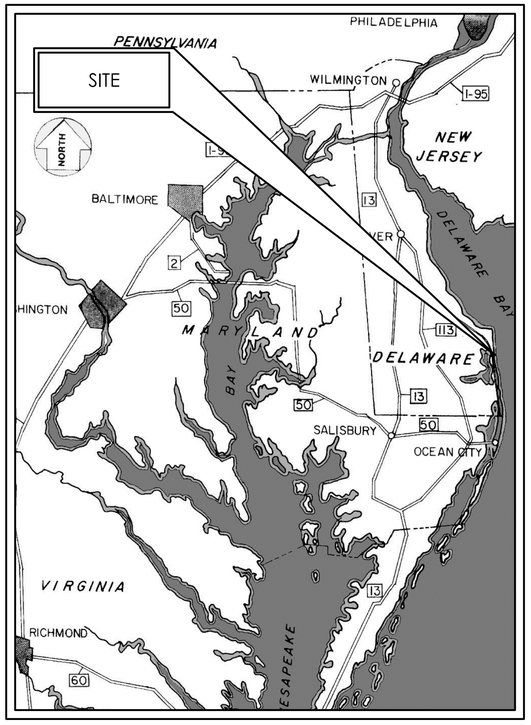
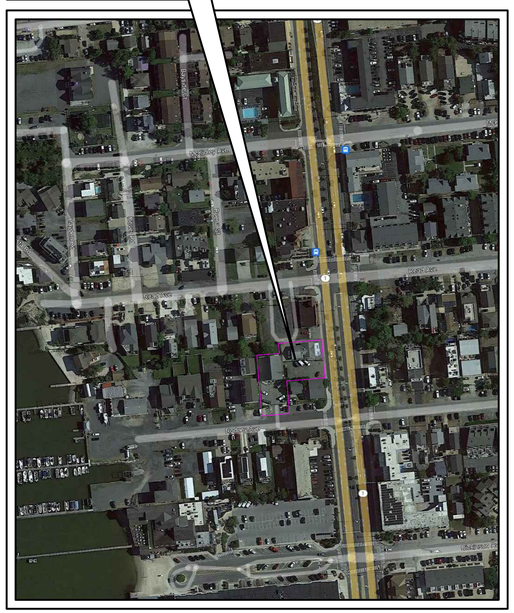
NEW CONSTRUCTION FOR:

DEWEY TOWN HALL & POLICE DEPARTMENT

1505 COASTAL HIGHWAY, DEWEY BEACH, DELAWARE



VICINITY MAP
N.T.S.



LOCATION MAP
N.T.S.

CONTACTS:

OWNER REP.:	TOWN OF DEWEY BEACH 105 RODNEY AVE DEWEY BEACH, DELAWARE 19971	
	BILL ZOLPER, TOWN MANAGER	
ARCHITECT /STRUCT. /CIVIL:	GEORGE, MILES & BUHR, LLC 206 W. MAIN STREET SALISBURY, MD 21801 410-742-3115	
	MORGAN HELFRICH, AIA, LEED AP ROLAND E. HOLLAND, P.E. ANDREW LYONS, P.E.	
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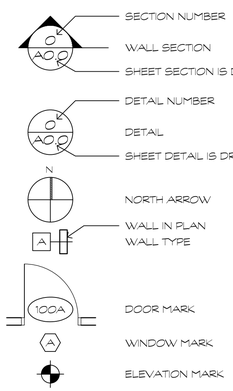
	TIMOTHY CHATTERTON, P.E.	

SYMBOLS LEGEND:



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GENERAL NOTES:

1. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND CERTIFICATIONS OF APPROVALS REQUIRED IN CONNECTION WITH ALL WORK UNDER THIS CONTRACT. CONTRACTOR SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. OBTAIN PERMITS PRIOR TO SCHEDULED START OF CONSTRUCTION.
2. THE GENERAL CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND PROJECT CONDITIONS AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES, CONFLICTS AND OMISSIONS THAT WOULD INTERFERE WITH THE SATISFACTORY COMPLETION OF THE PROJECT. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE FINAL CONSTRUCTION DOCUMENT.
3. BASE INFORMATION INDICATED ON THESE DRAWINGS WAS DERIVED FROM BY VISUAL AND CASUAL OBSERVATIONS, AND FROM EXISTING DRAWINGS BY OTHER. THIS BASE INFORMATION IS PROVIDED FOR THE CONVENIENCE OF THE GENERAL CONTRACTOR AND IS NOT TO BE CONSTRUED AS A RE-MEASURED OR "AS-BUILT" PLAN, BUT RATHER AS REFERENCED DATA WHICH FROM ALL SURFACE APPEARANCES OBSERVED AT THE SITE IS BASICALLY ACCEPTABLE FOR THE PURPOSES OF THIS PROJECT.
4. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, GRADE ELEVATIONS AND DIMENSIONS BEFORE EXECUTION OF ANY WORK AND, ANY VARIANCES OR INCONSISTENCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY.
5. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT, IN WRITING, OF ANY CONDITIONS THAT ARE MADE EVIDENT THAT WILL CONFLICT WITH THE COMPLETION OF THE PROJECT OR REQUIRE ADDITIONAL DEMOLITION TO MEET THE REQUIREMENTS OF THE NEW SCOPE OF WORK REQUIRED BY THE CONTRACT.
6. THE GENERAL CONTRACTOR AGREES TO WORK WITH THE ARCHITECT IN RESOLVING CONFLICTS IN A TIMELY MANNER, INCLUDING CONCEALED OR UNANTICIPATED CONDITION THAT AFFECT THE WORK OF THIS CONTRACT.
7. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS OF THE GOVERNING AGENCIES HAVING JURISDICTION OVER THE PROJECT.
8. THE GENERAL CONTRACTOR SHALL TAKE ADEQUATE CARE TO PROTECT ALL AREAS OF THE BUILDING WHERE THE WORK OF THIS ALTERATION IS LOCATED AS WELL AS AREAS ADJACENT TO THE AREA OF WORK OF THIS PROJECT SO AS TO PREVENT DAMAGE TO LIFE OR PROPERTY AS A RESULT OF THIS WORK. PROVIDE ALL NECESSARY SAFEGUARDS AS REQUIRED TO PROTECT THE OCCUPANTS, PUBLIC AND EMPLOYEES FROM ANY POSSIBLE INJURY RESULTING FROM THE WORK.
9. IN ALL CASES, DRAWINGS SHALL NOT BE SCALED FOR INFORMATION. FIGURED DIMENSIONS SHALL GOVERN THE WORK AND ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD.
10. THE GENERAL CONTRACTOR AND EACH SUB-CONTRACTOR SHALL KEEP ACCURATE RECORDS OF ANY MODIFICATION OR DEVIATIONS FROM THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL DELIVER TO THE ARCHITECT A COMPLETE SET OF "AS-BUILT" DRAWINGS AND SPECIFICATIONS PRIOR TO APPROVAL OF FINAL PAYMENT.
11. THE GENERAL CONTRACTOR SHALL NOT MAKE, CAUSE TO BE MADE, OF PERMIT A SUBCONTRACTOR OR STAFF MEMBER OR LOCAL REPRESENTATIVE OF THE OWNER TO MAKE ANY CHANGES TO WHAT IS SPECIFIED ON THE DRAWINGS WITHOUT SPECIFIC AUTHORIZATION OF THE ARCHITECT.
12. THE GENERAL CONTRACTOR SHALL PATCH AND/OR RESTORE TO MATCH THE EXISTING ADJACENT SURFACES THAT ARE DISTURBED AS A RESULT OF ANY MISC. DEMOLITION OR NEW CONSTRUCTION.
13. CONNECT NEW WORK TO EXISTING IN A NEAT AND APPROVED MANNER. RESTORE EXISTING AND NEW AREAS IN ACCORDANCE WITH THE REQUIREMENTS OF THE NOTE ABOVE.
14. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO ADJOINING, REMAINING AREAS AS A RESULT OF THIS WORK AND SHALL REPAIR ANY DAMAGED SURFACES TO THEIR CONDITIONS EXISTING PRIOR TO THE START OF THIS WORK.
15. INTERRUPTION OF POWER AND ANCILLARY SYSTEMS SHALL BE COORDINATED WITH THE OWNER, PROGRAM MANAGER AND ARCHITECT. PROVIDE 72 HOURS ADVANCE NOTICES FOR ANY OUTAGE. SUCH OUTAGES SHALL OCCUR ONLY DURING PREARRANGED ACCEPTABLE TIMES FOR ALL PARTIES CONCERNED. THE EXISTING BUILDING SHALL NOT BE LEFT WITHOUT THE USE LIGHTING, POWER, ETC. EXCEPT FOR FINAL CONNECTION, WHICH SHALL BE PERFORMED AT A TIME CONVENIENT TO AND WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
16. THE GENERAL CONTRACTOR SHALL COORDINATE WITH THE OWNER, ALL EQUIPMENT OR SYSTEMS TO BE SALVAGED AND GIVEN TO THE OWNER.
17. THE GENERAL CONTRACTOR SHALL PROTECT ALL OCCUPIED AREAS AGAINST DUST AND NOISE.
18. THE GENERAL CONTRACTOR SHALL PROTECT ALL NEW WORK, INCLUDING FIXTURES, EQUIPMENT, FINISHES, FURNISHINGS, ETC. FROM DAMAGE OR DETERIORATION UNTIL ACCEPTANCE OF THE WORK.
19. PROVIDE BLOCKING FOR ALL EQUIPMENT, FIXTURES AND FURNISHINGS. COORDINATE WITH OWNERS SEPARATE VENDORS FOR ALL LOCATIONS REQUIRING BLOCKING.
20. ALL CONSTRUCTION MUST COMPLY WITH THE NATIONAL FLOOD INSURANCE PROGRAMS (NFIP) BUILDING PERFORMANCE REQUIREMENTS CONTAINED IN TITLE 44 OF THE U.S. CODE OF FEDERAL REGULATIONS AT SECTION 60.3 FLOODPLAIN MANAGEMENT CRITERIA FOR FLOOD-PRONE AREAS.
21. FOR BUILDING COMPONENTS LOCATED BELOW THE BASE FLOOD ELEVATION IN SPECIAL FLOOD HAZARD AREAS, FLOOD-DAMAGE RESISTANT CONSTRUCTION MATERIALS ARE REQUIRED. CONCRETE WALLS AND FLOORS SHALL BE REINFORCED TO RESIST FLOOD LOADS AND SEEPAGE.
22. OPENINGS IN OR BELOW-BASE FLOOD ELEVATION WALLS OF ENCLOSURES SHALL BE CERTIFIED BY AN ENGINEER FOR EQUALIZATION OF HYDROSTATIC FORCES IN ACCORDANCE WITH ASCE 24 - 2.7.2.2.
23. FOR NEW NON-RESIDENTIAL BUILDINGS AND MIXED-USE BUILDINGS IN SPECIAL FLOOD HAZARD AREAS IDENTIFIED AS ZONE AE ON FLOOD INSURANCE RATE MAPS, DRY FLOODPROOFING DESIGN AND CERTIFICATION REQUIREMENTS APPLY. ENCLOSED AREAS FOR THE USE OF PARKING OF VEHICLES, BUILDING ACESS (STAIRWELLS AND FOYERS), AND STORAGE ARE PERMITTED TO BE IN THE FLOOD ZONE. FLOODPROOFING MEASURES SHALL BE CERTIFIED BY A REGISTERED ENGINEER USING FEMA FORM 086-0-34

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, BALTIMORE, ASHBURN
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

COVER SHEET

MORGAN HALL HELFRICH
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

CS1.0

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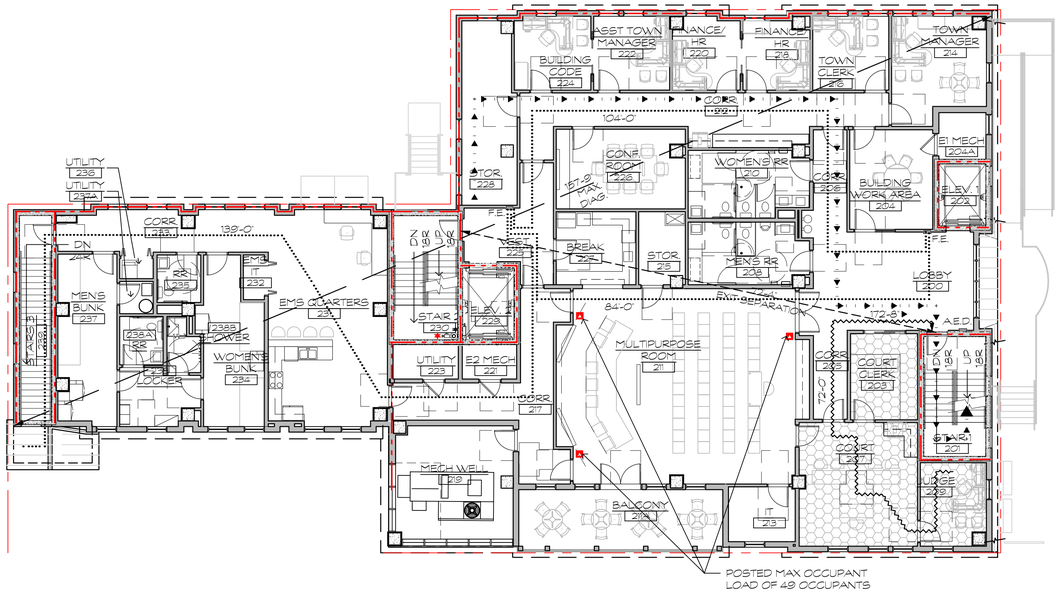
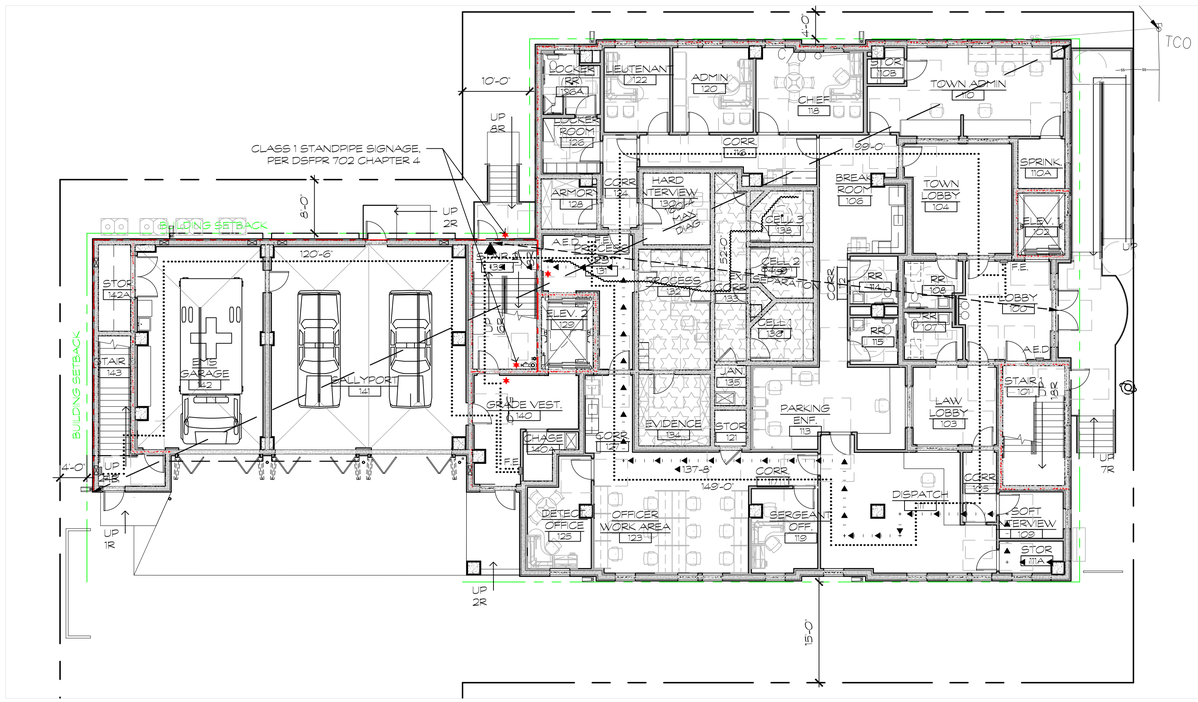
g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\G1.0 COVER SHEET.dwg, 11/14/2024 4:36 PM, Deone L. Townsend



1 LIFE SAFETY PLAN - SECOND FLOOR

3/32" = 1'-0"



2 LIFE SAFETY PLAN - FIRST FLOOR

3/32" = 1'-0"

DEWEY TOWN HALL & POLICE DEPT.
International Building Code 2021
NFPA 101 - Life Safety Code 2021
Delaware Regulations: 702 Fire Protection in Building Construction
Town of Dewey Beach Code

GMB ARCHITECTS / ENGINEERS

TOPIC	DESCRIPTION		CODE REFERENCE
OCCUPANCY GROUP	NEW TOWN HALL ADMIN. - BUSINESS (B) NEW COMMUNITY HALL - BUSINESS (B) NEW POLICE DEPARTMENT - BUSINESS (B) NEW EMS QUARTERS - BOARDING HOUSE (TRANSIENT) RESIDENTIAL (R-3) NEW ENCLOSED SALLYPORT + EMS GARAGE (S-2)		IBC 304 IBC 304.4 NFPA 6.1.11 IBC 310.4 IBC 311.3
CONSTRUCTION CLASSIFICATION	TYPE II-B, SPRINKLERED. NFPA TYPE II 000		IBC TABLE 601 NFPA TABLE A.8.2.1.2
ALLOWABLE AREAS	MAX. ALLOWABLE BUILDING HEIGHT NOT TO EXCEED 32 FT FROM FEMA 1% ANNUAL FLOOD PLUS FREE BOARD. ELEVATOR BULKHEAD, CHIMNEY, PIPES, AIR HANDLING, AND ALT. ENERGY SYSTEMS PERMITTED TO EXCEED MAX HEIGHT BY 42 INCH MAX. NUMBER OF STORIES, SPRINKLERED BUSINESS (B) RESIDENTIAL (R-3) STORAGE (S-2) MAX. ALLOWABLE AREA SPRINKLERED (SM) BUSINESS (B) RESIDENTIAL (R-3) STORAGE (S-2)	Type III B 4 5 4 69,000 UL 78,000	DEWEY A185-1, TABLE 2 IBC TABLE 504.3 IBC TABLE 504.4 IBC TABLE 506.2
BUILDING AREAS		% OF TOTAL AREA (E/UE)	
	1ST FLOOR, POLICE + TOWN OFFICES (B)	6810 27%	
	1ST FLOOR, GARAGE (S-2)	1800 7%	
	2ND FLOOR, TOWN OFF., & COMMUNITY HALL (B)	6318 25%	
	2ND FLOOR, EMS QUARTERS (R-3)	1800 7%	
	TOTAL FINISHED AND ENCLOSED BUILDING AREA:	**16,728 65%**	
	3RD FLOOR, UNFINISHED ATTIC (S-2)	8,215 32%	
	TOTAL ENCLOSED BUILDING AREA:	**24,943 97%**	
	1ST FLOOR COVERED PORCH AT GRADE VEST.	100 0%	
	2ND FLOOR BALCONY	257 1%	
	2ND FLOOR MECH WELL	335 1%	
	TOTAL UNENCLOSED BUILDING AREA:	**692 3%**	
	TOTAL ENCLOSED AND UNENCLOSED BUILDING AREA:	**25,635**	
FIRE RESISTANCE BUILDING ELEMENTS		Type III B	IBC TABLE 601 NFPA TABLE A.8.2.1.2
	STRUCTURAL FRAME	0 HRS.	
	EXTERIOR BEARING WALLS	0 HRS.	
	INTERIOR BEARING WALLS	0 HRS.	
	NON-BEARING EXTERIOR WALLS	0 HRS.	
	NON-BEARING INTERIOR WALLS	0 HRS.	
	FLOORS	0 HRS.	
	ROOFS	0 HRS.	
AUTOMATIC SPRINKLERS	AUTOMATIC SPRINKLERS REQUIRED FOR ALL BUILDINGS EXCEEDING AGGREGATE GROSS FLOOR AREA OF 10,000 SQUARE FEET		DE 702, CH 4, 1.2.1
FIRE RESIST. ON BLDG. SEP.	EXTERIOR WALLS X < 5 FT. (ALL CONSTRUCTION TYPE) = NORTH AND WEST, 4 FT	1 HRS	IBC TABLE 705.5
	EXTERIOR WALLS 10FT > X > 30 FT. (II-B) =	0 HRS	
	EXTERIOR WALLS X > 30 FT. (ALL CONSTRUCTION TYPE) = EAST	0 HRS	
ALLOWABLE OPENING AREA	NORTH: 12% OPENINGS / 15 % MAX. ALLOWED WEST: 8.5% OPENINGS / 15% MAX. ALLOWED		IBC TABLE 716.1(2)
FIRE RATED OPENINGS	FIRE BARRIER RATING	1 HR	IBC TABLE 716.1(3)
	MIN. FIRE RATING OF OPENINGS (DOORS + WINDOWS)	0.75 HR	NFPA TABLE 8.3.3.2.2
OCC. SEPARATION			IBC 508.4
	BUSINESS (B) TO RESIDENCE (R-3), SPRINKLERED: 1 HR PERMITTED WITH SPRINKLERS	1 HR	NFPA TABLE 6.1.14.4.1 NFPA 6.1.14.4.3
	BUSINESS (B) TO STORAGE (S-2), SPRINKLERED: 1 HR PERMITTED WITH SPRINKLERS	1 HR	NFPA 6.1.14.4.3
	RESIDENCE (R-3) TO STORAGE (S-2), SPRINKLERED: 1 HR PERMITTED WITH SPRINKLERS	1 HR	NFPA 6.1.14.4.3
MAX. ALLOWABLE AREA FOR UNPROTECTED OPENING	EXTERIOR WALLS: UNPROTECTED AND SPRINKLERED		IBC TABLE 705.8
	NORTH, X > 30 FT. =	100%	
	EAST, X > 30 FT. =	100%	
	SOUTH, 15 FT > X > 20 FT =	75%	
	WEST, 15 FT > X > 20 FT =	75%	
WALL AND CEILING FINISH	BUILDING EXIT ENCLOSURE ROOMS CORRIDORS	CLASS A CLASS B CLASS C	IBC TABLE 803.13 NFPA A.10.2.2

DEWEY TOWN HALL & POLICE DEPT.
International Building Code 2021
NFPA 101 - Life Safety Code 2021
Delaware Regulations: 702 Fire Protection in Building Construction
Town of Dewey Beach Code

GMB ARCHITECTS / ENGINEERS

TOPIC	DESCRIPTION		CODE REFERENCE
OCCUPANT LOAD	1ST FLOOR, POLICE AND TOWN (B): 6810 SF / 150	45 OCC.	IBC TABLE 1004
	1ST FLOOR, GARAGES (S-2): 1800 SF / 200	9 OCC.	
	2ND FLOOR, TOWN + COURT (B): 6318 SF / 150	42 OCC.	IBC 1004.8
	2ND FLOOR COMMUNITY ROOM (B):	49 OCC.	NFPA 7.3.1.2
	REFER TO SEATING LAYOUT (49 SEATED MAX.)		
	ASSEMBLY OCCUPANCIES PERMITTED TO BE ACCESORY IF <50 OCCUPANTS		IBC 303.1.2
	2ND FLOOR, EMS QUARTERS (R-3): 1328 SF / 200	7 OCC.	
	2ND F, MW BUNK (R-3, DORM): 472 SF / 50	9 OCC.	
	TOTAL OCCUPANTS:	**162** OCC.	
	3RD FLOOR, UNFINISHED ATTIC (S-2): 8215 SF / 150	55 OCC.	
	TOTAL OCCUPANTS:	**216** OCC.	
EGRESS WIDTH	EXIT WIDTH: 0.2 x 321 = 64.2 INCHES		IBC 1005.3.1
	PROVIDED: (3) 36", (1) 72" = 180 INCHES		IBC 1005.3.2
	STAIRWAY WIDTH: 0.3 x 321 = 96.3 INCHES		IBC TABLE 1021.2
	PROVIDED: (3) 48" = 144 INCHES		NFPA TABLE 7.3.3.1
EXIT ACCESS TRAVEL DISTANCE	BUSINESS (B) + STORAGE (S-2) = 300 FT. SPRINKLERED		IBC TABLE 1017.2
	RESIDENCE (R-3) = 250 FT SPRINKLERED		NFPA 38.2.6.3
	COMMON PATH BUSINESS + STORAGE = 100 FT. SPRINKLERED RESIDENTIAL (R-3) = 125 SPRINKLERED		IBC TABLE 1006.2.1
CORRIDOR REQUIREMENTS	CORRIDOR WALLS AND OPENINGS		IBC 1020.1
	B AND S OCCUPANCIES (>30 OCCUPANTS):	0 HRS.	
	R OCCUPANCY (>10 OCCUPANTS), SPRINKLERED:	0.5 HRS.	
	MIN. CORR. WIDTH:	44 INCH	IBC 1020.3
	DEAD END CORRIDOR LENGTH, SPRINKLERED:	20 FT MAX	IBC 1020.4
	BUSINESS AND STORAGE PERMITTED	50 FT. MAX.	NFPA 38.2.5.2
PLUMBING FIXTURES	WATERCLOSETS: BUSINESS (B) - POLICE, TOWN, COURTS, + COMMUNITY HALL 136 OCCUPANTS 1 PER 25 FOR 1ST 50 OCC, AND 1 PER 50 THEREAFTER; REQUIRED = 6 RESIDENTIAL (R-3) - EMS QUARTERS (BOARDING, TRANSIENT), 16 OCC. 1 PER DWELLING UNIT, REQUIRED = 1 STORAGE (S-2) - SALLYPORT + EMS GARAGE, 9 OCCUPANTS 1 PER 100, REQUIRED = 1 TOTAL REQUIRED = 8, PROVIDED 13 ALLOW FOR MIN. OF 4 WC FOR 3RD FLOOR UNFINISHED ATTIC (S-2) @ 54 OCC		IBC TABLE 2902.1
	LAVATORY: BUSINESS (B) - POLICE, TOWN, COURTS, + COMMUNITY HALL 136 OCCUPANTS 1 PER 40 FOR 1ST 80 OCC, AND 1 PER 80 THEREAFTER; REQUIRED: 4 RESIDENTIAL (R-3) - EMS QUARTERS (BOARDING, TRANSIENT), 16 OCC. 1 PER DWELLING UNIT, REQUIRED = 1 STORAGE (S-2) - SALLYPORT + EMS GARAGE, 9 OCCUPANTS 1 PER 100, REQUIRED = 1 TOTAL REQUIRED = 6, PROVIDED 10 ALLOW FOR MIN. OF 2 LAVATORIES FOR 3RD FLOOR UNFINISHED ATTIC (S-2)@ 54 OCC		
	SHOWER: RESIDENTIAL (R-3) - EMS QUARTERS (BOARDING, TRANSIENT), 16 OCC. REQUIRED: 1 PER DWELLING UNIT TOTAL REQUIRED = 1, PROVIDED 2		
	DRINKING FOUNTAIN BUSINESS (B) - POLICE, TOWN, COURTS, + COMMUNITY HALL 136 OCCUPANTS 1 PER 100, REQUIRED: 2 STORAGE (S-2) - SALLYPORT + EMS GARAGE, 9 OCCUPANTS 1 PER 1000, REQUIRED: 1 TOTAL REQUIRED = 4, PROVIDED 4 ALLOW FOR MIN. OF 1 DF FOR 3RD FLOOR UNFINISHED ATTIC (S-2) @ 54 OCC		
	SERVICE SINK BUSINESS (B) - POLICE, TOWN, COURTS, + COMMUNITY HALL 136 OCCUPANTS RESIDENTIAL (R-3) - EMS QUARTERS (BOARDING, TRANSIENT), 16 OCC. STORAGE (S-2) - SALLYPORT + EMS GARAGE, 9 OCCUPANTS TOTAL REQUIRED = 1, PROVIDED 3		
THERMAL PERFORMANCE REQUIREMENTS	ZONE 4, EXCEPT MARINE		IECC C402.1.3
	ROOF: ATTIC AND OTHER	R-49	
	ROOF: INSULATION ENTIRELY ABOVE DECK	R-30 CI	
	WALL: MASS	R-9.5CI	
	METAL FRAMED:	R-13 + R-7.5CI	
	WOOD FRAMED:	R-20	
	UNHEATED SLAB:	R-15, 24"	
	FIXED FENESTRATION	U-0.36	IECC C402.4
	OPERABLE FENESTRATION	U-0.45	
	ENTRANCE DOORS	U-0.63	
SHGC	PROJECTION FACTOR < 0.2	0.36	IECC C402.4

LEGEND

- 0'-0" MAX DIAG. — MAX DIAGONAL DISTANCE
- 0'-0" EXIT SEP. — EXIT SEPARATION DISTANCE (NO LESS THAN 1/3 OF MAX DIAG. DISTANCE. 90.33 FT / 3 = 30 FT MINIMUM SEPARATION 79.5 FT / 3 = 26.5 FT MINIMUM SEPARATION)
- 0'-0" — EXIT ACCESS TRAVEL DISTANCE: GROUP A + R: 250 FT MAX SPRINKLERED; GROUP B + S: 300 FT MAX SPRINKLERED
- 0'-0" — F.E. SPACING: OSHA: 75 FT TRAVEL DIST. (NOT TO EXCEED 150 FT BETWEEN FE)
- 0'-0" — COMMON PATH OF TRAVEL: GROUP B: 100 FT MAX SPRINKLERED
- HOLDING BLOCK: GROUP B OCCUPANCY; 800 SF / 150 OCC LOAD = 5 OCCUPANTS
- COURT: GROUP B OCCUPANCY; 650 SF / 150 OCC LOAD = 4 OCCUPANTS

- NEW CONSTRUCTION
- MIN. 1 HR FIRE RATED CONSTRUCTION
- MIN. 2 HR FIRE RATED CONSTRUCTION

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 21804
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

LIFE SAFETY PLAN

MORGAN HALL HELFRICH
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

CS1.1

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g:\Projects\2022\220242 dewey beach new town holl design\Drawings\working sets\G1.1 LIFE SAFETY PLAN.dwg, 11/14/2024 4:36 PM, Deane L. Townsend

g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\G1.1 LIFE SAFETY PLAN.dwg, 11/14/2024 4:39 PM, Deone L. Townsend

1 LIFE SAFETY PLAN - THIRD FLOOR
3/32" = 1'-0"

DEWEY TOWN HALL & POLICE DEPT.
International Building Code 2021
NFPA 101 - Life Safety Code 2021
Delaware Regulations: 702 Fire Protection in Building Construction
Town of Dewey Beach Code

GMB ARCHITECTS / ENGINEERS

TOPIC	DESCRIPTION		CODE REFERENCE
OCCUPANCY GROUP	NEW TOWN HALL ADMIN. - BUSINESS (B) NEW COMMUNITY HALL - BUSINESS (B) NEW POLICE DEPARTMENT - BUSINESS (B) NEW EMS QUARTERS - BOARDING HOUSE (TRANSIENT) RESIDENTIAL (R-3) NEW ENCLOSED SALLYPORT + EMS GARAGE (S-2)		IBC 304 IBC 304.4 NFPA 6.1.11 IBC 310.4 IBC 311.3
CONSTRUCTION CLASSIFICATION	TYPE II-B, SPRINKLERED. NFPA TYPE II 000		IBC TABLE 601 NFPA TABLE A.8.2.1.2
ALLOWABLE AREAS	MAX. ALLOWABLE BUILDING HEIGHT NOT TO EXCEED 32 FT FROM FEMA 1% ANNUAL FLOOD PLUS FREE BOARD. ELEVATOR BULKHEAD, CHIMNEY, PIPES, AIR HANDLING, AND ALT. ENERGY SYSTEMS PERMITTED TO EXCEED MAX HEIGHT BY 42 INCH		DEWEY A185-1, TABLE 2
		Type III B	IBC TABLE 504.3
	MAX. NUMBER OF STORIES, SPRINKLERED		IBC TABLE 504.4
	BUSINESS (B)	4	
	RESIDENTIAL (R-3)	5	
	STORAGE (S-2)	4	
	MAX. ALLOWABLE AREA SPRINKLERED (SM)		IBC TABLE 506.2
	BUSINESS (B)	69,000	
	RESIDENTIAL (R-3)	UL	
	STORAGE (S-2)	78,000	
BUILDING AREAS		% OF TOTAL AREA (E/UE)	
	1ST FLOOR, POLICE + TOWN OFFICES (B)	6810 27%	
	1ST FLOOR, GARAGE (S-2)	1800 7%	
	2ND FLOOR, TOWN OFF., & COMMUNITY HALL (B)	6318 25%	
	2ND FLOOR, EMS QUARTERS (R-3)	1800 7%	
	TOTAL FINISHED AND ENCLOSED BUILDING AREA:	**16,728 65%**	
	3RD FLOOR, UNFINISHED ATTIC (S-2)	8,215 32%	
	TOTAL ENCLOSED BUILDING AREA:	**24,943 97%**	
	1ST FLOOR COVERED PORCH AT GRADE VEST.	100 0%	
	2ND FLOOR BALCONY	257 1%	
	2ND FLOOR MECH WELL	335 1%	
	TOTAL UNENCLOSED BUILDING AREA:	**692 3%**	
	TOTAL ENCLOSED AND UNENCLOSED BUILDING AREA:	**25,635**	
FIRE RESISTANCE BUILDING ELEMENTS		Type II B	IBC TABLE 601
	STRUCTURAL FRAME	0 HRS.	NFPA TABLE A.8.2.1.2
	EXTERIOR BEARING WALLS	0 HRS.	
	INTERIOR BEARING WALLS	0 HRS.	
	NON-BEARING EXTERIOR WALLS	0 HRS.	
	NON-BEARING INTERIOR WALLS	0 HRS.	
	FLOORS	0 HRS.	
	ROOFS	0 HRS.	
AUTOMATIC SPRINKLERS	AUTOMATIC SPRINKLERS REQUIRED FOR ALL BUILDINGS EXCEEDING AGGREGATE GROSS FLOOR AREA OF 10,000 SQUARE FEET		DE 702, CH 4, 1.2.1
FIRE RESIST. ON BLDG. SEP.	EXTERIOR WALLS X < 5 FT. (ALL CONSTRUCTION TYPE) = NORTH AND WEST, 4 FT	1 HRS	IBC TABLE 705.5
	EXTERIOR WALLS 10FT > X > 30 FT. (II-B) =	0 HRS	
	EXTERIOR WALLS X > 30 FT. (ALL CONSTRUCTION TYPE) = EAST	0 HRS	
ALLOWABLE OPENING AREA	NORTH: 12% OPENINGS / 15 % MAX. ALLOWED WEST: 8.5% OPENINGS / 15% MAX. ALLOWED		IBC TABLE 716.1(2)
FIRE RATED OPENINGS	FIRE BARRIER RATING	1 HR	IBC TABLE 716.1(3)
	MIN. FIRE RATING OF OPENINGS (DOORS + WINDOWS)	0.75 HR	NFPA TABLE 8.3.3.2.2
OCC. SEPARATION			IBC 508.4
	BUSINESS (B) TO RESIDENCE (R-3), SPRINKLERED:	1 HR	NFPA TABLE 6.1.14.4.1
	1 HR PERMITTED WITH SPRINKLERS		NFPA 6.1.14.4.3
	BUSINESS (B) TO STORAGE (S-2), SPRINKLERED:	1 HR	
	1 HR PERMITTED WITH SPRINKLERS		NFPA 6.1.14.4.3
	RESIDENCE (R-3) TO STORAGE (S-2), SPRINKLERED:	1 HR	
	1 HR PERMITTED WITH SPRINKLERS		NFPA 6.1.14.4.3
MAX. ALLOWABLE AREA FOR UNPROTECTED OPENING	EXTERIOR WALLS; UNPROTECTED AND SPRINKLERED		IBC TABLE 705.8
	NORTH, X > 30 FT. =	100%	
	EAST, X > 30 FT. =	100%	
	SOUTH, 15 FT > X > 20 FT =	75%	
	WEST, 15 FT > X > 20 FT =	75%	
WALL AND CEILING FINISH	BUILDING		
	EXIT ENCLOSURE	CLASS A	IBC TABLE 803.13
	ROOMS	CLASS B	NFPA A.10.2.2
	CORRIDORS	CLASS C	

DEWEY TOWN HALL & POLICE DEPT.
International Building Code 2021
NFPA 101 - Life Safety Code 2021
Delaware Regulations: 702 Fire Protection in Building Construction
Town of Dewey Beach Code

GMB ARCHITECTS / ENGINEERS

TOPIC	DESCRIPTION		CODE REFERENCE
OCCUPANT LOAD	1ST FLOOR, POLICE AND TOWN (B): 6810 SF / 150	45 OCC.	IBC TABLE 1004
	1ST FLOOR, GARAGES (S-2): 1800 SF / 200	9 OCC.	
	2ND FLOOR, TOWN + COURT (B): 6318 SF / 150	42 OCC.	IBC 1004.8
	2ND FLOOR COMMUNITY ROOM (B):	49 OCC.	NFPA 7.3.1.2
	REFER TO SEATING LAYOUT (49 SEATED MAX.)		
	ASSEMBLY OCCUPANCIES PERMITTED TO BE ACCESORY IF <50 OCCUPANTS		IBC 303.1.2
	2ND FLOOR, EMS QUARTERS (R-3): 1328 SF / 200	7 OCC.	
	2ND F, MHV BUNK (R-3, DORM): 472 SF / 50	9 OCC.	
	TOTAL OCCUPANTS:	**162** OCC.	
	3RD FLOOR, UNFINISHED ATTIC (S-2): 8215 SF / 150	55 OCC.	
	TOTAL OCCUPANTS:	**216** OCC.	
EGRESS WIDTH	EXIT WIDTH: 0.2 x 321 = 64.2 INCHES		IBC 1005.3.1
	PROVIDED: (3) 36", (1) 72" = 180 INCHES		IBC 1005.3.2
	STAIRWAY WIDTH: 0.3 x 321 = 96.3 INCHES		IBC TABLE 1021.2
	PROVIDED: (3) 48" = 144 INCHES		NFPA TABLE 7.3.3.1
EXIT ACCESS TRAVEL DISTANCE	BUSINESS (B) + STORAGE (S-2) = 300 FT. SPRINKLERED		IBC TABLE 1017.2
	RESIDENCE (R-3) = 250 FT SPRINKLERED		NFPA 38.2.6.3
	COMMON PATH		IBC TABLE 1006.2.1
	BUSINESS + STORAGE = 100 FT. SPRINKLERED		
	RESIDENTIAL (R-3) = 125 SPRINKLERED		
CORRIDOR REQUIREMENTS	CORRIDOR WALLS AND OPENINGS		IBC 1020.1
	B AND S OCCUPANCIES (>30 OCCUPANTS):	0 HRS.	
	R OCCUPANCY (>10 OCCUPANTS), SPRINKLERED:	0.5 HRS.	
	MIN. CORR. WIDTH:	44 INCH	IBC 1020.3
	DEAD END CORRIDOR LENGTH, SPRINKLERED:	20 FT MAX	IBC 1020.4
	BUSINESS AND STORAGE PERMITTED	50 FT. MAX.	NFPA 38.2.5.2
PLUMBING FIXTURES	WATERCLOSETS:		IBC TABLE 2902.1
	BUSINESS (B) - POLICE, TOWN, COURTS, + COMMUNITY HALL 136 OCCUPANTS		
	1 PER 25 FOR 1ST 50 OCC, AND 1 PER 50 THEREAFTER; REQUIRED = 6		
	RESIDENTIAL (R-3) - EMS QUARTERS (BOARDING, TRANSIENT), 16 OCC.		
	1 PER DWELLING UNIT, REQUIRED = 1		
	STORAGE (S-2) - SALLYPORT + EMS GARAGE, 9 OCCUPANTS		
	1 PER 100, REQUIRED = 1		
	TOTAL REQUIRED = 8, PROVIDED 13		
	ALLOW FOR MIN. OF 4 WC FOR 3RD FLOOR UNFINISHED ATTIC (S-2) @ 54 OCC		
	LAVATORY:		
	BUSINESS (B) - POLICE, TOWN, COURTS, + COMMUNITY HALL 136 OCCUPANTS		
	1 PER 40 FOR 1ST 80 OCC, AND 1 PER 80 THEREAFTER; REQUIRED: 4		
	RESIDENTIAL (R-3) - EMS QUARTERS (BOARDING, TRANSIENT), 16 OCC.		
	1 PER DWELLING UNIT, REQUIRED = 1		
	STORAGE (S-2) - SALLYPORT + EMS GARAGE, 9 OCCUPANTS		
	1 PER 100, REQUIRED = 1		
	TOTAL REQUIRED = 6, PROVIDED 10		
	ALLOW FOR MIN. OF 2 LAVATORIES FOR 3RD FLOOR UNFINISHED ATTIC (S-2) @ 54 OCC		
	SHOWER:		
	RESIDENTIAL (R-3) - EMS QUARTERS (BOARDING, TRANSIENT), 16 OCC.		
	REQUIRED: 1 PER DWELLING UNIT		
	TOTAL REQUIRED = 1, PROVIDED 2		
	DRINKING FOUNTAIN		
	BUSINESS (B) - POLICE, TOWN, COURTS, + COMMUNITY HALL 136 OCCUPANTS		
	1 PER 100, REQUIRED: 2		
	STORAGE (S-2) - SALLYPORT + EMS GARAGE, 9 OCCUPANTS		
	1 PER 1000, REQUIRED: 1		
	TOTAL REQUIRED = 4, PROVIDED 4		
	ALLOW FOR MIN. OF 1 DF FOR 3RD FLOOR UNFINISHED ATTIC (S-2) @ 54 OCC		
	SERVICE SINK		
	BUSINESS (B) - POLICE, TOWN, COURTS, + COMMUNITY HALL 136 OCCUPANTS		
	RESIDENTIAL (R-3) - EMS QUARTERS (BOARDING, TRANSIENT), 16 OCC.		
	STORAGE (S-2) - SALLYPORT + EMS GARAGE, 9 OCCUPANTS		
	TOTAL REQUIRED = 1, PROVIDED 3		
THERMAL PERFORMANCE REQUIREMENTS	ZONE 4, EXCEPT MARINE		IECC C402.1.3
	ROOF: ATTIC AND OTHER	R-49	
	ROOF: INSULATION ENTIRELY ABOVE DECK	R-30 CI	
	WALL: MASS	R-9.5CI	
	METAL FRAMED:	R-13 + R-7.5CI	
	WOOD FRAMED:	R-20	
	UNHEATED SLAB:	R-15, 24"	
	FIXED FENESTRATION	U-0.36	IECC C402.4
	OPERABLE FENESTRATION	U-0.45	
	ENTRANCE DOORS	U-0.63	
SHGC	PROJECTION FACTOR < 0.2	0.36	IECC C402.4

LEGEND

- 0'-0" / MAX DIAG. — MAX DIAGONAL DISTANCE
- 0'-0" / EXIT SEP. — EXIT SEPARATION DISTANCE
  (NO LESS THAN ½ OF MAX DIAG. DISTANCE.
  90.33 FT / 3 = 30 FT MINIMUM SEPARATION
  79.5 FT / 3 = 26.5 FT MINIMUM SEPARATION)
- 0'-0" — EXIT ACCESS TRAVEL DISTANCE:
  GROUP A + R: 250 FT MAX SPRINKLERED
  GROUP B + S: 300 FT MAX SPRINKLERED
- 0'-0" — F.E. SPACING
  OSHA: 75 FT TRAVEL DIST.
  (NOT TO EXCEED 150 FT BETWEEN FE)
- 0'-0" — COMMON PATH OF TRAVEL
  GROUP B: 100 FT MAX SPRINKLERED
- HOLDING BLOCK
  GROUP B OCCUPANCY
  800 SF / 150 OCC LOAD = 5 OCCUPANTS
- COURT
  GROUP B OCCUPANCY
  650 SF / 150 OCC LOAD = 4 OCCUPANTS
- NEW CONSTRUCTION
- MIN. 1 HR FIRE RATED CONSTRUCTION
- MIN. 2 HR FIRE RATED CONSTRUCTION

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024

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ARCHITECTS & ENGINEERS
SALISBURY - BALTIMORE - ASHBURN
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

LIFE SAFETY PLAN

MORGAN HALL HELFRICH No. S5-0007846 STATE OF DELAWARE REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

CS1.2

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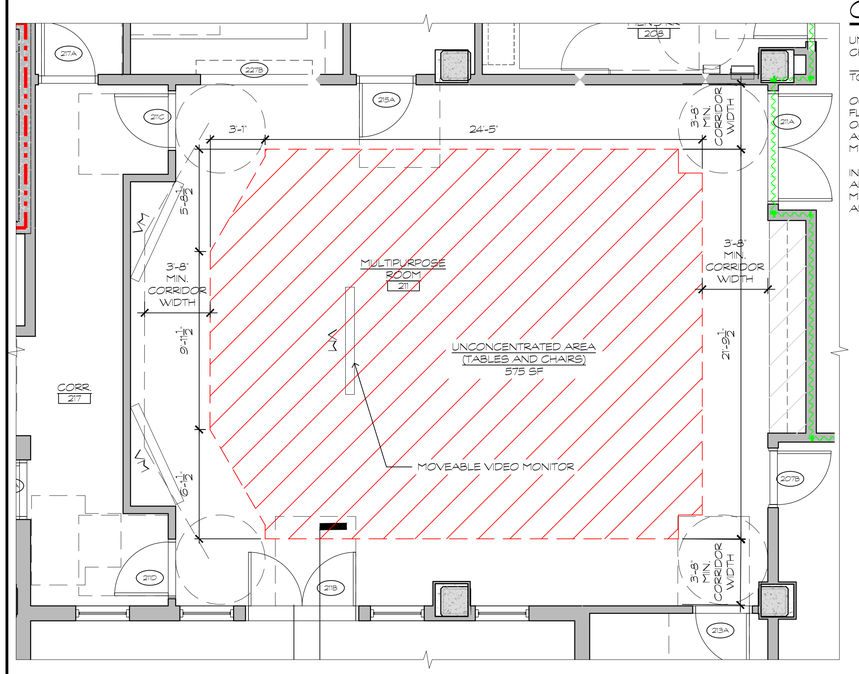


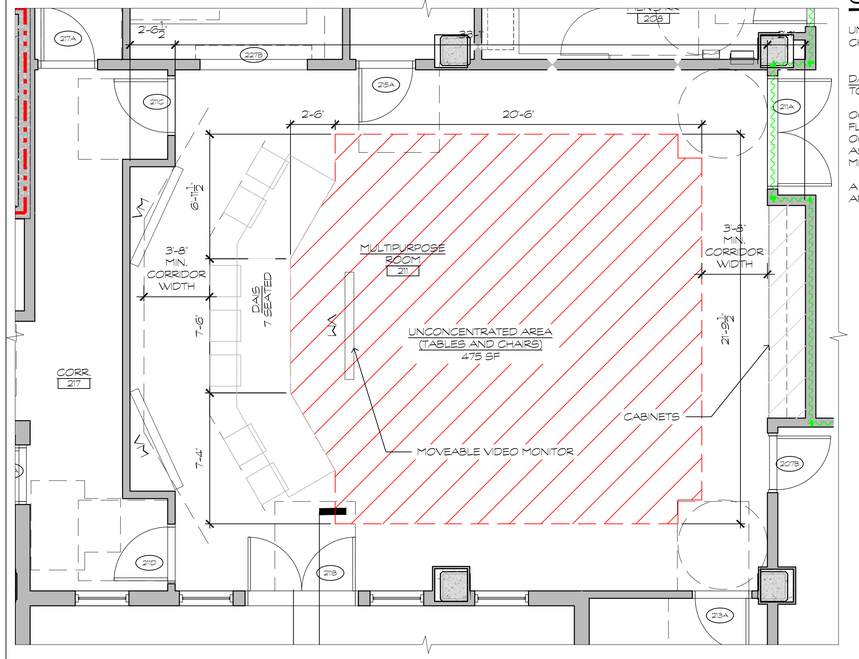
OCCUPANCY AREA CALCULATIONS

UNCONCENTRATED AREA (TABLES AND CHAIRS):
575 SF / 15 NET OCC = 38 OCCUPANTS
TOTAL OCCUPANTS 38 OCCUPANTS

OCCUPANCY FACTOR ASSESSED AS NET FLOOR AREA. ACCOUNTS ONLY FOR THE OCCUPIED AREA AND EXCLUDES AREAS SUCH AS CORRIDORS, STAIRWAYS, RAMPS, TOILETS, MECHANICAL SPACES, AND CLOSETS.

IN THIS CONFIGURATION THE DAIS IS MOVABLE, AND CAN BE REMOVED FROM THE SPACE. A MIN. 44" WALKING AREA HAS BEEN FACTORED AROUND THE PERIMETER.

2 CONFIGURATION - UNCONCENTRATED WITHOUT DAIS
1/4" = 1'-0"



OCCUPANCY AREA CALCULATIONS

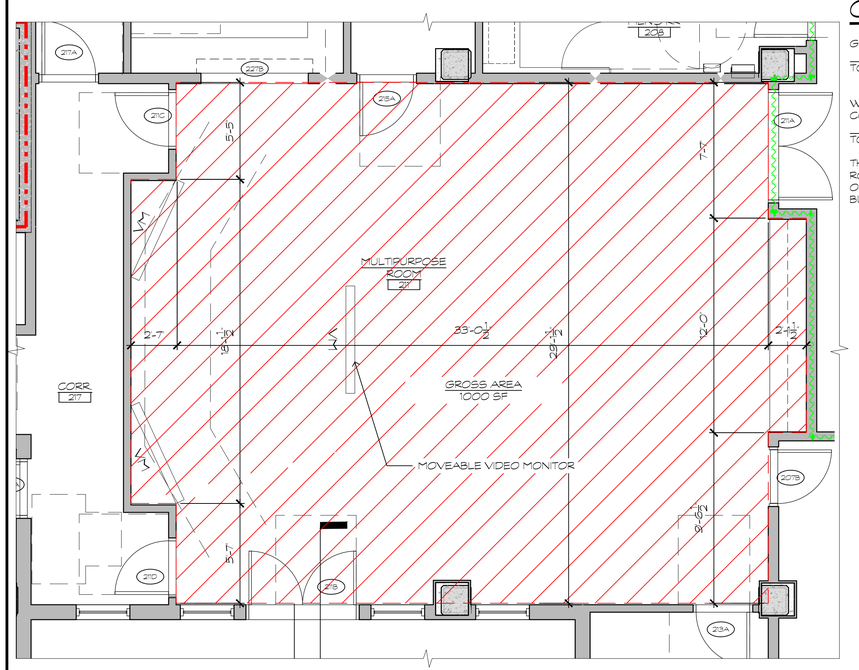
UNCONCENTRATED AREA (TABLES AND CHAIRS):
475 SF / 15 NET OCC = 32 OCCUPANTS

DAIS TABLE AND SEATS = 7 OCCUPANTS
TOTAL OCCUPANTS 39 OCCUPANTS

OCCUPANCY FACTOR ASSESSED AS NET FLOOR AREA. ACCOUNTS ONLY FOR THE OCCUPIED AREA AND EXCLUDES AREAS SUCH AS CORRIDORS, STAIRWAYS, RAMPS, TOILETS, MECHANICAL SPACES, AND CLOSETS.

A MIN. 44" WALKING AREA HAS BEEN FACTORED AROUND THE PERIMETER

1 CONFIGURATION - UNCONCENTRATED WITH FIXED DAIS
1/4" = 1'-0"



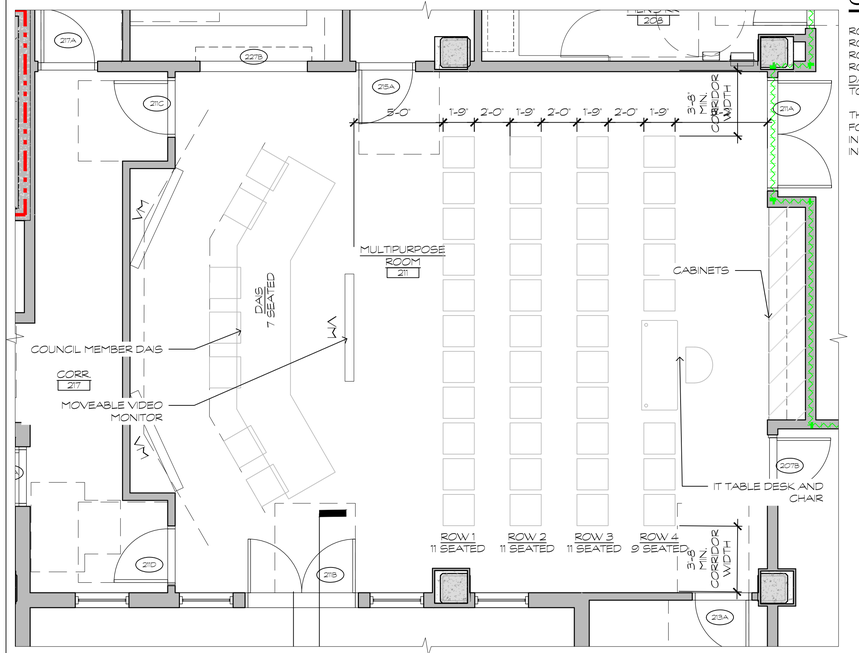
OCCUPANCY AREA CALCULATIONS

GROSS BUSINESS AREA
1000 SF / 150 GROSS OCC = 6 OCC.
TOTAL OCCUPANTS 6 OCCUPANTS

WORSE CASE,
CONCENTRATED GROSS BUSINESS AREA
1000 SF / 50 GROSS OCC = 20 OCC
TOTAL OCCUPANTS 20 OCCUPANTS

THIS SCENARIO ASSUMES THE MULTIPURPOSE ROOM IS ACCESSORY TO THE REST OF THE OCCUPANCY, AND IS CONSIDERED AS A BUSINESS OCCUPANCY.

4 CONFIGURATION - GROSS AREA
1/4" = 1'-0"



OCCUPANCY AREA CALCULATIONS

ROW 1: = 11 SEATED
ROW 2: = 11 SEATED
ROW 3: = 11 SEATED
ROW 4: = 9 SEATED
DAIS TABLE AND SEATS = 7 SEATED
TOTAL OCCUPANTS 49 OCCUPANTS

THIS OCCUPANCY CALCULATION ACCOUNTS FOR FIXED SEATING (IBC 1004.6) ASSUMING INDIVIDUAL SEATS ARE ARMLESS AND 18 INCHES WIDE AND DEEP.

3 CONFIGURATION - FIXED SEATING ONLY
1/4" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

LIFE SAFETY PLAN - MULTIPURPOSE OCC. CALCULATIONS

MORGAN HALL HEILBRUN
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: 1/4" = 1'-0"
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

CS1.3

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g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\CS1.3 LIFE SAFETY PLAN - MULTIPURPOSE OCC CALCULATIONS.dwg, 11/14/2024 4:45 PM, Deane L. Townsend

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

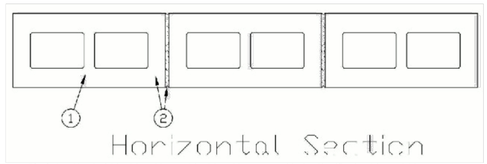
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. U937

March 17, 2023

Bearing Wall Rating — 2 or 4 Hr. (See Item #1)
Nonbearing Wall Rating — 2 or 4 Hr. (See Item #1)
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Concrete Blocks* —** Nominal 8 by 8 by 16 in. or 12 by 8 by 16 in. concrete blocks. Classification 2 hr. and 4 hr.
CAROLINA BLOCK LLC — 8x8x16 Bottom Ash Fire Block, 12x8x16 Bottom Ash Fire Block

2. **Mortar —** Blocks laid in full bed of Type S mortar, nom. 3/8 in. thick. Vertical joints staggered.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

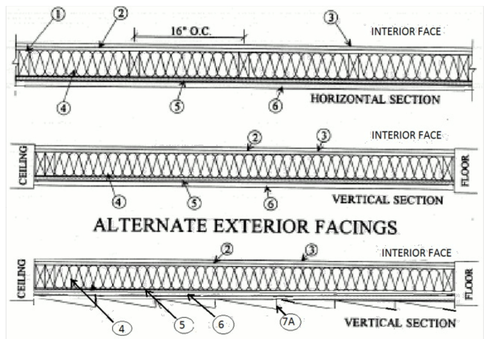
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. W408

March 16, 2023

Bearing Wall Rating — 2 Hr when EXPOSED TO FIRE ON INTERIOR FACE ONLY
(Maximum loading on the bearing wall to be based on un-braced stud height of 93.75 inches in the week axis of the studs)
Bearing Wall Rating — 1 Hr when EXPOSED TO FIRE ON EXTERIOR FACE ONLY, see Item 4 and 6
(Maximum loading on the bearing wall to be based on un-braced stud height of 93.75 inches in the week axis of the studs)
For Wood Studs, Finish Rating — 50 min when EXPOSED TO FIRE ON INTERIOR FACE.
For Wood Studs, Finish Rating — 17 min when EXPOSED TO FIRE ON EXTERIOR FACE.
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Wood Studs —** Nom 2 by 4 in., spaced 16 in. OC with double 2 by 4 top and single 2 by 4 in, bottom plates, with 2 by 4 in. lateral bracing at 96 in. OC max. Studs effectively fire stopped. As an option, nom 2 by 6 in., spaced 24 in. OC with double 2 by 6 top and single 2 by 6 bottom plates, with 2 by 6 in. lateral bracing at 96 in. OC max may be used in lieu of 2 by 4 studs and plates. Studs effectively fire stopped.

1A. **Steel Studs and Floor and Ceiling Tracks —** As an option to Item 1 — (Not Shown) — Top and bottom tracks of wall assemblies shall consist of steel members, min No. 20 MSG (0.0329 in., min bare metal thickness) steel or min No. 20 MSG (0.036 in. thick) galv steel or No. 20 MSG (0.033 in. thick) primed steel, that provide a sound structural connection between steel studs, and to adjacent assemblies such as a floor, ceiling, and/or other walls. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. O.C. Steel studs min 3-1/2 in. wide, No. 20 MSG (0.0329 in., min bare metal thickness) corrosion protected cold formed steel studs designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute. All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max stud spacing of wall assemblies shall not exceed 24 in. OC. Studs attached to floor and ceiling tracks with 1/2 in. long Type S-12 steel screws on both sides of studs or by welded or bolted connections designed in accordance with the AISI specifications.

2. **Gypsum Board* —** Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305. Nom 5/8 in. thick, 4 ft. wide, two layers applied vertically. Base layer nailed to wood studs and bearing plates 6 in. OC. with 6d cup-head drywall nails, 1-7/8 in. long. The face layer, with joints staggered from base layer, nailed to the studs and bearing plates over the base layer, 8 in. OC. with 8d cup-head drywall nails, 2-3/8 in. long. Type W screws of the same length, head diameter, as the nails and at the spacing described for nails may be used instead of nails. When steel framing is substituted for wood framing, 1 and 1-5/8 in. long Type S steel screws are used for base and face layers, respectively.
CABOT MANUFACTURING ULC (View Classification) — CKNX.R25370

AMERICAN GYPSUM CO (View Classification) — CKNX.R14196

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO (View Classification) — CKNX.R19374

CERTAINTEED GYPSUM INC (View Classification) — CKNX.R3660

CERTAINTEED GYPSUM INC (View Classification) — CKNX.R18482

CGC INC (View Classification) — CKNX.R19751

GEORGIA-PACIFIC GYPSUM L L C (View Classification) — CKNX.R2717

NATIONAL GYPSUM CO (View Classification) — CKNX.R3501

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM (View Classification) — CKNX.R7094

PANEL REY S A (View Classification) — CKNX.R21796

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD (View Classification) — CKNX.R19262

THAI GYPSUM PRODUCTS PCL (View Classification) — CKNX.R27517

UNITED STATES GYPSUM CO (View Classification) — CKNX.R1319

USG MEXICO S A DE C V (View Classification) — CKNX.R16089

3. **Joints and Fastener Heads —** Gypsum board joints covered with tape and joint compound. Fastener heads covered with joint compound.

4. **Batts and Blankets* —** Faced or unfaced mineral fiber insulation, 3-1/2 in. thick, nominal 2.5 pcf, friction fit in the wall cavity between stud, plates, and cross bracing.
See **Batts and Blankets*** (BZJZ) category for names of Classified manufacturers.

4A. **Batts and Blankets* —** As an option to Item 4, when the Fire Resistance Rating is for a fire on the Interior Face only and the Fire Resistance Rating for the Exterior face is not required. Faced or unfaced glass fiber insulation, 3-1/2 in. thick, nom 0.65 pcf, friction fit in the wall cavity between stud, plates, and cross bracing.
See **Batts and Blankets*** (BZJZ) category for names of Classified manufacturers.

5. **Building Units* —** Building units nailed to the wood framing with 1-7/8 in. long, 6d nails, spaced 6 in. OC. on the perimeter and 12 in. OC. in the field. Vertical joints centered on studs. Horizontal joints backed with nom. 2 by 4 wood blocking. When steel framing is substituted for wood framing, 1-1/4 in. long Type S steel screws are used in lieu of nails. Horizontal joints backed by steel framing.
LOUISIANA-PACIFIC CORP — Type Blazeguard 2-Side

LOUISIANA-PACIFIC CORP — Type LP FlameBlock 2-Side

6. **Exterior Sidings —** One of the Exterior Siding as specified in Item 6A to Item 6D are required for 1 hr Fire Resistance Rating for fire from the Exterior Face, optional for 2 hr Fire Resistance Rating for fire from Interior Face.

6A. **Exterior Wood Siding —** Min 11/32 in. thick, 4 ft wide wood plywood siding panels or 7/16 in. thick, 4 feet wide OSB siding panel. Installed with long dimension of sheet (strength axis) or face grain parallel with studs. Vertical joints centered on studs. Horizontal joints over nom. 2 by 4 in. wood blocking. Attached to studs through the Building Units, Item 5, on the exterior side of wall with 8d nails, 2-1/2 in. long spaced 6 in. OC at perimeter of panels and 12 in. OC in the field.

6B. **Exterior OSB Lap Siding —** Min 7/16 in. thick, OSB lap siding fastened to studs through the Building Units, Item 5, with nails or screws, at the locations specified by the manufacturer.

6C. **Cementitious Stucco —** Portland cement or synthetic stucco systems with self-furring metal lath. Thickness from 3/8 in. to 3/4 in. depending on system, fastened to studs through the Building Units, Item 5, with nails or screws, at the locations specified by the manufacturer.

6D. **Fiber Cement Siding —** Fiber Cement Lap or Vertical Siding. Minimum 5/16 in. thick, fastened to studs through the Building Units, Item 5, with nails or screws, at the locations specified by the manufacturer.

6E. **Brick —** Brick veneer, meeting the requirements of local code agencies. Brick veneer attached to the studs with corrugated metal wall ties attached to each stud with 8d cement coated nails, every sixth course of bricks.

7. **Exterior Facings —** Exterior Facing specified as Item 7A and 7B is not permitted for 1 hr Fire Resistance Rating for fire from the Exterior Face, optional for 2 hr Fire Resistance Rating for fire from Interior Face.

7A. **Vinyl Siding —** (Optional) - UL Classified exterior plastic siding (molded plastic), fastened to the building units or wood panel sheathing with nails or screws, at the locations specified by the manufacturer.

7B. **Exterior Facings —** (Optional - Not Shown) - Any exterior facing approved by the Authority Having Jurisdiction installed in accordance with the manufacturer's installation instructions.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2023-03-16

ICC-ES Evaluation Report ESR-2290

Reissued March 2022
Revised May 2023
This report is subject to renewal March 2024.

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 16 00—Sheathing

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 46 46—Fiber-Cement Siding

REPORT HOLDER:

JAMES HARDIE BUILDING PRODUCTS, INC.

EVALUATION SUBJECT:

HARDIE®SHINGLE PANELS, HARDIE®PLANK LAP SIDING, ARTISAN® LAP SIDING, AND HARDIE®SHINGLE INDIVIDUAL SHINGLES

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2021, 2018, 2015, 2012, 2009 and 2006 *International Building Code*® (IBC)
- 2021, 2018, 2015, 2012, 2009 and 2006 *International Residential Code*® (IRC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)†

†The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

- Weather protection
- Structural
- Types I, II, III, and IV (noncombustible) construction
- Fire-resistance-rated construction
- Thermal resistance

1.2 Evaluation to the following green standards:

2020, 2015, 2012 and 2008 ICC 700 *National Green Building Standard™* (ICC 700-2020, ICC 700-2015, ICC 700-2012 and ICC 700-2008)

Attributes verified:

See Section 3.1

2.0 USES

James Hardie fiber-cement panels, plank lap siding, and cladding shingles are used as exterior wall covering. The products comply with 2021 and 2018 IBC Section 1403.10 [2015, 2012, 2009 and 2006 IBC Sections 1404.10] and IRC Section R703.10. The products may be used on exterior walls required to be of Type I, II, III or IV construction (IBC).

3.0 DESCRIPTION

3.1 General:

The exterior sidings are single-faced, cellulose fiber–reinforced cement (fiber-cement) products. Exterior sidings are identified as Hardie®Shingle panels, Hardie®Plank (Cemplank®, Prevail®, and RFC®) lap siding, Artisan® Lap Siding, and Hardie®Shingle individual shingles.

The products comply with ASTM C1186, as Grade II, Type A; have a flame-spread index of 0 and a smoke-developed index of 5 when tested in accordance with ASTM E84; and are classified as noncombustible when tested in accordance with ASTM E136. Thermal conductance (K) and resistance (R) values for the products are as shown in Table 2 of this report, based on testing in accordance with ASTM C177.

The attributes of the fiber-cement sidings have been verified as conforming to the provisions of (i) ICC 700-2020, ICC 700-2015 and ICC 700-2012 Sections 602.1.6 and 11.602.1.6 for termite-resistant materials; and (ii) ICC 700-2008 Section 602.8 for termite-resistant materials. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

3.2 Siding:

Hardie®Shingle panels, Hardie®Plank (Cemplank®, Prevail®, and RFC®) lap siding, Artisan® Lap Siding, and Hardie®Shingle individual shingles are supplied either coated, or uncoated for subsequent application of a compatible exterior-grade top coat. Nominal product dimensions are noted in Table 1.

The products are available in a variety of finish textures. Hardie®Shingle panels are offered in three configurations:

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

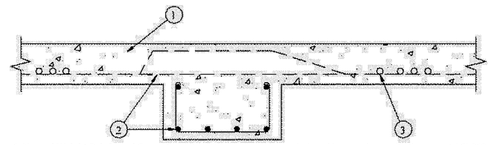
Design No. K913

October 30, 2019

Restrained Assembly Rating — 1-1/2 or 2 Hr. (See Items 1 and 3)
Unrestrained Assembly Rating — 1 and 2 Hr. (See Item 1)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Normal Weight Reinforced Concrete —** Reinforced slab and beam designed in accordance with the current ACI-318. Carbonate aggregate, minimum compressive strength of 3500 psi., and unit weight of 145 +/- 5 pcf. Minimum Slab thickness and reinforcement cover described in the table below:

Restrained Assembly Rating (hr.)	Unrestrained Assembly Rating (hr.)	Min. Total Slab Thickness (in.)	Min. Concrete Cover Over Positive Reinforcement. (in.)
2	1-1/2	6-1/2	1
2	2	6-1/2	1 - 1/2

2. **Steel Reinforcement —** Various sized Grade 40 or 60 deformed steel bars located as required by ACI-318 design for positive and negative reinforcement. Minimum concrete cover to be placed over positive reinforcement as described in Item 1.

3. **Non-Metallic Plumbing Components* —** Nominal 1/2 in through 2 in.diameter tubing tied perpendicular to and on the top side of the positive reinforcing bars. The tubing may be placed inside a flexible or rigid polyethelene or rigid PVC sleeve. The tubing may penetrate the floor membrane through a sill plate and into a stud cavity of a wall as necessary. Tubes may be supported by 1-1/2 in wide by 3/8 in thick "PVC" or steel brackets. The maximum amount of tubing shall be defined as shown in the table below:

Restrained Assembly Rating (hr.)	Unrestrained Assembly Rating (hr.)	Max. Density of Tube per ft.^{3} of concrete (in.^{3})
2	1-1/2	13
2	2	13

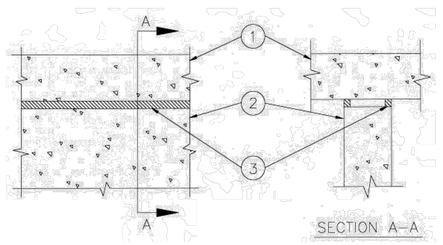
UPONOR WIRSBO COMPANY — Types AquaPex White, AquaPex Red, AquaPex Blue, Pre-Insulated AquaPex and HePex

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2019-10-30

System No. HW-D-0369

Assembly Ratings – 2 Hr
Nominal Joint Width – 3/4 in.
Class II Movement Capabilities –33% Compression or Extension



1. **Floor Assembly –** Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete.

2. **Wall Assembly –** Min 4-7/8 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete. Wall may also be constructed of any UL Classified **Concrete Blocks*.**
See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

3. **Joint System – Max separation between bottom of floor and top of wall is 3/4 in. The joint system is designed to accommodate a max 33 percent compression or extension from its installed width.** Min 5/8 in. thickness of fill material installed on each side of the wall between the top of the wall and the bottom of the floor, flush with each surface of wall.

John Wagner & Associates Inc. – GrabberGard EFC

*Bearing the UL Classification Marking

COMcheck Software Version COMcheckWeb
Envelope Compliance Certificate

Project Information

Energy Code:	2021 IECC
Project Title:	220242 - New Dewey Town Hall
Location:	Dewey Beach, Delaware
Climate Zone:	4a
Project Type:	New Construction
Vertical Glazing / Wall Area:	11%

Construction Site:
1503 + 1505 Coastal Highway, +
105 Rodney Ave
Dewey Beach, Delaware 19971

Owner/Agent:
The Town of Dewey Beach
105 Rodney Ave
Dewey Beach, Delaware 19971

Designer/Contractor:
Morgan Helfrich
GMB - Architects & Engineers LLC
206 W Main St
Salisbury, Maryland 21801
410-742-3115
mhelfrich@gmbnet.com

Additional Efficiency Package(s)

Credits: 10.0 Required 13.0 Proposed
5% heating efficiency improvement, 0.0 credit
5% cooling efficiency improvement, 0.0 credit
Dedicated outdoor air, 5.0 credit
Enhanced envelope performance, 0.0 credit
Reduced air infiltration, 8.0 credit
Reduced lighting power, 0.0 credit
Efficient kitchen equipment, 0.0 credit

Building Area	Floor Area
1-Town Hall : Nonresidential	21168

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof: Attic Roof, Steel Joists, [Bldg. Use 1 - Town Hall]	8772	49.0	0.0	0.029	0.021
Floor: Unheated Slab-On-Grade Fully insulated (uniform R-value across perimeter + under entire slab), [Bldg. Use 1 - Town Hall] (d)	491	---	15.0	0.300	0.520
NORTH					
Ext. Wall - Type A: Concrete Block, 8in., Solid Grouted, Medium Density, Furring: Metal, [Bldg. Use 1 - Town Hall]	1653	0.0	9.5	0.080	0.104
Door (139B + 141D; 21 sf ea)): Insulated Metal, Swinging, [Bldg. Use 1 - Town Hall] (c)	42	---	---	0.480	0.370
Window Type A (9 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.05, [Bldg. Use 1 - Town Hall] (c)	72	---	---	0.360	0.360
Window Type F (7 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.08, [Bldg. Use 1 - Town Hall] (c)	14	---	---	0.360	0.360
Ext. Wall - Type D: Steel-Framed, 16in. o.c., [Bldg. Use 1 - Town Hall]	2821	13.0	7.5	0.064	0.064
Window Type C (15 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.13, [Bldg. Use 1 - Town Hall] (c)	390	---	---	0.360	0.360
Window Type F (7 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.18, [Bldg. Use 1 - Town Hall] (c)	14	---	---	0.360	0.360
EAST					
Ext. Wall - Type A: Concrete Block, 8in., Solid Grouted, Medium Density, Furring: Metal, [Bldg. Use 1 - Town Hall]	914	0.0	9.5	0.080	0.104
Entrance Door (100A): Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID na, SHGC 0.16, PF 0.28, [Bldg. Use 1 - Town Hall] (c)	88	---	---	0.600	0.630
Window Type A (9 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.07, [Bldg. Use 1 - Town Hall] (c)	54	---	---	0.360	0.360
Ext. Wall - Type D: Steel-Framed, 16in. o.c., [Bldg. Use 1 - Town Hall]	1668	13.0	7.5	0.064	0.064
Window Type B (9 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.27, [Bldg. Use 1 - Town Hall] (c)	90	---	---	0.360	0.360
Window Type C (15 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.13, [Bldg. Use 1 - Town Hall] (c)	90	---	---	0.360	0.360
Window Type E (55 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.25, [Bldg. Use 1 - Town Hall] (c)	55	---	---	0.360	0.360
SOUTH					
Ext. Wall - Type A: Concrete Block, 8in., Solid Grouted, Medium Density, Furring: Metal, [Bldg. Use 1 - Town Hall]	1653	0.0	9.5	0.080	0.104
Door (143AD; 21 sf ea): Insulated Metal, Swinging, [Bldg. Use 1 - Town Hall]	21	---	---	0.480	0.370
Bi-Fold Door (141B, 141C, 142B; 144 sf ea): Other (U-Factor option), Garage door 14% glazing, [Bldg. Use 1 - Town Hall]	432	---	---	0.480	0.310
Entrance Door (140A): Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID na, SHGC 0.16, PF 1.09, [Bldg. Use 1 - Town Hall] (c)	54	---	---	0.600	0.630
Window Type A (9 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.05, [Bldg. Use 1 - Town Hall] (c)	72	---	---	0.360	0.360
Window Type F (7 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.08, [Bldg. Use 1 - Town Hall] (c)	14	---	---	0.360	0.360
Ext. Wall - Type D: Steel-Framed, 16in. o.c., [Bldg. Use 1 - Town Hall]	2821	13.0	7.5	0.064	0.064
Entrance Door (211B): Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID na, SHGC 0.16, PF 1.00, [Bldg. Use 1 - Town Hall] (c)	51	---	---	0.600	0.630
Window Type C (15 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.13, [Bldg. Use 1 - Town Hall] (c)	390	---	---	0.360	0.360
Window Type F (7 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.18, [Bldg. Use 1 - Town Hall] (c)	7	---	---	0.360	0.360
WEST					
Ext. Wall - Type A: Concrete Block, 8in., Solid Grouted, Medium Density, Furring: Metal, [Bldg. Use 1 - Town Hall]	914	0.0	9.5	0.080	0.104
Window Type C (15 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.13, [Bldg. Use 1 - Town Hall] (c)	120	---	---	0.360	0.360
Window Type B (9 sf ea): Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.18, PF 0.27, [Bldg. Use 1 - Town Hall] (c)	18	---	---	0.360	0.360
Ext. Wall - Type D: Steel-Framed, 16in. o.c., [Bldg. Use 1 - Town Hall]	1668	13.0	7.5	0.064	0.064

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) 'Other' components require supporting documentation for proposed U-factors.
(c) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(d) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Project Notes

Envelope PASSES: Design 3% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Morgan Helfrich, AIA, LEED AP — Name - Title
Signature
2024.02.21 — Date

This report identifies proposed Construction Documentation Design only, GMB - Architect's & Engineers is not liable for construction or any deviations from this design.

MORGAN HALL HELFRICH No. S5-0007846 STATE OF DELAWARE REGISTERED ARCHITECT

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 21801
www.gmbnet.com

CONSTRUCTION FOR:
NEW DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

UL ASSEMBLIES + COMCHECK REPORT

MORGAN HALL HELFRICH No. S5-0007846 STATE OF DELAWARE REGISTERED ARCHITECT

SCALE	: ############
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

CS1.4

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g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\CS1.4 UL ASSEMBLIES.dwg, 11/14/2024 4:48 PM, Deone L. Townsend

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

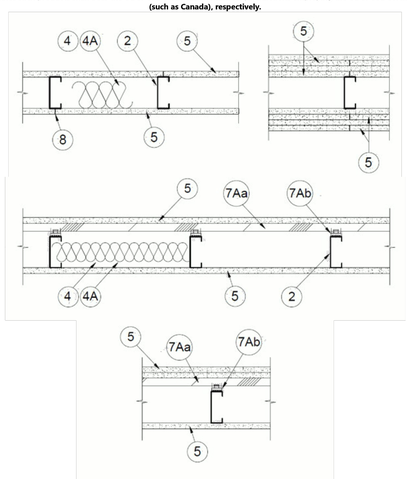
See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. **U419**

March 15, 2024

Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 4 & 5 through 5J)
*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Floor and Ceiling Runners —** (Not Shown) — For use with Item 2 — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth to accommodate stud size, with min 1-1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.

1A. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2B, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max.
CEMCO, LLC — Viper25™ Track

CRACO MFG INC — SmartTrack25™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™ Track

IMPERIAL MANUFACTURING GROUP INC — Viper25™ Track

1B. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2C, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
CEMCO, LLC — Viper20™ Track

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track

IMPERIAL MANUFACTURING GROUP INC — Viper20™ Track

1C. **Framing Members* — Floor and Ceiling Runners —** (Not Shown) — In lieu of Item 1 — Channel shaped, attached to floor and ceiling with fasteners 24 in. OC. max.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20

TELLING INDUSTRIES L L C — Type SUPREME D24/30EQD and Type SUPREME D20

UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

1D. **Floor and Ceiling Runners —** (Not Shown) — For use with Item 2A — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners spaced max 24 in. OC.

1E. **Framing Members* — Floor and Ceiling Runners —** (Not Shown, As an alternate to Item 1) — For use with Items 2E, 5F or 5G or 5I only, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max.
CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK

DMFCWBS L L C — ProTRAK

MBA METAL FRAMING — ProTRAK

RAM SALES L L C — Ram ProTRAK

STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProTRAK

1F. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2F, proprietary channel shaped runners, minimum width to accommodate stud size, with 1- 1/8 in. long legs fabricated from min 0.015 in. (min bare metal thickness) galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
SUPER STUD BUILDING PRODUCTS — The Edge

1G. **Framing Members* — Floor and Ceiling Runner —** For use with Item 2G, proprietary channel shaped runners, minimum width to accommodate stud size attached to floor and ceiling with fasteners 24 in. OC max.
STUDCO BUILDING SYSTEMS — CROCSTUD Track

1H. **Floor and Ceiling Runners —** (Not Shown) — Channel shaped, fabricated from min 0.02 in. galv steel, min width to accommodate stud size, with min 1 in. long legs; for use with studs specified below and fabricated from min 0.018 in. galv steel or thicker, attached to floor and ceiling with fasteners spaced max 24 in. OC.
MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track VT100

IMPERIAL MANUFACTURING GROUP INC — Viper20™ Track VT100

1I. **Framing Members* — Floor and Ceiling Runners —** (Not Shown, As an alternate to Item 1) — For use with Items 2H, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max.
TELLING INDUSTRIES L L C — TRUE-TRACK™

1J. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2I, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max.

1K. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2J, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

1L. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2N, proprietary channel shaped runners, 1-1/4 in. wide by min. 3-1/2 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
RESCUE METAL FRAMING, L L C — AlphaTRAK

1M. **Framing Members* — Floor and Ceiling Runners —** Not Shown — As an alternate to Item 1 — For use with Item 2O, proprietary channel shaped runners, min width to accommodate stud size, galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
RONDO BUILDING SERVICES PTY LTD — Rondo Wall Track

1N. **Framing Members* — Floor and Ceiling Runners —** Not Shown — As an alternate to Item 1 — For use with Item 2P, proprietary channel shaped runners, min width to accommodate stud size, galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
OEG BUILDING MATERIALS — OEG Track

1O. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2Q, proprietary channel shaped runners, min width to accommodate stud size, fabricated from min. 25 MSG (0.018 in. min. bare metal thickness), attached to floor and ceiling with fasteners spaced 24 in. OC max.
CEMCO, LLC — Viper X Track

1P. **Framing Members* — Floor and Ceiling Runner —** (Not Shown — Alternate to Item 1) — For use with Item 2R, channel shaped runners pre-equipped with proprietary attachment clips. Min. 3-5/8 in. wide. Legs of top runners minimum 3-1/4 in. wide. Legs of bottom runners minimum 1-1/2 in. wide. Runners attached to floor and ceiling with fasteners 24 in. OC max.

HYPERFRAME INC - Hypertrack

1Q. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2S , proprietary channel shaped runners, min width to accommodate stud size, fabricated from min. 20 EQ/22 mils. (min. 0.0221 in. thick) galvanized steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

JJC INTERNATIONAL DISTRIBUTORS — Non-structural Tracks 3-5/8" and 6".

1R. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2T, proprietary channel shaped runners ,min width to accommodate stud size, fabricated from min. 25 MSG (0.018 in. min. bare metal thickness), attached to floor and ceiling with fasteners spaced 24 in. OC max

IRONLINE METALS LLC — Bantam Track.

2. **Steel Studs —** Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

2A. **Steel Studs —** (As an alternate to Item 2, For use with Items 5B, 5E, 5H, 5J or Type ULIX) — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.

2B. **Framing Members* - Steel Studs —** (As an alternate to Item 2, For use with Items 5C, 5I or Type ULIX) — Proprietary channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in less than the assembly height and installed with a 1/2 in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.
CEMCO, LLC — Viper25™

CRACO MFG INC — SmartStud25™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™

IMPERIAL MANUFACTURING GROUP INC — Viper25™

2C. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.
CEMCO, LLC — Viper20™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™

IMPERIAL MANUFACTURING GROUP INC — Viper20™

2D. **Framing Members* — Steel Studs —** In lieu of Item 2 — Channel shaped studs, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20

TELLING INDUSTRIES L L C — Type SUPREME D24/30EQD and Type SUPREME D20

UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

2E. **Framing Members* — Steel Studs —** (Not Shown, As an alternate to Item 2) — For use with Items 5F or 5G or 5I or Type ULIX only, channel shaped studs, min depth as indicated under Item 5F, 5G or 5I, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
CLARKDIETRICH BUILDING SYSTEMS — CD ProSTUD

DMFCWBS L L C — ProSTUD

MBA METAL FRAMING — ProSTUD

RAM SALES L L C — Ram ProSTUD

STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProSTUD

2F. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, minimum width indicated under Item 5, 1-1/4 in. deep fabricated from min 0.015 in. (min bare metal thickness) galvanized steel. Studs 3/8 in. to 3/4 in. less in lengths than assembly heights.
SUPER STUD BUILDING PRODUCTS — The Edge

2G. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — proprietary channel shaped studs, minimum width indicated under Item 5, Studs to be cut 3/8 to 3/4 in less than the assembly height.
STUDCO BUILDING SYSTEMS — CROCSTUD

2H. **Framing Members* — Steel Studs —** (Not Shown, As an alternate to Item 2) — Fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
TELLING INDUSTRIES L L C — TRUE-STUD™

2I. **Framing Members* — Steel Studs —**

2J. **Framing Members* — Metal Studs —** Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights

2K. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
EB METAL INC — NITROSTUD

2L. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
OLMAR SUPPLY INC — PRIMESTUD

2M. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
MARINO/WARE, DIV OF WARE INDUSTRIES INC — StudRite™

2N. **Framing Members*— Steel Studs —** As an alternate to Item 2 — proprietary channel shaped steel studs, min depth 3-1/2 in. and as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in length than assembly height.
RESCUE METAL FRAMING, L L C — AlphaSTUD

2O. **Framing Members* — Steel Studs —** As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, galv steel. Studs to be cut 3/8 to 3/4 in. less in lengths than assembly height. Spaced 24 in. OC max.
RONDO BUILDING SERVICES PTY LTD — Rondo Lipped Wall Stud

2P. **Framing Members* — Steel Studs —** As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, min 25 MSG galv steel. Studs to be cut 3/8 to 3/4 in. less in lengths than assembly height. Spaced 24 in. OC max.
OEG BUILDING MATERIALS — OEG Stud

2Q. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — For use with Item 1O, proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 25 MSG (0.018 in. min. bare metal thickness). Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.
CEMCO, LLC — Viper X

2R. **Framing Members* — Steel Studs —** (Not Shown — Alternate to Item 2, For use with Item 1P) — Channel shaped steel studs with attachment clips at top and bottom, min 3-5/8 in. depth, spaced a max of 24 in. OC. Studs clipped into floor and ceiling runners (Item 1P). Max 2-3/8 in. extension reveal from top of stud to inside of ceiling runner.

HYPERFRAME INC— Hyperstud

2S. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — For use with Item 1Q, proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min. 20 EQ/22 mils. (min. 0.0221 in. thick) galvanized steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.

JJC INTERNATIONAL DISTRIBUTORS — Non-structural Studs 3-5/8" and 6".

2T. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — For use with Item 1R, proprietary channel shaped steelstuds, min depth as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 25 MSG (0.018 in. min. bare metal thickness). Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.

IRONLINE METALS LLC — Bantam Stud.

3. **Wood Structural Panel Sheathing —** (Optional, For use with Item 5 Only) — (Not Shown) — 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC PS1 or PS2, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in. at maximum 6 in. OC. in the perimeter and 12 in. OC. in the field. When used, gypsum panels attached over OSB or plywood panels and fastener lengths for gypsum panels increased by min. 1/2 in.

4. **Batts and Blankets* —** (Required as indicated under Item 5) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5.
See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

4A. **Batts and Blankets* —** (Optional – as an alternate to item 4) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance.
See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

4B. **Fiber, Sprayed* —** (Optional – as an alternate for items 4 or 4A, for use with Type ULIX) Where insulation is required - Spray applied granulated mineral fiber material. The fiber is applied with adhesive at a minimum density of 4.0 pcf to completely fill the wall cavity in accordance with the application instructions supplied with the product. See **Fiber, Sprayed** (CCAZ).
AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

4C. **Foamed Plastic* —** (As an alternate for items 4, 4A or 4B, for use with Item 5K) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity, for 2 hour rated assemblies only. When foamed plastic is used, minimum stud depth shall be 3-1/2 in. with minimum 20 MSG steel thickness.

CARLISLE SPRAY FOAM INSULATION — Types SealTite ONE, SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamsulate Closed Cell, Foamsulate OCX, Foamsulate 70, and Foamsulate HFO.

4D. **Foamed Plastic* —** (As an alternate for items 4, 4A or 4B, for use with Item 5K) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity, for up to 2 hour rated assemblies only. When foamed plastic is used, minimum stud depth shall be 3-1/2 in. with minimum 20 MSG steel thickness.

BASF CORP - Enerfite® NM, Enerfite® G, FE178®, Sprayfite® 178, Sprayfite® 81206, Wallfite® 200, Wallfite® US, Wallfite® US-N, Wallfite HP+, FE137®, FE158®, Sprayfite® 158, Sprayfite® SP, Sprayfite® 81205, Sprayfite® Comfort XL, Wallfite® XL, and Wallfite® MAX

5. **Gypsum Board* —** Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) with Type ULIX need not be staggered. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Items 2, 2C, 2D, 2F, 2G, 2O	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item 4)
1	3-1/2	1 layer, 5/8 in. thick	Optional
1	2-1/2	1 layer, 1/2 in. thick	1-1/2 in.
1	1-5/8	1 layer, 3/4 in. thick	Optional
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
2	3-1/2	1 layer, 3/4 in. thick	3 in.
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	2 layers, 3/4 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional
4	2-1/2	2 layers, 3/4 in. thick	2 in.

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR; WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — 1/2 in. thick Type C and 5/8 in. thick Type SCX

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SGX, SHX, ULIX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR; 3/4 in. thick Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or; 3/4 in. thick Types IP-X3 or ULTRACODE

When Item 7B, **Steel Framing Members***, is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth is 3-1/2 in., min. thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 6.

5A. **Gypsum Board* —** (As an alternate to Item 5) — 5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 6.
CGC INC — Type SHX.

UNITED STATES GYPSUM CO — Type FRX-G, SHX.

USG MEXICO S A DE C V — Type SHX.

5B. **Gypsum Board* —** (Not Shown) — As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in or 3/4 in. thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) — Nom 5/8 in. or 3/4 in. may be used as alternate to all 5/8 in. or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel studs Item 2A with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 11) or Lead Discs or Tabs (see Item 12).
RAY-BAR ENGINEERING CORP — Type RB-LBG

5C. **Gypsum Board* —** (For Use With Item 2B) — Rating Limited to 1 Hour. 5/8 in. thick, 48 in. wide, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. (Vertical Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered one stud cavity on opposite sides of studs. (Horizontal Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. All horizontal joints are to be backed as outlined under section VI of Volume 1 in the Fire Resistive Directory.
CGC INC — Type SCX, ULIX.

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type SCX

UNITED STATES GYPSUM CO — Type SCX, SGX, ULIX.

USG BORAL DRYWALL SFZ LLC — Type SCX

USG MEXICO S A DE C V — Type SCX

5D. **Gypsum Board* —** (As an alternate to Item 5) — 5/8 in. thick, 48 in. wide, applied vertically or horizontally. Secured as described in Item 6. For use with Items 1 and 2 only.
CGC INC — Type USGX

UNITED STATES GYPSUM CO — Type USGX

USG BORAL DRYWALL SFZ LLC — Type USGX

USG MEXICO S A DE C V — Type USGX

5E. **Gypsum Board* —** (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified, For direct attachment only to steel studs Item 2A, not to be used with Item 3). Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or No. 6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.
NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Nelco

5F. **Gypsum Board* —** (As an alternate to Item 5) — For use with Items 1E and 2E and limited to 1 Hour Rating only, Gypsum panels with beveled, square or tapered edges, applied vertically, and fastened to the steel studs with 1 in. long Type S screws spaced 8 in. OC along vertical and bottom edges and 12 in. OC in the field. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Steel stud depth shall be a minimum 3-5/8 in.
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type SCX

UNITED STATES GYPSUM CO — 5/8 in. thick Type SCX, SGX, ULIX

USG BORAL DRYWALL SFZ LLC — 5/8 in. thick Type SCX, SGX

5G. **Gypsum Board* —** (As an alternate to Item 5) — For use with Items 1E and 2E only, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally, as specified in the table below and fastened to the steel studs as described in Item 6. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Item 2E	No. of Layers & Thickness of Panel	Min Thkns of Insulation (Item 4)
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR;, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX or 3/4 in. thick Types IP-X3 or ULTRACODE

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — 1/2 in. thick Types C and 5/8 in. thick SCX

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type SCX, SGX, SHX, IP-X1, AR, C, , FRX-G, IP-AR, IP-X2, IPC-AR, ULIX; 3/4 in. thick Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or; 3/4 in. thick Types IP-X3 or ULTRACODE

5H. **Gypsum Board* —** (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 or 3/4 in thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) - Nom 5/8 or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Gypsum board secured to 20 MSG steel studs Item 2B with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 11A) or Lead Discs (see Item 12A).
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

5I. **Gypsum Board* —** (As an alternate to Item 5) — Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 5. Steel stud minimum depth shall be as indicated in Item 5.
CGC INC — Type ULIX, ULX

UNITED STATES GYPSUM CO — Type ULIX, ULX

USG MEXICO S A DE C V — Type ULIX

5J. **Gypsum Board* —** (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified, For direct attachment only to steel studs Item 2A, not to be used with Item 3). Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5K. **Gypsum Board* —** (As an alternate to Item 5 when Foam Plastic insulation (Items 4C or 4D) is used) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 5 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1-1/4 in. long Type S steel screws spaced 8 in. OC at perimeter and in the field. For 2 layer assemblies outer layer will be attached to studs over inner layer with the 1-7/8 in. long steel screws spaced 8 in. OC.

6. **Fasteners —** (Not Shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). **Single layer systems:** 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. **Single layer system with Type ULIX:** 1 in. long, spaced 12 in. OC in the field and perimeter, when panels are applied horizontally or vertically.**Two layer systems:** First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer.**Three-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. **Four-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

UL ASSEMBLIES

MORGAN HALL HELFRICH
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: ############
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

CS1.5

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BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. **U419**

7. **Furring Channels —** (Optional, Not Shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 5A.

7A. **Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 9/16 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).

7B. **Framing Members* —** (Optional, Not Shown) — As an alternate to Item 7, for single or double layer systems, furring channels and Steel Framing Members on only one side of studs as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 5. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ba) to one side of studs (Item 2) only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.
KINETICS NOISE CONTROL INC — Type Isomax

7C. **Framing Members* —** (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ca) to studs (Item 2). Clips spaced max. 48 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
PLITEQ INC — Type GENIECLIP

7D. **Steel Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Da) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

7E. **Steel Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 7Eb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

7F. **Steel Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — Resilient channels and Steel Framing Members as described below:
a. **Resilient Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 5. Not for use with Item 5A and 5E.

b. **Steel Framing Members* —** Used to attach resilient channels (Item 7Fa) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan- head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

7G. **Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ga) to studs (Item 2). Clips spaced max. 48 in. OC. Clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips.
CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

8. **Joint Tape and Compound —** Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

9. **Siding, Brick or Stucco —** (Optional, Not Shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

10. **Caulking and Sealants* —** (Optional, Not Shown) — A bead of acoustical sealant applied around the partition perimeter for sound control.
UNITED STATES GYPSUM CO — Type AS

11. **Lead Batten Strips —** (Not Shown, For Use With Item 5B) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.

11A. **Lead Batten Strips —** (Not Shown, For Use With Item 5H) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations.

12. **Lead Discs or Tabs —** (Not Shown, For Use With Item 5B) — Used in lieu of or in addition to the lead batten strips (Item 11) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

12A. **Lead Discs —** (Not Shown, for use with Item 5H) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

13. **Lead Batten Strips —** (Not Shown, For Use With Item 5E) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5E) and optional at remaining stud locations.

14. **Lead Tabs —** (Not Shown, For Use With Item 5E) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5E) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

15. **Barrier Mesh —** (Optional, Not Shown) - Attached to steel studs on one or both sides of the wall using Barrier Mesh Clips spaced at maximum 12 inches on center vertically, using a flat head type screw penetrating through the steel at least 3/8 of an inch. For Steel Studs less than 0.033 inches in thickness, use self-piercing screws. For Steel Studs equal to or greater than 0.033 inches in thickness, use steel drill screws (self-tapping). Gypsum Board (Item 5) to be installed directly over the Barrier Mesh using prescribed screw patterns with lengths increased by a minimum 1/8 in. Barrier Mesh may be installed with the long dimension of the diamond pattern positioned vertically or horizontally. Barrier Mesh joints may occur as butt joints at the framing members and secured using the Barrier Mesh Clips or occur in between framing members as overlapping joints secured using 18 SWG wire ties spaced a maximum 12 in. on center.
CLARKDIETRICH BUILDING SYSTEMS — Barrier Mesh, Barrier Mesh Clips

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2024-03-15

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NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024

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GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 21804
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

UL ASSEMBLIES

MORGAN HALL HEDRICK
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: ============
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

CS1.6

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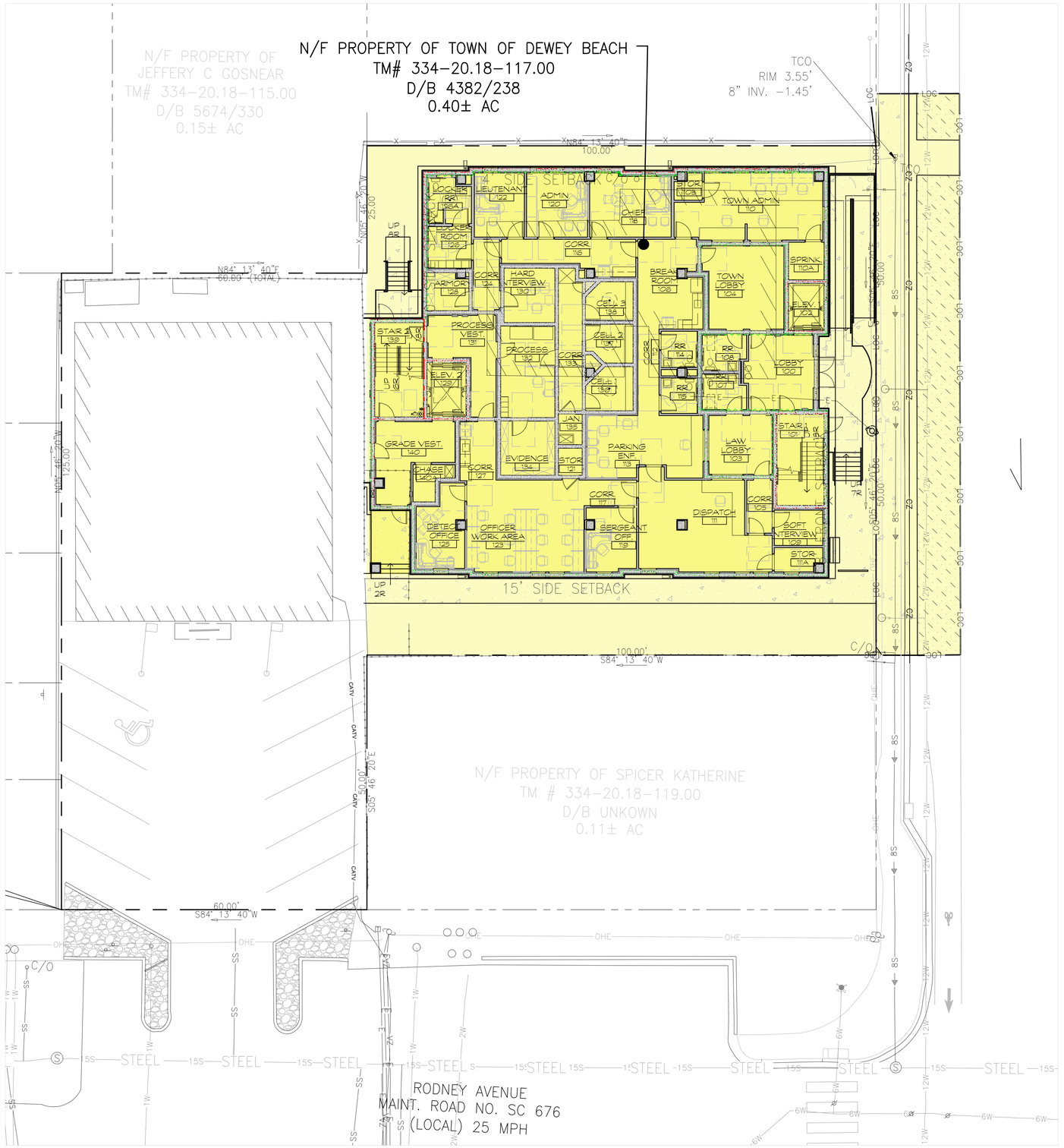


2 PHASING PLAN - PHASE 1 (FIRST FLOOR)
3/32" = 1'-0"

NOTES

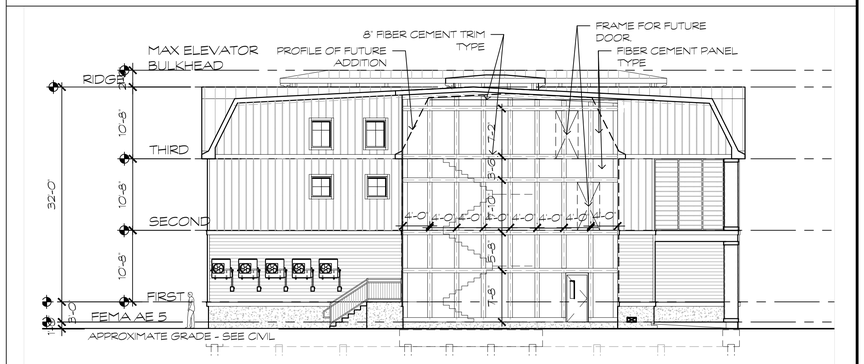
ALL HEAVY CONSTRUCTION (I..E. PILE DRIVING, EXCAVATION, DRILLING, ETC.) OR ANY ASSOCIATED CONSTRUCTION THAT GENERATES LOUD NOISES AND VIBRATIONS SHALL HALT BETWEEN THE THURSDAY PRIOR TO MEMORIAL DAY AND TUESDAY FOLLOWING LABOR DAY.

PHASE 1
- EXISTING TOWN HALL LOCATED ON 105 RODNEY AVENUE (TM# 334-20.18-120.00) TO REMAIN OPEN AND OCCUPIED.
- TEMPORARY INTERRUPTIONS TO POWER SERVICES AND UTILITY SHUT OFFS TO THE EXISTING TOWN HALL OR ADJACENT PROPERTIES SHALL BE COORDINATED WITH THE TOWN PRIOR TO SERVICE INTERRUPTION.
- MAINTAIN TOWN HALL PARKING AREAS AND PROVIDE SAFETY MEASURES FOR EMPLOYEES AND RESIDENTS ENTERING THE BUILDING.
- CONTRACTOR SHALL MAKE REASONABLE EFFORTS TO REDUCE NOISE, DUST AND OTHER DISRUPTIONS TO A MINIMUM DURING OFFICE OPERATING HOURS.
- COORDINATE SCHEDULE FOR COMPLETION OF PHASE WITH OWNER.

PHASE 2
- NEW TOWN HALL AND POLICE DEPARTMENT LOCATED ON 1503 + 1505 COASTAL HIGHWAY (TM# 334-20.18-117.00 AND 334-20.18-118.00) TO BE OCCUPIED BY THE TOWN.
- TEMPORARY INTERRUPTIONS TO POWER SERVICES AND UTILITY SHUT OFFS TO THE NEW TOWN HALL OR ADJACENT PROPERTIES SHALL BE COORDINATED WITH THE TOWN PRIOR TO SERVICE INTERRUPTION.
- MAINTAIN A SECURED PATH OF EGRESS FROM THE NEW TOWN HALL TO RODNEY AVE THROUGH 105 RODNEY AVE (TM# 334-20.18-120.00) DURING CONSTRUCTION.
- CONTRACTOR SHALL MAKE REASONABLE EFFORTS TO REDUCE NOISE, DUST AND OTHER DISRUPTIONS TO A MINIMUM DURING OFFICE OPERATING HOURS

PHASE 1
- DEMOLITION OF EXISTING CODE ENFORCEMENT OFFICE, PARKING, UTILITIES ON PROPERTIES 1503 & 1505 COASTAL HIGHWAY (TM# 334-20.18-117.00 AND 334-20.18-118.00) TO BE PERFORMED BY THE TOWN.
- SITEWORK SHALL CONSIST OF SITE GRADING, UTILITIES, STORMWATER AND EROSION CONTROL, AND OTHER MISC SITEWORK INDICATED ON CIVIL DRAWINGS PERTAINING TO PROPERTIES TM# 334-20.18-117.00 AND 334-20.18-118.00 SHALL OCCUR. EXISTING CURB CUT AND SIDEWALK TO BE REMOVED, AND NEW SIDEWALK AND CURB TO BE PROVIDED ALONG COASTAL HIGHWAY.
- CONSTRUCTION OF NEW TOWN HALL AND POLICE DEPARTMENT TO OCCUR AS INDICATED ON ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.
- WESTERN PARTY WALL BETWEEN PHASE 1 + 3 SHALL BE FINISHED WITH VB, FURRING, RIGID INSULATION, AND LARGE FIBER-CEMENT PANELS AND TRIM TYPICAL OF WALL CONSTRUCTION ASSEMBLY FOR TEMPORARY WEATHER PROTECTION BETWEEN PHASE 1+3 CONSTRUCTION.
- EXISTING SITEWORK AND BUILDING STRUCTURE OF THE TOWN HALL ON 105 RODNEY AVENUE (TM# 334-20.18-120.00) TO REMAIN INTACT AND OCCUPIED.

PHASE 2
- UPON SUBSTANTIAL COMPLETION OF THE NEW TOWN HALL AND POLICE DEPARTMENT, THE TOWN OF DEWEY TO VACATE THE EXISTING TOWN HALL AND TRANSFER ALL FURNISHINGS, EQUIPMENT, DOCUMENTS, ETC. TO THE NEW FACILITY.
- UPON COMPLETION OF TRANSFERRING TO THE NEW FACILITY, THE TOWN WILL DEMOLISH THE EXISTING TOWN HALL. NEW SITEWORK SHALL CONSIST OF SITE GRADING, UTILITIES, STORMWATER AND EROSION CONTROL, AND OTHER MISC SITEWORK AS INDICATED ON CIVIL DRAWINGS THAT PERTAINS TO THE FORMER 105 RODNEY AVENUE (TM# 334-20.18-120.00).
- CONSTRUCTION OF NEW SALLYPORT, EMS GARAGE, AND EMS QUARTERS, SHALL OCCUR AS INDICATED ON ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.
- FIBER CEMENT PANELS FROM PHASE 1 TO BE REMOVED, AND DRYWALL TO BE INSTALLED OVER FURRING.
- ANY ASSOCIATED UTILITY TIE-INS TO OCCUR.



1 PHASING PLAN - PHASE 1 ELEVATION
3/32" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

PHASING PLAN - PHASE 1

MORGAN HALL HEFFRON No. S5-0007646 STATE OF DELAWARE REGISTERED ARCHITECT

SCALE	: ##############
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

CS1.7

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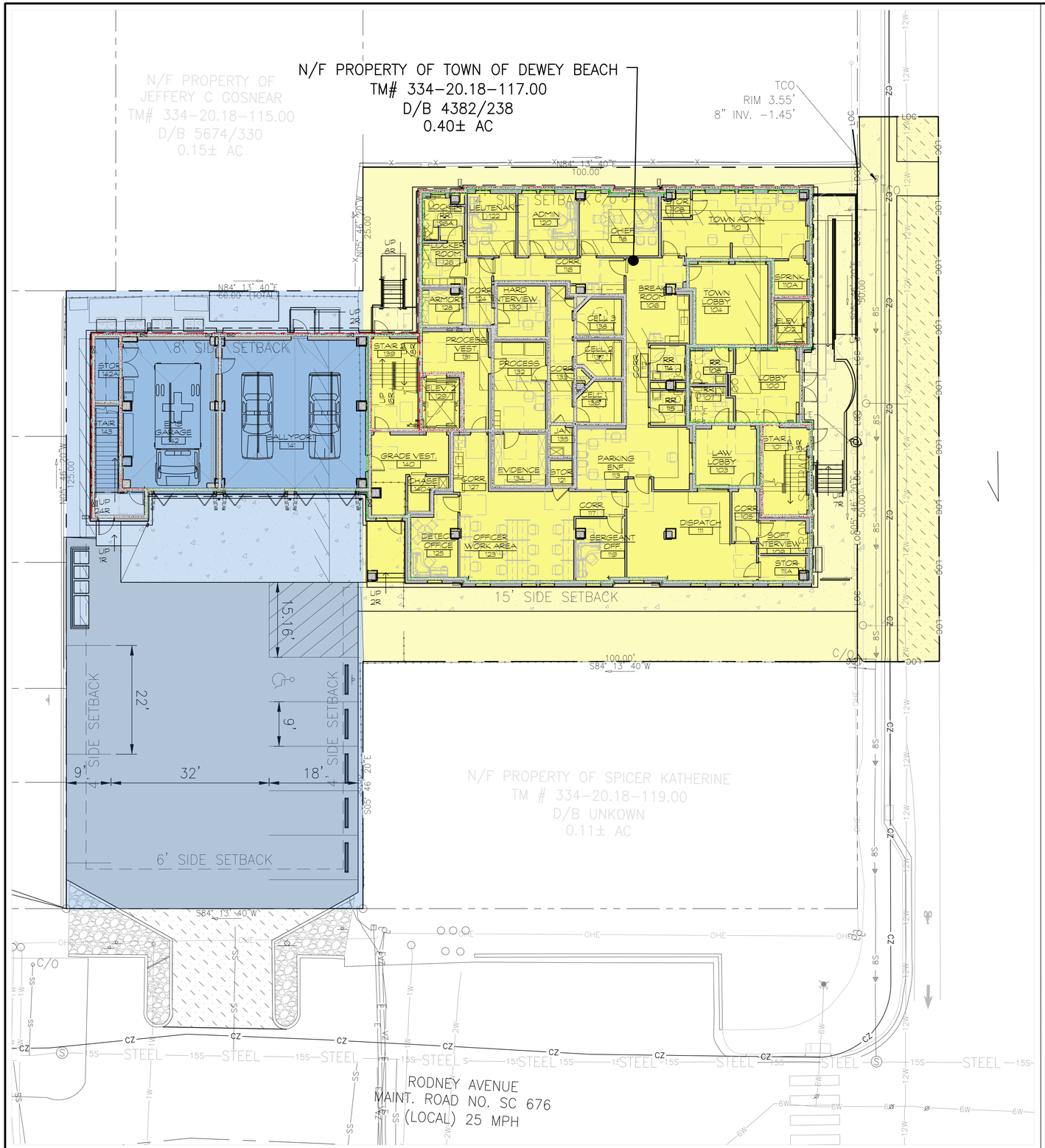
g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\CS1.4 PHASING PLAN.dwg, 11/14/2024 4:38 PM, Deane L. Townsend



1 PHASING PLAN - PHASE 3 (FIRST FLOOR)
3/32" = 1'-0"

NOTES

ALL HEAVY CONSTRUCTION (I..E. PILE DRIVING, EXCAVATION, DRILLING, ETC.) OR ANY ASSOCIATED CONSTRUCTION THAT GENERATES LOUD NOISES AND VIBRATIONS SHALL HALT BETWEEN THE THURSDAY PRIOR TO MEMORIAL DAY AND TUESDAY FOLLOWING LABOR DAY.

PHASE 1
- EXISTING TOWN HALL LOCATED ON 105 RODNEY AVENUE (TM# 334-20.18-120.00) TO REMAIN OPEN AND OCCUPIED.
- TEMPORARY INTERRUPTIONS TO POWER SERVICES AND UTILITY SHUT OFFS TO THE EXISTING TOWN HALL OR ADJACENT PROPERTIES SHALL BE COORDINATED WITH THE TOWN PRIOR TO SERVICE INTERRUPTION.
- MAINTAIN TOWN HALL PARKING AREAS AND PROVIDE SAFETY MEASURES FOR EMPLOYEES AND RESIDENTS ENTERING THE BUILDING.
- CONTRACTOR SHALL MAKE REASONABLE EFFORTS TO REDUCE NOISE, DUST AND OTHER DISRUPTIONS TO A MINIMUM DURING OFFICE OPERATING HOURS.
- COORDINATE SCHEDULE FOR COMPLETION OF PHASE WITH OWNER.

PHASE 2
- NEW TOWN HALL AND POLICE DEPARTMENT LOCATED ON 1503 + 1505 COASTAL HIGHWAY (TM# 334-20.18-117.00 AND 334-20.18-118.00) TO BE OCCUPIED BY THE TOWN.
- TEMPORARY INTERRUPTIONS TO POWER SERVICES AND UTILITY SHUT OFFS TO THE NEW TOWN HALL OR ADJACENT PROPERTIES SHALL BE COORDINATED WITH THE TOWN PRIOR TO SERVICE INTERRUPTION.
- MAINTAIN A SECURED PATH OF EGRESS FROM THE NEW TOWN HALL TO RODNEY AVE THROUGH 105 RODNEY AVE (TM# 334-20.18-120.00) DURING CONSTRUCTION.
- CONTRACTOR SHALL MAKE REASONABLE EFFORTS TO REDUCE NOISE, DUST AND OTHER DISRUPTIONS TO A MINIMUM DURING OFFICE OPERATING HOURS

PHASE 1
- DEMOLITION OF EXISTING CODE ENFORCEMENT OFFICE, PARKING, UTILITIES ON PROPERTIES 1503 & 1505 COASTAL HIGHWAY (TM# 334-20.18-117.00 AND 334-20.18-118.00) TO BE PERFORMED BY THE TOWN.
- SITEWORK SHALL CONSIST OF SITE GRADING, UTILITIES, STORMWATER AND EROSION CONTROL, AND OTHER MISC SITEWORK INDICATED ON CIVIL DRAWINGS PERTAINING TO PROPERTIES TM# 334-20.18-117.00 AND 334-20.18-118.00 SHALL OCCUR. EXISTING CURB CUT AND SIDEWALK TO BE REMOVED, AND NEW SIDEWALK AND CURB TO BE PROVIDED ALONG COASTAL HIGHWAY.
- CONSTRUCTION OF NEW TOWN HALL AND POLICE DEPARTMENT TO OCCUR AS INDICATED ON ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.
- WESTERN PARTY WALL BETWEEN PHASE 1 + 3 SHALL BE FINISHED WITH VB, FURRING, RIGID INSULATION, AND LARGE FIBER-CEMENT PANELS AND TRIM TYPICAL OF WALL CONSTRUCTION ASSEMBLY FOR TEMPORARY WEATHER PROTECTION BETWEEN PHASE 1+3 CONSTRUCTION.
- EXISTING SITEWORK AND BUILDING STRUCTURE OF THE TOWN HALL ON 105 RODNEY AVENUE (TM# 334-20.18-120.00) TO REMAIN INTACT AND OCCUPIED.

PHASE 2
- UPON SUBSTANTIAL COMPLETION OF THE NEW TOWN HALL AND POLICE DEPARTMENT, THE TOWN OF DEWEY TO VACATE THE EXISTING TOWN HALL AND TRANSFER ALL FURNISHINGS, EQUIPMENT, DOCUMENTS, ETC. TO THE NEW FACILITY.
- UPON COMPLETION OF TRANSFERRING TO THE NEW FACILITY, THE TOWN WILL DEMOLISH THE EXISTING TOWN HALL. NEW SITEWORK SHALL CONSIST OF SITE GRADING, UTILITIES, STORMWATER AND EROSION CONTROL, AND OTHER MISC SITEWORK AS INDICATED ON CIVIL DRAWINGS THAT PERTAINS TO THE FORMER 105 RODNEY AVENUE (TM# 334-20.18-120.00).
- CONSTRUCTION OF NEW SALLYPORT, EMS GARAGE, AND EMS QUARTERS, SHALL OCCUR AS INDICATED ON ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.
- FIBER CEMENT PANELS FROM PHASE 1 TO BE REMOVED, AND DRYWALL TO BE INSTALLED OVER FURRING.
- ANY ASSOCIATED UTILITY TIE-INS TO OCCUR.

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

PHASING PLAN -
PHASE 2

MORGAN HALL HELFRICH
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: ############
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

CS1.8

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g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\CS1.4 PHASING PLAN.dwg, 11/14/2024 4:47 PM, Decne L. Townsend

DEWEY TOWN HALL & POLICE DEPARTMENT

TOWN OF DEWEY BEACH, SUSSEX COUNTY, DELAWARE

TAX MAP NO. 334-20.18-117.00

GMB FILE NO. 220242

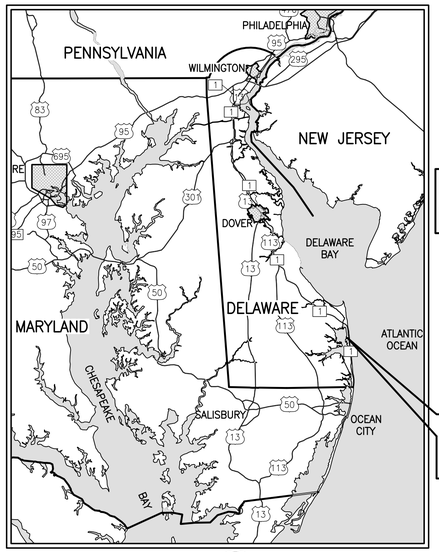
GENERAL NOTES

1. TOPOGRAPHIC DATA WAS OBTAINED BY GEORGE, MILES & BUHR, LLC DURING AUGUST 2023 AND SCALED ENGINEERING DURING JULY AND AUGUST OF 2022.
2. VERTICAL DATUM: NAVD88.
3. HORIZONTAL DATUM: NAD83.
4. PROPERTY LINES SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE CONSTRUED AS A PROPERTY LINE SURVEY.
5. EXISTING UTILITIES DEPICTED BY THESE PLANS ARE BASED UPON THE BEST INFORMATION AVAILABLE AND DO NOT GUARANTEE THE LOCATION, DEPTH OR COMPLETENESS OF THE UTILITIES SHOWN. GENERALLY, WATER SERVICES, SEWER LATERALS, AND GAS LATERALS ARE NOT SHOWN ON PLANS AND PROFILES. HOWEVER, CONTRACTOR IS RESPONSIBLE FOR RELOCATING SERVICES AS REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING BY MEANS OF TEST PITTING THE ACTUAL LOCATIONS OF ALL UTILITIES NECESSARY FOR PERFORMANCE OF THE WORK. ANY CONFLICTS WITH THE APPROVED PLANS SHALL BE RECORDED AND PROMPTLY REPORTED TO THE ENGINEER.
7. THE CONTRACTOR SHALL NOTIFY MISS UTILITY (1-800-282-8555) AND THE TOWN OF DEWEY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION TO HAVE UNDERGROUND UTILITIES MARKED. THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS PRIOR TO ANY EXCAVATION.
8. THE CONTRACTOR SHALL KEEP EXISTING UTILITIES IN OPERATION DURING CONSTRUCTION. NOTIFY AFFECTED RESIDENCE AT LEAST 24 HOURS IN ADVANCE OF ANY CONFLICTING SERVICES BETWEEN EXISTING AND NEW WORK BEFORE ANY EXISTING SERVICES CAN BE MODIFIED.
9. THE CONTRACTOR IS RESPONSIBLE FOR SECURING AND PROTECTING UTILITY POLES BEFORE AND DURING CONSTRUCTION ACTIVITIES.
10. THE CONTRACTOR SHALL REPAIR OR REPLACE IN KIND ANY EXISTING FEATURES DAMAGED OR DESTROYED DURING CONSTRUCTION.
11. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY STAKEOUT OF LINE AND GRADE.
12. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT, LATEST EDITION, AND ALL RULES AND REGULATIONS THERETO.
13. THE CONTRACTOR SHALL EXERCISE EXTREME CARE AND CAUTION AND TAKE MEASURES NECESSARY TO PROTECT TREES DURING CONSTRUCTION ACTIVITY.
14. ANY DISTURBED AREAS OUTSIDE THE RIGHT-OF-WAY SHALL BE RESTORED TO THEIR ORIGINAL CONDITION IMMEDIATELY.
15. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
16. CONTRACTOR SHALL ADJUST TO FINAL GRADE AS REQUIRED TOPS OF MANHOLES, INLET STRUCTURES, ETC. PRIOR TO INSTALLATION OF SURFACE MATERIAL.
17. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF ALL PERMITS WHICH TAKE PRECEDENCE OVER THE SPECIFICATION.
18. ALL DISTURBED AREAS LOCATED IN UNPAVED AREAS ARE TO BE FILLED WITH 4" OF TOPSOIL AND SEEDED.
19. THE CONTRACTOR SHALL REMOVE AND IMMEDIATELY RELOCATE/RESET/RECONSTRUCT ALL OBSTRUCTIONS WHETHER NATURAL OR MANMADE, ETC. WHENEVER REQUIRED OR AS DIRECTED BY THE ENGINEER.
20. WATER MAINS ARE TO HAVE A MINIMUM COVER OF 3'-6" TO THE TOP OF THE PIPE.
21. PROVIDE A MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SEWER MAINS OF 10'-0". UNLESS OTHERWISE INDICATED, ALLOW 18" VERTICAL SEPARATION ON PERPENDICULAR CROSSINGS. WHERE WATER MAINS CROSS SEWER MAIN OR SEWER SERVICE LATERALS, WITH LESS THAN 18" SEPARATION, ENCASE THE WATER MAIN IN SCH 80 PVC A DISTANCE OF 10'-0" ON BOTH SIDES OF THE SEWER. WHERE MINIMUM SEPARATION DISTANCES CANNOT BE MAINTAINED, THE OFFICE OF DRINKING WATER MUST SPECIFICALLY APPROVE ANY VARIANCE, SUPPORTED BY DATA FROM THE DESIGN ENGINEER. PROVIDE A MINIMUM SEPARATION BETWEEN WATER AND SEWER SERVICES OF 5'-0".

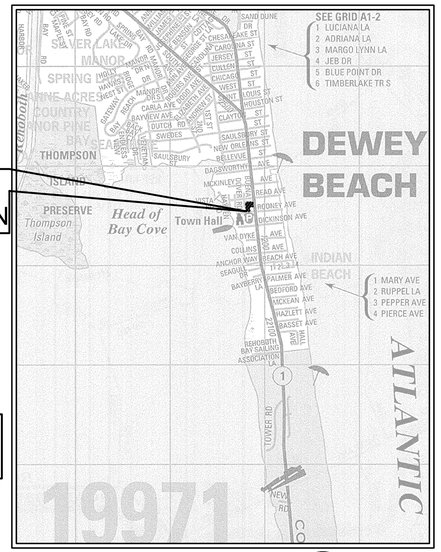
CONTACT DATA

OWNER: TOWN OF DEWEY BEACH
ADDRESS: 105 RODNEY AVE,
DEWEY BEACH, DE 19971
TEL: 302-227-6363
CONTACT: BILL ZOLPER

ENGINEER: GEORGE, MILES & BUHR, LLC
ADDRESS: 400 HIGH STREET
SEAFORD, DE 19973
TEL: 302-628-1421
CONTACT: ANDREW J. LYONS, P.E.



VICINITY MAP
SCALE: 1" = 20 MILES
NAD 83



LOCATION MAP
SCALE: 1" = 2500'
NAD 83

LIST OF DRAWINGS

G1.0 COVER SHEET
C1.0 EXISTING CONDITIONS & DEMOLITION PLAN
C2.0 SITE PLAN
C3.0 GRADING PLAN
C4.0 UTILITY PLAN
C5.0 FIRE MARSHAL PLAN
C6.0-C6.2 EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
C7.0 SITE DETAIL SHEET
C7.1 UTILITY DETAIL SHEET
C8.0 EROSION AND SEDIMENT CONTROL PLAN

DATA COLUMN

TAX PARCEL ID:	334-20.18-117.00
SITE ADDRESS:	1505 COASTAL HIGHWAY, DEWEY BEACH, DE 19971
EXISTING/PROPOSED SITE AREA:	0.40± ACRES
AREA TO BE DISTURBED:	19,878± SF (0.50±AC)
BENCHMARK LOCATION: IPC	FOUND, ELEV. 3.46, DATE 8/31/23, NAD 83, NAVD 88
LATITUDE: 753597.859,	LONGITUDE: 251805.471
LATITUDE: 38.6909320',	LONGITUDE: -075.0753274'
PROPOSED BUILDING AREA:	24,270± GSF (8,526± SF)
HEIGHT:	32' MAX + FREEBOARD (HEIGHT BASED ON BFE)
PROPOSED USE:	TOWN HALL & POLICE STATION
NUMBER OF UNITS:	1

THE PROJECT SITE IS OUTSIDE OF THE WELLHEAD PROTECTION AREA.

ZONING:	RESORT BUSINESS 2 - RB2
REQUIRED SETBACKS:	FRONT (COASTAL HWY) - 8' FRONT (RODNEY AVE.) - 6' SIDE - 4-15' (VARIES, SEE PLAN) REAR - 8-10' (VARIES, SEE PLAN)
WATER SERVICE:	SUSSEX COUNTY
SEWER SERVICE:	SUSSEX COUNTY

THESE PARCELS ARE WITHIN A SPECIAL FLOOD HAZARD AREA SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD WITHIN ZONE AE, FLOOD ELEVATION 5, DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, MAP NUMBER 10005C0354K, PANEL 3544 OF 660, DATED MARCH 16, 2015.
A PORTION OF THE SITE IS WITHIN THE WELLHEAD PROTECTION AREA.
THERE ARE NO KNOWN WETLANDS ON THESE PARCELS OR WITHIN CLOSE PROXIMITY TO THESE PARCELS.

LEGEND

EXISTING	PROPOSED	
N/A	LOD	LIMIT OF DISTURBANCE
	N/A	PROPERTY LINE
	N/A	PROPERTY - ROW LINE - ADJACENT
	N/A	FENCE
12W	6W	WATER MAIN WITH SIZE
12S	12S	SANITARY SEWER LINE WITH MANHOLE AND SIZE
OHE	N/A	OVERHEAD ELECTRIC LINE
	N/A	CENTER LINE OF ROAD
	N/A	GRAVEL SURFACE
8S C/O	N/A	SANITARY SEWER AND CLEANOUT
		CONCRETE SURFACE
48	N/A	ELEVATION CONTOUR
	N/A	STORMDRAIN LINE
47.50 MOW	N/A	SPOT ELEVATION
	N/A	UTILITY POLE WITH GUY WIRE
	N/A	CATCH BASIN
T	N/A	TELEPHONE PEDESTAL (VERIZON)
	N/A	FIRE HYDRANT
	N/A	WATER VALVE
N/A		PROPERTY CORNER
	N/A	GRAVEL SURFACE
		BUILDING
CATV	N/A	CATV LINE

OWNER CERTIFICATION

I, BILL ZOLPER, CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT SHALL BE DONE PURSUANT TO THE APPROVED PLAN AND THAT RESPONSIBLE PERSONNEL (I.E., BLUE CARD HOLDER) INVOLVED IN THE LAND DISTURBANCE WILL HAVE A CERTIFICATION OF TRAINING PRIOR TO INITIATION OF THE PROJECT, AT A DNREC SPONSORED OR APPROVED TRAINING COURSE FOR THE CONTROL OF EROSION AND SEDIMENT DURING CONSTRUCTION. IN ADDITION, I GRANT THE DNREC SEDIMENT AND STORMWATER PROGRAM AND/OR THE RELEVANT DELEGATED AGENCY THE RIGHT TO CONDUCT ON-SITE REVIEWS, AND I UNDERSTAND THAT MY RESPONSIBILITIES UNDER THE NPDES CONSTRUCTION GENERAL PERMIT, AS REVERENCED ON THIS COVER SHEET."

_____
TOWN OF DEWEY BEACH C/O BILL ZOLPER DATE

LICENSED PROFESSIONAL CERTIFICATION

I, ANDREW J. LYONS P.E., HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES."

_____ 11/15/24
ANDREW J. LYONS, P.E. DATE

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY • BALTIMORE • SEAFORD
400 HIGH STREET
SEAFORD, DELAWARE 19973
302-628-1421, FAX 302-628-8350
www.gmbnet.com

NOV. 2023

APPROVED:

_____ _____
SUSSEX COUNTY ENGINEER DATE
AGREEMENT # XXXX

NO.	REVISION	DATE
1	60% PROGRESS SET	11/17/23
2	75% PROGRESS SET	2/16/24
3	ISSUED FOR BID	11/15/24

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DEWEY TOWN HALL REDESIGN
TOWN OF DEWEY BEACH
SUSSEX COUNTY, DELAWARE

ANDREW JOSEPH LYONS
LICENSE
No. 14360
DELAWARE
PROFESSIONAL ENGINEER
11/15/24

COVER SHEET

SCALE	: AS SHOWN
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: NOV 2023

G1.0

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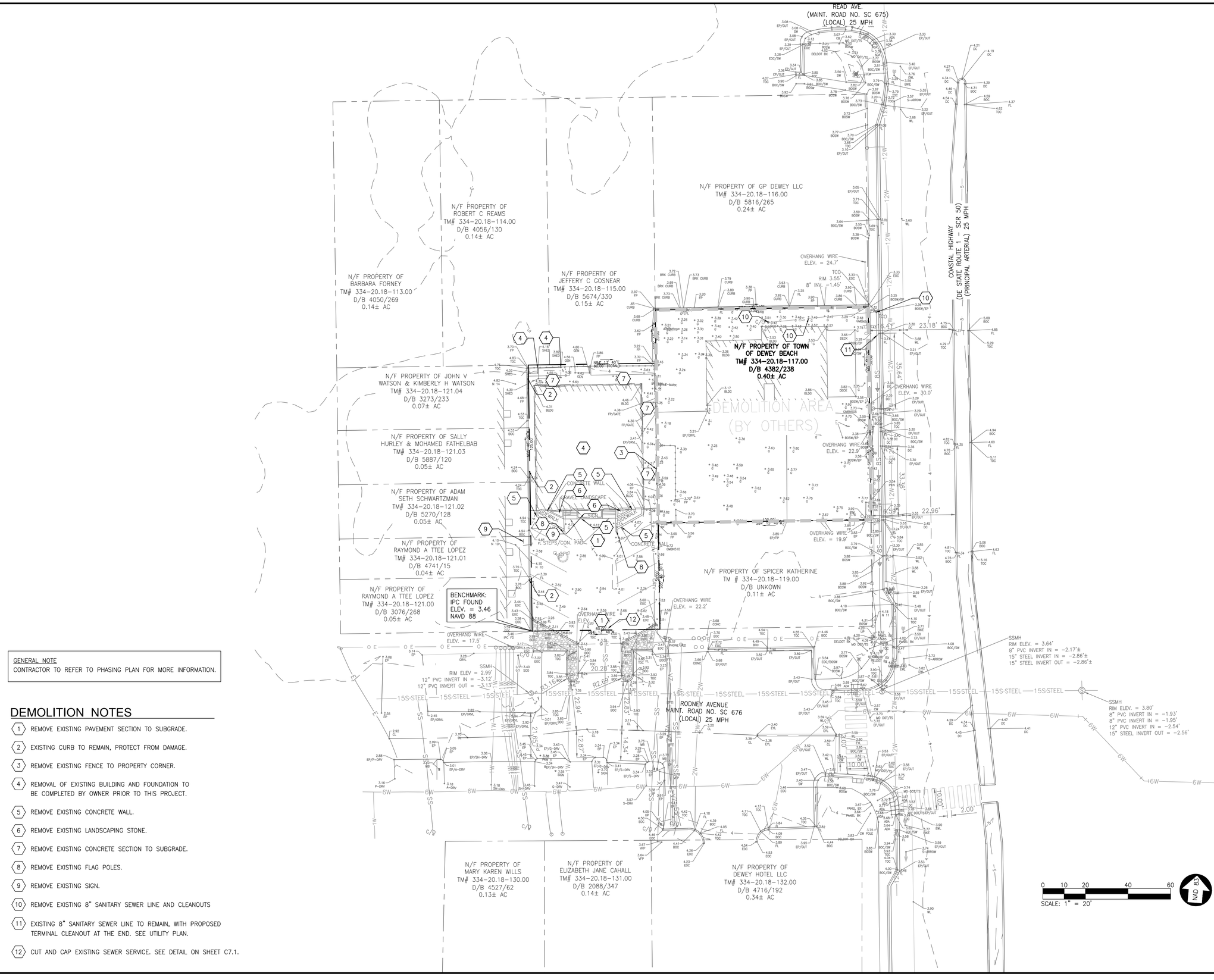

GENERAL NOTE
CONTRACTOR TO REFER TO PHASING PLAN FOR MORE INFORMATION.

DEMOLITION NOTES

1. REMOVE EXISTING PAVEMENT SECTION TO SUBGRADE.
2. EXISTING CURB TO REMAIN, PROTECT FROM DAMAGE.
3. REMOVE EXISTING FENCE TO PROPERTY CORNER.
4. REMOVAL OF EXISTING BUILDING AND FOUNDATION TO BE COMPLETED BY OWNER PRIOR TO THIS PROJECT.
5. REMOVE EXISTING CONCRETE WALL.
6. REMOVE EXISTING LANDSCAPING STONE.
7. REMOVE EXISTING CONCRETE SECTION TO SUBGRADE.
8. REMOVE EXISTING FLAG POLES.
9. REMOVE EXISTING SIGN.
10. REMOVE EXISTING 8" SANITARY SEWER LINE AND CLEANOUTS
11. EXISTING 8" SANITARY SEWER LINE TO REMAIN, WITH PROPOSED TERMINAL CLEANOUT AT THE END. SEE UTILITY PLAN.
12. CUT AND CAP EXISTING SEWER SERVICE. SEE DETAIL ON SHEET C7.1.

NO.	REVISION	DATE
1	60% PROGRESS SET	11/17/23
2	75% PROGRESS SET	2/16/24
3	ISSUED FOR BID	11/15/24

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DEWEY TOWN HALL REDESIGN
TOWN OF DEWEY BEACH
SUSSEX COUNTY, DELAWARE

ANDREW JOSEPH LYONS
LICENSE
No. 14860
DELAWARE
PROFESSIONAL ENGINEER
11/15/24

EXISTING CONDITIONS & DEMOLITION PLAN

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: NOV 2023

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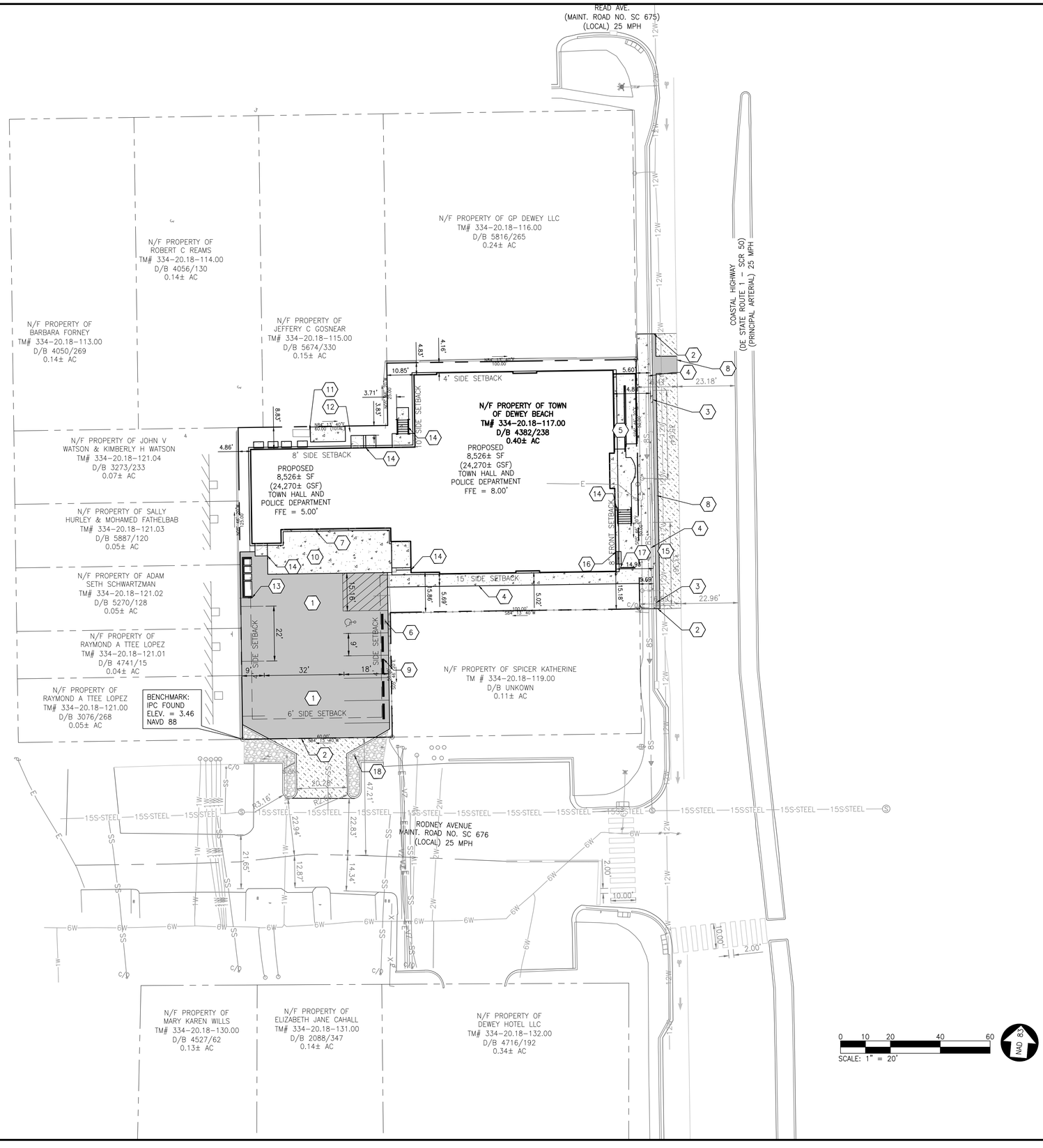

CONSTRUCTION NOTES

1. NEW ASPHALT PAVEMENT SECTION. SEE DETAIL ON SHEET C7.0. FOR PROPOSED FIRE LANE STRIPING, SEE SHEET C5.0.
2. PAVEMENT TIE-IN TO EXISTING ASPHALT PAVEMENT SECTION, SEE DETAIL ON SHEET C7.0.
3. PROPOSED INTEGRAL PCC CURB AND GUTTER PER DELDOT DETAIL C-1 (SHEET 2 OF 4) ON SHEET C7.0.
4. PROPOSED CONCRETE SIDEWALK - WIDTH VARIES, SEE DETAIL ON SHEET C7.0.
5. PROPOSED ADA COMPLIANT RAMP, SEE ARCHITECTURAL PLANS FOR DETAIL.
6. PROPOSED ADA COMPLIANT PARKING SPACE AND SIGN, SEE DETAIL ON SHEET C7.0.
7. PROPOSED 6" DIA. BOLLARDS (4 TYP.). SEE DETAIL ON SHEET C7.0.
8. PROPOSED 18" WIDE PAVEMENT SECTION WITHIN DELDOT RIGHT-OF-WAY. SEE SHEET DE6 FOR PAVEMENT RESTORATION CROSS SECTIONS.
9. PROPOSED PRECAST CONCRETE WHEELSTOP (5 TYP.)
10. HEAVY DUTY CONCRETE PER SECTION ON SHEET C7.0.
11. EXISTING GENERATOR TO REMAIN.
12. PROPOSED GENERATOR PAD. SEE STRUCTURAL PLANS. COORDINATE FINAL LOCATION WITH OWNER AND/OR ARCHITECT/ENGINEER.
13. PROPOSED TRASH ENCLOSURE DETAIL. SEE TYPICAL TRASH ENCLOSURE DETAIL ON SHEET C7.0.
14. PROPOSED CONCRETE STAIRS. SEE ARCHITECTURAL PLANS FOR DETAIL.
15. PROPOSED PAVEMENT SECTION PER DELDOT STANDARDS.
16. PROPOSED BENCH (BY OWNER)
17. PROPOSED BIKE RACK (BY OWNER)
18. FURNISH AND INSTALL FIRE LANE SIGN ON A STEEL BREAKAWAY POST. SEE SIGN DETAIL ON SHEET C5.0.

NO.	REVISION	DATE
1	60% PROGRESS SET	11/17/23
2	75% PROGRESS SET	2/16/24
3	ISSUED FOR BID	11/15/24

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DEWEY TOWN HALL REDESIGN

TOWN OF DEWEY BEACH
SUSSEX COUNTY, DELAWARE

ANDREW JOSEPH LYONS
AGENT
No. 14360
DELAWARE
PROFESSIONAL ENGINEER
11/15/24

SITE PLAN

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: NOV 2023

C2.0

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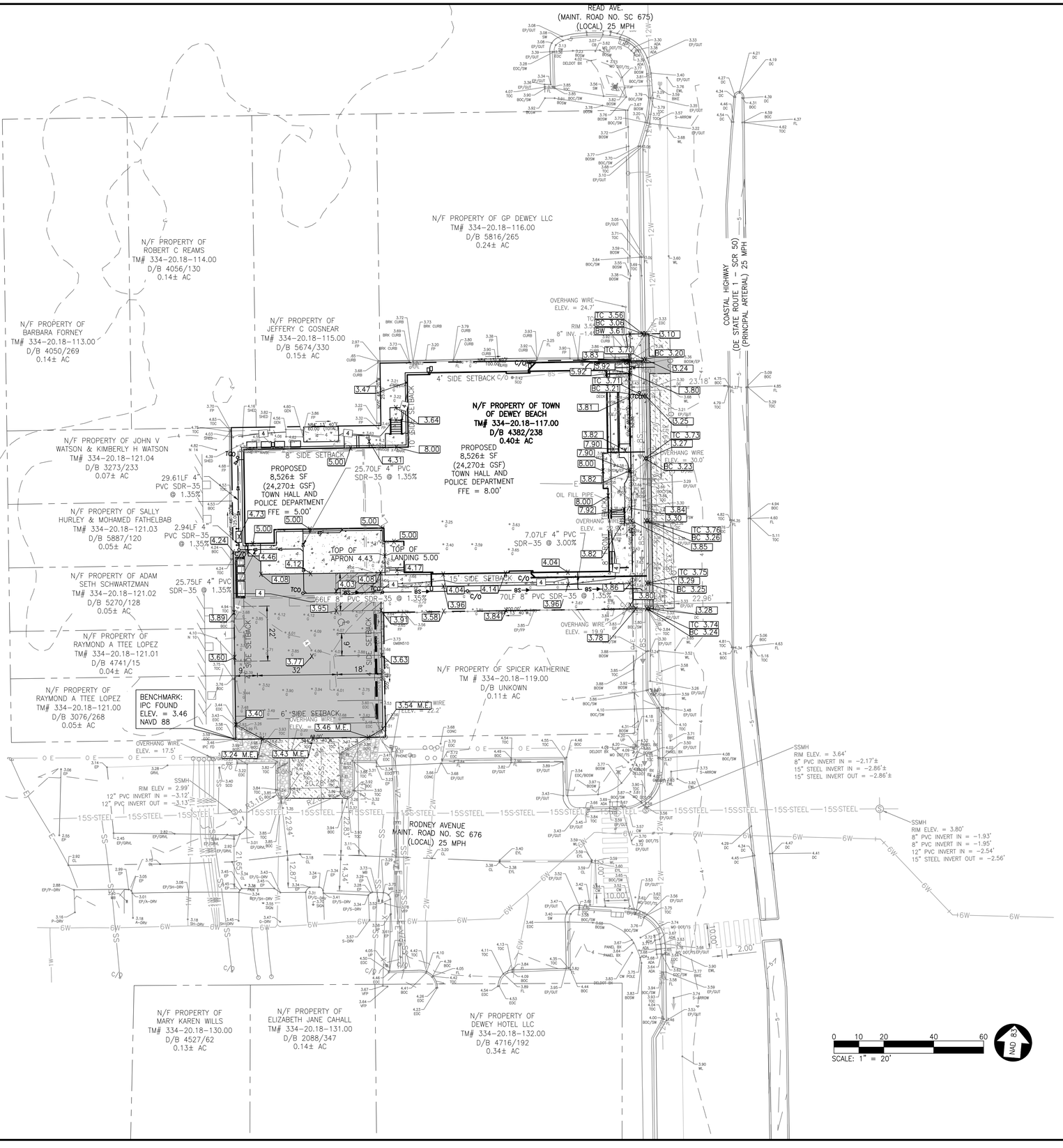

NO.	REVISION	DATE
1	60% PROGRESS SET	11/17/23
2	75% PROGRESS SET	2/16/24
3	ISSUED FOR BID	11/15/24

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DEWEY TOWN HALL REDESIGN

TOWN OF DEWEY BEACH
SUSSEX COUNTY, DELAWARE

ANDREW JOSEPH LYONS
LICENSE
No. 14360
DELAWARE
PROFESSIONAL ENGINEER
11/15/24

GRADING PLAN

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: NOV 2023

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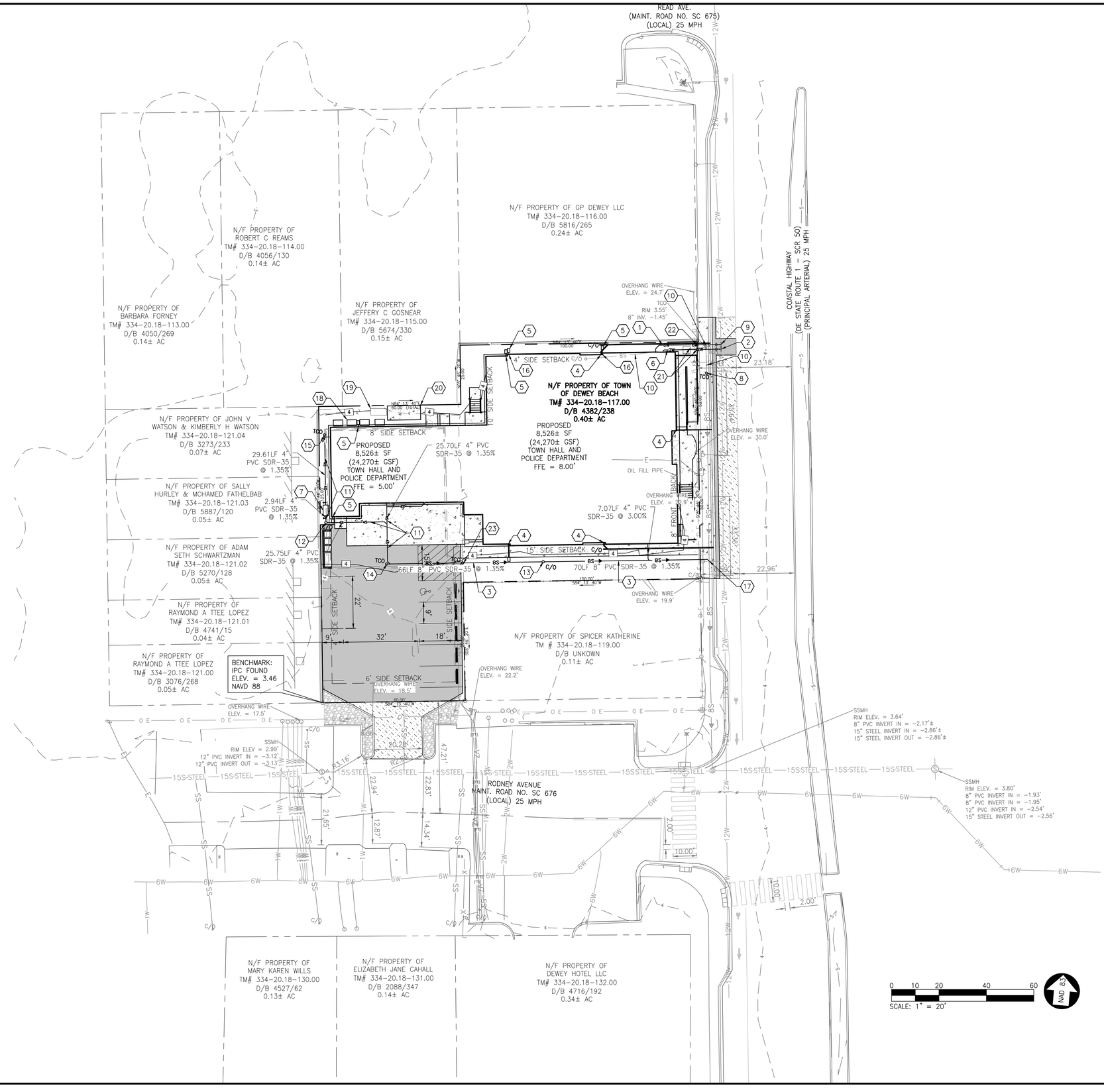

CONSTRUCTION NOTES

1. 6" PVC C-900 FIRE SERVICE, PER SUSSEX COUNTY STANDARDS. TERMINATE 5' FROM BUILDING, FOR CONTINUATION REFER TO THE MEP PLANS.
2. FURNISH AND INSTALL 2" x 12" TAPPING TEE AND VALVE.
3. FURNISH AND INSTALL SEWER LATERAL – 8" PVC SDR-35 AT 1.35% SLOPE. SEE DETAIL S-3.01 ON SHEET C7.1.
4. ROOF DRAIN WITH REQUIRED ABOVE GRADE EMERGENCY OVERFLOW TO BE PROVIDED. SEE ROOF DRAIN WITH 45 DEGREE WYE CLEANOUT DETAIL ON SHEET C7.0.
5. CONTRACTOR TO SUPPLY COMMERCIAL GRADE SPLASH BLOCK. TYPE TO BE APPROVED BY OWNER.
6. 2" DOMESTIC WATER, PER SUSSEX COUNTY STANDARDS. TERMINATE 5' FROM BUILDING, FOR CONTINUATION REFER TO THE MEP PLANS. SEE MEP PLANS.
7. FURNISH AND INSTALL OIL/WATER SEPARATOR. SEE MEP PLANS FOR DETAIL. RIM ELEVATION = 4.73. U.S. INVERT IN = 0.90'. D.S. INVERT OUT = 0.65'.
8. FURNISH AND INSTALL 8" TERMINAL CLEANOUT. RIM = 3.69', INVERT = -1.49'. SEE TERMINAL CLEANOUT DETAIL ON SHEET C7.1.
9. FURNISH AND INSTALL 6" X 12" TAPPING TEE AND VALVE.
10. SEWER TO BE REMOVED. SEE EXISTING CONDITIONS AND DEMOLITION PLAN.
11. FURNISH AND INSTALL SEWER LATERAL – 4" PVC SDR-35 AT 1.35% SLOPE. SEE DETAIL S-3.01 ON SHEET C7.1.
12. FURNISH AND INSTALL 4" CLEANOUT. RIM = 4.55', INVERT = 0.61'. SEE 4" SEWER LATERAL CLEANOUT DETAIL ON SHEET C7.1.
13. FURNISH AND INSTALL 8" CLEANOUT. RIM = 3.94', INVERT = -0.87. SEE DETAILS S-2.01 & S-2.03 ON SHEET C7.1.
14. FURNISH AND INSTALL 8" TERMINAL CLEANOUT. RIM = 4.03', INVERT = 0.02'. SEE TERMINAL CLEANOUT DETAIL ON SHEET C7.1.
15. FURNISH AND INSTALL 4" TERMINAL CLEANOUT. RIM = 4.80', INVERT = 1.30' .SEE TERMINAL CLEANOUT DETAIL ON SHEET C7.1.
16. PIPE DRAIN TO SPLASH BLOCK. COORDINATE WITH MEP PLANS.
17. SEWER LATERAL CONNECTION TO SEWER MAIN AT INVERT -1.81'. SEE DETAIL S-2.05 ON SHEET C7.1.
18. CONDENSING UNIT (4 TYP). SEE MEP PLANS FOR DETAIL.
19. EXISTING GENERATOR TO REMAIN
20. PROPOSED GENERATOR. SEE MEP PLANS FOR DETAIL.
21. PROPOSED CURB BOX AND METER BOX. SEE WATER METER AND CURB BOX DETAIL ON SHEET C7.0.
22. PROPOSED 6" VALVE BOX WITH TRACER WIRE. SEE MODIFIED VALVE BOX DETAIL ON SHEET C7.0.
23. INSTALL TEMPORARY TERMINAL CLEANOUT.

NO.	REVISION	DATE
1	60% PROGRESS SET	11/17/23
2	75% PROGRESS SET	2/16/24
3	ISSUED FOR BID	11/15/24

GMB
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ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 21804
www.gmbnet.com

DEWEY TOWN HALL REDEVELOPMENT
TOWN OF DEWEY BEACH
SUSSEX COUNTY, DELAWARE

ANDREW JOSEPH LYONS
LICENSE
No. 14860
DELAWARE
PROFESSIONAL ENGINEER
11/15/24

UTILITY PLAN

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: NOV 2023

C4.0

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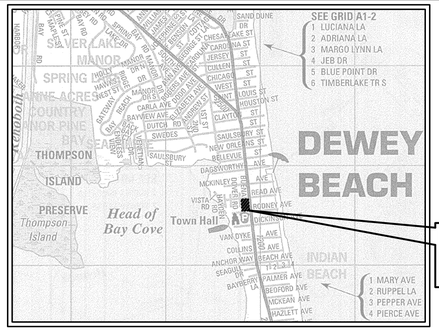


LOCATION MAP
SCALE: 1" = 2,500'

PROJECT LOCATION

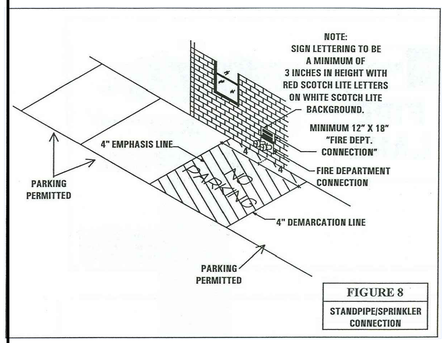
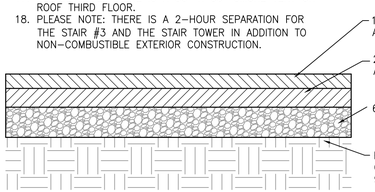


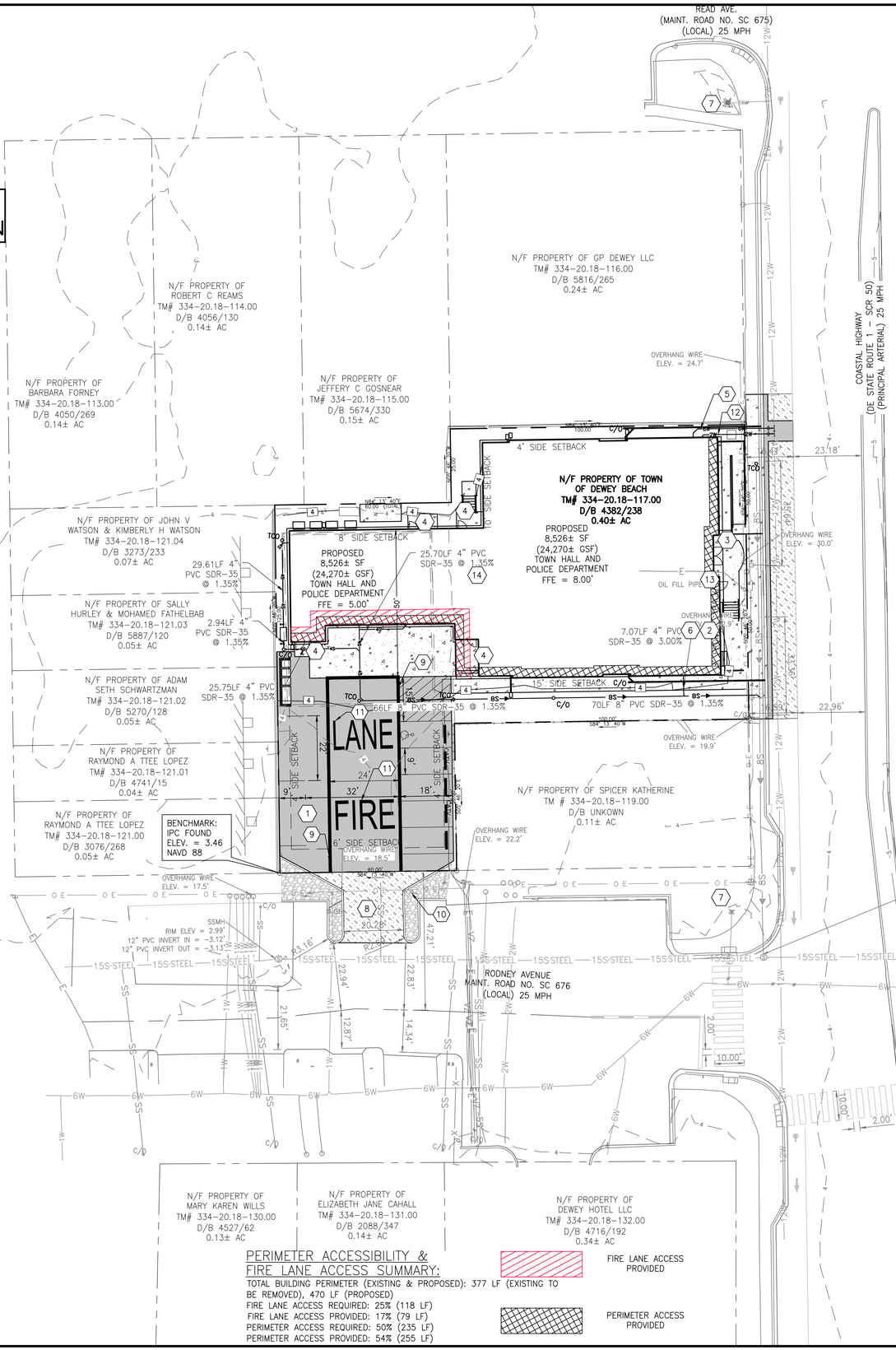
FIGURE 8
STANDPIPE/SPRINKLER CONNECTION

GENERAL NOTES

1. TOPOGRAPHIC DATA WAS OBTAINED BY GEORGE, MILES & BUHR, LLC DURING AUGUST 2023. PROPERTY LINES SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE CONSTRUED AS A PROPERTY LINE SURVEY.
2. NAME OF THIS PROPOSED BUILDING: DEWEY TOWN HALL REDESIGN
3. CURRENT OWNER ADDRESS:
   TOWN OF DEWEY
   BILL ZOLPER
   105 RODNEY AVENUE,
   DEWEY BEACH, DE 19971
   SITE 911 ADDRESS:
   1505 COASTAL HIGHWAY
   DEWEY BEACH, DE 19971
4. DESIGN PROFESSIONAL:
   GEORGE, MILES & BUHR, LLC
   400 HIGH STREET
   SEAFORD, DELAWARE 19973
   CONTACT: CHERI HOCHSTEDLER
5. APPLICANT: TOWN OF DEWEY
   C/O GEORGE, MILES & BUHR, LLC
   400 HIGH STREET
   SEAFORD, DELAWARE 19973
6. INTENDED USE OF BUILDING: TOWN HALL & POLICE DEPARTMENT
7. NAME OF WATER SUPPLIER: SUSSEX COUNTY
8. LOCATION OF FIRE HYDRANTS: ON ADJACENT PARCEL 334-20.18-119.00 NEAR COASTAL HIGHWAY AND RODNEY AVENUE INTERSECTION, AND OFF OF READ AVENUE NORTH OF THE SITE NEAR THE INTERSECTION OF COASTAL HIGHWAY.
9. LOCATION AND DIAMETER OF WATER MAIN SUPPLYING FIRE PROTECTION WATER: COASTAL HWY RIGHT-OF-WAY – 12" MAIN, RODNEY AVENUE – 6" MAIN.
10. MAXIMUM HEIGHT OF BUILDING: 34' (3 STORIES)
11. PROPOSED BUILDING CONSTRUCTION: NFPA TYPE II CONSTRUCTION
12. THE PROPOSED BUILDING WILL BE PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM.
13. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
14. MINIMUM BUILDING SETBACK LINES:
    FRONT SETBACK: 20' (RODNEY AVENUE)
    FRONT SETBACK: 8' (COASTAL HIGHWAY)
    SIDE SETBACK: 4' – 15' (VARIES)
    REAR SETBACK: 8' – 10' (VARIES)
15. TAX MAP LOCATION OF PROJECT:
    334-20.18-117.00
16. OCCUPANCY CLASSIFICATION: TBD BY OSFM
17. PLEASE NOTE: THERE IS A 2-HOUR SEPARATION FOR THE STAIR #3 AND THE STAIR TOWER IN ADDITION TO NON-COMBUSTIBLE EXTERIOR CONSTRUCTION.



TYPICAL ONSITE PAVEMENT SECTION
NO SCALE



PERIMETER ACCESSIBILITY & FIRE LANE ACCESS SUMMARY:

TOTAL BUILDING PERIMETER (EXISTING & PROPOSED): 377 LF (EXISTING TO BE REMOVED), 470 LF (PROPOSED)
FIRE LANE ACCESS REQUIRED: 25% (118 LF)
FIRE LANE ACCESS PROVIDED: 17% (79 LF)
PERIMETER ACCESS REQUIRED: 50% (235 LF)
PERIMETER ACCESS PROVIDED: 54% (255 LF)

FIRE LANE ACCESS PROVIDED

PERIMETER ACCESS PROVIDED

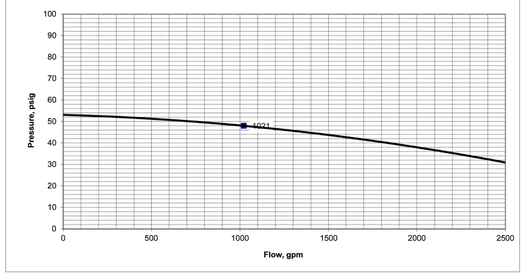
Water Flow Test Report
Dewey Beach Water

HYDRANT # 26
LOCATION: Rodney St. Halfway from Rt 1 and the Ocean Front
DATE 9/28/2023
TEST BY: S. Baker K. Sumpf

DATA

FLOW HYDRANT(S)	Hydrant # 1	Hydrant # 2	Hydrant # 3
SIZE OPENING:	2.5		
COEFFICIENT:	0.9		
PITOT READING:	37		
GPM:	1021		

TOTAL FLOW DURING TEST: 1021 GPM
STATIC READING: 52 PSI RESIDUAL: 48 PSI
RESULTS: AT 20 PSI RESIDUAL 3137 GPM AT 0 PSI 4078 GPM
REMARKS:



HYDRANT TESTING BY THE TOWN OF DEWEY COMPLETED 9/28/23 FOR THE FIRE HYDRANT AT THE INTERSECTION OF COASTAL HWY AND RODNEY AVENUE

CONSTRUCTION NOTES

1. FURNISH AND INSTALL HOT MIX ASPHALT PAVEMENT. SEE PAVEMENT SECTION ON THIS SHEET
2. FURNISH AND INSTALL FIRE DEPARTMENT CONNECTION. INSTALL MINIMUM 12"X18" "FIRE DEPT. CONNECTION" ALUMINUM SIGN ON WALL OF BUILDING ABOVE CONNECTION. SIGN LETTERING SHALL BE MINIMUM OF 3 INCHES (3") IN HEIGHT WITH RED SCOTCHLITE LETTERS ON WHITE SCOTCHLITE BACKGROUND. THE SIGN SHALL BE CLEARLY VISIBLE FROM THE FIRE LANE
3. PRIMARY BUILDING ENTRANCE
4. SECONDARY BUILDING ENTRANCES
5. 6" PVC C-900 FIRE/DOMESTIC SERVICE, PER SUSSEX COUNTY STANDARDS.
6. FURNISH AND INSTALL FIRE DEPARTMENT LOCK BOX. CONTACT THE LOCAL FIRE CHIEF FOR ORDERING INFORMATION AND LOCATION OF BOX ON THE BUILDING
7. EXISTING FIRE HYDRANT
8. EXISTING PAVEMENT TO REMAIN
9. PAINT FOUR INCH (4") SOLID YELLOW DEMARCATION OF FIRE LANE.
10. FURNISH AND INSTALL FIRE LANE SIGN ON A STEEL BREAKAWAY POST. SEE SIGN DETAIL ON THIS SHEET.
11. PAINT "FIRE" AND "LANE" WORDS ON THE PAVEMENT IN YELLOW IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS (TYPICAL).
12. 2" DOMESTIC WATER. SEE MEP PLANS.
13. ENTRANCE TO STAIRWELL FOR FIRE EMERGENCY ACCESS ONLY.
14. STANDPIPE. SEE ARCHITECTURAL PLANS FOR EXACT LOCATION.

NOTES:
1. THE SIGN SHALL HAVE A WHITE SCOTCHLITE BACKGROUND WITH RED SCOTCHLITE LETTERS, EXCEPT FOR THE FOR "NO" WHICH SHALL HAVE THE COLOR SCHEME REVERSED.
2. THE SIGNS SHALL BE LOCATED AT EACH END & 150' MAX. ON CENTER ALONG FIRE LANES.
3. ALL LETTERING SHALL BE 3 INCHES IN HEIGHT, EXCEPT FOR THE WORD "PARKING" WHICH SHALL BE 2 INCHES IN HEIGHT.

FIRE LANE SIGN DETAIL
NO SCALE

0 10 20 40 60
SCALE: 1" = 20'

NO.	REVISION	DATE
1	60% PROGRESS SET	11/17/23
2	75% PROGRESS SET	2/16/24
3	ISSUED FOR BID	11/15/24

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 410-742-3115
SEAFORD, DELAWARE 302-629-9460
www.gmbnet.com

DEWEY TOWN HALL REDESIGN
TOWN OF DEWEY BEACH
SUSSEX COUNTY, DELAWARE

ANDREW JOSEPH LYONS LICENSE No. 14860 DELAWARE PROFESSIONAL ENGINEER
11/15/24

FIRE MARSHAL SITE PLAN

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: NOV 2023

C5.0

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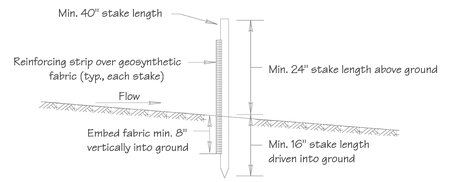
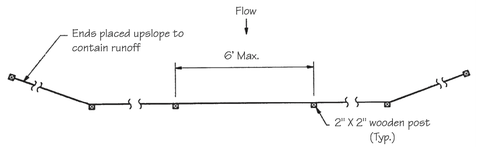
Standard Detail & Specifications

Silt Fence



Section



Plan

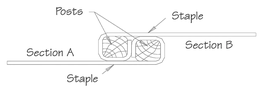
DATA
Max. controlled slope

Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	SF	**DE-ESC-3.1.2.1** Sheet 1 of 2 Effective July 2023

Standard Detail & Specifications

Silt Fence

Construction Detail



Top

Method for joining continuous sections

Construction Notes:

1. Geosynthetic fabric to be fastened securely to fence posts with wire ties or staples.
2. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
3. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.

Materials:

1. Stakes: Steel (either T or U) or 2" x 2" hardwood
2. Geosynthetic Fabric: Type GD-I
3. Reinforcing strip: Wooden lath or plastic strip

Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	SF	**DE-ESC-3.1.2.1** Sheet 2 of 2 Effective July 2023

Standard Detail & Specifications

Vegetative Stabilization

TEMPORARY SEEDING BY RATES, DEPTHS AND DATES

Mix #	Species[6]	Seeding Rate		Optimum Seeding Dates [1] O = Optimum Planting Period; A = Acceptable Planting Period							Planting Depth[3]
				Coastal Plain			Piedmont			All	
	Certified Seed	lb/Ac [4]	lb/1000 sq.ft.	2/1-4/30	[2] 5/1-8/14	8/15-10/31	3/1-4/30	[2] 5/1-7/31	8/1-10/31	10/31-2/1	
1	Barley	125	4	O	A	O	O	A	O		1-2 inches 2-3" sandy soils
2	Oats	125	4	O	A	A	O	A	A		1-2 inches 2-3" sandy soils
3	Rye	125	4	O	A	O	O	A	O	A	1-2 inches 2-3" sandy soils
4	Perennial Ryegrass	125	4	O	A	O	O	A	O		0.5 inches 1-2" sandy soils
5	Annual Ryegrass	125	4	O	A	O	O	A	O	A	0.5 inches 1-2" sandy soils
6	Winter Wheat	125	4	O	A	O	O	A	O	A	1-2 inches 2-3" sandy soils
7	Foxtail Millet	30 PLS	0.7		O			O			0.5 inches 1-2" sandy soils
8	Pearl Millet	20 PLS	0.5		O			O			0.5 inches 1-2" sandy soils

1. Winter seeding requires 3 tons per acre of straw mulch for proper stabilization.
2. May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
3. Applicable on slopes 3:1 or less.
4. Use varieties currently recommended for Delaware. Contact a County Extension Office for information.
5. Warm season grasses such as Millet may be used between 5/1 and 9/1 if desired. Seed at 3-5 lbs. per acre. Good on low fertility and acid areas. Seed after frost through summer at a depth of 0.5".

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 1 of 4 Effective July 2023

Standard Detail & Specifications

Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES

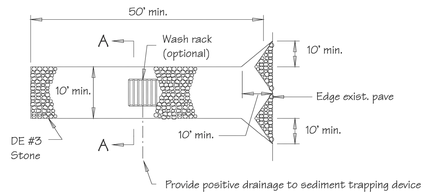
Seeding Mixtures		Seeding Rate[1]		Optimum Seeding Dates [2] O = Optimum Planting Period A = Acceptable Planting Period							Remarks
Mix No.	Certified Seed[3]			Coastal Plain			Piedmont			All[4]	
	Well Drained Soils	lb/Ac	lb/1000 sq.ft.	2/1-4/30	5/1-8/14	8/15-10/31	3/1-4/30	5/1-7/31	8/1-10/31	10/31-2/1	
1	Tall Fescue Canada Wild Rye	140 10	3.2 0.23	A	O	A	A	O	A	Add 100 lbs./ac Winter Rye	Good erosion control mix Tolerant of low fertility soils Good for droughty sites
2	Deertongue Sheep Fescue White Clover	30 30 10	0.69 0.69 0.35	A	O	A	A	O	A	Add 100 lbs./ac Winter Rye	Good erosion control mix Tolerant of low fertility soils Legume that fixes atmospheric N into soil
3	Tall Fescue (Turf-type) **or** Strong Creeping Red Fescue **or** Perennial Ryegrass **plus** Flatpea[5]	50 50 50 15	1.15 1.15 1.15 0.34	O	A[4]	O	O	A[4]	O	Add 100 lbs./ac. Winter Rye	Good erosion control mix Tall Fescue for droughty conditions. Creeping Red Fescue for heavy shade. Flatpea to suppress woody vegetation.
4	Strong Creeping Red Fescue Kentucky Bluegrass Perennial Ryegrass **or** Redtop **plus** White Clover[5]	100 70 15 5 3	2.3 1.61 0.35 0.11 0.07	O	A[4]	O	O	A[4]	O	Add 100 lbs./ac. Winter Rye	Suitable waterway mix. Canada Bluegrass more drought tolerant. Use Redtop for increased drought tolerance.
5	Switchgrass[6,7] **or** Coastal Panicgrass Big Bluestem Little Bluestem Indian Grass	10 10 5 5 5	0.23 0.23 0.11 0.11 0.1		O			O			Native warm-season mixture. Tolerant of low fertility soils. Drought tolerant. Poor shade tolerance. N fertilizer discouraged - weeds
6	Tall Fescue (turf-type) (Blend of 3 cultivars)	150	3.5	O	A[4]	O	O	A[4]	O		Managed filter strip for nutrient uptake.
7	Tall Fescue Ky. Bluegrass (Blend) Perennial Ryegrass	150 20 20	3.5 0.46 0.46	O	A[4]	O	O	A[4]	O		Three cultivars of Kentucky Bluegrass. Traffic tolerant.
8	Big Bluestem[7] Indian Grass[7] Little Bluestem[7] Creeping Red Fescue **plus one of:** Partridge Pea Bush Clover Wild Indigo Showy Tick-Trefoil	10 10 8 30 5 3 3 2	0.23 0.23 0.18 0.69 0.11 0.07 0.07 0.05	O	A[4]		O	A[4]			All species are native. Indian Grass and Bluestem have fluffy seeds. Plant with a specialized native seed drill. Creeping Red Fescue will provide erosion protection while the warm season grasses get established.

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

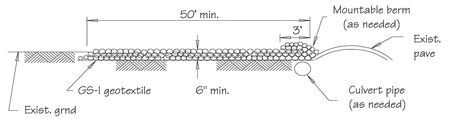
Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 2 of 4 Effective July 2023

Standard Detail & Specifications

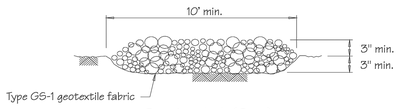
Stabilized Construction Entrance



Plan



Profile

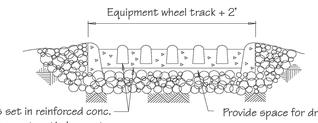


Section A-A (Std.)

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SCE	**DE-ESC-3.4.7** Sheet 1 of 2 Effective July 2023

Standard Detail & Specifications

Stabilized Construction Entrance



Section A-A (Opt.)

Construction Notes:

1. Stone size - Use DE #3 stone.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than size (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Geotextile - Type GS-I; placed over the entire area prior to placing of stone.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Vehicle wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Inspection - Periodic inspection and needed maintenance shall be provided after each rain.

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SCE	**DE-ESC-3.4.7** Sheet 2 of 2 Effective July 2023

Standard Detail & Specifications

Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES (cont.)

Seeding Mixtures		Seeding Rate[1]		Optimum Seeding Dates [2] O = Optimum Planting Period A = Acceptable Planting Period							Remarks
Mix No.	Certified Seed[3]			Coastal Plain			Piedmont			All[4]	
	Poorly Drained Soils	lb/Ac	lb/1000 sq.ft.	2/1-4/30	5/1-8/14	8/15-10/31	3/1-4/30	5/1-7/31	8/1-10/31	10/31-2/1	
9	Redtop Creeping Bentgrass Sheep Fescue Rough Bluegrass	75 35 30 45	1.72 0.8 0.69 1	O	A[4]	O	O	A[4]	O	Add 100 lbs./ac. Winter Rye	Quick stabilization of disturbed sites and waterways
10	Switchgrass[6]	10	0.23	A		O	A		O		Good erosion control, wildlife cover and wetland revegetation.
	Residential Lawns										
11	Tall Fescue Perennial Ryegrass Kentucky Bluegrass Blend	100 25 30	2.3 0.57 0.69	O	A[4]	O	O	A[4]	O		High value, high maintenance, light traffic, irrigation necessary. Well drained soils, full sun.
12	Tall Fescue Perennial Ryegrass Sheep Fescue	100 25 25	2.3 0.57 0.57	O	A[4]	O	O	A[4]	O		Moderate value, low maintenance, traffic tolerant.
13	Creeping Red Fescue Chewings Fescue Rough Bluegrass Kentucky Bluegrass	50 50 20 20	1.15 1.15 0.4 0.4	O	A[4]	O	O	A[4]	O		Shade tolerant, moderate traffic tolerance, moderate maintenance.
14	Creeping Red Fescue Rough Bluegrass **or** Chewings Fescue	50 90	1.15 2.1	O	A[4]	O	O	A[4]	O		Shade tolerant, moisture tolerant.
15	K-31 Tall Fescue	150	3.5	O	A[4]	O	O	A[4]	O		Monoculture, but performs well alone in lawns. Discouraged.

1. When hydroseeding is the chosen method of application, the total rate of seed should be increased by 25%.
2. Winter seeding requires 3 tons per acre of straw mulch. Planting dates listed above are average for Delaware. These dates may require adjustment to reflect local conditions.
3. All seed shall meet the minimum purity and minimum germination percentages recommended by the Delaware Department of Agriculture. The maximum % of weed seeds shall be in accordance with Chapter 15, Title 3 of the Delaware Code.
4. Turf-type species may be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
5. It is recommended that all leguminous seed be inoculated.
6. Warm season grass mix and Switchgrass cannot be mowed more than 4 times per year.
7. Warm season grasses require a soil temperature of at least 50 degrees in order to germinate and will remain dormant until then.

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 3 of 4 Effective July 2023

Standard Detail & Specifications

Vegetative Stabilization

Construction Notes:

1. Site Preparation
   a. Prior to seeding, install needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, grassed waterways, and sediment basins.
   b. Final grading and shaping is not necessary for temporary seedings.
2. Seedbed Preparation

   It is important to prepare a good seedbed to ensure the success of establishing vegetation. The seedbed should be well prepared, loose, uniform, and free of large clods, rocks, and other objectionable material. The soil surface should not be compacted or crusted.
3. Soil Amendments
   a. Lime - Apply liming materials based on the recommendations of a **soil test** in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply dolomitic limestone at the rate of 1 to 2 tons per acre. Apply limestone uniformly and incorporate into the top 4 to 6 inches of soil.
   b. Fertilizer - Apply fertilizer based on the recommendations of a **soil test** in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply a formulation of 10-10-10 at the rate of 600 pounds per acre. Apply fertilizer uniformly and incorporate into the top 4 to 6 inches of soils.
4. Seeding
   a. For **temporary stabilization**, select a mixture from **Sheet 1** . For a **permanent stabilization**, select a mixture from **Sheet 2** or **Sheet 3** depending on the conditions. Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.
   b. Apply seed uniformly with a broadcast seeder, drill, cultipacker seeder or hydroseeder. All seed will be applied at the recommended rate and planting depth.
   c. Seed that has been broadcast should be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used and the seed and fertilizer is mixed, they will be mixed on site and the seeding shall be done immediately and without interruption.
5. Mulching

   All mulching shall be done in accordance with detail **DE-ESC-3.4.5**.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 4 of 4 Effective July 2023

NO.	REVISION	DATE
1	60% PROGRESS SET	11/17/23
2	75% PROGRESS SET	2/16/24
3	ISSUED FOR BID	11/15/24

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 21804
www.gmbnet.com

DEWEY TOWN HALL REDESIGN
TOWN OF DEWEY BEACH
SUSSEX COUNTY, DELAWARE

ANDREW JOSEPH LYONS
AGENS
No. 14360
DELAWARE
PROFESSIONAL ENGINEER
11/15/24

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: NOV 2023

C6.0

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Standard Detail & Specifications

Dust Control

Temporary Methods:

1. Mulches - See **DE-ESC-3.4.5**, Standard Detail and Specifications for Mulching.
2. Vegetative cover - See **DE-ESC-3.4.3**, Std. Detail and Specifications for Vegetative Stabilization.
3. Adhesives - Use on mineral soils only (not effective on muck soils). Keep traffic off these areas. The following table may be used for general guidance.

Type of Emulsion	Water Dilution	Type of Nozzle	Apply Gal/Ac.
Latex emulsion	12.5:1	Fine spray	235
Resin-in-water emulsion	4.1	Fine spray	300
Acrylic emulsion (non-traffic)	7:1	Coarse spray	450
Acrylic emulsion (traffic)	3.5:1	Coarse spray	350

4. Tillage - For emergency temporary treatment, scarify the soil surface to prevent or reduce the amount of blowing dust until a more appropriate solution can be implemented. Begin the tillage operation on the windward side of the site using a chisel-type plow for best results.
5. Sprinkling - Sprinkle site with water until the surface is moist . Repeat as needed.
6. Calcium Chloride - Apply as flakes or granular material with a spreader at a rate that will keep the soil surface moist. Re-apply as necessary.
7. Barriers - Place barriers such as solid board fences, snow fences, hay bales, etc. at right angles to the prevailing air currents at intervals of approx. 10X their height.

Permanent Methods:

1. Vegetative cover - See **DE-ESC-3.4.3**, Std. Detail and Specifications for Vegetative Stabilization.
2. Stone - Apply layer of crushed stone or coarse gravel to protect soil surface.

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook		**DE-ESC-3.4.8** Sheet 1 of 1 Effective July 2023

Standard Detail & Specifications

Construction Site Pollution Prevention

Delaware NPDES Discharge Permit
General Permit for Discharge of Stormwater from Construction Activities

((Project Name))

((NOI Permit Number))

((Agency Plan Approval ID))

((Contact Name & Number for Additional Site Information))

((Contact Name & Number to Obtain Copy of Approved Plan))

If you observe indicators of stormwater pollutants in the discharge or in the receiving waterbody, call the DNREC Spill Notification 24 HR Hotline at

1-800-662-8802

Example Construction General Permit (CGP) Signage

NOTES:
1. Minimum sign size 2' x 2'
2. Minimum text size 1"
3. Sign must be posted at a safe, publicly accessible location close to construction site
4. Sign must be visible from the public road nearest the active construction site
5. Signs posted within a DelDOT or other public road right-of-way (ROW) must be in accordance with all local and/or State requirements in regards to safety, location, orientation, etc.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.6.1** Sheet 1 of 4 Effective July 2023

Standard Detail & Specifications

Construction Site Pollution Prevention

Notes:

The Construction Site Pollution Prevention Plan includes the following elements:

1. **Material Inventory**

   Document the storage and use of the following materials:
   a. Concrete
   b. Detergents
   c. Paints (enamel and latex)
   d. Cleaning solvents
   e. Pesticides
   f. Wood scraps
   g. Fertilizers
   h. Petroleum based products
2. **Good housekeeping practices**
   a. Store only enough product required to do the job.
   b. Store all materials in a neat, orderly manner in their original labeled containers and covered.
   c. Do not mix different substances.
   d. When possible, use all of a product prior to disposal of the container.
   e. Manufacturers' instructions for disposal should be strictly adhered to.
   f. Designate someone to inspect all BMPs daily.
3. **Waste management practices**
   a. Collect and store all waste materials in securely lidded dumpsters in a location that does not drain to a waterbody.
   b. Salvage and/or recycle waste materials whenever possible.
   c. The dumpsters shall be emptied a minimum of twice per week, or more if necessary. The licensed trash hauler is responsible for cleaning out dumpsters.

Source:	Symbol:	Detail No.
Adapted from USEPA Pub. 840-B-92-002		**DE-ESC-3.6.1** Sheet 2 of 4 Effective July 2023

Standard Detail & Specifications

Construction Site Pollution Prevention

Notes (cont.)

d. Dispose of all trash in accordance with all applicable Delaware laws.
e. Littering is strictly prohibited. Trash cans should be placed at all lunch spots and recycle bins should be placed near the construction trailer.
f. If fertilizer bags can not be stored in a weather-proof location, they should be kept on a pallet and covered with plastic sheeting which is overlapped and anchored.

4. **Equipment maintenance practices**
   a. If possible, equipment should be taken to off-site commercial facilities for washing and maintenance.
   b. If performed on-site, wash vehicles with high-pressure water spray without detergents in an area contained by an impervious berm.
   c. Use drip pans for all equipment maintenance.
   d. Inspect equipment for leaks on a daily basis.
   e. Direct washout from concrete trucks into a temporary pit for hardening and proper disposal.
   f. Equip fuel nozzles with automatic shut-off valves.
   g. Dispose of all used products such as oil, antifreeze, solvents and tires in accordance with manufacturers' recommendations and local, state and federal laws and regulations.
5. **Spill prevention practices**
   a. Identify potential spill areas and contain them in covered areas with no connection to the storm drain system.
   b. Post warning signs in hazardous material storage areas.
   c. Perform preventive maintenance on all tanks, valves, pumps, pipes and other equipment as necessary.
   d. Prioritize low or non-toxic substances for use.

Source:	Symbol:	Detail No.
Adapted from USEPA Pub. 840-B-92-002		**DE-ESC-3.6.1** Sheet 3 of 4 Effective July 2023

Standard Detail & Specifications

Construction Site Pollution Prevention

Notes (cont.)

e. Prominently post contact information for reporting spills through the DNREC 24-Hour Toll Free Number.

6. **Education**
   a. Include Best Management Practices (BMPs) for construction site pollution control as part of regular progress meetings.
   b. Information regarding waste management, equipment maintenance and spill prevention should be prominently posted in the construction trailer.

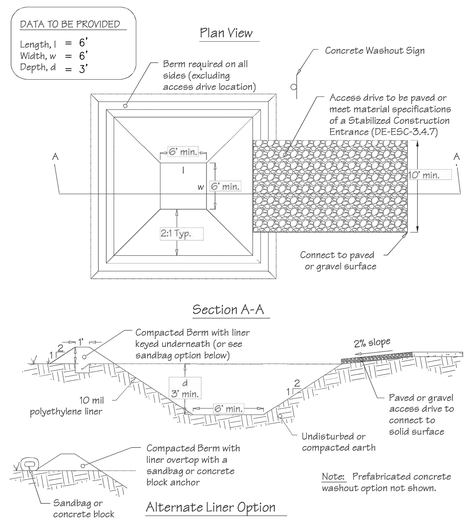
CONTACT INFORMATION

DNREC 24-Hour Toll Free Number	**800-662-8802**
DNREC Solid & Hazardous Waste Management Section	**302-739-9403**

Source:	Symbol:	Detail No.
Adapted from USEPA Pub. 840-B-92-002		**DE-ESC-3.6.1** Sheet 4 of 4 Effective July 2023

Standard Detail & Specifications

Concrete Washout



Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	CW	**DE-ESC-3.6.2** Sheet 1 of 2 Effective July 2023

Standard Detail & Specifications

Concrete Washout

Construction Notes:

1. Locate washout area a minimum of 50 feet from open channels, stormdrain inlets, wetlands or waterbodies.
2. Locate washout area so that it is accessible to concrete equipment (service with a minimum 10 foot wide gravel accessway), but so it is not in a highly active construction area causing accidental damage.
3. Minimum dimensions for prefabricated units are 4 feet by 4 feet by 1 foot deep with a minimum 4mil polyethylene plastic liner. Minimum dimensions for constructed concrete washout areas are 6 feet by 6 feet by 3 feet deep, with a minimum 10mil polyethylene liner, 2:1 side slopes, and a 1 foot high by 1 foot wide compacted fill berm.
4. The liner must be free of tears or holes and placed over smooth surfaces to prevent puncturing. For excavated washouts, anchor the liner underneath the berm or overtop with sandbags or concrete blocks to hold in place.
5. Provide a sign designating the washout area, and for large construction sites, provide signs throughout directing traffic to its location.
6. Allow washed out concrete mixture to harden through evaporation of the wastewater. Once the facility has reached 75 percent of its capacity, remove the hardened concrete by reusing the broken aggregate onsite, recycling, or disposing of offsite. The hardened material can be buried on site with minimum of 1 foot of clean, compacted fill.
7. Apply a new liner before reusing the station for additional washouts after maintenance has occurred.

Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	CW	**DE-ESC-3.6.2** Sheet 2 of 2 Effective July 2023

NO.	REVISION	DATE
1	60% PROGRESS SET	11/17/23
2	75% PROGRESS SET	2/16/24
3	ISSUED FOR BID	11/15/24

GMB
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SALISBURY, MARYLAND 21804
www.gmbnet.com

DEWEY TOWN HALL REDESIGN
TOWN OF DEWEY BEACH
SUSSEX COUNTY, DELAWARE

ANDREW JOSEPH LYONS
LICENSED
No. 14360
DELAWARE
PROFESSIONAL ENGINEER
11/15/24

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: NOV 2023

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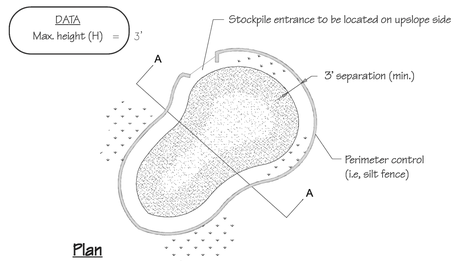
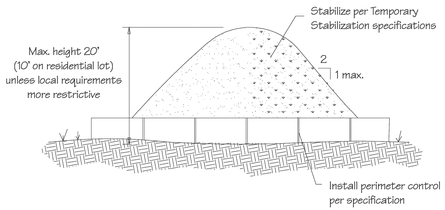
Standard Detail & Specifications

Soil Stockpile



Plan



Section A-A

Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	SP	DE-ESC-3.7.3 Sheet 1 of 2 Effective July 2023

Standard Detail & Specifications

Soil Stockpile

Construction Notes:

1. Locate stockpiles so that they are 50 feet from any storm drain inlet, open channel, wetland or waterbody. Redirect any concentrated flow around the stockpile using an approved erosion and sediment control measure.
2. Secure the perimeter of the stockpile with an approved erosion and sediment control perimeter device.
3. If stockpile is to remain inactive for more than 14 calendar days, the stockpile must be vegetated. Follow the temporary vegetation specifications. The vegetation chosen shall last the duration of the stockpile; the stockpile shall be restabilized if the temporary vegetation dies or erosion results.

Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	SP	DE-ESC-3.7.3 Sheet 2 of 2 Effective July 2023

PERMANENT SEEDING NOTES

SEEDBED PREPARATION:
LOOSEN UPPER 4 INCHES OF SOIL BY DISCING, RAKING, OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

SOIL AMENDMENTS:
APPLY 1–2 TONS PER ACRE (46–92 LBS/1000 SQ. FT.) OF DOLOMITIC LIMESTONE AND 600 LBS PER ACRE (14 LBS/1000 SQ. FT.) OF 10–10–10 FERTILIZER.

SEEDING:
FOR PERIODS OF SEPTEMBER 1 THROUGH NOVEMBER 15 AND MARCH 1 THROUGH MAY SEED WITH 210–230 LBS PER ACRE (5 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR PERIODS OF NOVEMBER 15 THROUGH FEBRUARY, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL–ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING.

MULCHING:
APPLY 1–1/2 TO 2 TONS PER ACRE (70 TO 90 LB/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATIONS USING A SYNTHETIC BINDER SUCH AS ACRYLIC DLR (AGRI–TAC) DCA–70. PETROSET OR TERRA TACK AT RATES RECOMMENDED BY THE MANUFACTURER.

MAINTENANCE:
INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS, AND RESEEDINGS.

TEMPORARY SEEDING NOTES

SEEDBED PREPARATION:
LOOSEN UPPER 4 INCHES OF SOIL BY DISCING, RAKING, OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

SOIL AMENDMENTS:
APPLY 1–2 TONS PER ACRE (46–92 LBS/1000 SQ. FT.) OF DOLOMITIC LIMESTONE AND 600 LBS PER ACRE (14 LBS/1000 SQ. FT.) OF 10–10–10 FERTILIZER.

SEEDING:
FOR PERIODS OF SEPTEMBER 1 THROUGH NOVEMBER 15 AND MARCH 1 THROUGH MAY SEED WITH 40 LBS/ACRE OF PERENNIAL RYE (1.0 LBS/1000 SQ. FT.). PERIODS OF NOVEMBER 15 THROUGH FEBRUARY, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING.

MULCHING:
APPLY 1–1/2 TO 2 TONS PER ACRE (70 TO 90 LB/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATIONS USING A SYNTHETIC BINDER SUCH AS ACRYLIC DLR (AGRI–TAC) DCA–70. PETROSET OR TERRA TACK AT RATES RECOMMENDED BY THE MANUFACTURER.

SEQUENCE OF OPERATIONS

1. A PRE–CONSTRUCTION MEETING SHALL BE HELD PRIOR TO COMMENCEMENT OF SITE CONSTRUCTION. ALSO, THE SUSSEX CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING FIVE (5) DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORM WATER MANAGEMENT PLAN.
2. INSTALL PERIMETER CONTROLS.
3. PERFORM DEMOLITION ACTIVITIES ACCORDING TO EXISTING CONDITIONS AND DEMOLITION PLAN.
4. IF DUST CONTROL BECOMES A PROBLEM, SPRINKLERING SHOULD BE USED.
5. EXCAVATE AS REQUIRED FOR PARKING LOT CONSTRUCTION.
6. INSTALL PAVEMENT PER ONSITE PAVEMENT SECTION ON SHEET C7.0.
7. EXCAVATE AS REQUIRED FOR CURB AND GUTTER AND SIDEWALK CONSTRUCTION.
8. INSTALL CURB AND GUTTER AND SIDEWALKS.
9. RESTORE ALL DISTURBED GRASS AREAS AND VEGETATE AS REQUIRED.
10. REMOVE SEDIMENT CONTROL MEASURES AND STABILIZE AREA AFTER OBTAINING PERMISSION FROM SEDIMENT CONTROL INSPECTOR.

SEDIMENT CONTROL NOTES

1. SUSSEX CONSERVATION DISTRICT MUST BE NOTIFIED IN WRITING FIVE (5) DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
2. REVIEW AND OR APPROVAL OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE *DELAWARE SEDIMENT AND STORMWATER REGULATIONS*, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
3. IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY THE SUSSEX CONSERVATION DISTRICT.
4. FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED FOR ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE WITHIN 14 CALENDAR DAYS UNLESS MORE RESTRICTIVE FEDERAL REQUIREMENTS APPLY.
5. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE *DELAWARE EROSION AND SEDIMENT HANDBOOK*, LATEST EDITION.
6. AT ANY TIME A DEWATERING OPERATION IS USED, IT SHALL BE PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR A NON–EROSIVE POINT OF DISCHARGE, AND A DEWATERING PERMIT SHALL BE APPROVED BY THE DNREC WELL PERMITTING BRANCH.
7. APPROVED PLANS REMAIN VALID FOR 5 YEARS FROM THE DATE OF APPROVAL.
8. POST CONSTRUCTION VERIFICATION DOCUMENTS ARE TO BE SUBMITTED TO THE SUSSEX CONSERVATION DISTRICT WITHIN 60–DAYS OF STORMWATER MANAGEMENT FACILITY COMPLETION.
9. APPROVAL OF A SEDIMENT AND STORMWATER MANAGEMENT PLAN DOES NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORMWATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC., NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.
10. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
11. BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENTS OF 7. DEL C. CH 60, *REGULATIONS GOVERNING THE CONTROL OF WATER POLLUTION*, SECTION 9.1.02, KNOWN AS SPECIAL CONDITIONS FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, AND DEPARTMENT POLICIES, PROCEDURES, AND GUIDANCE.

SITE INFORMATION

TOTAL AREA OF AFFECTED PARCELS AND RIGHT–OF–WAYS: 19,878± SF (0.50±AC)
TOTAL AREA TO BE DISTURBED: 19,878± SF (0.50±AC)

TOWN CONTACT/PROPERTY OWNER REPRESENTATIVE: BILL ZOLPER
302–227–8319 (PHONE)

ENGINEER: GEORGE, MILES & BUHR, LLC
400 HIGH STREET
SEAFORD, DE 19973

CONTACT: ANDREW J. LYONS, P.E.
(302) 628–1421 (PHONE)
(302) 628–8350 (FAX)

OWNER'S CERTIFICATION

I, THE UNDERSIGNED, CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT SHALL BE DONE PURSUANT TO THE APPROVED PLAN AND THAT RESPONSIBLE PERSONNEL (i.e., BLUE CARD HOLDER) INVOLVED IN THE LAND DISTURBANCE WILL HAVE A CERTIFICATION OF TRAINING PRIOR TO INITIATION OF THE PROJECT, AT A DNREC SPONSORED OR APPROVED TRAINING COURSE FOR THE CONTROL OF EROSION AND SEDIMENT DURING CONSTRUCTION. IN ADDITION, I GRANT THE DNREC SEDIMENT AND STORMWATER PROGRAM AND/OR THE RELEVANT DELEGATED AGENCY THE RIGHT TO CONDUCT ON–SITE REVIEWS.

BILL ZOLPER, TOWN MANAGER
TOWN OF DEWEY BEACH

DATE

ENGINEER'S CERTIFICATION

"I ANDREW J. LYONS, P.E. HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HERE ON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE."

ENGINEER'S SIGNATURE

11/15/24
DATE

NO.	REVISION	DATE
1	60% PROGRESS SET	11/17/23
2	75% PROGRESS SET	2/16/24
3	ISSUED FOR BID	11/15/24

GMB
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SEAFORD, DELAWARE 19973
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DEWEY TOWN HALL REDESIGN
TOWN OF DEWEY BEACH
SUSSEX COUNTY, DELAWARE

ANDREW JOSEPH LYONS
LICENSED
No. 14860
DELAWARE
PROFESSIONAL ENGINEER
11/15/24

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: NOV 2023

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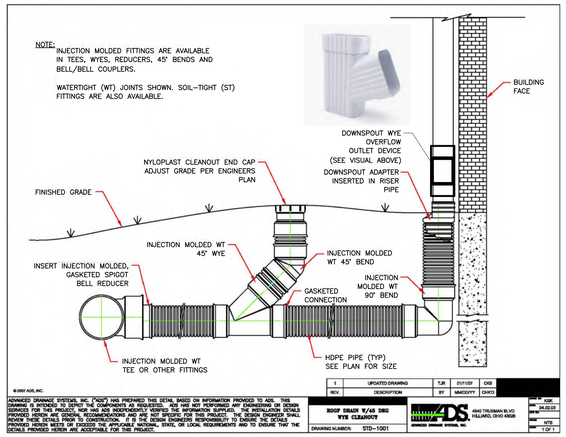
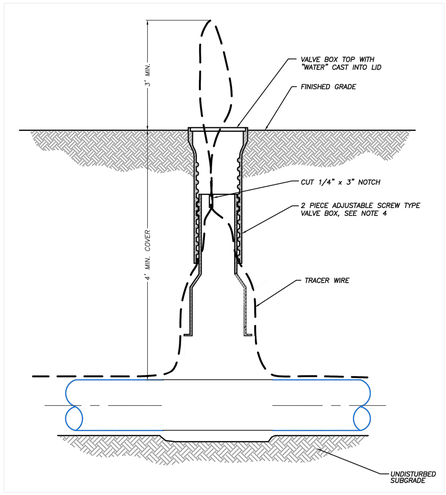
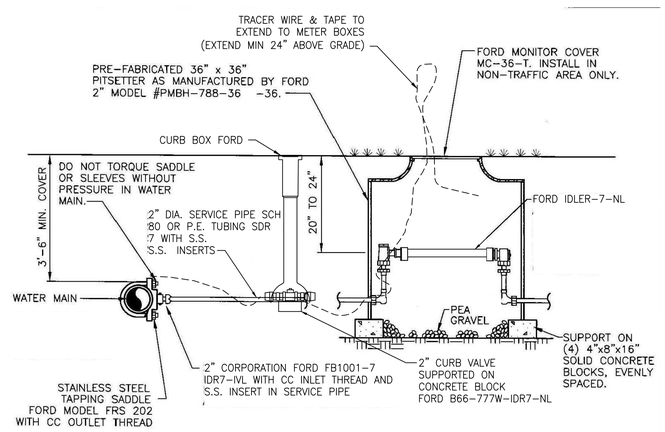


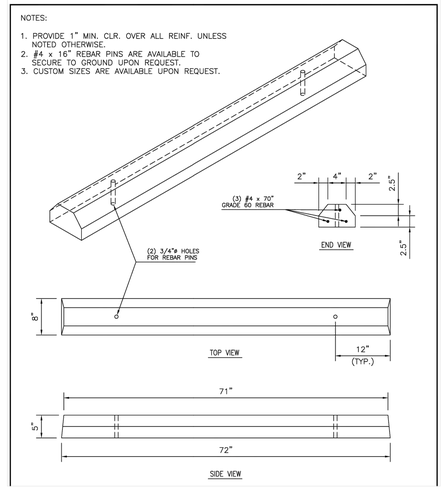
ROOF DRAIN WITH 45 DEGREE WYE CLEANOUT
NO SCALE



MODIFIED VALVE BOX DETAIL
NO SCALE

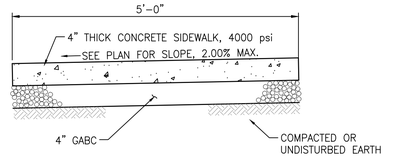


WATER METER AND CURB BOX DETAIL
NO SCALE



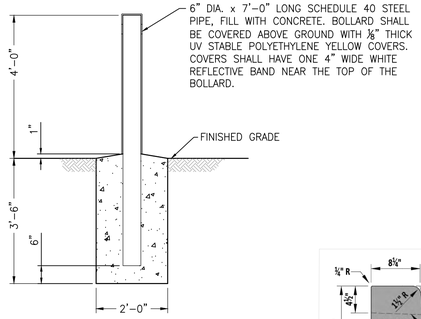
NOTE:
1. POLYMER WHEELSTOPS TO BE CONSIDERED AS AN APPROVED EQUAL.

STANDARD BUMPER CURB/WHEELSTOP DETAIL
NO SCALE

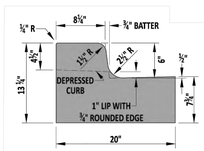


NOTES:
1. PROVIDE EXPANSION JOINTS AT INTERVALS NOT GREATER THAN 20 FEET.
2. APPLY BROOM FINISH TO SURFACE, PERPENDICULAR TO THE DIRECTION OF TRAFFIC.
3. SIDEWALK WIDTH ONSITE VARIES.
4. REFER TO SUSSEX COUNTY SIDEWALK DETAIL M-2.

CONCRETE SIDEWALK DETAIL
NO SCALE



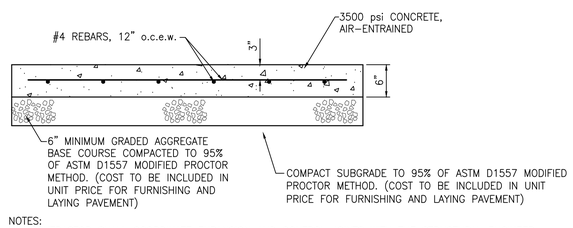
TYPICAL BOLLARD DETAIL
NO SCALE



INTEGRAL PCC CURB AND GUTTER
TYPE 3-6

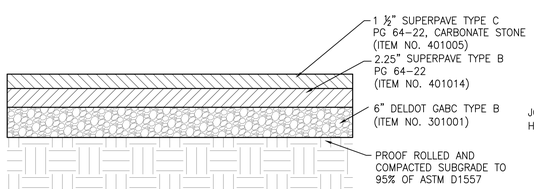
NOTES:
1). WHEN PCC CURB OR INTEGRAL PCC CURB AND GUTTER IS PLACED ADJACENT TO PORTLAND CEMENT CONCRETE PAVEMENT, CONSTRUCT THE JOINT AS PER THE LONGITUDINAL JOINT SEALANT DETAIL ON DETAIL P-2, SHEET 3 OF 5. USE APPROVED JOINT FILLER TO SEAL. WORK TO BE PAID UNDER RESPECTIVE CURB AND GUTTER ITEM.
2). THE DEPRESSED CURB DIMENSIONS (INCLUDING 1" LIP) ON THIS SHEET ARE FOR USE AT ENTRANCES ONLY. FOR CURB DIMENSIONS AT PEDESTRIAN CONNECTION, SEE DETAIL C-1, SHEET 3.
3). DIMENSIONS FOR CURB AND GUTTER BATTER AND PAN ARE MEASURED TO THE HINGE POINT.
4). DEPRESS CURB FLUSH WITH PAVEMENT OR ADJACENT AREA AT LEADING EDGE OF TRIANGULAR ISLANDS, TAPERING BACK TO FULL HEIGHT AT A SLOPE OF 4:1. SEE C-1, SHEET 1 FOR TYPICAL SECTION OF TAPER AT NOSE OF MEDIAN ISLANDS.
5). DEPRESS END OF CURB RUNS NOT PART OF AN ISLAND OR MEDIAN FLUSH WITH PAVEMENT OR ADJACENT AREA AT A SLOPE OF 12:1.
6). INSTALL TYPE IV POLYURETHANE-BONDED RECYCLED RUBBER EXPANSION MATERIAL BETWEEN THE FACE OF CURB AND EDGE OF PCC PAVEMENT.

DELDOT INTEGRAL PCC CURB AND GUTTER 3-6 DETAIL
NO SCALE

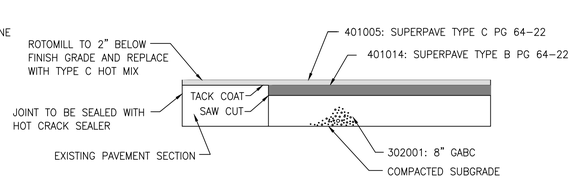


NOTES:
1. CONTRACTOR SHALL COORDINATE EXPANSION AND CONTROL JOINTS WITH THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE. (15' MAXIMUM SPACING OF CONTROL JOINTS, 30' MAXIMUM SPACING OF EXPANSION JOINTS).
2. GEOTECHNICAL ENGINEER TO VERIFY HEAVY DUTY CONCRETE SECTION.

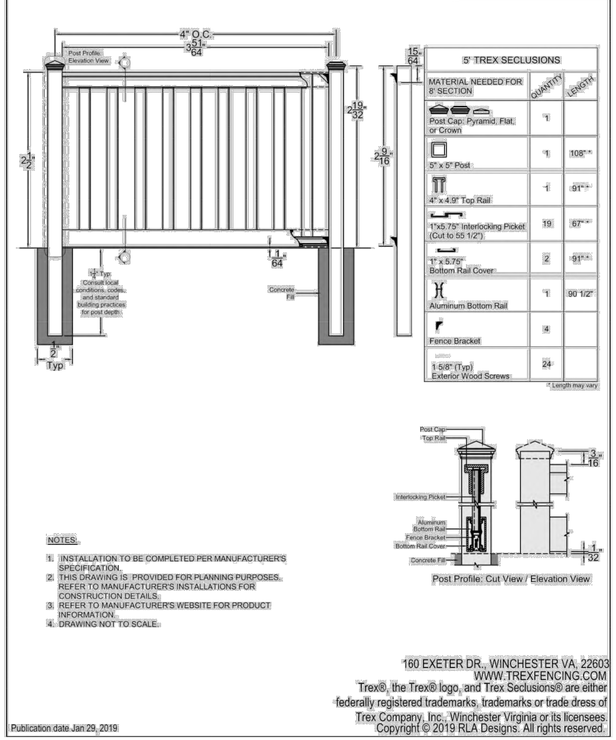
HEAVY DUTY CONCRETE DETAIL
NOT TO SCALE



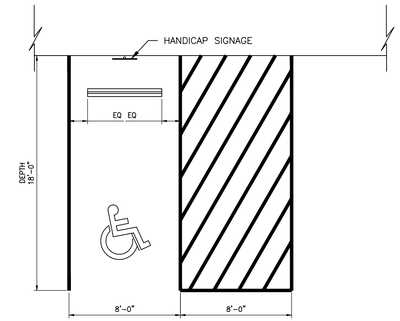
TYPICAL ONSITE PAVEMENT SECTION



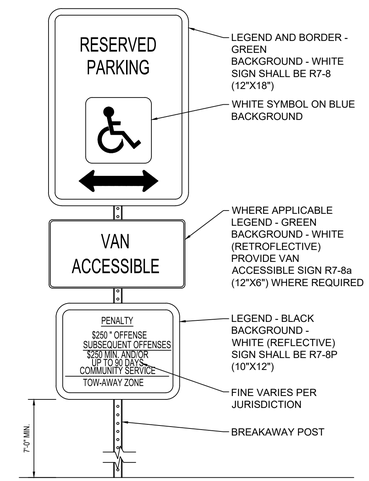
ENTRANCE PAVEMENT TIE-IN DETAIL
NOT TO SCALE



TYPICAL TRASH ENCLOSURE DETAIL
NO SCALE



TYPICAL ADA ACCESSIBLE PARKING SPACES
NO TO SCALE



NOTES:
1. SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. SIGNS ATTACHED WITH ACORN NUT TYPE FASTENERS.

TYPICAL ADA PARKING SIGN DETAIL
NO SCALE

NO.	REVISION	DATE
1	60% PROGRESS SET	11/17/23
2	75% PROGRESS SET	2/16/24
3	ISSUED FOR BID	11/15/24

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DEWEY TOWN HALL REDESIGN
TOWN OF DEWEY BEACH
SUSSEX COUNTY, DELAWARE

ANDREW JOSEPH LYONS TAGENS
No. 14360
DELAWARE PROFESSIONAL ENGINEER
11/15/24

SITE DETAIL SHEET

SCALE	: AS SHOWN
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: NOV 2023

C7.0

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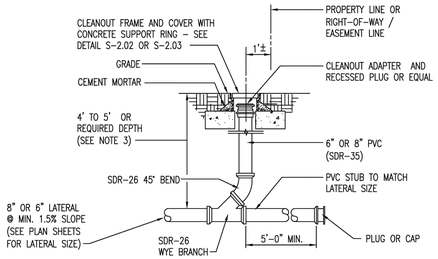
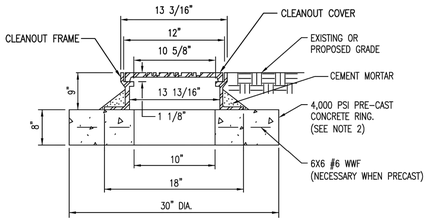


NOTES:

1. CLEANOUT SHALL NOT TO BE LOCATED WITHIN DITCH, SWALE, ETC.
2. MAINTAIN 10' MIN. OCTARATION BETWEEN SEWER AND WATER LINES.
3. WHERE SEWER MAIN DEPTH IS TOO SHALLOW TO ACCOMMODATE 4' OF COVER, SET LATERAL AT 1.5% FROM MAIN LINE SEWER TO THE PROPERTY LINE TO ACHIEVE THE MAXIMUM LATERAL DEPTH POSSIBLE AT THE PROPERTY LINE.
4. SIZE OF PVC LATERAL STUB TO MATCH LATERAL SIZE.
5. PROVIDE BETWEEN 3" AND 6" OF CLEARANCE BETWEEN CLEANOUT COVER AND CLEANOUT TOP.
6. ALL CLEANOUT DEPTHS LABELED AS CRITICAL DEPTH LATERALS SHALL BE INSTALLED PER CONFIGURATION ON DETAIL S-2.05.
7. METALLIC DETECTABLE REINFORCED UNDERGROUND MARKING TAPE TO BE PLACED WITHIN ENTIRE LIMITS OF SEWER LATERAL TRENCH – REFER TO DETAIL S-3.01 FOR CONFIGURATION.

SUSSEX COUNTY ENGINEERING DEPARTMENT	SEWER LATERAL CLEANOUT	DETAIL S-2.01
APPROVED: SUSSEX COUNTY ENGINEER		DATE ISSUED: 12/30/2021

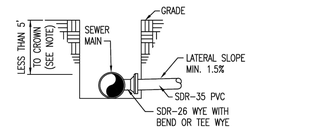


FRAME AND COVER SECTION

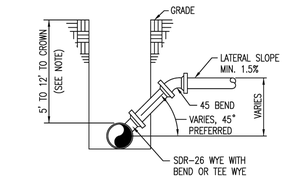
NOTES:

1. FRAME AND COVER ASSEMBLY SHALL BE CENTERED OVER THE CLEANOUT RISER.
2. HDPE COMPOSITE SUPPORT RING BASE MAY BE SUBSTITUTED FOR CONCRETE RING IN NON-TRAFFIC AREA. HDPE SUPPORT RING IS NOT PERMITTED IN TRAFFIC BEARING AREA.
3. CLEANOUT FRAME AND COVER SHALL BE INSTALLED BY UTILITY CONTRACTOR PRIOR TO SUBSTANTIAL COMPLETION INSPECTION FOR DEVELOPMENT PROJECTS.
4. MATERIAL FOR FRAME AND COVER SHALL BE HEAVY DUTY GRAY IRON CL35B MEETING THE REQUIREMENTS OF ASTM A48.
5. CLEANOUT COVER SHALL HAVE A RAISED DIAMOND PATTERN WITH A 2" MIN. RAISED "S" IMPRINTED IN SHARP FACE GOTHIC AT CENTER OF COVER. A SINGLE 1" MIN. WIDE PICKHOLE SHALL BE PROVIDED AT EDGE.
6. SEWER CLEANOUT COVERS LOCATED WITHIN A PEDESTRIAN WALKWAY MUST BE ADA COMPLIANT.
7. REFER TO CURRENT DELDOT REQUIREMENTS FOR INSTALLATIONS WITHIN DELDOT RIGHT-OF-WAY.

SUSSEX COUNTY ENGINEERING DEPARTMENT	8" SEWER LATERAL CLEANOUT FRAME AND COVER	DETAIL S-2.03
APPROVED: SUSSEX COUNTY ENGINEER		DATE ISSUED: 5/31/2022



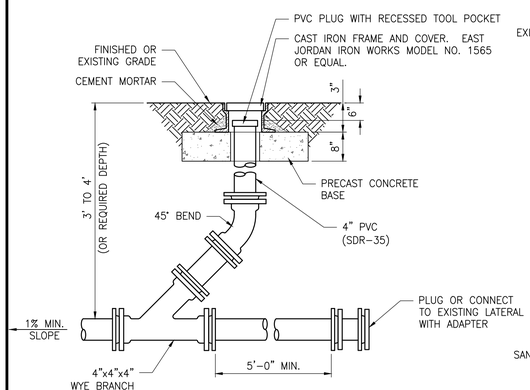
SHALLOW CONFIGURATION

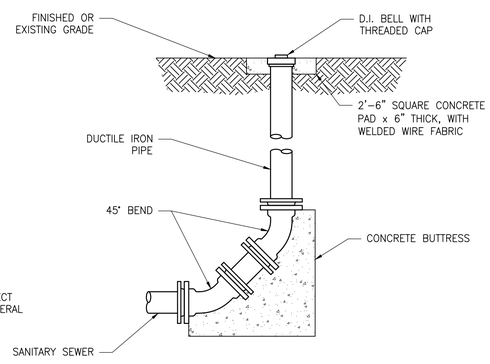


DEEP CONFIGURATION

NOTE:
LATERALS SHOWN ON THE PLANS AS CRITICAL DEPTH LATERALS WILL BE INSTALLED IN THE SAME FASHION AS SHALLOW LATERALS REGARDLESS OF THE TRENCH DEPTH. FOR MAINS GREATER THAN 12' TO CROWN SEE RISER DETAIL S-2.06.

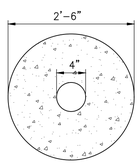
SUSSEX COUNTY ENGINEERING DEPARTMENT	SEWER LATERAL CONNECTIONS	DETAIL S-2.05
APPROVED: SUSSEX COUNTY ENGINEER		DATE ISSUED: 10/5/2022





TERMINAL CLEANOUT DETAIL

NO SCALE



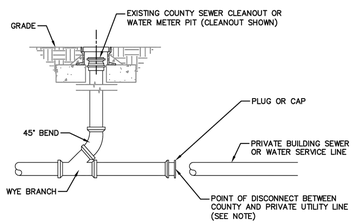
PRECAST CONCRETE BASE PLAN

NOTES:

1. C.O. NOT TO BE LOCATED IN DITCH, SWALE, ETC.
2. MAINTAIN 10' MINIMUM SEPARATION BETWEEN WATER AND SEWER LINES.
3. FOR USE AT 4" SEWER CLEANOUT LOCATIONS.

4" SEWER LATERAL CLEANOUT

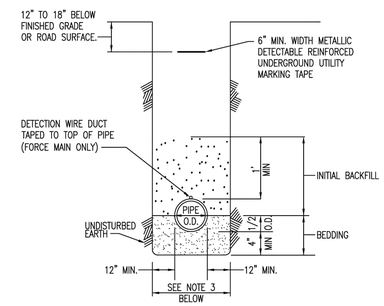
NO SCALE



ELEVATION
SCALE: NTS

NOTES:
1. UNLESS OTHERWISE DIRECTED BY SUSSEX COUNTY BASED ON SITE SPECIFIC CONDITIONS, UTILITY DISCONNECT LOCATION SHALL BE:
   1.1 WATER: AT BACK SIDE OF COUNTY METER PIT AT OUTLET THREADS OF HOME OWNER'S CONNECTION.
   1.2 SEWER: FIVE FEET FROM COUNTY CLEANOUT OR VALVE.

SUSSEX COUNTY ENGINEERING DEPARTMENT	PROPERTY DISCONNECT	DETAIL TB-7
APPROVED: SUSSEX COUNTY ENGINEER		DATE ISSUED: 9/30/2024



NOTES:
1. THIS DETAIL APPLIES TO BOTH GRAVITY AND FORCE MAIN SEWER INSTALLATIONS.
2. #57 STONE IS REQUIRED FOR BEDDING MATERIAL AND INITIAL BACKFILL TO 12" ABOVE THE PIPE CROWN FOR ALL SEWER INSTALLATIONS 12' DEEP AND GREATER. FOR INSTALLATIONS LESS THAN 12' DEEP, INITIAL BACKFILL MATERIAL REQUIREMENTS MAY BE MODIFIED BASED ON FIELD CONDITIONS, AS APPROVED BY THE COUNTY. ABOVE INITIAL BACKFILL, MATERIAL MEETING THE REQUIREMENTS OF TYPE F BORROW PER DELDOT'S SPECIFICATIONS SHALL BE USED.
3. FOR INSTALLATION WITHIN LIMITS OF DELDOT ROADWAY AND/OR RIGHT-OF-WAY, TRENCH CONFIGURATIONS AND BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH CURRENT DELDOT REQUIREMENTS.

SUSSEX COUNTY ENGINEERING DEPARTMENT	SEWER TRENCH	DETAIL S-3.01
APPROVED: SUSSEX COUNTY ENGINEER		DATE ISSUED: 12/30/2021

NO.	REVISION	DATE
1	60% PROGRESS SET	11/17/23
2	75% PROGRESS SET	2/16/24
3	ISSUED FOR BID	11/15/24

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DEWEY TOWN HALL REDESIGN
TOWN OF DEWEY BEACH
SUSSEX COUNTY, DELAWARE

ANDREW JOSEPH LYONS AGENT No. 14360 DELAWARE PROFESSIONAL ENGINEER
11/15/24

UTILITY DETAIL SHEET

SCALE	: AS SHOWN
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: NOV 2023

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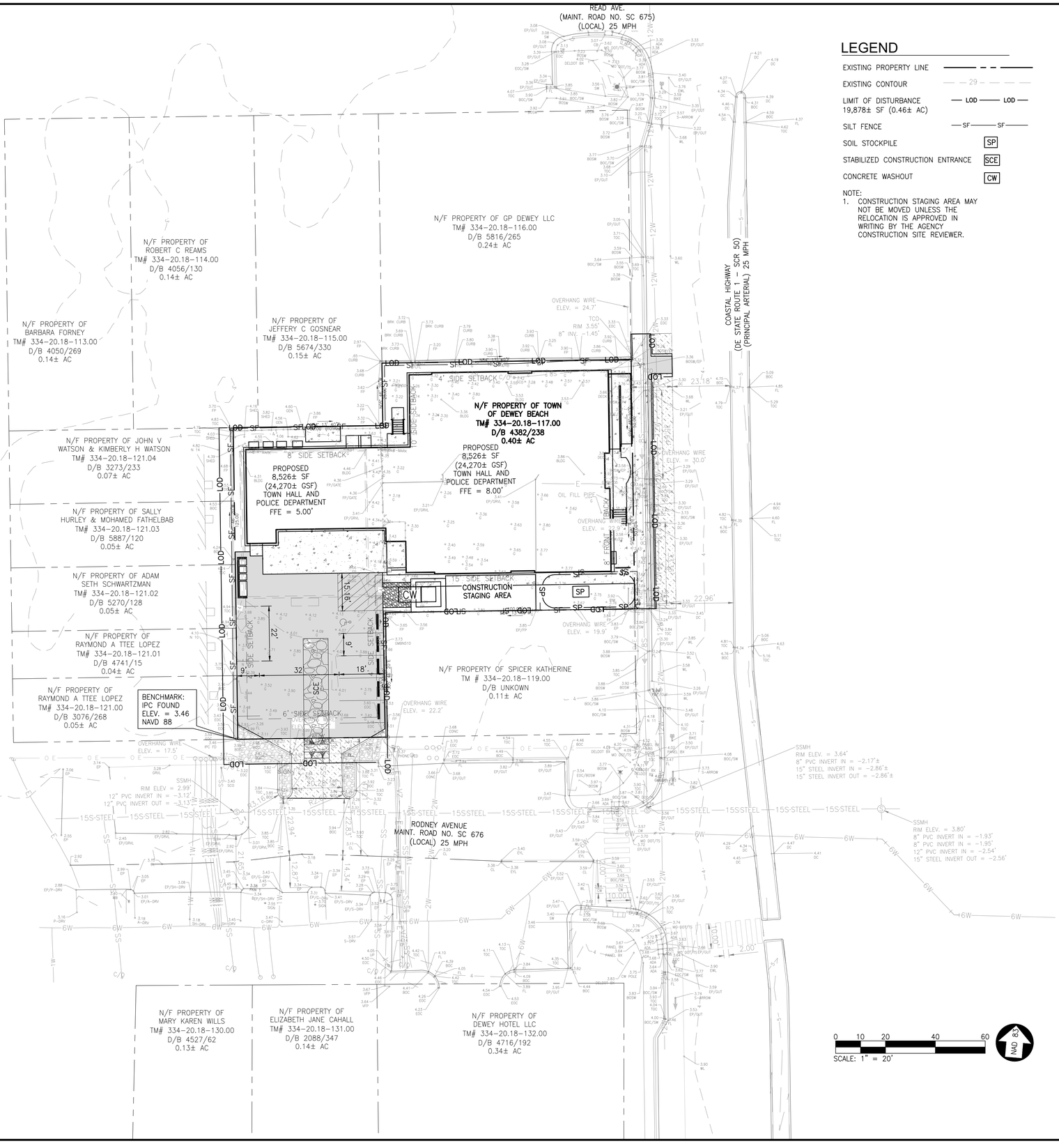

LEGEND

- EXISTING PROPERTY LINE
- EXISTING CONTOUR — 29 —
- LIMIT OF DISTURBANCE 19,878± SF (0.46± AC) — LOD — LOD —
- SILT FENCE — SF — SF —
- SOIL STOCKPILE [SP]
- STABILIZED CONSTRUCTION ENTRANCE [SCE]
- CONCRETE WASHOUT [CW]

NOTE:
1. CONSTRUCTION STAGING AREA MAY NOT BE MOVED UNLESS THE RELOCATION IS APPROVED IN WRITING BY THE AGENCY CONSTRUCTION SITE REVIEWER.

NO.	REVISION	DATE
1	60% PROGRESS SET	11/17/23
2	75% PROGRESS SET	2/16/24
3	ISSUED FOR BID	11/15/24

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DEWEY TOWN HALL REDESIGN

TOWN OF DEWEY BEACH
SUSSEX COUNTY, DELAWARE

ANDREW JOSEPH LYONS
LICENSE
No. 14360
DELAWARE
PROFESSIONAL ENGINEER
11/15/24

EROSION AND SEDIMENT CONTROL PLAN

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: NOV 2023

C8.0

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DEWEY BEACH TOWN HALL AND POLICE DEPARTMENT

STATE MAINTENANCE ROAD #00676

TOWN OF DEWEY BEACH,

SUSSEX COUNTY, DELAWARE

DELDOT ENTRANCE CONSTRUCTION PLANS

GMB FILE NO. 220242

REVIEWED FOR GENERAL CONFORMITY WITH CURRENT REGULATIONS, STANDARD SPECIFICATIONS AND STANDARD DETAILS. THE DEVELOPER'S ENGINEER IS RESPONSIBLE FOR ACCURACY OF CONTENT.

09/10/2024

SUBDIVISION ENGINEER
DELAWARE DEPARTMENT OF TRANSPORTATION

FINAL PLANS
PRINTS ISSUED FOR:
APPROVAL

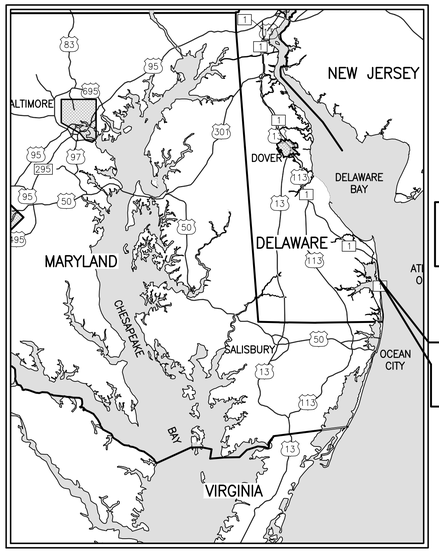
NO.	REVISIONS	DATE
1	REVISIONS PER DELDOT	3/21/24
2	REVISIONS PER DELDOT	5/15/24
3	REVISIONS PER OWNER	8/30/24

CONSTRUCTION / ENTRANCE PLAN GENERAL NOTES LAST REVISED 3/14/22

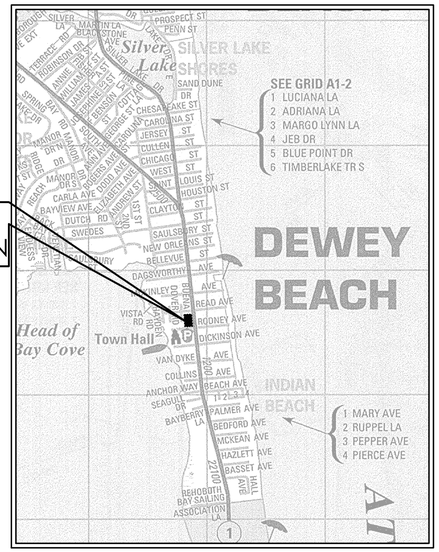
1. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL AND SHALL BE SUBJECT TO ITS APPROVAL.
2. AS OF THE ISSUANCE OF THE NOTICE TO PROCEED (NTP) ALL MATERIALS AND WORKMANSHIP WITHIN THE STATE OF DELAWARE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH CURRENT STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SUPPLEMENTAL SPECIFICATIONS, STANDARD CONSTRUCTION DETAILS, SPECIAL PROVISIONS, PAS MANUAL AND DESIGN GUIDANCE MEMORANDUMS.
3. ALL DISTURBED AREAS WITHIN THE STATE RIGHT-OF-WAY, BUT NOT IN THE PAVEMENT, SHALL BE TOP-SOILED (6" MINIMUM), FERTILIZED, SEEDED AND MULCHED. IF SOD IS USED NEXT TO SIDEWALK OR SHARED-USE PATH, CONTRACTOR SHALL GRADE TOPSOIL ADJACENT TO THE SIDEWALK OR SHARED-USE PATH PRIOR TO PLACEMENT OF SOD TO ENSURE THAT SOD IS PLACED FLUSH OR JUST BELOW EDGE OF SIDEWALK OR SHARED-USE PATH TO AVOID WATER PONDING ON THE SIDEWALK OR SHARED-USE PATH.
4. A 72-HOUR (MINIMUM) NOTICE SHALL BE GIVEN TO THE DELDOT DISTRICT PERMIT SUPERVISOR PRIOR TO STARTING ENTRANCE CONSTRUCTION.
5. MISS UTILITY OF DELAWARE SHALL BE NOTIFIED THREE (3) CONSECUTIVE WORKING DAYS PRIOR TO EXCAVATION, AT 1-800-282-8555.
6. THE DEVELOPER SHALL BE REQUIRED TO FURNISH AND PLACE RIGHT-OF-WAY MONUMENTS IN ACCORDANCE WITH DELDOT'S DEVELOPMENT COORDINATION MANUAL.
7. AT THE DISCRETION OF THE PUBLIC WORKS INSPECTOR, ANY DAMAGED, NON-COMPLIANT OR MISSING CURB OR SIDEWALK FOUND ON SITE WILL NEED TO BE REPAIRED OR REPLACED TO MEET CURRENT DELDOT STANDARDS.
8. AS OF THE ISSUANCE OF THE NOTICE TO PROCEED (NTP), ALL SIGNING, STRIPING, AND MAINTENANCE OF TRAFFIC IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL FOLLOW THE GUIDELINES SHOWN IN THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DELAWARE MUTCD) FOR STREETS AND HIGHWAYS. THE DEVELOPER OR PROPERTY OWNERS SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL SIGNS INSTALLED AS PART OF THIS PROJECT.
9. PLAN LOCATION AND DIMENSIONS SHALL BE STRICTLY ADHERED TO UNLESS OTHERWISE DIRECTED BY THE DELDOT INSPECTOR.
10. A COPY OF THE-UP-TO DATE APPROVED CONSTRUCTION DOCUMENTS AND DELDOT APPROVAL LETTERS SHALL BE MAINTAINED ON THE PROJECT SITE AT ALL TIMES AND BE AVAILABLE FOR INSPECTION BY DELDOT PERSONNEL.
11. EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS OR CORRECTNESS THEREOF IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY COMPANIES INVOLVED IN ORDER TO SECURE THE MOST ACCURATE INFORMATION AVAILABLE AS TO UTILITY LOCATION AND ELEVATION. NO CONSTRUCTION AROUND OR ADJACENT TO UTILITIES SHALL BEGIN WITHOUT NOTIFYING THEIR OWNERS AT LEAST 48-HOURS IN ADVANCE. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO HIS/HER NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE. TO LOCATE EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELAWARE (SEE NOTE #5).
12. SHOULD UTILITY RELOCATION BE REQUIRED, THE DEVELOPER MUST SUBMIT A UTILITY RELOCATION PLAN FOR DELDOT REVIEW, ALONG WITH CORRESPONDENCE FROM THE UTILITY COMPANIES STATING PRELIMINARY APPROVAL TO THE RELOCATION AND DESIGN OF THE UTILITIES PRIOR TO THE DELDOT PRE-CONSTRUCTION MEETING. NO PHYSICAL CONSTRUCTION CAN OCCUR UNTIL THE UTILITY PLANS ARE APPROVED, THE INDIVIDUAL UTILITY COMPANIES ISSUE FINAL APPROVAL, AND A DELDOT UTILITY PERMIT IS ISSUED TO THE UTILITY COMPANY.
13. UPON COMPLETION OF THE CONSTRUCTION OF THE SIDEWALK OR SHARED-USE PATH ACROSS THIS PROJECT'S FRONTAGE AND PHYSICAL CONNECTION TO ADJACENT EXISTING FACILITIES, THE DEVELOPER, THE PROPERTY OWNERS OR BOTH ASSOCIATED WITH THIS PROJECT, SHALL BE RESPONSIBLE TO REMOVE ANY EXISTING ROAD TIE-IN CONNECTIONS LOCATED ALONG ADJACENT PROPERTIES, AND RESTORE THE AREA TO GRASS. THESE DISTURBED AREAS SHALL BE TOP-SOILED (6" MINIMUM), FERTILIZED, SEEDED AND MULCHED. SUCH ACTIONS SHALL BE COMPLETED AT DELDOT'S DISCRETION, AND IN CONFORMANCE WITH THE DEVELOPMENT COORDINATION MANUAL.
14. DELDOT WILL NOT PROVIDE THE RESPECTIVE LOCAL LAND USE AGENCY WITH A 'NO' OBJECTION TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY NOTICE' UNTIL THE ENTRANCE(S) ARE COMPLETED TO THE SATISFACTION OF THE DEPARTMENT.
15. DESIGN, FABRICATION AND INSTALLATION OF ALL PERMANENT SIGNING SHALL BE AS OUTLINED IN THE LATEST VERSION OF THE DELAWARE MUTCD.
16. DESIGN AND INSTALLATION OF ALL PAVEMENT MARKINGS AND STRIPING SHALL BE AS OUTLINED IN THE LATEST VERSION OF THE DELAWARE MUTCD. FOR FINAL PERMANENT PAVEMENT MARKINGS:
    a. EPOXY RESIN PAINT SHALL BE REQUIRED FOR LONG LINE STRIPING.
    b. THERMO PLASTIC (EXTRUDED OR PREFORMED MATERIAL) WILL BE REQUIRED ON ASPHALT SURFACES, FOR SHORT LINE STRIPING, I.E. SYMBOLS/LEGENDS.
    c. PERMANENT PAVEMENT MARKING TAPE (PER DELDOT'S APPROVED MATERIALS LIST) WILL BE REQUIRED ON CONCRETE SURFACES, FOR SHORT LINE STRIPING, I.E. SYMBOLS/LEGENDS.
17. REMOVAL OF PAVEMENT MARKING PAINT OR TAPE SHALL COMPLY WITH SECTION 5.11.2 OF THE DEVELOPMENT COORDINATION MANUAL.
18. BREAKAWAY POSTS SHALL BE USED WHEN INSTALLING ALL SIGNS. REFERENCE DELDOT'S STANDARD CONSTRUCTION DETAILS, SECTION VIII – TRAFFIC, T-15.
19. MAINTENANCE OF THE STREETS WITHIN THIS SUBDIVISION WILL BE THE RESPONSIBILITY OF THE DEVELOPER, THE PROPERTY OWNERS WITHIN THIS SUBDIVISION, OR BOTH. THE STATE OF DELAWARE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THESE STREETS
20. ALL FIXED OBJECTS ARE TO BE A MINIMUM OF 10-FEET FROM THE EDGE OF TRAVEL LANE AND 5-FEET FROM THE EDGE OF PAVEMENT. REFERENCE SECTION 5.5.5 OF THE DEVELOPMENT COORDINATION MANUAL. ANY FIXED OBJECT THAT DOES NOT MEET THIS REQUIREMENT SHALL BE RELOCATED.
21. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL PAVING WITHIN THE STATE OF DELAWARE RIGHT-OF-WAY IS INSTALLED TO THE ELEVATIONS SHOWN AND NO PONDING OF WATER EXISTS AFTER PAVING IS COMPLETE.
22. THE DEVELOPER AND EXISTING/FUTURE OWNER OF NON-STATE-MAINTAINED ROADWAYS SHALL ENSURE THAT THE TRAFFIC CONTROL DEVICES ON SAID ROADWAYS OPEN TO PUBLIC TRAVEL ARE IN COMPLIANCE WITH THE LATEST VERSION OF THE DELAWARE MUTCD.
23. ALL SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM STANDARD T-99 DRY DENSITY.
24. THE CONTRACTOR SHALL NOTIFY DART FIRST STATE AT DOT_DETOURS@DELAWARE.GOV AT LEAST 14 DAYS PRIOR TO THE START OF ANY DETOURS OR CONSTRUCTION, AND DOT_DTC_PROJECTDEVELEOPMENT@DELAWARE.GOV AT SUCH TIME THE FACILITY IS COMPLETED AND OPERABLE FOR TRANSIT OPERATIONS. FOR EMERGENCY DETOUR INFORMATION ONLY PLEASE CONTACT DTC'S CHIEF SCHEDULER AT 302-576-6019.
25. FOR INFORMATION ON OBTAINING A UTILITY PERMIT IN SUSSEX COUNTY CONTACT M&O-SOUTH DISTRICT-PUBLIC WORKS AT (302) 853-1345.
26. FOR INFORMATION ON GETTING APPROVAL FOR PROPOSED OUTDOOR ADVERTISING IN SUSSEX COUNTY CONTACT M&O-SOUTH DISTRICT-OUTDOOR ADVERTISING & ROADSIDE CONTROL AT (302) 853-1327.

LEGEND

EXISTING	PROPOSED	
	N/A	PROPERTY AND/OR RIGHT-OF-WAY LINE AND MONUMENTATION
	N/A	BUILDING SETBACK LINE
48	29	ELEVATION CONTOUR
+ 47.50	49.50	SPOT ELEVATION
		PROPOSED PAVEMENT
N/A		HIGHWAY SHOULDER MILL AND OVERLAY
N/A		GRAVEL SURFACE
		BUILDING
		CONCRETE SURFACE
N/A		CONCRETE CURB
N/A		DEPRESSED CONCRETE CURB
N/A		A.D.A. TRUNCATED DOMES
	N/A	TREE
	N/A	UTILITY POLE WITH GUY WIRE
E	N/A	UNDERGROUND ELECTRIC LINE
TEL	N/A	UNDERGROUND TELEPHONE OR FIBER OPTIC CONDUIT (VERIZON)
12W	12W	WATER MAIN WITH SIZE
6W	6W	WATER SERVICE LINE WITH SIZE
12S	12S	SANITARY SEWER LINE WITH MANHOLE AND SIZE
6S	6S	SANITARY SEWER SERVICE LINE WITH SIZE
N/A	LOC	LIMIT OF DELDOT-RELATED CONSTRUCTION AND/OR DEMOLITION



VICINITY MAP
SCALE: 1" = 20 MILES



LOCATION MAP
SCALE: 1" = 2000'

DRAWING INDEX

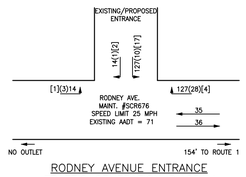
DE1 ENTRANCE PLAN – TITLE SHEET
DE2 ENTRANCE PLAN – SECTIONS & DETAILS
DE3 ENTRANCE PLAN – EXISTING CONDITIONS PLAN
DE4 ENTRANCE PLAN – EROSION AND SEDIMENT CONTROL PLAN
DE5 ENTRANCE PLAN – CONSTRUCTION PLAN
DE6 ENTRANCE PLAN – CROSS SECTIONS
DE7 ENTRANCE PLAN – GRADES AND GEOMETRICS PLAN
DE8 ENTRANCE PLAN – SIGNING AND STRIPING PLAN
DE9 ENTRANCE PLAN – MAINTENANCE OF TRAFFIC PLAN
DE10 ENTRANCE PLAN – PEDESTRIAN DETOUR PLAN
10 TOTAL SHEETS

CONTACTS:

OWNER/DEVELOPER: TOWN OF DEWEY
C/O BILL ZOLPER, TOWN MANAGER
105 RODNEY AVE.
DEWEY BEACH, DE 19971
(302)-227-8319

CIVIL: GEORGE, MILES, & BUHR, LLC
C/O ANDREW J. LYONS, P.E.
400 HIGH ST.
SEAFORD, DE 19973
(302)628-1421

TRAFFIC GENERATION – RODNEY AVENUE (SCR676)
(FULL MOVEMENT)



RODNEY AVENUE ENTRANCE
TRAFFIC GENERATION DIAGRAM
ADT (A.M. PEAK HOUR) [P.M. PEAK HOUR]

TRAFFIC GENERATION RATES

ROAD TRAFFIC DATA:
FUNCTIONAL CLASSIFICATION (SCR676) RODNEY AVENUE – LOCAL
POSTED SPEED LIMIT – 25 MPH
ROADWAY AADT = 61 TRIPS (FROM 2021 DELDOT TRAFFIC SUMMARY)
10 YEAR PROJECTED ROADWAY AADT =1.16 X 61 TRIPS = 71 TRIPS
TRAFFIC PATTERN GROUP – 4 (FROM 2021 DelDOT TRAFFIC SUMMARY)
K-FACTOR = 16.2, D-FACTOR = 59.9, TRUCK % = 0.70 (FROM 2021 DelDOT TRAFFIC SUMMARY)

SITE TRAFFIC DATA:
SOURCE: THE TRIP GENERATION MANUAL 11th. EDITION.
730 – GOVERNMENT OFFICE BUILDING (730)
31 EMPLOYEES, 24,270 SF TOWN HALL & POLICE STATION
ONE ENTRANCE – FULL MOVEMENT
DESIGN VEHICLE: SU-30

EXISTING (24 EMPLOYEES):
ADT: 228 TRIPS (114 ENTER, 114 EXIT)
AM: 37 (28 ENTER, 9 EXIT)
PM: 19 (4 ENTER, 15 EXIT)

PROPOSED (31 EMPLOYEES):
ADT: 282 TRIPS (141 ENTER, 141 EXIT)
AM: 42 (31 ENTER, 11 EXIT)
PM: 24 (5 ENTER, 19 EXIT)

DIFFERENCE (PROPOSED – EXISTING):
ADT: 282–228 = 54
AM: 42–37 = 5 AM PK
PM: 24–19 = 5 PM PK

DIRECTIONAL DISTRIBUTION:
90% TO AND FROM THE EAST
10% TO AND FROM THE WEST
PEAK HOUR HV% OF PROPOSED SITE = 5%

TRAFFIC GENERATION RATES

SITE DATA:

GROSS ACREAGE OF PROPERTY (AFTER DELDOT DEDICATION):	0.40± ACRES
GROSS LEASABLE FLOOR AREA:	24,270± GSF
ZONING:	RESORT BUSINESS 2 – RB2
PRESENT/PROPOSED USE:	CITY HALL & POLICE DEPARTMENT/ CITY HALL & POLICE DEPARTMENT
SEWER PROVIDER:	SUSSEX COUNTY
WATER PROVIDER;	SUSSEX COUNTY
LANDUSE APPROVAL AGENCY:	TOWN OF DEWEY
TAX PARCEL NUMBERS:	334-20.18-117.00
NUMBER OF LOTS, EXISTING AND PROPOSED:	1
PARKING REQUIRED:	7
PARKING PROVIDED:	7
POSTED SPEED LIMIT ON FRONTAGE ROAD:	25 MPH (COASTAL HWY) 25 MPH (RODNEY AVE.)
PROXIMITY TO IDENTIFIED TRANSPORTATION DISTRICTS (TID):	NOT WITHIN TID
INVESTMENT LEVEL AREA:	LEVEL 2
MAX. BUILDING HEIGHT:	34'
HORIZONTAL/VERTICAL DATUM:	NAD83/NAVD 88

NOTE: CONTRACTOR TO TEST PIT FOR EXISTING UTILITY LOCATIONS AT LEAST TWO WEEKS PRIOR TO UTILITY INSTALLATION. REPORT ANY INCONSISTENCIES TO ENGINEER.

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY • BALTIMORE • SEAFORD
400 HIGH STREET
SEAFORD, DELAWARE 19973
302-628-1421, FAX 302-628-8350
www.gmbnet.com

FEBRUARY 2024

OWNER/DEVELOPER'S CERTIFICATION:

I HEREBY CERTIFY THAT I AM THE DEVELOPER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN AND THAT THE PLAN WAS MADE AT MY DIRECTION. I ACKNOWLEDGE THE SAME TO BE MY ACT AND IT IS MY DESIRE TO HAVE THE PLAN RECORDED.

9/5/24
DATE

TOWN OF DEWEY
C/O BILL ZOLPER, TOWN MANAGER
105 RODNEY AVE.
DEWEY BEACH, DE 19971
(302)-227-8319

GMB
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DEWEY TOWN HALL AND POLICE DEPARTMENT
FOR
TOWN OF DEWEY
BROADKILL HUNDRED
SUSSEX COUNTY, DELAWARE
DELDOT PROJECT ID NO.: 9452
STATE MAINTAINED ROAD #SCR676

ANDREW JOSEPH LYONS
No. 14860
DELAWARE
PROFESSIONAL ENGINEER
9/5/24

ENTRANCE PLAN - TITLE SHEET

SCALE	: AS SHOWN
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: FEB 2024

SHEET NO.
DE1

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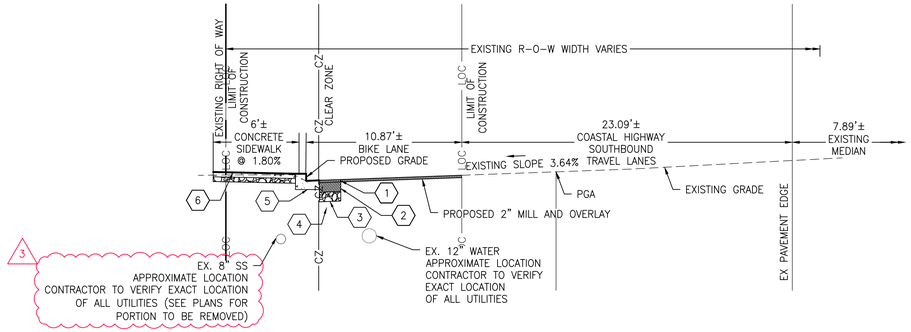
PEN7-WHITE 039 INCHES (1.00mm)
PEN6-MAGENTA 027 INCHES (.70mm)
PEN5-BLUE 020 INCHES (.50mm)
PLOT CODE PEN4-CYAN 014 INCHES (.35mm)
PEN3-GREEN 009 INCHES (.25mm)
PEN2-YELLOW 007 INCHES (.18mm)
PEN1-RED 005 INCHES (.13mm)

DelDOT REVIEWED FOR GENERAL CONFORMITY
Sep. 10, 2024

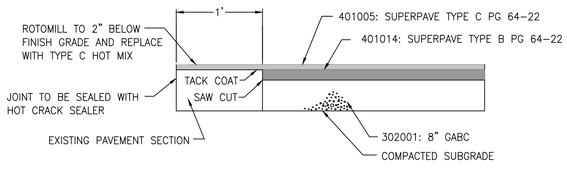


LEGEND

1. ITEM 401005 – 2" BITUMINOUS CONCRETE, SUPERPAVE TYPE C, PG 64–22, (CARBONATE STONE)
2. ITEM 401014 – 8" BITUMINOUS CONCRETE, SUPERPAVE TYPE B, PG 64–22.
3. ITEM 301001 – GRADED AGGREGATE BASE COURSE (GABC), TYPE B, 8" DEPTH.
4. PREPARE SUBGRADE IN ACCORDANCE WITH DELDOT STANDARD SPECIFICATIONS.
5. INTEGRAL PCC CURB AND GUTTER TYPE 3–6 PER DELDOT DETAIL C–1 (2 OF 4)
6. CONCRETE SIDEWALK (4" CONC, 4" GABC) PER DELDOT DETAIL M–3.

COASTAL HIGHWAY TYPICAL SITE FRONTAGE SECTION STA. -0+10 TO STA. 1+00

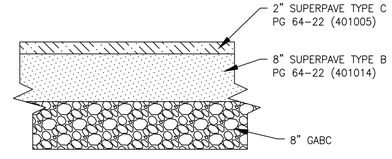
NO SCALE



ENTRANCE PAVEMENT TIE-IN DETAIL

NO SCALE

TYPICAL NEW CONSTRUCTION STRUCTURAL NUMBERS	
PAVEMENT SECTION THICKNESS	STRUCTURAL NUMBER
2" TYPE C	0.80
8" TYPE B	3.20
8" GABC	1.12
TOTAL	5.12



SN REQUIRED = 3.12
SN = 2*.44+8*.44+8*.14 = 5.12

TYPICAL PAVEMENT SECTION (DELDOT ROW)

NO SCALE

FINAL PLANS
PRINTS ISSUED FOR:
APPROVAL

NO.	REVISIONS	DATE
1	REVISIONS PER DELDOT	3/21/24
2	REVISIONS PER DELDOT	5/15/24
3	REVISIONS PER OWNER	8/30/24

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DEWEY TOWN HALL AND POLICE DEPARTMENT
FOR
TOWN OF DEWEY
BROADKILL HUNDRED
SUSSEX COUNTY, DELAWARE
DELDOT PROJECT ID NO.: 9452
STATE MAINTAINED ROAD #SCR676

JOSHUA JOSEPH LYONS
LICENSE
No. 14860
DELAWARE
PROFESSIONAL ENGINEER
9/5/24

ENTRANCE PLAN - SECTIONS & DETAILS

SCALE	: AS SHOWN
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: FEB 2024

SHEET NO.
DE2

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PLOT CODE
PEN1-RED .006 INCHES (.15mm)
PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-CYAN .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGENTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)

DelDOT
REVIEWED FOR
GENERAL
CONFORMITY
Sep. 10, 2024

READ AVE.
(MAINT. ROAD NO. SC 675)
(LOCAL) 25 MPH

COASTAL HIGHWAY
(DE STATE ROUTE 1 - SCR 50)
(PRINCIPAL ARTERIAL) 25 MPH

N/F PROPERTY OF GP DEWEY LLC
TM# 334-20.18-116.00
D/B 5816/265
0.24± AC

N/F PROPERTY OF
ROBERT C REAMS
TM# 334-20.18-114.00
D/B 4056/130
0.14± AC

N/F PROPERTY OF
BARBARA FORNEY
TM# 334-20.18-113.00
D/B 4050/269
0.14± AC

N/F PROPERTY OF
JEFFERY C GOSNEAR
TM# 334-20.18-115.00
D/B 5674/330
0.15± AC

N/F PROPERTY OF TOWN
OF DEWEY BEACH
TM# 334-20.18-117.00
D/B 4382/238
0.40± AC

EXISTING BUILDING TO
BE DEMOLISHED

EXISTING BUILDING TO
BE DEMOLISHED

N/F PROPERTY OF JOHN V
WATSON & KIMBERLY H WATSON
TM# 334-20.18-121.04
D/B 3273/233
0.07± AC

N/F PROPERTY OF SALLY
HURLEY & MOHAMED FATHELBAB
TM# 334-20.18-121.03
D/B 5887/120
0.05± AC

N/F PROPERTY OF ADAM
SETH SCHWARTZMAN
TM# 334-20.18-121.02
D/B 5270/128
0.05± AC

N/F PROPERTY OF
RAYMOND A TTEE LOPEZ
TM# 334-20.18-121.01
D/B 4741/15
0.04± AC

N/F PROPERTY OF
RAYMOND A TTEE LOPEZ
TM# 334-20.18-121.00
D/B 3076/268
0.05± AC

BENCHMARK:
IPC FOUND
ELEV. = 3.46
NAVD 88

N/F PROPERTY OF SPICER KATHERINE
TM # 334-20.18-119.00
D/B UNKOWN
0.11± AC

RODNEY AVENUE
MAINT. ROAD NO. SC 676
(LOCAL) 25 MPH

N/F PROPERTY OF
MARY KAREN WILLS
TM# 334-20.18-130.00
D/B 4527/62
0.13± AC

N/F PROPERTY OF
ELIZABETH JANE CAHALL
TM# 334-20.18-131.00
D/B 2088/347
0.14± AC

N/F PROPERTY OF
DEWEY HOTEL LLC
TM# 334-20.18-132.00
D/B 4716/192
0.34± AC

OVERHANG WIRE
ELEV. = 24.7'

OVERHANG WIRE
ELEV. = 30.0'

OVERHANG WIRE
ELEV. = 22.9'

OVERHANG WIRE
ELEV. = 19.9'

OVERHANG WIRE
ELEV. = 22.2'

OVERHANG WIRE
ELEV. = 18.5'

OVERHANG WIRE
ELEV. = 17.5'

TCO
RIM 3.55'
8" INV. -1.45'

SSMH
RIM ELEV. = 2.99'
12" PVC INVERT IN = -3.12'
12" PVC INVERT OUT = -3.13'

SSMH
RIM ELEV. = 3.64'
8" PVC INVERT IN = -2.17'±
15" STEEL INVERT IN = = -2.86'±
15" STEEL INVERT OUT = -2.86'±

SSMH
RIM ELEV. = 3.80'
8" PVC INVERT IN = -1.93'
8" PVC INVERT IN = -1.95'
12" PVC INVERT IN = -2.54'
15" STEEL INVERT OUT = -2.56'

0 10 20 40 60
SCALE: 1" = 20'

NAD 83

FINAL PLANS
PRINTS ISSUED FOR:
APPROVAL

NO.	REVISIONS	DATE
1	REVISIONS PER DELDOT	3/21/24
2	REVISIONS PER DELDOT	5/15/24
3	REVISIONS PER OWNER	8/30/24

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DEWEY TOWN HALL AND POLICE DEPARTMENT
FOR
TOWN OF DEWEY
BROADKILL HUNDRED
SUSSEX COUNTY, DELAWARE
DELDOT PROJECT ID NO.: 9452
STATE MAINTAINED ROAD #SCR676

ANDREW JOSEPH LYONS
LICENSED
No. 14880
DELAWARE
PROFESSIONAL ENGINEER
9/5/24

ENTRANCE PLAN - EXISTING CONDITIONS PLAN

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: FEB 2024

SHEET NO.
DE3

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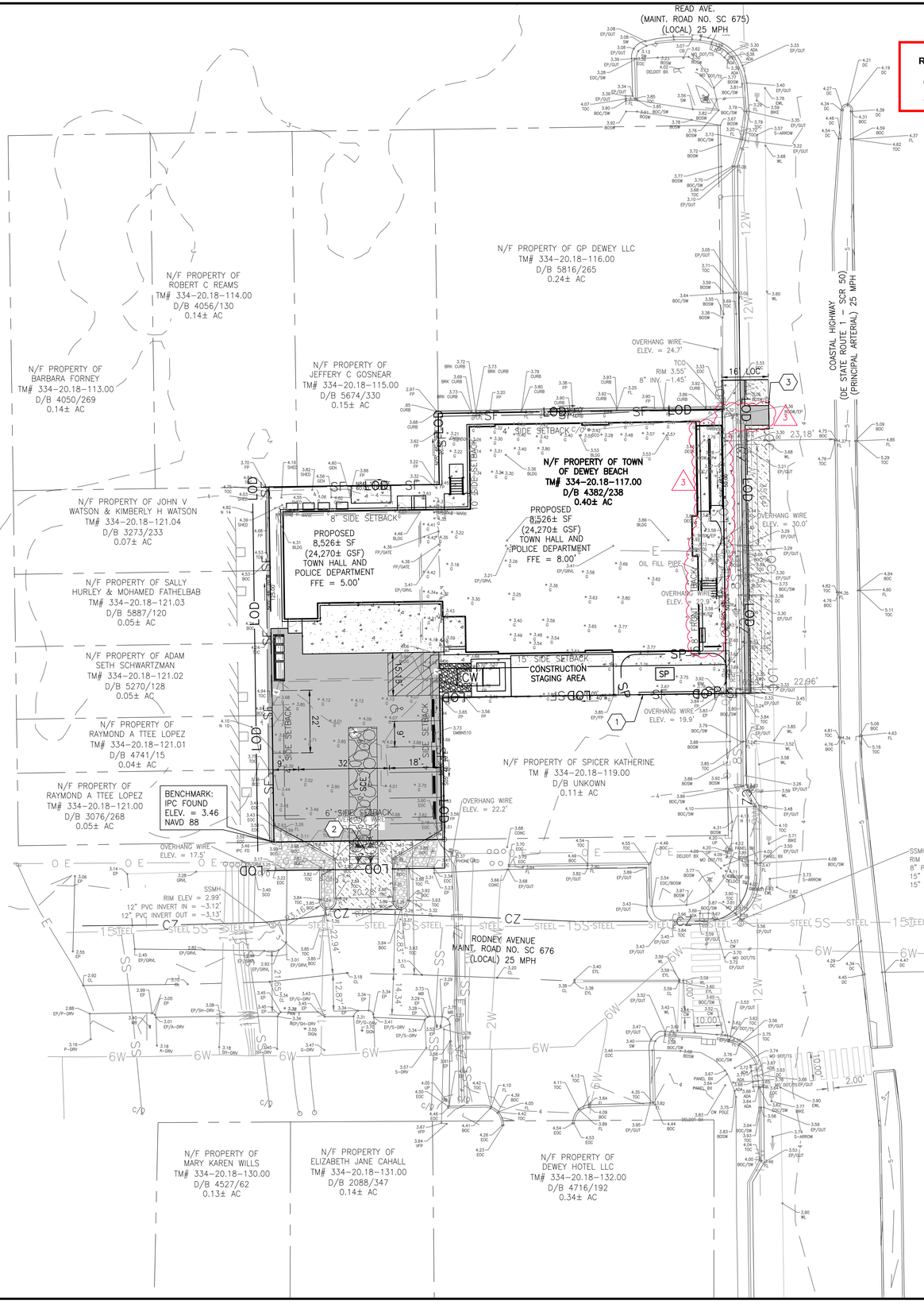
PLOT CODE
FEN1-RED .006 INCHES (.15mm)
FEN2-YELLOW .007 INCHES (.18mm)
FEN3-GREEN .010 INCHES (.25mm)
FEN4-CYAN .014 INCHES (.35mm)
FEN5-BLUE .020 INCHES (.50mm)
FEN6-MAGENTA .027 INCHES (.70mm)
FEN7-WHITE .039 INCHES (1.00mm)



DelDOT
REVIEWED FOR
GENERAL
CONFORMITY
Sep. 10, 2024

DELDOT SEQUENCE OF CONSTRUCTION

1. NOTIFY THE SUSSEX CONSERVATION DISTRICT IN WRITING AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
2. PRIOR TO ANY CLEARING, INSTALLATION OF SEDIMENT CONTROL MEASURES OR GRADING, A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED AND CONDUCTED WITH THE AGENCY CONSTRUCTION SITE REVIEWER. THE LANDOWNER/DEVELOPER, CONTRACTOR, AND CERTIFIED CONSTRUCTION REVIEWER ARE REQUIRED TO BE IN ATTENDANCE AT THE PRE-CONSTRUCTION MEETING; THE DESIGNER IS RECOMMENDED TO ATTEND. PLEASE NOTE THAT THE CCR SHALL BE A THIRD PARTY REVIEWER.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN AND REPAIR ALL EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PRACTICES DURING CONSTRUCTION AND UTILITY INSTALLATION.
4. CLEAR AND GRUB THOSE AREAS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS.
5. INSTALL SEDIMENT AND EROSION PERIMETER CONTROLS.
6. CLEAR AND GRUB REMAINDER OF THE RIGHT-OF-WAY AS NECESSARY FOR CONSTRUCTION WITHIN THE DELDOT LIMITS OF CONSTRUCTION.
7. ALL PERIMETER CONTROLS ARE TO BE REVIEWED BY THE AGENCY CONSTRUCTION SITE REVIEWER AND APPROVED PRIOR TO PROCEEDING WITH FURTHER SITE DISTURBANCE OR CONSTRUCTION.
8. THE CONTRACTOR SHOULD AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. IF DUST BECOMES A PROBLEM, SPRINKLING SHALL BE UTILIZED. PERIMETER CONTROLS SHOULD BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENTATION ON THE SITE. ACCUMULATED SEDIMENT SHOULD BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR REPAIR MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
9. INSTALL VEHICULAR MOT IN ACCORDANCE WITH DELDOT MAINTENANCE OF TRAFFIC NOTES PRIOR TO BEGINNING WORK IMPACTING ROAD USERS. INSTALL PEDESTRIAN MOT FOLLOWING THE APPROVED PEDESTRIAN DETOUR PLAN ON SHEET DE10.
10. SAWCUT AND REMOVE EXISTING CURB AND GUTTER, SIDEWALK, AND PAVEMENT AS REQUIRED. FOR EXCAVATION WITHIN THE LIMITS OF THE EXISTING LANE CONFIGURATIONS, THE CONTRACTOR SHALL ONLY EXCAVATE AN AMOUNT OF MATERIAL THAT CAN BE REPLACED USING ACCEPTABLE MATERIALS IN ACCORDANCE WITH STANDARD MOT NOTE #12 AT THE END OF EACH WORK DAY.
11. REMOVE EXISTING SANITARY SEWER TO PROPOSED TERMINAL CLEANOUT LOCATION. INSTALL NEW TERMINAL CLEANOUT. SEE DE5 FOR EXTENTS OF SEWER REMOVAL AND LOCATION FOR PROPOSED TERMINAL CLEANOUT.
12. INSTALL CONCRETE CURB AND GUTTER AND PCC SIDEWALK.
13. INSTALL PROPOSED FULL DEPTH PAVEMENT SECTION TO THE TYPE B PAVING LAYER.
14. MILL EXISTING PAVEMENT AND INSTALL FINAL TYPE C PAVING THROUGHOUT PROJECT LIMITS.
15. FINAL GRADING, LANDSCAPING AND STABILIZATION.
16. INSTALL FINAL SIGNING & STRIPING.
17. EROSION AND SEDIMENT CONTROL DEVICES TO BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH WRITTEN APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER.
18. REMOVE PEDESTRIAN DETOUR MOT DEVICES.
19. THE TERMINATION OF THE CONSTRUCTION GENERAL PERMIT WILL REQUIRE SUBMISSION AND ACCEPTANCE OF THE POST CONSTRUCTION VERIFICATION DOCUMENTS, INCLUDING FINAL STABILIZATION THROUGHOUT THE SITE, ALL ELEMENTS OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN IMPLEMENTED, AND ACCEPTANCE OF THE FINAL OPERATION AND MAINTENANCE PLAN.

SOIL INFORMATION

SYMBOL	NAME	HYDROLOGIC SOIL GROUP
AuB	ACQUANGO-URBAN LAND COMPLEX, 0-5% SLOPES	A
BuA	BROCKATONORTON-URBAN LAND COMPLEX, 0-2% SLOPES	A

SOIL CLASSIFICATION OBTAINED FROM USDA-SCS SOIL SURVEY OF SUSSEX COUNTY.

LEGEND

EXISTING	PROPOSED	
	RW	PROPERTY AND/OR RIGHT-OF-WAY LINE
N/A	PE	PERMANENT EASEMENT
N/A	LOC	LIMIT OF DELDOT-RELATED CONSTRUCTION AND/OR DEMOLITION (1,824SF = 0.04AC)
	LOD	OVERALL LIMIT OF DISTURBANCE
	SF	SILT FENCE
	SCE	STABILIZED CONSTRUCTION ENTRANCE

CONSTRUCTION NOTES

1. INSTALL SILT FENCE TO LIMITS SHOWN PER DELDOT DETAIL E-2 AND DNREC DETAIL DE-ESC-3.1.2.1.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DELDOT DETAIL E-14 AND DNREC DETAIL DE-ESC-3.4.7. MIRAFI 600X TO BE UTILIZED UNDERNEATH (TYPE GS-1 GEOTEXTILE) WITH DE #3 STONE.
3. LIMIT OF DELDOT-RELATED CONSTRUCTION AND/OR DEMOLITION

0 10 20 40 60
SCALE: 1" = 20'

NAD 83

FINAL PLANS
PRINTS ISSUED FOR:
APPROVAL

NO.	REVISIONS	DATE
1	REVISIONS PER DELDOT	3/21/24
2	REVISIONS PER DELDOT	5/15/24
3	REVISIONS PER OWNER	8/30/24

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DEWEY TOWN HALL AND POLICE DEPARTMENT
FOR
TOWN OF DEWEY
BROADKILL HUNDRED
SUSSEX COUNTY, DELAWARE
DELDOT PROJECT ID NO.: 9452
STATE MAINTAINED ROAD #SCR676

9/5/24

ENTRANCE PLAN - EROSION & SEDIMENT CONTROL PLAN

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: FEB 2024

SHEET NO.
DE4

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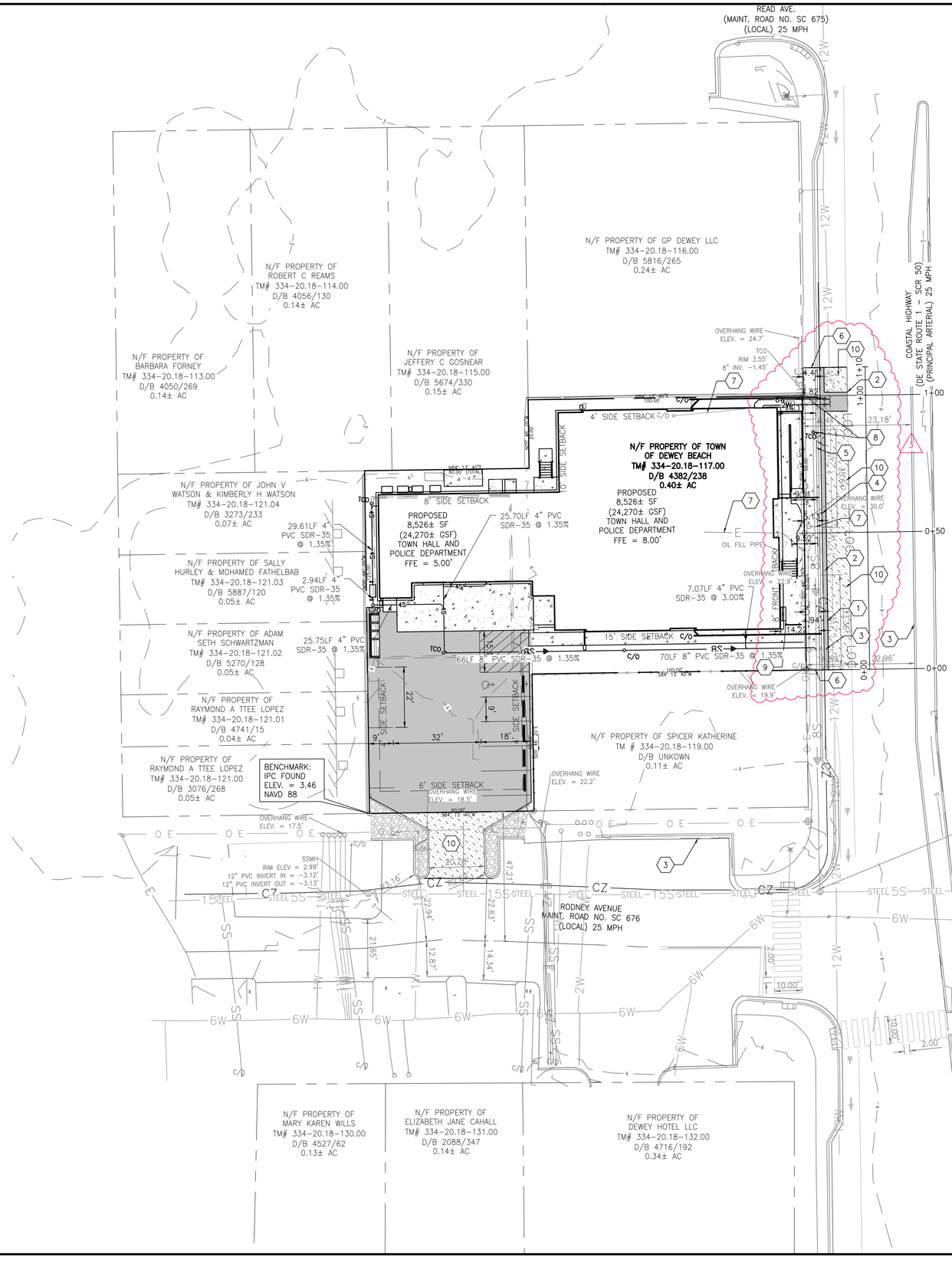
PLOT CODE
PEW-BRITE .039 INCHES (1.00mm)
PEW-MAGENTA .027 INCHES (.70mm)
PEBS-BLUE .035 INCHES (.90mm)
PEW-CYAN .014 INCHES (.35mm)
PEYG-GREEN .010 INCHES (.25mm)
PEW-YELLOW .007 INCHES (.18mm)
PEW-RED .006 INCHES (.15mm)



DelDOT REVIEWED FOR GENERAL CONFORMITY
Sep. 10, 2024

CONSTRUCTION NOTES

1. PAVEMENT TIE-IN TO EXISTING ASPHALT PAVEMENT SECTION, SEE DETAIL ON SHEET DE2.
2. PROPOSED PAVEMENT SECTION WITHIN DELDOT RIGHT-OF-WAY, PER SECTION ON SHEET DE2.
3. EXISTING EDGE OF PAVEMENT.
4. FURNISH AND INSTALL DELDOT INTEGRAL PCC CURB & GUTTER TYPE 3-6.
5. FURNISH AND INSTALL CONCRETE SIDEWALK PER DELDOT DETAIL M-3. CURB AND SIDEWALK REMOVAL WILL NEED TO BE DONE TO THE NEXT EXISTING JOINT.
6. PROPOSED TRANSITION FROM EXISTING SIDEWALK TO PROPOSED SIDEWALK.
7. EXISTING ONSITE UTILITY TO BE REPLACED AS SHOWN ON FINAL SITE PLAN SET.
8. TERMINAL CLEANOUT TO BE REMOVED ALONG WITH 12±LF OF SANITARY SEWER. A NEW TERMINAL CLEANOUT TO BE INSTALLED FLUSH WITH SIDEWALK GRADE AS SHOWN. (3)
9. PROPOSED BENCH (BY OWNER)
10. PROPOSED MILL AND OVERLAY

0 10 20 40 60
SCALE: 1" = 20'

N

FINAL PLANS
PRINTS ISSUED FOR:
APPROVAL

NO.	REVISIONS	DATE
1	REVISIONS PER DELDOT	3/21/24
2	REVISIONS PER DELDOT	5/15/24
3	REVISIONS PER OWNER	8/30/24

GMB
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DEWEY TOWN HALL AND POLICE DEPARTMENT
FOR
TOWN OF DEWEY
BROADKILL HUNDRED
SUSSEX COUNTY, DELAWARE
DELDOT PROJECT ID NO.: 9452
STATE MAINTAINED ROAD #SCR676

JASON JOSEPH LYONS
No. 14860
DELAWARE
PROFESSIONAL ENGINEER
9/5/24

ENTRANCE PLAN - CONSTRUCTION PLAN

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: FEB 2024

SHEET NO.
DE5

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G:\Projects\2022\220242 Dewey Beach New Town Hall Design\Drawings\Working Set\DelDot Entrance Plans\DES Construction Plan.dwg, 9/5/2024 1:43 PM, Cheri R. Hochstetler
PLOT CODE
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PEN2-YELLOW 007 INCHES (.18mm)
PEN3-GREEN 010 INCHES (.25mm)
PEN4-CYAN 014 INCHES (.35mm)
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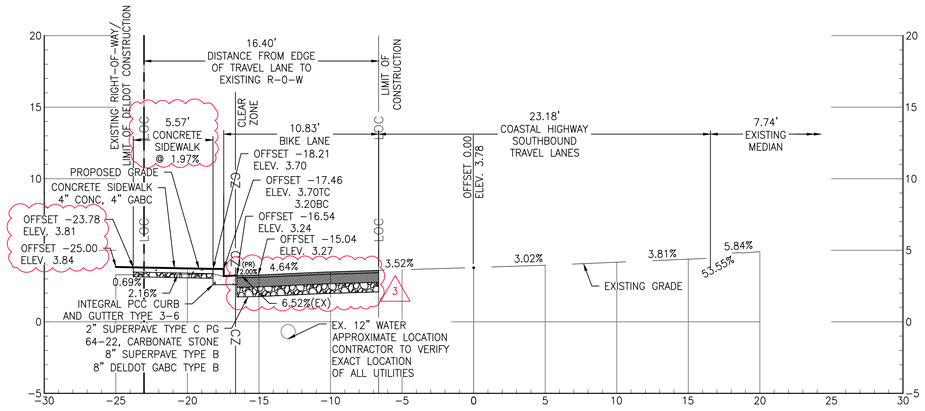
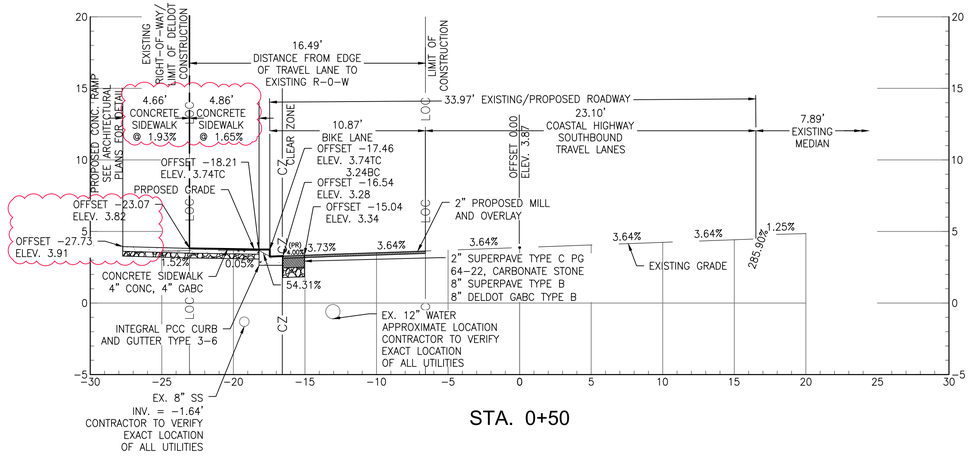
PEN6-MAGENTA 027 INCHES (.70mm)
PEN7-WHITE 039 INCHES (1.00mm)



STA. 1+00



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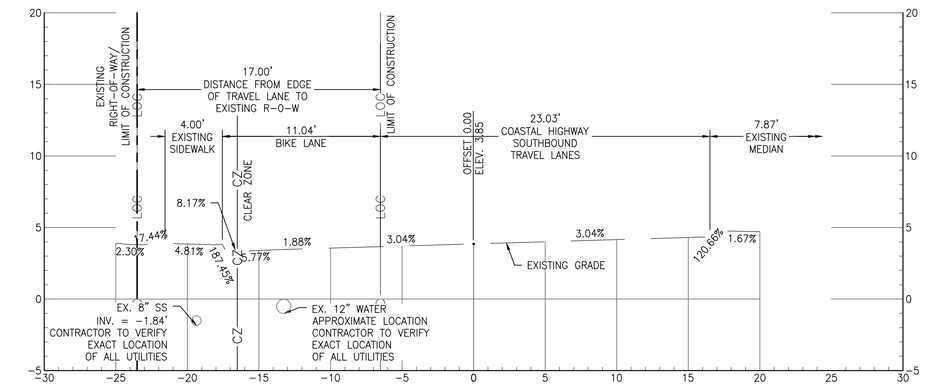

STA. 0+00

DelDOT REVIEWED FOR GENERAL CONFORMITY
Sep. 10, 2024

FINAL PLANS
PRINTS ISSUED FOR:
APPROVAL

NO.	REVISIONS	DATE
1	REVISIONS PER DELDOT	3/21/24
2	REVISIONS PER DELDOT	5/15/24
3	REVISIONS PER OWNER	8/30/24

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DEWEY TOWN HALL AND POLICE DEPARTMENT
FOR
TOWN OF DEWEY
BROADKILL HUNDRED
SUSSEX COUNTY, DELAWARE
DELDOT PROJECT ID NO.: 9452
STATE MAINTAINED ROAD #SCR676

ANDREW JOSEPH LYONS
No. 14860
DELAWARE
PROFESSIONAL ENGINEER
9/5/24

ENTRANCE PLAN - COASTAL HIGHWAY CROSS-SECTIONS

SCALE	: AS SHOWN
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: FEB 2024

SHEET NO.
DE6

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PLOT CODE
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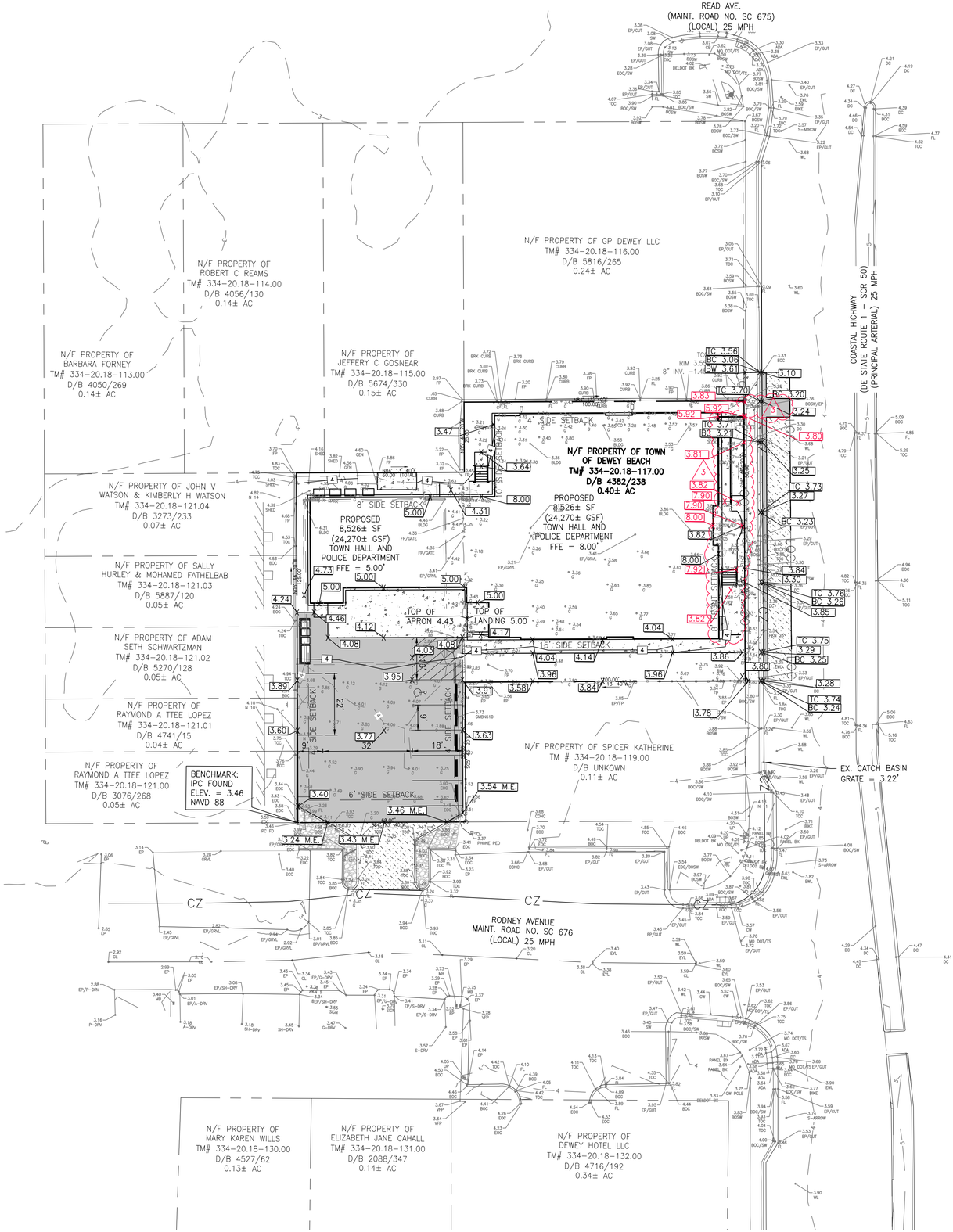
PEN2-YELLOW .007 INCHES (.19mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-CYAN .014 INCHES (.35mm)
PEN5-BLUE .020 INCHES (.50mm)
PEN6-MAGNTA .027 INCHES (.70mm)
PEN7-WHITE .039 INCHES (1.00mm)

DelDOT REVIEWED FOR GENERAL CONFORMITY
Sep. 10, 2024



FINAL PLANS
PRINTS ISSUED FOR:
APPROVAL

NO.	REVISIONS	DATE
1	REVISIONS PER DELDOT	3/21/24
2	REVISIONS PER DELDOT	5/15/24
3	REVISIONS PER OWNER	8/30/24

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DEWEY TOWN HALL AND POLICE DEPARTMENT
FOR
TOWN OF DEWEY
BROADKILL HUNDRED
SUSSEX COUNTY, DELAWARE
DELDOT PROJECT ID NO.: 9452
STATE MAINTAINED ROAD #SCR676

ANDREW JOSEPH LYONS
LICENSED
No. 14860
DELAWARE
PROFESSIONAL ENGINEER
9/5/24

ENTRANCE PLAN - GRADES & GEOMETRICS PLAN

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: FEB 2024

SHEET NO.
DE7

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PEN1-RED 009 INCHES (100mm)
PEN2-MAGENTA 007 INCHES (70mm)
PEN3-BLUE 005 INCHES (50mm)
PEN4-CYAN 014 INCHES (35mm)
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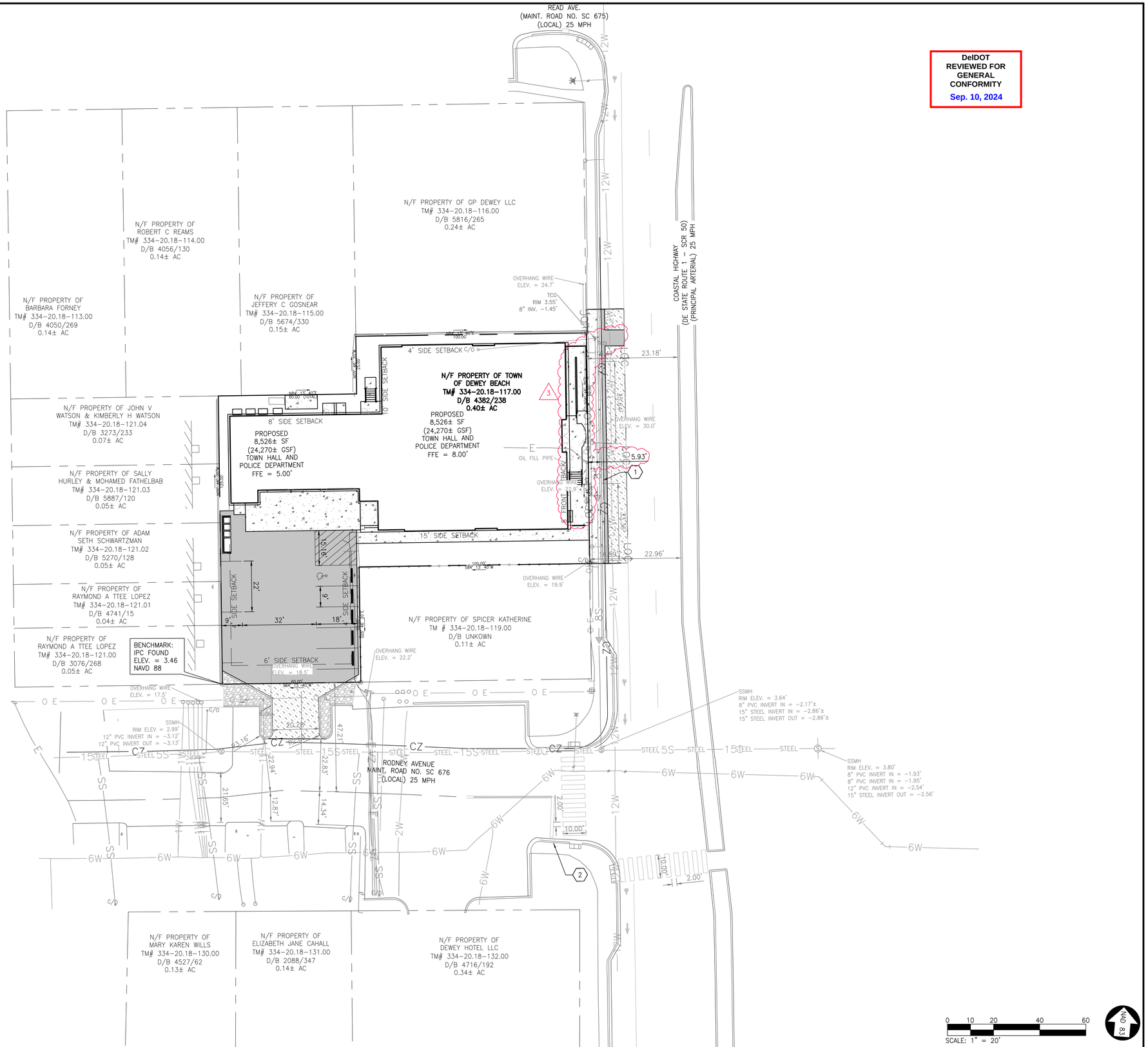

CONSTRUCTION NOTE

1. PROPOSED CURB TO BE PAINTED YELLOW.
2. APPROXIMATE LOCATION OF EXISTING STOP SIGN TO REMAIN.

DelDOT REVIEWED FOR GENERAL CONFORMITY
Sep. 10, 2024

FINAL PLANS
PRINTS ISSUED FOR:
APPROVAL

NO.	REVISIONS	DATE
1	REVISIONS PER DELDOT	3/21/24
2	REVISIONS PER DELDOT	5/15/24
3	REVISIONS PER OWNER	8/30/24

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DEWEY TOWN HALL AND POLICE DEPARTMENT
FOR
TOWN OF DEWEY
BROADKILL HUNDRED
SUSSEX COUNTY, DELAWARE
DELDOT PROJECT ID NO.: 9452
STATE MAINTAINED ROAD #SCR676

9/5/24

ENTRANCE PLAN -
SIGNING &
STRIPING PLAN

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: FEB 2024

SHEET NO.
DE8

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PLOT CODE
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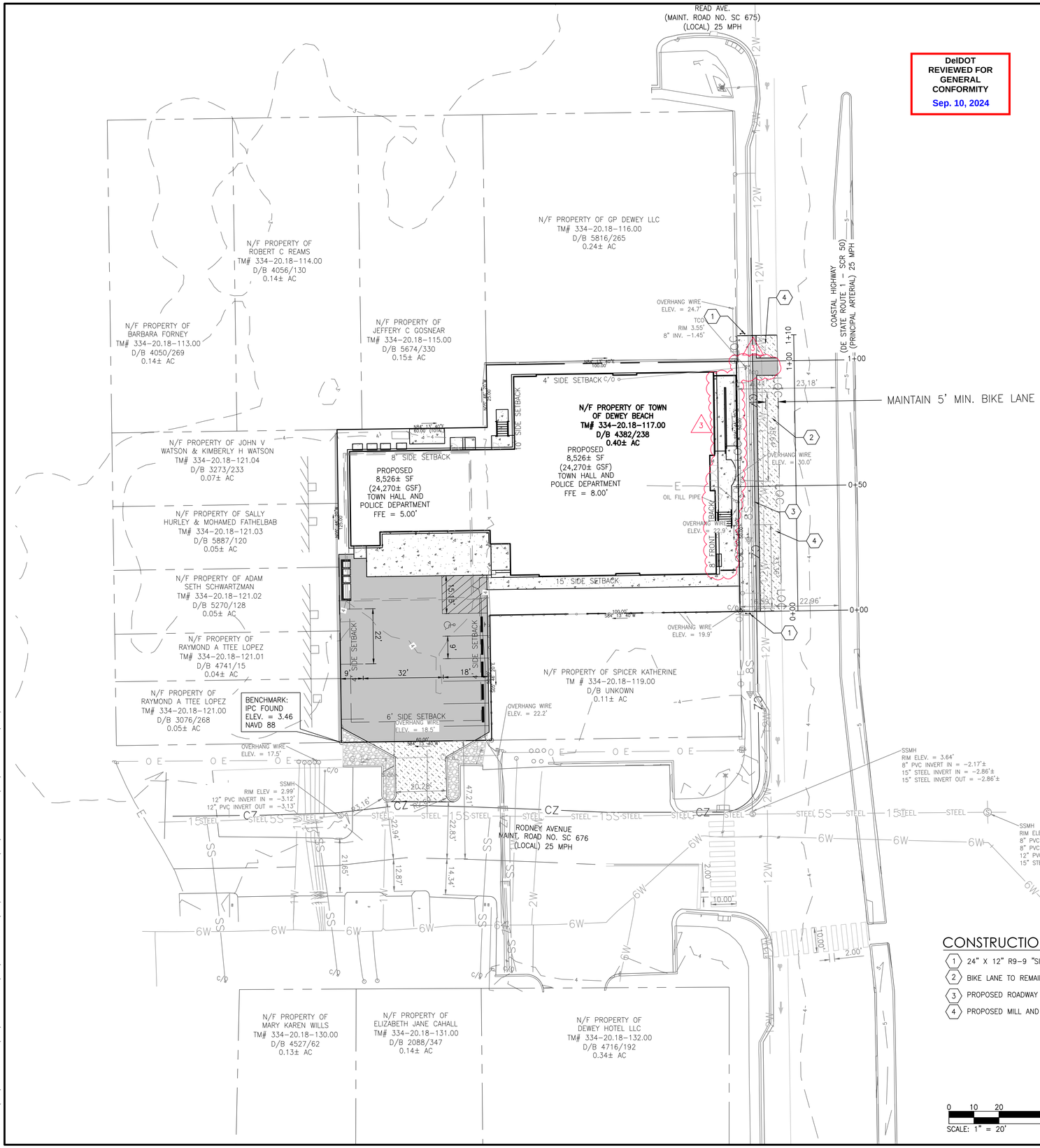
PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-BLUE .020 INCHES (.50mm)
PEN5-MAGENTA .027 INCHES (.69mm)
PEN6-WHITE .039 INCHES (1.00mm)



DelDOT REVIEWED FOR GENERAL CONFORMITY
Sep. 10, 2024

MAINTENANCE OF TRAFFIC NOTES

LAST REVISED 6/27/24 (3)

1. ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH: THE CONTRACT DOCUMENTS, THE LATEST VERSION OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD), CURRENT STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND STANDARD CONSTRUCTION DETAILS, INCLUDING ALL REVISIONS AS OF THE DATE OF THE ENTRANCE PERMIT APPROVAL. TEMPORARY TRAFFIC CONTROL DEVICES USED ON THE PROJECT SHALL ONLY BE THOSE LISTED ON THE APPROVED PRODUCTS LIST (APL). IF A CATEGORY OF DEVICES DOES NOT HAVE AN APL, THE DEVICE SHALL BE COMPLIANT WITH THE DE MUTCD.
2. CONTRACTOR SHALL SUPPLY MESSAGE BOARDS THAT ARE TO BE PLACED TEN (10) DAYS PRIOR TO THE START OF CONSTRUCTION AND/OR TRAFFIC PATTERN CHANGES. THE MESSAGE BOARDS MUST REMAIN IN PLACE FIVE (5) DAYS AFTER WORK HAS STARTED AND/OR AFTER TRAFFIC PATTERN CHANGES HAVE BEEN IMPLEMENTED. THE NUMBER OF MESSAGE BOARDS, LOCATIONS, AND WORDING ON THE MESSAGE BOARDS SHALL BE COORDINATED WITH THE DISTRICT SAFETY OFFICER.
3. IN ACCORDANCE WITH SECTION 105.1.C OF THE STANDARD SPECIFICATIONS, THE DEPARTMENT RESERVES THE RIGHT TO SUSPEND THE CONTRACTOR'S OPERATIONS, IF, IN THE OPINION OF THE DEPARTMENT'S REPRESENTATIVE, THE CONTRACTOR'S OPERATIONS ARE NOT IN COMPLIANCE WITH THE DE MUTCD, THE SPECIFICATIONS OR THE PLANS OR IF THE CONTRACTOR'S OPERATIONS ARE DEEMED UNSAFE IN ACCORDANCE WITH SECTION 801.3.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE LOCAL 911 CENTER, LOCAL SCHOOLS AND DELDOT COMMUNITY RELATIONS OF ALL ROADS AND LANES TO BE CLOSED A MINIMUM OF SEVEN (7) CALENDAR DAYS BEFORE THE CLOSURE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE TRANSPORTATION MANAGEMENT CENTER (TMC) IS NOTIFIED DAILY BEFORE ROADWAY ACTIVITY IS BEING PERFORMED IN STATE RIGHT-OF-WAY. THE CONTRACTOR SHALL IDENTIFY THE TYPE OF WORK, ANY LANE(S) OR SHOULDER(S) CLOSED, THE LENGTH OF TIME FOR WORK, WHEN THE LANE RESTRICTIONS ARE IN PLACE AND WHEN LANE RESTRICTIONS ARE LIFTED, CONTACT PERSON/PHONE NUMBER AND STATE INSPECTOR. THE TRANSPORTATION MANAGEMENT CENTER CAN BE REACHED AT (302) 659-4600.
6. WHEN SIDE ROADS INTERSECT THE WORK ZONE, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE ERECTED INCLUDING PERMANENT WARNING SIGNS (SEE NOTE 11).
7. ALL STORAGE OF EQUIPMENT AND MATERIAL SHALL COMPLY WITH THE DE MUTCD, SECTION 6G.21.
8. ALL PAVEMENT MARKINGS THAT ARE NO LONGER IN USE AND CONFLICT WITH TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED AND COMPLETELY OBLITERATED BY A METHOD APPROVED BY THE ENGINEER. PAINTING OVER THE CONFLICTING PAVEMENT MARKINGS WILL NOT BE ACCEPTED AS A METHOD OF REMOVAL.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF EXISTING PAVEMENT WITHIN THE PROJECT LIMITS FOR THE DURATION OF THE CONTRACT OR AS DIRECTED BY THE ENGINEER.
10. TYPICAL APPLICATIONS PER THE DE MUTCD SHALL BE INCORPORATED TO ACHIEVE REQUIRED TEMPORARY TRAFFIC CONTROL AND SAFETY REQUIREMENTS. THIS PROJECT IS SUBJECT TO THE FOLLOWING TYPICAL APPLICATIONS UNLESS DIRECTED OTHERWISE BY THE DELDOT DISTRICT SAFETY OFFICER: TYPICAL APPLICATION TA-3A: "WORK ON THE SHOULDER OF A MULTI-LANE, DIVIDED HIGHWAY (TA-3A)".
11. WITHIN THE MAINLINE WORK AREA, PERMANENT ADVANCE WARNING SIGNS WITH THE LEGENDS ROAD WORK AHEAD SHALL BE INSTALLED IN ADVANCE OF THE WORK AREA IN BOTH DIRECTIONS. AN END ROAD WORK SIGN SHALL BE LOCATED 500 FEET DOWNSTREAM FROM THE WORK AREA IN EACH DIRECTION. ON INTERSECTING ROADWAYS WITHIN THE PROJECT LIMITS, A ROAD WORK AHEAD SIGN SHALL BE PLACED AT A DISTANCE NOT LESS THAN 500 FEET IN ADVANCE OF THE WORK AREA AND AN END ROAD WORK SIGN SHALL BE PLACED ON THE OPPOSITE SIDE OF THE ROADWAY OF THE ROAD WORK AHEAD SIGN. ALL PERMANENT ADVANCE WARNING SIGNS SHALL BE GROUND MOUNTED ON TWO APPROVED BREAKAWAY SIGN POSTS AND SHALL BE INSTALLED IN COMPLIANCE WITH THE DE MUTCD. PERMANENT ADVANCE WARNING SIGNS SHALL BE MOUNTED AT A HEIGHT OF 7 FEET, MEASURED FROM THE NEAREST EDGE OF ROADWAY TO THE BOTTOM OF THE SIGN. THE USE OF APPROVED SKID MOUNTED SIGN SUPPORTS IS NOT ALLOWED UNLESS THE CONTRACTOR CAN DEMONSTRATE THAT A UTILITY CONFLICT EXISTS, WHICH SHALL BE VERIFIED BY THE DISTRICT SAFETY OFFICER; OR CONCRETE MEDIANS PREVENT THE INSTALLATION OF THE PERMANENT ADVANCE WARNING SIGNS IN THE APPROPRIATE LOCATION. ALL SIGN SUPPORTS SHALL BE AS APPROVED IN THE MOST RECENT VERSION OF THE TEMPORARY TRAFFIC CONTROL DEVICES APL.
12. THE USE OF MILLINGS AND GRADED AGGREGATE BASE COURSE (GABC) IN THE TRAVEL WAY, TEMPORARY TRAVEL WAY, HIGH VOLUME ENTRANCES AND ACCESS RAMP FOR THE PURPOSE OF PROVIDING A TEMPORARY ROADWAY SURFACE, POTHOLE REPAIR, TAPERED EDGE FOR UTILITIES, BUTT JOINTS, AND LONGITUDINAL DROP-OFFS (MILLING AND PAVING OPERATIONS) IS PROHIBITED UNLESS IT IS OTHERWISE DESIGNATED TO BE USED IN THE CONTRACT PLANS. USE COLD PATCH, BITUMINOUS CONCRETE, BITUMINOUS CONCRETE WEDGE, OR TAPER MILL, AS NOTED IN THE CONTRACT DOCUMENTS OR APPROVED BY THE ENGINEER.

    MILLINGS OR GABC SHALL BE USED AT THE FOLLOWING LOCATIONS WHERE ACCESS TO A BUSINESS, RESIDENCE, OR EDGE DROP OFF NEEDS TO BE MAINTAINED UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE ENGINEER TO USE BITUMINOUS CONCRETE OR COLD PATCH. ALL MILLINGS AND GABC WILL BE ROLLED AND COMPACTED TO HELP PREVENT THE MATERIAL FROM UNRAVELLING:

    a. DRIVEWAYS
    b. ENTRANCES
    c. LOW VOLUME ACCESS RAMPS (IDENTIFIED IN THE CONTRACT DOCUMENTS)
    d. EDGE DROP-OFFS ADJACENT TO LIVE ROADWAY (LANES AND SHOULDER) AND THE PROPOSED ROAD CONSTRUCTION
    e. EDGE OF ROADWAY DROP-OFF

    THE BASE COURSE MATERIAL SHALL BE PLACED AT NO GREATER THAN THE SLOPE SPECIFIED IN THE DE MUTCD, TABLE 6G-1 AND SHALL BE COMPACTED.

    VERTICAL DIFFERENCES SHALL BE CORRECTED IN ACCORDANCE WITH THE DE MUTCD, TABLE 6G-1.
13. ACCEPTABLE MATERIALS FOR TEMPORARY PEDESTRIAN PATHS SHALL BE AS DEFINED IN STANDARD CONSTRUCTION DETAIL M-13. TYPE 2 TEMPORARY SIDEWALKS (PLYWOOD WALKWAY STRUCTURES) SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD CONSTRUCTION DETAIL M-13. TEMPORARY PEDESTRIAN PATHS SHALL BE DETECTABLE AS DEFINED IN SECTION 6F.73 OF THE DE MUTCD.
14. CLOSURES OF TRAVEL LANES AND TURN LANES WITHIN THE PROJECT LIMITS SHALL OCCUR IN ACCORDANCE WITH THE ALLOWABLE LANE CLOSURE HOURS MATRIX SHOWN IN THE PLANS. THE PROJECT IS SUBJECT TO ADDITIONAL RESTRICTIONS IN ACCORDANCE WITH SECTION 801.3.5 OF THE STANDARD SPECIFICATIONS.

Allowable Lane Closure Hours - Non-Summer (October 1 - April 30)
SR 1 (Coastal Highway)

	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
SUNDAY																								
MONDAY										1	1	1	1	1	1	1	1	1						
TUESDAY								1	1	1	1	1	1	1	1	1	1	1						
WEDNESDAY								1	1	1	1	1	1	1	1	1	1	1						
THURSDAY								1	1	1	1	1	1	1	1	1	1	1						
FRIDAY																								
SATURDAY																								

1 only one through lane closed / flagging operation permitted
no lane closures (all lanes open)

Lane closures are not permitted during the summer, between May 1 and September 30.

NOTE: SEE SHEET DE4 FOR SEQUENCE OF CONSTRUCTION.

CONSTRUCTION NOTES

1. 24" X 12" R9-9 "SIDEWALK CLOSED" SIGN MOUNTED ON TYPE 3 BARRICADE.
2. BIKE LANE TO REMAIN OPEN DURING CONSTRUCTION.
3. PROPOSED ROADWAY WORK TO BE STAGED AND OCCUR FROM SITE.
4. PROPOSED MILL AND OVERLAY.

FINAL PLANS
PRINTS ISSUED FOR:
APPROVAL

NO.	REVISIONS	DATE
1	REVISIONS PER DELDOT	3/21/24
2	REVISIONS PER DELDOT	5/15/24
3	REVISIONS PER OWNER	8/30/24

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DEWEY TOWN HALL AND POLICE DEPARTMENT
FOR
TOWN OF DEWEY
BROADKILL HUNDRED
SUSSEX COUNTY, DELAWARE
DELDOT PROJECT ID NO.: 9452
STATE MAINTAINED ROAD #SCR676

ANDREW JOSEPH LYONS
LICENSED
No. 14860
DELAWARE
PROFESSIONAL ENGINEER
9/5/24

ENTRANCE PLAN - MAINTENANCE OF TRAFFIC PLAN

SCALE	: 1" = 20'
DESIGN BY	: CRH
DRAWN BY	: CRH
CHECKED BY	: AJL
GMB FILE	: 220242
DATE	: FEB 2024

SHEET NO.
DE9

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PLOT CODE
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PEN2-YELLOW .007 INCHES (.18mm)
PEN3-GREEN .010 INCHES (.25mm)
PEN4-BLUE .020 INCHES (.50mm)
PEN5-MAGENTA .027 INCHES (.70mm)
PEN6-WHITE .039 INCHES (1.00mm)

SPECIAL SIGNS

SPECIAL NOTES

N

DelDOT
REVIEWED FOR
GENERAL
CONFORMITY
May. 21, 2024

LEGEND

(A) M4-9b-DE	(B) M4-9b-DE	(C) M4-9b-DE
(D) M4-9b-DE	(E) M4-9b-DE	(F) END DETOUR M4-9b-DE1
PEDESTRIAN CROSSWALK R9-8 (G)	SIDEWALK CLOSED USE OTHER SIDE R9-10 (H)	
SIDEWALK CLOSED AHEAD CROSS HERE R9-11(L) (I)	SIDEWALK CLOSED AHEAD CROSS HERE R9-11(R) (J)	
SIDEWALK CLOSED CROSS HERE R9-11a(L) (K)	SIDEWALK CLOSED CROSS HERE R9-11a(R) (L)	SIDEWALK CLOSED AHEAD R9-9(MOD) (M)
SIDEWALK CLOSED R9-9 (N)	CROSSWALK CLOSED AHEAD R9-9(MOD) (O)	CROSSWALK CLOSED R9-9(MOD) (P)
		(Q)

GENERAL NOTES

1. ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR AND SHALL BE IN COMPLIANCE WITH THIS PLAN AND THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD) LATEST EDITION.

2. BARRICADES SHALL BE A MINIMUM OF 4 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

PREPARED BY

GEORGE, MILES, & BUHR, LLC

2/14/24
THIS SEAL ONLY APPLIES TO THIS DETOUR SHEET — DATE

LAUREN JOSEPH LEWIS — LICENSED — No. 14860 — DELAWARE — PROFESSIONAL ENGINEER — 2/14/24
SEAL

Chris Hochstetler 2/14/24
QA/QC REVIEWER — DATE

"I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THIS DETOUR PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."

CONCURRENCE FOR IMPLEMENTATION

Justin Dion 02/26/2024
TRAFFIC SAFETY — DATE

ADDENDA / REVISIONS						
	NOT TO SCALE	DEWEY TOWN HALL AND POLICE DEPARTMENT FOR TOWN OF DEWEY ROAD NO. SCR 676 & SCR 50 DEWEY BEACH, DELAWARE	CONTRACT N/A	PERMIT NO. N/A	DETOUR PLAN - PEDESTRIAN SR 1 @ READ AND RODNEY AVENUE	SECTION GMB
			COUNTY SUSSEX	DESIGNED BY: CRH		SHEET NO. 10
				CHECKED BY: AJL		

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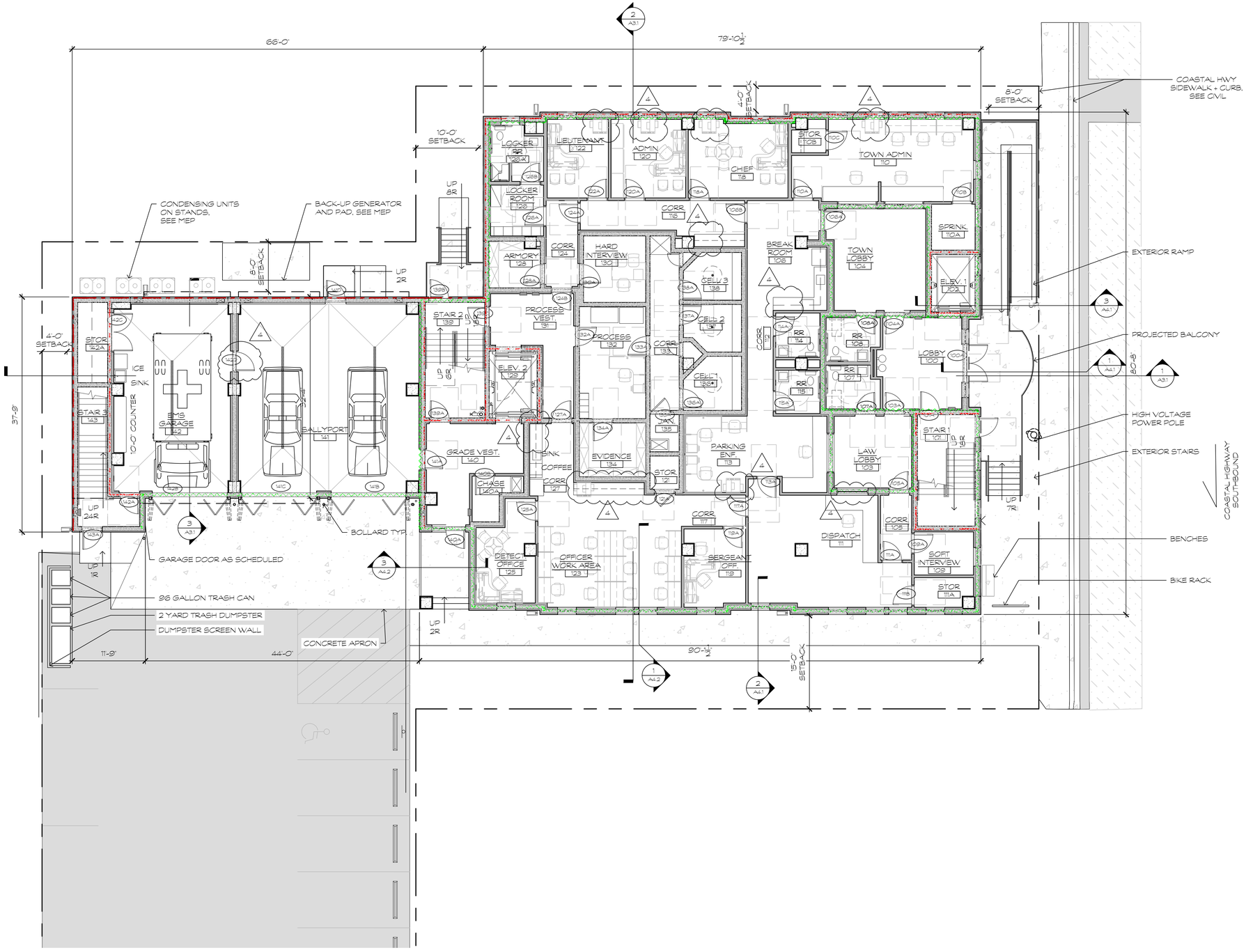
LEGEND:

- NEW CONSTRUCTION
- MIN. 1 HR FIRE RATED CONSTRUCTION
- MIN. 2 HR FIRE RATED CONSTRUCTION
- MIN. HPSA LEVEL 3 BALLISTIC RESISTANCE



1 FLOOR PLAN - FIRST
1/8" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM # 2	12/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

FLOOR PLAN - FIRST

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A1.1

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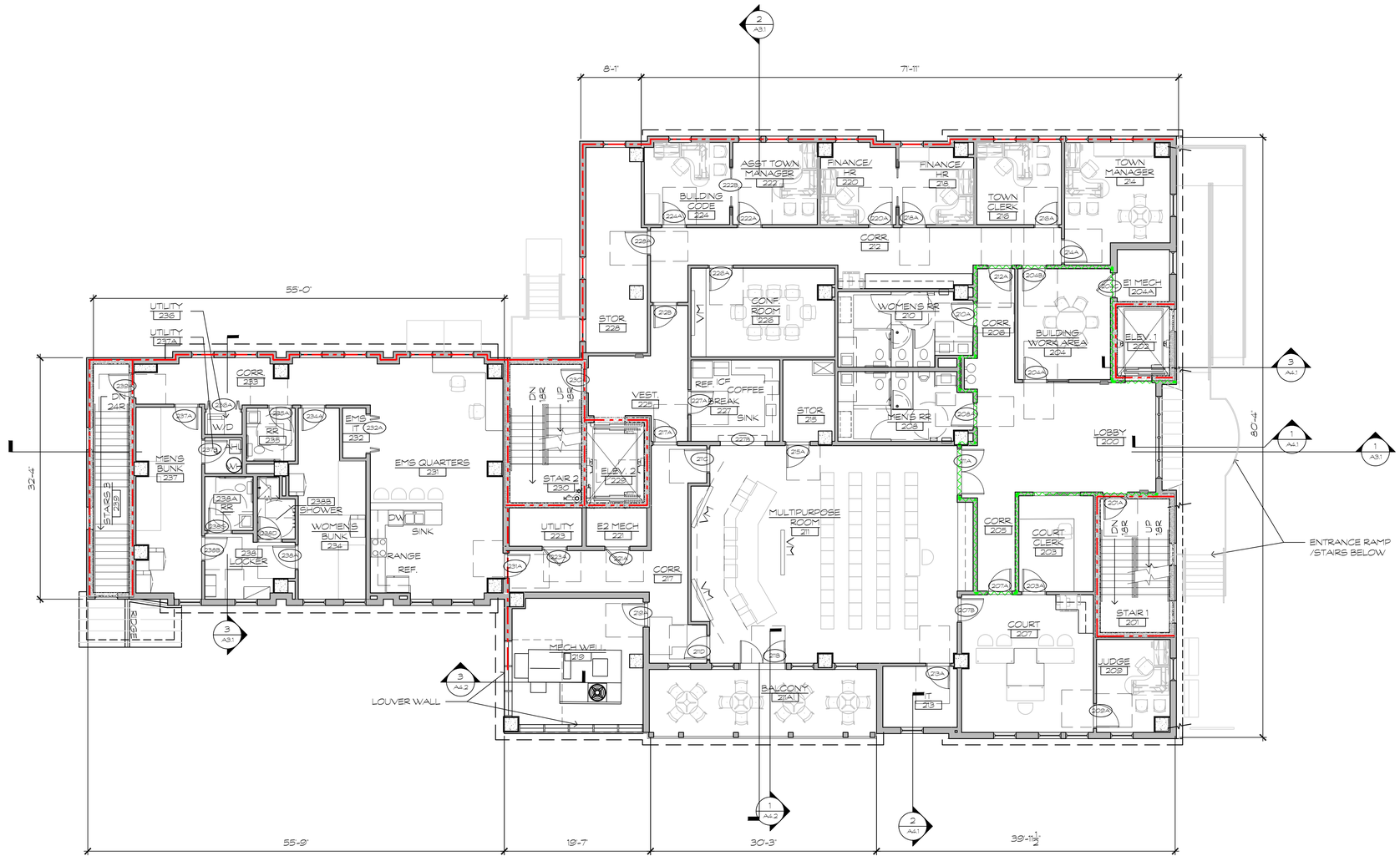

LEGEND:

- NEW CONSTRUCTION
- MIN. 1 HR FIRE RATED CONSTRUCTION
- MIN. 2 HR FIRE RATED CONSTRUCTION
- MIN. HPSA LEVEL 3 BALLISTIC RESISTANCE

0 8' 16' 32'

1/8" = 1'-0"

PROJECT NORTH

1 FLOOR PLAN - SECOND
1/8" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

FLOOR PLAN - SECOND

MORGAN HALL HEFFRON
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A1.2

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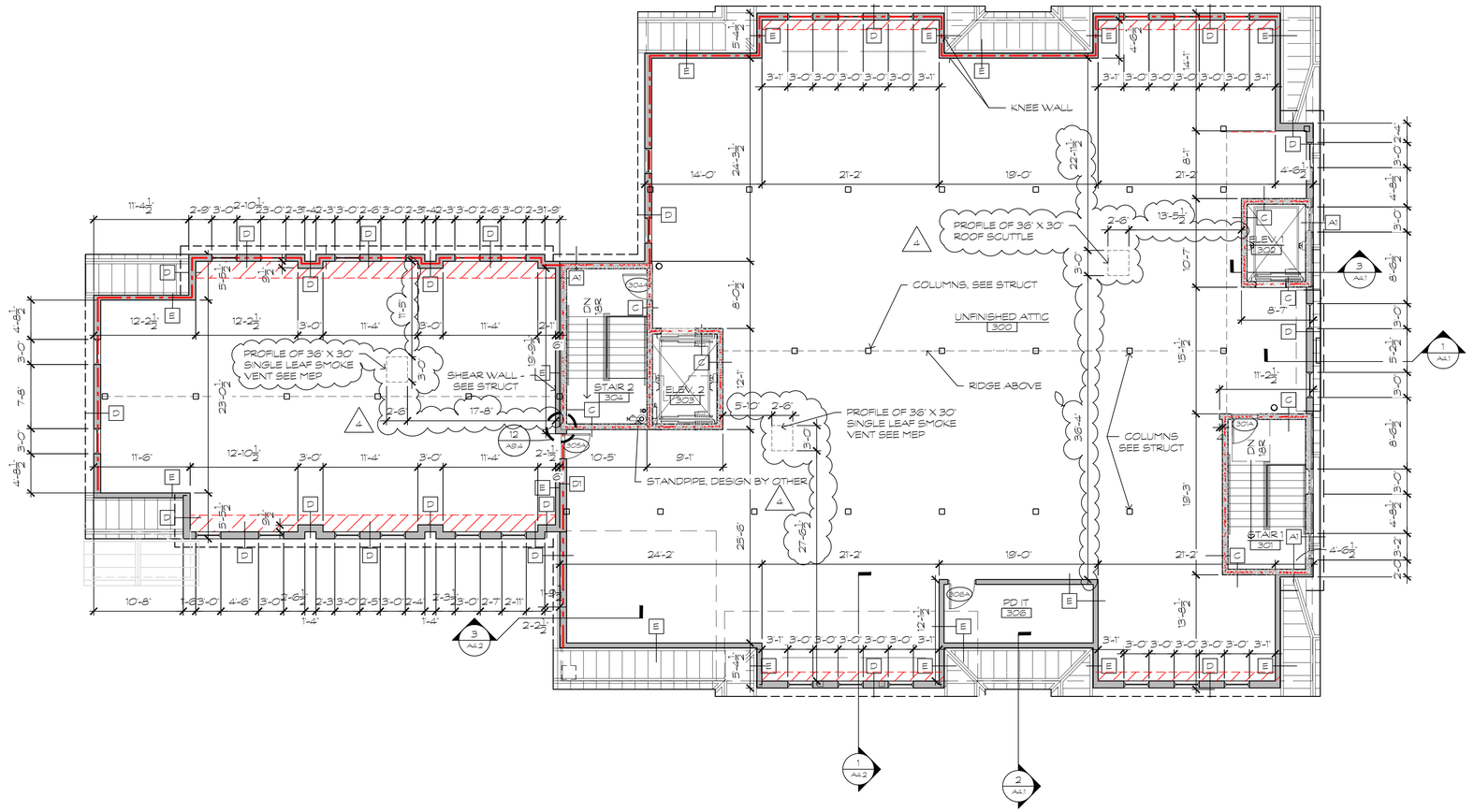
g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\A1.2 FLOOR PLAN - SECOND.dwg, 11/14/2024 4:48 PM, Deane L. Townsend



LEGEND:

- NEW CONSTRUCTION
- MIN. 1 HR FIRE RATED CONSTRUCTION
- MIN. 2 HR FIRE RATED CONSTRUCTION
- PORTIONS UNDER MIN. 7'-6" CEILING HEIGHT.*

*IBC 1208.2 (2): SLOPED CEILINGS PERMITTED TO BE LESS THAN 7'-6", PROVIDED THAT IT IS LESS THAN ⅓ OF THE OCCUPIABLE AREA

1 FLOOR PLAN - THIRD FLOOR (UNFINISHED)
1/8" = 1'-0"

PROJECT NORTH

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

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM # 2	12/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

FLOOR PLAN - THIRD

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A1.3

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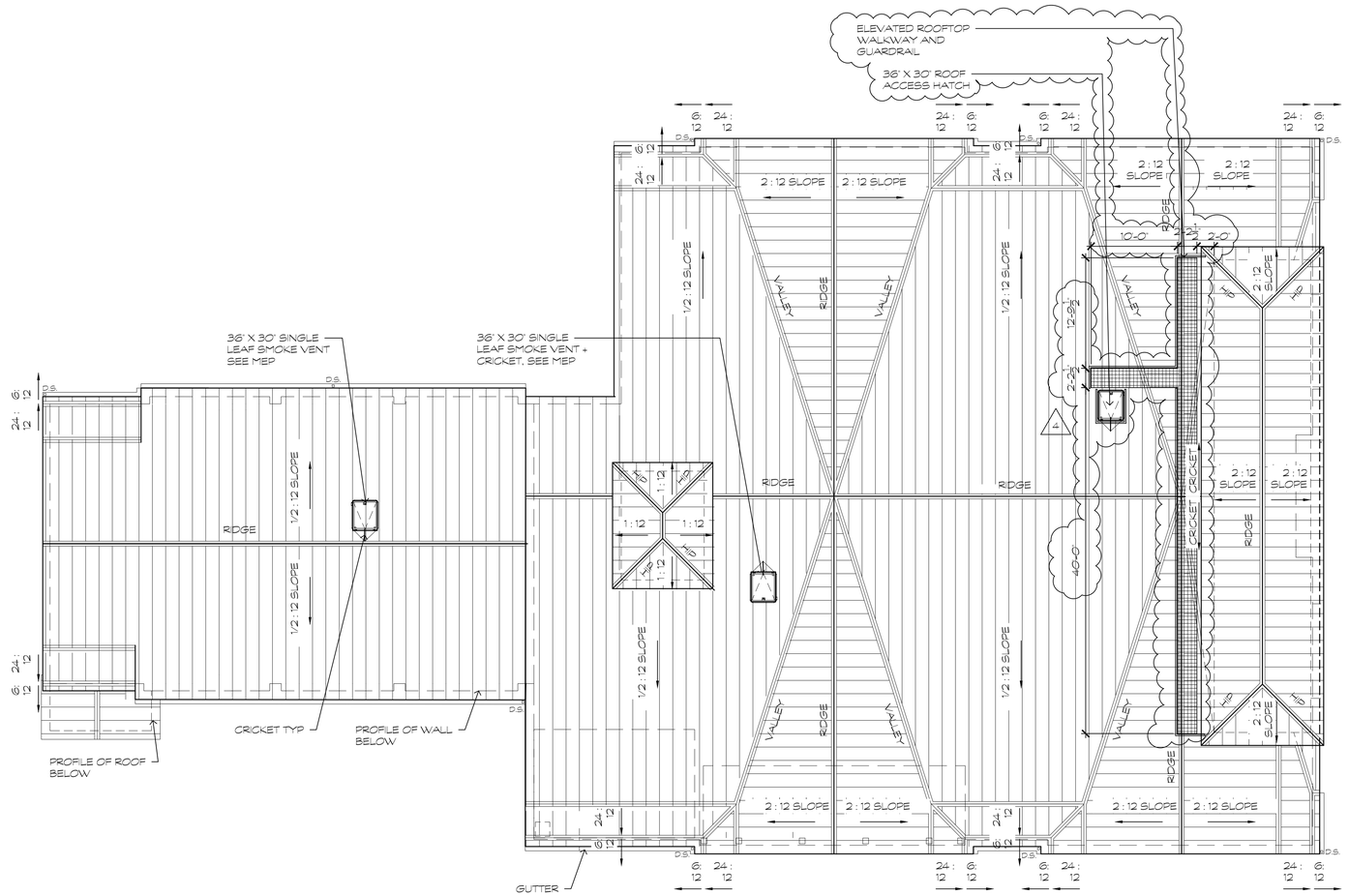
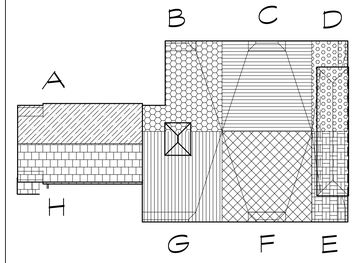
g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\A1.3 FLOOR PLAN - THIRD.dwg, 12/27/2024 2:30 PM, Deane L. Townsend



1 ROOF PLAN
1/8" = 1'-0"

PROJECT NORTH



KEY PLAN
1/32" = 1'-0"

ROOF AREA CALCS:

AREA A:
1. 1,070 SF. X 1.00 (<3:12 ROOF PITCH FACTOR, PER SMACNA TABLE 1-1) = 1,070 TOTAL SF.
2. 1070 SF / 1 DOWNSPOUT = 1070 SF EACH
3. 1070 SF / 95 S.F./S.I. (RAINFALL FOR 100 YEAR STORM) = 11.26" MIN. AREA REQD.

AREA B:
1. 1,082 SF. X 1.00 (<3:12 ROOF PITCH FACTOR, PER SMACNA TABLE 1-1) = 1,082 TOTAL SF.
2. 1,082 SF / 1 DOWNSPOUT = 1,082 SF EACH
3. 1,082/ 95 (RAINFALL FOR 100 YEAR STORM) = 11.39" MIN. AREA REQD.

AREA C:
1. 1,627 SF. X 1.00 (<3:12 ROOF PITCH FACTOR, PER SMACNA TABLE 1-1) = 1,627 TOTAL SF.
2. 1,627 SF / 1 DOWNSPOUT = 1,627 SF EACH
3. 1,627/ 95 (RAINFALL FOR 100 YEAR STORM) = 17.13" MIN. AREA REQD.

AREA D:
1. 663 SF. X 1.00 (<3:12 ROOF PITCH FACTOR, PER SMACNA TABLE 1-1) = 663 TOTAL SF.
2. 663 SF / 1 DOWNSPOUT = 663 SF EACH
3. 663 / 95 S.F./S.I. (RAINFALL FOR 100 YEAR STORM) = 6.98" MIN. AREA REQD.

AREA E:
1. 663 SF. X 1.00 (<3:12 ROOF PITCH FACTOR, PER SMACNA TABLE 1-1) = 663 TOTAL SF.
2. 663 SF / 1 DOWNSPOUT = 663 SF EACH
3. 663 / 95 S.F./S.I. (RAINFALL FOR 100 YEAR STORM) = 6.98" MIN. AREA REQD.

AREA F:
1. 1,625 SF. X 1.00 (<3:12 ROOF PITCH FACTOR, PER SMACNA TABLE 1-1) = 1,625 TOTAL SF.
2. 1,625 SF / 1 DOWNSPOUT = 1,625 SF EACH
3. 1,625/ 95 (RAINFALL FOR 100 YEAR STORM) = 17.11" MIN. AREA REQD.

AREA G:
1. 1,378 SF. X 1.00 (<3:12 ROOF PITCH FACTOR, PER SMACNA TABLE 1-1) = 1,378 TOTAL SF.
2. 1,378 SF / 1 DOWNSPOUT = 1,378 SF EACH
3. 1,378/ 95 (RAINFALL FOR 100 YEAR STORM) = 14.51" MIN. AREA REQD.

AREA H:
1. 974 SF. X 1.00 (<3:12 ROOF PITCH FACTOR, PER SMACNA TABLE 1-1) = 974 TOTAL SF.
2. 974 SF / 1 DOWNSPOUT = 974 SF EACH
3. 974 / 95 S.F./S.I. (RAINFALL FOR 100 YEAR STORM) = 10.23" MIN. AREA REQD.

GENERAL NOTES

1. CONTRACTOR TO PROVIDE GUTTER AND DOWNSPOUT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
2. ROOF AREA CALCULATIONS SHOWN ARE FOR GUIDANCE ONLY. CONTRACTOR SHALL DESIGN & CERTIFY GUTTER & D.S. CALCULATIONS TO MEET OR EXCEED 500 YEAR STORM REQUIREMENTS PER LATEST SMACNA EDITION AND NOAA ATLAS 14.
3. GUTTER SIZE SHALL BE BASED UPON THE 500-YEAR STORM PRECIPITATION INTENSITY: 9.95 INCH/HOUR.
4. DOWNSPOUT AREA SHALL BE BASED UPON THE 500-YEAR STORM ROOF AREA FACTOR OF 95 SQUARE FEET / SQUARE INCH.
5. ALL DOWNSPOUT & GUTTER SIZING TO BE UNIFORM. THEREFORE THE WORST CASE SCENARIO (LARGEST REQUIRED SIZING) SHALL PREVAIL.
6. ROOF TOP EQUIPMENT SHOWN FOR ILLUSTRATION ONLY. SEE M.E.P. DRAWINGS FOR ACTUAL EQUIPMENT SCHEDULE AND QUANTITIES.

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

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM # 2	12/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ROOF PLAN

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A1.4

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g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\A1.4D ROOF PLAN.dwg, 12/27/2024 2:31 PM, Deone L. Townsend

g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\A1.5 ENLARGED FLOOR PLAN - FIRST.dwg, 12/27/2024 2:31 PM, Deane L. Townsend

1 ENLARGED FLOOR PLAN - FIRST
1/4" = 1'-0"

KEY PLAN
1/32" = 1'-0"

LEGEND:
- NEW CONSTRUCTION
- MIN. 1 HR FIRE RATED CONSTRUCTION
- MIN. 2 HR FIRE RATED CONSTRUCTION
- MIN. HPSA LEVEL 3 BALLISTIC RESISTANCE

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM #2	12/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ENLARGED FLOOR PLAN - FIRST

SCALE	: 1/4" = 1'-0"
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A1.5

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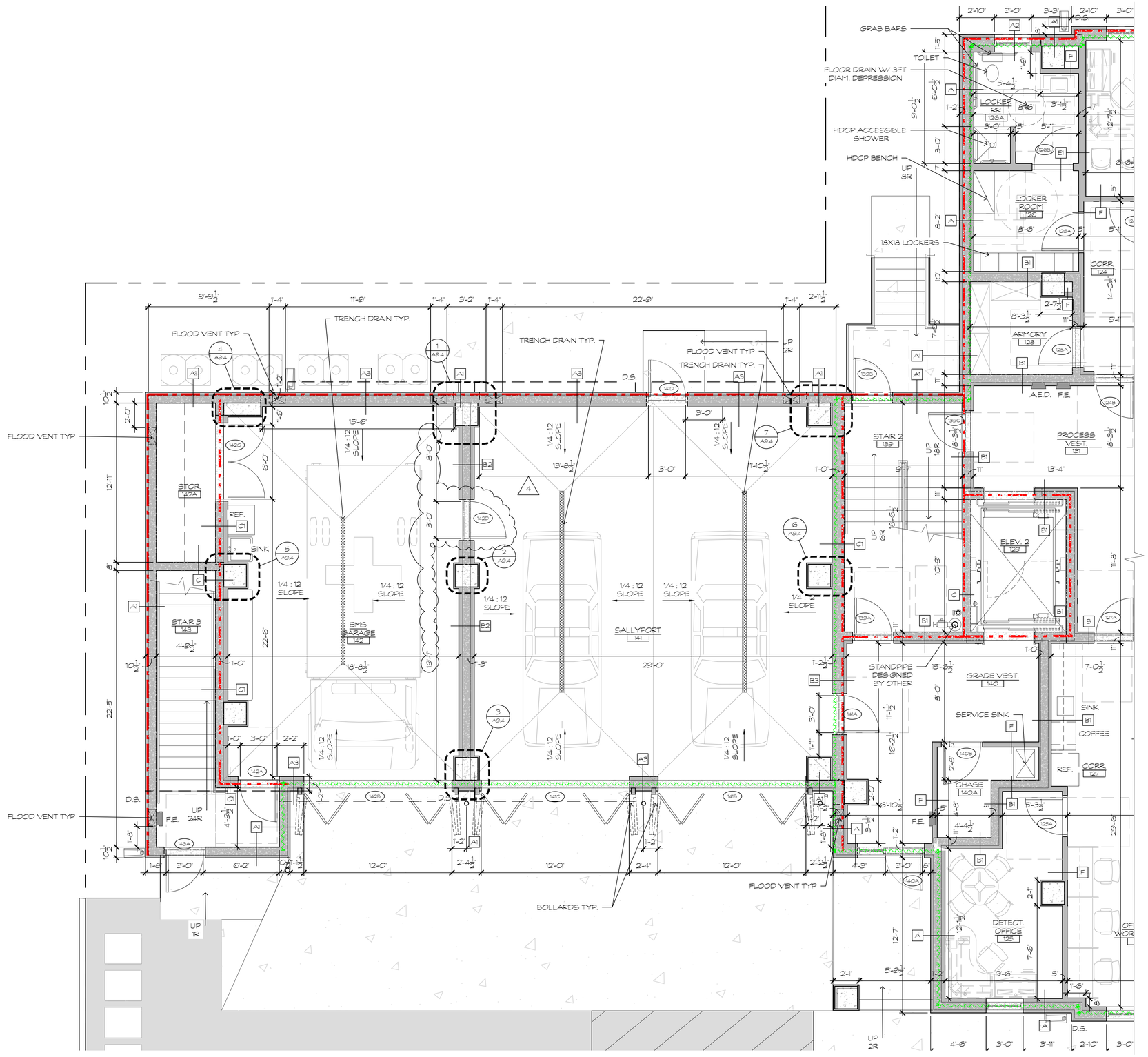

KEY PLAN
1/32" = 1'-0"

LEGEND:
- NEW CONSTRUCTION
- MIN. 1 HR FIRE RATED CONSTRUCTION
- MIN. 2 HR FIRE RATED CONSTRUCTION
- MIN. HPSA LEVEL 3 BALLISTIC RESISTANCE

1 ENLARGED FLOOR PLAN - FIRST
1/4" = 1'-0"

PROJECT NORTH

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM #2	12/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ENLARGED FLOOR PLAN - FIRST

SCALE	: 1/4" = 1'-0"
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A1.6

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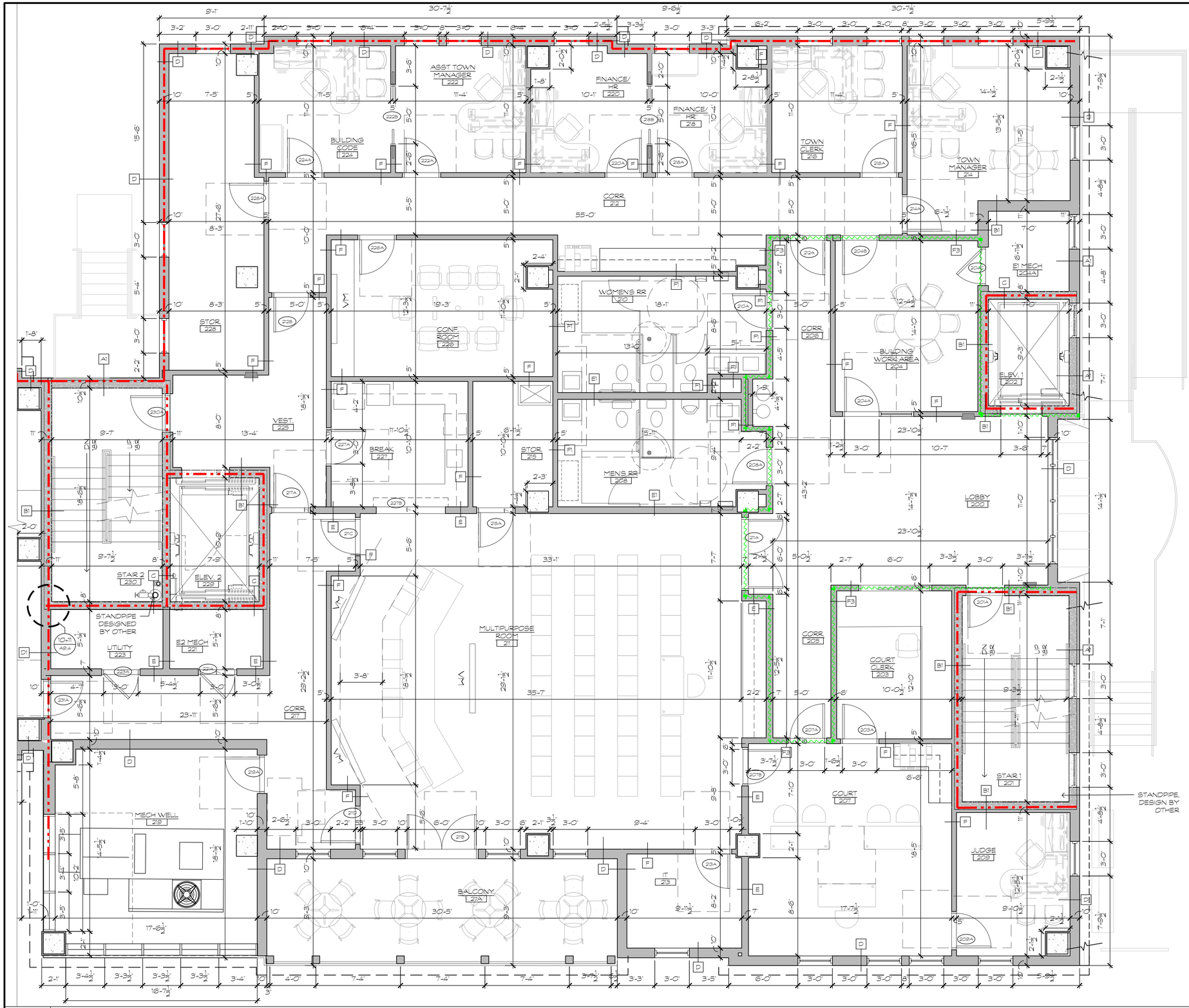
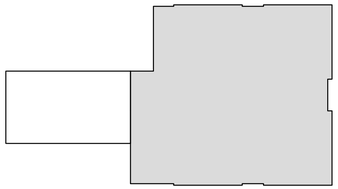


1 ENLARGED FLOOR PLAN - SECOND
1/4" = 1'-0"



KEY PLAN
1/32" = 1'-0"

LEGEND:

- NEW CONSTRUCTION
- MIN. 1 HR FIRE RATED CONSTRUCTION
- MIN. 2 HR FIRE RATED CONSTRUCTION
- MIN. HPSA LEVEL 3 BALLISTIC RESISTANCE

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ENLARGED FLOOR PLAN - SECOND

MORGAN HALL HELFRICH
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: ############
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A1.7

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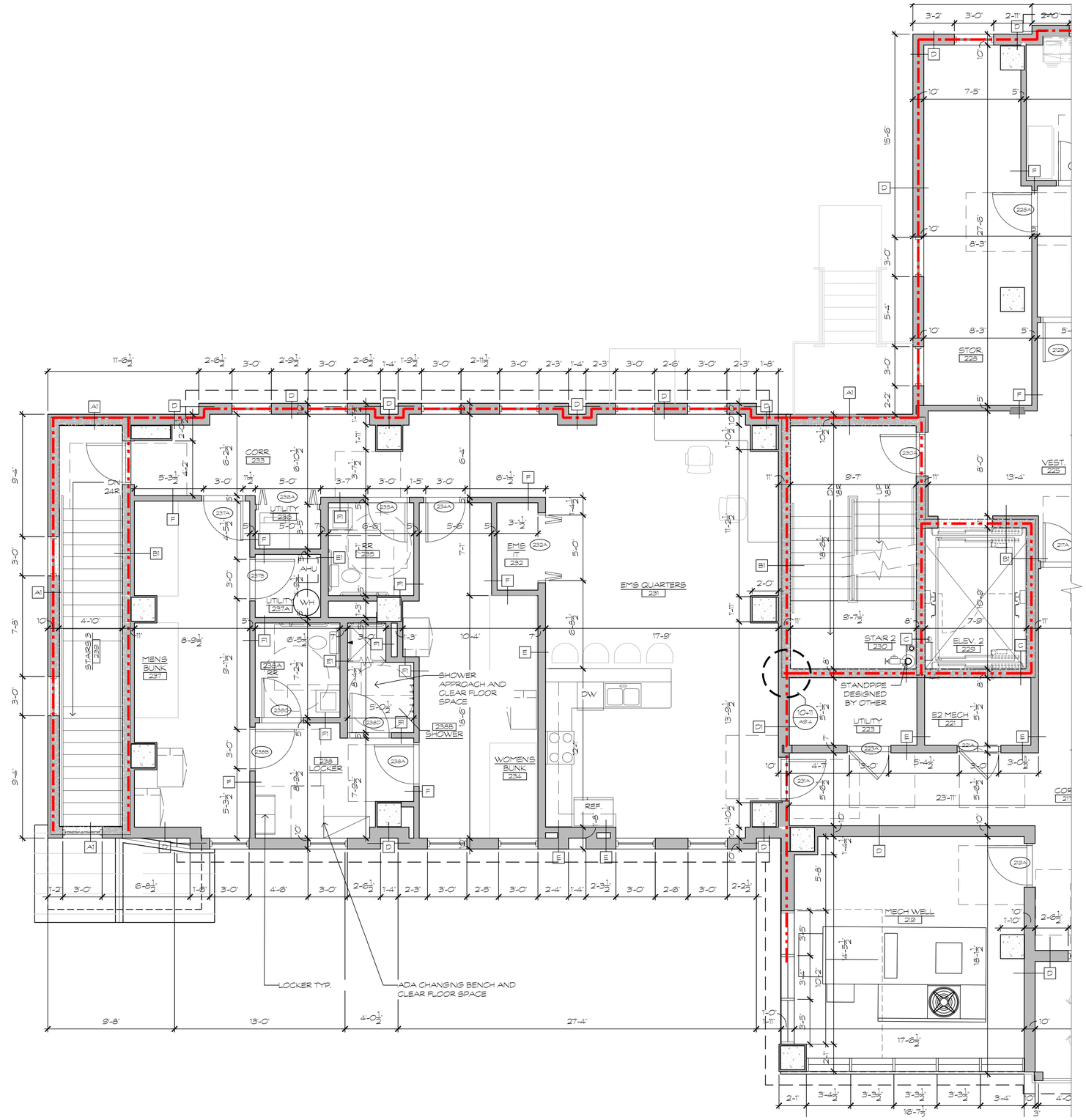

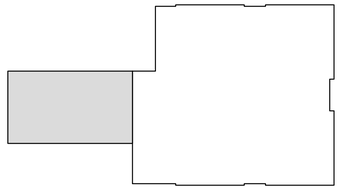

KEY PLAN
1/32" = 1'-0"

LEGEND:

- NEW CONSTRUCTION
- MIN. 1 HR FIRE RATED CONSTRUCTION
- MIN. 2 HR FIRE RATED CONSTRUCTION
- MIN. HPSA LEVEL 3 BALLISTIC RESISTANCE

1 ENLARGED FLOOR PLAN - SECOND
1/4" = 1'-0"

PROJECT NORTH

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ENLARGED
FLOOR PLAN -
SECOND

MORGAN HALL HEFFRICH
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: ==========
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

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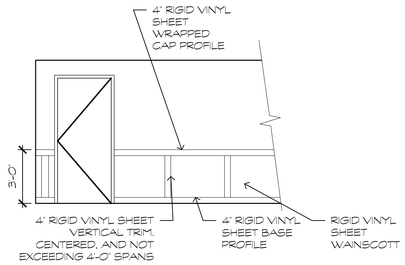
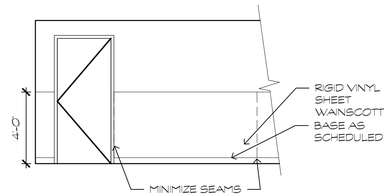
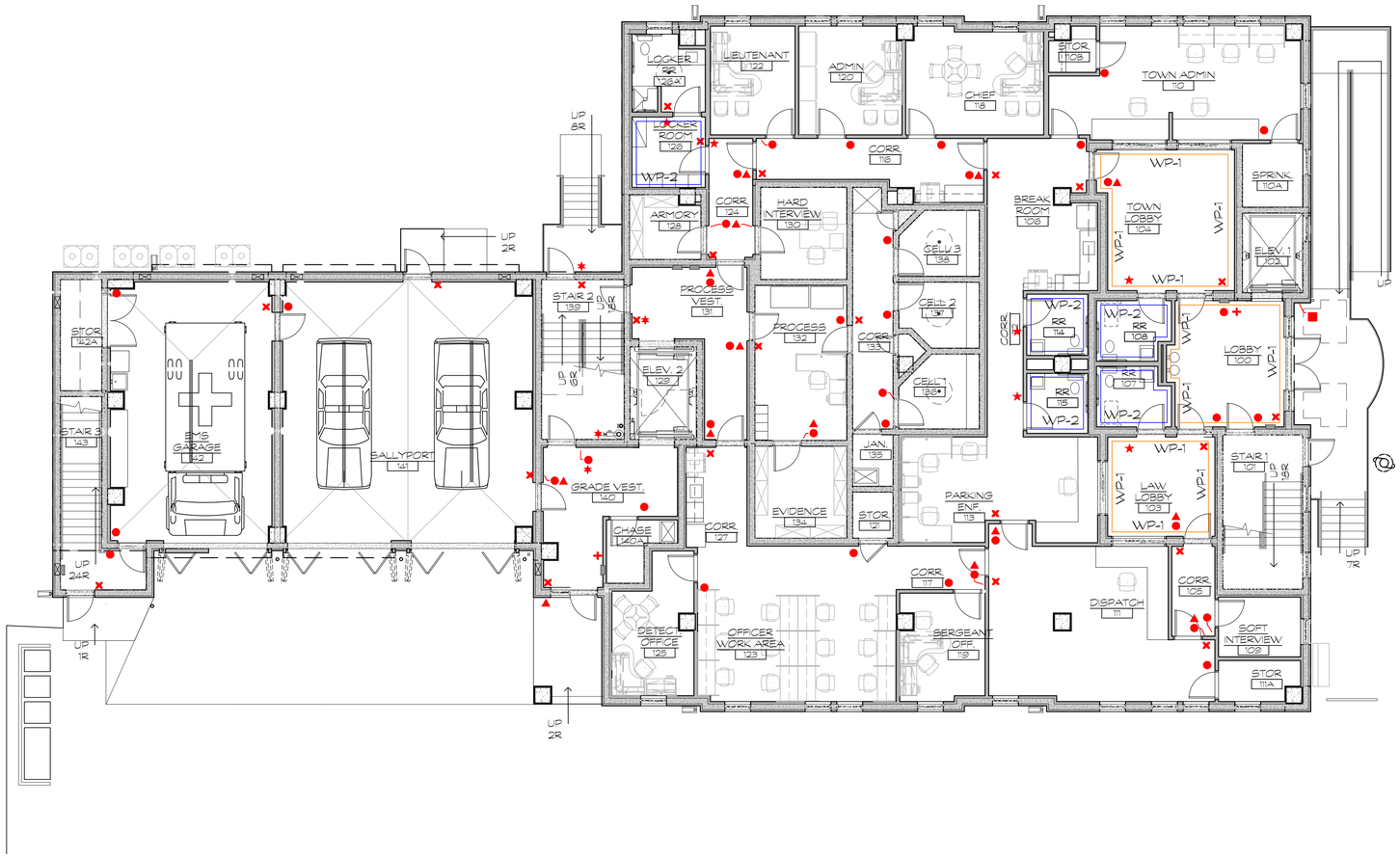


TYP. RIGID VINYL WAINSCOTT (WP-1) DETAIL
1/4" = 1'-0"



TYP. RIGID VINYL WAINSCOTT (WP-2) DETAIL
1/4" = 1'-0"

1 TYP. WALL PROTECTION DETAILS



2 FIRST FLOOR SIGNAGE & WAYFINDING PLAN
1/8" = 1'-0"

SIGNAGE KEY
N.T.S.

- HDCP DOOR OPERATOR
- ACCESS CONTROL
- ROOM SIGN (TACTILE)
- RESTROOM SIGN (TACTILE)
- EXIT SIGN (TACTILE)
- EVACUATION MAP SIGN (TACTILE)
- CLASS 1 STANDPIPE SIGNAGE, PER DSFPR 702 CHAPTER 4
- POSTED MAX OCCUPANT LOAD OF 49 OCCUPANTS

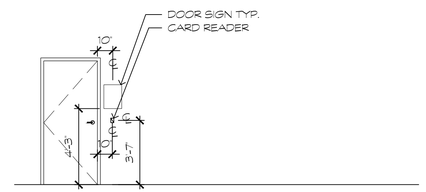
NOTES & LEGEND
N.T.S.

1. REFER TO INTERIOR ELEVATIONS FOR TYPICAL WALL PROTECTION HEIGHTS.
2. ALL OUTSIDE WALL PROTECTION CORNERS SHALL HAVE CORNER GUARDS AS SPECIFIED BY THE MANUFACTURER FOR THE WALL PROTECTION SYSTEM.
3. ALL OUTSIDE GYPSUM WALLBOARD CORNERS WITHOUT SHEET WALL PROTECTION SHALL HAVE CORNER GUARDS AS SPECIFIED.

- WP-1: EXTENT OF WALL PROTECTION 36" A.F.F.
- WP-2: EXTENT OF WALL PROTECTION 48" A.F.F
- WP-3: EXTENT OF WALL PROTECTION, FULL HEIGHT. (SEE A7.2)

NOTES:

1. REFER TO THE SPECIFICATIONS FOR SIGNAGE INFORMATION AND TYPES.
2. ALL ROOM SIGNS, RESTROOMS, AND EXIT SIGNS SHALL MEET TACTILE SIGNAGE REQUIREMENTS.



TYP. SIGN + CARD READER PLACEMENT
1/4" = 1'-0"

WORK BOXES TO BE RECESSED IN WALL. COORD. LOCATION, POWER + CABLE W/ MEP COORD. LOCATION OF SIGNS, VIDEO BOX, AND/OR CARD READERS WITH JAMBS, WAINSCOT, AND OTHER MISC. SURFACE FEATURES. ADJUST LOCATION ACCORDINGLY.

TACTILE CHARACTERS OF SIGNS SHALL BE LOCATED 48 INCHES (1220 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE LOWEST TACTILE CHARACTER AND 60 INCHES (1525 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE CHARACTER.

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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SALISBURY, MARYLAND 21804
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

FIRST FLOOR SIGNAGE AND WALL PROTECTION

MORGAN HALL HEFFRON
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A1.9

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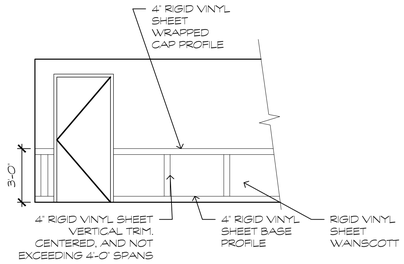
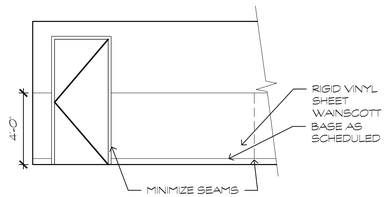


TYP. RIGID VINYL WAINSCOTT (WP-1) DETAIL

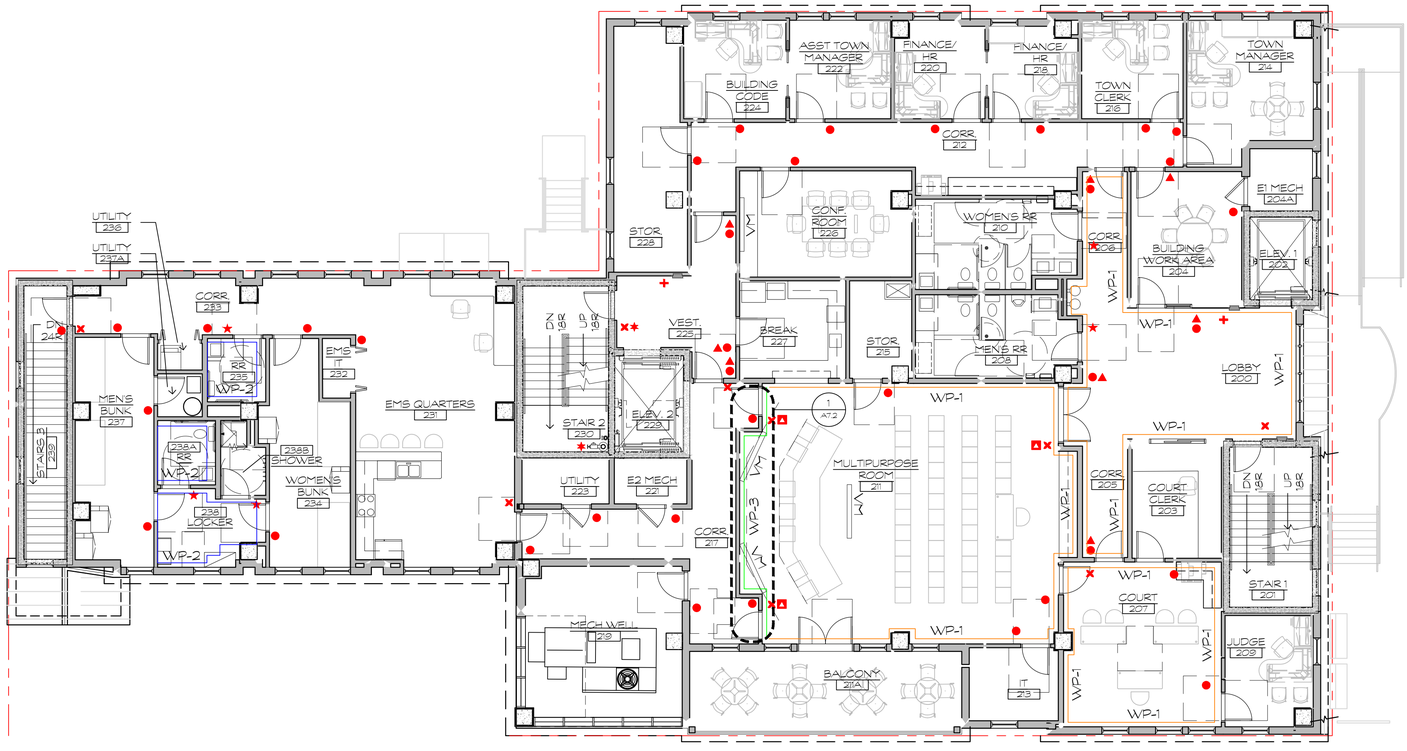
1/4" = 1'-0"



TYP. RIGID VINYL WAINSCOTT (WP-2) DETAIL

1/4" = 1'-0"

1 TYP. WALL PROTECTION DETAILS



2 SECOND FLOOR SIGNAGE & WAYFINDING PLAN

1/8" = 1'-0"

SIGNAGE KEY

N.T.S.

- HDCP DOOR OPERATOR
- ACCESS CONTROL
- ROOM SIGN (TACTILE)
- RESTROOM SIGN (TACTILE)
- EXIT SIGN (TACTILE)
- EVACUATION MAP SIGN (TACTILE)
- CLASS 1 STANDPIPE SIGNAGE, PER DSFPR 702 CHAPTER 4
- POSTED MAX OCCUPANT LOAD OF 49 OCCUPANTS

NOTES & LEGEND

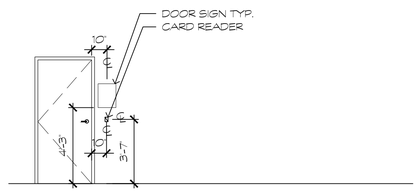
N.T.S.

1. REFER TO INTERIOR ELEVATIONS FOR TYPICAL WALL PROTECTION HEIGHTS.
2. ALL OUTSIDE WALL PROTECTION CORNERS SHALL HAVE CORNER GUARDS AS SPECIFIED BY THE MANUFACTURER FOR THE WALL PROTECTION SYSTEM.
3. ALL OUTSIDE GYPSUM WALLBOARD CORNERS WITHOUT SHEET WALL PROTECTION SHALL HAVE CORNER GUARDS AS SPECIFIED.

- WP-1: EXTENT OF WALL PROTECTION 36" A.F.F.
- WP-2: EXTENT OF WALL PROTECTION 48" A.F.F
- WP-3: EXTENT OF WALL PROTECTION, FULL HEIGHT. (SEE A7.2)

NOTES:

1. REFER TO THE SPECIFICATIONS FOR SIGNAGE INFORMATION AND TYPES.
2. ALL ROOM SIGNS, RESTROOMS, AND EXIT SIGNS SHALL MEET TACTILE SIGNAGE REQUIREMENTS.



TYP. SIGN + CARD READER PLACEMENT

1/4" = 1'-0"

WORK BOXES TO BE RECESSED IN WALL, COORD. LOCATION, POWER + CABLE W/ MEP COORD. LOCATION OF SIGNS, VIDEO BOX, AND/OR CARD READERS WITH JAMBS, WAINSCOT, AND OTHER MISC. SURFACE FEATURES. ADJUST LOCATION ACCORDINGLY.

TACTILE CHARACTERS OF SIGNS SHALL BE LOCATED 48 INCHES (1220 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE LOWEST TACTILE CHARACTER AND 60 INCHES (1525 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE CHARACTER.

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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SALISBURY, MARYLAND 410.742.3115
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

SECOND FLOOR SIGNAGE AND WALL PROTECTION

MORGAN HALL HEINRICH No. S5-0007846 STATE OF DELAWARE REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

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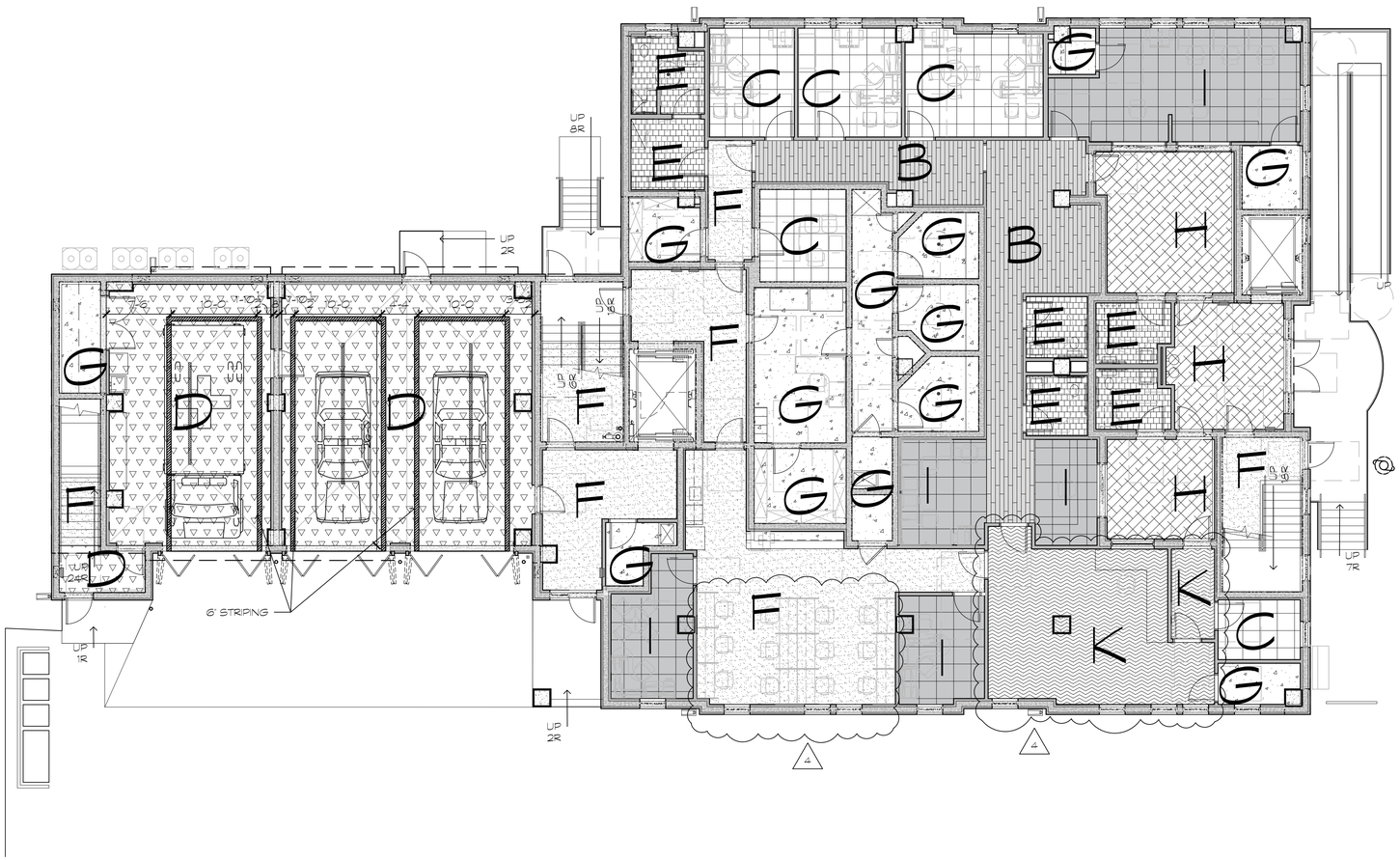
g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\A1.9 SIGNAGE AND WALL SCHEDULE.dwg, 11/14/2024 4:46 PM, Deane L. Townsend



FLOORING LEGEND
N.T.S.

- A — LUXURY VINYL TILE STYLE #1
- B — LUXURY VINYL TILE STYLE #2
- C — CARPET TILE #1
- D — EPOXY FLOOR
- E — PORCELAIN TILE
- F — POLISHED + STAINED CONCRETE
- G — SEALED CONCRETE
- H — TERRAZZO
- I — CARPET TILE #2
- J — LUXURY VINYL TILE STYLE #3
- K — RUBBER W/ LUXURY VINYL TILE TOPPER

PROJECT NORTH

1 FLOORING PLAN - FIRST FLOOR
1/8" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024
4.	ISSUED FOR ADDENDUM #2	12/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

FLOORING PLAN - FIRST FLOOR

SCALE	: 1/8" = 1'-0"
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A1.11

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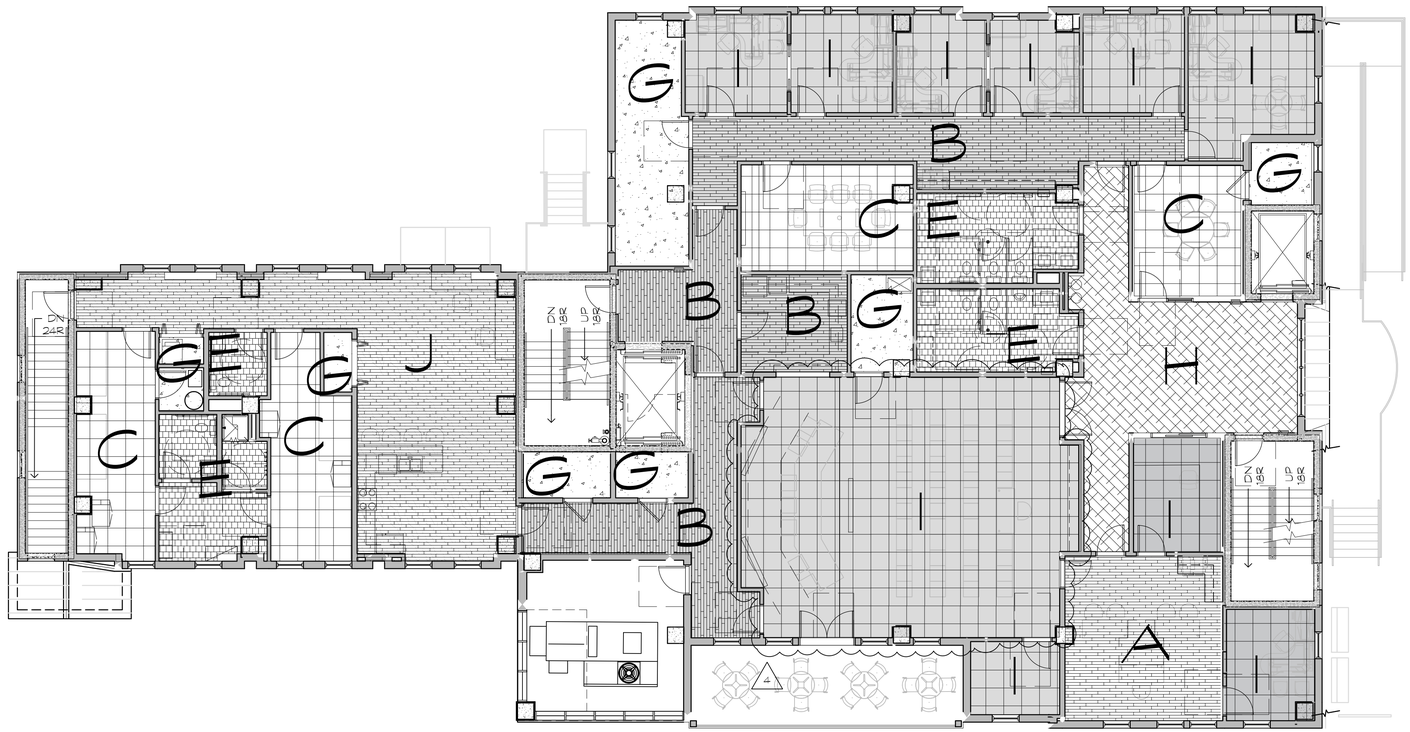

1 FLOORING PLAN - SECOND FLOOR
1/8" = 1'-0"

PROJECT NORTH

FLOORING LEGEND
N.T.S.

- A — LUXURY VINYL TILE STYLE #1
- B — LUXURY VINYL TILE STYLE #2
- C — CARPET TILE #1
- D — EPOXY FLOOR
- E — PORCELAIN TILE
- F — POLISHED + STAINED CONCRETE
- G — SEALED CONCRETE
- H — TERRAZZO
- I — CARPET TILE #2
- J — LUXURY VINYL TILE STYLE #3
- K — RUBBER W/ LUXURY VINYL TILE TOPPER

4

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM #2	12/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

FLOORING PLAN - SECOND FLOOR

SCALE	: 1/8" = 1'-0"
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A1.12

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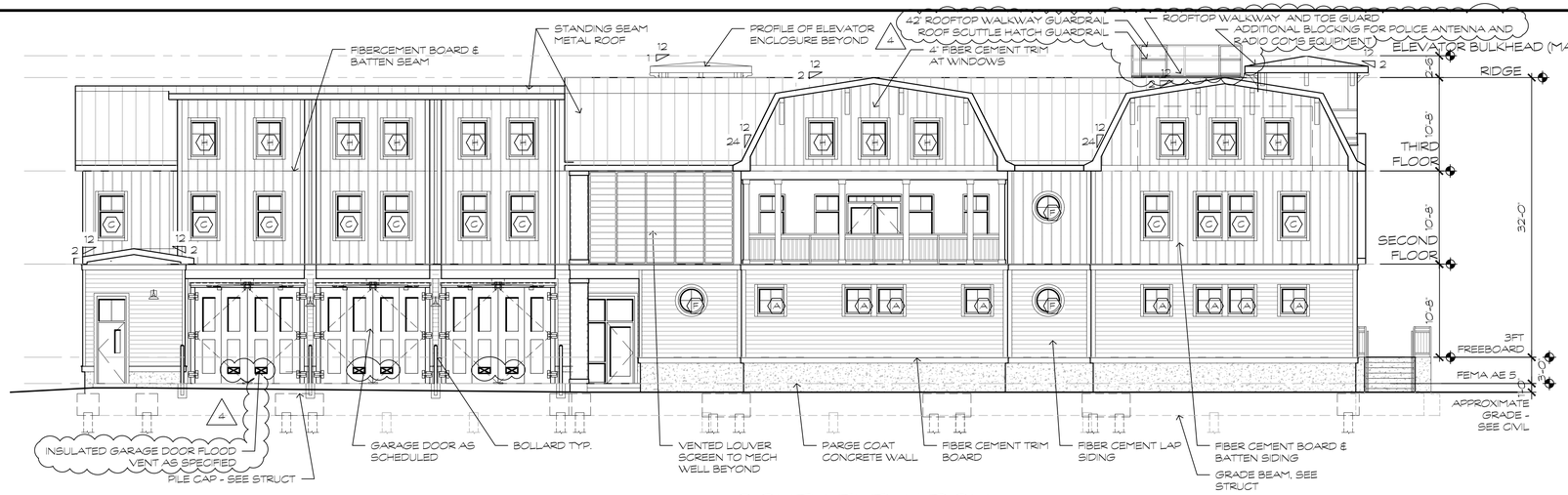
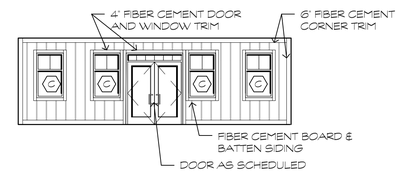
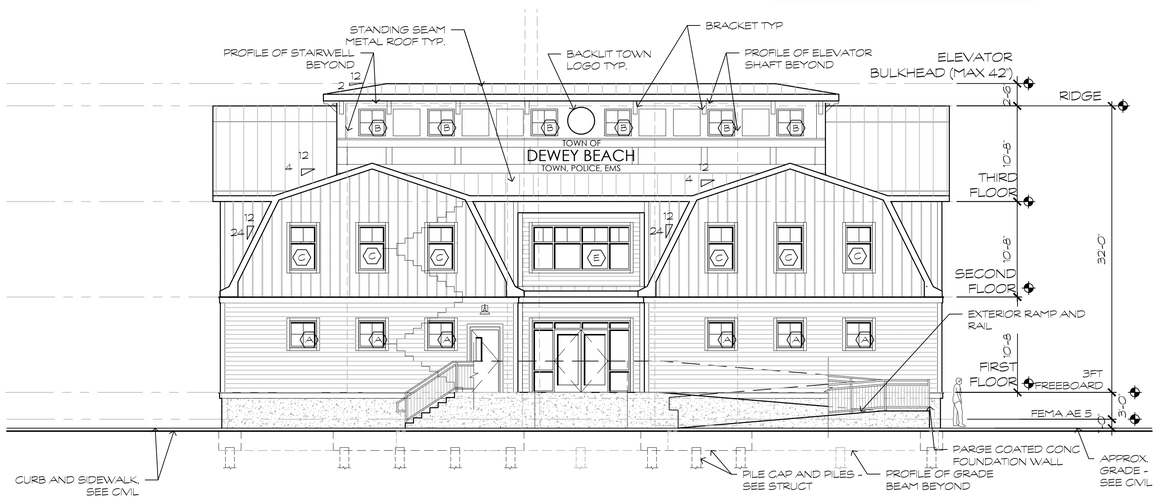


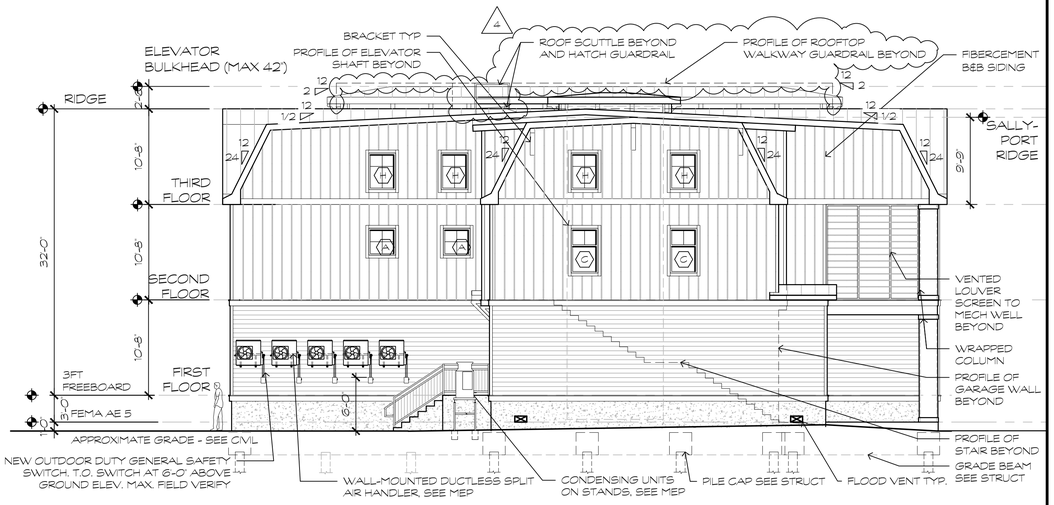
SOUTH ELEVATION



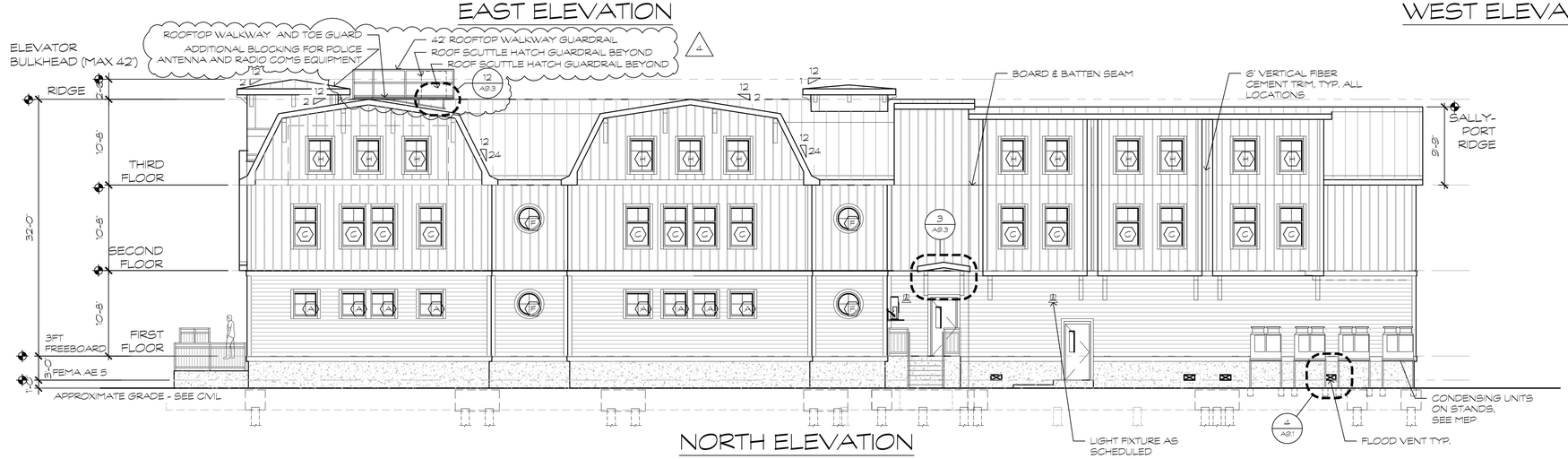
PARTIAL SOUTH ELEVATION
(BALCONY)



EAST ELEVATION



WEST ELEVATION



NORTH ELEVATION

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

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM #2	12/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ELEVATIONS

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A2.1

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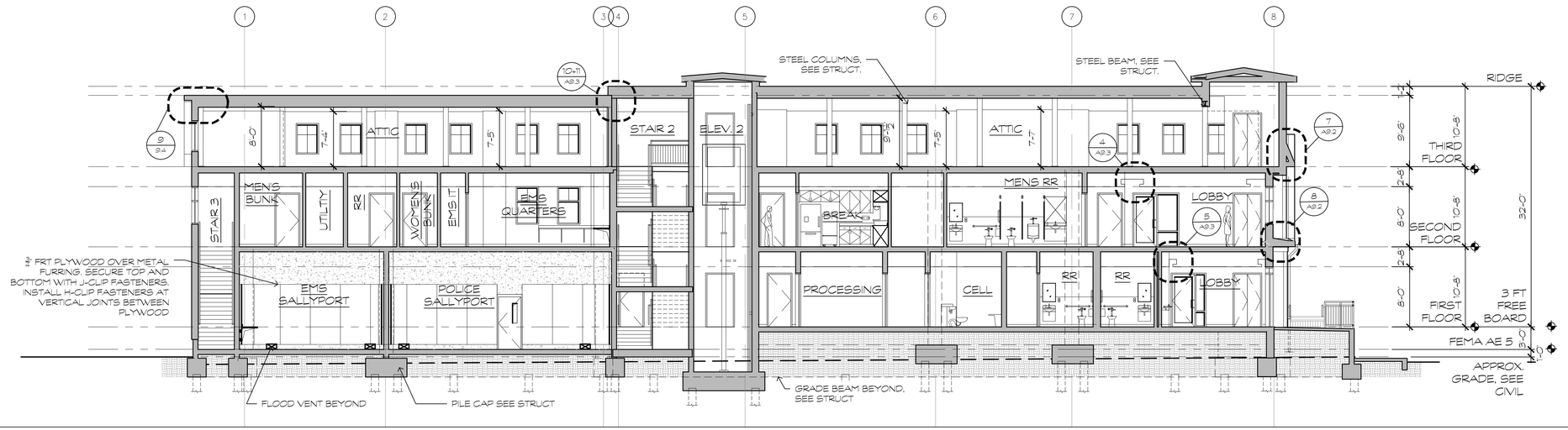
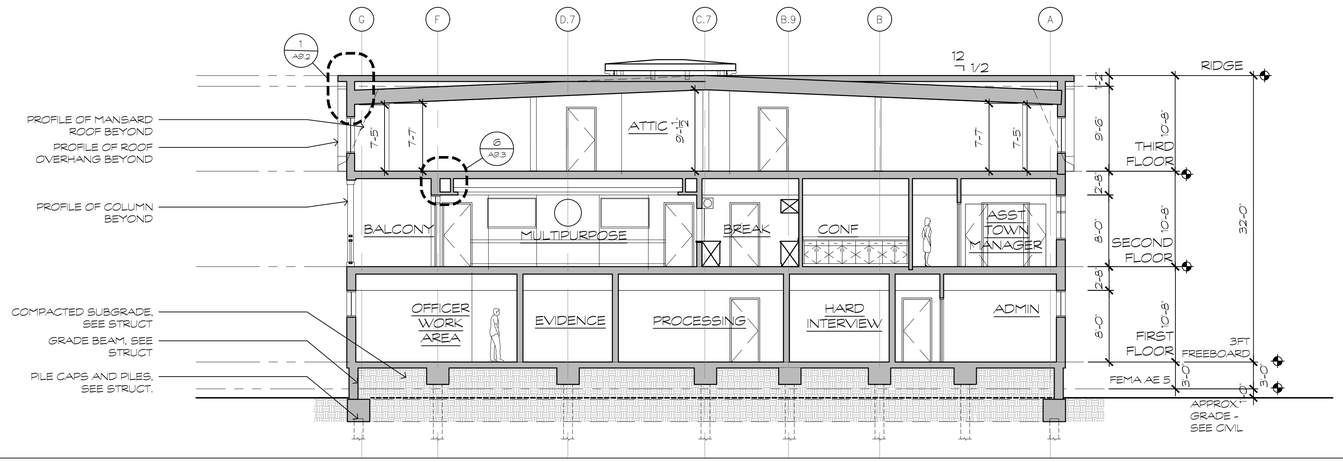


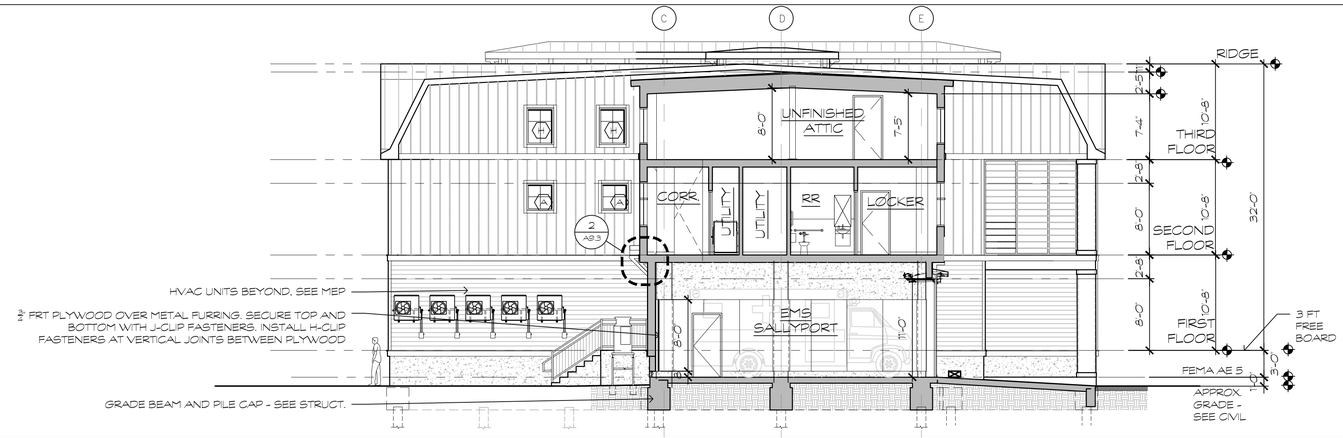
1 BUILDING SECTION

1/8" = 1'-0"



2 BUILDING SECTION

1/8" = 1'-0"



3 BUILDING SECTION

1/8" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

BUILDING SECTION

MORGAN HALL HEATWOLE
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: 1/8" = 1'-0"
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A3.1

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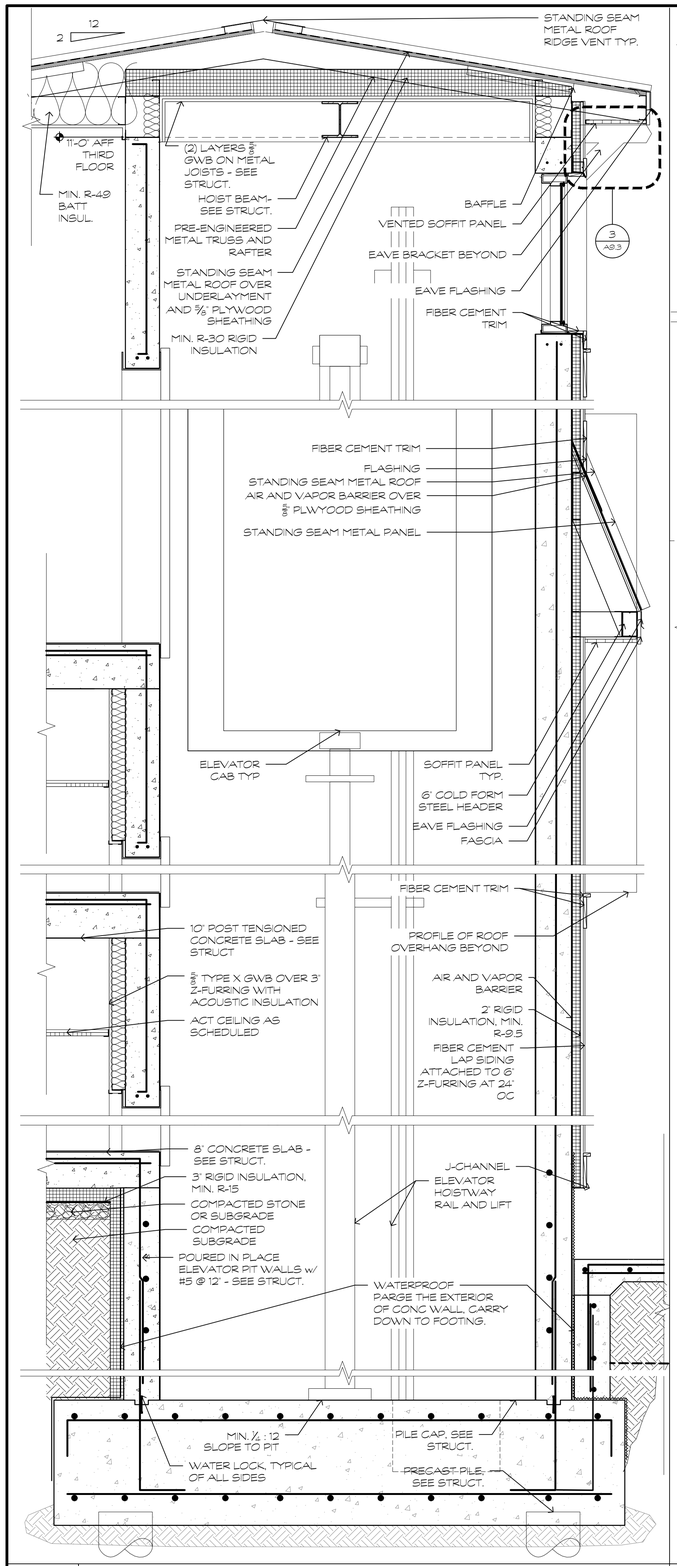
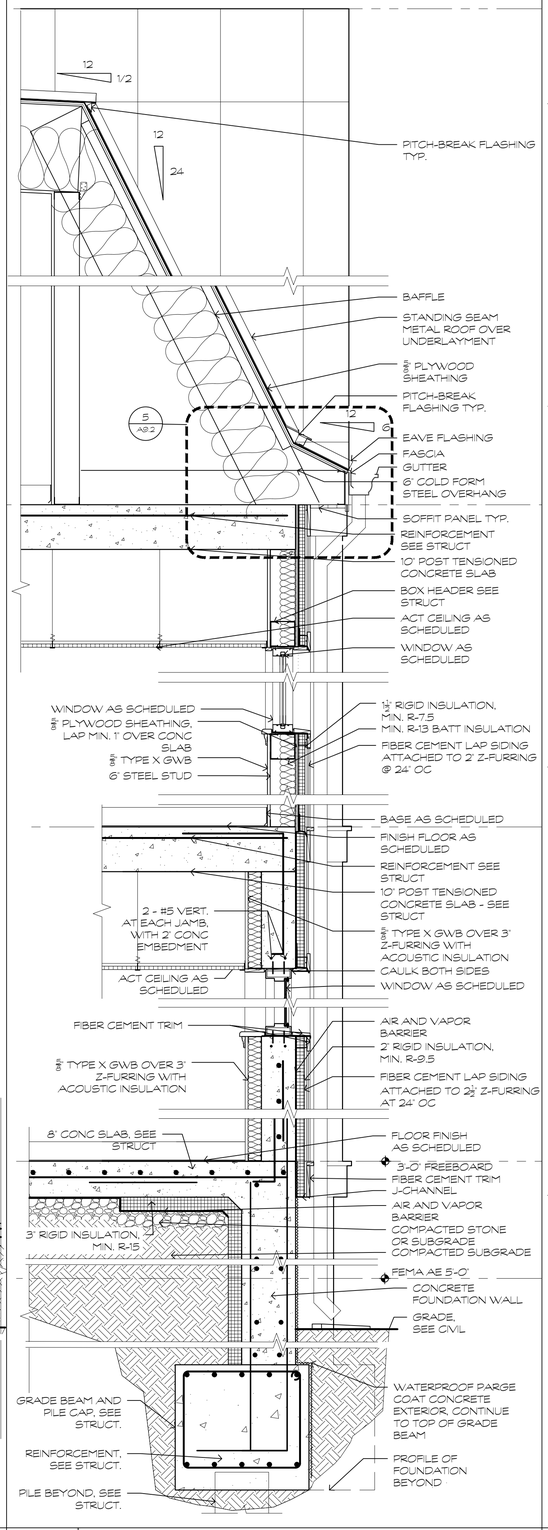
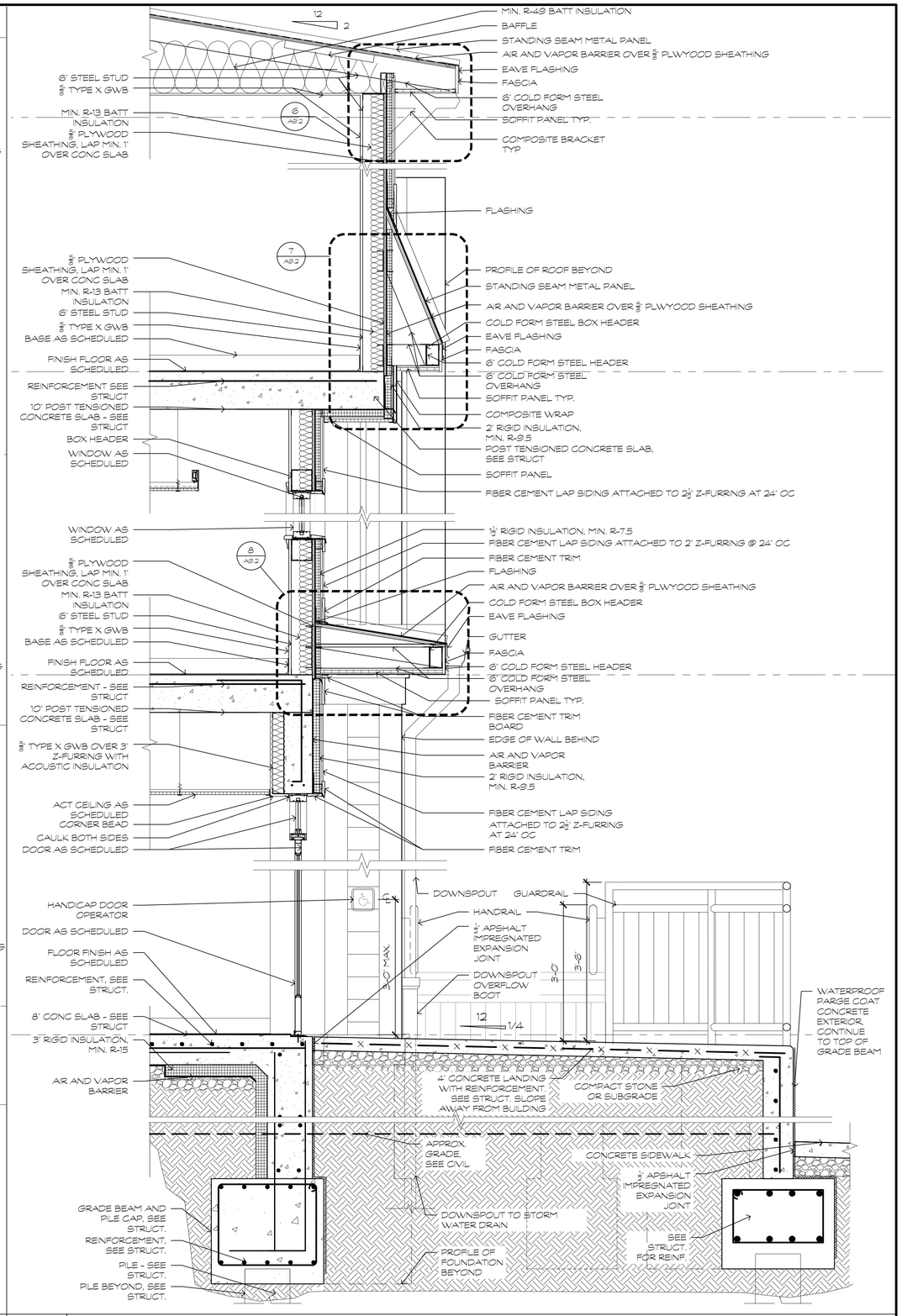


3 WALL SECTION
3/4" = 1'-0"



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



1 WALL SECTION
3/4" = 1'-0"

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024

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WALL SECTIONS

MORGAN HALL HEFLIN
No. S5-0007646
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: 3/4" = 1'-0"
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A4.1

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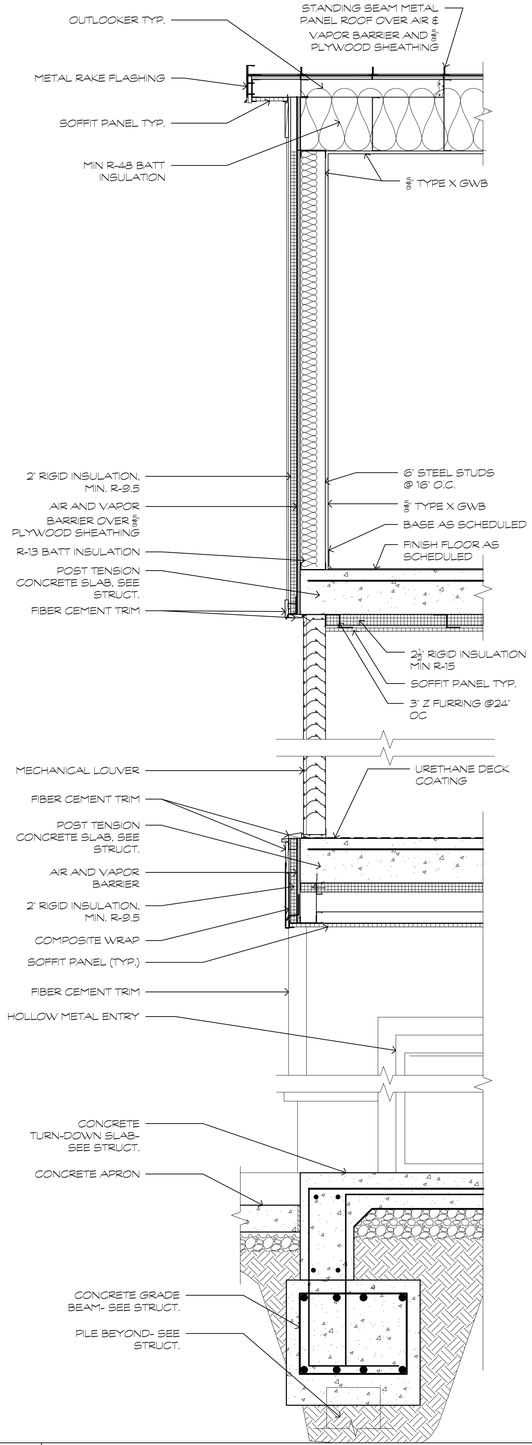
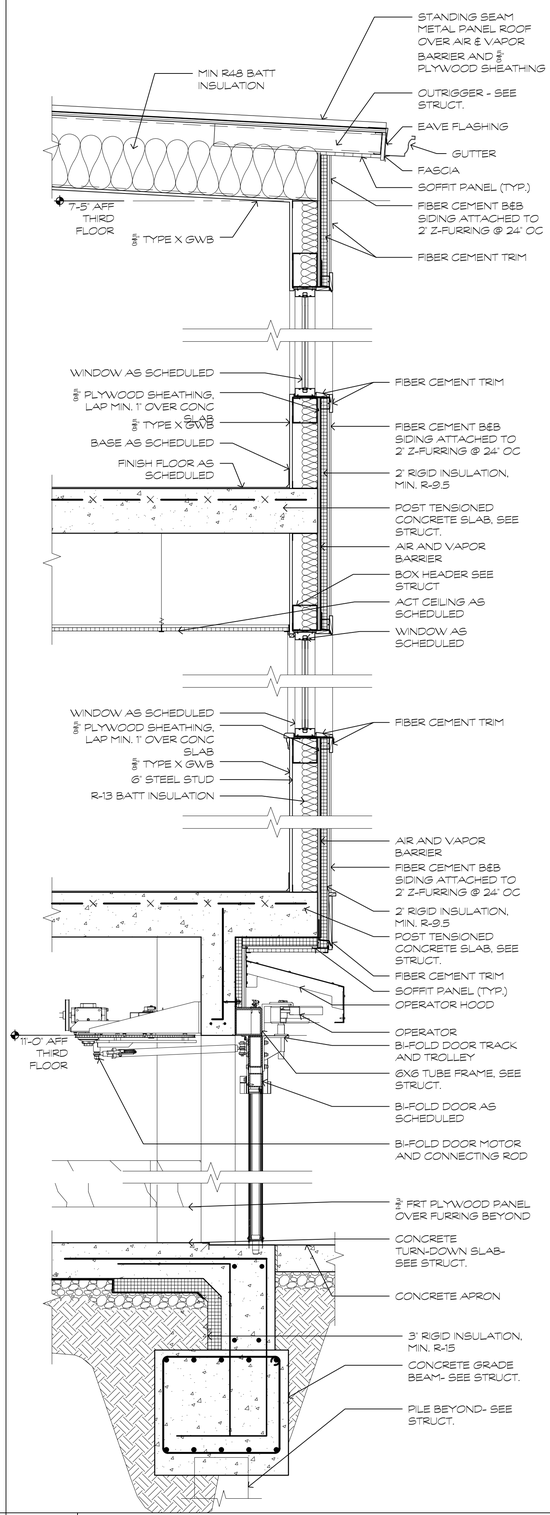
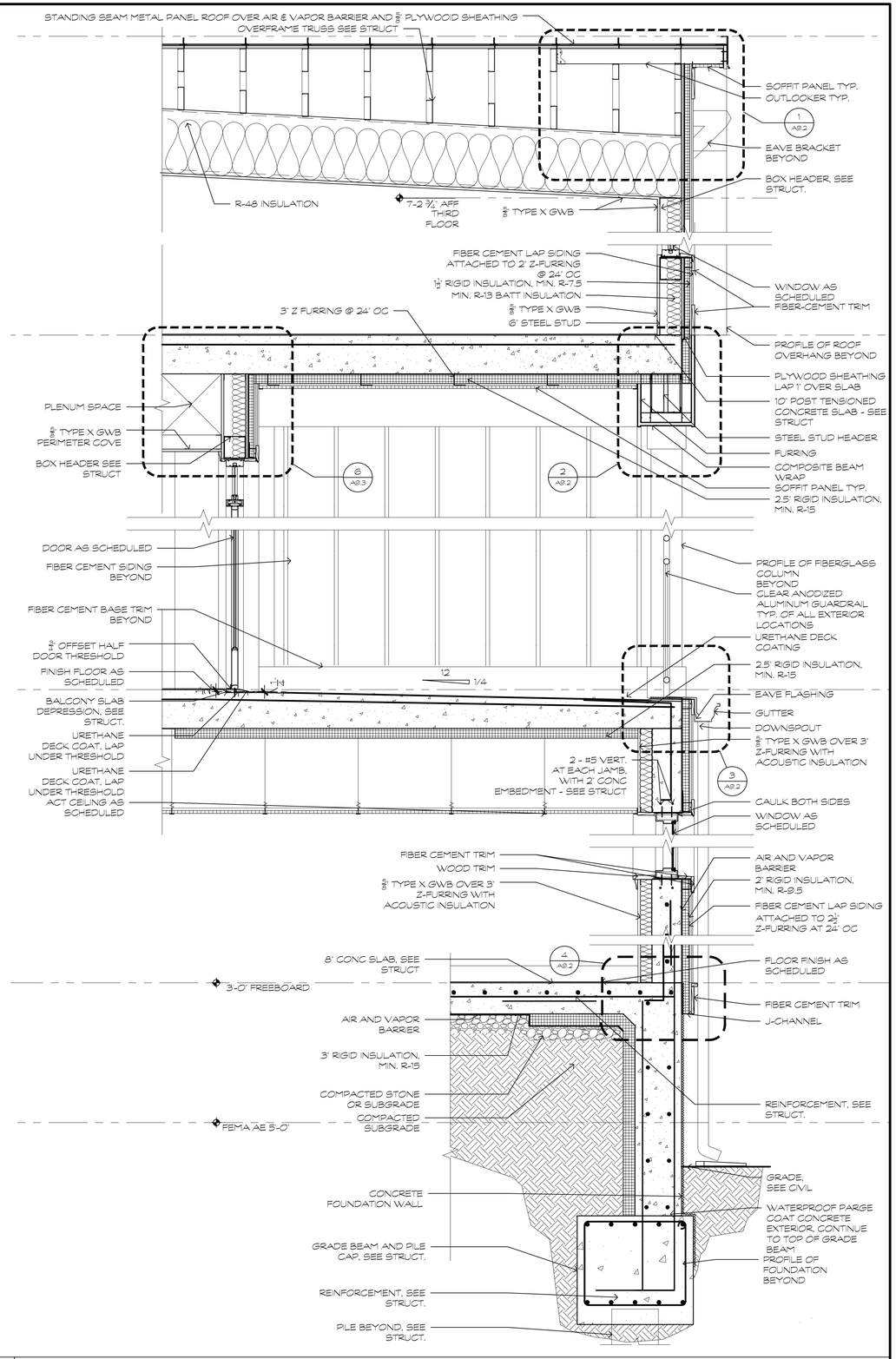


3 WALL SECTION
3/4" = 1'-0"



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



1 WALL SECTION
3/4" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

WALL SECTIONS

MORGAN HALL HEATH No. S5-0007646 STATE OF DELAWARE REGISTERED ARCHITECT

SCALE	: ############
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A4.2

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FINISH SCHEDULE

ROOM #	ROOM NAME	FLOOR	BASE	WALLS				CEILING	CLG. HT.	NOTES
				N	E	S	W			
100	LOBBY	TERRAZZO	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	
101	STAIR 1	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	
102	ELEV 1	---	---	---	---	---	---	---	---	
103	LAW LOBBY	TERRAZZO	RUBBER	PAINT 2	PAINT 1	PAINT 2	PAINT 2	ACT 1	8'-0"	
104	TOWN LOBBY	TERRAZZO	RUBBER	PAINT 2	PAINT 1	PAINT 2	PAINT 2	ACT 1	8'-0"	
105	CORRIDOR	LVT TOPPED RUBBER	RUBBER	PAINT 2	PAINT 1	PAINT 2	PAINT 2	ACT 1	8'-0"	
106	BREAK ROOM	LVT 2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	
107	RESTROOM	CT 1	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 2	8'-0"	
108	RESTROOM	CT 1	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 2	8'-0"	
109	SOFT INTERVIEW	CARPET TILE #1	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
110	TOWN ADMIN	CARPET TILE #2	RUBBER	PAINT 1	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
110A	SPRINKLER	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
110B	STORAGE	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
111	DISPATCH	LVT TOPPED RUBBER	RUBBER	PAINT 2	PAINT 2	PAINT 1	PAINT 2	ACT 1	8'-0"	
111A	STORAGE	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
111B	CORRIDOR	LVT 2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	
113	PARKING ENFORCEMENT	CARPET TILE #2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	SEE FLOORING SCHEDULE A1.11
114	RESTROOM	CT 1	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 2	8'-0"	
115	RESTROOM	CT 1	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 2	8'-0"	
116	CORRIDOR	LVT 2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
117	CORRIDOR	POLISHED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
118	POLICE CHIEF	CARPET TILE #1	RUBBER	PAINT 2	PAINT 1	PAINT 2	PAINT 2	ACT 1	8'-0"	
119	SERGEANT OFFICE	CARPET TILE #1	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	
120	POLICE ADMIN	CARPET TILE #1	RUBBER	PAINT 2	PAINT 1	PAINT 2	PAINT 2	ACT 1	8'-0"	
121	STORAGE	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
122	LIEUTENANT	CARPET TILE #1	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	
123	OFFICER WORK AREA	POLISHED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 1	PAINT 2	ACT 1	8'-0"	
124	CORRIDOR	LVT 2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 2	8'-0"	
125	DETECTIVE OFFICE	CARPET TILE #1	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	
126	LOCKER ROOM	CT 1	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
126A	LOCKER ROOM RR	CT 1	RUBBER	CT 1	CT 2	CT 2	CT 2	ACT 1	8'-0"	
127	CORRIDOR	POLISHED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
128	ARMORY	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	SEC	8'-0"	
129	ELEVATOR 2	---	---	---	---	---	---	---	---	
130	HARD INTERVIEW	CARPET TILE #1	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	SEC	8'-0"	
131	PROCESS VEST.	POLISHED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	SEC	8'-0"	
132	PROCESSING	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	SEC	8'-0"	
133	CORRIDOR	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	SEC	8'-0"	
134	EVIDENCE	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	SEC	8'-0"	
135	JANITOR	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
136	CELL 1	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	SEC	8'-0"	
137	CELL 2	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	SEC	8'-0"	
138	CELL 3	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	SEC	8'-0"	
139	STAIR 2	POLISHED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	
140	GRADE VESTIBULE	POLISHED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
141	SALLYPORT	EPOXY	RUBBER	PAINT 2 + PYLWOOD PANELLING	PAINT 2 + PYLWOOD PANELLING	PAINT 2 + PYLWOOD PANELLING	PAINT 2 + PYLWOOD PANELLING	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
142	EMS GARAGE	EPOXY	RUBBER	PAINT 2 + PYLWOOD PANELLING	PAINT 2 + PYLWOOD PANELLING	PAINT 2 + PYLWOOD PANELLING	PAINT 2 + PYLWOOD PANELLING	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
142A	STORAGE	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	CEILING EXPOSED TO UNDERSIDE OF PT STAIR"
143	STAIR 3	EPOXY	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	

FIRST FLOOR

FINISH SCHEDULE

ROOM #	ROOM NAME	FLOOR	BASE	WALLS				CEILING	CLG. HT.	NOTES
				N	E	S	W			
200	LOBBY	TERRAZZO	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	
201	STAIR 1	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	
202	ELEVATOR 1	---	---	---	---	---	---	---	---	
203	COURT CLERK	CARPET TILE #2	RUBBER	PAINT 2	PAINT 2	PAINT 1	PAINT 2	ACT 1	8'-0"	
204	BUILDING WORK AREA	CARPET TILE #1	RUBBER	PAINT 1	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
204A	ELEVATOR 1 MECH	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
205	CORRIDOR	TERRAZZO	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	
206	CORRIDOR	TERRAZZO	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	
207	COURT	LVT 1	RUBBER	PAINT 2	PAINT 2	PAINT 1	PAINT 2	ACT 1	8'-0"	
208	MEN'S RESTROOM	CT 1	RUBBER	CT 2	CT 2	CT 1	CT 2	ACT 2	8'-0"	
209	JUDGE	CARPET TILE #2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
210	WOMEN'S RESTROOM	CT 1	RUBBER	CT 1	CT 2	CT 2	CT 2	ACT 2	8'-0"	
211	MULTIPURPOSE ROOM	CARPET 2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	SEE FLOORING SCHEDULE A1.12
211A	BALCONY	URETHANE COATING	---	---	---	---	---	SOFFIT	---	FINISH SIMILAR TO REST OF EXTERIOR
212	CORRIDOR	LVT 2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
213	IT	CARPET TILE #2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
214	TOWN MANAGER	CARPET TILE #2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	
215	STORAGE	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
216	TOWN CLERK	CARPET TILE #2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	
217	CORRIDOR	LVT 2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
218	FINANCE / HR	CARPET TILE #2	RUBBER	PAINT 2	PAINT 1	PAINT 2	PAINT 2	ACT 1	8'-0"	
219	MECH WELL	URETHANE COATING	---	---	---	---	---	SOFFIT	---	FINISH SIMILAR TO REST OF EXTERIOR
220	FINANCE / HR	CARPET TILE #2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	
221	ELEVATOR 2 MECH	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
222	ASSISTANT TOWN MANAGER	CARPET TILE #2	RUBBER	PAINT 1	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
223	UTILITY	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
224	BUILDING CODE	CARPET TILE #2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 1	ACT 1	8'-0"	
225	VESTIBULE	LVT 2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
226	CONFERENCE ROOM	CARPET TILE #1	RUBBER	PAINT 2	PAINT 2	PAINT 1	PAINT 2	ACT 1	8'-0"	
227	BREAK ROOM	LVT 2	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
228	STORAGE	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
229	ELEVATOR 2	---	---	---	---	---	---	---	---	
230	STAIR 2	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	
231	EMS QUARTERS	LVT 3	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
232	EMS IT	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
233	CORRIDOR	LVT 3	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
234	WOMEN'S BUNK	CARPET TILE #1	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
235	RESTROOM	CT 1	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 2	8'-0"	
236	UTILITY	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
237	MEN'S BUNK	CARPET TILE #1	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	
237A	UTILITY	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	---	CEILING EXPOSED TO UNDERSIDE OF PT SLAB"
238	LOCKER	CERAMIC TILE	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 2	8'-0"	
238A	RESTROOM	CERAMIC TILE	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 2	8'-0"	
238B	SHOWER	CERAMIC TILE	RUBBER	CT 2	CT 2	CT 2	CT 1	ACT 2	8'-0"	
239	STAIR 3	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	ACT 1	8'-0"	

SECOND FLOOR

300	UFINISHED ATTIC	---	---	---	---	---	---	---	---	UNPAINTED GWB TO THE UNDERSIDE OF ROOF RAFTERS
301	STAIR 1	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	PAINTED GWB TO THE UNDERSIDE OF ROOF RAFTERS
302	ELEVATOR 1	---	---	---	---	---	---	---	---	UNPAINTED GWB TO THE UNDERSIDE OF ROOF RAFTERS
303	ELEVATOR 2	---	---	---	---	---	---	---	---	UNPAINTED GWB TO THE UNDERSIDE OF ROOF RAFTERS
304	STAIR 2	SEALED CONC	RUBBER	PAINT 2	PAINT 2	PAINT 2	PAINT 2	PAINT 2	---	PAINTED GWB TO THE UNDERSIDE OF ROOF RAFTERS
305	UNFINISHED ATTIC	---	---	---	---	---	---	---	---	UNPAINTED GWB TO THE UNDERSIDE OF ROOF RAFTERS

THIRD FLOOR

KEY:

ACT 1 = ACOUSTIC TILE CEILING
ACT 2 = MOISTURE RESISTANT ACOUSTIC TILE CEILING
CT 1 = CERAMIC TILE ACCENT COLOR
CT 2 = CERAMIC TILE FIELD COLOR
PAINT 1 = PAINT IN ACCENT COLOR
PAINT 2 = PAINT IN FIELD COLOR
LVT 1 = LUXURY VINYL TILE STYLE #1
LVT2 = LUXURY VINYL TILE STYLE #2
LVT3= LUXURY VINYL TILE STYLE #3
SEC = SECURITY CEILING

NOTES:

1. REFER TO SPECIFICATIONS FOR DETAILS AND REQUIREMENTS OF FLOORING, BASEBOARD, WALL FINISH AND CEILING TYPES.

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM # 2	12/27/2024

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SALISBURY, MARYLAND 410-742-3115
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

FINISH SCHEDULES

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A5.1

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g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\A5.1 FINISH SCHEDULES AND WALL TYPES.dwg, 12/27/2024 2:31 PM, Deane L. Townsend

DOOR SCHEDULE

ROOM NAME	DOOR #	TYPE	MATL	SIZE	THICK	RATING	FRAME	HDWR	HEAD	JAMB	SILL	VIDEO BOX	ACC. CTRL	REMARKS	
LOBBY	100A	A	ALUM	3'-0" x 7'-0" PAIR	1 3/4"	--	F-5	1	--	--	--	■	■	HDCP ASSIST OPENER, ELEC DISPATCH SECURED	FIRST FLOOR
STAIR 1	101A	C	WD	3'-0" x 7'-0"	1 3/4"	1.5 HR	F-3	4	--	--	--	--	--	ELEC DISPATCH SECURED	
STAIR 1	101B	C	FIBER GLAS	3'-0" x 7'-0"	1 3/4"	--	F-3	2B	--	--	--	--	--		
LAW LOBBY	103A	A	WD	3'-0" x 7'-0"	1 3/4"	--	F-7	2	--	--	--	--	--	ELEC DISPATCH SECURED	
TOWN LOBBY	104A	A	WD	3'-0" x 7'-0"	1 3/4"	--	F-7	2	--	--	--	--	--	ELEC DISPATCH SECURED	
CORRIDOR	105A	C	WD	3'-0" x 7'-0"	1 3/4"	--	F-3	4	--	--	--	--	■	BULLET RESISTANT	
BREAK ROOM	106A	C	WD	3'-0" x 7'-0"	1 3/4"	--	F-3	4	--	--	--	--	■	BULLET RESISTANT	
BREAK ROOM	106B	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	4	--	--	--	--	■		
RESTROOM	107A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-3	7	--	--	--	--	--		
RESTROOM	108A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-3	7	--	--	--	--	--		
SOFT INTERVIEW	109A	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	5B	--	--	--	--	--		
TOWN ADMIN	110A	C	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	2	--	--	--	--	--		
SPRINK.	110B	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	5	--	--	--	--	--		
STOR.	110C	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	5	--	--	--	--	--		
DISPATCH	111A	C	WD	3'-0" x 7'-0"	1 3/4"	--	F-3	3	--	--	--	--	■		
PD IT	111B	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	5	--	--	--	--	--		
PARKING ENFORCE.	113A	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
RESTROOM	114A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	7	--	--	--	--	--		
RESTROOM	115A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	7	--	--	--	--	--		
CORRIDOR	117A	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
CHIEF OFF.	118A	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
SERGEANT OFF.	119A	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
ADMIN. OFF.	120A	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
STORAGE	121A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-3	5B	--	--	--	--	--		
LIEUT. OFFICE	122A	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
CORRIDOR	124A	D	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	4	--	--	--	--	■		
CORRIDOR	124B	C	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	4	--	--	--	--	■	BULLET RESISTANT	
DETECT. OFFICE	125A	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
LOCKER ROOM	126A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	4	--	--	--	--	--		
LOCKER RR	126B	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	7	--	--	--	--	--		
CORRIDOR	127A	C	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	4	--	--	--	--	■	BULLET RESISTANT	
ARMORY	128A	B	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	5	--	--	--	--	■		
HARD INTERVIEW	130A	C	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	8	--	--	--	--	■	REINFORCED CELL DOOR	
PROCESS	132A	C	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	8	--	--	--	--	■		
CORRIDOR	133A	D	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	8	--	--	--	--	--		
CORRIDOR	133B	B	HM	2'-0" x 7'-0"	1 3/4"	--	F-3	5	--	--	--	--	--		
CORRIDOR	133C	B	HM	2'-0" x 7'-0"	1 3/4"	--	F-3	5	--	--	--	--	--		
EVIDENCE	134A	B	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	5	--	--	--	--	■		
JANITOR	135A	B	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	5	--	--	--	--	--		
CELL 1	136A	G	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	8	--	--	--	--	--	REINFORCED CELL DOOR	
CELL 2	137A	G	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	8	--	--	--	--	--	REINFORCED CELL DOOR	
CELL 3	138A	G	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	8	--	--	--	--	--	REINFORCED CELL DOOR	
STAIR 2	139A	C	HM	3'-0" x 6'-8"	1 3/4"	1.5 HR	F-3	4	--	--	--	--	--		
STAIR 2	139B	C	FIBER GLAS	3'-0" x 7'-0"	1 3/4"	1.5 HR	F-3	5A	--	--	--	■	--		
STAIR 2	139C	C	HM	3'-0" x 7'-0"	1 3/4"	1.5 HR	F-3	4	--	--	--	--	--		
GRADE VEST.	140A	A	ALUM	3'-0" x 7'-0"	1 3/4"	--	F-13	3	--	--	--	■	■		
CHASE	140B	B	HM	3'-0" x 7'-0"	1 3/4"	--	F-2	5	--	--	--	--	--		
SALLY-PORT	141A	C	FIBER GLAS	3'-0" x 7'-0"	1 3/4"	1 HR	F-3	4	--	--	--	--	■		

DOOR SCHEDULE

ROOM NAME	DOOR #	TYPE	MATL.	SIZE	THICK	RATING	FRAME	HDWR.	HEAD	JAMB	SILL	VIDEO BOX	ACC. CTRL.	REMARKS	
SALLY-PORT	141B	F	HM	12'-0" x 11'-0"	1 3/4"	--	F-11	1	--	--	--	--	--		FIRST FLOOR
SALLY-PORT	141C	F	HM	12'-0" x 11'-0"	1 3/4"	--	F-11	1	--	--	--	--	--		
SALLY-PORT	141D	C	FIBER GLAS	3'-0" x 7'-0"	1 3/4"	1 HR	F-3	5A	--	--	--	■	--		
EMS GARAGE	142A	C	HM	3'-0" x 7'-0"	1 3/4"	1.5 HR	F-3	5A	--	--	--	--	--		
EMS GARAGE	142B	F	HM	12'-0" x 11'-0"	1 3/4"	--	F-11	1	--	--	--	--	--		
STOR.	142C	B	HM	3'-0" x 7'-0" PAIR	1 3/4"	1.5 HR	F-14	6	--	--	--	--	--		
EMS GARAGE	142D	C	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	5A	--	--	--	--	--		
STAIR 3	143A	C	FIBER GLAS	3'-0" x 7'-0"	1 3/4"	1.5 HR	F-14	2	--	--	--	■	--		
STAIR 1	201A	C	WD	3'-0" x 7'-0"	1 3/4"	1.5 HR	F-3	4	--	--	--	--	--		SECOND FLOOR
COURT CLERK	203A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
BUILDING WORK	204A	A	WD	3'-0" x 7'-0"	1 3/4"	--	F-9	2	--	--	--	--	■		
BUILDING WORK	204B	C	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	■		
ELEV. 1 MECH.	204C	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	5	--	--	--	--	--		
COURT	207A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	2	--	--	--	--	■		
COURT	207B	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	9	--	--	--	--	--		
MENS RESTROOM	208A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	4B	--	--	--	--	--		
JUDGE	209A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
WOMENS RESTROOM	210A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	4B	--	--	--	--	--		
MULTI-PURPOSE	211A	C	WD	3'-0" x 7'-0" PAIR	1 3/4"	1 HR	F-4	2	--	--	--	--	■		
BALCONY	211B	A	ALUM	3'-0" x 7'-0" PAIR	1 3/4"	--	F-6	2	--	--	--	--	--		
MULTI-PURPOSE	211C	C	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	2	--	--	--	--	--		
MULTI-PURPOSE	211D	C	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	2	--	--	--	--	--		
CORRIDOR	212A	C	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	2	--	--	--	--	■		
CORRIDOR	212B	C	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	2	--	--	--	--	■		
IT	213A	C	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
TOWN MANAGER	214A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
STOR.	215A	B	WD	3'-0" x 7'-0"	1 3/4"	1 HR	F-2	5	--	--	--	--	--		
TOWN CLERK	216A	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
CORRIDOR	217A	C	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	2	--	--	--	--	■		
FINANCE /HR	218A	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
FINANCE /HR	218B	B	WD	2'-6" x 7'-0" PAIR	1 3/4"	--	F-10	1A	--	--	--	--	--		
MECH WELL	219A	B	FIBER GLAS	3'-0" x 7'-0"	1 3/4"	--	F-2	5	--	--	--	--	--		
FINANCE /HR	220A	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
ELEV. 2 MECH	221A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	5B	--	--	--	--	--		
ASST. TOWN	222A	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
ASST. TOWN	222B	B	WD	2'-6" x 7'-0" PAIR	1 3/4"	--	F-10	1A	--	--	--	--	--		
UTILITY	223A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	5B	--	--	--	--	--		
BUILDING CODE	224A	D	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		
CONF. ROOM	226A	C	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	4	--	--	--	--	--		
BREAK ROOM	227A	C	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	2	--	--	--	--	--		
BREAK ROOM	227B	H	HM	6'-0" x 3'-8"	1 3/4"	--	F-16	1A	--	--	--	--	--	OVERHEAD COILING DOOR	
STOR.	228A	B	HM	3'-0" x 7'-0"	1 3/4"	--	F-3	5	--	--	--	--	--		
STAIR 2	230A	C	WD	3'-0" x 7'-0"	1 3/4"	1.5 HR	F-3	4	--	--	--	--	--		
EMS QUARTER	231A	B	HM	3'-0" x 7'-0"	1 3/4"	1.5 HR	F-3	2	--	--	--	--	--		
EMS IT	232A	E	WD	2'-6" x 7'-0" PAIR	1 3/4"	--	F-15	--	--	--	--	--	--		
WOMENS BUNK	234A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	2A	--	--	--	--	--		
RESTROOM	235A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	7A	--	--	--	--	--		
UTILITY	236A	E	WD	2'-6" x 7'-0" PAIR	1 3/4"	--	F-15	--	--	--	--	--	--		

DOOR SCHEDULE

ROOM NAME	DOOR #	TYPE	MATL.	SIZE	THICK	RATING	FRAME	HDWR.	HEAD	JAMB	SILL	VIDEO BOX	ACC. CTRL.	REMARKS	
MENS BUNK	237A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	2A	--	--	--	--	--		SECOND
UTILITY	237B	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	6	--	--	--	--	--		
LOCKER	238A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	7A	--	--	--	--	--		
LOCKER	238B	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	7A	--	--	--	--	--		
RESTROOM	238C	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	7A	--	--	--	--	--		
SHOWER	238D	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	7A	--	--	--	--	--		
STAIR 3	239A	C	WD	3'-0" x 7'-0"	1 3/4"	1.5 HR	F-3	5A	--	--	--	--	--		
STAIR 1	301A	C	WD	3'-0" x 7'-0"	1 3/4"	1.5 HR	F-3	5A	--	--	--	--	--		THIRD
STAIR 2	304A	C	WD	3'-0" x 7'-0"	1 3/4"	1.5 HR	F-3	5A	--	--	--	--	--		
ATTIC	305A	C	WD	3'-0" x 7'-0"	1 3/4"	1.5 HR	F-3	4	--	--	--	--	--		
PD IT	305A	B	WD	3'-0" x 7'-0"	1 3/4"	--	F-2	3	--	--	--	--	--		

HARDWARE SCHEDULE

HW-1 - ENTRANCE HARDWARE W/ KEYED LOCK CYLINDER, BALANCE OF HARDWARE FURNISHED BY DOOR SUPPLIER INCLUDING PANIC HARDWARE, HANDICAP DOOR OPENER, AND LOW ENERGY PUSH BUTTON.

HW-1A - SAME AS HW-1, NO LOCKSET, BALANCE OF HARDWARE PROVIDED BY DOOR SUPPLIER INCLUDING CONCEALED RAIL & TRACK, GUIDES, SILL GUIDE, AND DAMPENERS

HW-2
½ PR HINGES (BB)
1 ENTRANCE/OFFICE LOCKSET INT. PUSHBUTTON W/O 90° ROTATION
1 CLOSER
2 KICKPLATES
1 DOOR STOP

HW-2A - SAME AS HW-2 W/ NO CLOSER

HW-2B - SAME AS HW-2 W/ DELAYED EGRESS PANIC HARDWARE

HW-3
½ PR HINGES (BB)
1 ENTRY LOCKSET
2 KICKPLATES
1 DOOR STOP

HW-4
½ PR HINGES (BB)
1 PASSAGE SET
1 CLOSER
2 KICKPLATES
1 DOOR STOP

HW-4A - SAME AS HW-4 W/ NO CLOSER

HW-4B - SAME AS HW-4 W/ NO LOCKSET, PUSH/PULL PLATE ONLY

HW-5
½ PR HINGES (BB)
1 STORAGE LOCKSET
1 DOOR STOP

HW-5A - SAME AS HW-5 W/ NO WALL/FLOOR BUMPER
1 PANIC HARDWARE
1 CLOSER
1 WEATHER STRIP
1 THRESHOLD

HW-5B - SAME AS HW-5 w/ NO WALL/FLOOR BUMPER
1 CLOSER
2 KICKPLATES

HW-5C - SAME AS HW-5 w/ NO WALL/FLOOR BUMPER
1 WEATHER STRIP
1 DOOR SHOE

HW-5D - SAME AS HW-5 w/ NO WALL/FLOOR BUMPER
1 KEYPAD

HW-5E - SAME AS HW-5 w/ NO WALL/FLOOR BUMPER
1 PANIC HARDWARE
1 CLOSER

HW-6
3 PR HINGES (BB)
1 STORAGE LOCKSET
1 T & B FLUSH BOLT (INACTIVE LEAF)
2 CLOSERS
1 COORDINATING DEVICE
4 KICKPLATES
1 DOOR STOP

HW-7
½ PR HINGES (BB)
1 PRIVACY LOCKSET
1 CLOSER
2 KICKPLATES
1 DOOR STOP

HW-7A - SAME AS HW-8 W/ NO CLOSER

HW-8
½ PR HINGES (BB)
1 INSTITUTIONAL LOCKSET
1 CLOSER
2 KICKPLATES
1 DOOR STOP

HW-9
½ PR HINGES (BB)
1 COMMUNICATING EXIT LOCKSET ON PULL SIDE, BLANK PLATE ON PUSH SIDE
1 CLOSER
2 KICKPLATES
1 DOOR STOP

GENERAL NOTES

ABBREVIATIONS

WD = WOOD
HM = HOLLOW METAL
ALUM = ALUMINUM

ELEC. DISPATCH SECURED.

- DOOR 100A, 101A, 103A, 104A, AND ELEVATOR #1 TO PROVIDE LOCK DOWN FUNCTIONALITY AND CONTROLS FROM DISPATCH #111, INTENT IS TO CONTROL VISITOR ACCESS AFTER BUSINESS HOURS. VIDEO AND TWO-WAY COMMUNICATION FROM LOBBY DOOR #100A TO DISPATCHER #111 CONTROLS, PROVIDES COMMUNICATION AND DOOR LOCK/UNLOCK REMOTELY. LOBBY #100 AND SUBSEQUENTLY LAW LOBBY #103 WILL ONLY BE ACCESSIBLE AFTER HOURS. STAIR 1 (#101, DOOR 101A), ELEVATOR 1 (#102A), AND TOWN LOBBY (#104A) WILL REMAIN LOCKED.

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 21801
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

DOOR + HARDWARE SCHEDULE

MORGAN HALL HELFRICH
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A5.2

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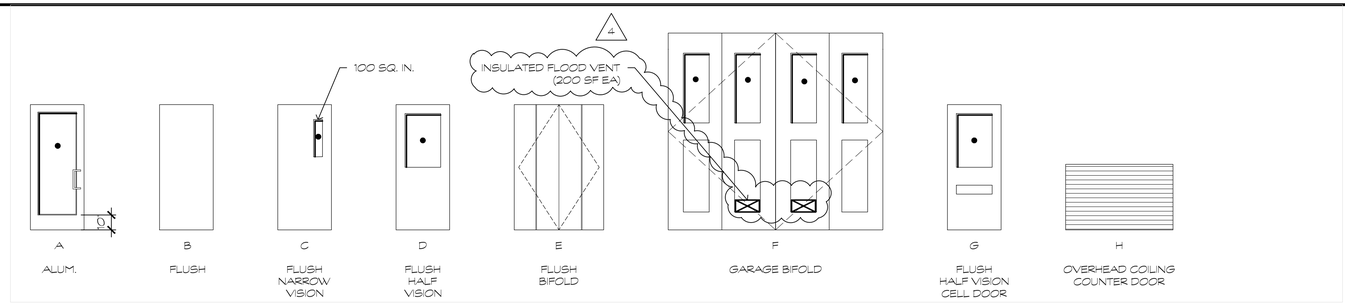
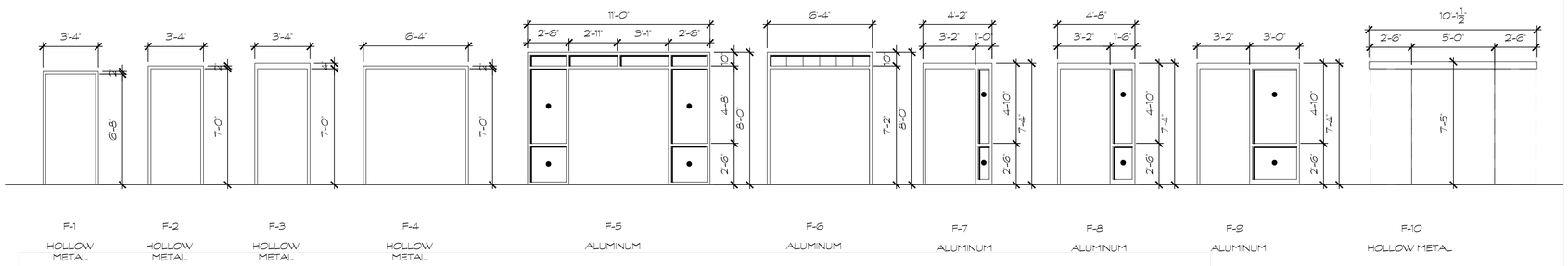
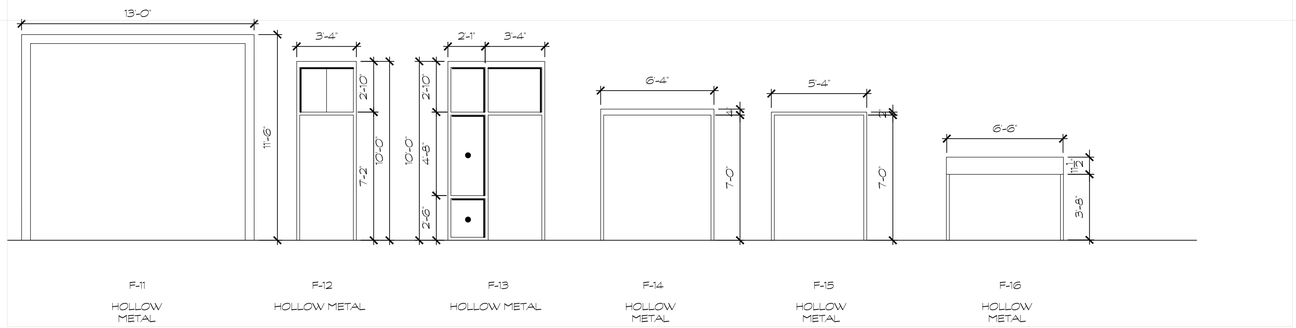


1 DOOR TYPES

1/4" = 1'-0"

• DENOTES TEMPERED GLASS

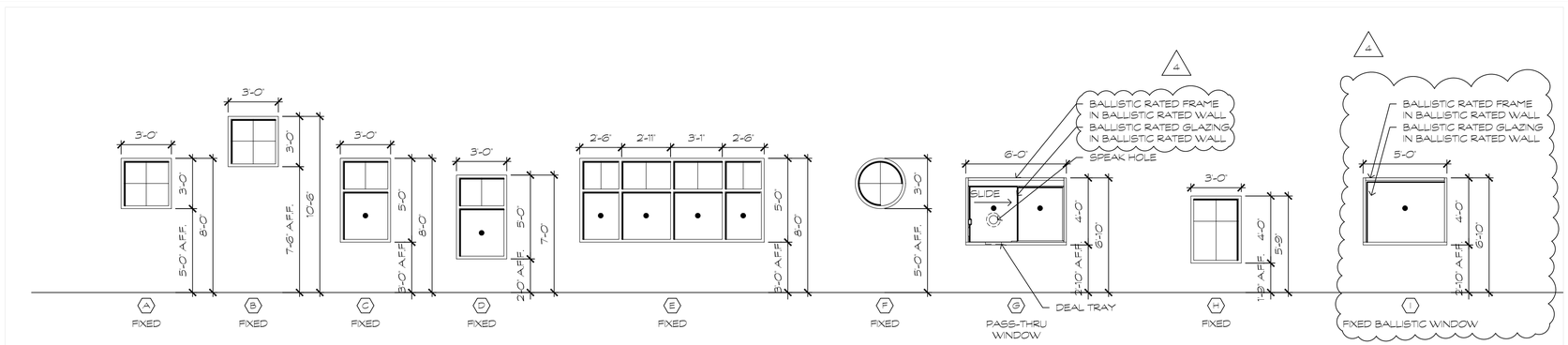




2 FRAME TYPES

1/4" = 1'-0"

• DENOTES TEMPERED GLASS



3 WINDOW + VENT TYPES

1/4" = 1'-0"

• DENOTES TEMPERED GLASS

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM # 2	12/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

DOOR, FRAME, & WINDOW TYPES

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A5.3

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g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\A5.1 FINISH SCHEDULES AND WALL TYPES.dwg, 11/14/2024 4:40 PM, Deane L. Townsend

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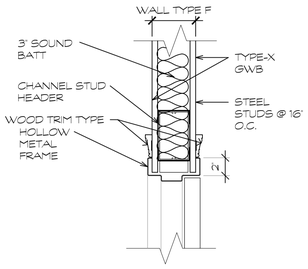

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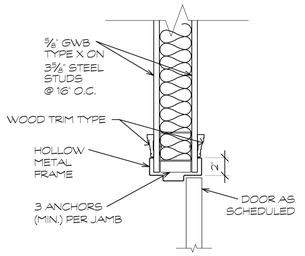

JAMB

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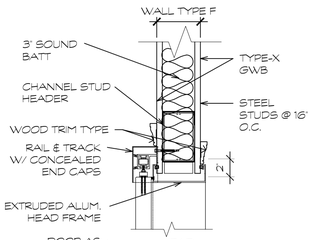

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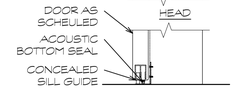

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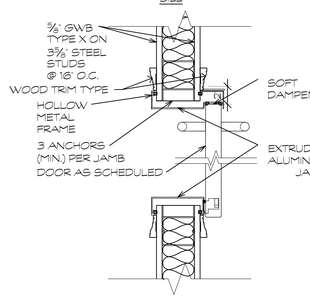

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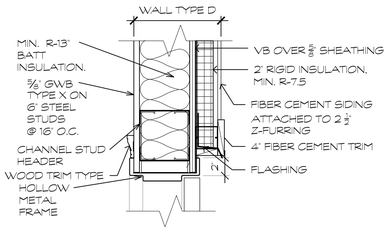

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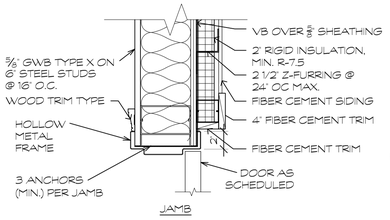

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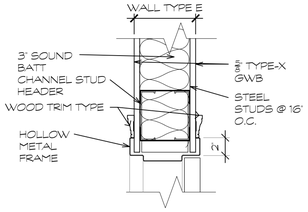

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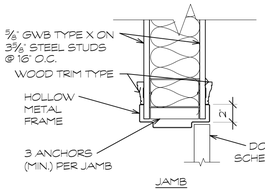

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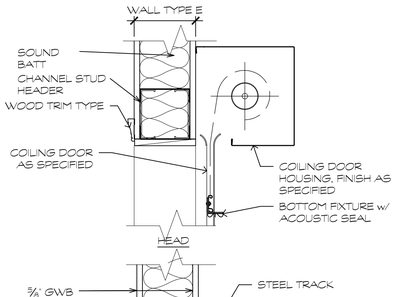

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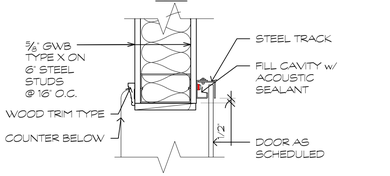

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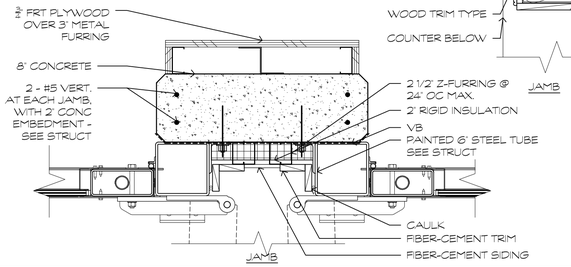

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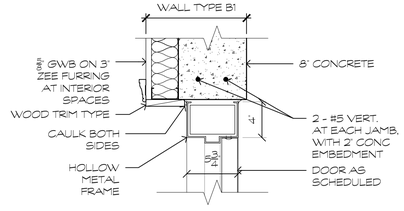

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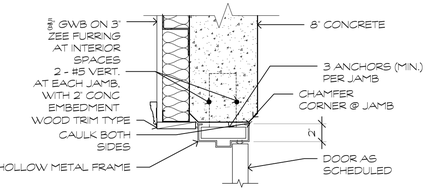

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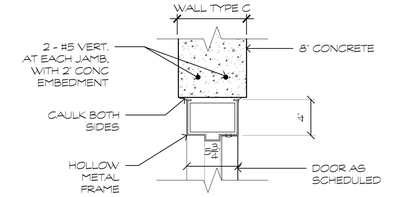

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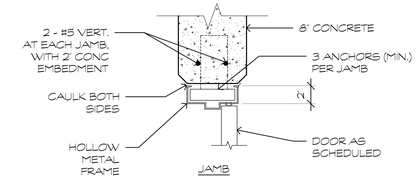

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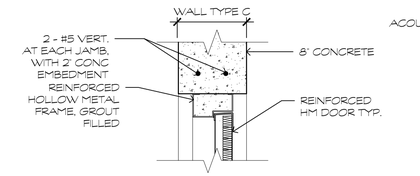

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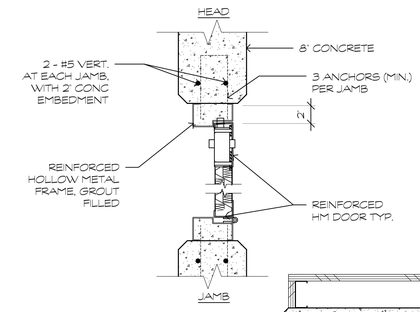

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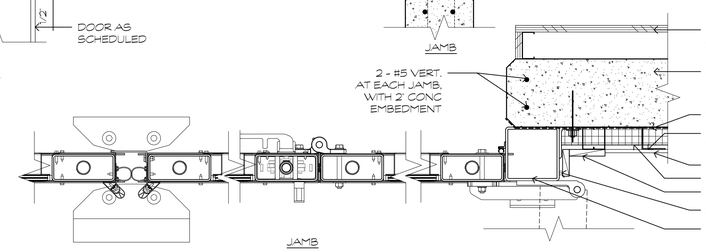

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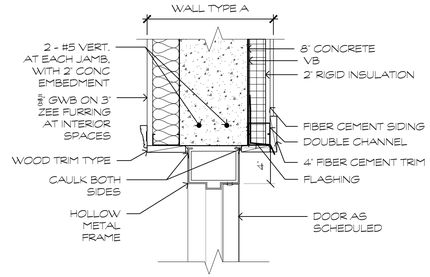

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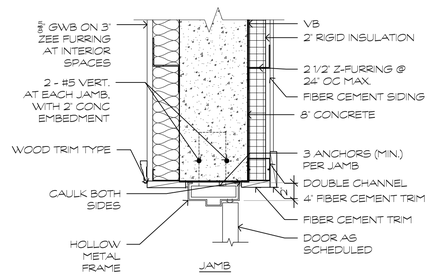

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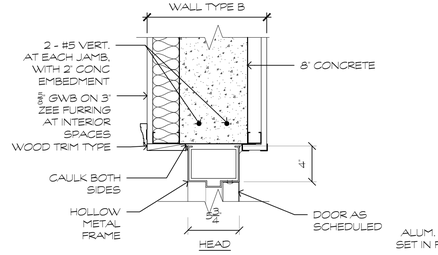

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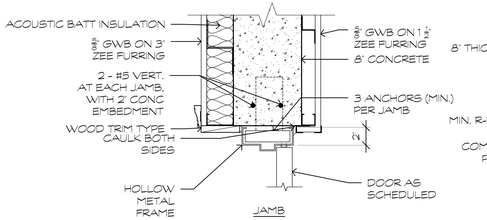

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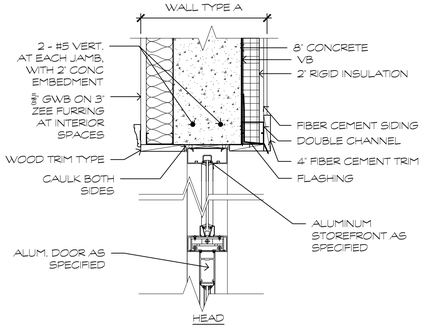

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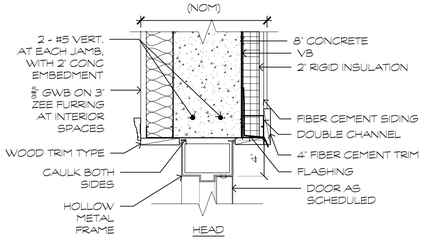

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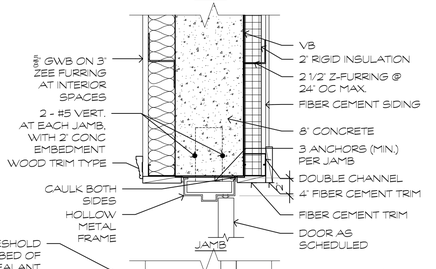

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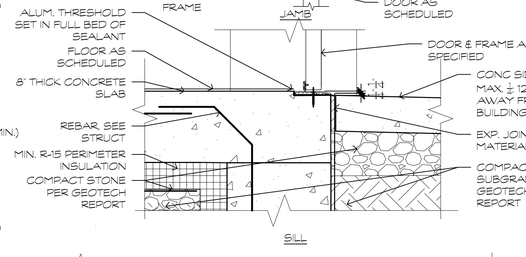

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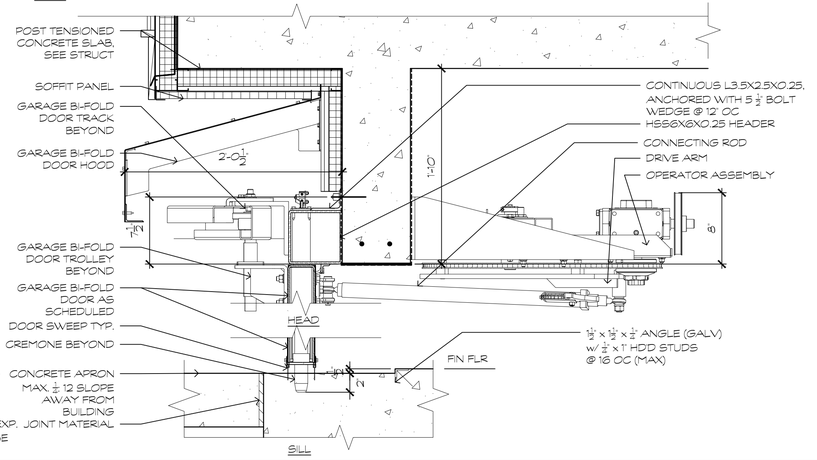

HEAD

SILL

1 DOOR DETAILS
1 1/2" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/16/2024
3.	ISSUED FOR BID	11/15/2024

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ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 21801
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

DOOR DETAILS

MORGAN HALL HEDERICK
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

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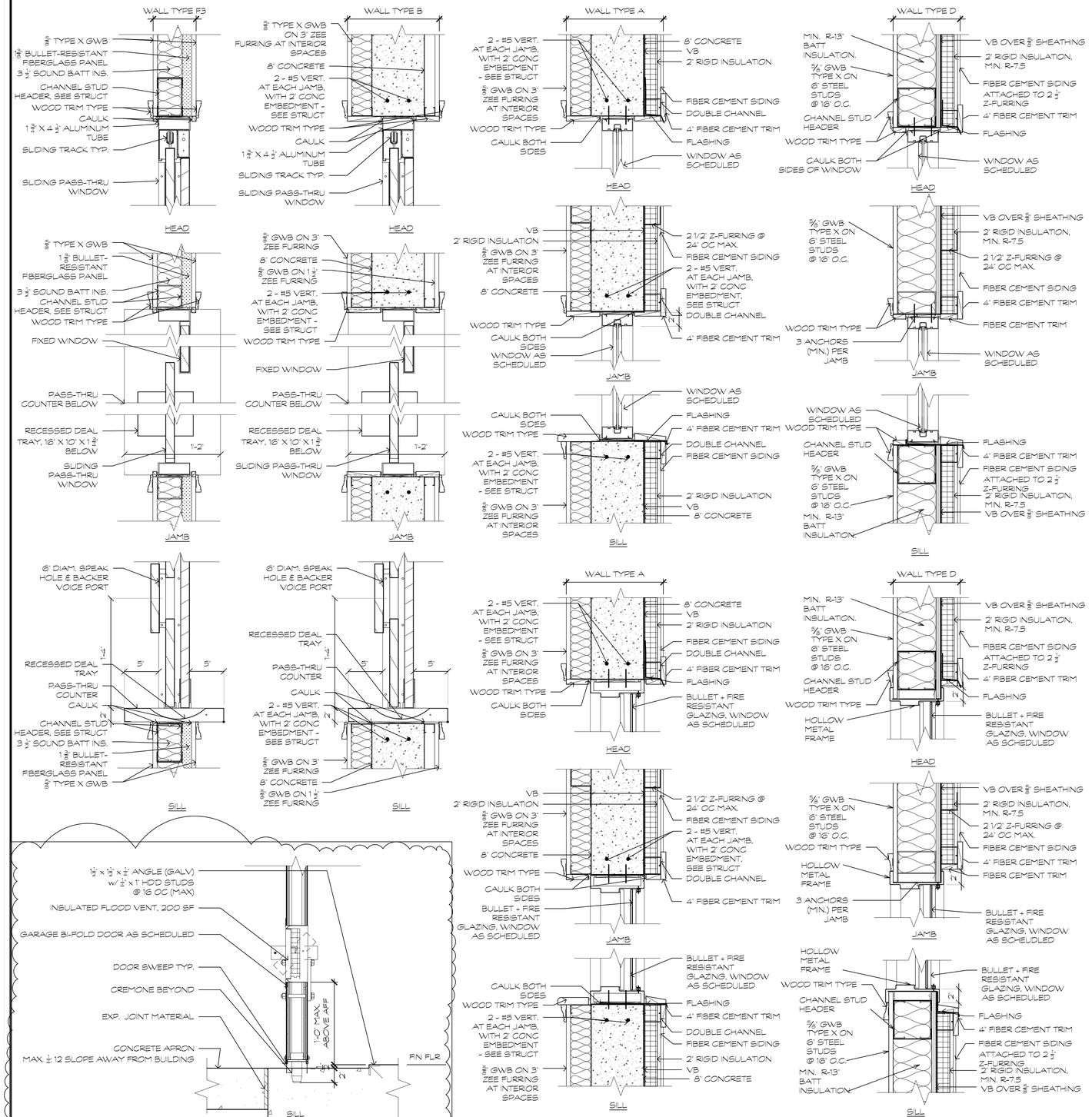
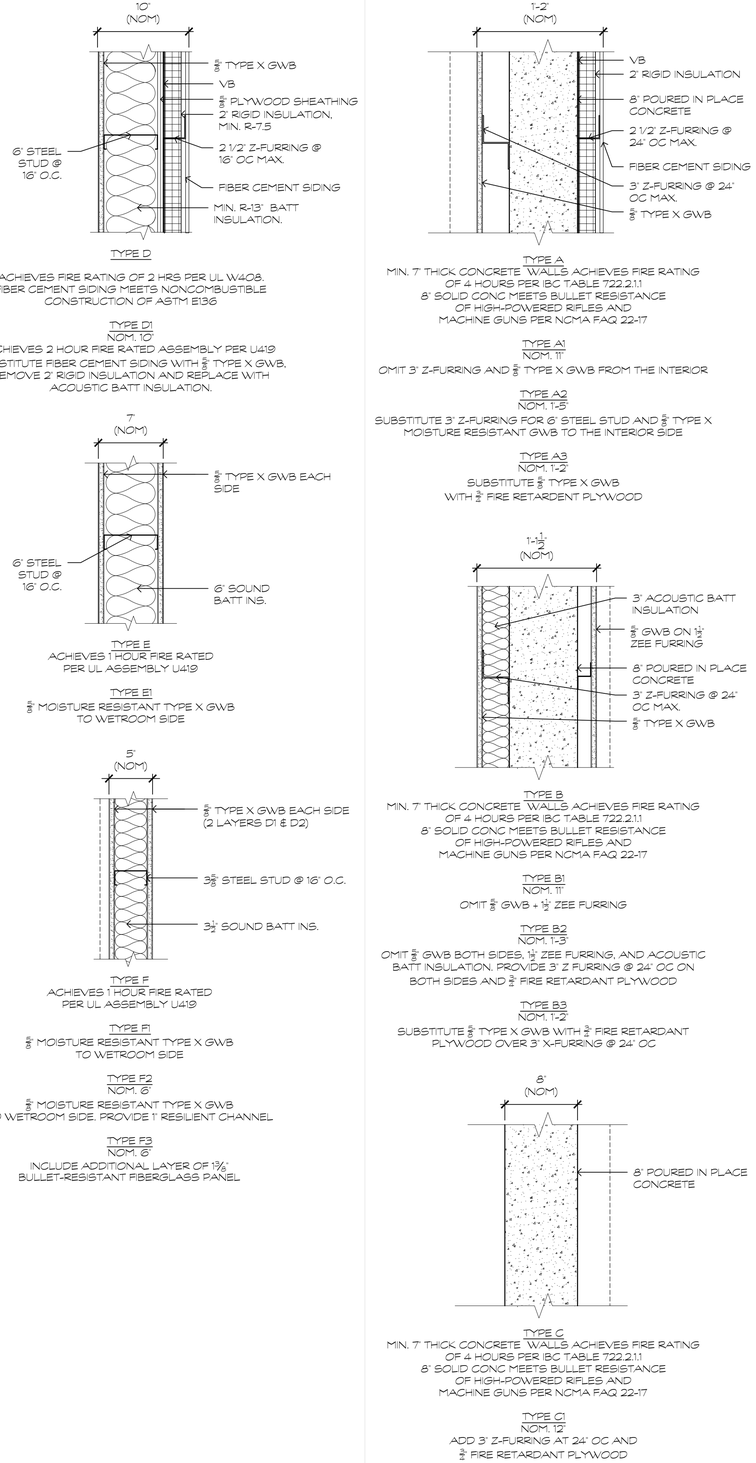


3 GARAGE DOOR SILL DETAIL
1 1/2" = 1'-0"

2 WINDOW DETAILS
1 1/2" = 1'-0"



1 WALL TYPES
1 1/2" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM # 2	12/27/2024

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GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 410-742-3115
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

WALL TYPES & WINDOW DETAILS

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

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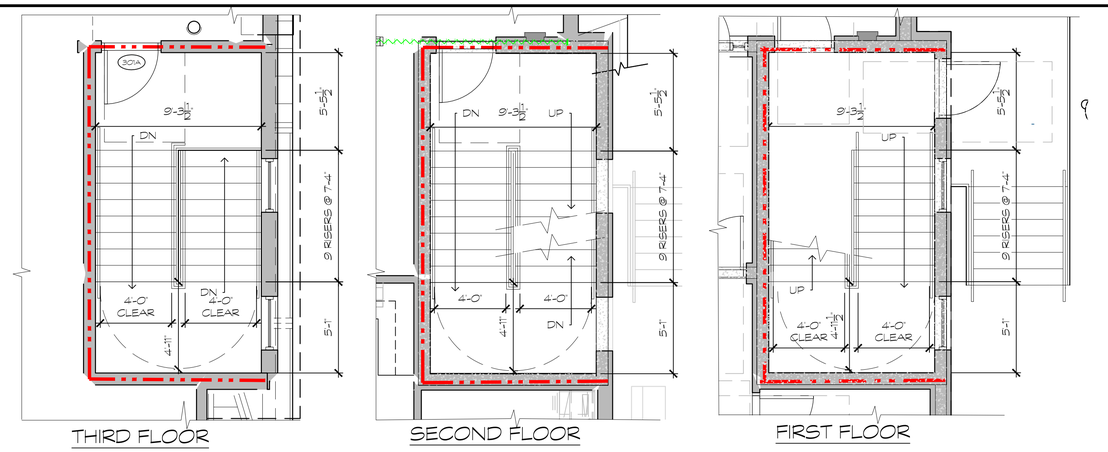
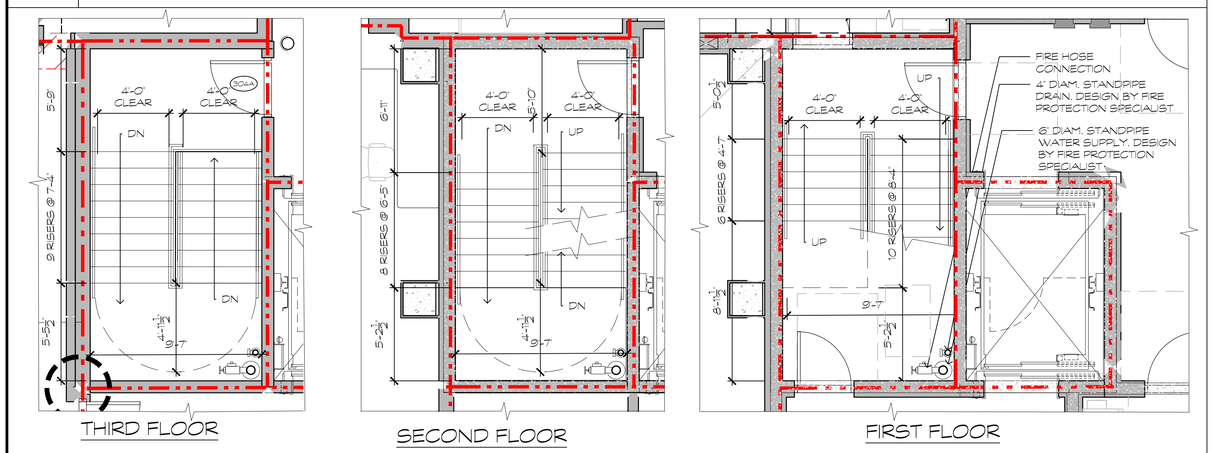


2 STAIR WELL 1 - FLOOR PLAN

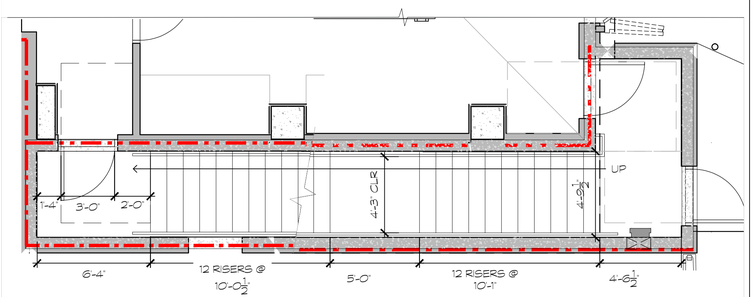
1/4" = 1'-0"



3 STAIR WELL 2 - FLOOR PLAN

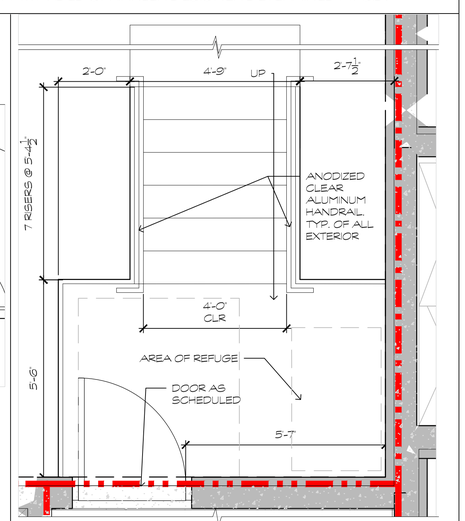
1/4" = 1'-0"

CLASS I STANDPIPES PERMITTED TO BE INSTALLED ON EITHER MAIN FLOOR OR INTERMEDIATE LANDING OF STAIRS. STANDPIPE DESIGN, SIZING AND LOCATION TO BE DESIGNED BY AWARDED SPRINKLER DESIGNER DETERMINED AT BID.



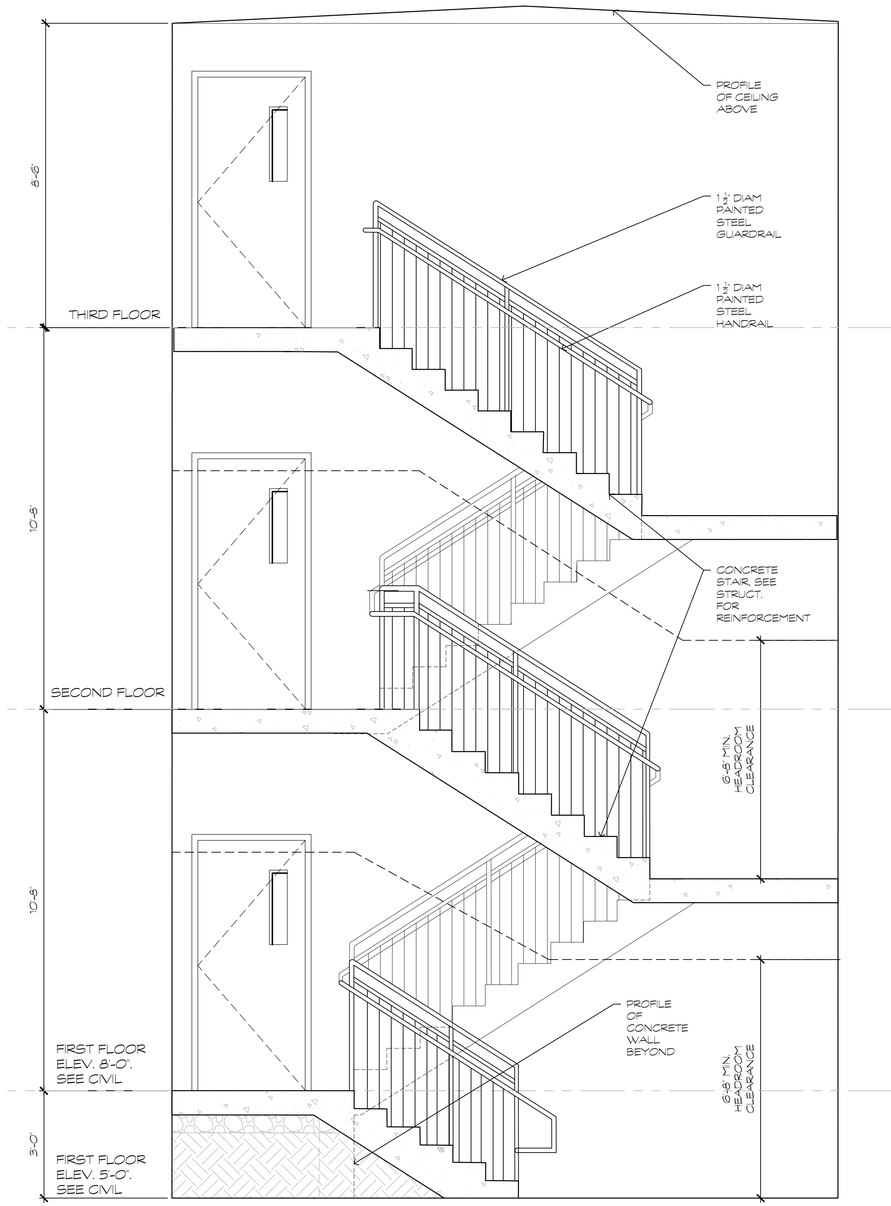
5 STAIR WELL 3 - FLOOR PLAN

1/4" = 1'-0"



4 LANDING FROM STAIR #2

1/2" = 1'-0"



1 STAIR WELL 2 - SECTION

1/2" = 1'-0"

STAIR WELL 1 SIMILAR IN CONFIGURATION SPACING OF RISERS AND LANDINGS BETWEEN 2ND AND 3RD FLOORS OF THIS SECTION

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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SALISBURY, MARYLAND 410-742-3115
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

STAIR PLANS AND DETAILS

MORGAN HALL HENDRICH
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: 1/4" = 1'-0"
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

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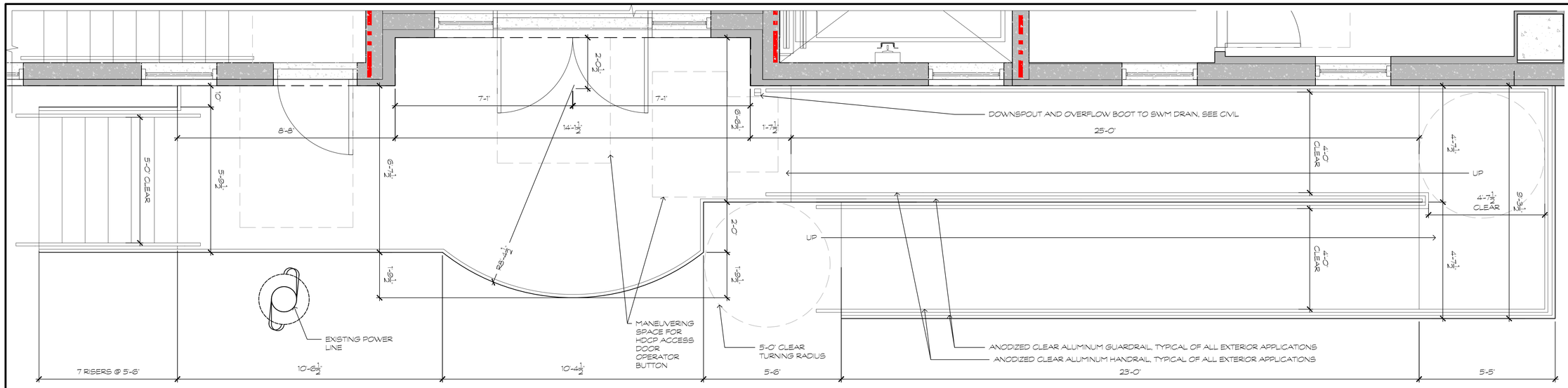
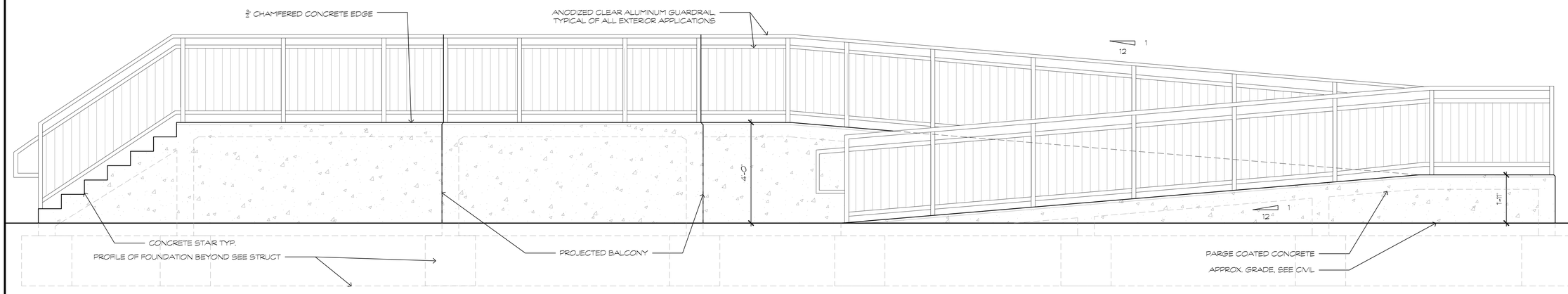
g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\SK9 STAIR PLANS AND DETAILS.dwg, 11/14/2024 4:45 PM, Deane L. Townsend



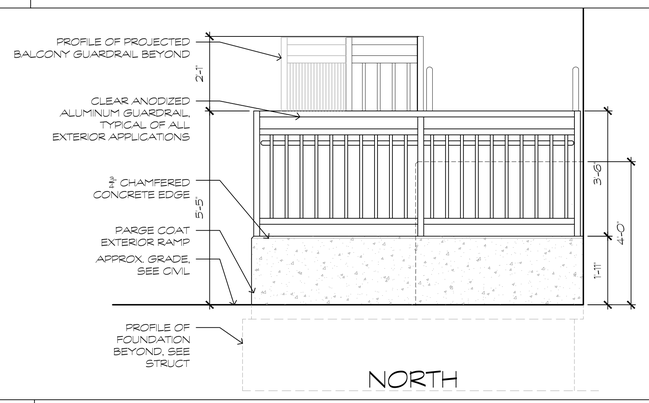
1 ENTRANCE STAIR AND RAMP PLAN

1/2" = 1'-0"

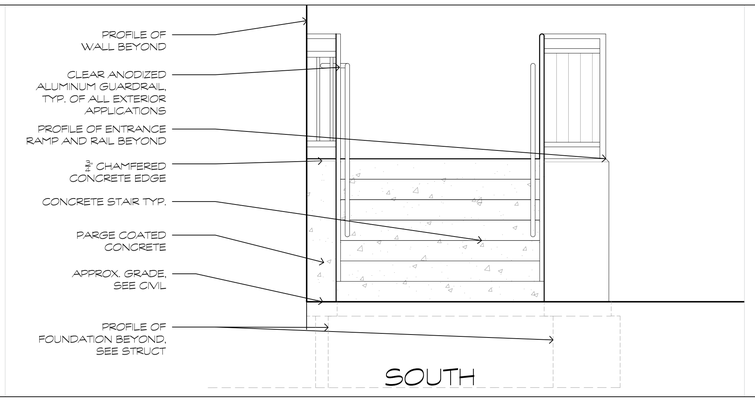


2 ENTRANCE STAIR AND RAMP ELEVATION

1/2" = 1'-0"



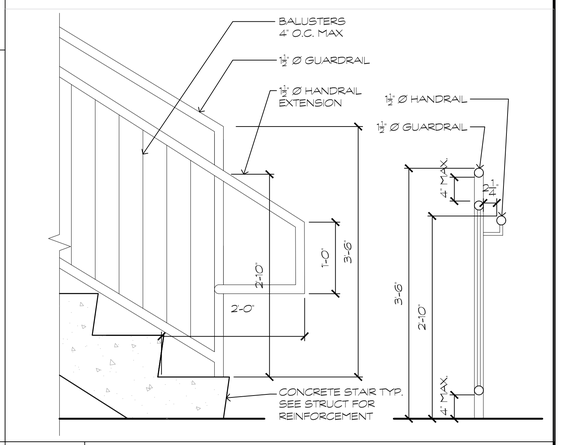
NORTH



SOUTH

4 ENTRANCE STAIR AND RAMP ELEVATION

1/2" = 1'-0"



3 TYPICAL STAIR DETAILS

1" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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SALISBURY, MARYLAND 410-742-3115
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ENTRANCE RAMP & STAIRS PLAN AND DETAILS

MORGAN HALL HELTZEL No. S5-0007846 STATE OF DELAWARE REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A6.2

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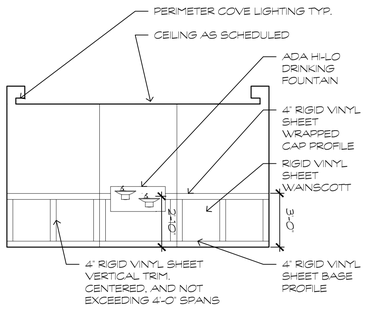
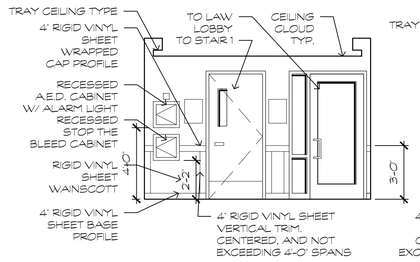
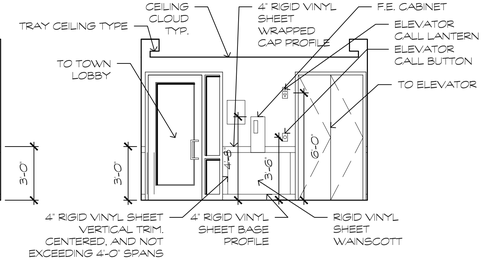
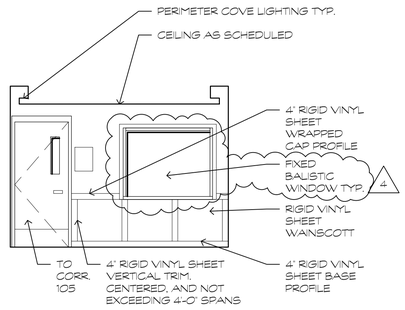
g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\SK9 STAIR PLANS AND DETAILS.dwg, 11/14/2024 4:50 PM, Deone L. Townsend



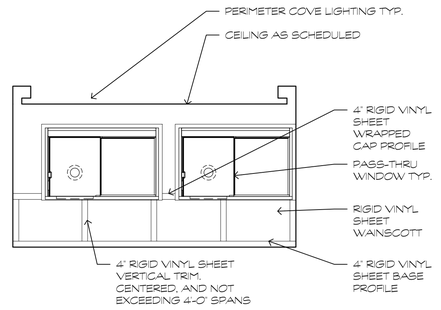
LOBBY 100



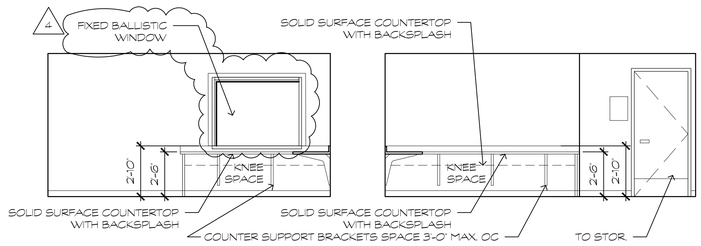




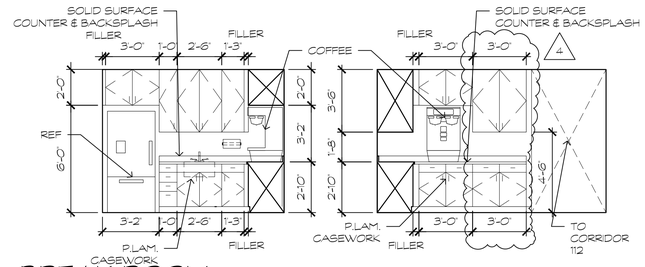
LAW LOBBY 103



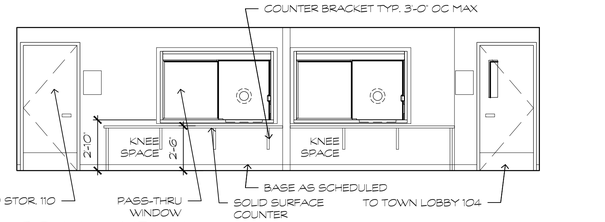
TOWN LOBBY 104



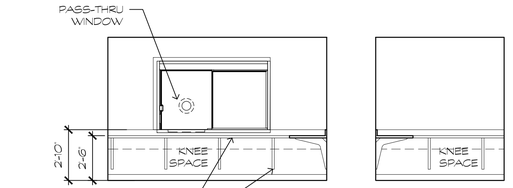
DISPATCH 105



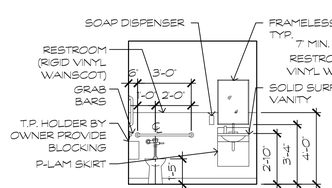
BREAK ROOM 106



TOWN ADMIN 110

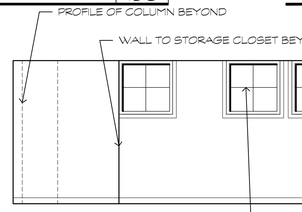


PARKING ENFORCEMENT 113



RESTROOM 114

(SIMILAR AS 115, AND OTHER SINGLE-OCC RESTROOM)



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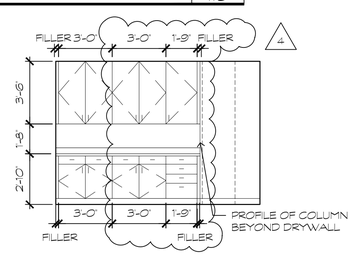
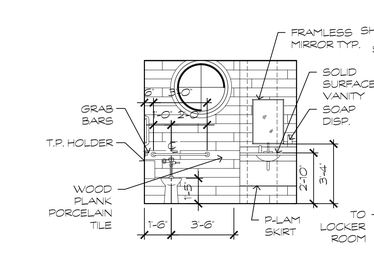
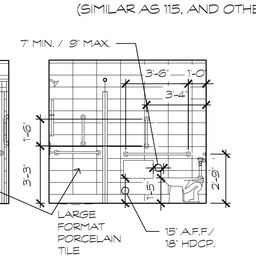
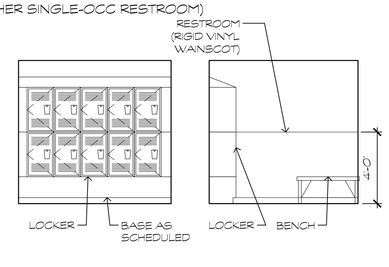


CORRIDOR 116

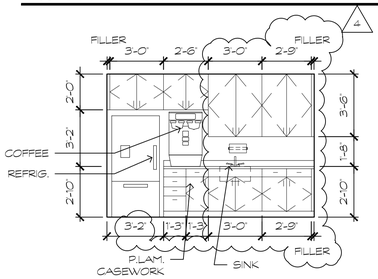




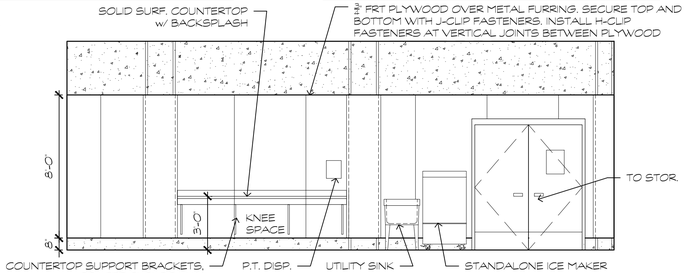


RESTROOM 114

(SIMILAR AS 115, AND OTHER SINGLE-OCC RESTROOM)

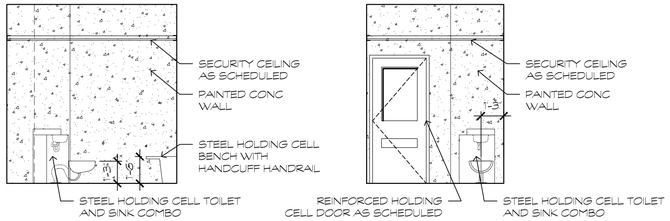


TOWN ADMIN 110



EMS GARAGE 142

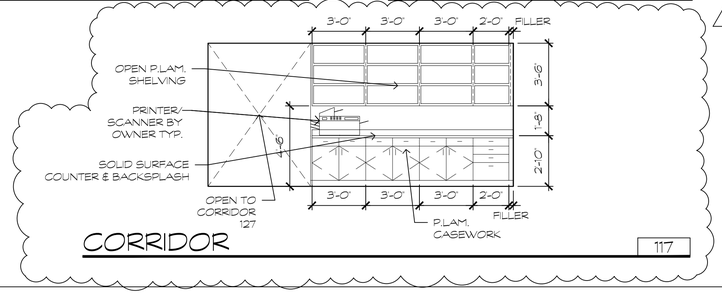
LOCKER 124



HOLDING CELL #3 138

(SIMILAR TO CELLS 1 & 2, ROOM #136 + 137)

CORRIDOR 127



CORRIDOR 117

1 INTERIOR ELEVATIONS - FIRST FLOOR

1/4" = 1'-0"

• DENOTES LOCKING CASEWORK

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM #2	12/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

INTERIOR ELEVATIONS - FIRST FLOOR

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A7.1

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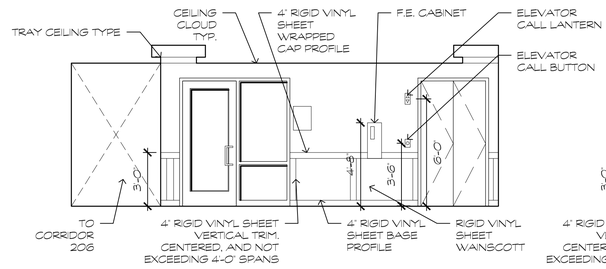
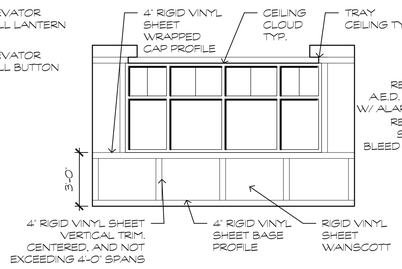
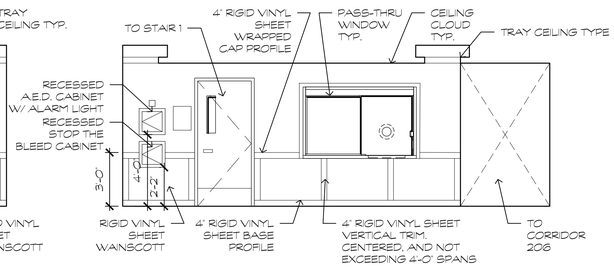
g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\A7.1 INTERIOR ELEVATIONS.dwg, 12/27/2024 2:36 PM, Deane L. Townsend

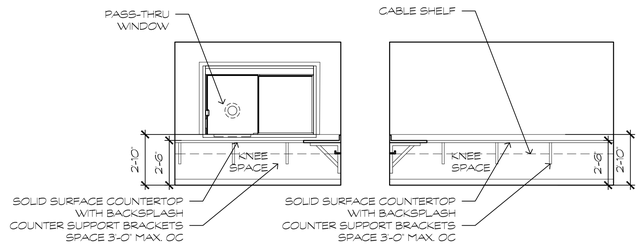






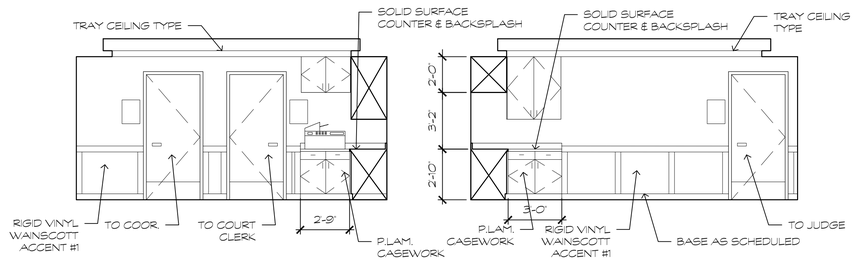
LOBBY

200



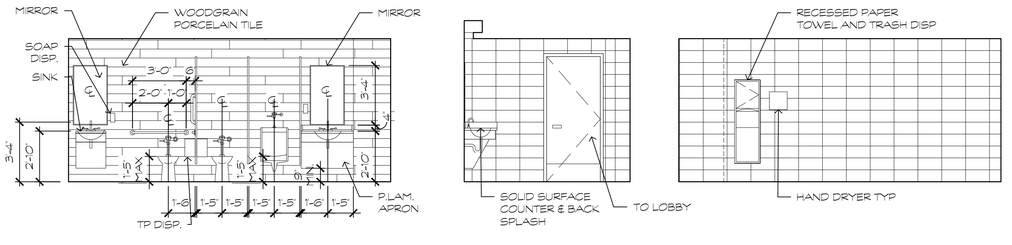
COURT CLERK

203



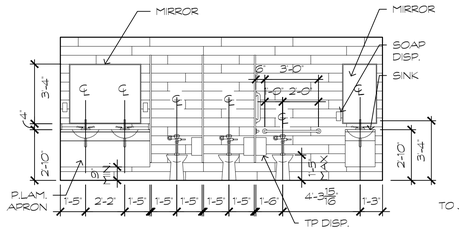
COURT ROOM

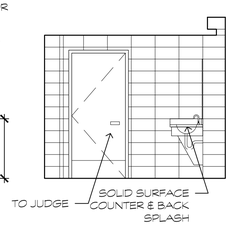
207

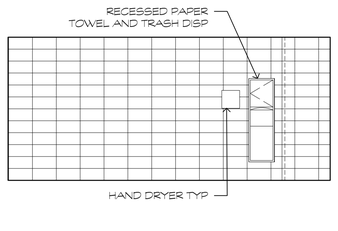


MEN'S RESTROOM

208

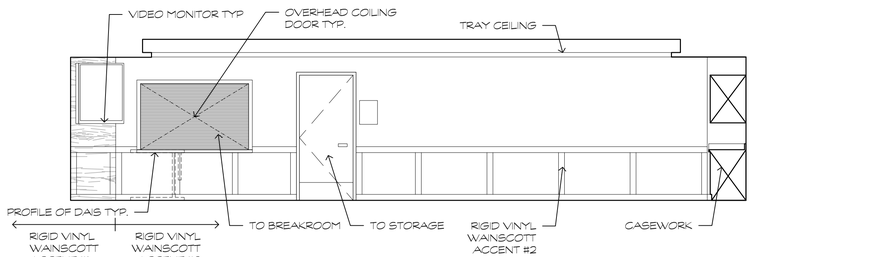






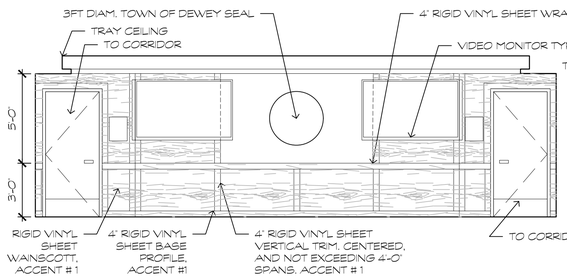
WOMEN'S RESTROOM

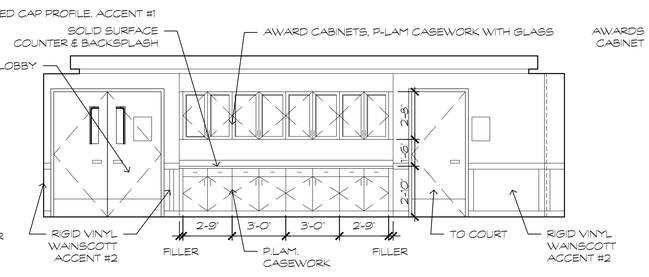
210

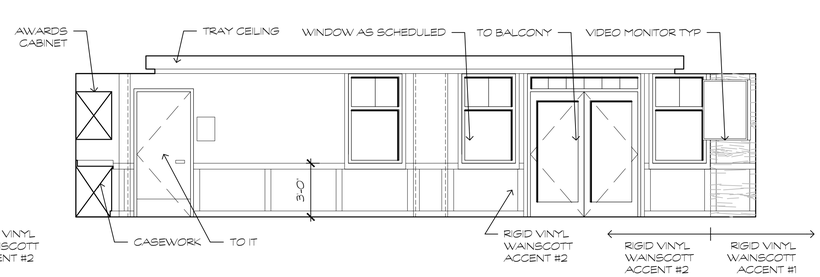


MULTIPURPOSE ROOM

211







MULTIPURPOSE ROOM

211

1 INTERIOR ELEVATIONS - SECOND FLOOR
1/4" = 1'-0"

• DENOTES LOCKING CASEWORK

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 21804
www.gmbnet.com

CONSTRUCTION FOR:
NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

INTERIOR ELEVATIONS - SECOND FLOOR

MORGAN HALL HEFFRON
No. S5-0007646
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A7.2

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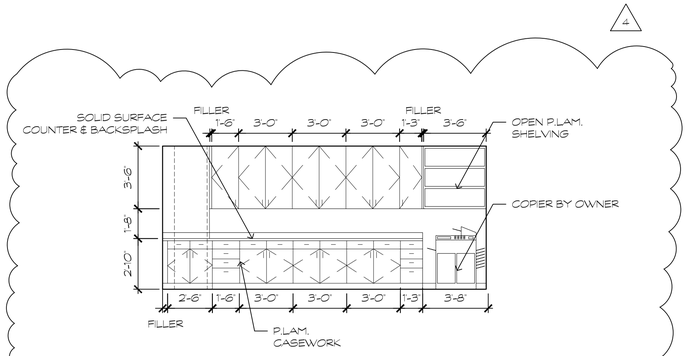
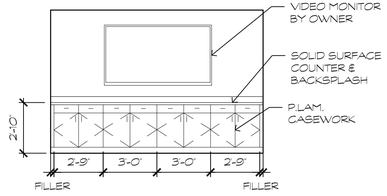
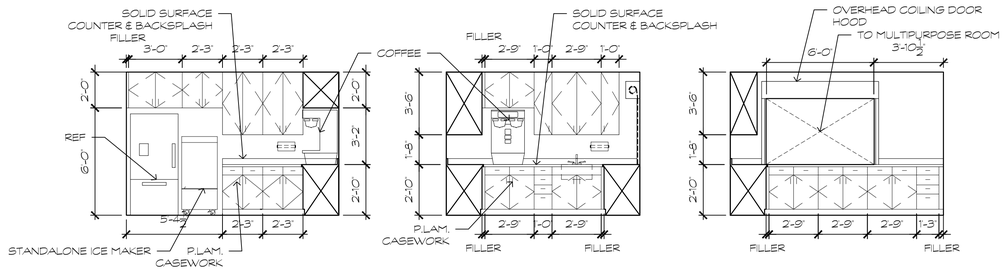


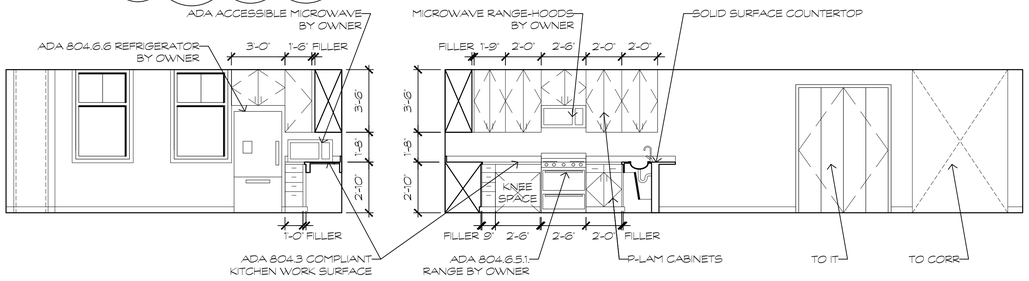
CORRIDOR 212

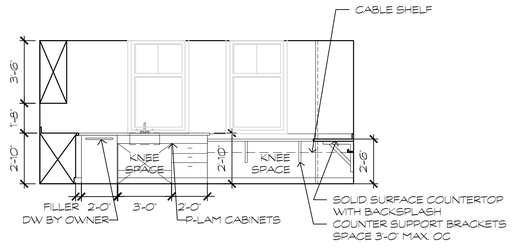


CONFERENCE 226

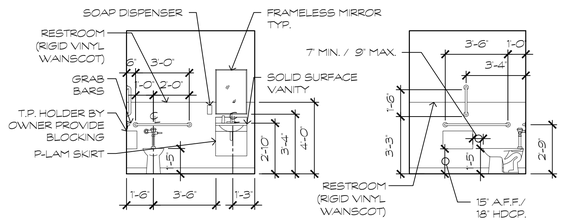


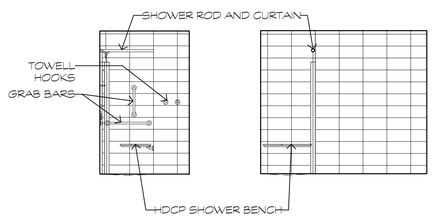
BREAK ROOM 227





EMS QUARTERS 231





RESTROOM + SHOWER 238

1 INTERIOR ELEVATIONS - SECOND FLOOR
1/4" = 1'-0"

• DENOTES LOCKING CASEWORK

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM #2	12/27/2024

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ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 410-742-3115
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

INTERIOR ELEVATIONS - SECOND FLOOR

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A7.3

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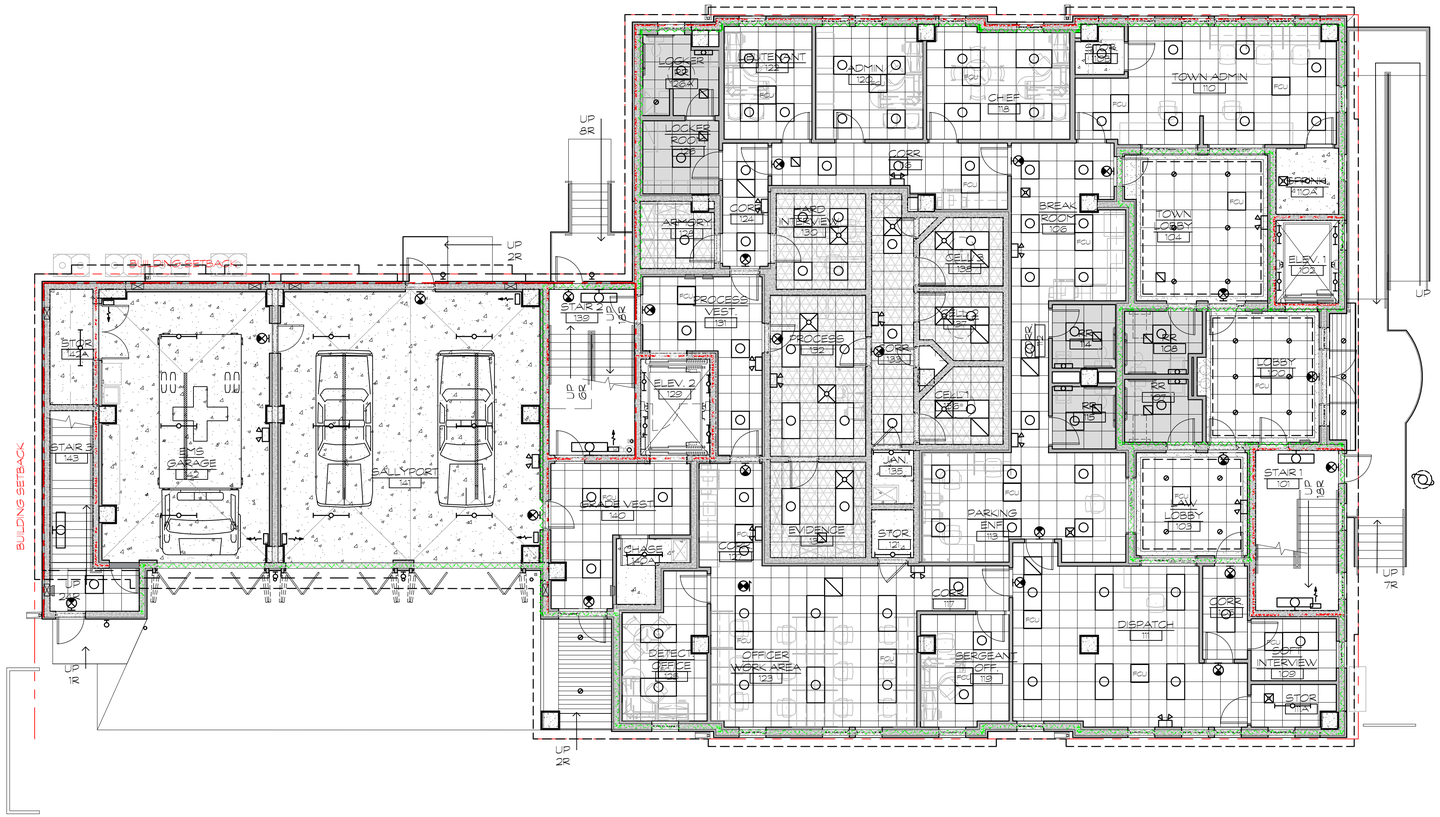
NOTES

1. SEE ELECTRICAL PLANS FOR EXIT AND EMERGENCY LIGHTING.
2. SEE MECHANICAL PLANS FOR DUCTWORK, REGISTER AND GRILLE LOCATIONS.
3. REFER TO FINISH SCHEDULE FOR CEILING HEIGHTS UNLESS OTHERWISE NOTED.

LEGEND

- 2 x 2 ACOUSTICAL LAY-IN CEILING
- 2 X 2 MOISTURE RESISTANT ACOUSTICAL LAY-IN CEILING
- SECURITY CEILING
- GYPSUM WALL BOARD
- SOFFIT
- EXPOSED TO PT SLAB ABOVE



1 REFLECTED CEILING PLAN - FIRST FLOOR

1/8" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

REFLECTED CEILING PLAN - FIRST

MORGAN HALL HEATH No. S5-0007646 STATE OF DELAWARE REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A8.1

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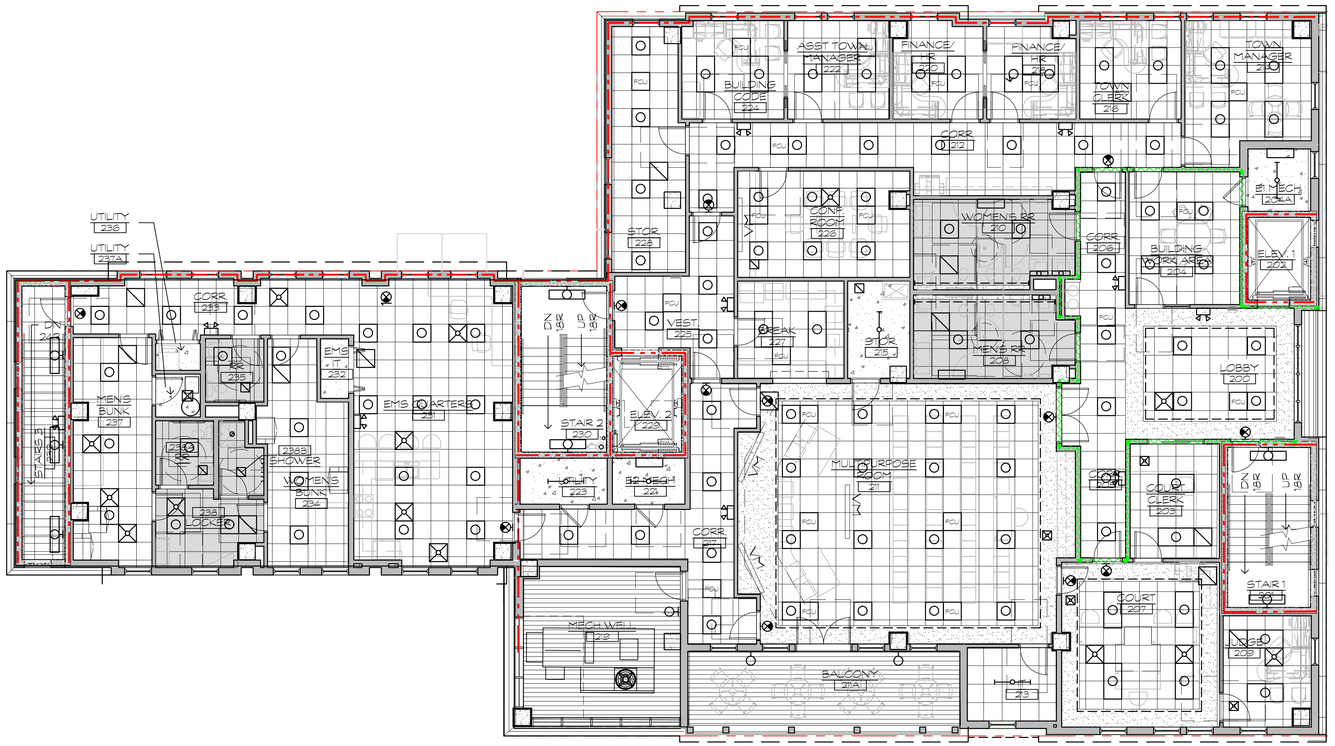
g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\A8.1 REFLECTED CEILING PLAN.dwg, 11/14/2024 4:39 PM, Deane L. Townsend

NOTES

1. SEE ELECTRICAL PLANS FOR EXIT AND EMERGENCY LIGHTING.
2. SEE MECHANICAL PLANS FOR DUCTWORK, REGISTER AND GRILLE LOCATIONS.
3. REFER TO FINISH SCHEDULE FOR CEILING HEIGHTS UNLESS OTHERWISE NOTED.

LEGEND

- 2 x 2 ACOUSTICAL LAY-IN CEILING
- 2 X 2 MOISTURE RESISTANT ACOUSTICAL LAY-IN CEILING
- SECURITY CEILING
- GYPSUM WALL BOARD
- SOFFIT
- EXPOSED TO PT SLAB ABOVE



1 REFLECTED CEILING PLAN - SECOND FLOOR

1/8" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 21804
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

REFLECTED CEILING PLAN - SECOND

MORGAN HALL HEISERICH
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A8.2

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g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\A8.1 REFLECTED CEILING PLAN.dwg, 11/14/2024 4:40 PM, Deane L. Townsend

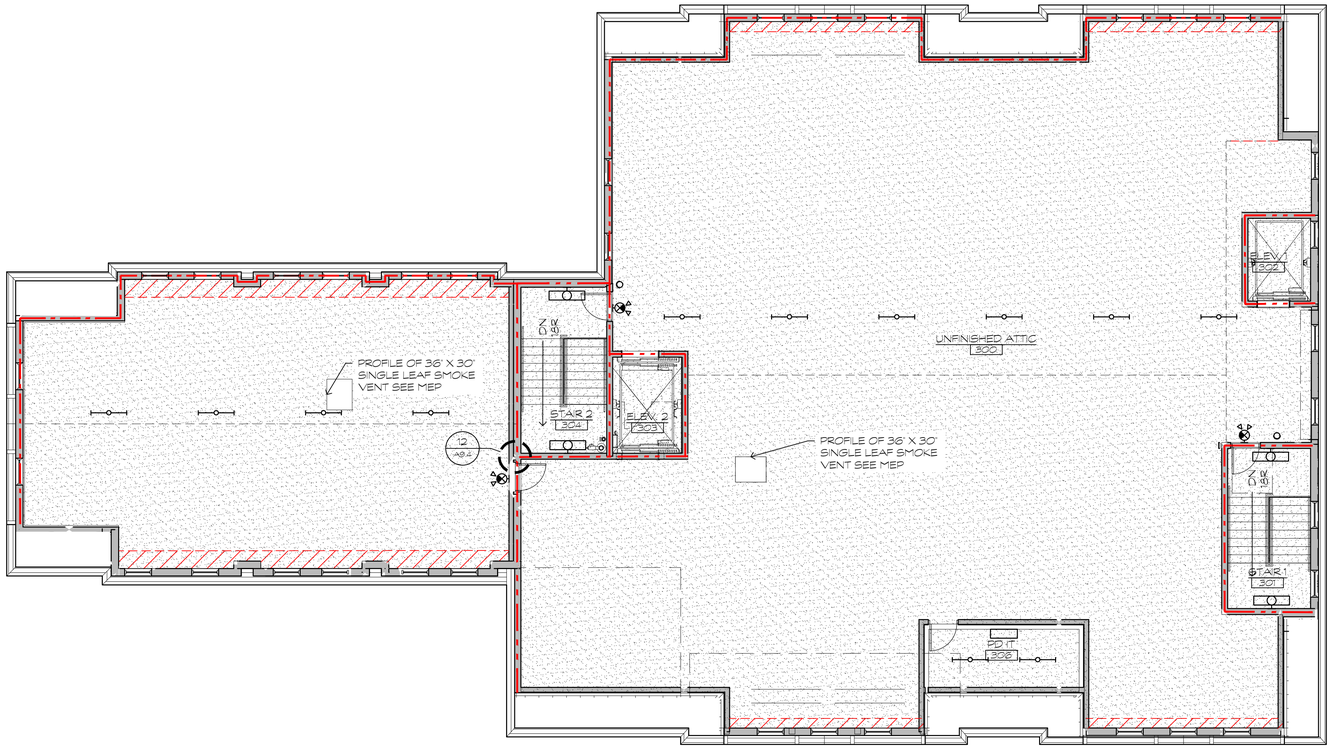
g:\Projects\2022\220242 dewey beach new town hall design\Drawings\working sets\A8.1 REFLECTED CEILING PLAN.dwg, 11/14/2024 4:37 PM, Deane L. Townsend

NOTES

1. SEE ELECTRICAL PLANS FOR EXIT AND EMERGENCY LIGHTING.
2. SEE MECHANICAL PLANS FOR DUCTWORK, REGISTER AND GRILLE LOCATIONS.
3. REFER TO FINISH SCHEDULE FOR CEILING HEIGHTS UNLESS OTHERWISE NOTED.

LEGEND

- 2 x 2 ACOUSTICAL LAY-IN CEILING
- 2 X 2 MOISTURE RESISTANT ACOUSTICAL LAY-IN CEILING
- SECURITY CEILING
- GYPSUM WALL BOARD
- SOFFIT
- EXPOSED TO PT SLAB ABOVE



1 REFLECTED CEILING PLAN - THIRD FLOOR

1/8" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

REFLECTED CEILING PLAN - THIRD

MORGAN HALL HELFRICH
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A8.3

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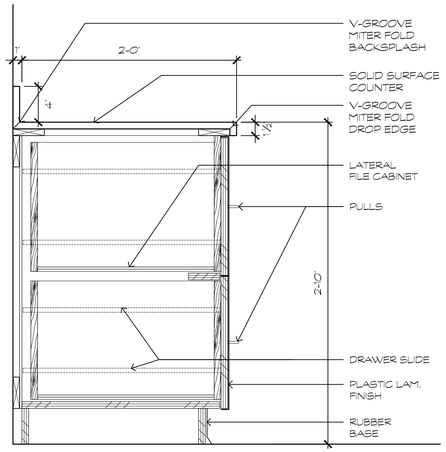
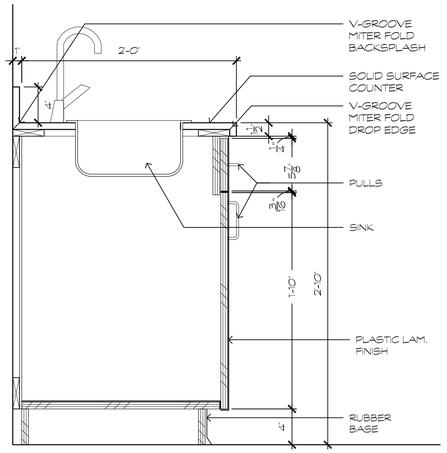
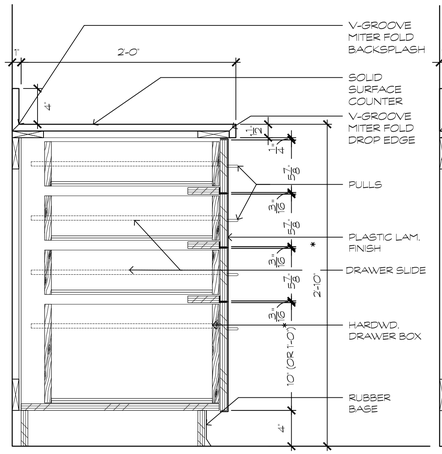
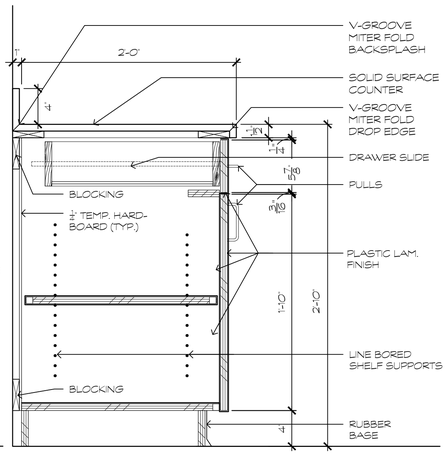
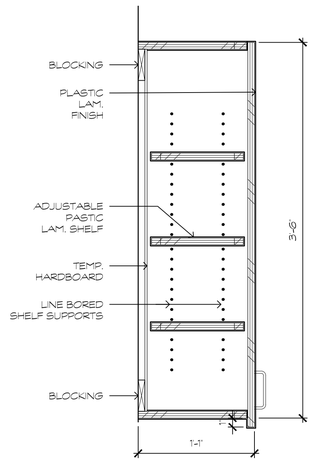




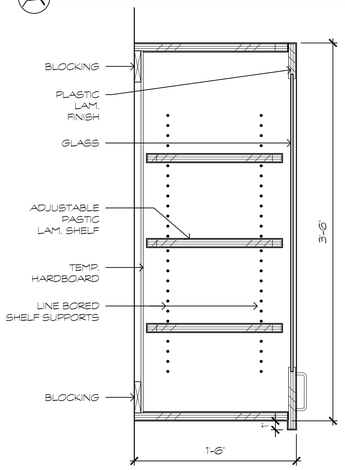






COUNTERTOP 3/4" PLYWOOD
CABINET 3/4" MDF W/ MELAMINE INTERIOR

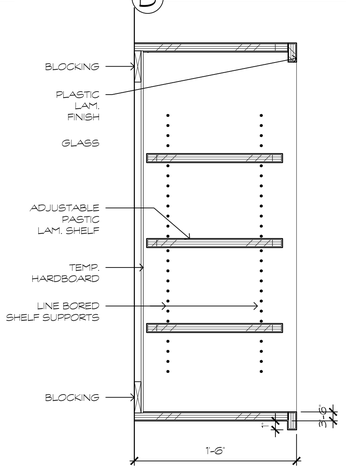
A BASE DRAWER CABINET



CABINETS 3/4" MDF WITH MELAMINE INTERIOR

COUNTERTOP 3/4" PLYWOOD
CABINET 3/4" MDF W/ MELAMINE INTERIOR

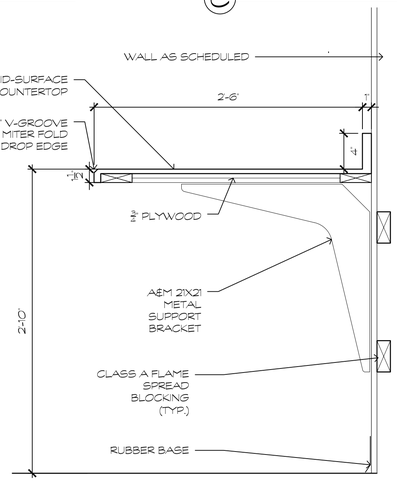
B BASE SINK CABINET



CABINETS 3/4" MDF WITH MELAMINE INTERIOR

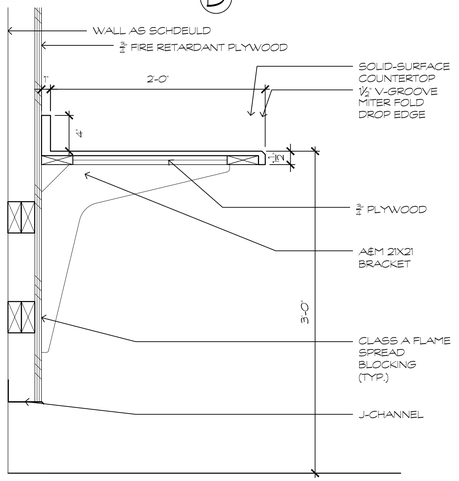
COUNTERTOP 3/4" PLYWOOD
CABINET 3/4" MDF W/ MELAMINE INTERIOR

C BASE CABINET



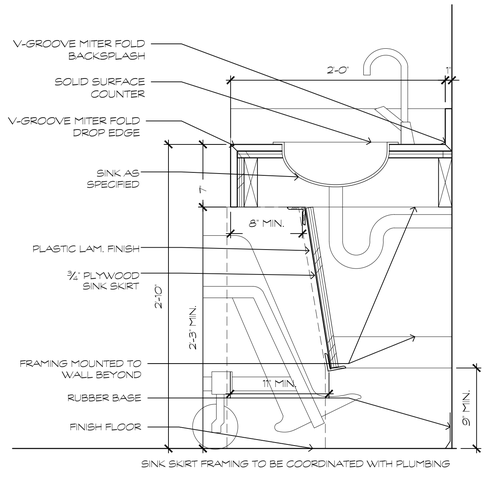
COUNTERTOP 3/4" PLYWOOD
CABINET 3/4" MDF W/ MELAMINE INTERIOR

D BASE CABINET



CABINETS 3/4" MDF WITH MELAMINE INTERIOR

E WALL CABINET



SINK SKIRT FRAMING TO BE COORDINATED WITH PLUMBING

F AWARDS WALL CABINET

G OPEN WALL CABINET

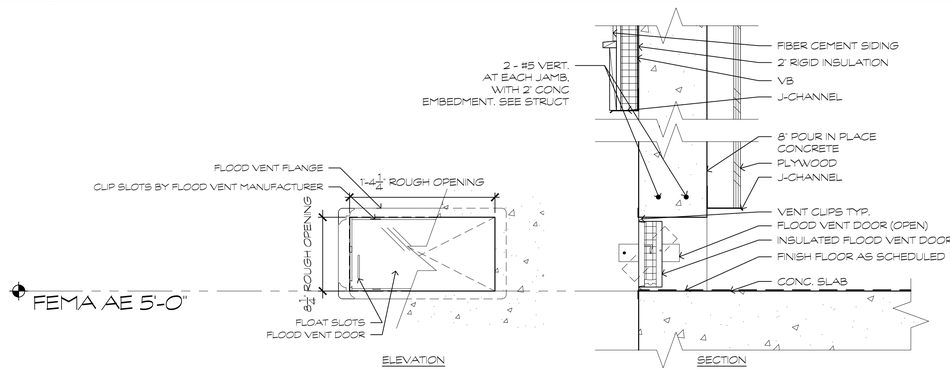
H BUILT-IN COUNTERTOP

I EMS SALLYPORT COUNTERTOP

J RESTROOM SINK COUNTERTOP

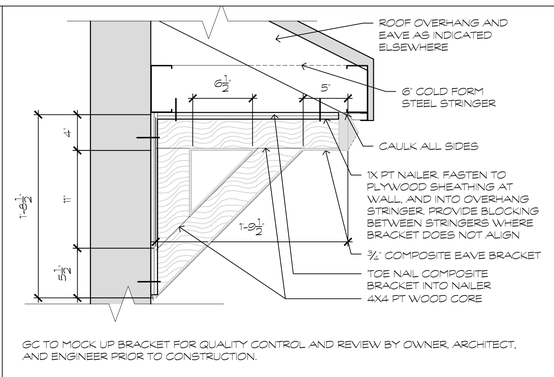
1 CASEWORK & CABINETRY DETAILS

1 1/2" = 1'-0"



4 TYP. FLOOD VENT DETAIL

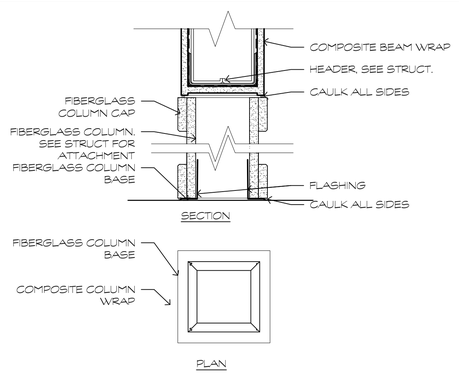
1 1/2" = 1'-0"



GC TO MOCK UP BRACKET FOR QUALITY CONTROL AND REVIEW BY OWNER, ARCHITECT, AND ENGINEER PRIOR TO CONSTRUCTION.

3 TYP. EAVE BRACKET DETAIL

1 1/2" = 1'-0"



2 TYP. COLUMN DETAIL

1 1/2" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/5/2024

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SALISBURY, MARYLAND 410.742.3115
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

DETAILS

MORGAN HALL HEFFRICH
No. S5-0007846
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A9.1

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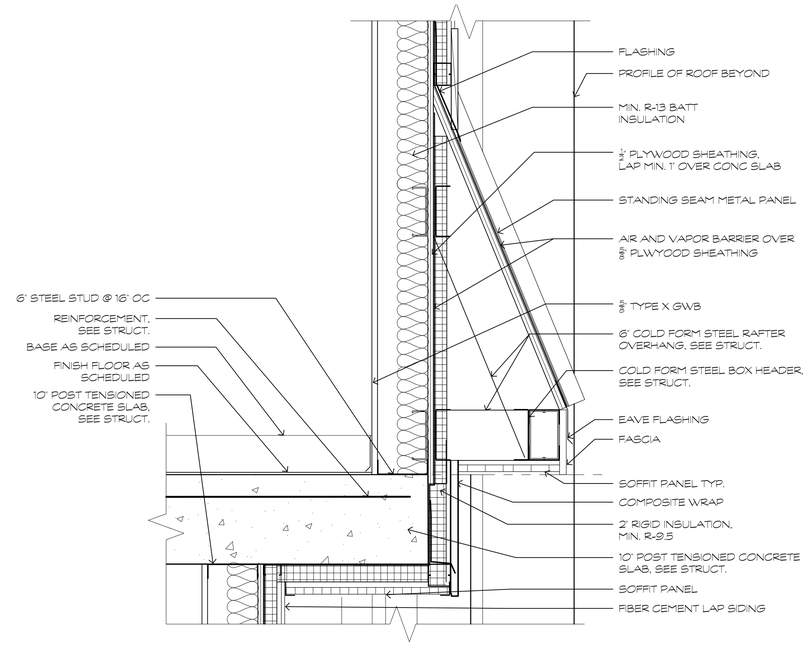
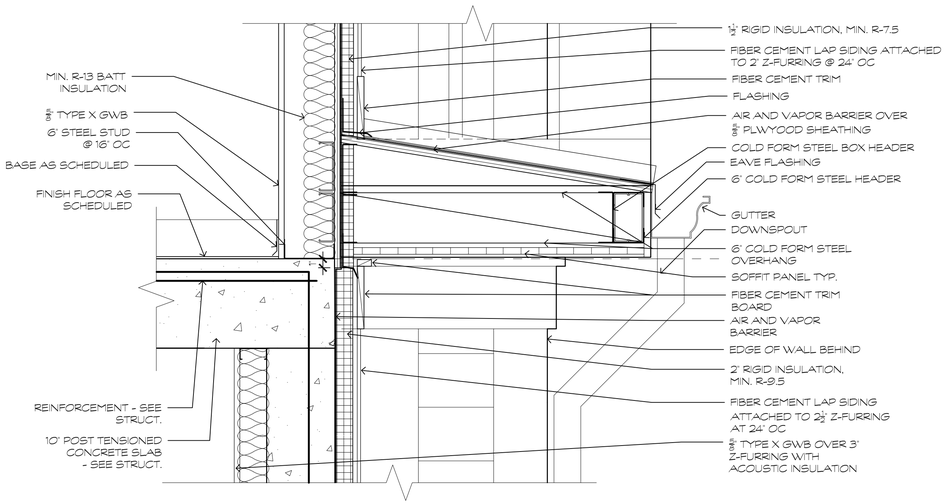
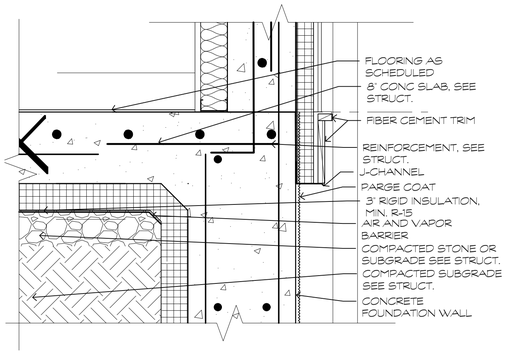


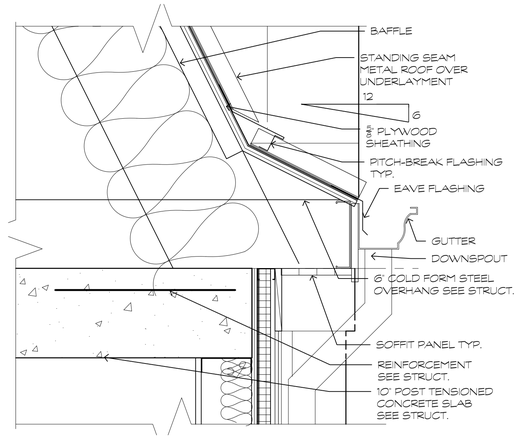
7 TYP. OVERHANG DETAIL
1 1/2" = 1'-0"



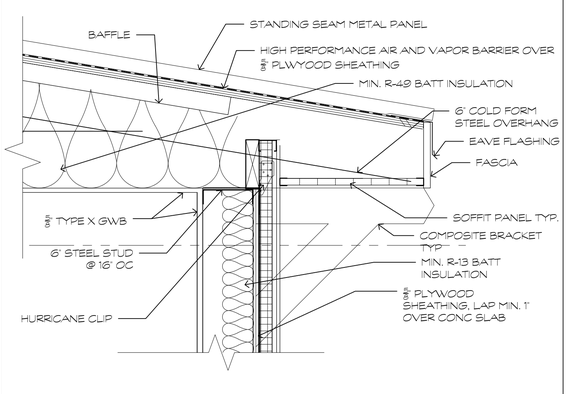
8 TYP. OVERHANG DETAIL
1 1/2" = 1'-0"



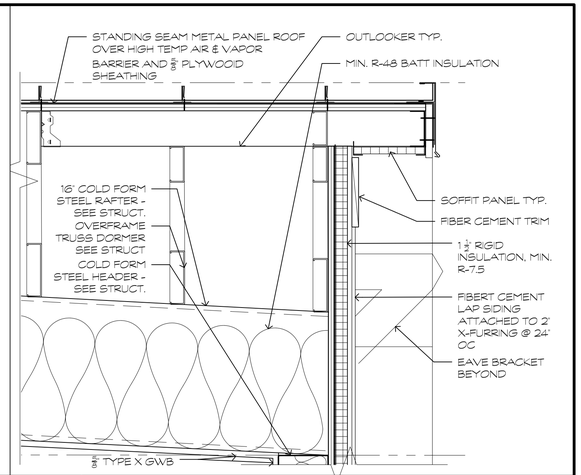
4 TYP. SLAB TO FOUNDATION DET.
1 1/2" = 1'-0"



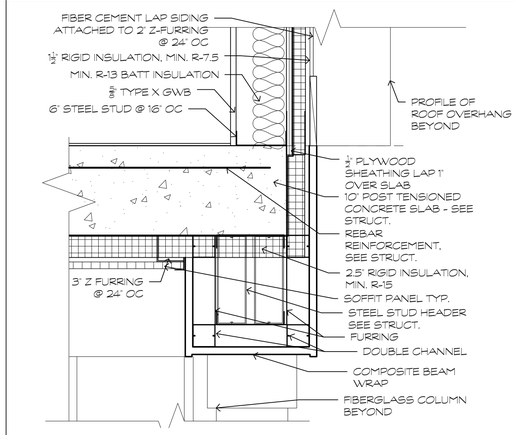
5 TYP. EAVE DETAIL
1 1/2" = 1'-0"



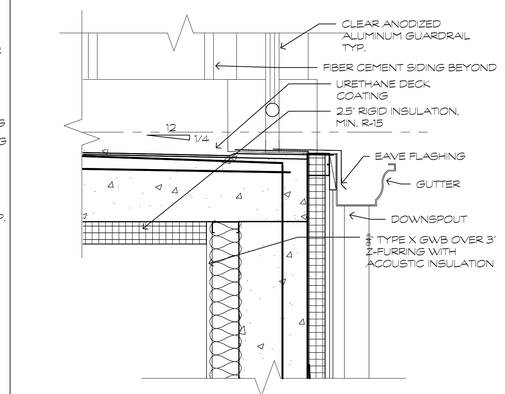
6 TYP. EAVE DETAIL
1 1/2" = 1'-0"



1 TYP. EAVE DETAIL
1 1/2" = 1'-0"



2 TYP. BALCONY OVERHANG DET.
1 1/2" = 1'-0"



3 TYP. BALCONY EDGE DETAIL
1 1/2" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024

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GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 21804
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

DETAILS

MORGAN HALL HEFFRON
No. S5-0007646
STATE OF DELAWARE
REGISTERED ARCHITECT

SCALE	: ######
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

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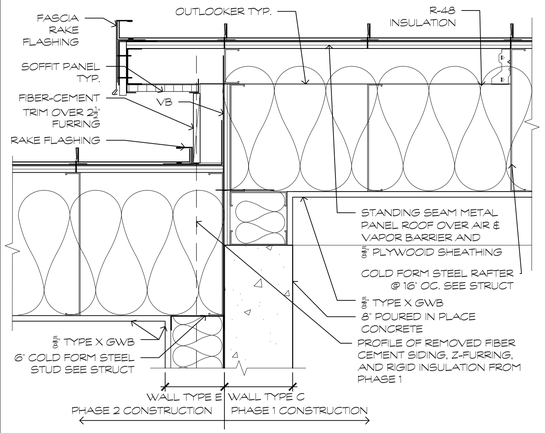
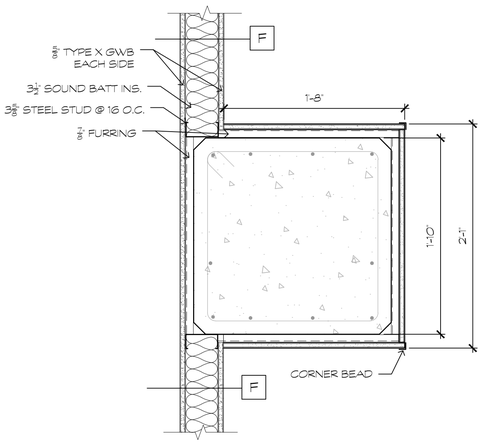
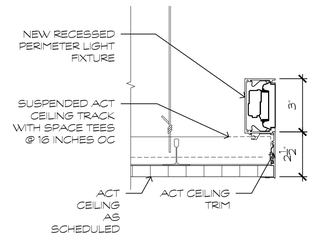


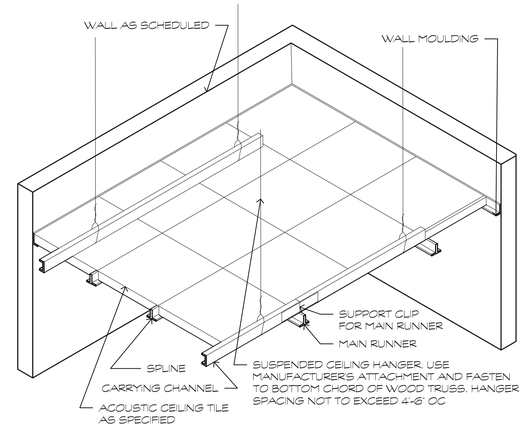
10 TYP. PHASED ROOF OVERHANG
1 1/2" = 1'-0"



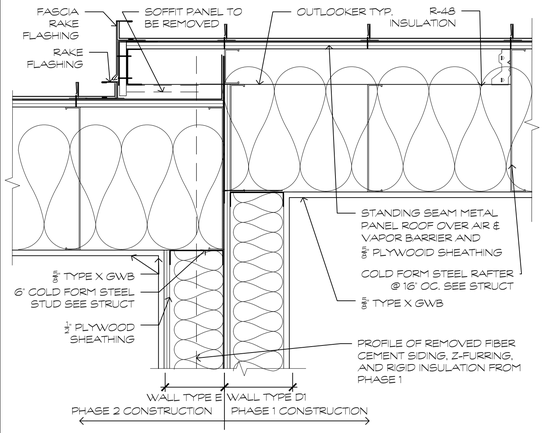
7 TYP. COLUMN DETAIL
1 1/2" = 1'-0"



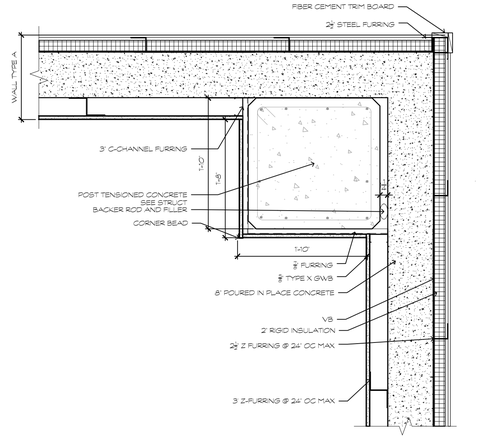
4 TYP. CEILING PERIMETER COVE LIGHTING
3" = 1'-0"



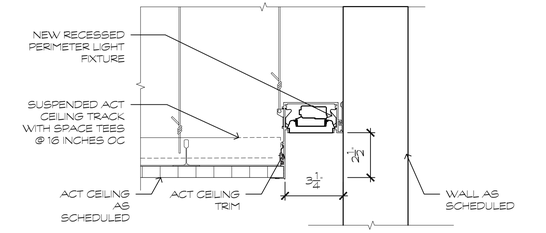
1 TYP. SUSPENDED CEILING DET.
N.S.T.



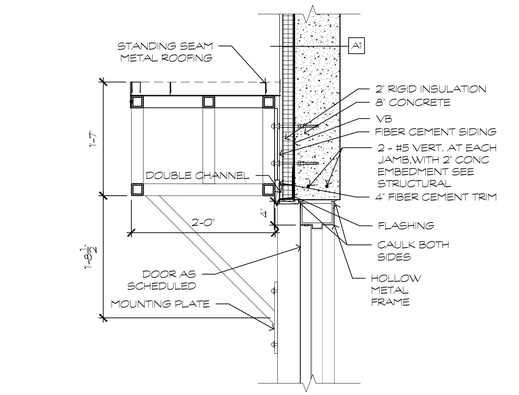
11 TYP. PHASED ROOF OVERHANG
1 1/2" = 1'-0"



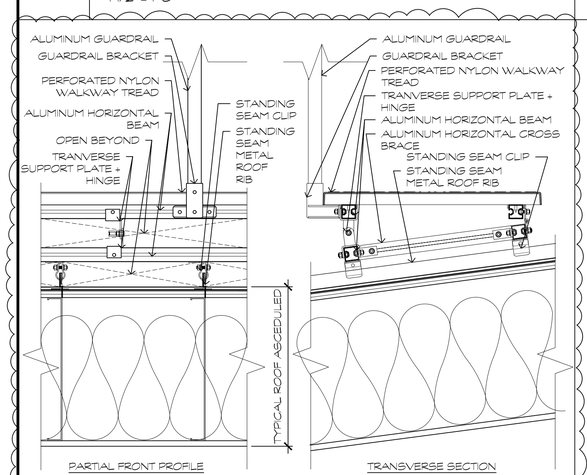
8 TYP. COLUMN DETAIL
1 1/2" = 1'-0"



5 TYP. CEILING PERIMETER COVE LIGHTING
3" = 1'-0"

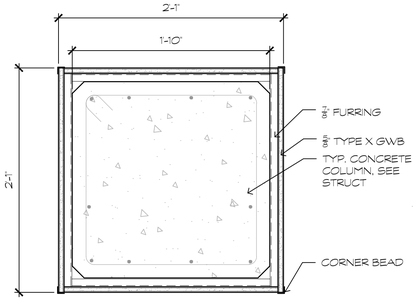


2 TYP. CANOPY DETAIL
1" = 1'-0"

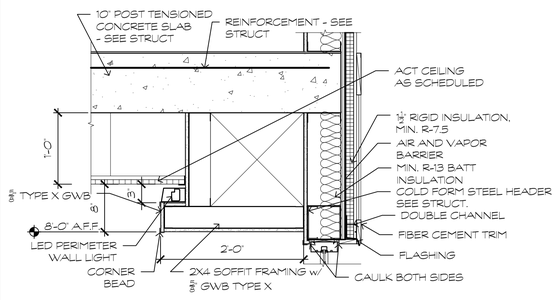


12 TYP. ROOFTOP WALKWAY AND GUARDRAIL DETAIL
1 1/2" = 1'-0"

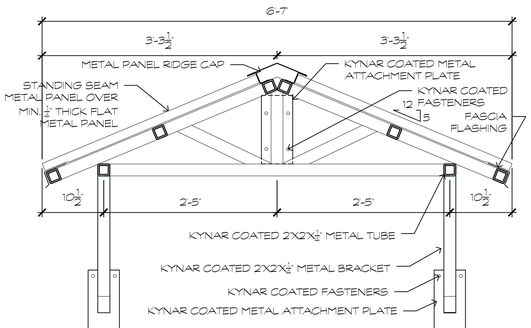
4



9 TYP. COLUMN DETAIL
1 1/2" = 1'-0"



6 TYP. CEILING PERIMETER COVE LIGHTING
1" = 1'-0"



3 TYP. CANOPY SECTION
1" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM # 2	12/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

DETAILS

SCALE	: #######
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

A9.3

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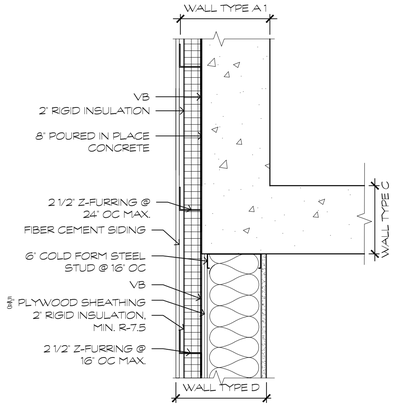
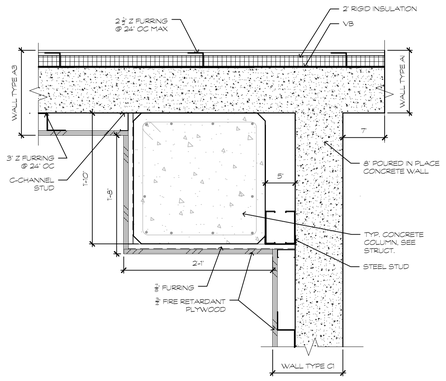
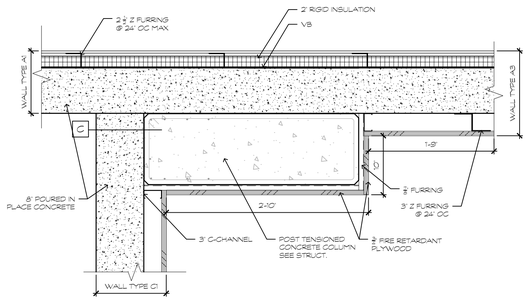
g:\Projects\2022\220242 dewey beach new town holl design\Drawings\working sets\A9.1 DETAILS.dwg, 12/27/2024 2:33 PM, Deane L. Townsend



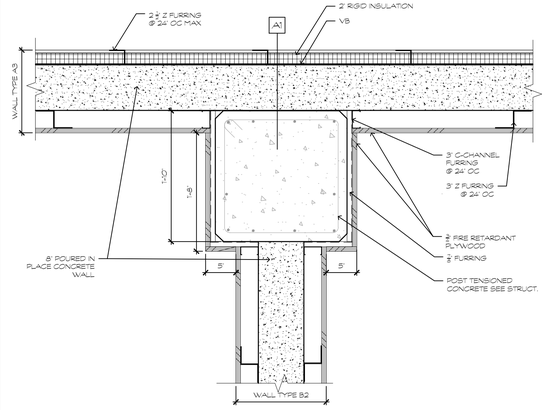
10 TYP. PHASE 1 EXT. WALL DETAIL
1 1/2" = 1'-0"



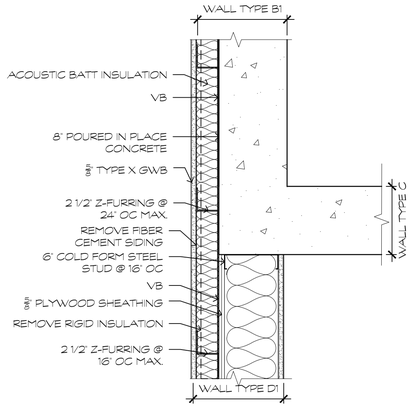
7 TYP. GARAGE COLUMN DETAIL
1" = 1'-0"



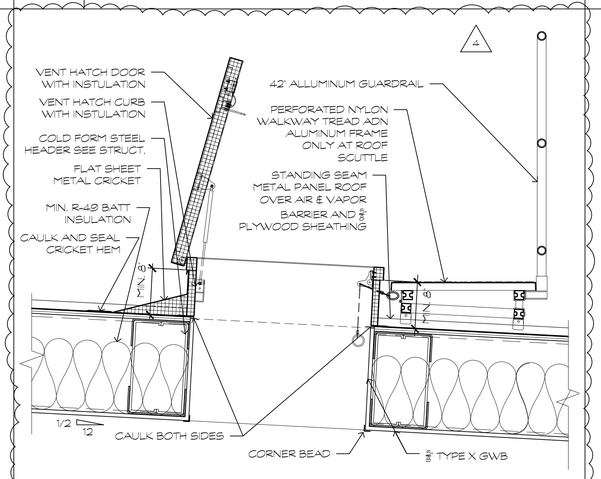
4 TYP. GARAGE COLUMN DETAIL
1" = 1'-0"



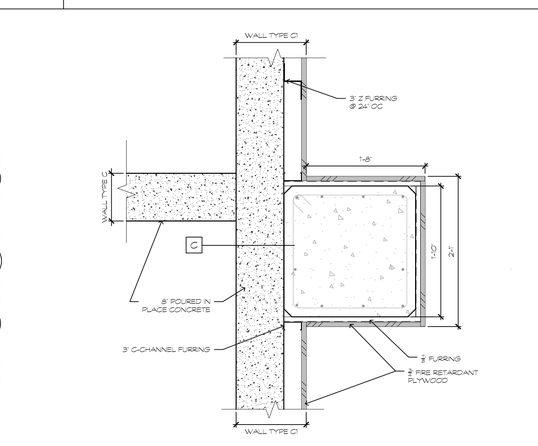
1 TYP. GARAGE COLUMN DETAIL
1" = 1'-0"



11 TYP. PHASE 2, SECOND FLOOR WALL DETAIL 1 1/2" = 1'-0"



8 TYP. ROOF SCUTTLE AND SINGLE LEAF SMOKE VENT
1" = 1'-0"



5 TYP. GARAGE COLUMN DETAIL
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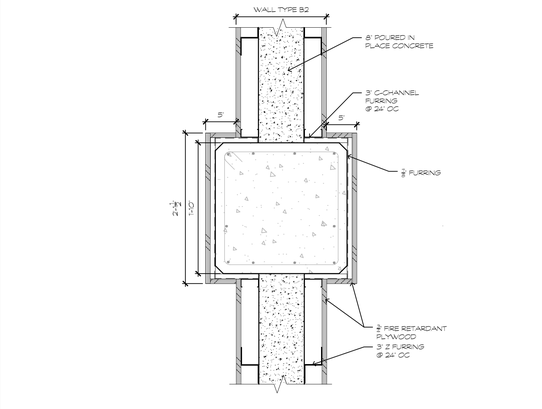

2 TYP. GARAGE COLUMN DETAIL
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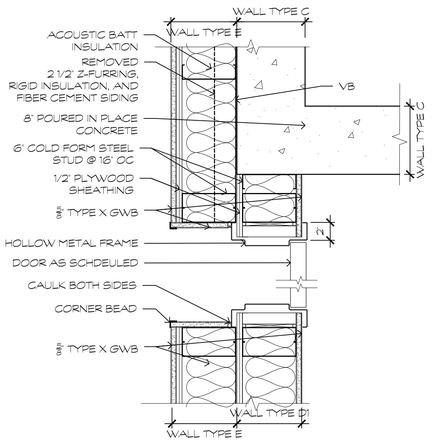
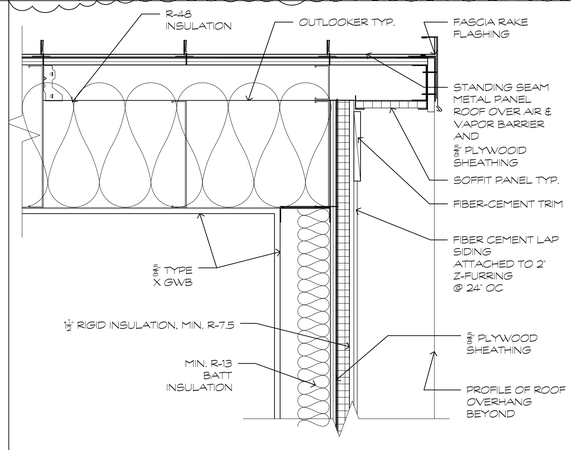
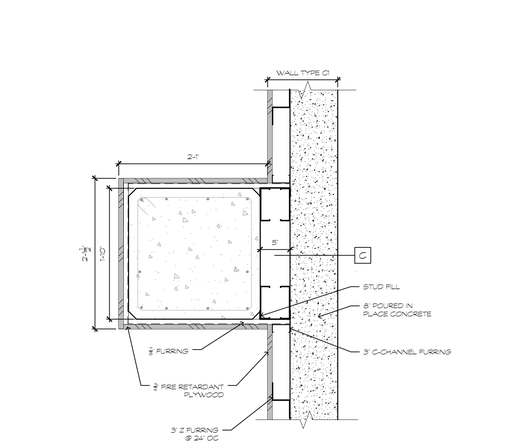


12 TYP. THIRD FLOOR WALL DETAIL
1 1/2" = 1'-0"



9 TYP. GABLE EAVE OVERHANG
1" = 1'-0"



6 TYP. GARAGE COLUMN DETAIL
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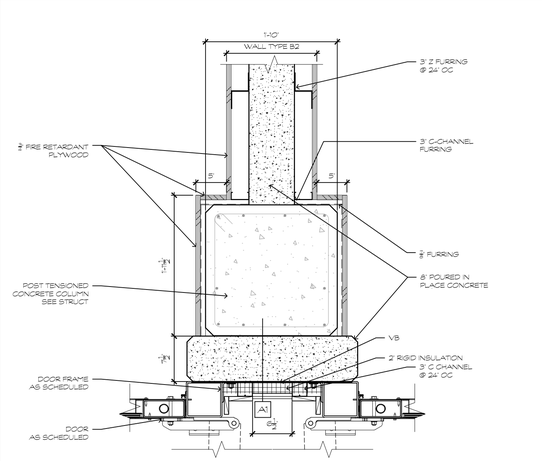

3 TYP. GARAGE COLUMN DETAIL
1" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM # 2	12/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

DETAILS

SCALE	: ######
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

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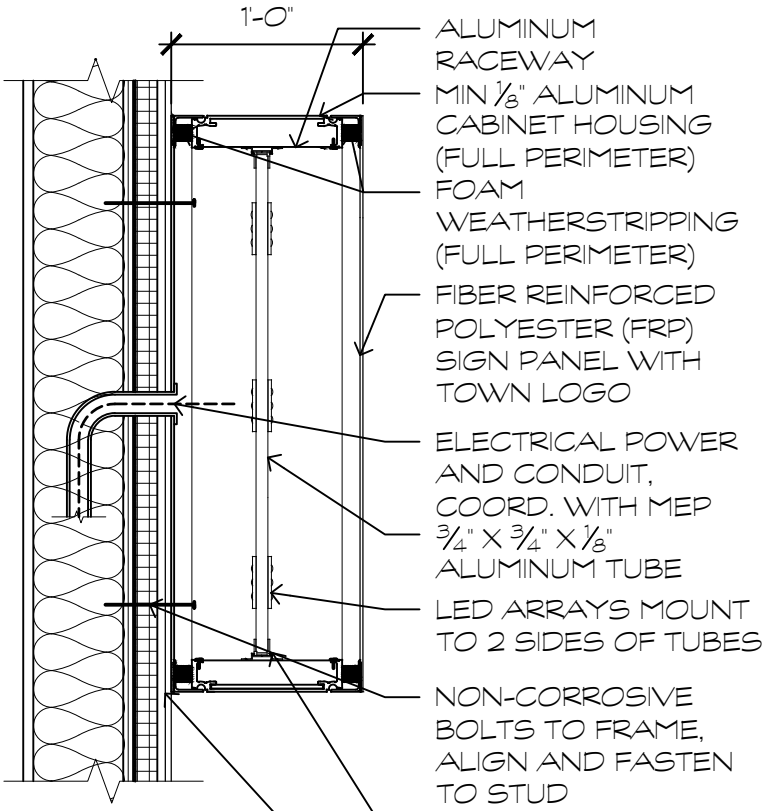

LOGO COLOR	CMYK	RGB	HEX	PANTONE
1. BLACK:	0, 11, 9, 86	35, 31, 32	#231F20	BLACK 6 C
2. L. YELLOW:	0, 2, 42, 1	253, 247, 147	#FDF793	166-5 C
4. D. YELLOW:	0, 8, 100, 1	252, 232, 0	#FCE800	4-8 C
5. ORANGE:	0, 32, 100, 5	242, 164, 0	#F2A400	14-8 C
6. L. BLUE:	42, 22, 0, 13	129, 174, 223	#81AEDF	106-4 C
7. BLUE:	72, 25, 0, 10	65, 173, 230	#41ADE6	112-5 C
8. D BLUE:	79, 41, 0, 28	38, 108, 183	#266CB7	104-7 C

SCALE:	1" = 1'-0"
DRAWN BY:	DLT
CK. BY:	MHH
JOB NO.:	220242
DATE:	1-10-2025

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NEW CONSTRUCTION FOR:
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BACKLIT SIGN DETAIL

SK12
DRAWING NO.

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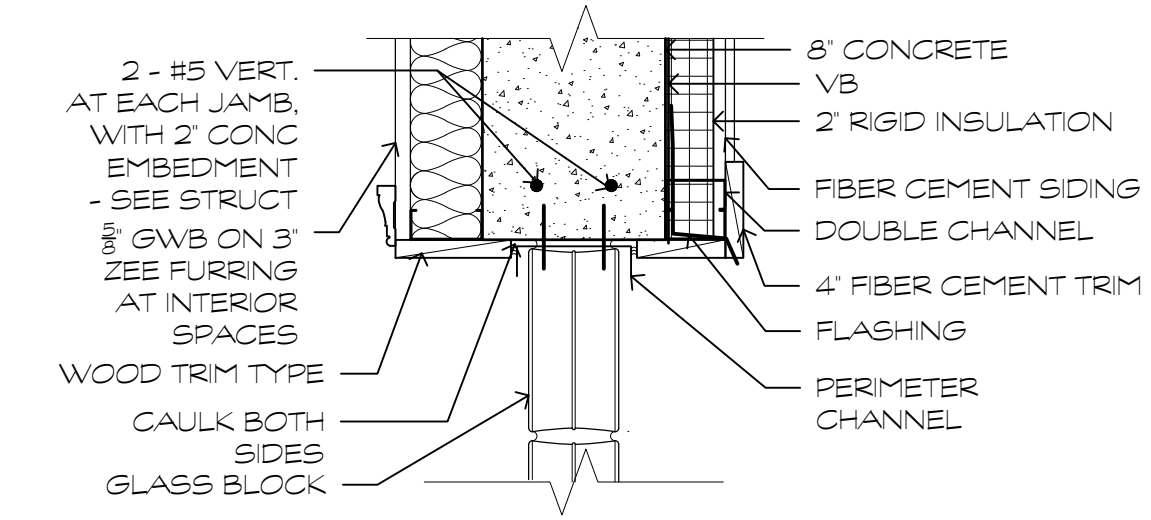
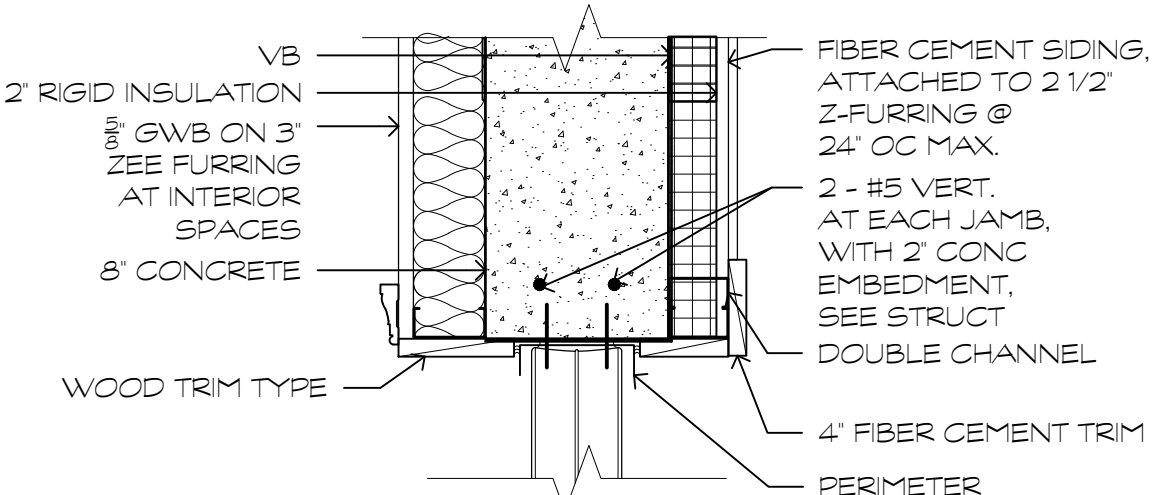
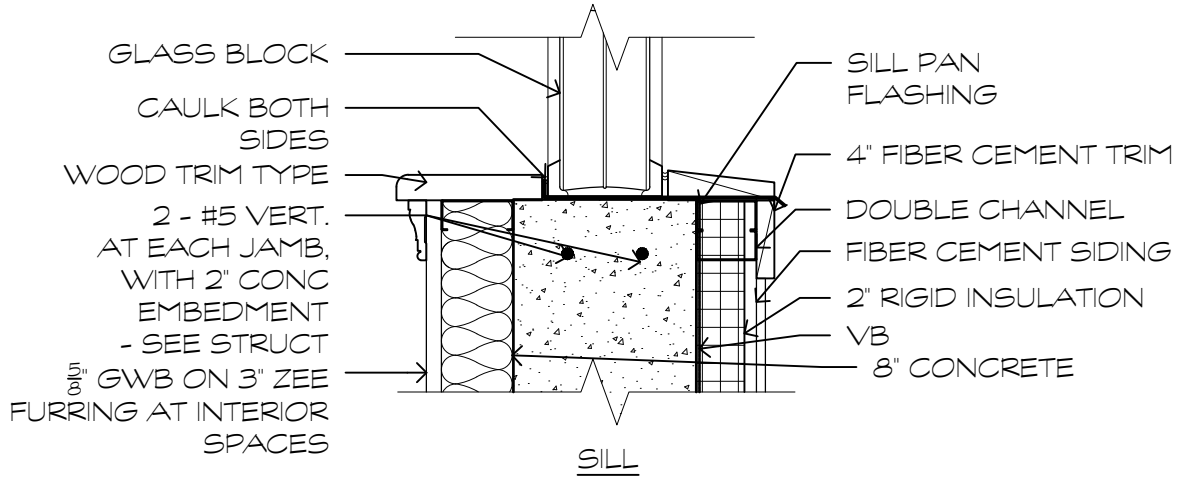


HEAD



JAMB



SILL

SCALE:	1-1/2" = 1'-0"
DRAWN BY:	DLT
CK. BY:	MHH
JOB NO.:	220242
DATE:	1-10-2025

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GLASS BLOCK DETAIL

SK13
DRAWING NO.

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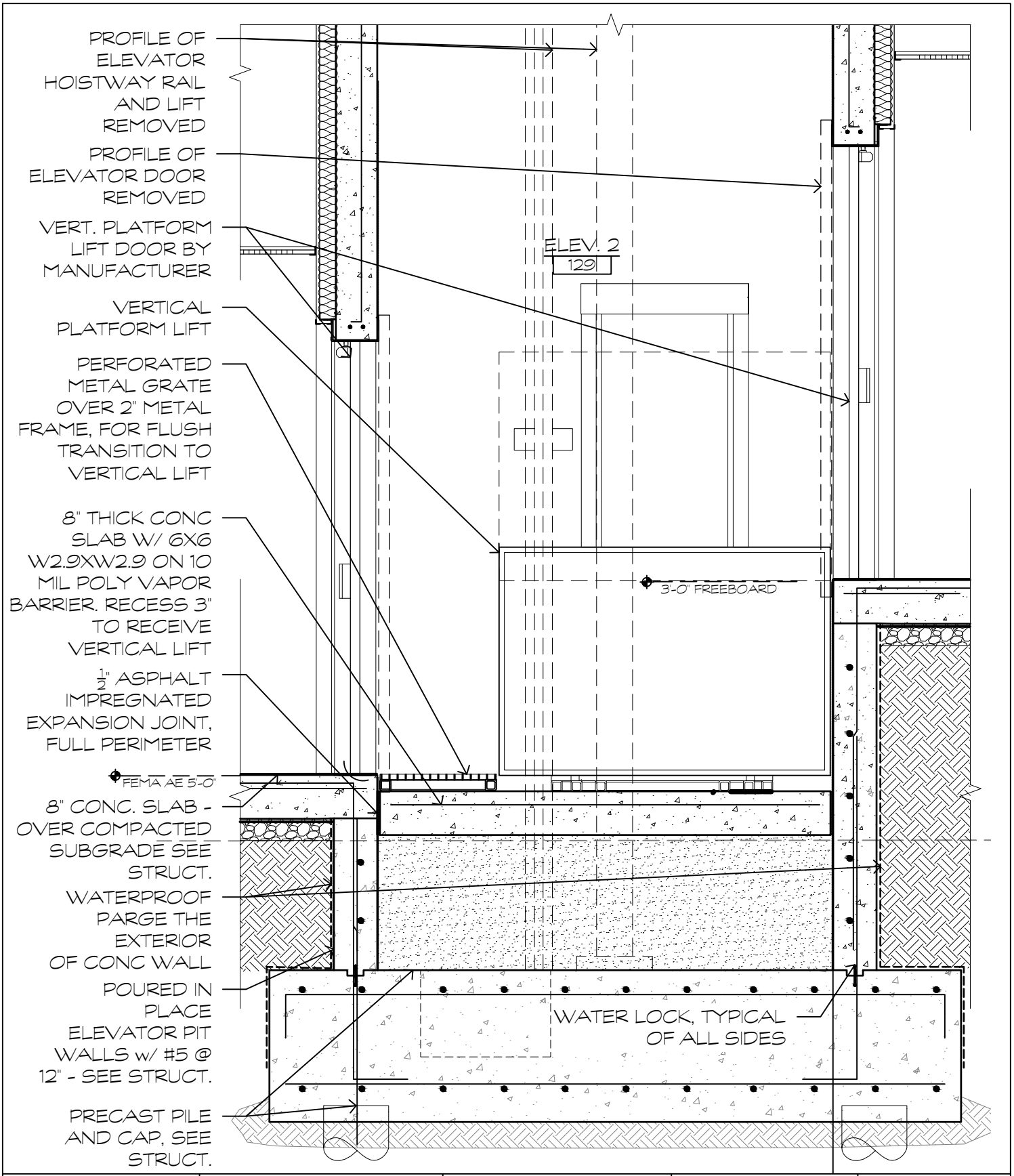

SCALE:	1/2" = 1'-0"
DRAWN BY:	DLT
CK. BY:	MHH
JOB NO.:	220242
DATE:	1-10-2025

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VERTICAL PLATFORM LIFT + PIT DETAIL

SK14
DRAWING NO.

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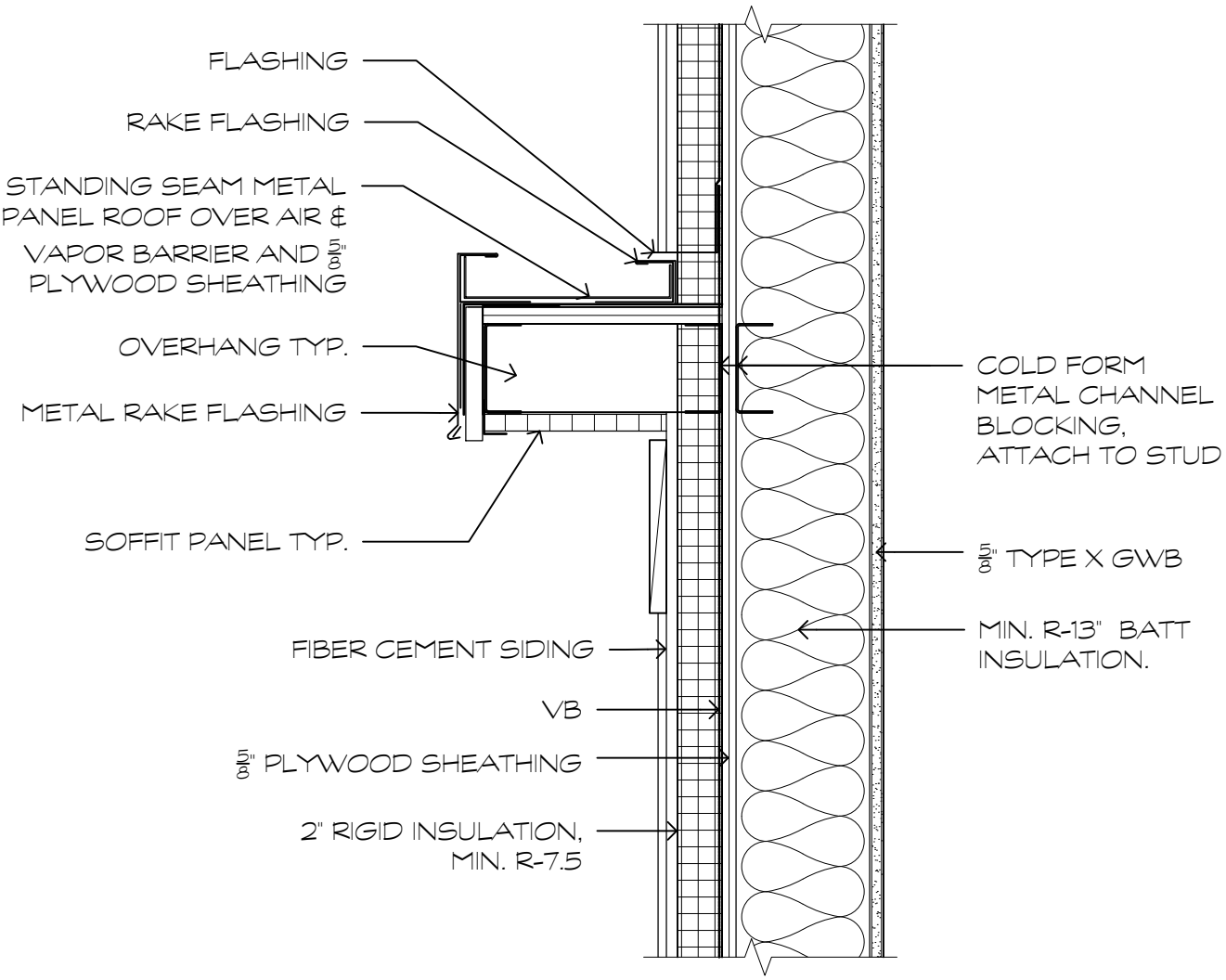

SCALE:	1-1/2" = 1'-0"
DRAWN BY:	DLT
CK. BY:	MHH
JOB NO.:	220242
DATE:	1-10-2025

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NEW CONSTRUCTION FOR:
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DEWEY BEACH, DELAWARE

APPLIED MANSARD ROOF OVERHANG DETAIL

SK15

DRAWING NO.

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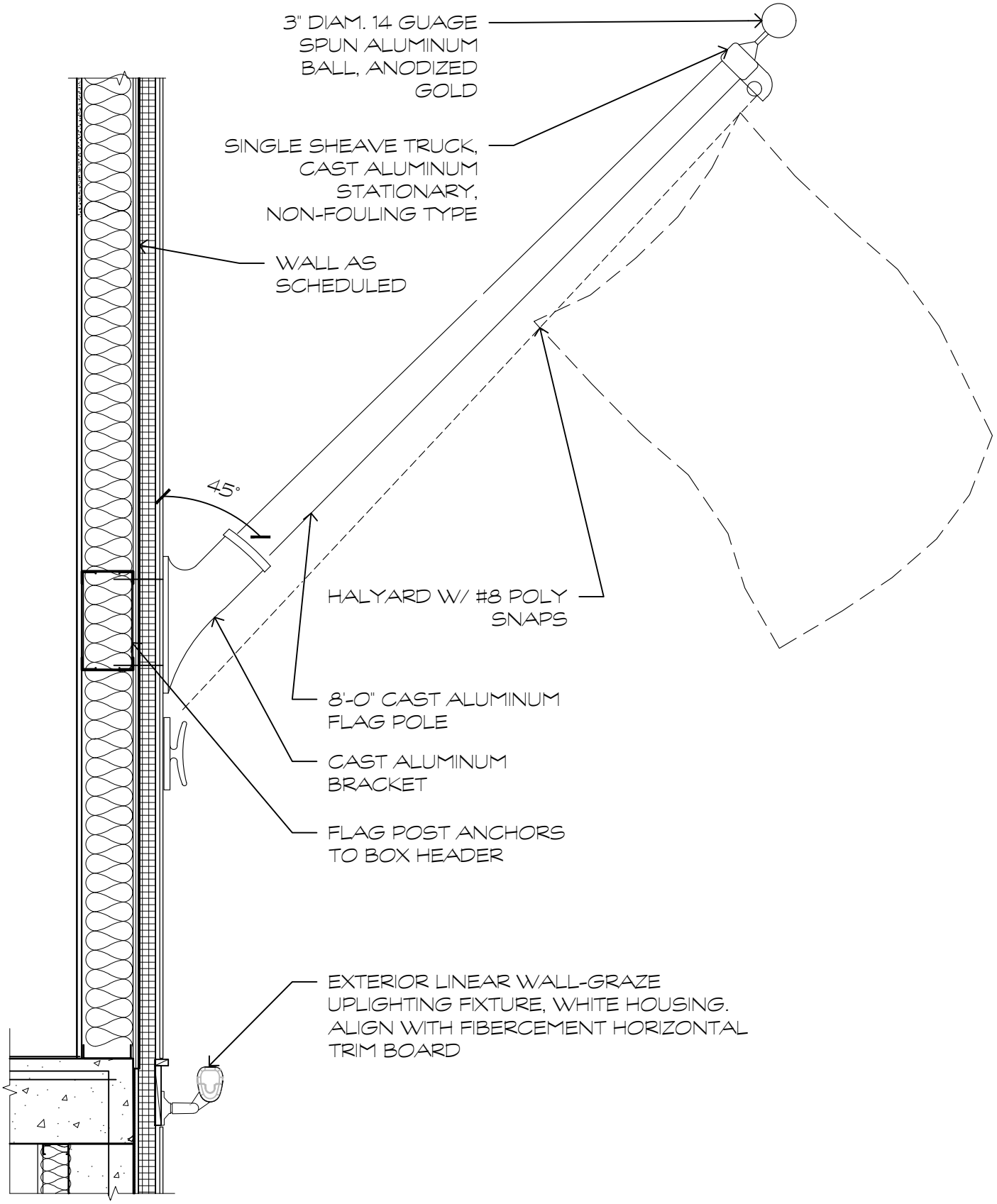

SCALE:	3/4" = 1'-0"
DRAWN BY:	DLT
CK. BY:	MHH
JOB NO.:	220242
DATE:	1-10-2025

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NEW CONSTRUCTION FOR:
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DEWEY BEACH, DELAWARE

FLAGPOLE DETAIL

SK16
DRAWING NO.

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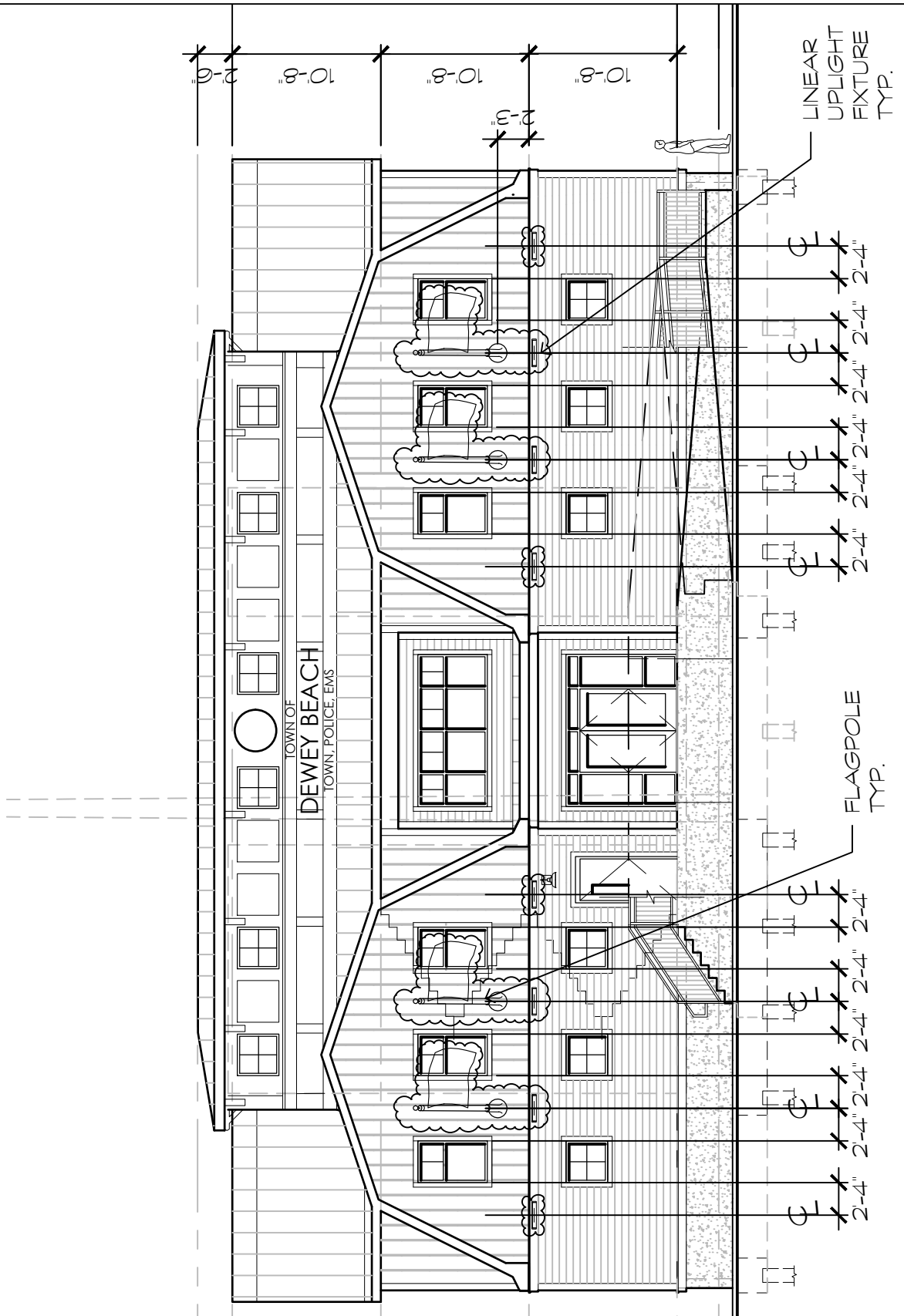

GENERAL NOTE

LOCATION AND QUANTITIES OF FLAGPOLES + LIGHT ARE SHOWN FOR REFERNCE. FINAL LOCATION AND QUANTITIES SHALL BE VERIFID AND APPROVED BY THE TOWN, AND INSTALLATION OF LIGHT FIXTURES COORDINATED WITH MEP.

SCALE:	3/32" = 1'-0"
DRAWN BY:	DLT
CK. BY:	MHH
JOB NO.:	220242
DATE:	1-10-2025

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NEW CONSTRUCTION FOR:
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DEWEY BEACH, DELAWARE

FLAGPOLE + LIGHTING ELEVATION

SK17
DRAWING NO.

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GOVERNING CODES

THE FOLLOWING CODES AND STANDARDS, INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN, SHALL APPLY TO THE DESIGN, CONSTRUCTION, QUALITY CONTROL AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT. USE THE LATEST EDITIONS UNLESS NOTED OTHERWISE.

A. "INTERNATIONAL BUILDING CODE", INTERNATIONAL CODE COUNCIL, INC., 2021
B. "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" (ANSI/ASCE 7–16), AMERICAN SOCIETY OF CIVIL ENGINEERS.
C. "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318–19", AMERICAN CONCRETE INSTITUTE.
D. "ACI MANUAL OF CONCRETE PRACTICE – PARTS 1 THROUGH 5
E. "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION/ 2018, AMERICAN FOREST & PAPER ASSOCIATION.
F. "SPECIFICATIONS FOR THE DESIGN OF COLD–FORMED STEEL STRUCTURAL MEMBERS", AMERICAN IRON AND STEEL INSTITUTE.

DESIGN LOADS (NOT INCLUDING SELF WEIGHT)

	LIVE LOADS	DEAD LOADS	TOTAL
ROOF TRUSSES	30 PSF	20 PSF	55 PSF
PUBLIC ROOMS	100 PSF	25 PSF	125 PSF
CORRIDORS	100 PSF	25 PSF	125 PSF
STAIRS	100 PSF	25 PSF	125 PSF
ELEVATORS	150 PSF	25 PSF	175 PSF
ARMORY	150 PSF	25 PSF	175 PSF
CELLS	40 PSF	25 PSF	65 PSF
OFFICES	50 PSF	25 PSF	75 PSF
VEHICLE BAYS	100 PSF	10 PSF	110 PSF

NOTE: DEAD LOADS DO NOT INCLUDE SELF WEIGHT OF FLOOR FRAMING.

WIND LOAD BASED ON 137 MPH BASIC WIND SPEED EXPOSURE D, CATEGORY IV
SNOW LOAD = 24 PSF MINIMUM (SEE ROOF PLANS FOR DRIFT)
WINDOWS/DOORS SHALL HAVE A MINIMUM DESIGN PRESSURE RATING OF DP46 IN END ZONE AND DP40 ELSEWHERE.
IMPACT RESISTANT GLAZING IS NOT REQUIRED (SEE ARCH. FOR BULLET RESISTANT GLAZING)

SEISMIC LOAD DATA:
SITE CLASSIFICATION D
RISK CATEGORY IV
Ss = 9.9 %g, S1 = 3.7 %g
Sds = 0.105, Sd1 = 0.059
SEISMIC DESIGN CATEGORY = A

BEARING WALL SYSTEM – ORDINARY REINFORCED CONCRETE

BACK FILL 30 PCF EQUIVALENT FLUID WEIGHT, UNLESS OTHERWISE NOTED

THE STRUCTURAL INTEGRITY OF THE BUILDING IS DEPENDANT UPON COMPLETION ACCORDING TO PLANS AND SPECIFICATIONS. THE STRUCTURAL ENGINEER ASSUMES NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION. THE METHOD OF CONSTRUCTION AND SEQUENCE OF OPERATIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL SUPPLY ANY NECESSARY SHORING, BRACING, GUYS, ETC., TO PROPERLY BRACE THE STRUCTURE AGAINST WIND, DEAD AND LIVE LOADS UNTIL THE BUILDING IS COMPLETED ACCORDING TO THE PLANS AND SPECIFICATIONS. ANY QUESTIONS REGARDING TEMPORARY SHORING REQUIREMENTS SHOULD BE FORWARDED TO THE STRUCTURAL ENGINEER FOR REVIEW. MECHANICAL UNITS AND ANY OTHER EQUIPMENT SUPPORTED BY THE STRUCTURE WITH WEIGHTS IN EXCESS OF 200 LBS. SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

FOUNDATION

ALL FOUNDATIONS AND STRUCTURES SHALL BE INSTALLED BASED ON THE REQUIREMENTS AND RECOMMENDATIONS IN THE SOILS REPORT PROVIDED BY GEOTECHNOLOGY ASSOCIATES, INC. DATED OCTOBER 6, 2023 (GTA JOB NO. 31231674). THE FOUNDATION HAS BEEN DESIGNED BASED ON AN ALLOWABLE COMPRESSIVE PILE CAPACITY OF 50 TONS PER THIS REPORT.

THE TOP OF ALL EXTERIOR FOOTINGS SHALL BE PLACED A MINIMUM OF 2'–0" BELOW FINISH GRADE. THE TOP OF INTERIOR FOOTINGS SHALL BE PLACED A MINIMUM OF 0'–8" BELOW FINISH FLOOR.

A STRUCTURAL SLAB SHALL BE USED WHEN UNCOMPACTED FILL EXCEEDS 8".

PLACE FOOTINGS ON FIRM, DRY, NON–FROZEN SUBGRADE. REMOVE SOFT SOILS ENCOUNTERED DURING EXCAVATION. BACKFILL EXCAVATIONS AND AREAS REQUIRING STRUCTURAL FILL WITH CLEAN, MOIST, GRANULAR SELECT BORROW. ALL BACKFILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 8–INCHES IN LOOSE THICKNESS. PROPER EQUIPMENT SHALL BE SELECTED AND USED FOR COMPACTION ACCORDING TO THE TYPE A BACKFILL MATERIAL USED. COMPACTION RATIO SHALL BE 95% MINIMUM.

FOOTING DESIGN IS BASED ON WATER TABLE= 2'–0" (MINIMUM) BELOW BOTTOM OF ALL CONCRETE SLABS AND FOOTINGS.

SOILS, FOOTINGS, FOUNDATION WALLS AND SLABS SHALL NOT BE PLACED ON OR IN MARINE CLAY, PEAT OR OTHER ORGANIC MATERIALS.

WHERE REQUIRED, STEP FOOTINGS IN A RATIO OF 2 HORIZONTAL TO 1 VERTICAL.

CAST–IN–PLACE CONCRETE

ALL CONCRETE SHALL BE MADE IN ACCORDANCE WITH DESIGN MIXES WHICH ARE TO BE APPROVED BY THE ARCHITECT OR ENGINEER PRIOR TO CASTING ANY CONCRETE. MIXES SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE ACI 318. MIXES SHALL HAVE A MINIMUM CEMENT CONTENT OF 520 LB. PER CUBIC YD., MAXIMUM WATER/CEMENT RATIO OF 0.45 FOR INTERIOR CONCRETE PROTECTED FROM FREEZING AND 0.40 FOR ALL EXTERIOR EXPOSED CONCRETE.

MINIMUM SPECIFIED COMPRESSIVE STRENGTH f'c @ 28 DAYS.

LOCATION	MIN. COMP. (f'C)	SLUMP (IN.)
GRADE BEAMS/FOUNDATION	4500 PSI(1)	4" +/– 1"
SLAB–ON–GRADE	4500 PSI	4" +/– 1"
POST–TENSIONED SLABS	5000 PSI	4" +/– 1"
COLUMNS/WALLS	5000 PSI	4" +/– 1"
PILE CAPS (INCLUDING STAIRS)	3000 PSI	4" +/– 1"

NOTES: (1) CONCRETE SUBJECTED TO FREEZE AND THAW SHALL BE AIR–ENTRAINED.

CONCRETE MATERIALS SHALL CONFORM TO ASTM C150, TYPE I FOR PORTLAND CEMENT AND ASTM C33 FOR AGGREGATES. WATER–REDUCING ADMIXTURES SHALL CONFORM TO ASTM C494, TYPE A (FREE OF CALCIUM CHLORIDES), AIR–ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260, AND HIGH–RANGE WATER REDUCERS (SUPER–PLASTICIZERS) SHALL CONFORM TO ASTM C494, TYPE F. FLY ASH SHALL COMPLY WITH ASTM C619 FOR CLASS F AND SHALL NOT BE PROPORTIONED IN MIXES WITH MORE THAN 20% CEMENT BY WEIGHT. LIQUID–MEMBRANE CURING COMPOUNDS SHALL BE HIGH–SOLIDS, WATER AND ACRYLIC–BASED, COMPLYING WITH ASTM C309 AS TESTED UNDER ASTM C156.

EXPOSED CONCRETE BEAMS AND COLUMNS SHALL HAVE CHAMFERED EDGES.

SLAB CONTROL JOINTS: SAW CUT OR FORM TO 1/4 SLAB DEPTH. SPACE NO MORE THAN 36 TIMES THE SLAB THICKNESS. DISCONTINUE WELDED WIRE FABRIC AT CONTROL JOINTS. PROVIDE JOINTS ON GROUND SUPPORTED SLABS IN RECTANGULAR CONFIGURATION, WITH THE LONGER SIDE NO MORE THAN ONE–AND–ONE–HALF TIMES THE LENGTH OF THE SHORTER SIDE.

SLAB ISOLATION JOINTS: PROVIDE PRE–MOLDED JOINT FILLER AROUND ALL PIPING, PIERS AND FOUNDATION WALLS.

ALL CONCRETE TO BE PLACED IN THE CELLS OF CONCRETE MASONRY UNITS (CMU BLOCK FILL), OR IN THE VOIDS OF BRICK MASONRY CONSTRUCTION, SHALL CONTAIN PEA GRAVEL (3/8–INCH DIAMETER STONE) IN LIEU OF COARSE AGGREGATE. THE CONCRETE MIX SHALL CONTAIN A HIGH–RANGE WATER REDUCER (SUPERPLASTICIZER). SLUMP OF THE CONCRETE SHALL BE A MINIMUM OF 6–INCHES AND A MAXIMUM OF 9–INCHES.

ALL EXTERIOR CONCRETE AND CONCRETE EXPOSED TO WEATHER SHALL BE AIR–ENTRAINED (6% +/– 1%). USE OF ADDITIVES SHALL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. USE OF ADDITIVES CONTAINING CALCIUM CHLORIDE SHALL NOT BE PERMITTED.
DO NOT USE HIGH–RANGE WATER REDUCING ADMIXTURES IN AIR–ENTRAINED CONCRETE. CONFORM TO ASTM C260.

ADDITION OF WATER TO THE CONCRETE AT THE JOB SITE FOR THE PURPOSE OF INCREASING THE SLUMP OR FOR RETEMPERING THE CONCRETE WHICH HAS BEGUN TO SET IS STRICTLY PROHIBITED.

CONCRETE FOR SLABS–ON–GRADE SHALL BE PLACED IN A SEQUENCE AND MANNER THAT IS CONSISTENT WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE. LOCATE CONSTRUCTION AND CONTROL JOINTS IN SUCH A WAY TO MINIMIZE THE EFFECTS OF SHRINKAGE OF THE CONCRETE SLAB SECTIONS. SUBMIT TO THE ARCHITECT/ENGINEER THE SEQUENCE AND METHOD OF CASTING CONCRETE SLABS–ON–GRADE PRIOR TO PLACING THESE ELEMENTS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ANCHOR BOLTS, CLIPS, INSERTS, CONNECTION PLATES, SLEEVES, SLOTS AND OTHER REQUIRED ITEMS IN ACCORDANCE WITH THE CONTRACT DRAWINGS, AND IN COOPERATION WITH OTHER TRADES PRIOR TO PLACING CONCRETE.

REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO ASTM A–615, GRADE 60 (60,000 PSI). WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A–185. ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH ACI'S MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES, (ACI–315). DETAILS OF REINFORCEMENT SHALL CONFORM TO ACI 318, ACI 315, AND CRSI STANDARDS.

ALL REINFORCING STEEL (INCLUDING WELDED WIRE FABRIC) SHALL BE SECURELY TIED AND ANCHORED IN PLACE TO PREVENT DISLOCATION DURING THE PLACING OPERATION.

REINFORCING STEEL SHALL BE CLEAN OF MUD, DEBRIS, LOOSE RUST, CEMENT, GROUT, OR ANY OTHER MATERIAL WHICH MAY INHIBIT THE BOND BETWEEN THE STEEL AND CONCRETE.

DRY PACK SHALL CONSIST OF SIKA GROUT 212 OR APPROVED SUBSTITUTE. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

ASTMC39/C39M. MAKE SIX TEST CYLINDERS FOR EACH SET OF TESTS IN ACCORDANCE WITH ASTM C31/C31M. TAKE PRECAUTIONS TO PREVENT EVAPORATION AND LOSS OF WATER FROM THE SPECIMEN. TEST TWO CYLINDERS AT 7 DAYS, THREE CYLINDERS AT 28 DAYS, AND HOLD ONE CYLINDER IN RESERVE. TAKE SAMPLES FOR STRENGTH TESTS OF EACH MIX DESIGN OF AND FOR CONCRETE PLACED EACH DAY NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5400 SQUARE FEET OF SURFACE AREA FOR SLABS AND WALLS. FOR THE ENTIRE PROJECT, TAKE NO LESS THAN SIX SETS OF SAMPLES AND PERFORM STRENGTH TESTS FOR EACH MIX DESIGN OF CONCRETE PLACED. EACH STRENGTH TEST RESULT MUST BE THE AVERAGE OF TWO CYLINDERS FROM THE SAME CONCRETE SAMPLE TESTED AT 28 DAYS. IF THE AVERAGE OF ANY THREE CONSECUTIVE STRENGTH TEST RESULTS IS LESS THAN F'C OR IF ANY STRENGTH TEST RESULT FALLS BELOW F'C BY MORE THAN 450 PSI, TAKE A MINIMUM OF THREE ASTM C42/C42M CORE SAMPLES FROM THE IN–PLACE WORK REPRESENTED BY THE LOW TEST CYLINDER RESULTS AND TEST. CONCRETE REPRESENTED BY CORE TEST IS CONSIDERED STRUCTURALLY ADEQUATE IF THE AVERAGE OF THREE CORES IS EQUAL TO AT LEAST 85 PERCENT OF F'C AND IF NO SINGLE CORE IS LESS THAT 75 PERCENT OF F'C. RETEST LOCATIONS REPRESENTED BY ERRATIC CORE 180209 03 30 00 –17 STRENGTHS. REMOVE CONCRETE NOT MEETING STRENGTH CRITERIA AND PROVIDE NEW ACCEPTABLE CONCRETE. REPAIR CORE HOLES WITH NON SHRINK GROUT. MATCH COLOR AND FINISH OF ADJACENT CONCRETE.

CONCRETE PROTECTION FOR REINFORCEMENT

PROVIDE THE MINIMUM CLEARANCES (COVER) FOR REINFORCEMENT AS FOLLOWS:

FOOTINGS AND OTHER CONCRETE POURED AGAINST EARTH –	3"
FORMED CONCRETE EXPOSED TO EARTH –	2"
FORMED CONCRETE NOT EXPOSED TO WEATHER OR EARTH –	1 1/2"
SLABS ON GROUND, UNLESS OTHERWISE NOTED –	1 1/2" FROM TOP OF SLAB

ALL REINFORCEMENT TO BE GRADE 60.

PROVIDE THE FOLLOWING MINIMUM CONCRETE COVER FOR REINFORCEMENT:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH (PILE CAPS, GRADE BEAM BOTTOMS): 3"

FORMED NON–PRESTRESSED CONCRETE EXPOSED TO EARTH OR WEATHER: 2"

BEAMS, COLUMNS: NOT EXPOSED TO WEATHER: 1 1/2"

FOOTINGS SHALL HAVE MINIMUM 2 #4 BARS CONTINUOUS WHEN FOOTINGS ARE PLACED OVER FILL OR SOIL OF DIFFERENT COMPACTION LEVELS.

REINFORCING STEEL

REINFORCING BARS SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615, GRADE 60, EXCEPT THAT COLUMN AND PIER TIES MAY CONFORM TO ASTM A615, GRADE 40. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A–185. REINFORCING BAR MATS SHALL ALSO CONFORM TO ASTM A184. BARS SHALL BE BRANDED BY THE MANUFACTURER WITH BAR SIZE AND GRADE OF STEEL AND
CERTIFIED MILL REPORTS SHALL BE SUBMITTED FOR RECORD. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION.

PROVIDE CORNER BARS AT JUNCTIONS OF CONCRETE WALLS, GRADE BEAMS AND WALL FOOTINGS AND LAP WITH WALL REINFORCING AS SHOWN IN TYPICAL DETAILS. SIZE AND SPACING OF CORNER BARS TO BE SAME AS HORIZONTAL WALL REINFORCING, UNLESS SHOWN OTHERWISE. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AS NECESSARY. PROVIDE STANDARD HOOKS AT DISCONTINUOUS ENDS. TENSION AND COMPRESSION LAP SPLICES SHALL NOT BE LESS THAN THE SPLICE LENGTHS AS GIVEN IN ACI–318. GENERALLY LAP TOP BARS AT MID SPAN AND BOTTOM BARS AT SUPPORTS. PROVIDE PLACING ACCESSORIES IN ACCORDANCE WITH ACI RECOMMENDATIONS.

POST–TENSIONING

ANCHORING HARDWARE AND TENDONS SHALL MEET THE MINIMUM REQUIREMENTS OF ACI 318 AND THE REQUIREMENTS OF THE POST–TENSIONING INSTITUTE. SUBMIT FABRICATION AND PLACEMENT DETAILS, PREPARED AND CERTIFIED BY A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN THE PROJECT JURISDICTION FOR APPROVAL. SHOP DRAWINGS SHALL INDICATE COMPLETE DETAILS OF PRESTRESSING TENDONS INCLUDING ARRANGEMENT, SIZE, STRENGTH, PROFILE, DESIGNATION, TYPES OF ENCLOSURE, ANCHORAGE AND STRESSING DATA, AND LOSS CALCULATIONS, CLEARANCE REQUIREMENTS FOR STRESSING EQUIPMENT, POUR STRIPS AND STRESSING POCKETS SHALL BE SHOWN.

POST–TENSIONING IS DESIGNATED ON DRAWINGS WITH FINAL FORCE AND TENDON PROFILE REQUIRED IN EACH SLAB STRIP, BEAM, COLUMN, JOIST AND GIRDER. TENSIONING SHALL BE WITHIN THE BOXOUTS, POCKETS AND POUR STRIPS SHOWN ON DRAWINGS, OR AS PROPOSED BY THE CONTRACTOR AND APPROVED BY THE STRUCTURAL ENGINEERS.

PRESTRESSING STEEL SHALL BE SEVEN WIRE LOW–RELAXATION OR STRESS RELIEVED STRAND WITH A MINIMUM ULTIMATE TENSILE STRENGTH OF 270 KSI, CONFIRMING TO ASTM A416. EFFECTIVE FORCE SHALL BE 24 KIPS FOR STRESS RELIEVED, AND 27 KIPS FOR LOW–RELAXATION TENDONS LESS THAN 100 FEET LONG. CONTRACTOR SHALL PROVIDE FRICTION AND LONG TERM LOSS CALCULATION FOR OTHER CASES.

STRANDS SHALL BE THOROUGHLY COATED WITH A PROPERLY APPLIED LOW–FRICTION COATING OF GREASE WITH A RUST–PREVENTING ADDITIVE, AND SHALL BE ENCASED IN A CONTINUOUS WATERPROOF TUBE OF PLASTIC SLIPPAGE SHEATHING MECHANICALLY SEALED FULL–LENGTH AGAINST WATER OR CEMENT PASTE INTRUSION OR ESCAPE OF COATING MATERIAL. SHEATHING MUST BE PROPERLY CONNECTED TO THE ANCHORAGES TO INSURE AN EFFECTIVE SEAL AT TENDON ENDS, (ENCAPSULATED SYSTEM).

NO TEARS OR HOLES ARE PERMITTED IN THE SLIPPAGE SHEATHING. UNDER NO CONDITIONS SHALL THE CONCRETE OR THE GROUT USED FOR SEALING ANCHORAGE POCKETS CONTAIN ANY ADDITIVES CONTAINING CHLORIDE OR SULPHIDES. DAMAGED TENDONS OR ANCHORAGES SHALL BE REPLACED.

THE FOLLOWING GUIDELINES SHALL BE FOLLOWED:

A) A MINIMUM OF TWO TENDONS IN EACH DIRECTION THROUGH SLABS DIRECTLY OVER COLUMNS (FOR TWO WAY SLAB ONLY).
B) TENDON OR TENDON BUNDLE SPACING SHALL NOT EXCEED 5 FEET OR 8 TIMES SLAB THICKNESS, WHICHEVER IS LESS.
C) ALL INSERTS AND EMBEDDED ITEMS SHALL BE COORDINATED BY THE CONTRACTOR TO AVOID CONFLICT WITH TENDONS.
D) CONTRACTOR SHALL PROVIDE #4 TIE BARS (EACH WAY) IN POST–TENSIONED SLABS FOR LATERAL SUPPORT OF ALL CHAIRS.
E) PROVIDE CHAIRS AT ALL TIE BAR/TENDON INTERSECTIONS.

PLACE TENDONS ON CHAIRS WITH SMOOTH CURVES THAT BECOME HORIZONTAL AT ANCHORAGE. PLACE ANCHORAGE DEVICES PERPENDICULAR TO BULKHEADS. ADJUST MILD REINFORCEMENT PLACEMENT TO MAINTAIN TENDON PROFILE AND LOCATION. PLACE CONCRETE WITHOUT DISTURBING TENDON PROFILE. WORKMEN SHALL NOT WALK ON TENDONS OR SUPPORT BARS. CONTRACTOR SHALL PROVIDE AS A MINIMUM CONTINUOUS #4 TIE BARS (EACH WAY) IN FLOOR SLABS FOR LATERAL SUPPORT OF ALL CHAIRS.

BEGIN STRESSING OPERATIONS WHEN CONCRETE TEST CYLINDERS, CURED AT THE JOB SITE, INDICATE CONCRETE HAS ATTAINED AT LEAST 75% OF ULTIMATE 28–DAY COMPRESSIVE STRENGTH. CONCRETE MIX DESIGNS SHALL BE SET SUCH THAT CONCRETE REACHES MINIMUM STRESSING STRENGTH WITHIN 72 HOURS OF POURING. ALL TENDONS SHALL BE STRESSED WITHIN 96 HOURS AFTER POURING.

STRESS PRESTRESSING STEEL USING HYDRAULIC JACKS EQUIPPED WITH CALIBRATED PRESSURE GAUGES. A CALIBRATION CHART SHALL ACCOMPANY EACH JACK. THE MEASURED ELONGATION AND JACK GAUGE READING SHALL AGREE WITHIN 7 PERCENT. SUBMIT RECORDS OF ALL JACKING FORCES AND ELONGATIONS TO THE STRUCTURAL ENGINEER. DO NOT PERMIT WORKMEN TO STAND BEHIND JACKS WHILE STRESSING TENDONS. NO CUTTING OF TENDONS SHALL BE PERMITTED UNTIL THE ENGINEER HAS REVIEWED STRESSING RECORDS.

PENETRATION SHALL NOT BE PERMITTED IN BEAMS OR DROP CAPS EXCEPT AS SHOWN ON THE DRAWINGS.

ALL ANCHORAGE BLOCKOUTS, HOLES, ETC. SHALL BE GROUT SEALED AGAINST MOISTURE PENETRATION. SECURE THE STRUCTURAL ENGINEER'S APPROVAL PRIOR TO SEALING ANCHORAGE BLOCKOUT. BURN OFF TENDON TO 1" FROM SLAB EDGE. COAT STRESSING HARDWARE WITH CORROSION PREVENTIVE MATERIAL. DRYPACK EXPOSED ANCHORAGE BLOCKOUTS WITH AN EPOXY MIX OR A STIFF GROUT MIXTURE CONSISTING OF 2 PARTS NON–SHRINK CEMENT TO 1 PART SAND. COAT ALL EXISTING CONCRETE SURFACES WITH A BONDING AGENT. REPAIR SLAB SURFACE SPLITS OR SPALLS RESULTING FROM STRESSING OPERATIONS.

INSERTS FOR SUSPENDED ARCHITECTURAL, ELECTRICAL AND MECHANICAL WORK SHALL BE CAST–IN–PLACE. POWER DRIVEN FASTENERS LONGER THAN 1/2" SHALL NOT BE PERMITTED.

DRILLED AND POWER–DRIVEN FASTENERS MAY BE PERMITTED ONLY WHEN IT CAN BE SHOWN THAT THE INSERTS WILL NOT SPALL THE CONCRETE AND ARE LOCATED TO AVOID THE TENDONS AND ANCHORAGES. THE CONTRACTOR MUST LOCATE TENDONS ON THE SURFACE SLAB.

POST TENSIONING WORK SHALL BE INSPECTED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER.

EMBEDDED ITEMS/ELEVATOR BEAMS

ANCHOR BOLTS, BEARING PLATES, INSERTS, LEVELING PLATES AND MISCELLANEOUS ITEMS SHALL BE LOCATED AND BUILT INTO CONNECTING WORK USING PRESET TEMPLATES. BEARING PLATES SHALL BE SET IN FULL BEDS OF NON–SHRINK GROUT AFTER LEVELING AND ADJUSTMENT. PROVIDE AND INSTALL MATERIALS NECESSARY TO CONNECT ELEVATOR SUPPORT BEAMS TO STRUCTURAL STEEL OR CONCRETE. LOCATION AND SIZE OF ELEVATOR SHEAVE BEAMS SHALL BE DETERMINED BY THE ELEVATOR MANUFACTURER. SHEAVE BEAMS SHALL BE FURNISHED AND INSTALLED BY THE ELEVATOR SUBCONTRACTOR. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL ELEVATOR HOIST BEAMS OR ELEVATOR HOIST HOOKS AND DIVIDER BEAMS AS REQUIRED.

OPENINGS AND PIPE SLEEVES

SIZE AND LOCATION OF ALL OPENINGS SHALL BE COORDINATED WITH ARCHITECTURAL, ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS. FORM OPENINGS AND PROVIDE PIPE SLEEVES WHEN POURING CONCRETE. HOLES LARGER THAN 2" IN DIAMETER SHALL NOT BE CUT INTO SLABS WITHOUT PERMISSION OF THE STRUCTURAL ENGINEER. ARRANGE REINFORCING AROUND OPENINGS AS SHOWN IN TYPICAL DETAILS. EMBEDDED PIPES OR CONDUITS SHALL BE SPACED AT LEAST THREE DIAMETERS ON CENTERS, UNLESS OTHERWISE NOTED. EXCESSIVE CROSSING OVER OF CONDUITS IN SLABS WILL NOT BE PERMITTED. PIPE SLEEVES SHALL NOT BE SPACED CLOSER THAN 8" CLEAR FROM ANY COLUMN UNLESS NOTED ON DRAWINGS. PLACE SLAB BARS TO CLEAR SLEEVES AND MAINTAIN 1 1/2" CLEAR SPACING BETWEEN BARS. WHERE SLEEVES ARE CLOSELY SPACED IN A GROUP, THE GROUP SHALL BE TREATED AS AN OPENING AND REINFORCED ACCORDINGLY. WHERE FLOORS ARE PENETRATED BY OPENINGS, SEAL THE OPENINGS TO MAINTAIN THE INTEGRITY OF FIRE RATING.

SLAB CRACKING

CRACKS IN POST–TENSIONED SLABS ARE LIKELY TO OCCUR DUE TO SLAB SHORTENING. SLABS SHOULD HAVE A ONE–TIME CRACK MAINTENANCE TWO YEARS AFTER CONSTRUCTION TO INSPECT AND EVALUATE SLABS AND SUPPORTING MEMBERS, DETERMINE CRACKS TO BE REPAIRED AND REPAIR CRACKS. EVALUATION SHOULD BE BY A LICENSED STRUCTURAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

PRECAST CONCRETE PILING NOTES

PILES ARE TO BE 12"x12" PRECAST CONCRETE PILES. PILES SHALL BE DRIVEN TO AN ALLOWABLE BEARING CAPACITY OF 50–TONS AND HAVE AN ALLOWABLE TENSILE CAPACITY OF 20–TONS. MINIMUM EMBEDMENT OF PILES = 40'–0" (BUT LENGTHS ARE ANTICIPATED TO BE APPROXIMATELY 60'–0"). DETAILED PILE SHOP DRAWINGS SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF MARYLAND SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL.

COMPRESSIVE STRENGTH OF PILES SHALL BE 6,000 PSI MINIMUM. PILES SHALL MEET THE REQUIREMENTS OF SECTION 1810.3.8 OF THE 2018 IBC INCLUDES MINIMUM REINFORCING AND EFFECTIVE PRESTRESS.

A TEST PILE SHALL BE DRIVEN PRIOR TO ORDERING THE PRODUCTION PILES TO DETERMINE THE PRODUCTION PILE LENGTHS AND TO VERIFY THAT THE MINIMUM EMBEDMENT LENGTH AND BEARING CAPACITY REQUIREMENTS CAN BE MET.

PILE AXIS SHALL NOT DEVIATE MORE THAN 1 INCH IN ANY TEN FOOT SECTION AND NOT MORE THAN 3 INCHES OVER THE FULL LENGTH. CONTRACTOR SHALL PROVIDE THE ENGINEER OF RECORD WITH A SURVEY OF FINAL PILE LOCATIONS FOR VERIFICATION. THE INSTALLATION OF ADDITIONAL PILES OR FOUNDATION ADJUSTMENTS MAY NEED TO OCCUR IF PILES ARE NOT ACCURATELY PLACED.

CERTIFICATION SEALED BY PROFESSIONAL ENGINEER IS REQUIRED THAT PILES AS INSTALLED WILL PROVIDE THE ALLOWABLE BEARING CAPACITY REQUIRED. INSPECTIONS SHALL BE PER THE 2018 IBC SPECIAL INSPECTIONS IN CHAPTER 17.

FORMWORK AND SHORING

FORMWORK SHALL CONFORM TO THE LATEST EDITIONS OF ACI SPECIAL PUBLICATION NO. 4 "FORMWORK FOR CONCRETE" AND ACI 347 "STANDARD RECOMMENDED PRACTICE FOR CONCRETE FORMWORK". SUBMIT FORMWORK AND SHORING DESIGN AND DETAIL DRAWINGS CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER. LOADS GREATER THAN THE DESIGN LIVE LOADS SHALL NOT BE PLACED ON ANY PART OF THE STRUCTURE. THE STRUCTURE SHALL NOT SUPPORT ITS FULL DESIGN LOADS FOR AT LEAST 28 DAYS UNLESS THE STRUCTURE IS RESHORED IN AN APPROVED MANNER. RESHORE POSTS SHALL BE PLACED AT THE INTERSECTION OF THE COLUMN AND MIDDLE STRIP LINES IN EACH DIRECTION, WITH INTERMEDIATE POSTS AS REQUIRED. RESHORING SHALL BE COMPLETED FOR EACH PANEL AS IT IS STRIPPED BEFORE REMOVING FORMS FROM ADJACENT PANELS OR RESHORES SHALL BE INSTALLED PRIOR TO REMOVAL OF SHORES AND FORMWORK. LOCATE RESHORES IN THE SAME POSITION ON EACH FLOOR TO PROVIDE VERTICAL ALIGNMENT AND CONTINUOUS SUPPORT FROM FLOOR TO FLOOR. RESHORES MUST BE SNUG TO SLABS, BUT NOT TIGHT ENOUGH TO ADD ADDITIONAL LOADS. AT LEAST TWO FLOORS SHALL BE FULLY FORMED AND SHORED WITH A MINIMUM OF TWO FLOORS BELOW RESHORED AT ANY GIVEN TIME. ADDITIONAL SHORING AND RESHORING SHALL BE PROVIDED AS INDICATED BY THE SHORING DESIGN REQUIREMENTS. MINIMUM AGE OF SLABS AND BEAMS AT STRIPPING OF FORMWORK SHALL BE 5 DAYS, AND THE MINIMUM STRENGTH AT THE TIME OF STRIPPING, AS VERIFIED BY FIELD–CURED CYLINDER STRENGTH TESTS, SHALL BE 75% OF THE DESIGN STRENGTH. STRIPPING OF FORMWORK IN POST TENSIONED SLAB IS NOT PERMITTED UNTIL AFTER COMPLETION AND APPROVAL OF POST–TENSIONING.

DO NOT CONSTRUCT MASONRY WALLS, PARAPETS, ETC. SUPPORTED BY CONCRETE SLABS UNTIL ALL SHORING AND RESHORING HAS BEEN REMOVED. CONCRETE FORMWORK AND SHORING SHALL BE INSPECTED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER FOR CONFORMANCE TO DESIGN REQUIREMENTS, ADEQUACY OF PLACEMENT, TIGHTNESS AND ALIGNMENT.

FOR ANY SLAB OR BEAM THAT IS HUNG FROM ANOTHER SLAB OR BEAM, THE FORMWORK UNDER THE HUNG SLAB OR BEAM MAY NOT BE REMOVED UNTIL THE SLAB OR BEAM ABOVE, WHICH IS SUPPORTING THE HANGING SLAB OR BEAM, IS AT DESIGN STRENGTH. ALSO, SINCE THE HUNG SLAB IS A "DEAD" SLAB AND DOES NOT SUPPORT ITSELF, THE RESHORING UNDER THIS AREA MUST BE STRENGTHENED AS NEEDED.

COLD–FORMED METAL FRAMING

ALL GALVANIZED STUDS, JOISTS AND TRACKS SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE MINIMUM REQUIREMENTS OF ASTM A1003/A1003M WITH A MINIMUM YIELD STRENGTH OF 50 ksi FOR MATERIAL 16 GAUGE & THICKER; AND GRADE A, 33 ksi FOR MATERIAL 18 GAUGE & THINNER. ALL STRUCTURAL MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD–FORMED STEEL STRUCTURAL MEMBERS." ALL STRUCTURAL MEMBERS SHALL BE ZINC COATED IN ACCORDANCE WITH ASTM A653.

WALL STUD BLOCKING AND STRAPPING FOR AXIALLY LOADED STUDS SHALL BE INSTALLED IN A MANNER TO PROVIDE RESISTANCE TO BOTH MINOR AXIS BENDING AND ROTATION. BLOCKING AND STRAPPING ROWS SHALL BE EQUALLY SPACED NOT TO EXCEED MORE THAN 4'–0" ON CENTERS. WALL SHALL BE PERMANENTLY SHEATHED PER THE ARCHITECTURAL DRAWINGS.

TRACKS SHALL BE COMPLETELY ANCHORED TO THE SUPPORTING STRUCTURE UNIFORMLY AND LEVEL. AT TRACK BUTT JOINTS, ABUTTING PIECES OF TRACK SHALL BE SECURELY ANCHORED TO A COMMON STRUCTURAL ELEMENT, OR THEY MAY BE BUTT WELDED OR SPLICED TOGETHER.

AXIALLY LOADED STUDS SHALL BE INSTALLED IN A MANNER IN WHICH WILL ASSURE THAT EACH END IS BEARING AGAINST THE INSIDE WEB OF THE TRACK, PRIOR TO STUD AND TRACK ATTACHMENT.

SPLICES IN AXIALLY LOADED STUDS SHALL NOT BE PERMITTED.

ALL LOAD BEARING STUDS SHALL BE LATERALLY BRACED AT 48–INCHES ON CENTERS MAXIMUM WITH 1–1/2 INCH COLD–ROLLED C

CONDITION CASES

BAR SIZE	TOP BARS		OTHER BARS	
	CASE 1	CASE 2	CASE 1	CASE 2
#3	28"	42"	22"	32"
#4	37"	56"	29"	43"
#5	47"	70"	36"	54"
#6	56"	84"	43"	65"
#7	81"	122"	63"	94"
#8	93"	139"	72"	107"
#9	105"	157"	81"	121"
#10	118"	177"	91"	136"

CLASS "B" LAP SPLICES (f'c=3000 psi)

NON EPOXY COATED

TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE SPLICE.

CASE 1 – OTHER CASES
CASE 2 – COLUMNS & BEAMS:
COVER < BAR DIA. OR
CENTER TO CENTER SPACING < 2 BAR DIA.
ALL OTHER ELEMENTS:
COVER < BAR DIA. OR
CENTER TO CENTER SPACING < 3 BAR DIA.

CONDITION CASES

BAR SIZE	TOP BARS		OTHER BARS	
	CASE 1	CASE 2	CASE 1	CASE 2
#3	24"	36"	19"	28"
#4	32"	48"	25"	37"
#5	40"	60"	31"	46"
#6	48"	72"	37"	56"
#7	70"	105"	54"	81"
#8	80"	120"	62"	93"
#9	90"	135"	69"	104"
#10	100"	150"	77"	116"

CLASS "B" LAP SPLICES (f'c=4000 psi)

NON EPOXY COATED

TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE SPLICE.

CASE 1 – OTHER CASES
CASE 2 – COLUMNS & BEAMS:
COVER < BAR DIA. OR
CENTER TO CENTER SPACING < 2 BAR DIA.
ALL OTHER ELEMENTS:
COVER < BAR DIA. OR
CENTER TO CENTER SPACING < 3 BAR DIA.

CONDITION CASES

BAR SIZE	TOP BARS		OTHER BARS	
	CASE 1	CASE 2	CASE 1	CASE 2
#3	22"	33"	17"	25"
#4	29"	44"	23"	34"
#5	36"	54"	28"	42"
#6	44"	65"	34"	50"
#7	63"	95"	49"	73"
#8	72"	108"	56"	83"
#9	81"	121"	63"	94"
#10	90"	135"	69"	104"

CLASS "B" LAP SPLICES (f'c=5000 psi)

NON EPOXY COATED

TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE SPLICE.

CASE 1 – OTHER CASES
CASE 2 – COLUMNS & BEAMS:
COVER < BAR DIA. OR
CENTER TO CENTER SPACING < 2 BAR DIA.
ALL OTHER ELEMENTS:
COVER < BAR DIA. OR
CENTER TO CENTER SPACING < 3 BAR DIA.

REQUIRED STRUCTURAL SPECIAL INSPECTIONS

IN ADDITION TO REGULAR INSPECTIONS, THE FOLLOWING STRUCTURAL ITEMS QUIRE SPECIAL INSPECTION IN ACCORDANCE WITH SECTION 1705 OF THE INTERNATIONAL BUILDING CODE. CONSTRUCTION NOT ASSOCIATED WITH THE STRUCTURAL SYSTEM MAY REQUIRE SPECIAL INSPECTION BUT NOT LISTED HERE, INCLUDING EIFS OR OTHER SIDING MATERIALS.

ITEM:	REQUIRED?	REMARKS
1. SOILS COMPLIANCE PRIOR TO FOUNDATION CONSTRUCTION	YES	REFERENCE IBC 1705.6
2. COLUMN FOOTINGS	YES	REFERENCE IBC TABLE 1705.3
3. WALL FOOTINGS	YES	REFERENCE IBC TABLE 1705.3
4. STRUCTURAL CONCRETE	YES	REFERENCE IBC TABLE 1705.3
5. REINFORCING STEEL INCLUDING PRESTRESSING TENDONS	YES	REFERENCE IBC TABLE 1705.3
6. BOLTS INSTALLED IN CONCRETE	YES	REFERENCE IBC TABLE 1705.3
7. EXPANSION/ADHESIVE ANCHORS	YES	REFERENCE IBC TABLE 1705.3
8. STRUCTURAL STEEL FABRICATION	YES	MAY BE OMITTED IF FABRICATOR IS AISC CERTIFIED REFERENCE IBC SECTION 1705.2
9. STRUCTURAL WELDING	YES	REFERENCE IBC SECTION 1705.2
10. HIGH STRENGTH BOLTING	YES	REFERENCE IBC SECTION 1705.2
11. STRUCTURAL MASONRY	YES	REFERENCE IBC SECTION 1705.4
12. DRIVEN PRECAST CONCRETE PILES	YES	REFERENCE IBC SECTION 1705.7

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
3.	ISSUED FOR BID	11/15/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

STRUCTURAL NOTES

ROLAND E. HOLLAND
REGISTERED
No. 13552
DELAWARE
PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9-27-2024

S0.2

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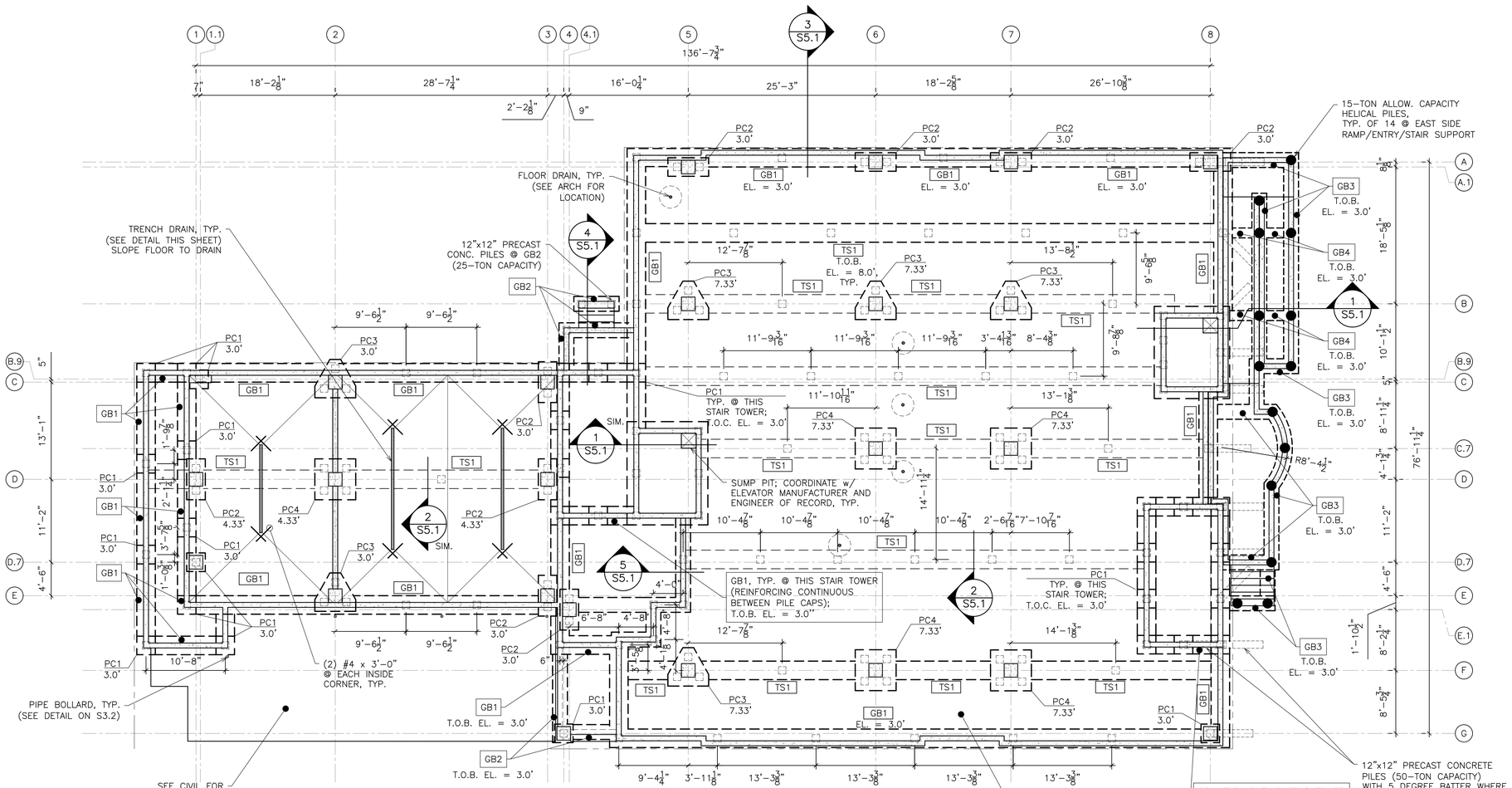


FOUNDATION PLAN

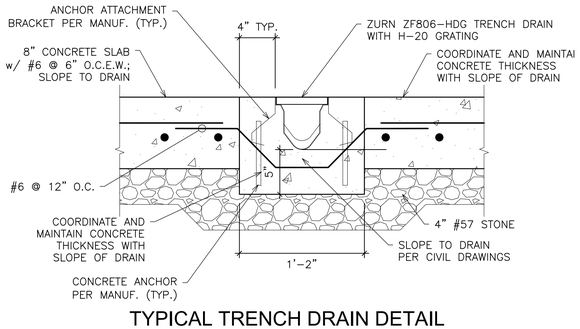
SCALE: ⅛" = 1'-0"

LEGEND

- CONCRETE COLUMN OR WALL ABOVE
- PC1 / 3.0' — PILE CAP (SEE SCHEDULE ON S5.1); TOP OF FOOTING ELEVATION (SEE PLAN THIS SHEET)
- 12" x 12" PRECAST CONCRETE PILE (50-TON ALLOWABLE CAPACITY)
- GB — GRADE BEAM (SEE SCHEDULE ON S5.1)
- TS1 — 30" DEEP x 30" WIDE THICKENED SLAB w/ (6) #8 T&B L.W. w/ (1) #4 TIE @ 2", BAL. @ 7" O.C.S.W.
- ● — 15-TON ALLOWABLE CAPACITY GALVANIZED HELICAL PILE. BASIS OF DESIGN – 36' DEEP GALVANIZED HELICAL PILE w/ 3 ½" x –.313" PIPE SHAFT w/ 12-14-16-16-16 HELIX PATTERN. CONTRACTOR SHALL PROVIDE PROOF OF CAPACITY VIA TORQUE READINGS BY A GEOTECHNICAL ENGINEER PER CODE. PILE SHALL INCLUDE NEW CONSTRUCTION CAP PLATE AND ALL NECESSARY HARDWARE FOR INSTALLATION.

NOTES:

1. PILE SUPPORTED SLABS (INCLUDING GROUND LEVEL) SHALL NOT HAVE SAW CUT CONTROL JOINTS.
2. SEE SHEET S1.1A FOR SLAB REINFORCING.



TYPICAL TRENCH DRAIN DETAIL

SCALE: 1½" = 1'-0"

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
3.	ISSUED FOR BID	11/15/2024
4.	ISSUED FOR ADDENDUM # 2	12/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

FOUNDATION PLAN

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9-27-2024

S1.1

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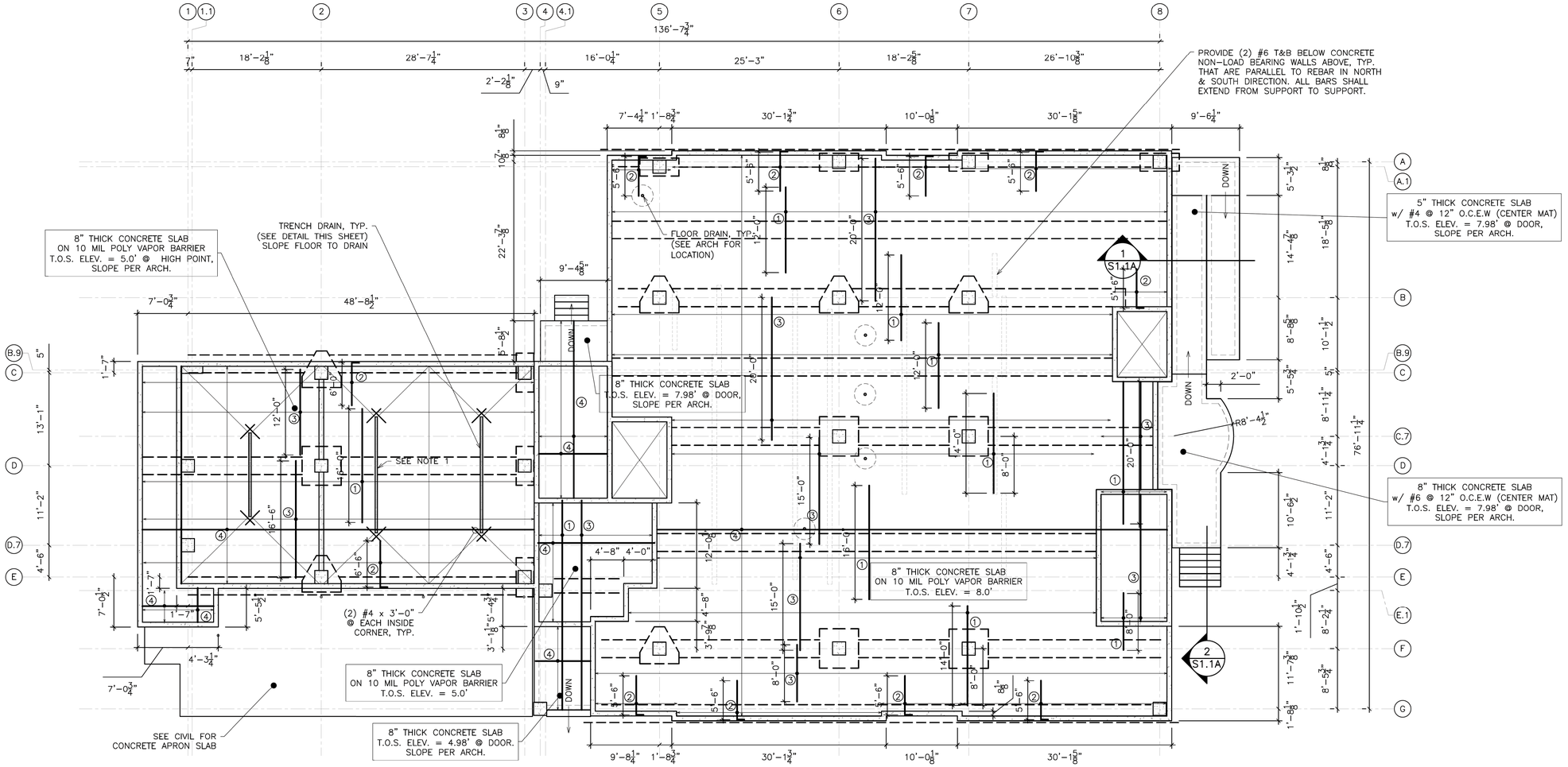
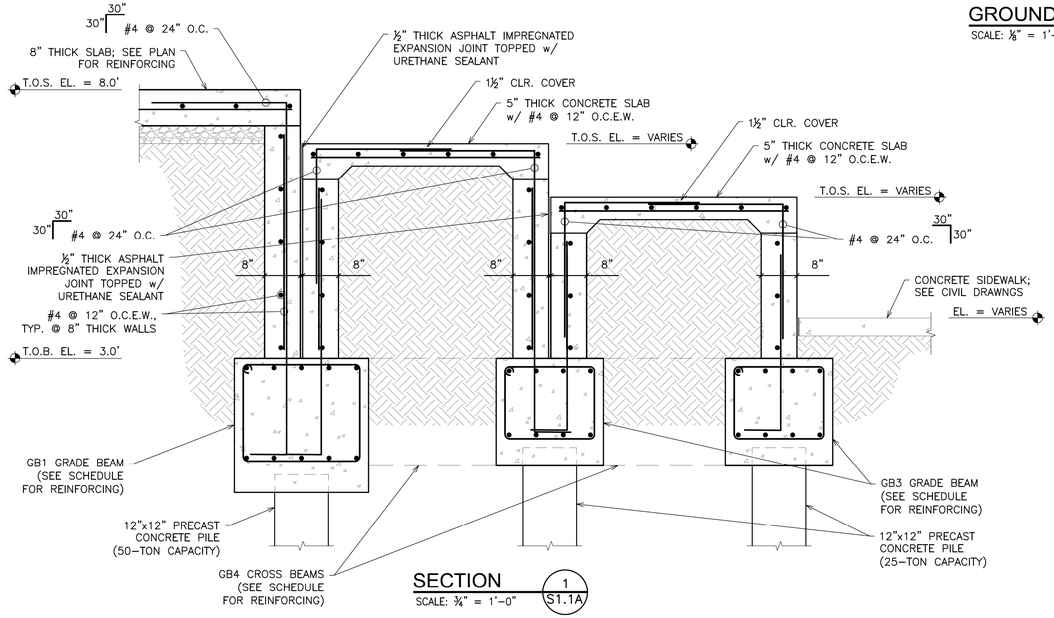


GROUND LEVEL SLAB PLAN

SCALE: ⅛" = 1'-0"



SECTION 1 S1.1A

SCALE: ¾" = 1'-0"

LEGEND:

- CONCRETE COLUMN OR WALL ABOVE
- NON-LOAD BEARING WALL ABOVE
- ① #6 @ 12" O.C. TOP
- ② #6 @ 12" O.C. TOP W/ 12" HOOK
- ③ #6 @ 12" O.C. BOTTOM
- ④ #6 @ 12" O.C. CENTERED IN SLAB (EXTEND BARS TO EDGES OF SLAB MINUS 2" EACH END)

PLAN NOTES:

1.) REINFORCEMENT TO BE CONTINOUS UNDER TRENCH DRAINS, SEE DETAIL.

2.) CONTRACTOR TO SUBMIT CONSTRUCTION JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL (SLAB SHALL NOT HAVE CONTROL JOINTS).

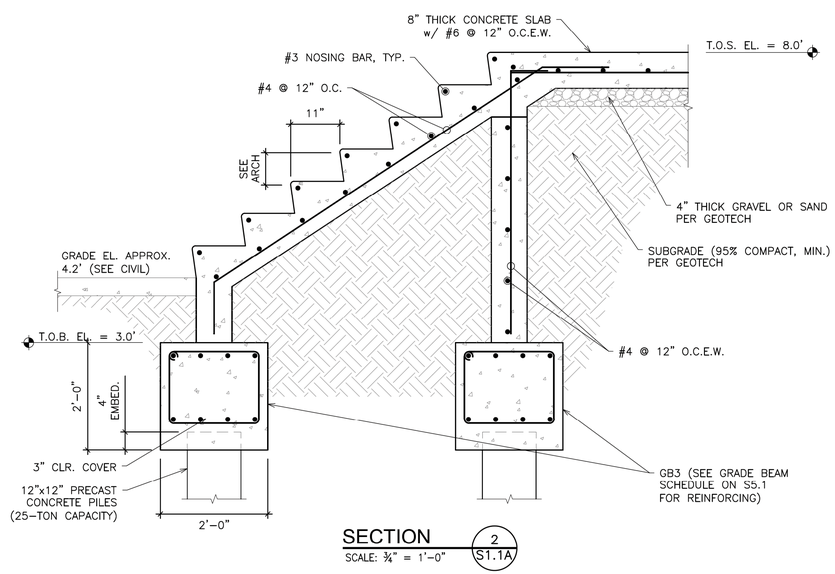
3.) CLEAR COVER TO TOP REBAR IS 2". CLEAR COVER TO BOTTOM REBAR OVER VAPOR BARRIER IS 2".

4.) FOR TOP BARS, CENTER BARS OVER SUPPORTS BELOW.

5.) FOR BOTTOM BARS, CENTER BARS IN MID-SPAN BETWEEN SUPPORTS.

6) SEE SHEET S1.1 FOR PILES, PILE CAPS, AND GRADE BEAMS. THESE ELEMENTS ARE ONLY PARTIALLY INDICATED ON THIS PLAN IN ORDER TO LOCATE REINFORCING.

7) ADJUST REBAR LENGTHS AS NECESSARY WHERE SLAB EDGE VARIES.



SECTION 2 S1.1A

SCALE: ¾" = 1'-0"

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
3.	ISSUED FOR BID	11/15/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

GROUND LEVEL SLAB PLAN

ROLAND E. HOLLAND REGISTERED No. 13552 DELAWARE PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9-27-2024

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PLAN NOTES:

1) SEE ARCH'L DWGS. FOR EXACT FINISHED FLOOR ELEVATIONS, COLUMN LAYOUT AND GRID LINE DIMENSIONS, SLOPES, FLOOR DRAINS, AND OTHER RELATED INFORMATION.

2) SLAB CONSTRUCTION: UNBONDED P/T SLAB. THICKNESS VARIES SEE PLAN. PROVIDE TOP & BOTTOM REBAR AS SHOWN ON PLANS.

3) CONCRETE FOR SLAB SHALL BE NORMAL WEIGHT WITH A 28 DAY STRENGTH, f'c OF 5000 psi, U.N.O. SLUMP = 4"±1".

4) REINFORCING BARS SHALL BE BILLET STEEL CONFORMING TO ASTM A615, GRADE 60.

5) POST-TENSIONING STEEL SHALL BE SEVEN WIRE STRESS-RELIEVED OR LOW-RELAXATION UNBONDED STRANDS WITH A MINIMUM ULTIMATE TENSILE STRENGTH OF 270 KSI, CONFORMING TO ASTM A416. STRANDS SHALL BE COATED WITH GREASE AND SHALL BE ENCASED IN A CONTINUOUS WATERPROOF PLASTIC TUBE. SHEATHING MUST BE PROPERLY CONNECTED TO THE ANCHORAGES FOR PROPER SEALANT AND ANCHORAGES SHALL BE PROPERLY COATED FOR RUST PROTECTION (ENCAPSULATED ANCHORAGE SYSTEM WITH POSITIVE LOCK RING).

6) PROVIDE SHEAR REINFORCEMENT AT COLUMNS PER SHEAR REINFORCEMENT SCHEDULE ON SHEET S5.5.

7) SYMBOLS INDICATING TENDONS ARE:

TENDON
STRESSING END
ANCHORED END

8) REINFORCING MARKED THUS: 44B ON PLAN ARE 4#4 BOTTOM BARS IN THE DIRECTION SHOWN. ALL ADDITIONAL BOTTOM BARS SHALL RUN FULL LENGTH, (COLUMN TO COLUMN),U.N.O.

9) REINFORCING MARKED THUS: 64 ON PLAN ARE 6#4 TOP BARS IN DIRECTION SHOWN. PROVIDE HOOKED BARS AT DISCONTINUOUS ENDS (EDGE CONDITION). SEE GENERAL NOTES AND DETAILS FOR REINFORCEMENT SPACING OVER COLUMN. WHERE T&B IS LISTED FOR BARS OVER COLUMNS, PROVIDE TOP AND BOTTOM BARS. BOTTOM BARS SHALL BE THE SAME LENGTH AS TOP BARS.

10) TENDON PROFILES AND FORCES SHALL BE AS SHOWN ON PLAN. DRAPE DISTANCES GIVEN ON PLAN ARE FROM THE BOTTOM OF THE SLAB TO THE CENTER OF TENDONS. ALL DRAPE DISTANCES ARE EITHER AT END OF SLAB, OVER SUPPORT OR IN MID-SPAN BETWEEN SUPPORTS.

11) PROVIDE AT LEAST TWO TENDONS DIRECTLY THROUGH COLUMN TYP., U.N.O.

12) WHERE TENDON GROUPS CURVE HORIZONTALLY AT A 1:12 ANGLE OR MORE, PROVIDE #3 (MIN.) HAIRPINS, 6" APART. HAIRPINS SHALL EXTEND ACROSS ALL TENDONS IN A BAND WITH CLOSED END HAIRPINS AT INSIDE TENDON RADIUS OF CURVE. SEE TYPICAL DETAILS.

13) VERIFY SIZE AND LOCATION OF FLOOR OPENINGS WITH UPDATED A/M/E/P DWG'S, PURCHASED EQUIPMENT(S) AND APPROVED SHOP DRAWINGS, PRIOR TO CONCRETE POUR. NO DRILLING, CORING AND CHIPPING ETC. IS PERMITTED AFTER CONCRETE POUR.

14) MARK THE TENDON LOCATIONS ON THE FORMS BY SPRAY PAINTING OR OTHER APPROVED METHODS BEFORE CONCRETE POUR, SO THAT TENDON LOCATIONS CAN BE VERIFIED AFTER FORM REMOVAL.

15) CONTRACTOR(S) SHALL COORDINATE A/M/E/P DWG'S WITH THIS DRAWING BEFORE SHOP DWG. AND CONCRETE POUR, AND REPORT ANY DISCREPANCIES TO ARCHITECT FOR PROPER SOLUTION.

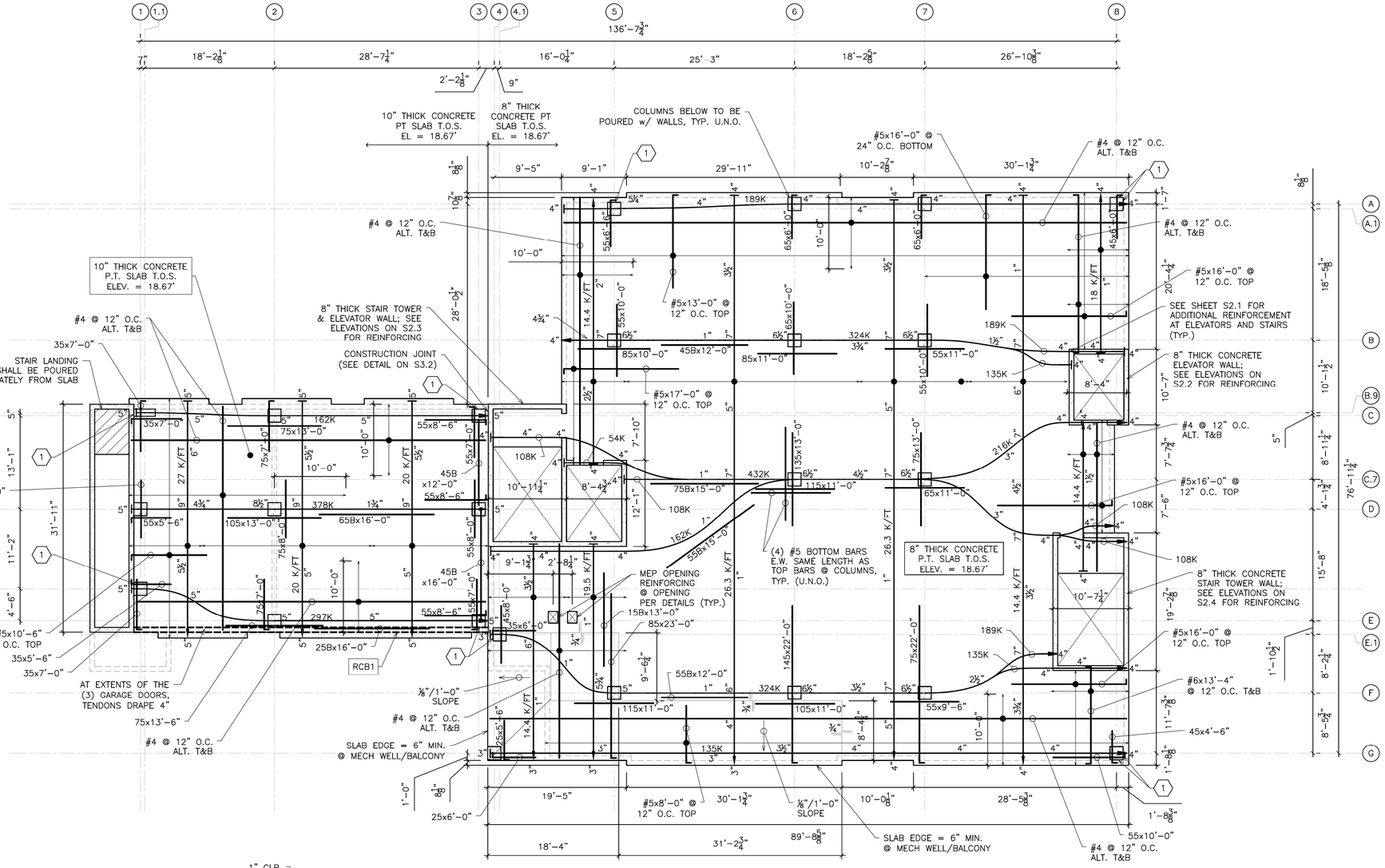
16) COORDINATE DIMENSIONS OF ALL ELEVATOR OPENINGS WITH ACTUAL PURCHASED ELEVATOR. PROVIDE ALL NECESSARY EMBED PLATES OR OPENINGS REQUIRED BY ELEVATOR MANUFACTURER.

17) WHERE TENDON GROUPS CURVE HORIZONTALLY THE RADIUS OF CURVATURE SHALL BE GREATER THEN 10'-0".

18) OPENINGS FOR MECHANICAL CHASE ARE SHOWN. COORDINATE W/ MEP FOR LOCATION AND LOCATIONS FOR ALL OTHER OPENINGS INCLUDING SANITARY PIPES THRU LEVEL 1.

19) SEE S5.5 FOR COLUMN REINFORCEMENT.

20) SEE S2.1 FOR REINFORCEMENT AT STAIR AND ELEVATOR WALLS.



SECOND LEVEL SLAB PLAN

SCALE: ⅛" = 1'-0"

LEGEND:

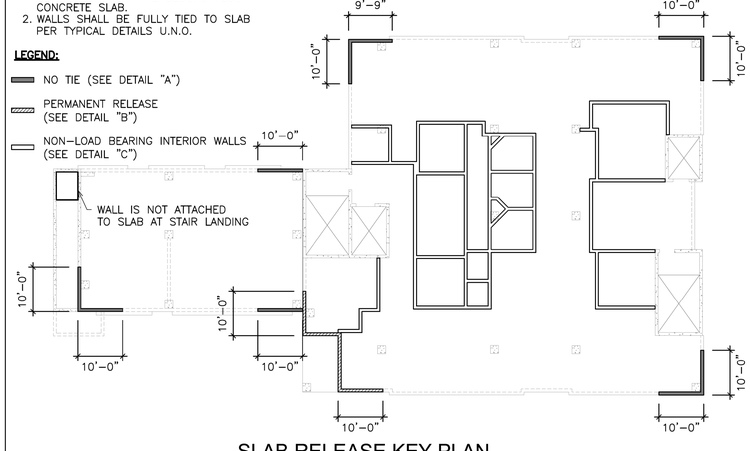
- COLUMN OR WALL ABOVE & BELOW
- COLUMN OR WALL ABOVE ONLY
- COLUMN OR WALL BELOW ONLY
- (1) INSTALL (2) LAYERS OF 15# FELT OR OTHER APPROVED SLIP MATERIAL ALONG VERTICAL FACES OF THESE COLUMNS IN ORDER TO PREVENT COLUMNS FROM BONDING TO ADJACENT WALLS

NOTES:

1. THIS PLAN INDICATES WHERE FIRST FLOOR CONCRETE WALLS ARE TO BE SEPARATED FROM THE SECOND FLOOR CONCRETE SLAB.
2. WALLS SHALL BE FULLY TIED TO SLAB PER TYPICAL DETAILS U.N.O.

LEGEND:

- NO TIE (SEE DETAIL "A")
- PERMANENT RELEASE (SEE DETAIL "B")
- NON-LOAD BEARING INTERIOR WALLS (SEE DETAIL "C")

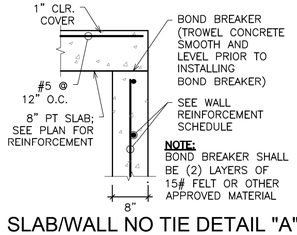


SLAB RELEASE KEY PLAN

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

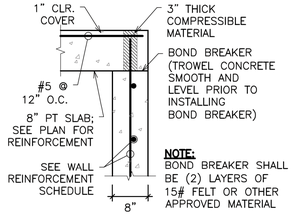
LEVEL 2 WIND END ZONE PLAN

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



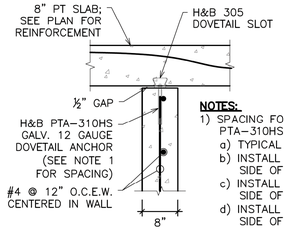
SLAB/WALL NO TIE DETAIL "A"

SCALE: ¾" = 1'-0"



SLAB/WALL PERMANENT RELEASE DETAIL "B"

SCALE: ¾" = 1'-0"



NON-LOAD BEARING INTERIOR WALL DETAIL "C"

SCALE: ¾" = 1'-0"

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

SECOND LEVEL SLAB PLAN

ROLAND E. HOLLAND
REGISTERED
No. 13552
DELAWARE
PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9-27-2024

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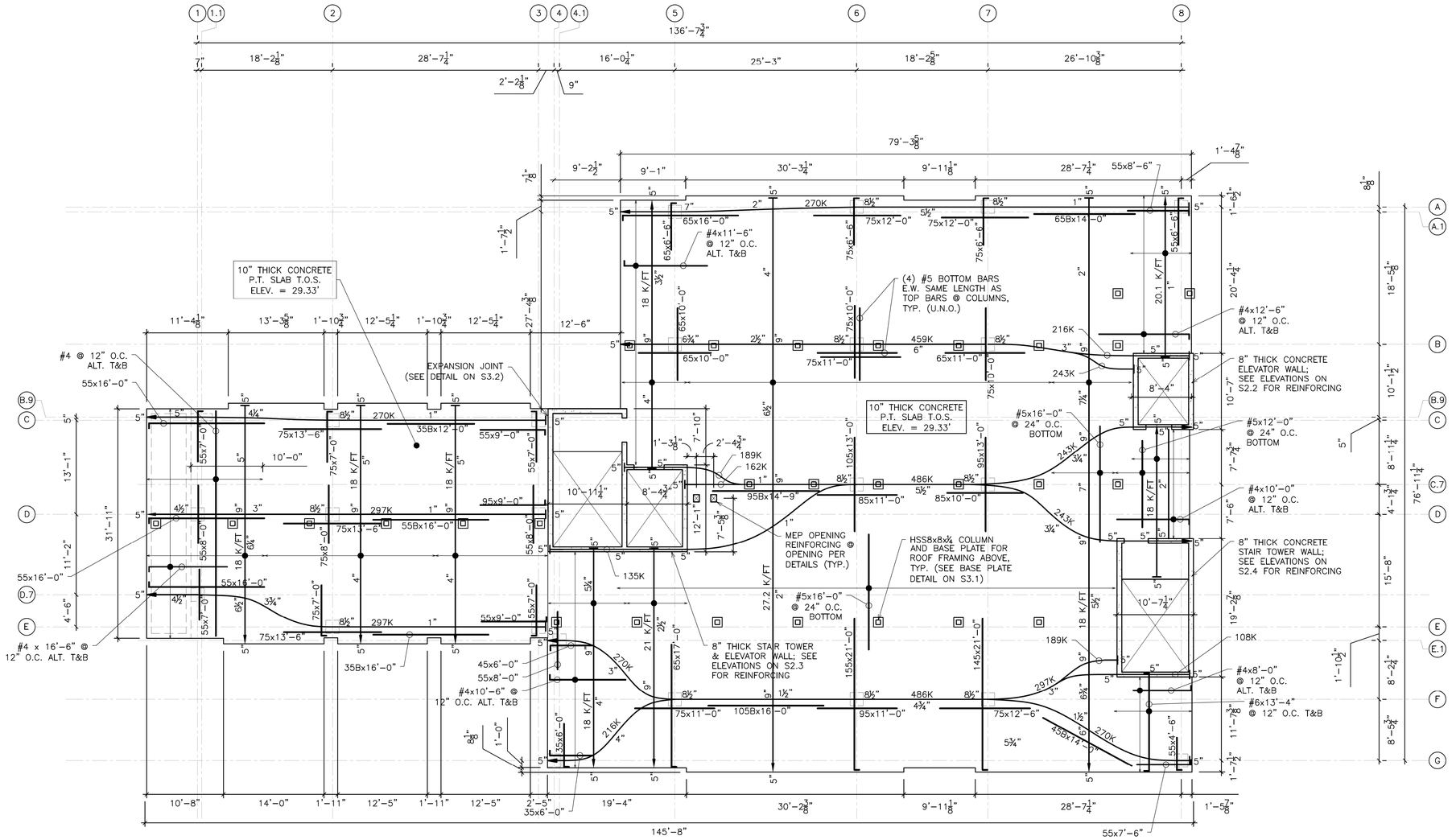


THIRD LEVEL SLAB PLAN

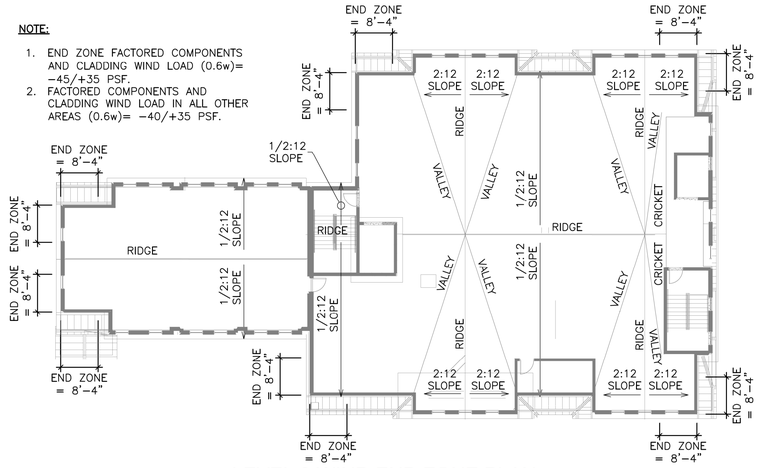
SCALE: ⅛" = 1'-0"

LEGEND:

- COLUMN OR WALL ABOVE & BELOW
- COLUMN OR WALL ABOVE ONLY
- COLUMN OR WALL BELOW ONLY

NOTE:

1. END ZONE FACTORED COMPONENTS AND CLADDING WIND LOAD (0.6w)= −45/+35 PSF.
2. FACTORED COMPONENTS AND CLADDING WIND LOAD IN ALL OTHER AREAS (0.6w)= −40/+35 PSF.



LEVEL 3 WIND END ZONE PLAN

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

PLAN NOTES:

1) SEE ARCH'L DWGS. FOR EXACT FINISHED FLOOR ELEVATIONS, COLUMN LAYOUT AND GRID LINE DIMENSIONS, SLOPES, FLOOR DRAINS, AND OTHER RELATED INFORMATION.
2) SLAB CONSTRUCTION: 10" THICK U.N.O., UNBONDED P/T SLAB. PROVIDE TOP & BOTTOM REBAR AS SHOWN ON PLANS.
3) CONCRETE FOR SLAB SHALL BE NORMAL WEIGHT WITH A 28 DAY STRENGTH, f'c OF 5000 psi, U.N.O. SLUMP = 4"±1".
4) REINFORCING BARS SHALL BE BILLET STEEL CONFORMING TO ASTM A615, GRADE 60.
5) POST−TENSIONING STEEL SHALL BE SEVEN WIRE STRESS−RELIEVED OR LOW−RELAXATION UNBONDED STRANDS WITH A MINIMUM ULTIMATE TENSILE STRENGTH OF 270 KSI, CONFORMING TO ASTM A416. STRANDS SHALL BE COATED WITH GREASE AND SHALL BE ENCASED IN A CONTINUOUS WATERPROOF PLASTIC TUBE. SHEATHING MUST BE PROPERLY CONNECTED TO THE ANCHORAGES FOR PROPER SEALANT AND ANCHORAGES SHALL BE PROPERLY COATED FOR RUST PROTECTION (ENCAPSULATED ANCHORAGE SYSTEM WITH POSITIVE LOCK RING).
6) PROVIDE SHEAR REINFORCEMENT AT COLUMNS PER SHEAR REINFORCEMENT SCHEDULE ON SHEET S5.5.
7) SYMBOLS INDICATING TENDONS ARE:

   TENDON
   STRESSING END
   ANCHORED END

8) REINFORCING MARKED THUS: 44B ON PLAN ARE 4#4 BOTTOM BARS IN THE DIRECTION SHOWN. ALL ADDITIONAL BOTTOM BARS SHALL RUN FULL LENGTH, (COLUMN TO COLUMN),U.N.O.
9) REINFORCING MARKED THUS: 64 ON PLAN ARE 6#4 TOP BARS IN DIRECTION SHOWN. PROVIDE HOOKED BARS AT DISCONTINUOUS ENDS (EDGE CONDITION). SEE GENERAL NOTES AND DETAILS FOR REINFORCEMENT SPACING OVER COLUMN. WHERE T&B IS LISTED FOR BARS OVER COLUMNS, PROVIDE TOP AND BOTTOM BARS. BOTTOM BARS SHALL BE THE SAME LENGTH AS TOP BARS.

PLAN NOTES CONT.:

10) TENDON PROFILES AND FORCES SHALL BE AS SHOWN ON PLAN. DRAPE DISTANCES GIVEN ON PLAN ARE FROM THE BOTTOM OF THE SLAB TO THE CENTER OF TENDONS. ALL DRAPE DISTANCES ARE EITHER AT END OF SLAB, OVER SUPPORT OR IN MID−SPAN BETWEEN SUPPORTS.
11) PROVIDE AT LEAST TWO TENDONS DIRECTLY THROUGH COLUMN TYP., U.N.O.
12) WHERE TENDON GROUPS CURVE HORIZONTALLY AT A 1:12 ANGLE OR MORE, PROVIDE #3 (MIN.) HAIRPINS, 6" APART. HAIRPINS SHALL EXTEND ACROSS ALL TENDONS IN A BAND WITH CLOSED END HAIRPINS AT INSIDE TENDON RADIUS OF CURVE. SEE TYPICAL DETAILS.
13) VERIFY SIZE AND LOCATION OF FLOOR OPENINGS WITH UPDATED A/M/E/P DWG'S, PURCHASED EQUIPMENT(S) AND APPROVED SHOP DRAWINGS, PRIOR TO CONCRETE POUR. NO DRILLING, CORING AND CHIPPING ETC. IS PERMITTED AFTER CONCRETE POUR.
14) MARK THE TENDON LOCATIONS ON THE FORMS BY SPRAY PAINTING OR OTHER APPROVED METHODS BEFORE CONCRETE POUR, SO THAT TENDON LOCATIONS CAN BE VERIFIED AFTER FORM REMOVAL.
15) CONTRACTOR(S) SHALL COORDINATE A/M/E/P DWG'S WITH THIS DRAWING BEFORE SHOP DWG. AND CONCRETE POUR, AND REPORT ANY DISCREPANCIES TO ARCHITECT FOR PROPER SOLUTION.
16) COORDINATE DIMENSIONS OF ALL ELEVATOR OPENINGS WITH ACTUAL PURCHASED ELEVATOR. PROVIDE ALL NECESSARY EMBED PLATES OR OPENINGS REQUIRED BY ELEVATOR MANUFACTURER.
17) WHERE TENDON GROUPS CURVE HORIZONTALLY THE RADIUS OF CURVATURE SHALL BE GREATER THEN 10'−0".
18) OPENINGS FOR MECHANICAL CHASE AND LAUNDRY CHUTE ARE SHOWN. COORDINATE w/ MEP FOR LOCATION AND LOCATIONS FOR ALL OTHER OPENINGS INCLUDING SANITARY PIPES THRU LEVEL 1.
19) SEE S5.5 FOR COLUMN REINFORCEMENT.
20) SEE S2.1 FOR REINFORCEMENT AT STAIR AND ELEVATOR WALLS.

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

THIRD LEVEL SLAB PLAN

ROLAND E. HOLLAND
REGISTERED
No. 13552
DELAWARE
PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9−27−2024

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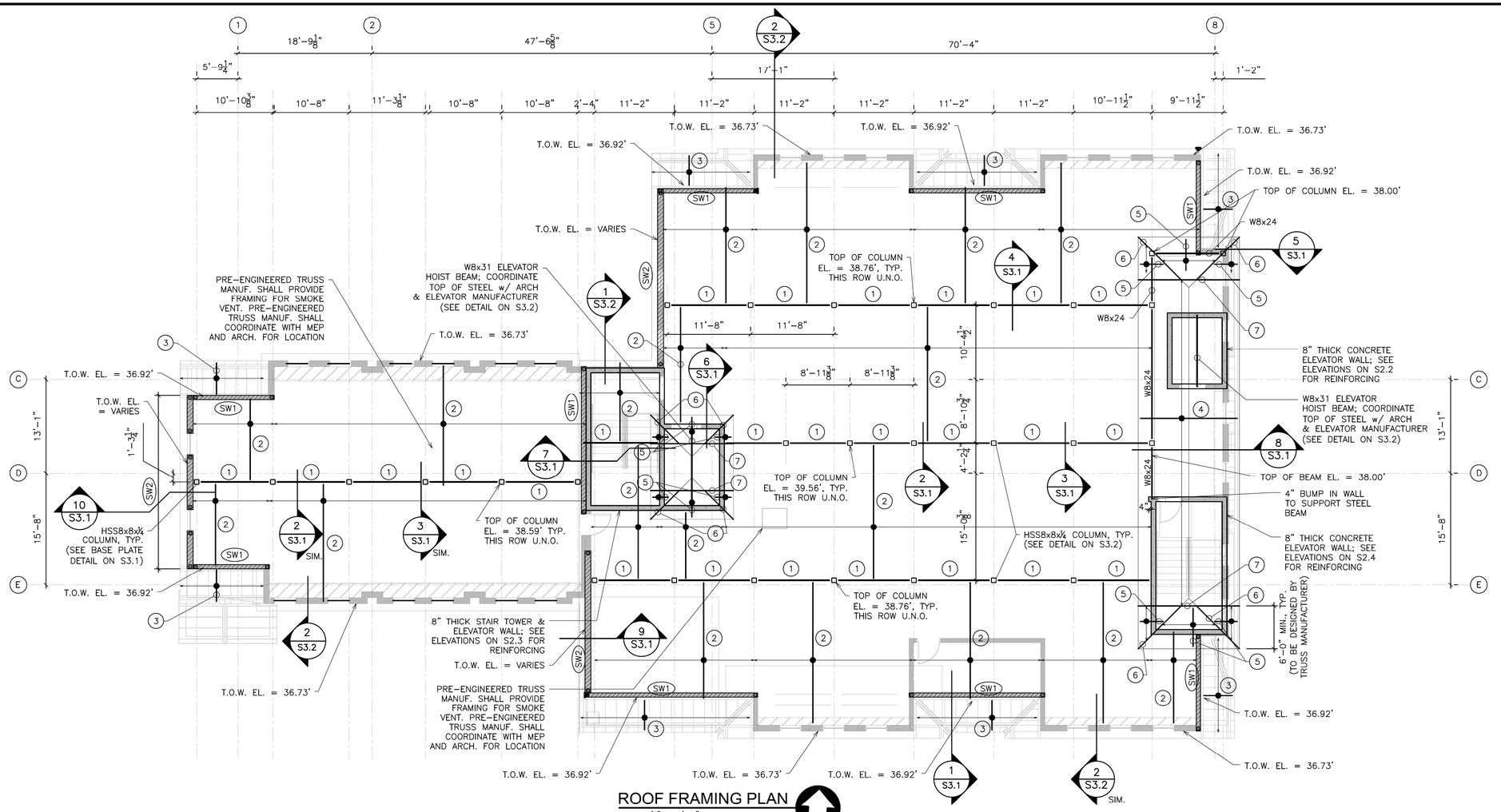
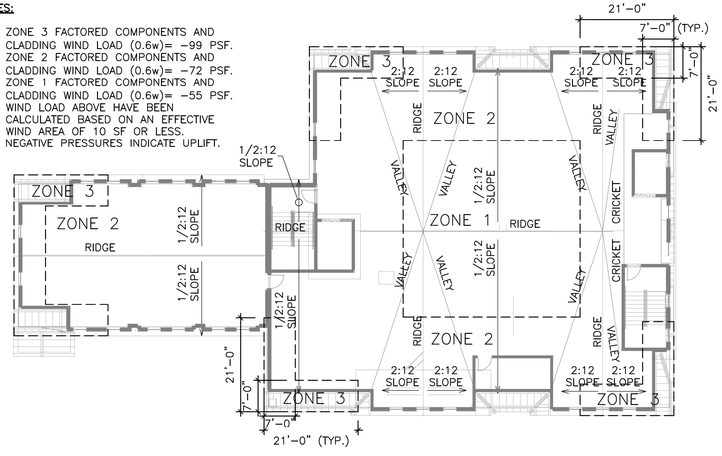


ROOF FRAMING PLAN

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

NOTES:

1. ZONE 3 FACTORED COMPONENTS AND CLADDING WIND LOAD (0.6w)= -99 PSF.
2. ZONE 2 FACTORED COMPONENTS AND CLADDING WIND LOAD (0.6w)= -72 PSF.
3. ZONE 1 FACTORED COMPONENTS AND CLADDING WIND LOAD (0.6w)= -55 PSF.
4. WIND LOAD ABOVE HAVE BEEN CALCULATED BASED ON AN EFFECTIVE WIND AREA OF 10 SF OR LESS.
5. NEGATIVE PRESSURES INDICATE UPLIFT.



ROOF WIND ZONE LEGEND

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

LEGEND:

1. 1600S350-97 NESTED w/ 1600T250-97
2. 1600S162-97 RAFTERS @ 16" O.C.
3. 600S162-54 RAFTERS @ 16" O.C.
4. PRE-ENGINEERED CFS ROOF TRUSSES @ 24" O.C.
5. PRE-ENGINEERED CFS JACK TRUSSES @ 24" O.C.
6. PRE-ENGINEERED CFS HIP TRUSS
7. PRE-ENGINEERED CFS GIRDER TRUSS
8. PRE-ENGINEERED CFS DOUBLE GIRDER TRUSS

SHEARWALL

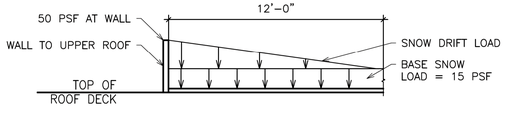
SIMPSON S/HDU4 HOLDOWN

SW1 SHEARWALL (SEE SCHEDULE ON S3.2)

U.N.O. UNLESS NOTED OTEHRWISE

ROOF FRAMING PLAN NOTES:

1. ROOF TRUSS ENGINEER SHALL DESIGN ALL TRUSS-TO-TRUSS AND TRUSS BEARING CONNECTIONS.
2. CFS ENGINEER SHALL DESIGN ROOF FRAMING INCLUDING RAFTERS AND CFS BEAMS INCLUDING THEIR CONNECTIONS TO CFS FRAMING AND CONCRETE AS REQUIRED.
3. OVERFRAMING SHALL BE INSTALLED USING COLD-FORMED TRUSSES TO PROVIDE THE ROOF LINES INDICATED ON THE ROOF PLAN.
4. SEE ARCH ROOF PLAN FOR ROOF SCOPES IN ALL AREAS

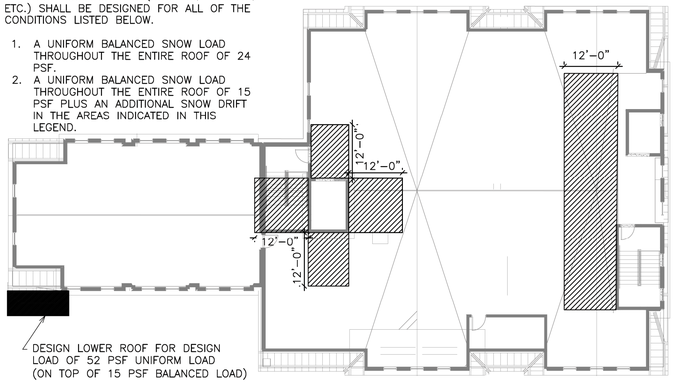


SNOW DRIFT LOAD DIAGRAM "A"

NOTES:

THE ROOF COMPONENTS (ROOFING, FRAMING, ETC.) SHALL BE DESIGNED FOR ALL OF THE CONDITIONS LISTED BELOW.

1. A UNIFORM BALANCED SNOW LOAD THROUGHOUT THE ENTIRE ROOF OF 24 PSF.
2. A UNIFORM BALANCED SNOW LOAD THROUGHOUT THE ENTIRE ROOF OF 15 PSF PLUS AN ADDITIONAL SNOW DRIFT IN THE AREAS INDICATED IN THIS LEGEND.



ROOF SNOW DRIFT LOAD LEGEND

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

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ROOF FRAMING PLAN

ROLAND E. HOLLAND REGISTERED No. 13552 DELAWARE PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
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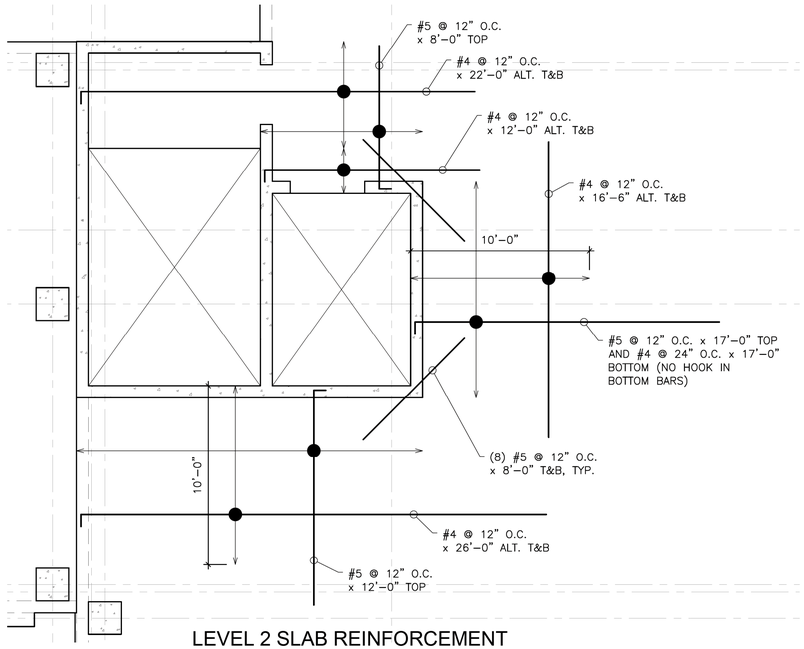
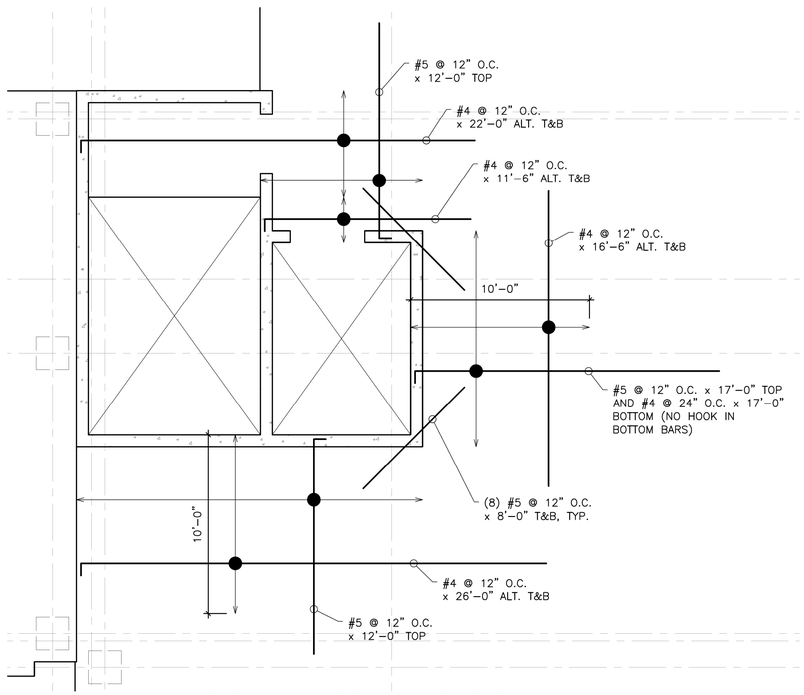


LEVEL 2 SLAB REINFORCEMENT
PLAN AT STAIR/ ELEVATOR TOWERS

SCALE: ¼" = 1'-0"

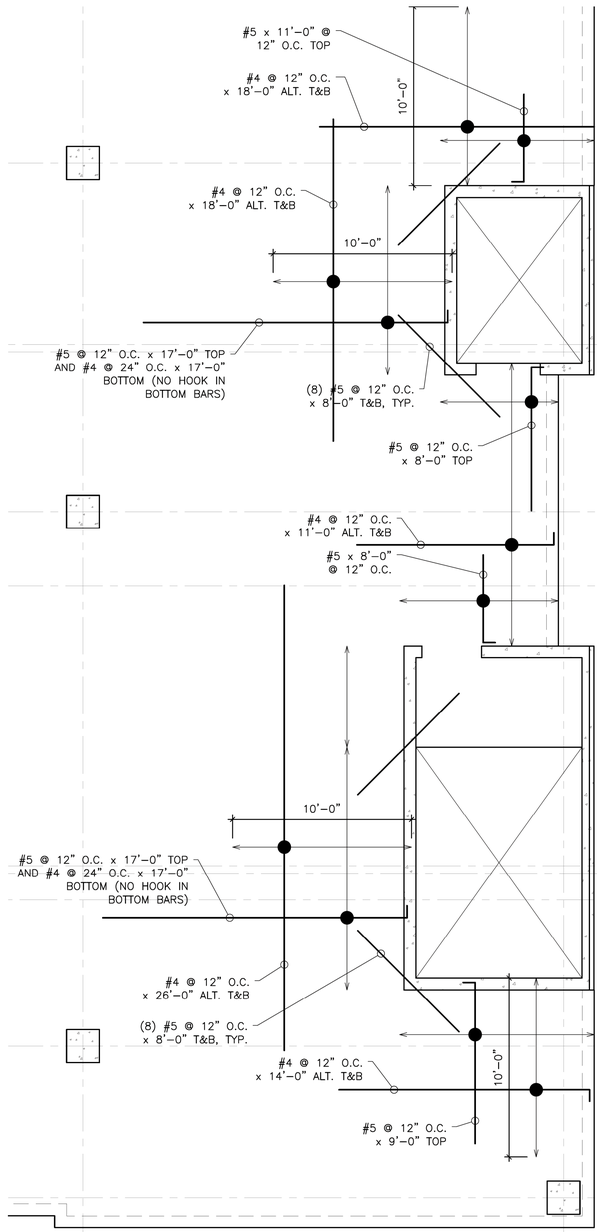
1 / S2.1



LEVEL 3 SLAB REINFORCEMENT
PLAN AT STAIR/ ELEVATOR TOWERS

SCALE: ¼" = 1'-0"

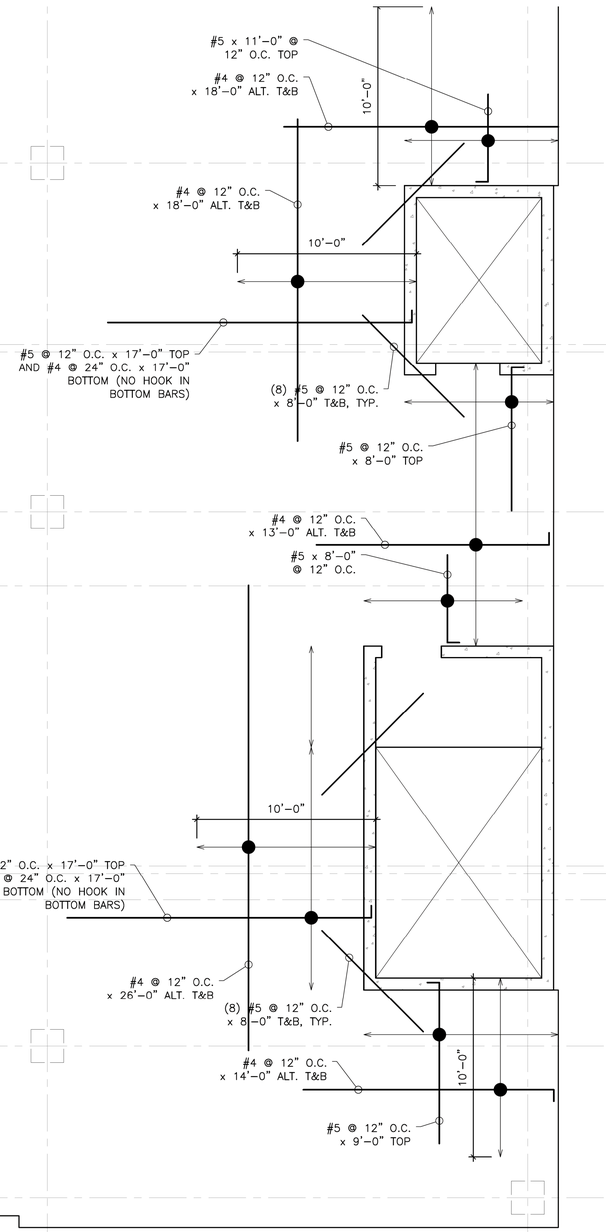
2 / S2.1



LEVEL 2 SLAB REINFORCEMENT
PLAN AT STAIR/ ELEVATOR TOWERS

SCALE: ¼" = 1'-0"

3 / S2.1



LEVEL 3 SLAB REINFORCEMENT
PLAN AT STAIR/ ELEVATOR TOWERS

SCALE: ¼" = 1'-0"

4 / S2.1

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
3.	ISSUED FOR BID	11/15/2024

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ARCHITECTS & ENGINEERS
SALISBURY, BALTIMORE, ASHBURN
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

SLAB REINFORCEMENT PLANS AT STAIRS AND ELEVATORS

ROLAND E. HOLLAND
REGISTERED
No. 13552
DELAWARE
PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9-27-2024

S2.1

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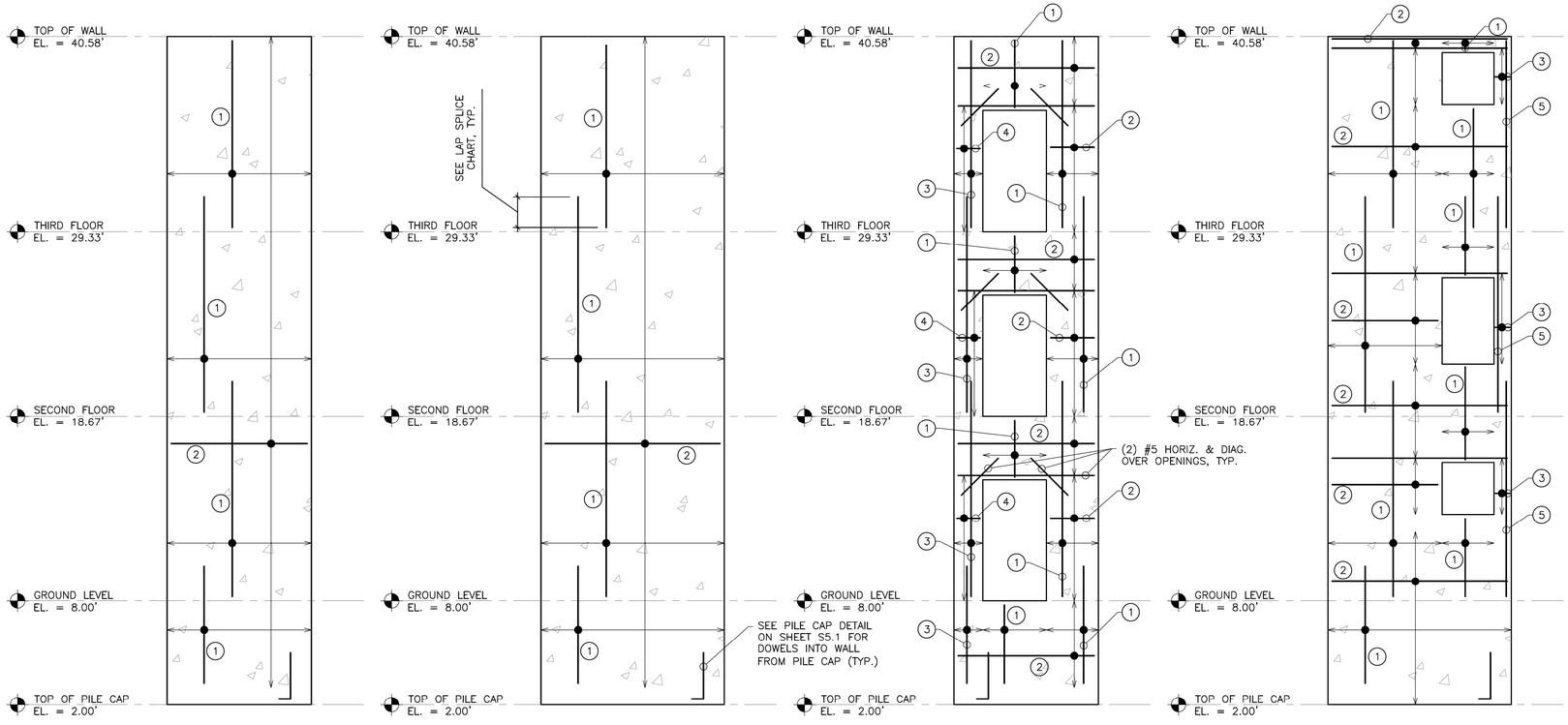
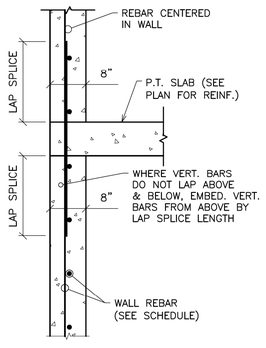


ELEVATION 1 S2.2 — SCALE: ¼" = 1'-0"

ELEVATION 2 S2.2 — SCALE: ¼" = 1'-0"

ELEVATION 3 S2.2 — SCALE: ¼" = 1'-0"

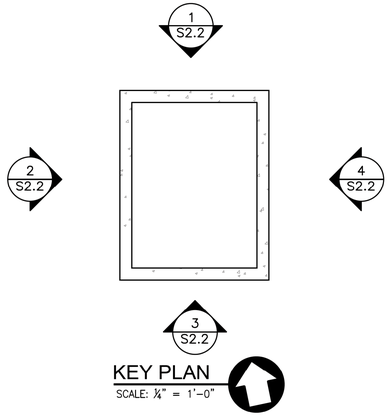
ELEVATION 4 S2.2 — SCALE: ¼" = 1'-0"



VERTICAL BAR SPLICES AT WALLS

LEGEND:

(1) #5 @ 12" O.C. VERT. CENTERED IN WALL
(2) #4 @ 12" O.C. HORIZ. CENTERED IN WALL
(3) #5 @ 10" O.C. VERT. CENTERED IN WALL
(4) #4 @ 10" O.C. HORIZ. CENTERED IN WALL
(5) #5 @ 6" O.C. VERT. CENTERED IN WALL



KEY PLAN — SCALE: ¼" = 1'-0"

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

EAST ELEVATOR TOWER ELEVATIONS

ROLAND E. HOLLAND REGISTERED No. 13552 DELAWARE PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9-27-2024

S2.2

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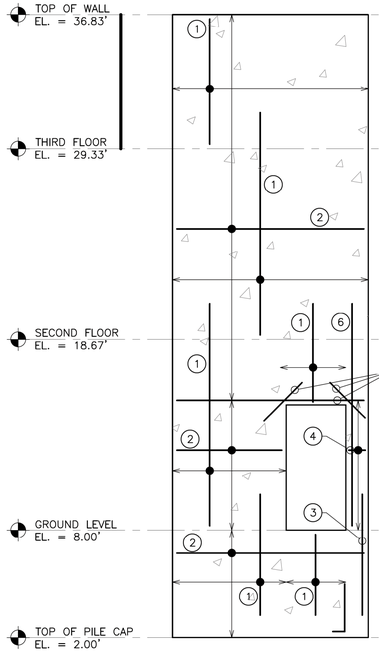
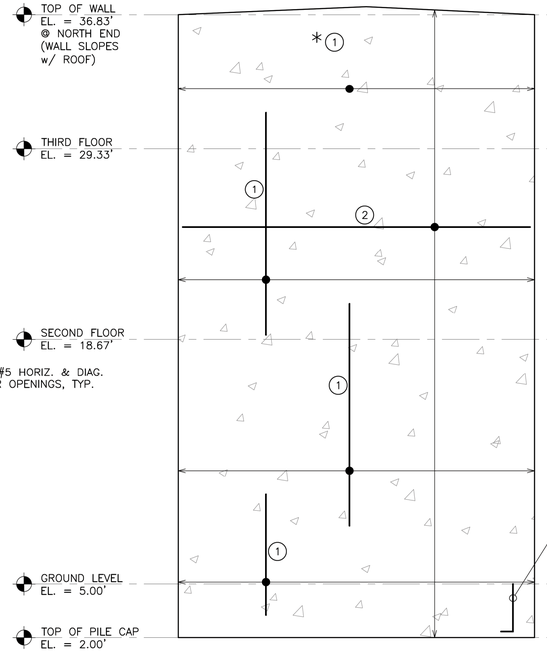
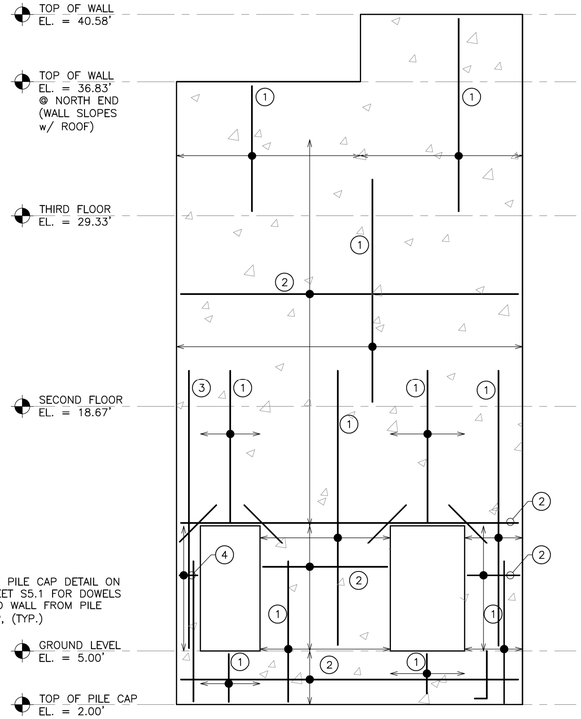


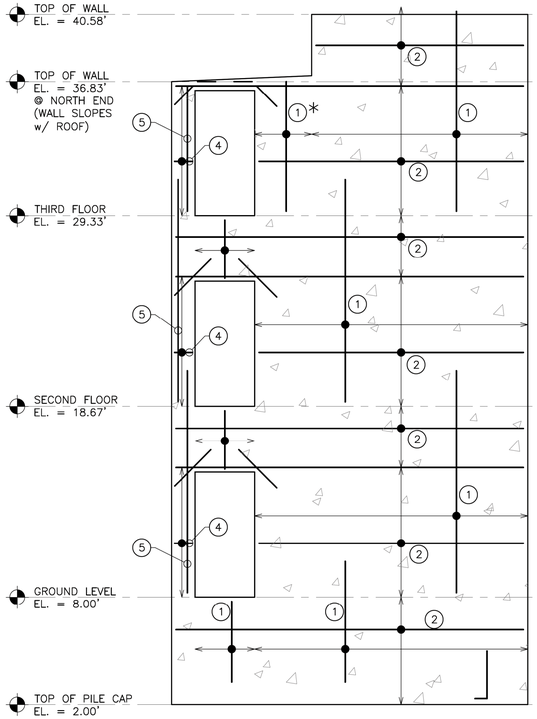
ELEVATION 1 / S2.3
SCALE: ¼" = 1'-0"



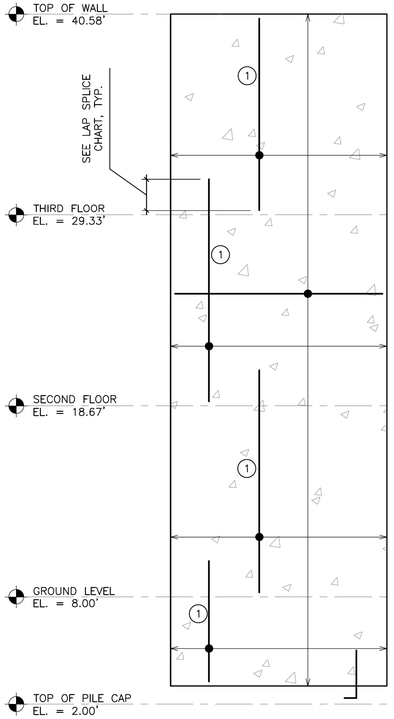
ELEVATION 2 / S2.3
SCALE: ¼" = 1'-0"



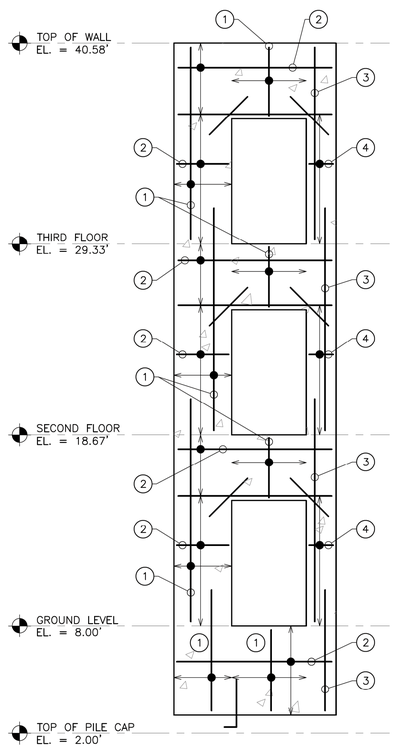
ELEVATION 3 / S2.3
SCALE: ¼" = 1'-0"



ELEVATION 4 / S2.3
SCALE: ¼" = 1'-0"



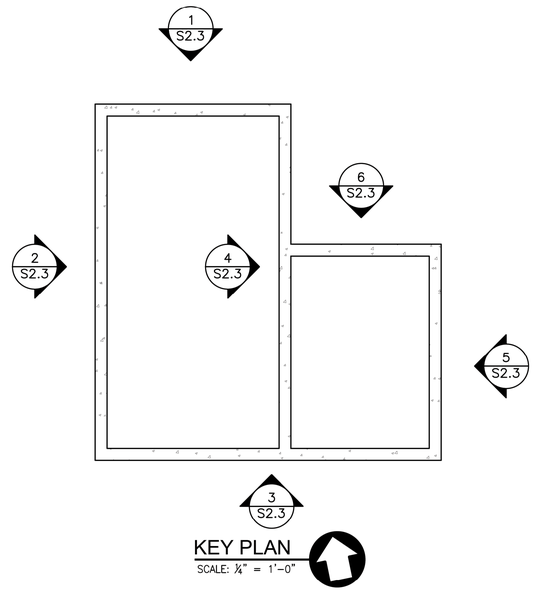
ELEVATION 5 / S2.4
SCALE: ¼" = 1'-0"



ELEVATION 6 / S2.3
SCALE: ¼" = 1'-0"

LEGEND:

(1) #5 @ 12" O.C. VERT. CENTERED IN WALL
(2) #4 @ 12" O.C. HORIZ. CENTERED IN WALL
(3) #5 @ 10" O.C. VERT. CENTERED IN WALL
(4) #4 @ 10" O.C. HORIZ. CENTERED IN WALL
(5) #5 @ 6" O.C. VERT. CENTERED IN WALL
(6) #5 @ 5" O.C. VERT. CENTERED IN WALL
∗ VARY BAR LENGTH w/ TOP OF WALL



KEY PLAN
SCALE: ¼" = 1'-0"

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

WEST STAIR AND ELEVATOR TOWER ELEVATIONS

ROLAND E. HOLLAND
REGISTERED
No. 13552
DELAWARE
PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9-27-2024

S2.3

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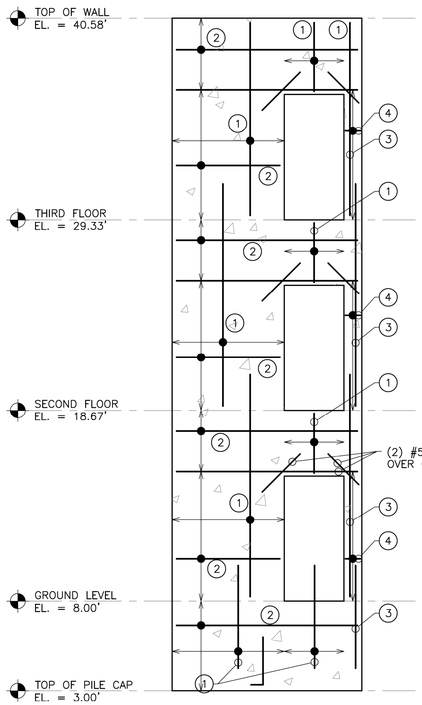
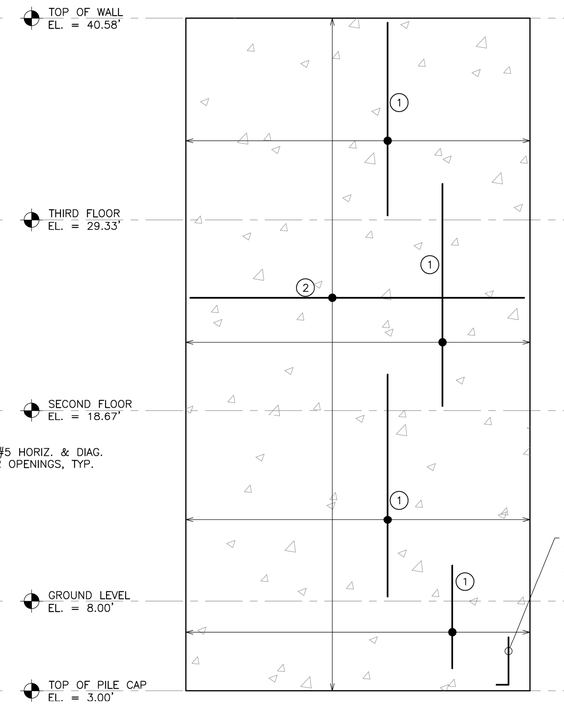
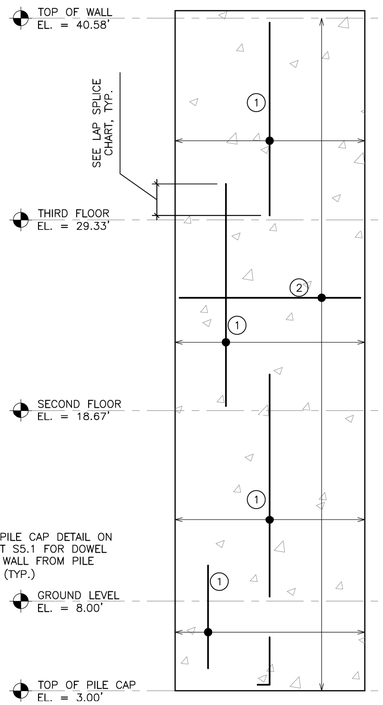


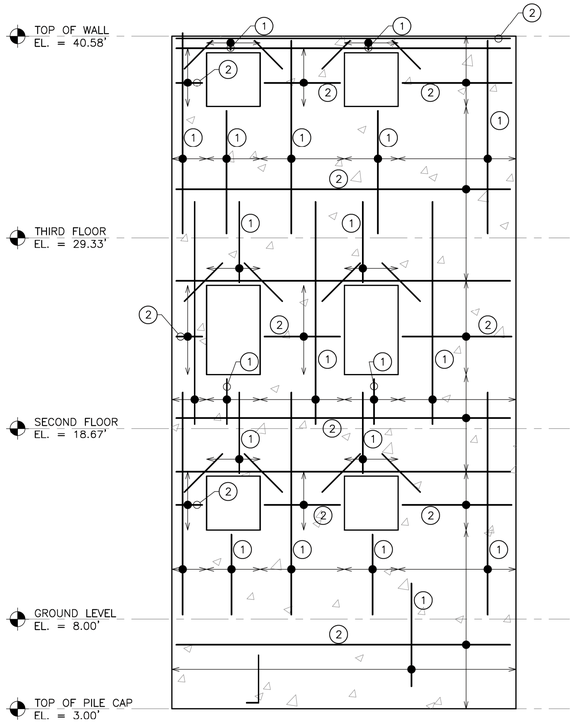
ELEVATION 1 S2.4
SCALE: ¼" = 1'-0"



ELEVATION 2 S2.4
SCALE: ¼" = 1'-0"



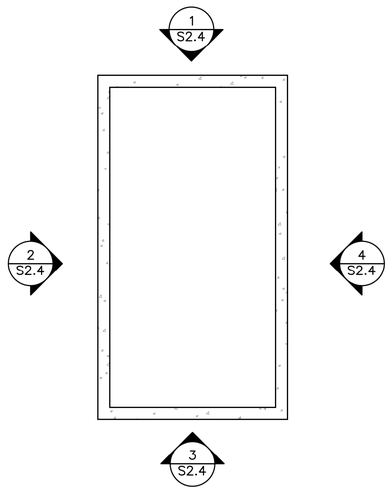
ELEVATION 3 S2.4
SCALE: ¼" = 1'-0"



ELEVATION 4 S2.4
SCALE: ¼" = 1'-0"

LEGEND:

(1) #5 @ 12" O.C. VERT. CENTERED IN WALL
(2) #4 @ 12" O.C. HORIZ. CENTERED IN WALL
(3) #5 @ 5" O.C. VERT. CENTERED IN WALL
(4) #4 @ 10" O.C. HORIZ. CENTERED IN WALL



KEY PLAN
SCALE: ¼" = 1'-0"

NO.	REVISION	DATE
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

EAST STAIR ELEVATIONS

ROLAND E. HOLLAND
REGISTERED
No. 13552
DELAWARE
PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
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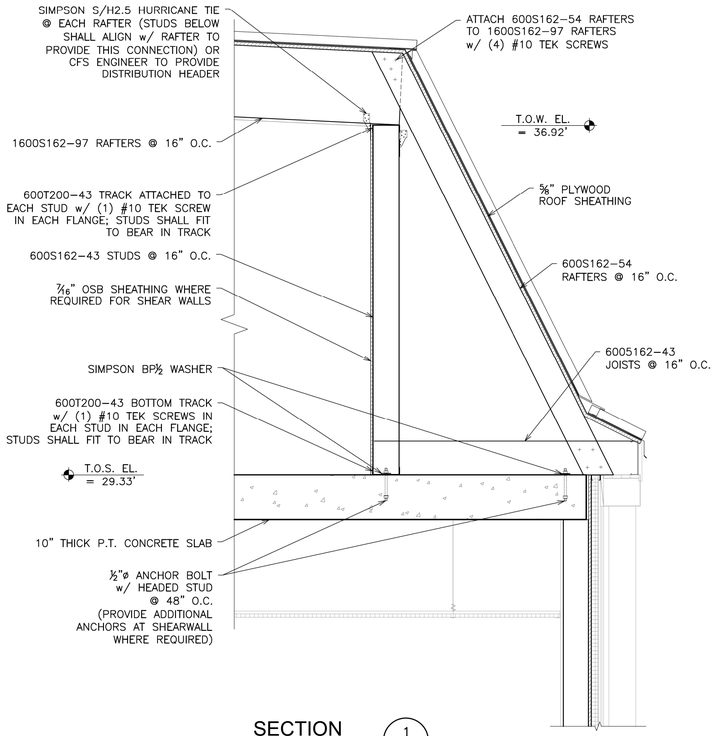
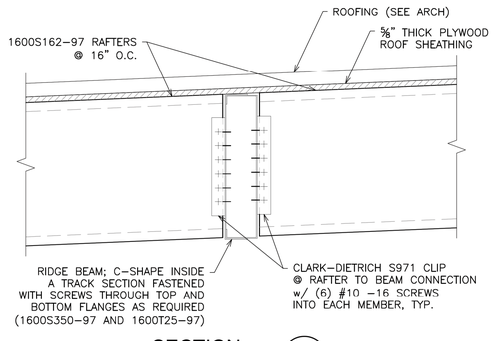
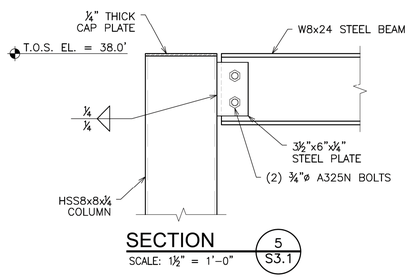


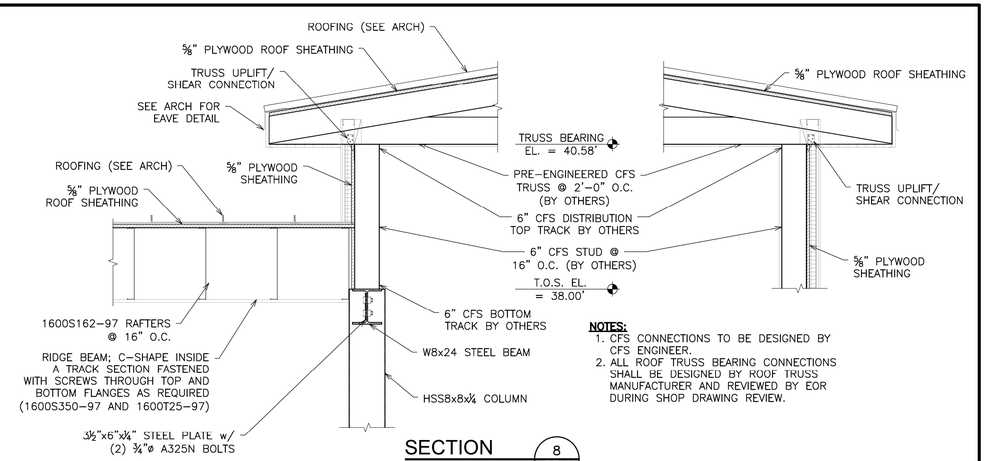
SECTION 1 — SCALE: 3/4" = 1'-0" — S3.1



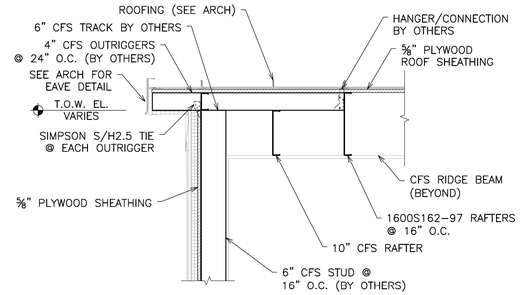
SECTION 4 — SCALE: 1 1/2" = 1'-0" — S3.1



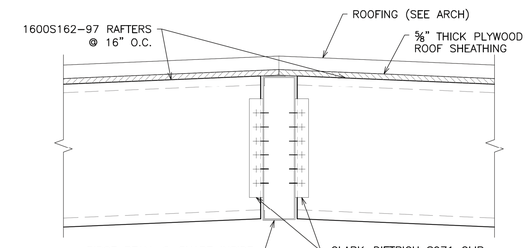
SECTION 5 — SCALE: 1 1/2" = 1'-0" — S3.1



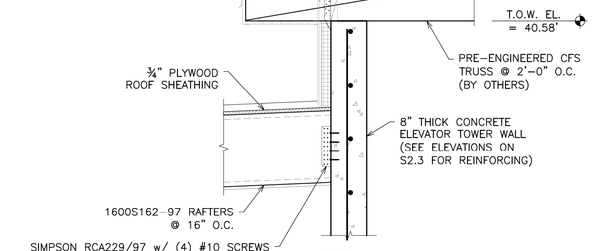
SECTION 8 — SCALE: 3/4" = 1'-0" — S3.1



SECTION 9 — SCALE: 3/4" = 1'-0" — S3.1

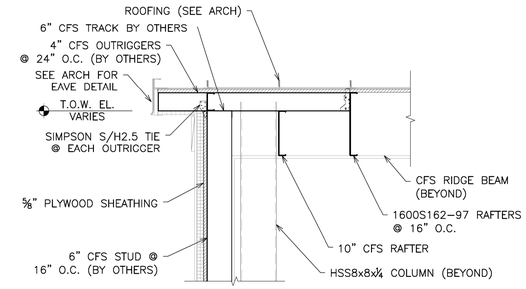


SECTION 2 — SCALE: 1 1/2" = 1'-0" — S3.1

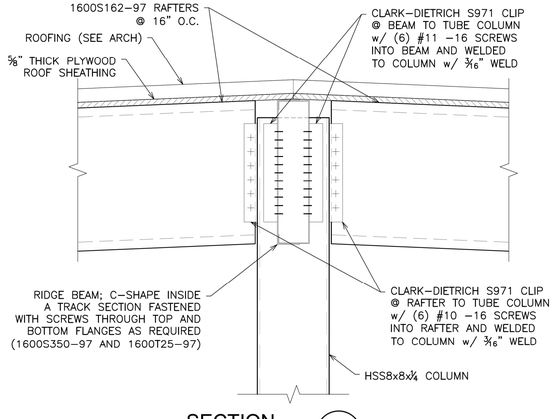


NOTES:
1. ALL ROOF TRUSS BEARING CONNECTIONS SHALL BE DESIGNED BY ROOF TRUSS MANUFACTURER AND REVIEWED BY EOR DURING SHOP DRAWING REVIEW.
2. ALL OTHER COLD-FORMED CONNECTIONS SHALL BE DESIGNED BY CFS ENGINEER.

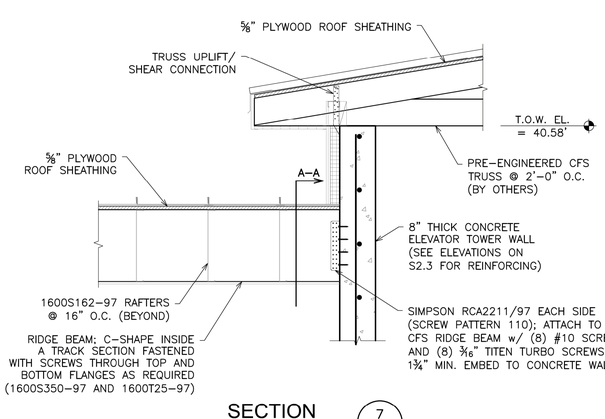
SECTION 6 — SCALE: 3/4" = 1'-0" — S3.1



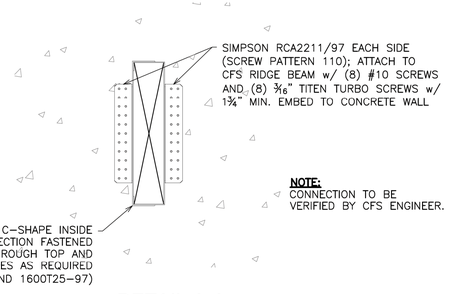
SECTION 10 — SCALE: 3/4" = 1'-0" — S3.1



SECTION 3 — SCALE: 1 1/2" = 1'-0" — S3.1



SECTION 7 — SCALE: 3/4" = 1'-0" — S3.1



DETAIL A-A — SCALE: 1 1/2" = 1'-0"

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

SECTIONS AND DETAILS

ROLAND E. HOLLAND REGISTERED No. 13552 DELAWARE PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9-27-2024

S3.1

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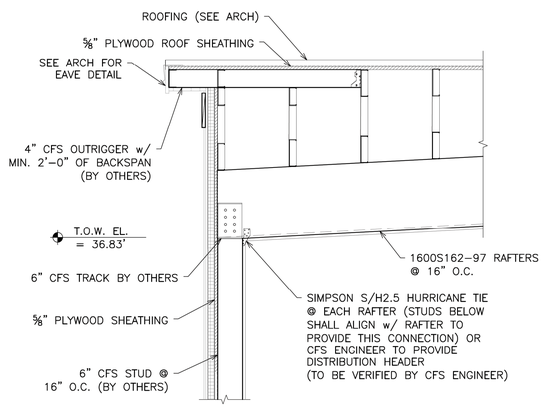
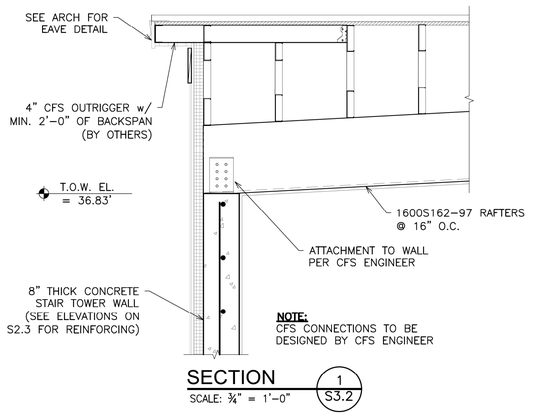


SECTION 2 / S3.2

SCALE: ¾" = 1'-0"

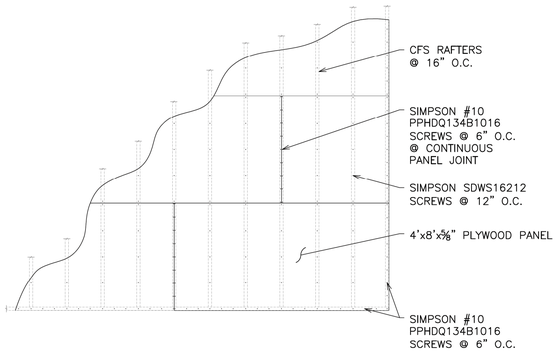


SECTION 1 / S3.2

SCALE: ¾" = 1'-0"

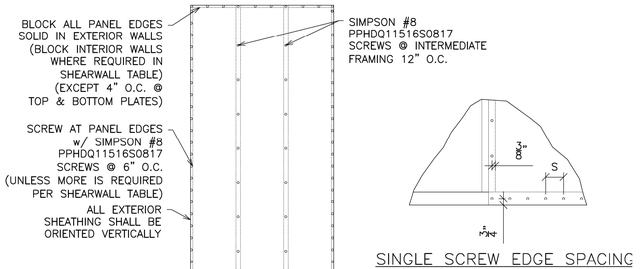
ELEV. MECH. RAILING DETAIL

NOTES:
1. MAX. POST SPACING 5-0 O.C. NO SCALE
2. PIPE RAILING AND COMPONENT PARTS COMING IN CONTACT WITH DISSIMILIAR MATERIALS SHALL BE PAINTED WITH BITUMINOUS PAINT.



ROOF SHEATHING ATTACHMENT DETAIL

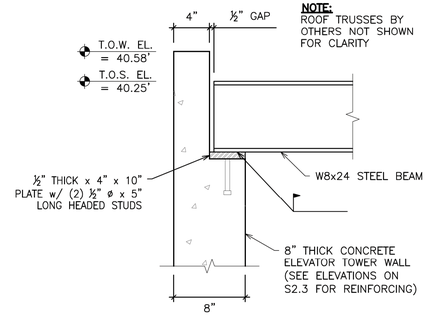
SCALE: ⅜" = 1'-0"



WALL SHEATHING ATTACHMENT

N.T.S.

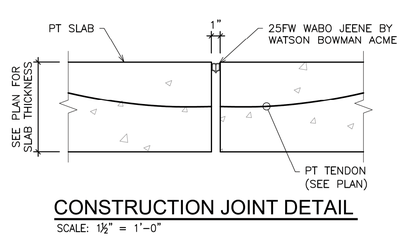
SINGLE SCREW EDGE SPACING



TYPICAL ELEVATOR HOIST BEAM DETAIL

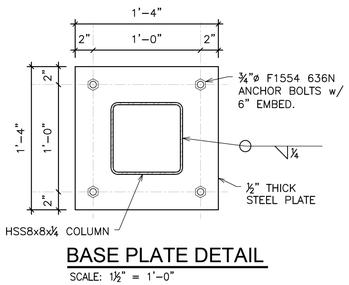
SCALE: 1½" = 1'-0"

NOTES:
1. STEEL ANGLE SHALL MEET ASTM A36 (Fy = 36KSI).
2. STEEL BEAM SHALL MEET ASTM A992 (Fy = 50KSI).
3. RAIL SUPPORT BEAMS ARE TO BE INSTALLED AT THE ELEVATIONS SHOWN IN WITH THE ELEVATOR SHOP DRAWINGS (CONTRACTOR TO VERIFY)
4. HOIST BEAM ELEVATION TO BE VERIFIED DURING ELEVATOR SHOP DRAWING REVIEW



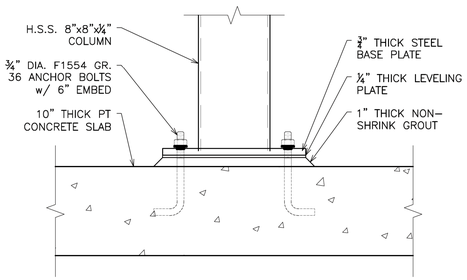
CONSTRUCTION JOINT DETAIL

SCALE: 1½" = 1'-0"



BASE PLATE DETAIL

SCALE: 1½" = 1'-0"



TYP. COLUMN CONNECTION DETAIL

SCALE: 1½" = 1'-0"

SHEAR WALL SCHEDULE

MARK	BLOCKED OR UN-BLOCKED	FRAMING NOTES	BOTTOM PLATE ATTACHMENT TO CONCRETE	HOLDOWN @ EACH END (SEE SHEAR WALL HOLDOWN ELEVATION)	CHORD STUDS
SW1	BLOCKED	600S162-43 CFS STUDS (MIN.) @ 16" O.C. w/ 7/16" OSB SHEATHING INTERIOR SIDE w/ SIMPSON #8 PPHDQ11516S0817 SCREWS @ 6" O.C. @ PANEL EDGES AND 12" O.C INTERMEDIATE	½"ø F1554 GRADE 36 ANCHOR BOLTS @ 32" O.C. w/ 6" EMBED.	SIMPSON S/HDU4-43 GALVANIZED (G90) w/ ⅝"ø F1554 GRADE 36 ANCHOR RODS w/ 6" EMBED. AND (6) #14 SELF DRILLING SCREWS	(2) 600S162-43 BACK-TO-BACK CFS STUDS
SW2	BLOCKED	600S162-43 CFS STUDS (MIN.) @ 16" O.C. w/ ⅝" EXTERIOR SHEATHING w/ SIMPSON #8 PPHDQ11516S0817 SCREWS @ 6" O.C. @ PANEL EDGES AND 12" O.C INTERMEDIATE	½"ø F1554 GRADE 36 ANCHOR BOLTS @ 32" O.C. w/ 6" EMBED.	SIMPSON S/HDU4-43 GALVANIZED (G90) w/ ⅝"ø F1554 GRADE 36 ANCHOR RODS w/ 6" EMBED. AND (6) #14 SELF DRILLING SCREWS	(2) 600S162-43 BACK-TO-BACK CFS STUDS

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
3.	ISSUED FOR BID	11/15/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

SECTIONS AND DETAILS

ROLAND E. HOLLAND REGISTERED No. 13552 DELAWARE PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9-27-2024

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MEMBER SIZE	
``	SSMA
1 ⅝"	162
2 ½"	250
3 ½"	350
3 ⅝"	362
4"	400
5 ½"	550
6"	600
8"	800
10"	1000
12"	1200

EXTERIOR WALL SCHEDULE		
FLOOR PLAN	END ZONES (SEE PLAN)	NON-END ZONES (SEE PLAN)
UPPER FLOOR	600S162-43 @ 16" O.C.	600S162-43 @ 16" O.C.
2ND-3RD FLOOR	600S162-43 @ 16" O.C.	600S162-43 @ 16" O.C.

FILLET AND FLARE GROOVE WELD ALLOWABLE LOADS		
STEEL MILS	NOMINAL WELD SIZE (IN)	ALLOWABLE LOAD (LBS/IN)
54	3/32	1104
68	1/8	1390
97	1/8	1983
118	1/8	2422

WELD CAPACITIES BASED ON AISI SECTION E2.

VALUES INCLUDE A 2.5 FACTOR OF SAFETY.

BASED ON THE MINIMUM ALLOWANCE LOAD FOR FILLET AND FLARE GROOVE WELDS, LONGITUDINAL OR TRANSVERSE LOADS.

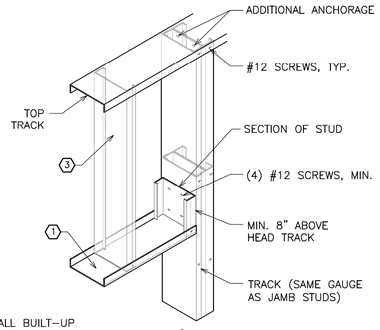
ALLOWABLE LOADS BASED ON E60XX ELECTRODES.

MEMBER TYPE	FLANGE WIDTH	SSMA
STUDS	1 ¼"	S125
	1 ⅜"	S137
	1 ⅝"	S162
	2"	S200
	2 ½"	S250
	3"	S300
	3 ½"	S350
TRACKS	T125	T125
	T150	T150
	T200	T200

MATERIAL THICKNESS/GAUGE				
MILS	GAUGE	DESIGN THICKNESS	MINIMUM THICKNESS	YEILD STRENGTH
33	20	0.0346"	0.0329"	33 KSI
43	18	0.0451"	0.0428"	33 KSI
54	16	0.0566"	0.0538"	50 KSI
68	14	0.0713"	0.0677"	50 KSI
97	12	0.1017"	0.0969"	50 KSI
118	10	0.1242"	0.1180"	50 KSI

NOTE:

FRAMING COMPONENTS FOR COLD-FORMED STEEL TO BE DESIGNED BY CFS ENGINEER. CFS ENGINEER TO SUBMIT CALCULATIONS AND DRAWINGS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF DELAWARE FOR REVIEW AND APPROVAL.



NOTES:
1. FASTEN ALL BUILT-UP MEMBERS AT 12" O.C., MIN.
2. REFER TO ARCHITECTURAL DOOR & WINDOW SCHEDULE FOR DOOR & WINDOW TYPE.

WINDOW OPENING LEGEND:

1. HEADER TRACK (WINDOW TYPE)
2. JAMB (WINDOW TYPE)
3. STUD (WINDOW TYPE)
4. SILL TRACK (WINDOW TYPE)
5. ANCHORAGE (WINDOW TYPE)

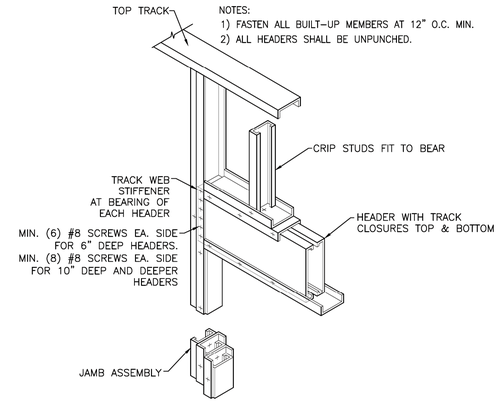
DOOR OPENING SCHEDULE:

1. HEADER TRACK (DOOR TYPE)
2. JAMB (DOOR TYPE)
3. STUD (DOOR TYPE)
5. ANCHORAGE (DOOR TYPE)

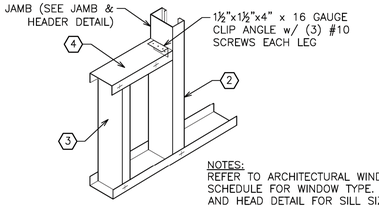
ABBREVIATIONS:

B-B = BACK-TO-BACK STUDS

TYPICAL HEADER (TRACK ONLY) DETAIL
N.T.S.

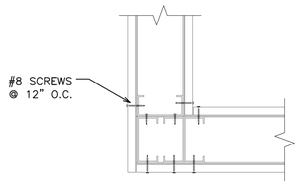


TYPICAL HEADER DETAIL
N.T.S.

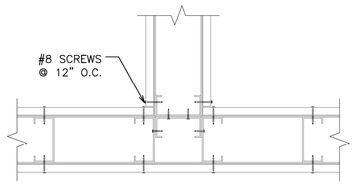


NOTES:
REFER TO ARCHITECTURAL WINDOW SCHEDULE FOR WINDOW TYPE. SEE JAMB AND HEAD DETAIL FOR SILL SIZE.

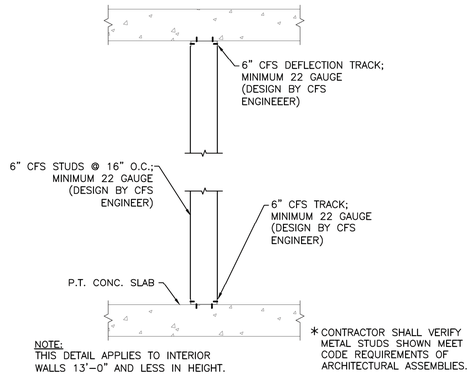
TYPICAL WINDOW SILL DETAIL
N.T.S.



TYP. WALL CORNER DETAIL
N.T.S.



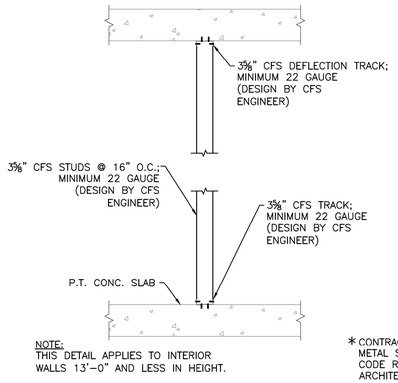
TYP. WALL INTERSECTION DETAIL
N.T.S.



NOTE:
THIS DETAIL APPLIES TO INTERIOR WALLS 13'-0" AND LESS IN HEIGHT.

*CONTRACTOR SHALL VERIFY METAL STUDS SHOWN MEET CODE REQUIREMENTS OF ARCHITECTURAL ASSEMBLIES.

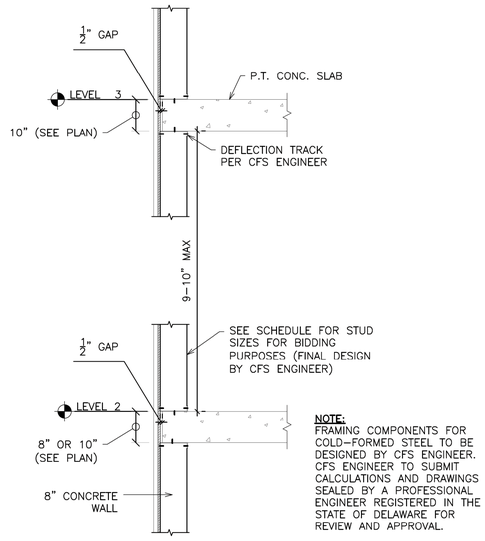
TYPICAL 6" INTERIOR WALL SECTION
SCALE: ¾" = 1'-0"



NOTE:
THIS DETAIL APPLIES TO INTERIOR WALLS 13'-0" AND LESS IN HEIGHT.

*CONTRACTOR SHALL VERIFY METAL STUDS SHOWN MEET CODE REQUIREMENTS OF ARCHITECTURAL ASSEMBLIES.

TYPICAL 3⅝" INTERIOR WALL SECTION
SCALE: ¾" = 1'-0"



NOTE:
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TYPICAL EXTERIOR WALL SECTION @ LEVEL 2 & ABOVE
SCALE: ¾" = 1'-0"

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

COLD FORMED STEEL DETAILS AND SCHEDULES

ROLAND E. HOLLAND REGISTERED No. 13552 DELAWARE PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
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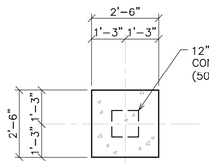
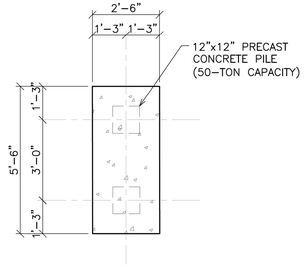
PILE CAP SCHEDULE					
PILE CAP MARK	PILE CAP DIMENSIONS	BOTTOM REBARS		TOP REBARS	
		SHORT BARS	LONG BARS	SHORT BARS	LONG BARS
PC1	2'-6"x2'-6"x30"	(5) #5	(5) #5	N/A	N/A
PC2	2'-6"x5'-6"x37"	(5) #4	(8) #5	N/A	N/A
PC3	5'-6"x5'-2"x31"	(7) #5 3-WAYS		N/A	N/A
PC4	5'-6"x5'-6"x32"	(12) #6	(12) #6	N/A	N/A

GRADE BEAM SCHEDULE									
MARK	WIDTH	DEPTH	REINFORCING				STIRRUPS		
			TOP L.E.	BOTTOM	TOP R.E.	TOP F.L.	SIZE	TYPE	SPACING AT EACH END
GB1	30"	30"	——	(6) #7	——	(6) #7	#3	▭	(1)@2", BAL. @ 8"
GB2	24"	24"	——	(4) #7	——	(6) #5	#3	▭	(1)@2", BAL. @ 10"
GB3	24"	24"	——	(4) #5	——	(4) #5	#3	▭	1@2", BAL @ 24"
GB4	16"	24"	——	(3) #7	——	(3) #6	#3	▭	1@2", BAL @ 24"

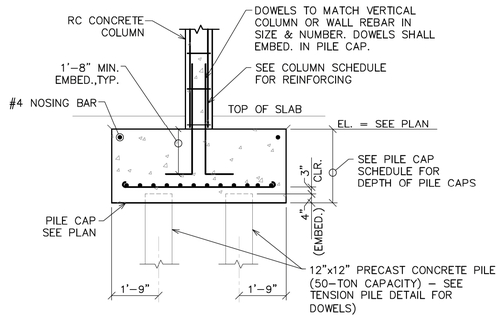
NOTE:
F.L.= FULL LENGTH



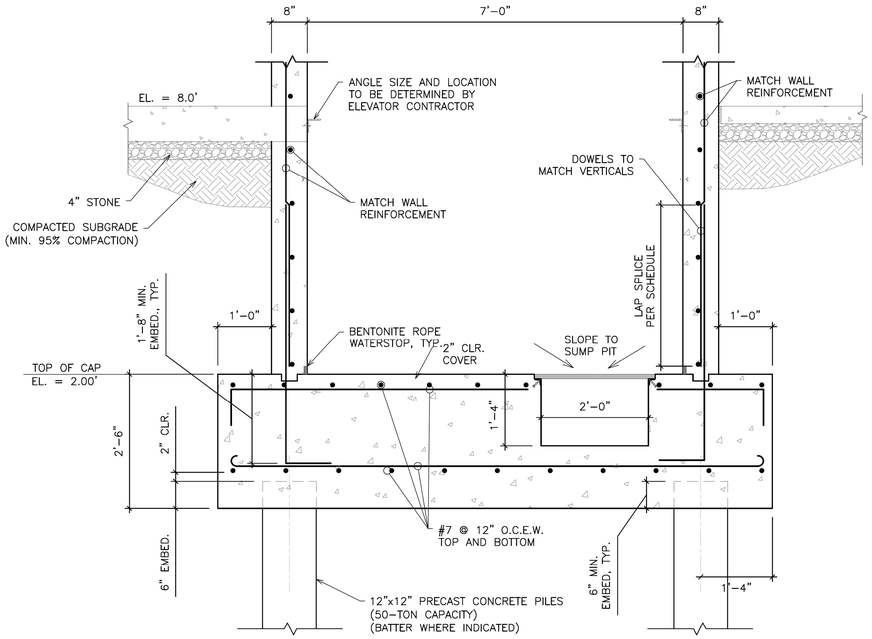
PC1 (D = 30")
SCALE: ⅜" = 1'-0"



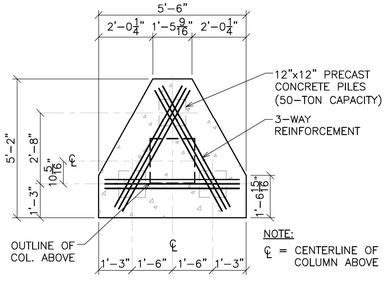
PC2 (D = 37")
SCALE: ⅜" = 1'-0"



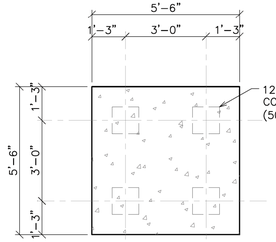
TYPICAL PEDESTAL PILE CAP DETAIL
SCALE: ⅜" = 1'-0"



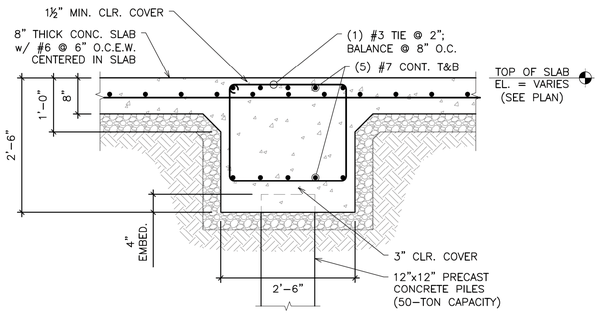
SECTION 1/S5.1
SCALE: ¾" = 1'-0"



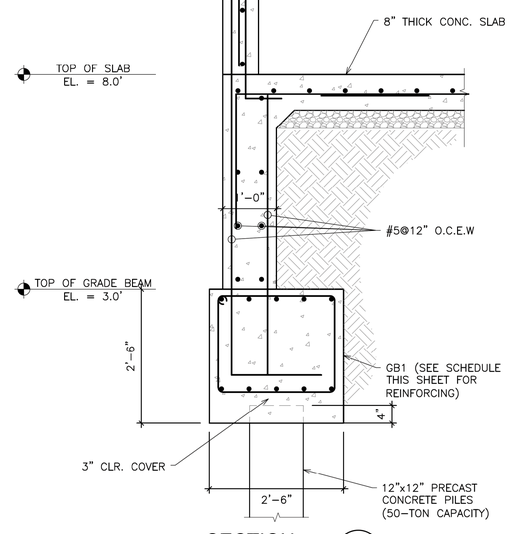
PC3 (D = 31")
SCALE: ⅜" = 1'-0"



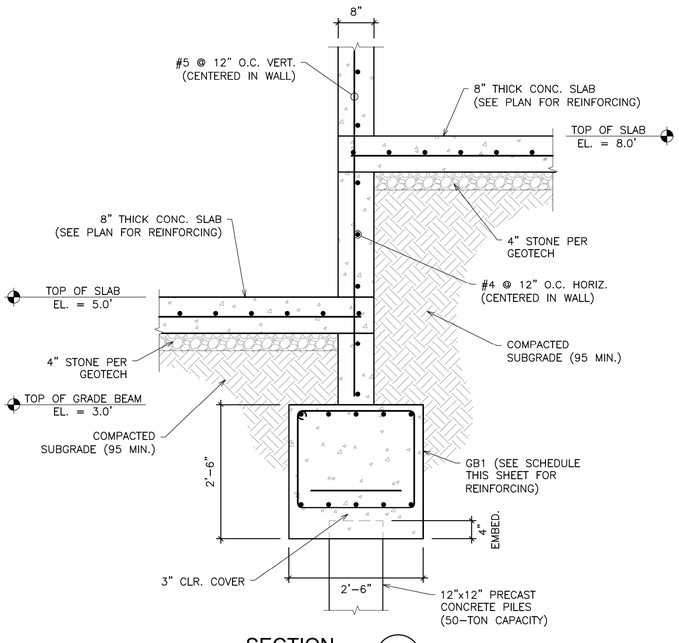
PC4 (D = 32")
SCALE: ⅜" = 1'-0"



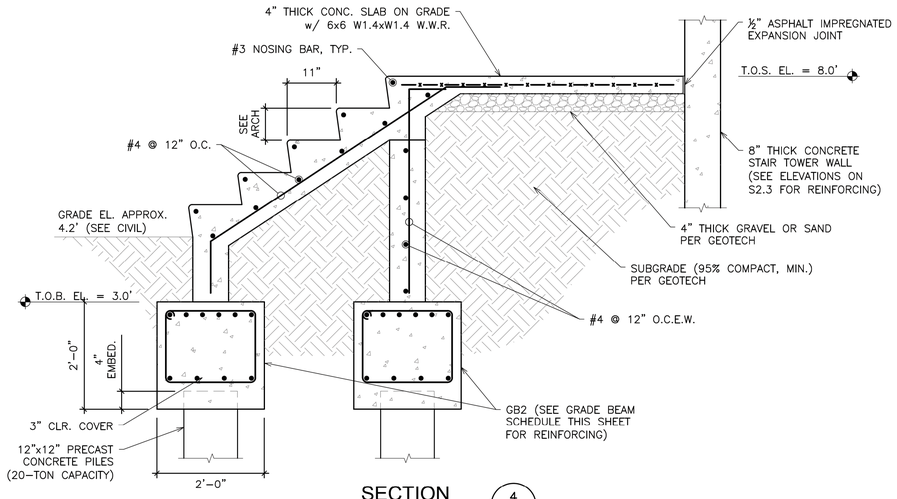
TS1 SECTION 2/S5.1
SCALE: ¾" = 1'-0"



SECTION 3/S5.1
SCALE: ¾" = 1'-0"



SECTION 5/S5.1
SCALE: ¾" = 1'-0"



SECTION 4/S5.1
SCALE: ¾" = 1'-0"

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
3.	ISSUED FOR BID	11/15/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

FOUNDATION SECTION AND DETAILS

ROLAND E. HOLLAND REGISTERED No. 13552 DELAWARE PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9-27-2024

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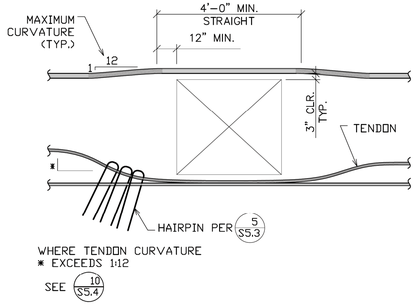
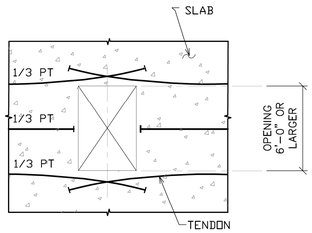
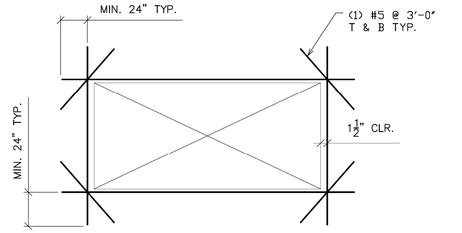


1 S5.2 TENDON PLACEMENT AT OPENING 24" OR LARGER



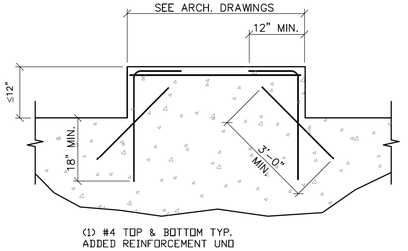
2 S5.2 ARRANGEMENT OF TENDONS AT OPENING 6'-0" OR LARGER



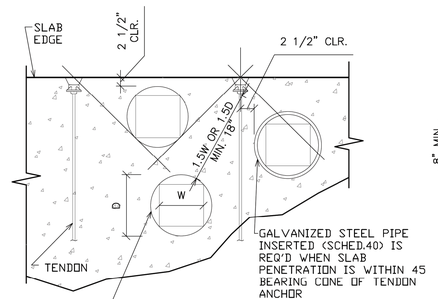
MAX. DIMENSION	REINFORCING
12' TO 18'	1 #5 EA. SIDE
18' TO 2'-6'	1 #5 T & B, EA. SIDE
2'-6' & LARGER	2 #5 T & B, EA. SIDE

NOTES:
1- ALL OPENINGS LARGER THAN 12' SHALL BE TRIMMED AS SHOWN
2- THESE BARS ARE IN ADDITION TO REBAR SHOWN ON PLANS
3- FOR MULTIPLE OPENINGS SEE 6/S5.2

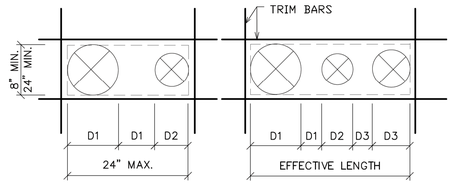
3 S5.2 TRIM BARS FOR INTERIOR OPENINGS IN SLAB



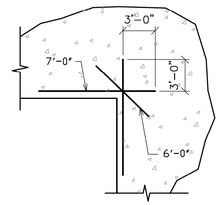
4 S5.2 TRIM BARS AT CANTILEVERED SLAB



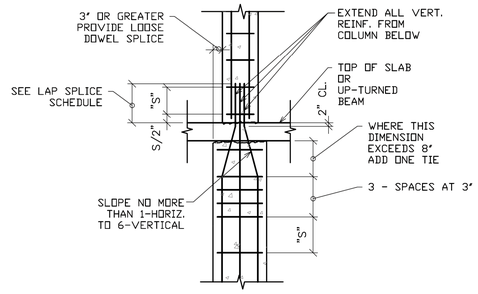
5 S5.2 OPENINGS AT PT ANCHORAGE



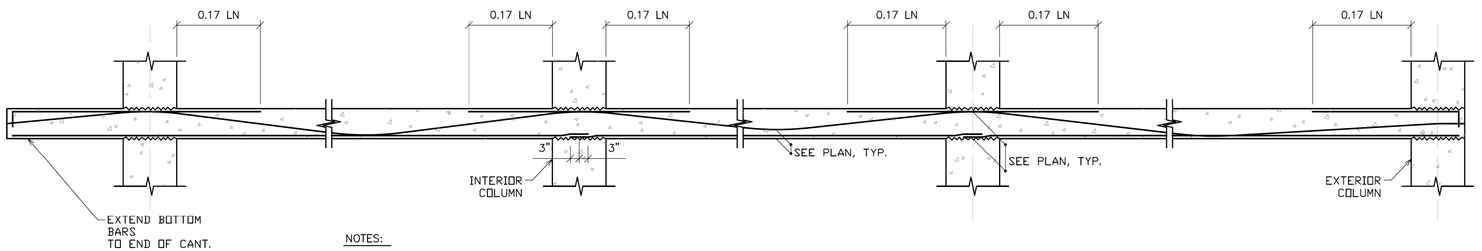
6 S5.2 TRIM BARS FOR MULTIPLE OPENINGS



7 S5.2 TRIM BARS AT RE-ENTRANT CORNERS

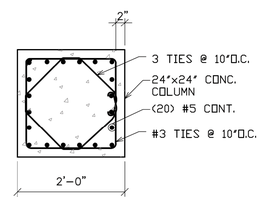


8 S5.2 COLUMN DETAIL FRAMED AT FLOOR
S= COLUMN TIE SPACING AS PER COLUMN SCHEDULE



NOTES:

1. CENTER ALL TOP BARS OVER CENTER LINE SUPPORTS.
2. LN IS THE CLEAR SPAN BETWEEN SUPPORTS. COEF. x LN SHALL BE BASED ON THE LARGER CLEAR SPAN ON EACH SIDE OF SUPPORT.
3. DEPTH OF CONCRETE COVER TO REINFORCING SHALL BE AS INDICATED IN THE STRUCTURAL NOTES.
4. PROVIDE A MINIMUM OF TWO TENDONS IN EACH DIRECTION THROUGH THE COLUMN CORE, UNLESS NOTED OTHERWISE ON PLANS.
5. SEE PLAN FOR TOP AND BOTTOM MILD REINFORCING REQUIRED. WHERE TOP BARS ARE SHOWN AT COLUMNS, PLACE BARS EQUALLY SPACED WITHIN A BAND WIDTH EQUAL TO COLUMN DIMENSION PLUS 1 1/2 TIMES SLAB THICKNESS ON EACH SIDE OF COLUMN. TOP BARS SHOWN BETWEEN THESE AREAS SHALL BE EVENLY DISTRIBUTED.
6. PROVIDE A 180 DEG. HOOK AT EXTERIOR TOP BARS IF SLAB DEPTH DOES NOT PERMIT A 90 DEG. HOOK.
7. SEE POST TENSIONING NOTES FOR CHAIRS AND HOLDING BARS NOT SHOWN.



TYPICAL POST TENSIONED TWO-WAY SLAB REINFORCING DETAIL

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
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NEW CONSTRUCTION FOR:
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POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

PT DETAILS

ROLAND E. HOLLAND REGISTERED No. 13552 DELAWARE PROFESSIONAL ENGINEER

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S5.2

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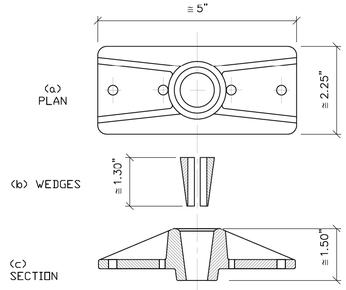
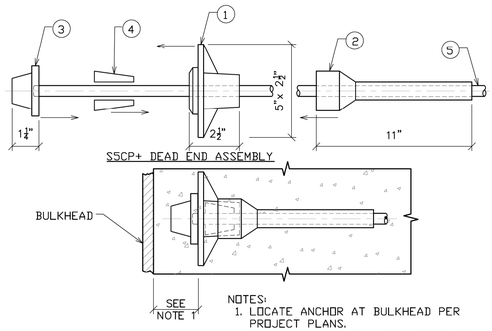


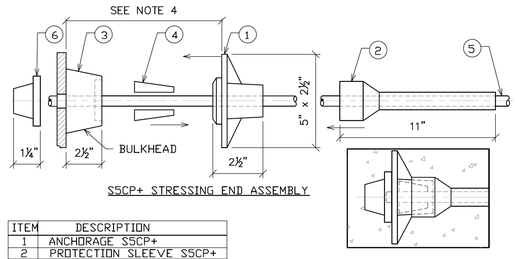
1 S5.3 GENERIC MONOSTRAND ANCHORAGE



ITEM	DESCRIPTION
1	ANCHORAGE
2	S5CP+PROTECTION SLEEVE
3	S5CP+END CAP S5CP+
4	MONOWEDGES TYPE 1.5
5	STRAND (GREASED & COATED)

NOTES:
1. LOCATE ANCHOR AT BULKHEAD PER PROJECT PLANS.
2. IF FABRICATED AT SHOP,WEDGES,GREASE CAP, AND SLEEVE WILL BE ASSEMBLED TIGHT TO ANCHOR
3. IF FIELD SEATING IS REQUIRED, BE SURE ALL COMPONENTS ARE TIGHT TO ANCHOR, BE SURE NO BARE STRAND IS EXPOSED, TAPE IF NECESSARY

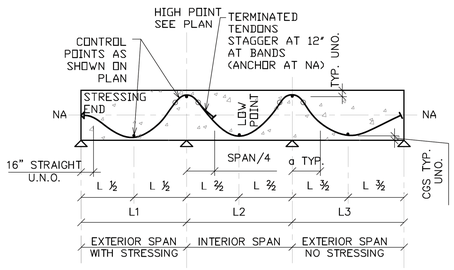
2 S5.3 ENCAPSULATED SYSTEM FOR TENDONS IN CORROSIVE ENVIRONMENT (DEAD END)



ITEM	DESCRIPTION
1	ANCHORAGE S5CP+
2	PROTECTION SLEEVE S5CP+
3	GROMMET S5CP+
4	MONOWEDGES TYPE 1.5
5	STRAND(GREASED AND COATED)
6	END CAP S5CP+

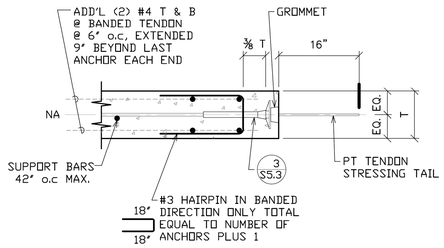
NOTES:
1. LOCATE ANCHOR AT BULKHEAD PER PROJECT PLANS.
2. INSTALL GROMMET FLUSH BETWEEN BULKHEAD AND ANCHOR FOR TIGHT SEAL.
3. SLIDE SLEEVE TIGHT AGAINST ANCHOR. BE SURE NO BARE STRAND IS EXPOSED. TAPE IF NECESSARY.
4. AFTER POURING, AT TIME OF STRESSING, REMOVE GROMMET AND INSERT WEDGES.
5. AFTER STRESSING, CUT STRAND TO WITHIN 1/8" OF END OF END CAP AND GREASE END CAP PRIOR TO INSERTING IT TIGHT AGAINST ANCHOR.
6. PATCH STRESSING POCKET PER PROJECT PLANS.

3 S5.3 ENCAPSULATED SYSTEM FOR TENDONS IN CORROSIVE ENVIRONMENT (STRESSING END)

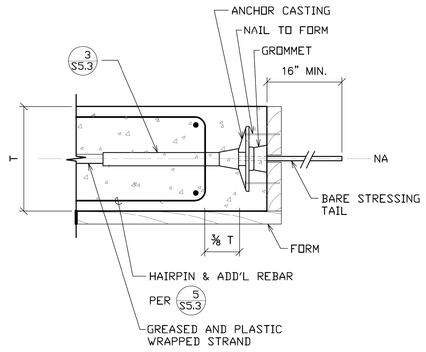


NOTES: a = 0.1 L
FOR UNIFORM SLAB
NA IS AT MID-DEPTH

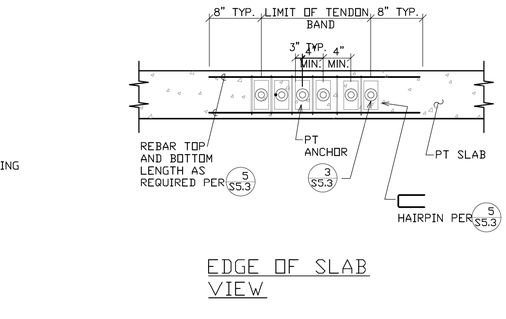
4 S5.3 PROFILE FOR REVERSED PARABOLA TENDONS



5 S5.3 STRESSING END ANCHOR SHOWING THE HAIRPIN AND ADDED #4 BARS AT TENDON BANDS IN CORROSIVE ENVIRONMENT

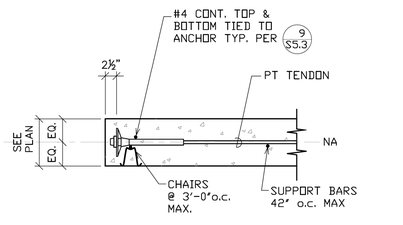


6 S5.3 STRESSING END ANCHOR FOR BANDED TENDON IN CORROSIVE ENVIRONMENT

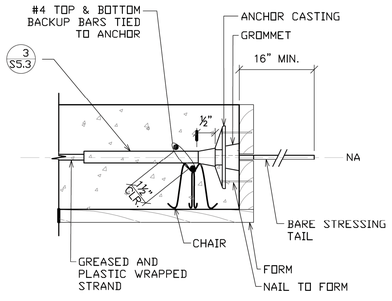


EDGE OF SLAB VIEW

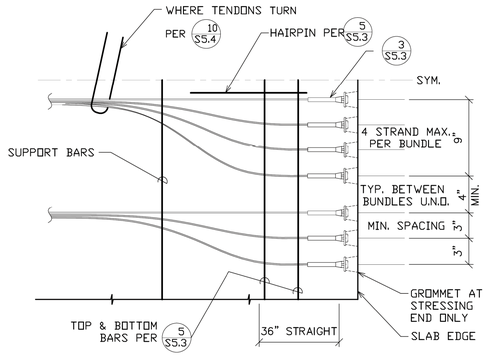
7 S5.3 TYPICAL REINFORCEMENT OF TENDON BAND AT SLAB EDGE OR INTERMEDIATE STRESSING IN CORROSIVE ENVIRONMENT



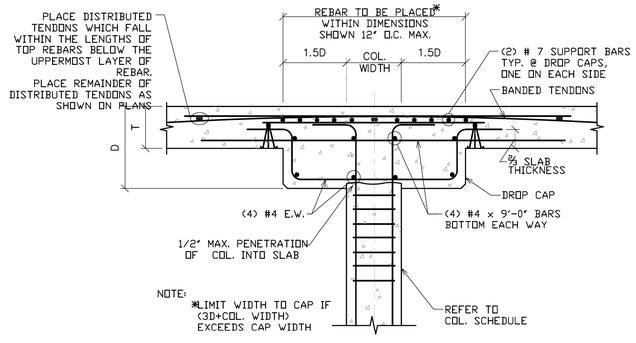
8 S5.3 DEAD END AT DISTRIBUTED TENDONS IN CORROSIVE ENVIRONMENT



9 S5.3 STRESSING END ANCHOR FOR DISTRIBUTED TENDONS IN CORROSIVE ENVIRONMENT



10 S5.3 FLARING OF BANDED TENDONS AT SLAB EDGE IN CORROSIVE ENVIRONMENT



11 S5.3 TYPICAL INTERIOR COLUMN W/ DROP CAP -SLAB SECTION AT TOP FLOOR

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
3.	ISSUED FOR BID	11/15/2024

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 410-742-3115
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

PT DETAILS

ROLAND E. HOLLAND REGISTERED No. 13552 DELAWARE PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9-27-2024

S5.3

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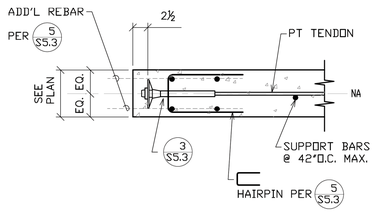
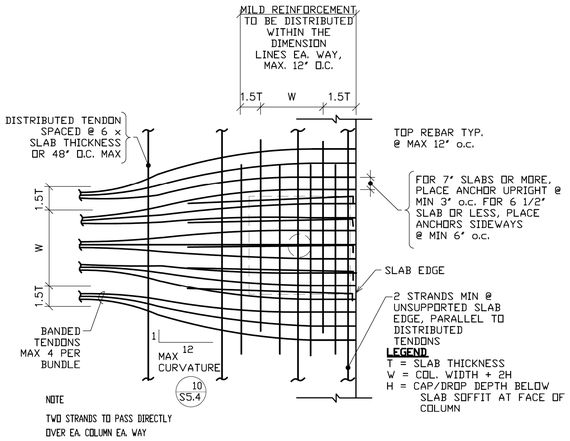
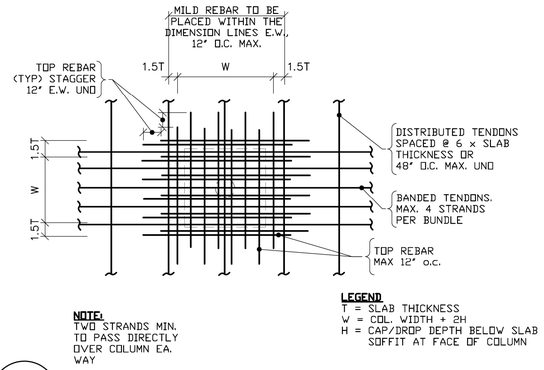


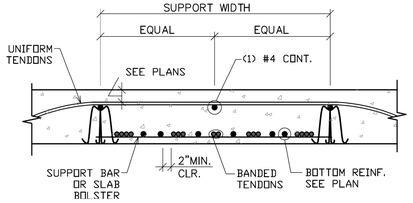
1 S5.4 DEAD END AT BANDED TENDONS IN CORROSIVE ENVIRONMENT



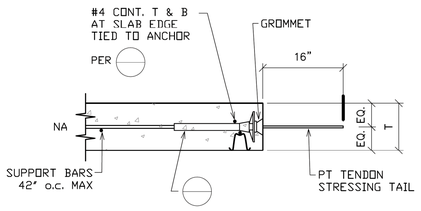
2 S5.4 TOP REINFORCEMENT AT EXTERIOR COLUMNS



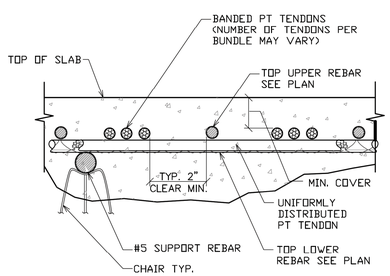
3 S5.4 TOP REINFORCEMENT AT INTERIOR COLUMNS



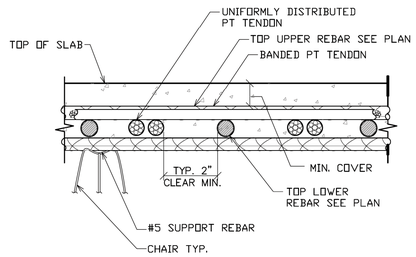
4 S5.4 SECTION - BANDED TENDONS AT MID-SPAN



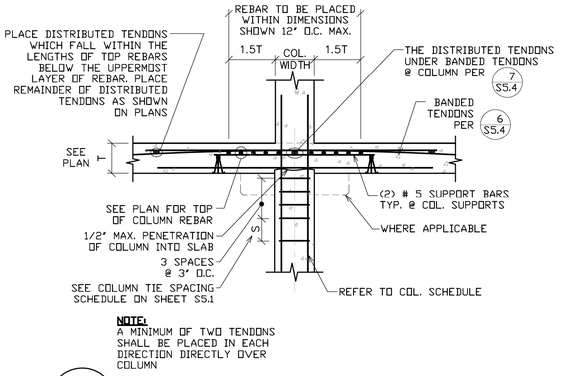
5 S5.4 STRESSING END ANCHOR SHOWING THE HAIRPIN AND ADDED #4 BARS AT DISTRIBUTED TENDONS IN CORROSIVE ENVIRONMENT



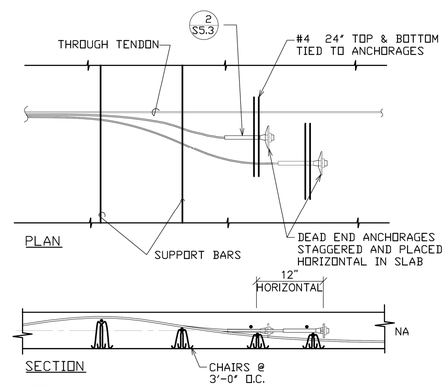
6 S5.4 SECTION THROUGH BANDED TENDON AT COLUMN



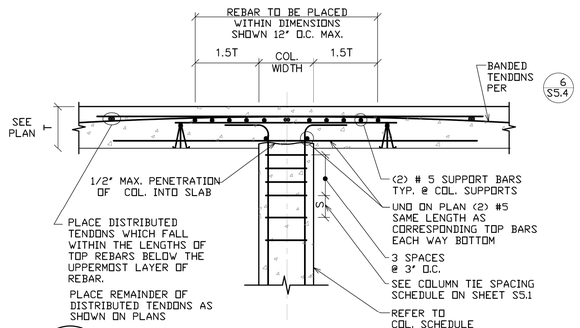
7 S5.4 SECTION THROUGH DISTRIBUTED TENDON AT COLUMN



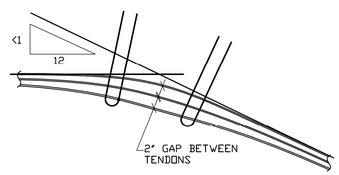
8 S5.4 TYPICAL INTERIOR COLUMN



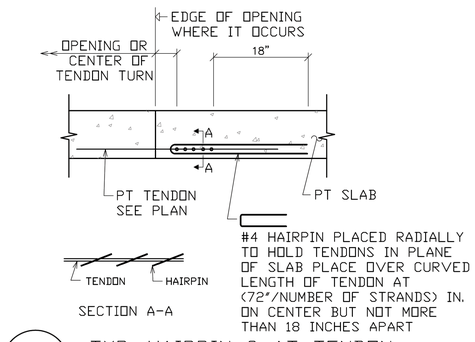
9 S5.4 PLACEMENT OF ADDED TENDON IN CORROSIVE ENVIRONMENT



10 S5.4 TYPICAL INTERIOR COLUMN-SLAB SECTION AT TOP FLOOR



11 S5.4 TENDON PLACEMENT FOR TURNS >1:12



12 S5.4 TYP. HAIRPIN @ AT TENDON TURNS

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
3.	ISSUED FOR BID	11/15/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

PT DETAILS

ROLAND E. HOLLAND REGISTERED No. 13552 DELAWARE PROFESSIONAL ENGINEER

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9-27-2024

S5.4

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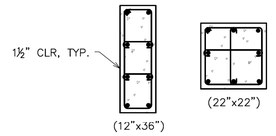
COLUMN SCHEDULE

COMP (F'_c) STRENGTH	COLUMN MARK	A-6	A-7	A-8	A.1-5	B-5	B-6	B-7	B.9-1.1	C-2	C-3	C.7-6	C.7-7	D-1	D-2	D-3	D.7-1	E-2	E-3	E.1-4.1	F-5	F-6	F-7	G-4	G-8
	COLUMN SIZE	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	12"x36"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"	22"x22"
5000 PSI	LEVEL 3 T.O.S. ELEV. = 29.33'	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	LEVEL 2 T.O.S. ELEV. = 18.67'	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
	GROUND LEVEL T.O.S. ELEV. = 8.00'	(8) #8	(8) #8	(8) #8	(8) #8	(8) #8	(8) #8	(8) #8				(8) #8	(8) #8								(8) #8	(8) #8	(8) #8		
	GROUND LEVEL T.O.S. ELEV. = 5.00'								(8) #8	(8) #8	(8) #8			(8) #8	(8) #8	(8) #8	(8) #8	(8) #8	(8) #8	(8) #8				(8) #8	(8) #8
	TOP OF PILE CAP (ELEV. = AS NOTED)	3.0'	3.0'	3.0'	3.0'	7.33'	7.33'	7.33'	3.0'	3.0'	3.0'	7.33'	7.33'	4.33'	4.33'	4.33'	3.0'	3.0'	3.0'	3.0'	7.33'	7.33'	7.33'	3.0'	3.0'

COLUMN TIE SPACING

TIE SIZE No.		3					4
VERT. BARS		6	7	8	9	10	11
LEAST COL. FACE DIMS.	10"	10"	10"	10"	10"	10"	10"
	12"	12"	12"	12"	12"	12"	12"
	14"	12"	14"	14"	14"	14"	14"
	16"	12"	14"	16"	16"	16"	16"
	18"	12"	14"	16"	18"	18"	18"
	20"	12"	14"	16"	18"	18"	20"
	22" & OVER	12"	14"	16"	18"	18"	22"
	--	--	--	--	--	--	--



SHEAR STUD REINFORCEMENT SCHEDULE

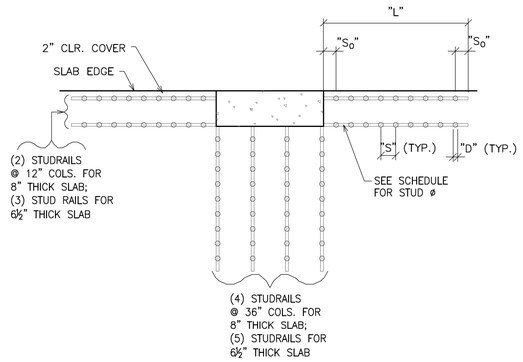
LEVEL 02 SLAB

COLUMN	TYPE	L	S	S_o	H	STUD ø	t	D	NOTES
A-5	EDGE	48.75"	4.875"	3.25"	6.5"	0.50"	0.25"	1.58"	
A-6	EDGE	30.875"	4.875"	3.25"	6.5"	0.50"	0.25"	1.58"	
A-7	EDGE	48.75"	4.875"	3.25"	6.5"	0.50"	0.25"	1.58"	
A-8	CORNER	48.75"	3.25"	3.25"	6.5"	0.50"	0.25"	1.58"	
B-5	INTERIOR	30.875"	4.875"	3.25"	6.5"	0.50"	0.25"	1.58"	
B-6	INTERIOR	30.875"	4.875"	3.25"	6.5"	0.50"	0.25"	1.58"	
C.7-6	INTERIOR	48.75"	3.25"	3.25"	6.5"	0.50"	0.25"	1.58"	
C.7-7	INTERIOR	30.875"	4.875"	3.25"	6.5"	0.50"	0.25"	1.58"	
E.1-2	EDGE	38.25"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
F-5	INTERIOR	38.5"	2.75"	2.75"	5.5"	0.50"	0.25"	1.58"	
F-6	INTERIOR	30.875"	4.875"	3.25"	6.5"	0.50"	0.25"	1.58"	
F-7	INTERIOR	30.875"	4.875"	3.25"	6.5"	0.50"	0.25"	1.58"	
G-8	CORNER	48.75"	4.875"	3.25"	6.5"	0.50"	0.25"	1.58"	

SHEAR STUD REINFORCEMENT SCHEDULE

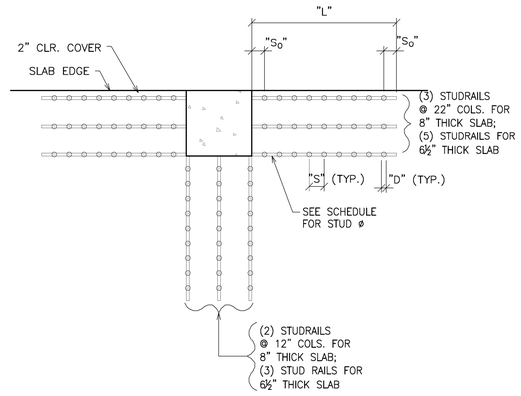
LEVEL 03 SLAB

COLUMN	TYPE	L	S	S_o	H	STUD ø	t	D	NOTES
A-5	EDGE	59.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
A-8	CORNER	59.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
B-5	INTERIOR	42.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
B.9-1.1	EDGE	42.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
C-2	EDGE	42.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
C-3	CORNER	42.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
C.7-6	INTERIOR	42.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
C.7-7	INTERIOR	42.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
D-1	INTERIOR	42.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
D-2	INTERIOR	42.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
D-3	EDGE	74.5"	6.0"	4.25"	8.5"	0.50"	0.25"	1.58"	
E.1-2	EDGE	42.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
E-3	CORNER	42.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
F-5	INTERIOR	42.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
F-6	INTERIOR	42.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	
F-7	INTERIOR	42.5"	4.25"	4.25"	8.5"	0.50"	0.25"	1.58"	



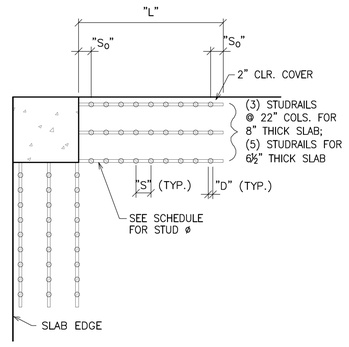
EDGE SHEAR STUD REINF. FOR 12"x36" COLUMN

SCALE: ½" = 1'-0"



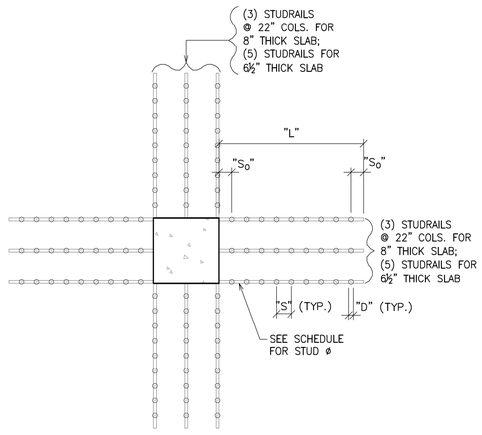
EDGE SHEAR STUD REINF. FOR 22"x22" COLUMN

SCALE: ½" = 1'-0"



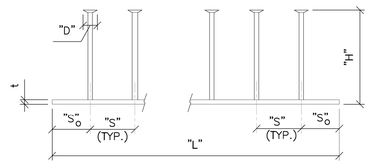
CORNER SHEAR STUD REINF. FOR 22"x22" COLUMN

SCALE: ½" = 1'-0"



INTERIOR SHEAR STUD REINF. FOR 22"x22" COLUMN

SCALE: ½" = 1'-0"



TYP. SHEAR STUD DETAIL

N.T.S.

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR BID	11/15/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

COLUMN SCHEDULE AND SHEAR STUD SCHEDULE AND DETAILS

ROLAND E. HOLLAND REGISTERED No. 13552 PROFESSIONAL ENGINEER DELAWARE

SCALE	: AS NOTED
DESIGN BY	: REH
DRAWN BY	: TFVT
CHECKED BY	: REH
GMB FILE	: 220242
DATE	: 9-27-2024

S5.5

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GENERAL NOTES (ALL DRAWINGS):

1. IN ACCORDANCE WITH FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AND THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP), ALL MECHANICAL EQUIPMENT INSTALLED IN NEW STRUCTURES SHALL BE INSTALLED AT AN ELEVATION ABOVE BASE FLOOD ELEVATION (BFE) OR DESIGNED IN A MANNER THAT FLOOD WATERS SHALL NOT INFILTRATE, ACCUMLATE, OR CAUSE DAMAGE WITHIN ANY COMPONENT OF THE SYSTEM. THESE SYSTEMS INCLUDE BUT NOT LIMITED TO THE FOLLOWING: HEATING, PLUMBING, VENTILAION, ELECTRICAL, AC EQUIPMENT, AND OTHER SERVICE UTILITIES. PER "DEWEY FLOOD MITIGATION EVALUATIONS" MEMO DATED JULY 16, 2024, THE PROJECT SHALL HAVE A FINISHED FLOOR ELEVATION (FFE) OF 7'-0" WHICH IS 2'-0" ABOVE THE FEMA LOCALITY BFE OF 5'-0."

7

GENERAL MECHANICAL NOTES (ALL DRAWINGS):

1. MECHANICAL CONTRACTOR SHALL PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE HVAC SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND REQUIRED BY CODE.
2. THE CONTRACT DOCUMENT DRAWINGS ARE DIAGRAMMATIC ONLY, AND ARE INTENDED TO CONVEY THE SCOPE AND GENERAL ARRANGEMENT OF WORK.
3. ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR BY FIELD INSPECTION PRIOR TO BIDDING. ANY INTERFERENCES TO INSTALLATION SHALL BE NOTED AND THE CONTRACTOR SHALL INCLUDE IN HIS BID PRICE THE COST TO AVOID OR RELOCATE ALL ITEMS, INCLUDING ITEMS OF OTHER TRADES, THAT INTERFERE. ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. ALL OFFSETS, RISES, TRANSITIONS AND DROPS IN DUCTS AND PIPING AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
4. VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT TRANSITIONS OR PIPE ADAPTERS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION.
5. PROVIDE ACCESS IN WALLS & CEILINGS TO ACCESS ALL EQUIPMENT, VALVES, CONTROL DEVICES, VOLUME DAMPERS, AND FIRE/SMOKE DAMPERS.
6. FOLLOW MANUFACTURE'S RECOMMENDATIONS FOR INSTALLATION OF EQUIPMENT. ALSO REFER TO TYPICAL DETAILS FOR INSTALLATION OF EQUIPMENT.
7. ALL MATERIALS FURNISHED, AND ALL WORK PERFORMED BY THE MECHANICAL CONTRACTOR SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS, INCLUDING BUT NOT LIMITED TO THE LATEST APPLICABLE EDITIONS OF NFPA, IEEE, OSHA, SMACNA, INTERNATIONAL MECHANICAL CODE, INTERNATIONAL BUILDING CODE, AND ANY STATE, COUNTY, AND LOCAL CODES.
8. ALL EQUIPMENT, DUCTWORK, ETC., SHALL BE SUPPORTED SUFFICIENTLY AND ANY ADDITIONAL SUPPORT SHALL BE PROVIDED AS REQUIRED TO PROVIDE VIBRATION FREE AND SAFE INSTALLATION. ALL MISCELLANEOUS STEEL REQUIRED AND/OR AS SHOWN IN DETAILS FOR DUCTWORK, AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. SUPPORT ALL DUCTWORK, PIPING AND EQUIPMENT MOUNTED ABOVE THE CEILING DIRECTLY FROM THE STRUCTURE. ALL ATTACHMENTS TO BEAMS, TRUSSES, OR JOIST SHALL BE MADE AT PANEL POINTS WITH BEAM CLAMPS MEETING MSS STANDARDS.
9. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH NEC AND ELECTRICAL SPECIFICATIONS FOR THIS PROJECT.

DUCTWORK GENERAL NOTES (ALL DRAWINGS):

1. ALL DUCTWORK INDICATED IS SCHEMATIC AND SHOW ONLY RELATIVE POSITIONS. PROVIDE OFFSETS, RISES, TRANSITIONS AND ELBOWS AS NEEDED TO INSTALL PROPERLY.
2. PROVIDE ACCESS DOORS IN DUCTWORK FOR OPERATION, ADJUSTMENT, AND MAINTENANCE OF ALL HVAC DEVICES, FANS, DAMPERS, (FIRE, SMOKE, BALANCING) COILS, AND TERMINAL EQUIPMENT.
3. LOCATIONS OF TERMINAL DEVICES, AIR OUTLETS AND INLETS ARE APPROXIMATE. LOCATE PER THE ARCHITECTURAL DRAWINGS AND TO AVOID OTHER TRADE'S WORK. COORDINATE LOCATIONS WITH OTHER TRADES. CONSULT ARCHITECT/ENGINEER FOR CLARIFICATION IF CONFLICTS OCCUR.
4. DUCT DIMENSIONS SHOWN ARE CLEAR INSIDE FACE-TO-FACE DIMENSIONS AND DO NOT INCLUDE DUCT LINER WHERE SPECIFIED. INCREASE DIMENSIONS OF LINED DUCTWORK TO PROVIDE FREE INSIDE AREA EQUAL DIMENSIONS SHOWN. REFER TO THE SPECIFICATIONS FOR LOCATION OF LINED DUCTWORK.
5. FINAL CONNECTIONS FROM HIGH VELOCITY MAIN DUCTS TO AIR TERMINAL UNITS SHALL BE MADE WITH FLEXIBLE DUCTWORK NOT EXCEEDING 3 FEET IN LENGTH. CONNECTIONS BETWEEN LOW VELOCITY DUCTWORK AND/OR TERMINAL UNITS TO AIR INLETS AND OUTLETS SHALL BE MADE WITH FLEXIBLE DUCTWORK NOT EXCEEDING 6 FEET IN LENGTH. LONGER DUCT RUN OUTS SHALL BE CONSTRUCTED OF HARD DUCT OF THE SAME MATERIAL SPECIFIED FOR THE SYSTEM SERVED AND INSULATED AS SPECIFIED FOR THAT SYSTEM. FLEXIBLE DUCTWORK SHALL BE OF THE PRESSURE CLASS AND FACTORY INSULATED AS SPECIFIED FOR THE SYSTEM WHERE INSTALLED.
6. FLEXIBLE DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS WITHOUT ANY SAGS, SHARP TURNS OR KINKS. AT THE MINIMUM, THE FLEXIBLE DUCTWORK SHALL BE FASTENED TO THE HARD DUCT BY A NYLON STRAP SECURED BY SHEETMETAL SCREWS TO PREVENT SLIPPING OFF FROM COLLAR.
7. PROVIDE VOLUME DAMPERS AT EACH AIR OUTLET, AIR INLET AND TERMINAL DEVICE AND AT EACH BRANCH TAKE-OFF CONNECTION FROM THE MAIN.

MECHANICAL LEGEND

SYMBOL	ABRV.	DESCRIPTION
	EX	EXISTING EQUIPMENT OR DUCTWORK TO REMAIN
	RX	EXISTING EQUIPMENT OR DUCTWORK TO BE REMOVED
		NEW EQUIPMENT OR DUCTWORK
		LINED DUCTWORK
		SUPPLY DUCT UP
		SUPPLY DUCT DOWN
		RETURN DUCT UP
		RETURN DUCT DOWN
		EXHAUST DUCT UP
		EXHAUST DUCT DOWN
		ROUND DUCT ELBOW UP
		ROUND DUCT ELBOW DOWN
		ELBOW WITH TURNING VANES
R		DUCT OFFSET - RISE
D		DUCT OFFSET - DROP
		SQUARE / RECTANGULAR DUCT TRANSITION
		SQUARE/RECTANGULAR TO ROUND DUCT TRANSITION
	SD	SUPPLY DIFFUSER - MULTI-DIRECT.
		SUPPLY DIFFUSER - DIRECT. (HATCH DENOTES BLANK OFF)
	SG/EG	SIDEWALL SUPPLY or RETURN GRILLE - (R = REGISTER)
	LD	LINEAR DIFFUSER. SEE SCHEDULE FOR INFORMATION.
	RG/EG	RETURN GRILLE - (R = REGISTER)
	EG	EXHAUST GRILLE - (R = REGISTER)
		FLEXIBLE DUCT
	FLEX	FLEXIBLE DUCT CONNECTION (TO EQUIPMENT)
		SPIN TAP WITH VOLUME CONTROL DAMPER
AD	AD	DUCT ACCESS DOOR
	VD	VOLUME CONTROL DAMPER
BD	BD	BACKDRAFT DAMPER
M	MD	MOTORIZED DAMPER
AP		ACCESS PANEL
	FD	VERTICAL FIRE DAMPER (WALL)
	HFD	HORIZONTAL FIRE DAMPER (FLOOR)
	SD	VERTICAL SMOKE DAMPER (WALL)
	HSD	HORIZONTAL SMOKE DAMPER (FLOOR)
	FD/SD	COMBINATION VERTICAL FIRE & SMOKE DAMPER
	HFD/SD	COMBINATION HORIZONTAL FIRE & SMOKE DAMPER
	RD	CEILING RADIATION FIRE DAMPER
DD	DD	DUCT SMOKE DETECTOR
T		THERMOSTAT
H		HUMIDISTAT
TH		COMBINATION THERMOSTAT & HUMIDISTAT
SP		STATIC PRESSURE SENSOR
CO_2		CARBON DIOXIDE SENSOR
CO		CARBON MONOXIDE SENSOR
NO_x		NITROUS OXIDE SENSOR
S		TEMPERATURE SENSOR
S		STARTER
OS		OCCUPANCY SENSOR
R		REFRIGERANT DETECTOR

SYMBOL	ABRV.	DESCRIPTION
		CONNECTION POINT, NEW TO EXISTING
		DISCONNECTION POINT
1		DRAWING KEYNOTE
A		DEMOLITION DRAWING KEYNOTE
1		REVISION NUMBER
		REVISION CLOUD
		PIPE UP
		PIPE DOWN
		PIPE TEE DOWN
		TOP PIPE CONNECTION
		BALL VALVE OR SHUTOFF VALVE IN RISE
		PIPE CAP
		PIPE UNION
		FLANGED CONNECTION
		CONCENTRIC PIPE REDUCER
		ECCENTRIC PIPE REDUCER
		FLOW ARROW
		PIPE ANCHOR
		PIPE GUIDE
	BV	BALL VALVE
	BFV	BUTTERFLY VALVE
	PV	PLUG VALVE
	GV	GATE VALVE
	GBV	GLOBE VALVE
	PRV	PRESSURE REDUCING VALVE
	CV	CHECK VALVE
	BFP	BACKFLOW PREVENTER
		PRESSURE RELIEF VALVE
		AUTOMATIC FLOW CONTROL VALVE
		CALIBRATED BALANCING VALVE
		AUTOMATIC AIR VENT
		MANUAL AIR VENT
		P/T PLUG
		PRESSURE GAGE W/ SHUT-OFF
		THERMOMETER
		STRAINER (W/ BALL VALVE AND CAP)
		HOSE BIBB
		FLEXIBLE CONNECTOR
		2-WAY CONTROL VALVE
		3-WAY CONTROL VALVE
		TRIPLE DUTY VALVE WITH MEASURING CONNECTIONS
		INVERTED BUCKET STEAM TRAP
		FLOAT & THERMOSTATIC STEAM TRAP
U	UC	UNDER CUT DOOR - 1"
L		LOUVERED DOOR
	RA / EA	RETURN OR EXHAUST AIR
	SA / OA	SUPPLY OR OUTSIDE AIR
TYP #		EQUIPMENT UNIT DESIGNATION
TAG CFM		DIFFUSER, REGISTER & GRILLE UNIT DESIGNATION W/ CFM

SYMBOL	ABRV.	DESCRIPTION
EX (X)	EX	EXISTING PIPING TO REMAIN - (X) DESIGNATES SERVICE
RX (X)	RX	EXISTING PIPING TO BE REMOVED - (X) DESIGNATES SERVICE
HWS	HWS	HEATING WATER SUPPLY PIPING
HWR	HWR	HEATING WATER RETURN PIPING
CWS	CWS	CONDENSER WATER SUPPLY PIPING
CWR	CWR	CONDENSER WATER RETURN PIPING
CHWS	CHWS	CHILLED WATER SUPPLY PIPING
CHWR	CHWR	CHILLED WATER RETURN PIPING
LPS	LPS	LOW PRESSURE STEAM SUPPLY PIPING (0-15 PSIG)
LPR	LPR	LOW PRESSURE STEAM CONDENSATE RETURN
MPS	MPS	MEDIUM PRESSURE STEAM SUPPLY PIPING (16-60 PSIG)
MPR	MPR	MEDIUM PRESSURE STEAM CONDENSATE RETURN
HPS	HPS	HIGH PRESSURE STEAM SUPPLY PIPING (61 TO 200 PSIG)
HPR	HPR	HIGH PRESSURE STEAM CONDENSATE RETURN
GWS	GWS	GLYCOL WATER SUPPLY
GWR	GWR	GLYCOL WATER RETURN
RL	RL	REFRIGERANT LIQUID PIPING
RS	RS	REFRIGERANT SUCTION PIPING
FOS	FOS	FUEL OIL SUPPLY PIPING
FOR	FOR	FUEL OIL RETURN PIPING
CW	CW	CITY (DOMESTIC) WATER
PC	PC	PUMPED STEAM CONDENSATE
D	D	CONDENSATE DRAIN PIPING
V	V	VENT PIPING
G	G	NATURAL GAS PIPING

MECHANICAL ABBREVIATIONS

ABRV.	DESCRIPTION
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
SA	SUPPLY AIR
RA	RETURN AIR
EA	EXHAUST AIR
OA	OUTSIDE AIR
TA	TRANSFER AIR
MA	MIXED AIR
MBH	1000 - BRITISH THERMAL UNITS
kW	1000-WATT (1 KW = 3,412 BTUH)
SENS.	SENSIBLE
LAT.	LATENT
E.A.T.	ENTERING AIR TEMPERATURE
L.A.T.	LEAVING AIR TEMPERATURE
E.W.T.	ENTERING WATER TEMPERATURE
L.W.T.	LEAVING WATER TEMPERATURE
DB/WB	DRY BULB / WET BULB
IN. W.G.	INCHES WATER GAUGE (AIR)
FT. W.G.	FEET WATER GAUGE (HYDRONIC)
E.S.P.	EXTERNAL STATIC PRESSURE
T.S.P.	TOTAL STATIC PRESSURE
TG	TRANSFER GRILLE
TR	TOP REGISTER
°F	FAHRENHEIT
R / R	REMOVE EXISTING ITEM & RELOCATE TO NEW LOCATION
EX	EXISTING
RL	RELOCATE EXISTING
UNO	UNLESS NOTED OTHERWISE
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
PH	PHASE
HZ	HERTZ
Ø	DIAMETER
AFF	ABOVE FINISHED FLOOR
ELEV.	ELEVATION FROM DATUM

NOTES:

1. NOT ALL SYMBOLS AND ABBREVIATIONS ARE IN USE FOR THIS PROJECT.

TIMOTHY R. CHATTERTON LICENSE No. 15702 STATE OF DELAWARE PROFESSIONAL ENGINEER

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPVO REVIEW	4/7/2024
4.	ISSUED FOR BPVO RESUBMISSION	5/10/2024
5.	ISSUED FOR BPVO RESUBMISSION	6/10/2024
7.	ISSUED FOR TOWN RESUBMISSION	

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

MECHANICAL DATA SHEET

Allen + Shariff
MEP Engineering
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443.545.1300

SCALE	: NONE
DESIGN BY	: ZCIO
DRAWN BY	: ZCIO
CHECKED BY	: TCHA
GMB FILE	: 220242
DATE	: 8-30-2024

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ALLEN + SHARIFF JOB# : 2331073

MECHANICAL SPECIFICATIONS

MECHANICAL GENERAL CONDITIONS (230010)

A. GENERAL

1. CONFORM TO ALL GENERAL AND SPECIAL CONDITIONS OF CONTRACT AS SPECIFIED BY ARCHITECT AND/OR OWNER.

2. PRODUCTS AND INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LAWS, CODES, GOVERNMENT REGULATIONS, UTILITY COMPANY REQUIREMENTS, ETC. OF ALL AUTHORITIES HAVING JURISDICTION. WORK SHALL COMPLY WITH THE FOLLOWING CODES, STANDARDS AND ORGANIZATIONS:
   - INTERNATIONAL BUILDING CODE
   - INTERNATIONAL MECHANICAL CODE
   - INTERNATIONAL PLUMBING CODE
   - INTERNATIONAL ENERGY CONSERVATION CODE
   - NATIONAL ELECTRIC CODE
   - NFPA
   - UNDERWRITERS LABORATORY (UL), IRI, FM
   - SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" GUIDELINES, DETAILS, & MODEL
   - SPECIFICATION
   - ASHRAE

3. WHERE CONFLICTS EXIST BETWEEN CODES, STANDARDS OR THIS SPECIFICATION THE HIGHER REQUIREMENT SHALL APPLY. DEVIATIONS FROM THE CONTRACT DOCUMENTS REQUIRED BY THE ABOVE AUTHORITIES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. OBTAIN PERMITS AND PAY ALL FEES. ARRANGE FOR ALL REQUIRED INSPECTIONS AND APPROVALS. CONFIRM ALL UTILITY COMPANY REQUIREMENTS AND CONNECTION POINTS IN FIELD, PRIOR TO STARTING WORK.

4. ALL SPECIFICATIONS AND DRAWINGS, I.E., ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL ARE COMPLIMENTARY AND MUST BE USED IN COMBINATION TO OBTAIN COMPLETE CONSTRUCTION INFORMATION. ANY INFORMATION CONFLICTS WITHIN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION. DRAWINGS ARE DIAGRAMMATIC. CONFIRM ALL DIMENSIONS BY FIELD MEASUREMENT. THE EXACT LOCATIONS FOR APPARATUS, FIXTURES, EQUIPMENT AND PIPING WHICH IS NOT COVERED BY DRAWINGS, SHALL BE OBTAINED FROM THE ARCHITECT OR HIS REPRESENTATIVE IN THE FIELD, AND THE WORK SHALL BE LAID OUT ACCORDINGLY.

5. EACH CONTRACTOR SHALL PROVIDE FOR HIS OWN CLEAN-UP, REMOVAL AND LEGAL DISPOSAL OF ALL RUBBISH DAILY. CONTRACTOR SHALL PROTECT THEIR WORK AND EXISTING OR ADJACENT PROPERTY AGAINST WEATHER, TO MAINTAIN THEIR WORK, MATERIALS, APPARATUS AND FIXTURES FREE FROM INJURY OR DAMAGE. ANY WORK DAMAGED BY FAILURE TO PROVIDE PROTECTION REQUIRED, SHALL BE REMOVED AND REPLACED WITH NEW WORK AT THE CONTRACTOR'S EXPENSE.

6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, SEQUENCES OF CONSTRUCTION AND THE SAFETY OF WORKMEN.

7. NO MEP, IT, FP SYSTEMS OR COMPONENTS SHALL BE INSTALLED OR ROUTED ABOVE ELECTRICAL PANELS AND EQUIPMENT OR THROUGH ELEVATOR ROOMS, FIRE PUMP ROOMS, OR STAIR TOWERS UNLESS SERVING THE MACHINE ROOM, FIRE PUMP ROOM OR STAIR TOWER.

8. THE CONTRACTOR SHALL COORDINATE AND OBTAIN A WRITTEN LISTING OF ELECTRICAL CHARACTERISTICS OF ALL MECHANICAL EQUIPMENT FROM ELECTRICAL CONTRACTOR PRIOR TO ORDERING OF EQUIPMENT. NO ADDITIONAL PAYMENT WILL BE MADE FOR LACK OF CONTRACTOR COORDINATION OF ELECTRICAL CHARACTERISTICS.

9. IN CASES OF DOUBT AS TO THE WORK INTENDED, OR IN THE EVENT OF NEED FOR EXPLANATION THEREOF, THE CONTRACTOR SHALL REQUEST SUPPLEMENTARY INSTRUCTIONS FROM THE ENGINEER. NO CHANGES ARE TO BE MADE TO THE WORK OF THIS CONTRACT WITHOUT PRIOR KNOWLEDGE AND APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL HOLD THE OWNER AND ITS CONSULTANTS HARMLESS AGAINST ALL CLAIMS AND JUDGMENTS ARISING OUT OF THE CONTRACTOR'S PERFORMANCE OF THE WORK OF THIS CONTRACT. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK, WHICH HE EXPECTS ADDITIONAL COMPENSATION BEYOND THE CONTRACT AMOUNT, WITHOUT WRITTEN AUTHORIZATION FROM THE APPROPRIATE AUTHORITY. FAILURE TO OBTAIN SUCH AUTHORIZATION SHALL INVALIDATE ANY CLAIM FOR EXTRA COMPENSATION.

10. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO INSTALL THE HEATING, VENTILATION AND AIR CONDITIONING SYSTEM SO AS TO INSURE QUIET OPERATION. NO VIBRATION OR SOUND SHALL BE TRANSMITTED TO THE BUILDING, STRUCTURE OR OCCUPIED AREAS. THE DECISION OF THE ENGINEER AS TO THE QUIETNESS OF THE SYSTEM AND EQUIPMENT SHALL BE FINAL. IT SHALL BE THIS CONTRACTORS RESPONSIBILITY TO CORRECT OR REPLACE ANY NOISY SYSTEM OR EQUIPMENT AS REQUIRED.

11. OBTAIN PERMITS AND PAY ALL FEES. ARRANGE FOR ALL REQUIRED INSPECTIONS AND APPROVALS.

D. BASIS OF DESIGN AND SUBSTITUTIONS

2. WHEREVER THE WORDS "APPROVED BY", "APPROVED EQUAL", "AS DIRECTED" OR SIMILAR PHRASES ARE USED IN THE FOLLOWING SPECIFICATIONS, THEY SHALL BE UNDERSTOOD TO REFER TO THE OWNER AS THE APPROVING AGENCY. THE NAME OR MAKE OF ANY EQUIPMENT OR MATERIALS NAMED IN THE SPECIFICATION (WHETHER OR NOT THE WORDS "OR APPROVED EQUAL" ARE USED) SHALL BE KNOWN AS THE "STANDARD".

3. SUBMIT SHOP DRAWINGS FOR MECHANICAL EQUIPMENT, FIRE PROTECTION SYSTEMS, DUCTWORK, AND PLUMBING FIXTURES AND EQUIPMENT WITH ADEQUATE DETAILS AND SCALES TO CLEARLY SHOW CONSTRUCTION. INDICATE THE OPERATING CHARACTERISTICS FOR EACH REQUIRED ITEM. CLEARLY IDENTIFY EACH ITEM ON THE SUBMITTAL AS TO MARK, LOCATION AND USE, USING SAME IDENTIFICATION AS PROVIDED ON DESIGN DRAWINGS. SHOP DRAWINGS TO BE SUBMITTED INCLUDE BUT NOT LIMITED TO:
   - SHEETMETAL
   - DIFFUSERS, GRILLES & REGISTERS
   - FIRE DAMPERS
   - VALVES & PIPING
   - ALL EQUIPMENT

4. DUCTWORK AND FIRE PROTECTION DRAWINGS SHALL BE FULLY DIMENSIONED BASED ON FIELD VERIFIED BUILDING CLEARANCES AND ARCHITECTURAL CEILING LAYOUTS, AND INDICATE STRUCTURAL, LIGHTING, DUCTWORK AND PIPING AT ALL CRITICAL LOCATIONS.

5. CONTRACTOR SHALL REVIEW AND INDICATE HIS APPROVAL OF EACH SHOP DRAWING PRIOR TO SUBMITTAL FOR REVIEW. DO NOT START WORK OR FABRICATION UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED BY THE ENGINEER AND RETURNED TO THE CONTRACTOR.

6. SUBMITTALS WILL BE REVIEWED ONLY FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND NOT FOR DIMENSIONS OR QUANTITIES. THE SUBMITTAL REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PURCHASE OF ANY ITEM IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS OR ITS COMPLETE AND PROPER INSTALLATION.

7. WHERE SUBMITTALS VARY FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL CLEARLY INDICATE ON SUBMITTAL OR ACCOMPANYING DOCUMENTS THE NATURE AND REASON FOR VARIATIONS.

8. EACH MANUFACTURER OR HIS REPRESENTATIVE MUST CHECK THE APPLICATION OF HIS EQUIPMENT AND CERTIFY AT TIME OF SHOP DRAWING SUBMITTAL THAT EQUIPMENT HAS BEEN PROPERLY APPLIED AND CAN BE INSTALLED, SERVICED AND MAINTAINED WHERE INDICATED ON DRAWINGS. ADVISE ENGINEER IN WRITING WITH SUBMITTAL DRAWINGS OF ANY POTENTIAL PROBLEMS. THE MANUFACTURER SHALL BE RESPONSIBLE FOR ANY CHANGES THAT MIGHT BE NECESSARY BECAUSE OF PHYSICAL CHARACTERISTICS OF EQUIPMENT THAT HAVE NOT BEEN CALLED TO THE ENGINEER'S ATTENTION AT THE TIME OF SUBMITTAL.

E. CUTTING, PATCHING AND DRILLING

1. ALL CUTTING AND PATCHING OF THE BUILDING CONSTRUCTION REQUIRED FOR THIS WORK SHALL BE BY THIS CONTRACTOR UNLESS SHOWN ON ARCHITECTURAL DRAWINGS AND CONFIRMED AS TO SIZE AND LOCATION PRIOR TO NEW CONSTRUCTION. CUTTING SHALL BE IN A NEAT AND WORKMANLIKE MANNER. NEATLY SAW CUT ALL RECTANGULAR OPENINGS, SET SLEEVE THROUGH OPENING, AND FINISH PATCH OR PROVIDE TRIM FLANGE AROUND OPENING. CORE DRILL AND SLEEVE ALL ROUND OPENINGS. DO NOT CUT ANY STRUCTURAL COMPONENTS WITHOUT ARCHITECT'S APPROVAL.

2. PATCH AND FINISH TO MATCH ADJACENT AREAS THAT HAVE BEEN CUT, DAMAGED OR MODIFIED AS A RESULT OF THE INSTALLATION OF THE MECHANICAL OR ELECTRICAL EQUIPMENT. FIRE STOP ALL PENETRATIONS OF FIRE RATED CONSTRUCTION IN A CODE APPROVED MANNER.

3. ALL CONTRACTORS SHALL CONFIRM WITH OWNER, PRIOR TO BID, TIMES AVAILABLE FOR NOISE PRODUCING WORK SUCH AS CUTTING AND CORE DRILLING OF FLOORS, WALLS, ETC., AS WELL AS TIMES FOR WORK WHICH REQUIRE ACCESS INTO ADJOINING TENANT SPACES. INCLUDE ANY PREMIUM TIME IN BID

4. EXACT LOCATION OF ROOFTOP EQUIPMENT SHALL BE APPROVED BY OWNER'S STRUCTURAL ENGINEER.

5. INFORMATION REGARDING REQUIRED PIPE OPENINGS IN WALLS, FLOORS, CHASES, ETC., AND CONCRETE EQUIPMENT PADS OR FOUNDATIONS SHALL BE GIVEN TO THE GENERAL CONTRACTOR BY THIS CONTRACTOR PRIOR TO THE CONSTRUCTION PERIOD. IF THIS CONTRACTOR FAILS TO COMPLY WITH THIS REQUEST, OR IF INCORRECT INFORMATION IS GIVEN, THE NECESSARY CUTTING AND PATCHING WILL BE PERFORMED BY THE GENERAL CONTRACTOR, AT THIS CONTRACTOR'S EXPENSE.

F. FIRESTOPPING

1. ALL SERVICES THAT PASS THRU FIRE OR SMOKE RATED PARTITIONS, WALLS, FLOORS, SHALL BE FIRESTOPPED. FIRE STOPPING RATING SHALL MATCH PARTITION RATING. ALL FIRE STOPPING SYSTEM SHALL MEET THE REQUIREMENTS OF ASTM E 814,UL 1479, AND BE FACTORY MUTUAL APPROVED.

2. ALL FIRESTOPPING AND/OR SMOKE STOPPING MATERIAL AND INSTALLATION SHALL BE AS MANUFACTURED BY HILTI OR APPROVED EQUAL.

G. ACCESS DOORS & PANELS

1. ACCESS DOORS SHALL BE PROVIDED IN WALLS AND CEILINGS WHERE REQUIRED TO PERMIT PROPER ACCESS TO VALVES AND ANY OTHER SUCH DEVICES WHICH REQUIRE MAINTENANCE OR SERVICE. DOORS PLACED IN WALLS, PARTITIONS OR OTHER FIRE-RATED CONSTRUCTION SHALL HAVE A LABEL SIGNIFYING THAT THE DOOR HAS THE SAME FIRE RATING AS THE FIRE-RATED CONSTRUCTION.

2. THIS CONTRACTOR SHALL FURNISH ACCESS PANELS TO THE GENERAL CONTRACTOR FOR INSTALLATION.

3. ACCESS PANELS SHALL BE CONSTRUCTED OF 14 GAUGE STEEL, WITH 16 GAUGE STEEL FRAMES. DOORS SHALL FINISH FLUSH WITH THE SURROUNDING SURFACE. FRAMES SHALL HAVE 3 INCH WIDE EXPANDED METAL FOR PLASTERED SURFACES AND PLAIN FLANGED TYPE FRAME FOR TILE, MASONRY OR GYPSUM BOARD SURFACES. DOORS AND FRAMES SHALL BE FURNISHED PRIME COATED. DOORS INSTALLED IN CERAMIC TILE OR OTHER NON-PAINTED SURFACES SHALL BE STAINLESS STEEL. HINGES SHALL BE CONCEALED SPRING TYPE, TO ALLOW DOORS TO BE OPENED 175 DEGREES. LOCKS SHALL BE FLUSH SCREWDRIVER TYPE WITH STEEL CAMS. ACCESS PANELS SHALL BE 16 INCHES BY 16 INCHES OR LARGER AS MAY BE REQUIRED FOR PROPER ACCESS TO THE DEVICE BEING SERVED.

4. ACCESS PANELS ARE NOT REQUIRED IN COMPLETELY ACCESSIBLE LIFT OUT TILE CEILINGS. CONTRACTOR SHALL REVIEW THE ROOM FINISH SCHEDULE ON THE ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY THE NEED FOR ACCESS PANEL

H. PAINTING

1. IN FINISHED SPACES, PAINTING OF ALL MECHANICAL EQUIPMENT, APPARATUS, AND PIPING SHALL BE DONE BY THE PAINTING TRADE UNDER THE GENERAL CONTRACTOR SPECIFICATION, EXCEPT WHERE SPECIFIED TO BE DONE BY THE MECHANICAL CONTRACTOR.

I. TEMPORARY HEAT

1. THE COSTS OF TEMPORARY HEAT, INCLUDING UTILITY COSTS, SHALL BE AT THE EXPENSE OF THE HEATING TRADE (MECHANICAL CONTRACTOR). THE HEATING TRADE SHALL PROVIDE THE MEANS OF TEMPORARY HEAT. EXISTING HEATING EQUIPMENT AND SYSTEMS MAY NOT BE USED DURING CONSTRUCTION AS THE SYSTEMS SERVE OTHER OCCUPIED SPACES WITHIN THE BUILDING.

2. THE PERMANENT MECHANICAL SYSTEM SHALL NOT BE USED UNDER ANY EXCEPTIONS TO PROVIDE TEMPORARY HEATING, VENTILATING, EXHAUST OR AIR CONDITIONING UNTIL THE BUILDING IS CLEAN, WITHOUT ANY DUST OR DEBRIS THAT CAN ENTER THE MECHANICAL SYSTEM AND IS READY FOR OCCUPANCY. COVERING THE RETURN/EXHAUST AIR INLETS WITH FILTER MEDIA IS NOT AN ACCEPTABLE ALTERNATIVE TO HAVING AN ENCLOSED, DUST-FREE ENVIRONMENT FOR THE SYSTEMS TO OPERATE IN. IN NO EVENT SHALL THE MECHANICAL CONTRACTOR'S ONE YEAR WARRANTY BE SHORTENED BY THE USE OF PERMANENT EQUIPMENT FOR TEMPORARY HEAT.

J. RECORD DRAWINGS

1. EACH CONTRACTOR OR SUBCONTRACTOR SHALL KEEP ONE (1) COMPLETE SET OF THE CONTRACT WORKING DRAWINGS ON THE JOB SITE ON WHICH HE SHALL REGULARLY RECORD ANY DEVIATIONS OR CHANGES FROM SUCH CONTRACT DRAWINGS MADE DURING CONSTRUCTION.

2. THESE DRAWINGS SHALL RECORD THE LOCATION OF ALL CONCEALED EQUIPMENT, PIPING, ELECTRIC SERVICE, SEWERS, WASTES, VENTS, DUCTS, CONDUIT AND OTHER PIPING, BY MEASURED DIMENSIONS TO EACH SUCH ITEM FROM READILY IDENTIFIABLE AND ACCESSIBLE WALLS OR CORNERS OF THE BUILDING. PLANS ALSO SHALL SHOW INVERT ELEVATION OF SEWERS AND TOP ELEVATION OF ALL OTHER BELOW-GRADE LINES.

3. RECORD DRAWINGS SHALL BE KEPT CLEAN AND UNDAMAGED AND SHALL NOT BE USED FOR ANY PURPOSE OTHER THAN RECORDING DEVIATIONS FROM WORKING DRAWINGS AND EXACT LOCATIONS OF CONCEALED WORK.

4. AFTER THE PROJECT IS COMPLETED, THESE SETS OF DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT IN GOOD CONDITION, AS A PERMANENT RECORD OF THE INSTALLATION AS ACTUALLY CONSTRUCTED.

K. WARRANTY

1. FULLY WARRANT ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FOR ONE (1) YEAR FROM DATE OF ACCEPTANCE. EXTEND ALL MANUFACTURER'S WARRANTIES TO OWNER, INCLUDING ALL EXTENDED WARRANTIES ON HVAC EQUIPMENT.

2. REPAIR OR REPLACE WITHOUT CHARGE TO THE OWNER ALL ITEMS FOUND DEFECTIVE DURING THE WARRANTY PERIOD. IN THE CASE OF REPLACEMENT OR REPAIR DUE TO FAILURE WITHIN THE WARRANTY PERIOD, THE WARRANTY ON THAT PORTION OF THE WORK SHALL BE EXTENDED FOR A MINIMUM PERIOD OF ONE (1) YEAR FROM THE DATE OF SUCH REPLACEMENT OR REPAIR.

REFRIGERANT PIPING (232300)

1. INSTALL REFRIGERANT PIPING BETWEEN CONDENSING UNIT AND DX COIL. PIPING SHALL BE REFRIGERANT GRADE TYPE "L" OR ACR COPPER WITH BRAZED JOINTS. PIPE PER MANUFACTURER'S PIPING DIAGRAMS AND RECOMMENDATIONS.

2. ISOLATE PIPING FROM STRUCTURE WITH ONE (1) INCH INSULATION BETWEEN ALL PIPING AND SUPPORT POINTS.

3. AFTER COMPLETION, PRESSURE TEST PIPING, PURGE AND EVACUATE SYSTEM TWICE AND CHARGE SYSTEM WITH REFRIGERANT AND OIL.

4. INSTALL PIPING IN AS SHORT AND DIRECT ARRANGEMENT AS POSSIBLE TO MINIMIZE PRESSURE DROP. PROVIDE OIL TRAP AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.

5. INSTALL UNIONS TO ALLOW REMOVAL OF SOLENOID VALVES, PRESSURE REDUCING VALVES, EXPANSION VALVES, AND AT CONNECTIONS TO COMPRESSORS AND EVAPORATORS.

6. FILL THE PIPE AND FITTINGS DURING BRAZING, WITH NITROGEN TO PREVENT FORMATION OF SCALE.

PIPE WALL SEALS (230517)

1. WALL PIPE SEALS WITH RUBBER LINKS SHALL BE THUNDERLINE LINK SEAL, OR APPROVED EQUAL. WALL PIPE SEALS WITH INORGANIC MATERIAL LINKS THE PENETRATIONS OF FIRE RATED WALLS SHALL BE THUNDERLINE PYRO-PAC, OR APPROVED EQUAL.

2. SEALS SHALL BE MODULAR MECHANICAL TYPE CONSISTING OF INTERLOCKING SYNTHETIC RUBBER OR INORGANIC MATERIAL LINKS SHAPED TO CONTINUOUSLY FILL THE ANNULAR SPACE BETWEEN THE PIPE AND WALL OPENING. LINKS SHALL BE LOOSELY ASSEMBLED WITH BOLTS TO FORM A CONTINUOUS BELT AROUND THE PIPE. A PRESSURE PLATE SHALL BE PROVIDED UNDER THE BOLT HEAD AND NUT OF EACH LINK. SEALS SHALL BE CONSTRUCTED TO PROVIDE ELECTRICAL INSULATION BETWEEN THE PIPE AND SLEEVE, THUS REDUCING CHANCES OF CATHODIC REACTION BETWEEN THESE TWO MEMBERS.

3. AFTER THE SEAL ASSEMBLY IS POSITIONED IN THE SLEEVE, THE TIGHTENING OF THE BOLTS SHALL CAUSE THE SEALING ELEMENTS TO EXPAND AND PROVIDE AN ABSOLUTELY WATER-TIGHT SEAL BETWEEN THE PIPE AND SLEEVE.

4. SLEEVES SHALL BE MANUFACTURED FROM HEAVY-WALL, WELDED OR SEAMLESS STEEL PIPE. A FULL CIRCLE CONTINUOUSLY WELDED WATER STOP PLATE SHALL BE PROVIDED TO ASSURE POSITIVE WATER SEALING OF THE SLEEVE. SLEEVE SHALL BE PROTECTED BY A COATING OF ENRICHED RED PRIMER.

DUCTWORK (233113)

1. FABRICATE AND ERECT ALL DUCTWORK TO ASHRAE AND SMACNA STANDARDS FROM G90 GALVANIZED STEEL. COMPLY WITH NFPA BULLETIN 90A REQUIREMENTS.

2. SUPPLY DUCTWORK UPSTREAM OF TERMINAL UNITS AND WITHIN 15' OF ANY AHU FAN OUTLET SHALL HAVE A SMACNA 3" STATIC PRESSURE RATING WITH SEAL CLASS A SEAMS AND JOINTS.

3. GENERAL SUPPLY AND RETURN DUCTWORK HAVE A SMACNA 2" STATIC PRESSURE RATING WITH SEAL CLASS B SEAMS AND JOINTS.

4. OUTDOOR AIR INTAKE DUCTWORK SHALL HAVE A SMACNA 2" STATIC PRESSURE RATING WITH SEAL CLASS A SEAMS AND JOINTS.

5. ALL EXPOSED ROUND AND OVAL DUCTWORK IN SHALL HAVE SPIRAL LOCKSEAM CONSTRUCTION.

6. ALL RECTANGULAR TRANSFER DUCTWORK SHALL HAVE 1" THICK ACOUSTICAL LINER. LINER SHALL BE FLEXIBLE AND CONSTRUCTED OF GLASS FIBERS BONDED WITH A THERMOSETTING RESIN. THE SURFACE OF THE LINER SHALL HAVE AN ANTIMICROBIAL EROSION RESISTANCE COATING TESTED BY NRTL AND REGISTERED BY THE EPA FOR USE IN HVAC SYSTEMS. MINIMUM R-VALUE SHALL BE 4.2.

7. GENERAL EXHAUST DUCTWORK UNDER 45' IN LENGTH SHALL HAVE A SMACNA 1" STATIC PRESSURE RATING WITH SEAL CLASS B SEAM AND JOINTS. EXHAUST DUCTWORK OVER 45' IN LENGTH SHALL HAVE A SMACNA 2" STATIC PRESSURE RATING WITH SEAL CLASS A SEAM AND JOINTS.

8. ALL FLEXIBLE DUCTWORK SHALL BEAR THE UL 181 LABEL (CLASS 1 AIR DUCT) AND SHALL BE FACTORY INSULATED (1-1/2 ", 0.6 LB., FIBERGLASS) ATCO UPC #076 I OR EQUAL. FLEXIBLE DUCTWORK SHALL COMPLY W/ NFPA 90A, AND NFPA 90B. ALL FLEXIBLE DUCTWORK CONNECTED TO DIFFUSERS SHALL NOT BE LESS THAN THE NECK SIZE OF THE DIFFUSER. MINIMUM FLEXIBLE DUCT BEND RADIUS OF CURVATURE SHALL BE 3 DUCT DIAMETERS, MAXIMUM LENGTH SHALL BE 6'-0", NO MORE THAN THE EQUIVALENT OF TWO (2) 90 DEGREE BENDS WILL BE ACCEPTABLE. FLEXIBLE DUCTS SHALL BE INDEPENDENTLY SUPPORTED FROM THE STRUCTURE AND CONNECTED WITH PLASTIC DRAW BANDS TIGHTENED WITH MANUFACTURER'S TOOL. FLEXIBLE DUCTS ARE NOT PERMITTED IN ROOMS WITHOUT CEILINGS.

9. EXTERIOR DUCTWORK (ALL DUCTWORK EXPOSED TO AMBIENT CONDITIONS) SHALL BE 2" THICK RIGID PHENOLIC, MINIMUM R-10 INSULATION VALUE, NOT EXCEEDING 25 FLAME SPREAD AND 50 SMOKE DEVELOPED RATINGS, WITH FACTORY-APPLIED WEATHERPROOF JACKETING DESIGNED FOR EXTERIOR INSTALLATION. SUPPORT AND INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS, UTILIZING SUPPORT SYSTEM THAT FULLY ENCLOSES THE DUCT. REINFORCE DUCT AS NECESSARY PER SMACNA HVAC PHENOLIC DUCT CONSTRUCTION STANDARDS. ACCEPTABLE MANUFACTURERS ARE AQC INDUSTRIES' Q-DUCT AND THERMADUCT.

10. INCLUDE ALL ACOUSTIC, DOUBLE RADIUS AIRFOIL SHAPED PERFORATED ALUMINUM TURNING VANES, MANUAL DAMPERS, FLEXIBLE CONNECTORS, GRILLES AND DIFFUSERS, ACOUSTIC LINING, AND OTHER SHEET METAL ACCESSORIES FOR THE PROJECT. VOLUME DAMPERS TO BE OF OPPOSED BLADE TYPE CONSTRUCTED IN ACCORDANCE WITH "SMACNA" STANDARDS.

11. ALL BRANCH CONNECTION FITTINGS IN RECTANGULAR DUCTWORK SHALL BE 45 DEGREE TRANSITION TYPE, CONICAL FITTINGS OR SPIN-IN FITTINGS. BUTT FITTINGS ARE NOT ACCEPTABLE.

12. DRYER VENT ROUND DUCTWORK SHALL BE 22 GAUGE (MINIMUM) ALUMINUM CONSTRUCTION WITH DIE STAMPED OR FABRICATED FITTINGS. DUCTS SHALL BE CONSTRUCTED FOR LOW PRESSURE OPERATION WITH LONGITUDINAL SEAM UP. FABRICATED ELBOWS SHALL BE THE MULTI-PIECE TYPE WITH EACH SEGMENT NOT EXCEEDING 22-1/2 DEGREES. THROAT RADIUM OF ALL ELBOWS SHALL BE EQUAL TO THE DUCT DIAMETER. TEES SHALL BE THE CONCEALED TYPE. JOINTS SHALL BE THE SLIP OF FLANGED TYPE. DO NOT USE DRIVE SLIP COUPLING BANDS. MAKE-UP SLIP JOINTS WITH DUCT SEALER. DUCTS FOR EXHAUSTING CLOTHES DRYERS SHALL NOT BE ASSEMBLED WITH SCREWS OR OTHER FASTENING MEANS THAT EXTEND INTO THE DUCT AND THAT WOULD CATCH LINT. PROVIDE NFPA 90 A APPROVED FLEXIBLE DUCT SECTION AT CONNECTION OF DRYER TO DUCTWORK. PROVIDE AND INSTALL EXTRUDED ALUMINUM DRYER FLAPPER VENT AT TERMINATION OF EACH DRYER VENT. WHERE CLOTHES DRYER VENT DUCTS PASS THROUGH WALLS, FLOORS, OR PARTITIONS, THAT SPACE AROUND THE DUCT SHALL BE SEALED WITH NON-COMBUSTIBLE MATERIAL AND FIRESTOPPED. SIGNAGE INDICATING EQUIVALENT LENGTH SHALL BE POSTED WITHIN 6' OF THE DRYER CONNECTION IN ACCORDANCE WITH IMC 504.6.5 2009.

13. PROVIDE FIRE DAMPERS WITH ACCESS DOORS AT ALL FIRE RATED WALLS, PARTITIONS AND CEILINGS. DAMPERS SHALL HAVE RATING EQUIVALENT TO BARRIER. DAMPER SHALL BE THE DYNAMIC TYPE AND SHALL BE ABLE TO CLOSE AGAINST AN AIRSTREAM. DAMPERS SHALL MEET ALL NFPA AND IBC REQUIREMENTS.

14. PROVIDE SMOKE DAMPERS WITH ACCESS DOORS AT ALL SMOKE BARRIERS/PARTITIONS. UNIT SHALL INCORPORATE BLADE END SWITCHES (OPEN AND CLOSED), AND OUTSIDE THE DUCT MOUNTED UL LISTED MOTOR. PROVIDE MANUFACTURER'S STANDARD U.L. LISTED OPEN- CLOSE - RESET SWITCH AND POSITION PILOT LIGHTS IN UNIT MOUNTED ENCLOSURE. ENCLOSURE TO BE CAPABLE OF BEING REMOVED FOR REMOTE MOUNTING TO ENSURE VISIBILITY AFTER SYSTEM INSTALLATION.

15. PROVIDE COMBINATION FIRE/SMOKE DAMPERS AT ALL FIRE/SMOKE RATED SHAFT AND WALL LOCATIONS. EACH COMBINATION FIRE SMOKE DAMPER SHALL HAVE 16 GA. GALVANIZED BLADES STRENGTHENED WITH GROOVES MEETING REQUIREMENTS OF UL STANDARD 555 & 555S AND HAVE AN 1-1/2 HOUR RATING. BASIS OF DESIGN SHALL BE GREENHECK MODEL FSD 200 SERIES. DAMPERS SHALL BE EQUIPPED STANDARD WITH AN ELECTRIC HEAT-RESPONSIVE DEVICE THAT PERFORMS THE SAME FUNCTION AS A FUSIBLE LINK TO CLOSE DAMPER AT 350 °F. PROVIDE POSITION INDICATING SWITCHES TO MEET REQUIREMENTS OF SMOKE PURGE CONTROL AND/OR BUILDING MANAGEMENT SYSTEM CONTROLS. THE DAMPER OPERATION AND CONSTRUCTION SHALL MEET UL REQUIREMENTS.

16. PROVIDE CURBS FOR ALL ROOF OPENINGS FOR DUCTS, FLUES, PIPING AND EQUIPMENT. CURBS SHALL BE FURNISHED AS ACCESSORIES TO THE EQUIPMENT OR 8" HIGH PATE OR EQUAL EQUIPMENT SUPPORTS SPANNING STRUCTURE AND FLASHED INTO ROOFING. ALL CUTTING, FLASHING, AND PATCHING OF ROOF SHALL BE BY OWNER'S ROOFING CONTRACTOR AND PAID FOR BY MECHANICAL CONTRACTOR.

17. PROVIDE BIG FOOT H FRAME SETS SUPPORT SYSTEM OR SIMILAR FOR ALL ROOFTOP DUCTWORK. SPACING SHALL BE PER SMACNA GUIDELINES.

TIMOTHY R. CHATTERTON LICENSE NO. 15702 STATE OF DELAWARE PROFESSIONAL ENGINEER

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPVC REVIEW	4/17/2024
4.	ISSUED FOR BPVC RESUBMISSION	5/10/2024
5.	ISSUED FOR BPVC RESUBMISSION	6/10/2024
7.	ISSUED FOR TOWN RESUBMISSION	

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NEW CONSTRUCTION FOR:
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POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

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DUCTWORK EXTERNAL INSULATION & PIPE INSULATION (230713, 230719)

1. INSULATE DUCTWORK AS DESCRIBED IN DUCTWORK INSULATION SCHEDULE. FIBERGLASS DUCT WRAP SHALL BE FULLY SECURED TO DUCT. LAP AND TAPE SEAMS AND SECURE TIGHTLY TO THE DUCTS WITH WIRE OR STICK PINS.

2. DO NOT INSULATE:

   a. MAKE-UP AIR DUCTWORK OPERATING AT SURROUNDING AMBIENT CONDITIONS.

   b. RETURN AND EXHAUST AIR DUCTWORK LOCATED WITHIN THE BUILDING ENVELOPE (EXCEPT DUCTWORK WITHIN 10' OF BUILDING ENVELOPE PENETRATIONS).

   c. TRANSFER AIR DUCTWORK (ACOUSTICALLY LINE DUCT, CLEAR INSIDE DIMENSIONS SHOWN ON PLANS)

   d. EXPOSED SUPPLY DUCTWORK LOCATED IN CONDITIONED SPACE. (DOES NOT INCLUDE RETURN AIR PLENUM)

   e. PHENOLIC DUCTWORK

3. INTERNAL DUCT INSULATION -- DUCTWORK INDICATED TO HAVE INTERNAL INSULATION SHALL BE INTERNALLY COVERED WITH INSULATION SUITABLE TO MEET R-VALUES LISTED IN INSULATION SCHEDULE. INSULATION SHALL BE MANUFACTURED FROM A ROTARY PROCESS WITH A NON-WOVEN HYDROPHOBIC FACING. INSULATION SHALL HAVE FLAME/SMOKE RATING OF 25/50. INSULATION SHALL WITHSTAND DUCT VELOCITIES OF 4000 FPM MINIMUM. DUCT SIZES SHOWN ON DRAWINGS ARE CLEAR INTERNAL DIMENSIONS. WHERE LINER IS USED, INCREASE OUTSIDE DIMENSIONS OF DUCT TO MAINTAIN INTERNAL DIMENSIONS. INSTALL LINER PER SMACNA OR NAIMA STANDARDS.

4. HYDRONIC PIPING TO BE INSULATED AS DESCRIBED IN PIPING INSULATION SCHEDULE. PROVIDE SECTIONAL GLASS FIBER PIPE INSULATION HAVING FACTORY APPLIED WHITE "ALL SERVICE" JACKET. LONGITUDINAL FLAPS SHALL BE SELF-SEALING TYPE ADDITIONALLY SECURED WITH NONFERROUS FLARE DOOR STAPLES SPACED 6" ON CENTERS. END JOINTS SHALL BE CLOSED WITH 4" WIDE SELF-SEALING TAPE STAPLED IN PLACE. ALL FITTINGS TO BE FINISHED WITH PRE-MOLDED ONE-PIECE ZESTON TYPE PVC COVERS WITH FIBERGLASS INSULATION INSIDE. SEAL ALL VISIBLE RAW FIBERGLASS WITH BENJAMIN FOSTER #3036 WHITE MASTIC.

5. INSULATE REFRIGERANT PIPING LINES AS DESCRIBED IN PIPING INSULATION SCHEDULE WITH ELASTOMERIC FOAM INSULATION WITH SELF-SEALING SEAM. ARMACELL - AP ARMAFLEX SS INSULATION. PAINT CLOSED CELL INSULATION OUTDOORS WITH TWO COATS OF UV RESISTANT PAINT PER MANUFACTURER'S RECOMMENDATIONS. USE PRE-MOLDED COVERS OVER FITTINGS, VALVES, ELBOWS AND CONTROL DEVICES SEALED VAPOR TIGHT.

6. STEAM SYSTEMS PIPING SHALL BE INSULATED AS DESCRIBED IN PIPING INSULATION SCHEDULE.

7. INSULATION SHALL BE OMITTED FROM HOT SYSTEM VALVE BODIES STRAINERS AND UNIONS. SYSTEMS OPERATING BELOW AMBIENT TEMPERATURE SHALL HAVE ALL VALVE BODIES AND PIPING SPECIALTIES FULLY INSULATED. ALL VALVE BODIES, STRAINERS, UNIONS, PUMP CASING, WATER SEPARATORS, ETC. IN COLD PIPING SHALL BE COVERED SAME AS PIPING SYSTEM. PIPE HANGERS ON INSULATED PIPE SHALL BE OUTSIDE OF THE INSULATION, SIZED ACCORDINGLY AND WITH SADDLE INSERT SUFFICIENT TO PROTECT INSULATION FROM CRUSHING.

8. ALL INSULATION TO BE APPLIED IN FULL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL INSULATION SHALL COMPLY WITH 25/50 FLAME AND SMOKE HAZARD RATINGS PER ASTM E-84, NFPA 255 AND UL 723.

9. PROVIDE REMOVABLE INSULATION SECTIONS TO COVER PARTS OF EQUIPMENT WHICH MUST BE OPENED PERIODICALLY FOR MAINTENANCE; INCLUDE METAL VESSEL COVERS, FASTENERS, FLANGES, CHILLED WATER PUMPS, FRAMES AND ACCESSORIES.

10. REPLACE DAMAGED INSULATION WHICH CANNOT BE REPAIRED SATISFACTORILY, INCLUDING UNITS WITH VAPOR BARRIER DAMAGE AND MOISTURE SATURATED UNITS.

11. CONDENSATE DRAIN PIPING IN RETURN AIR RATED PLENUMS SHALL BE TYPE L COPPER WITH 1/2" FIBERGLASS INSULATION (MIN. R-VALUE = 3). SCHEDULE 40 PVC WITHOUT INSULATION MAY BE USED IN ALL OTHER LOCATIONS.

HANGERS AND SUPPORTS (230529)

1. SUPPORT ALL PIPING FROM STRUCTURE WITH UL LISTED HANGERS AND SUPPORTS SUITABLE FOR THE INTENDED INSTALLATION. DESIGN, SELECTION, SPACING, AND APPLICATION OF HANGERS AND SUPPORTS SHALL COMPLY WITH ANSI B31.1 AND MSS SP-69. HANGERS SHALL BE MANUFACTURED BY PENTAIR., OR APPROVED EQUAL. BLACK OR GALVANIZED STEEL PIPE = MODEL NO. 100, CAST IRON PIPE = MODEL NO. 400, COPPER TUBING = MODEL NO. 102-A.

2. CONTRACTOR SHALL PROVIDE INSULATION HANGER WITH PROTECTIVE SHIELDS, SUCH AS PENTAIR, MODEL NO. 125, OR APPROVED EQUAL FOR ALL INSULATED PIPING.

3. CONTRACTOR SHALL PROVIDE RISER CLAMPS FOR VERTICAL PIPING AT EACH LEVEL. RISER CLAPS SHALL BE PENTAIR MODEL NO. 510 FOR STEEL PIPING AND MODEL NO. 511 FOR COPPER TUBING OR APPROVED EQUAL. USE "SHORT-END" RISER CLAMPS WHERE SPACE IS LIMITED.

4. CONTRACTOR SHALL PROVIDE SIDE BEAM CLAMPS FOR SUPPORTING PIPING FROM STRUCTURAL STEEL MEMBERS. BEAM CLAMPS SHALL BE MANUFACTURED BY PENTAIR, MODEL 300 OR APPROVED EQUAL.

5. WHERE OTHER MEANS OF SUPPORT PIPING ARE REQUIRED OR DESIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE ENGINEER'S APPROVAL PRIOR TO INSTALLING THOSE SUPPORTS.

6. HANGERS AND SUPPORTS SHALL BE SPACED AT INTERVALS WHICH WILL PREVENT SAGGING AND REDUCE STRAIN ON VALVES AND SPECIALTIES. HANGER SPACING SHALL BE NO GREATER AND ROD SIZE SHALL BE NO SMALLER THAN THAT SHOWN IN THE FOLLOWING TABLE. HANGERS SHALL ALLOW FOR EXPANSION AND CONTRACTION. HANGER SHALL BE PROVIDED AT EACH CHANGE OF DIRECTION.

7. RISER CLAMPS SHALL BE INSTALLED ABOVE THE FLOOR AT EACH LEVEL. RISER CLAMPS MAY BE SUSPENDED BELOW FLOOR LEVEL, WITH HANGER RODS AND INSERTS, WHERE THE INSTALLATION OF ESCUTCHEON PLATES IS REQUIRED.

EQUIPMENT (235000)

1. MAKE ALL FINAL EQUIPMENT CONNECTIONS AND PROVIDE THE NECESSARY ADAPTORS, FITTINGS, VALVES, DEVICES, ETC. FOR A COMPLETE AND OPERABLE SYSTEM. PROVIDE COMPLETE WITH BASES, ISOLATORS, SUPPORTS AND OTHER REQUIRED ACCESSORIES.

2. EQUIPMENT SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE MANUFACTURER'S DATA AND INSTALLATION INSTRUCTIONS, INCLUDING CLEARANCES; LUBRICATE AND ADJUST AS REQUIRED. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO CHECK AND CONFORM TO THESE REQUIREMENTS PRIOR TO STARTING WORK. FURNISH AND INSTALL CLEAN SET OF FILTERS PRIOR TO BALANCING.

3. THE CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS OF ALL MECHANICAL EQUIPMENT PRIOR TO ORDERING OF EQUIPMENT. COORDINATE REQUIREMENT FOR PROVISION OF MOTOR STARTERS, DISCONNECTS, CONTACTORS, CONTROL WIRING, ETC. AS REQUIRED FOR PROPER FUNCTIONING SYSTEM WITH ELECTRICAL CONTRACTOR. NO ADDITIONAL PAYMENT WILL BE MADE FOR LACK OF CONTRACTOR COORDINATION OF ELECTRICAL CHARACTERISTICS.

4. ALL FLOOR MOUNTED EQUIPMENT SHALL BE INSTALLED ON CONCRETE HOUSEKEEPING PADS. MINIMUM PAD THICKNESS SHALL BE NOMINAL 4". PAD SHALL EXTEND BEYOND THE EQUIPMENT A MINIMUM OF 4" ON EACH SIDE. CONCRETE PADS SHALL BE PROVIDED BY THIS CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE THIS CONTRACTOR TO COORDINATE THE SIZE AND LOCATION OF THE CONCRETE HOUSEKEEPING PADS WITH THE GENERAL CONTRACTOR.

5. ALL EQUIPMENT SHALL BE MOUNTED ON VIBRATION ISOLATORS TO PREVENT THE TRANSMISSION OF VIBRATION AND MECHANICALLY TRANSMITTED SOUND TO THE BUILDING STRUCTURE.

6. ISOLATION EQUIPMENT SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER, AND SHALL BE DESIGNED SPECIFICALLY FOR THE APPLICATION REQUIRED. THIS INCLUDES, BUT IS NOT LIMITED TO, PIPING DUCTWORK, PUMPS, COMPRESSORS. VIBRATION ISOLATORS SHALL BE RATED FOR THE WEIGHT AND SPACING REQUIRED FOR THE EQUIPMENT REQUIRING ISOLATION.

7. PROVIDE CURBS FOR ALL ROOF OPENINGS FOR DUCTS, FLUES, PIPING AND EQUIPMENT. CURBS SHALL BE FURNISHED AS ACCESSORIES TO THE EQUIPMENT OR 8" HIGH PATE OR EQUAL EQUIPMENT SUPPORTS SPANNING STRUCTURE AND FLASHED INTO ROOFING. ALL CUTTING, FLASHING, AND PATCHING OF ROOF SHALL BE BY OWNER'S ROOFING CONTRACTOR AND PAID FOR BY MECHANICAL CONTRACTOR.

CONTROLS (230910)

1. PROVIDE COMPLETE TEMPERATURE CONTROLS FOR ALL HVAC SYSTEMS. PROVIDE NEW CONTROL DEVICES INCLUDING DAMPER OPERATORS, TEMPERATURE SENSORS, STAGING RELAYS AND OTHER REQUIRED DEVICES TO PROVIDE A COMPLETE OPERATIONAL SYSTEM PER THE FOLLOWING OPERATING SEQUENCE. MOUNT ALL CONTROLS FURNISHED AS ACCESSORIES TO EQUIPMENT AND PROVIDE ALL CONTROL WIRING REQUIRED FOR PROPER OPERATION WHERE NOT SPECIFICALLY SHOWN ON ELECTRICAL PLANS. ALL WIRING SHALL BE IN CONDUIT OR PER N.E.C. AND LOCAL CODE REQUIREMENTS. STANDARD MOUNTING HEIGHT TO TOP OF THERMOSTAT IS 48" ABOVE FINISHED FLOOR OR AS INDICATED ON THE ARCHITECTURAL DRAWINGS. DO NOT INSTALL THERMOSTATS NEAR DIMMER SWITCHES. WIRING OF ALL MOTORIZED OPERATORS AND THERMOSTATS (REGARDLESS OF VOLTAGE) ARE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.

2. THE CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE, WEB-BASED, NATIVE BACNET-INTEGRATED BUILDING AUTOMATION SYSTEM (BAS) INCLUDING ALL NECESSARY HARDWARE, ALL OPERATING AND APPLICATIONS SOFTWARE NECESSARY TO PERFORM THE HVAC CONTROL SEQUENCES OF OPERATION AS CALLED FOR IN THIS SPECIFICATION OR AS SHOWN ON THE DRAWINGS. BAS CONTRACTOR SHALL FURNISH AND INSTALL ALL RELATED SOFTWARE AND HVAC-DDC CONTROLS AS SPECIFIED WITHIN THIS SPECIFICATION. IT SHALL BE THE RESPONSIBILITY OF THE BAS CONTRACTOR TO COORDINATE THIS WORK WITH THE GENERAL CONTRACTOR, MECHANICAL CONTRACTOR, AND THE ELECTRICAL CONTRACTOR AS IT RELATES TO THE INSTALLATION AND WIRING OF ALL RELATED HVAC SYSTEMS.

3. IT SHALL BE THE RESPONSIBILITY OF THE BAS CONTRACTOR TO PROVIDE ALL THE REQUIRED LABOR AND PROGRAMMING TO SEAMLESSLY INTEGRATE THE NEW BAS BACNET SYSTEM AND ITS DDC POINTS, GRAPHICS, ALARMS, ETC. INTO AN EXISTING BAS IF PRESENT.

4. THE CONTROLS CONTRACTOR SHALL WARRANT THE SYSTEM FOR 24 MONTHS AFTER SUBSTANTIAL COMPLETION. DURING THE WARRANTY PERIOD, THE BUILDING SYSTEM CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY REVISIONS TO THE SOFTWARE AS REQUIRED TO PROVIDE A COMPLETE AND WORKABLE SYSTEM CONSISTENT WITH THE LETTER AND INTENT OF THE SEQUENCE OF OPERATION SECTION OF THE SPECIFICATION.

5. THE FOLLOWING ARE THE APPROVED BAS MANUFACTURERS:
   AUTOMATED LOGIC, INC.
   CARRIER CONTROLS
   DISTECH CONTROLS BY TRINITY AUTOMATED SOLUTIONS
   HONEYWELL CONTROLS BY CHESAPEAKE CONTROLS, INC
   JOHNSON CONTROLS, PITTSBURGH BRANCH OFFICE
   KMC CONTROLS BY BUILDING CONTROL SYSTEMS
   SIEMENS CONTROLS
   TRANE CONTROLS
   OR PRE-APPROVED EQUAL.

6. THE CONTROL SYSTEM SHALL BE PROGRAMMED WITH THE FOLLOWING SEQUENCES AND FEATURES:

   a. UNOCCUPIED HEAT: THE SYSTEM SHALL USE THE BASEBOARD HEAT AS THE PRIMARY SOURCE OF HEAT DURING UNOCCUPIED PERIODS. IF THE BASEBOARD IS NOT ABLE TO MAINTAIN TEMPERATURE, THEN THE VAV FAN WITH THE HEAT VALVE 100% OPEN SHALL CYCLE TO PROVIDE ADDITIONAL HEAT IN THE SPACES.

   b. MORNING WARM UP: BEFORE THE OCCUPIED PERIOD BEGINS, THE SYSTEM SHALL USE THE BASEBOARD HEAT TO BRING THE CONNECTED SPACES UP TO OCCUPIED TEMPERATURE. IF THE BASEBOARD CANNOT BRING THE SPACE UP TO SETPOINT WITHIN AN HOUR, THEN UTILIZE THE VAV BOXES TO ASSIST. THE VAV BOXES SHALL USE THEIR FANS AND HW COILS WITH THE PRIMARY AIR DAMPER CLOSED TO ADD HEAT NEEDED IN THE SPACES.

   c. SUPPLY FAN PRESSURE RESET: THE CONTROL SYSTEM SHALL MONITOR ALL DAMPER POSITIONS THAT ARE CONNECTED TO THE AHU SUPPLY FAN. THE SUPPLY AIR PRESSURE SETPOINT SHALL BE REDUCED IF NONE OF THE DAMPERS ARE OPEN 95% OR GREATER.

   d. SUPPLY TEMPERATURE RESET: THE CONTROL SYSTEM SHALL MONITOR ALL DAMPER POSITIONS THAT ARE CONNECTED TO A PARTICULAR UNIT'S SUPPLY FAN. THE SUPPLY AIR TEMPERATURE SHALL BE RESET HIGHER IF THE RETURN AIR RELATIVE HUMIDITY IS BELOW 40% AND NONE OF THE VAV DAMPER POSITIONS ARE OPEN 95% OR GREATER.

   e. ECONOMIZER: THE CONTROL SYSTEM SHALL MONITOR THE ECONOMIZER OPERATION AND THE RELEVANT SENSORS FOR THE AHU. THE AHU SHALL CONTROL THE DAMPER POSITION AS DESIGNED FROM THE FACTORY. THE CONTROL SYSTEM SHALL MONITOR THE DAMPER POSITION AND THE OTHER SENSORS THAT ARE INTEGRATED INTO ECONOMIZER OPERATION.

IDENTIFICATION (230593)

1. CONTRACTOR SHALL PROVIDE IDENTIFICATION LABELS, TAGS, ETC. AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.THE IDENTIFICATION SHALL BE IN ACCORDANCE WITH ANSI STANDARD A13.1. PRESSURE SENSITIVE MARKERS SHALL BE MANUFACTURED BY THE BRADY CO., OR APPROVED EQUAL. MARKERS SHALL BE MANUFACTURER'S STANDARD PRODUCT. PRESSURE SENSITIVE PIPE MARKERS SHALL BE MANUFACTURED BY THE BRADY CO., OR APPROVED EQUAL. PIPE MARKERS SHALL BE MANUFACTURER'S STANDARD PRODUCT.

MOTOR CONTROLLERS (230513)

1. UNLESS OTHERWISE INDICATED, EVERY MOTOR NOT SPECIFIED TO BE PROVIDED WITH A CONTROLLER AT THE FACTORY SHALL BE PROVIDED WITH A CONTROLLER AS SPECIFIED HEREIN. CONTROLLERS SHALL BE FURNISHED BY THIS CONTRACTOR. INSTALLATION OF ALL CONTROLLERS SHALL BE BY THE ELECTRICAL CONTRACTOR.

2. MOTOR CONTROLLERS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF NEMA STANDARD IC-1, INDUSTRIAL CONTROL AND BE HEAVY DUTY CONSTRUCTION. CONTROLLER SIZES SHALL BE VERIFIED TO BE COMPATIBLE WITH HORSEPOWER OF THE MOTOR. CONTROLLERS SHALL BE MANUFACTURED BY ALLEN-BRADLEY CO., GENERAL ELECTRIC, CUTLER-HAMMER OR APPROVED EQUAL.

3. MANUAL MOTOR STARTERS:

   a. SWITCHES SHALL BE TUMBLER-SWITCH STYLE. THE MANUAL MOTOR STARTERS SHALL PROVIDE OVERLOAD PROTECTION WHICH CLOSELY FOLLOWS THE MOTOR LOAD. MANUAL MOTOR STARTERS FOR OUTDOOR USE SHALL BE NEMA TYPE 4X, INDOOR USE SHALL BE NEMA TYPE 1, EXPLOSION PROOF USE SHALL BE NEMA TYPE 7.

4. MAGNETIC MOTOR CONTROLLERS:

   a. MAGNETIC MOTOR CONTROLLERS SHALL BE PROVIDED AS INDICATED. THEY SHALL NOT BE SMALLER THAN NEMA SIZE 1.

   b. NON-REVERSING MAGNETIC CONTROLLER SHALL BE UTILIZED TO START FULL VOLTAGE, NON-REVERSING, AC SINGLE SPEED MOTORS. THE CONTROLLERS SHALL BE SIZED FOR THE LOAD UNLESS OTHERWISE INDICATED.

   c. REVERSING MAGNETIC CONTROLLER SHALL BE UTILIZED TO START FULL VOLTAGE REVERSING, AC SINGLE SPEED MOTORS. THE CONTROLLER SHALL BE SIZED FOR THE LOAD UNLESS OTHERWISE INDICATED. LOCATION OF REVERSING MAGNETIC CONTROLLERS IS INDICATED ON THE DRAWINGS.

   d. WHERE MULTI-SPEED MOTORS ARE SCHEDULED ON THE DRAWINGS, THE MOTOR CONTROLS SHALL BE COMPATIBLE WITH THE TYPE MOTOR SHOWN.

   e. OVERLOAD RELAYS SHALL BE SOLID STATE AND BE SUPPLIED IN EACH LEG. OVERLOAD RELAYS SHALL BE MATCHED TO LOAD AND SHALL BE ADJUSTABLE FROM 90% TO 110%. A SINGLE RESET BUTTON SHALL BE MOUNTED ON THE STARTER DOOR TO PERMIT EXTERNAL RESET. RELAYS SHALL BE CONVERTIBLE FROM MANUAL TO AUTOMATIC RESET BY A SIMPLE ADJUSTMENT.

   f. CONTROL TRANSFORMERS SHALL BE PROVIDED, WHERE REQUIRED. BOTH LEGS OF THE PRIMARY AND ONE LEG OF THE SECONDARY OF THE CONTROL TRANSFORMER SHALL BE PROTECTED BY NEMA CLASS J FUSES. THE OTHER LEG OF THE SECONDARY SHALL BE GROUNDED. CONTROL TRANSFORMER CAPACITY SHALL BE ADEQUATE TO OPERATE ALL CONTROL DEVICES IN THE CIRCUIT. CONTROL VOLTAGE SHALL BE 120V AC UNLESS OTHERWISE SPECIFIED.

   g. UNLESS OTHERWISE INDICATED, ALL MOTOR STARTERS SHALL BE PROVIDED WITH HAND-OFF-AUTOMATIC (H.O.A.) SWITCH IN THE DOOR. ENCLOSURES FOR MAGNETIC STARTERS SHALL BE NEMA TYPE 1 FOR INDOOR USE NEMA TYPE 4X FOR OUTDOOR USE AND NEMA TYPE 7 FOR EXPLOSION PROOF USE.

   h. MOTOR CONTROLLERS SHALL BE PROVIDED WITH ALL CONTROL DEVICES, INCLUDING AUXILIARY CONTACTS, REQUIRED FOR EQUIPMENT TO OPERATE AS SPECIFIED.

5. COMBINATION MOTOR CONTROLLERS:

   a. COMBINATION MOTOR CONTROLLERS SHALL BE PROVIDED WITH MOLDED CASE MOTOR CIRCUIT PROTECTORS OR MOLDED CASE CIRCUIT BREAKERS AS INDICATED. MOTOR CIRCUIT PROTECTIVE DEVICES SHALL HAVE SHORT CIRCUIT CAPACITY AS REQUIRED. UNIT CONTROL CIRCUIT FUSING SHALL BE PROVIDED. THE MOTOR CIRCUIT PROTECTIVE DEVICE SHALL BE MOUNTED IN THE SAME ENCLOSURE AS THE MAGNETIC CONTROLLER AND SHALL BE OPERABLE BY HAND FROM OUTSIDE THE ENCLOSURE. THE HANDLE SHALL BE SO INTERLOCKED WITH THE DOOR THAT IT MUST BE RETURNED TO THE "OFF" POSITION BEFORE THE DOOR CAN BE OPENED, BUT A COIN-PROOF DEFEAT MECHANISM SHALL BE PROVIDED TO ALLOW AUTHORIZED PERSONNEL TO OPEN THE ENCLOSURE DOOR WITHOUT OPENING THE DISCONNECTING DEVICE. PROVISIONS FOR PADLOCKING THE DISCONNECT HANDLE IN THE "OFF" POSITION SHALL BE MADE. THE ENCLOSURE FOR COMBINATION STARTERS SHALL BE NEMA TYPE 1 FOR INDOOR USE AND NEMA TYPE 4X FOR OUTDOOR USE, AND NEMA TYPE 7 FOR EXPLOSION PROOF USE.

   b. MOTOR CIRCUIT PROTECTORS SHALL BE THE CONTINUOUSLY ADJUSTABLE, INSTANTANEOUS MAGNETIC TRIP TYPE CIRCUIT BREAKER AND SHALL BE SO CONSTRUCTED THAT ALL POLES OPEN, CLOSE AND TRIP SIMULTANEOUSLY.

6. OVERLOAD AND SHORT CIRCUIT PROTECTION:
   a. HEATER ELEMENTS SHALL BE PROVIDED FOR OVERLOAD PROTECTION. MOTOR CIRCUIT PROTECTOR SHALL BE PROVIDED FOR MOTOR SHORT CIRCUIT PROTECTION.

DISCONNECT SWITCHES (230514)

1. THIS CONTRACTOR SHALL FURNISH ALL SAFETY DISCONNECT SWITCHES (FUSED AND NON-FUSED) REQUIRED FOR EQUIPMENT FURNISHED UNDER THIS CONTRACT. IN ADDITION, THIS CONTRACTOR SHALL FURNISH A SAFETY DISCONNECT SWITCH FOR ALL MOTORS AND EQUIPMENT WHICH DO NOT HAVE COMBINATION STARTERS OR INTEGRAL DISCONNECTING MEANS. FUSIBLE DISCONNECT SWITCHES SHALL BE PROVIDED FOR ALL EQUIPMENT RATED FOR USE ONLY WITH FUSES (SUCH AS CONDENSING UNITS, COMPRESSORS, ETC.). SUCH SWITCHES SHALL BE ONE, TWO OR THREE POLE TYPE, WITH SOLID NEUTRAL FOR 4 WIRE SERVICE, AND SHALL HAVE THE PROPER CURRENT AND VOLTAGE RATING AS REQUIRED. INSTALLATION OF ALL DISCONNECT SWITCHES SHALL BE BY THE ELECTRICAL CONTRACTOR.

2. ALL SAFETY SWITCHES SHALL BE NEMA HEAVY DUTY TYPE AND SHALL CARRY THE UNDERWRITERS' LABORATORIES LABEL. FUSIBLE SWITCHES SHALL INCORPORATE CLASS "R" FUSE REJECTION FEATURE AND SHALL BE BRACED TO WITHSTAND 200,000 AMPERE RMS SYMMETRICAL FAULT CURRENT. SAFETY SWITCHES SHALL CONFORM TO FEDERAL SPECIFICATION W-S-865.

3. PROVIDE HEAVY-DUTY TYPE, SHEET ENCLOSED, SAFETY SWITCHES. THE TYPE, SIZE, AND RATING SHALL BE AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY THE MOTOR OR EQUIPMENT SERVED. THE ENCLOSURE FOR DISCONNECT SWITCHES SHALL BE NEMA TYPE 1 FOR INDOOR USE, NEMA TYPE 4X FOR OUTDOOR USE AND NEMA TYPE 7 FOR EXPLOSION PROOF USE. DISCONNECTS SHALL BE MANUFACTURED BY ALLEN-BRADLEY, GENERAL ELECTRIC, CUTLER-HAMMER APPROVED EQUAL.

4. SWITCHES SHALL INCORPORATE QUICK-MAKE, QUICK-BREAK OPERATING HANDLES. THE MECHANISM SHALL BE AN INTEGRAL PART OF THE BOX, NOT THE COVER, AND SWITCHES SHALL HAVE A COVER INTERLOCK TO PREVENT UNAUTHORIZED OPENING OF THE SWITCH DOOR IN THE ON POSITION OR CLOSING OF THE SWITCH MECHANISM WITH THE DOOR OPEN. CURRENT CARRYING PARTS SHALL BE CONSTRUCTED OF HIGH-CONDUCTIVITY COPPER WITH SILVER-TUNGSTEN TYPE SWITCH CONTACT.

5. FUSE CLIPS SHALL BE POSITIVE PRESSURE TYPE REINFORCED FUSE CLIPS.

6. THE ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT ALL POWER WIRING TO ALL MECHANICAL CONTRACTOR FURNISHED EQUIPMENT. THE MECHANICAL CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT ALL CONTROL WIRING TO ALL FURNISHED EQUIPMENT, INCLUDING CONTROL DEVICES, STARTERS AND INTEGRAL DISCONNECT SWITCHES OF CONTRACTOR FURNISHED EQUIPMENT.

VARIABLE FREQUENCY DRIVES (230515)

1. PROVIDE VARIABLE FREQUENCY DRIVES (VFD) AS SPECIFIED HEREIN AND AS SHOWN ON THE CONTRACT DRAWINGS. BASIS OF DESIGN IS ABB MODEL ACH-550. THE ENCLOSURE FOR VFD SHALL BE NEMA TYPE 12 FOR INDOOR USE AND NEMA TYPE 3R FOR OUTDOOR USE. VFD SHALL PROVIDE MICROPROCESSOR-BASED CONTROL FOR THREE-PHASE INDUCTION MOTORS USING PULSE WIDTH MODULATED (PWM) DESIGN, WHICH CONVERTS THE UTILITY INPUT VOLTAGE AND FREQUENCY TO A VARIABLE VOLTAGE AND FREQUENCY OUTPUT VIA A TWO-STEP OPERATION. VFD SHALL HAVE AN EFFICIENCY AT FULL LOAD AND SPEED THAT EXCEEDS 97%. THE EFFICIENCY SHALL EXCEED 90% AT 50% SPEED.

2. VFD SHALL MAINTAIN A MINIMUM LINE SIDE DISPLACEMENT POWER FACTOR OF 0.96, REGARDLESS OF SPEED AND LOAD FOR VFD'S LESS THAN 75 HP. VFD SHALL MAINTAIN A MINIMUM LINE SIDE DISPLACEMENT POWER FACTOR OF .99, REGARDLESS OF SPEED AND LOAD FOR MOTORS GREATER THAN 75 HP. THE VFD'S SHALL HAVE A ONE (1) MINUTE OVERLOAD CURRENT RATING OF 110% FOR LOW OVERLOAD APPLICATIONS. VFD SHALL HAVE AN INTEGRAL EMI/RFI FILTER AND CIRCUIT BREAKER AS STANDARD. THE CURRENT WITHSTAND RATING OF THE OPEN VFD SHALL BE 65,000 AIC.

3. COMMUNICATION CAPABILITY OPTIONS SHALL INCLUDE MODBUS RTU, JOHNSON CONTROLS METASYS N2, BACNET MSTP, BACNET/IP. MODBUS/TCP AND EXPANSION CARD COMMUNICATIONS SHALL INCLUDE LONWORKS. THE EXACT PROTOCOL NEEDED IS THAT WHICH WILL COMMUNICATE WITH THE BAS COMMUNICATION SYSTEM PROVIDED.

4. VFD SHALL HAVE A COOLING FAN(S) THAT IS FIELD REPLACEABLE.

5. VFD SHALL INCLUDE THE FOLLOWING PROTECTIVE FEATURES: OVERCURRENT, OVERVOLTAGE, SYSTEM FAULT, UNDER VOLTAGE, INPUT LINE SUPERVISION, OUTPUT PHASE SUPERVISION, UNDER TEMPERATURE, OVER TEMPERATURE, MOTOR STALLED, MOTOR OVER TEMPERATURE AND MOTOR UNDER LOAD. VFD SHALL PROVIDE GROUND FAULT PROTECTION DURING POWER-UP, STARTING, AND RUNNING.

6. WARRANTY SHALL BE TWENTY-FOUR (24) MONTHS FROM CERTIFIED START-UP DATE. THIS WARRANTY DURATION INCLUDES START-UP BY AN AUTHORIZED SERVICE REPRESENTATIVE AND PARTS, LABOR AND TRAVEL TIME.

TIMOTHY R. CHATTERTON LICENSE No. 15702 DELAWARE PROFESSIONAL ENGINEER

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPVO REVIEW	4/17/2024
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5.	ISSUED FOR BPVO RESUBMISSION	6/10/2024
7.	ISSUED FOR TOWN RESUBMISSION	

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DEWEY BEACH, DELAWARE

MECHANICAL
SPECIFICATIONS

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SCALE	: NONE
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CHECK, TEST, START, ADJUST, BALANCE AND INSTRUCTIONS (230593)

1. AFTER INSTALLATION, CHECK ALL EQUIPMENT, AND PERFORM START UP IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

2. ALL PIPING SHALL BE TESTED AND FREE OF LEAKS.

3. CONCEALED OR INSULATED WORK SHALL REMAIN UNCOVERED UNTIL REQUIRED TESTS HAVE BEEN COMPLETED, BUT IF CONSTRUCTION SCHEDULE REQUIRES IT, ARRANGE FOR PRIOR TESTS ON PARTS OF SYSTEM AS APPROVED BY THE TENANT.

4. BALANCE ALL SYSTEMS, CALIBRATE CONTROLS, CHECK FOR PROPER OPERATION AND SEQUENCE UNDER ALL CONDITIONS AND MAKE ALL NECESSARY ADJUSTMENTS.

5. AFTER INSTALLATION AND EQUIPMENT IS PLACED IN OPERATION, HVAC CONTRACTOR IS RESPONSIBLE FOR BALANCING SYSTEMS. BALANCING SHALL BE PERFORMED BY AN INDEPENDENT AABC CERTIFIED CONTRACTOR.

6. ADJUST AND BALANCE THE AIR SYSTEMS BEFORE HYDRONIC, STEAM, AND REFRIGERANT SYSTEMS. TESTING AND BALANCING SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT AABC NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE. GPM'S SHALL BE BALANCED WITHIN 10% OF DESIGN. AFTER ALL AIR SYSTEMS ARE INSTALLED, EACH SUPPLY AIR OUTLET SHALL BE AIR BALANCED TO WITHIN 10% OF THE CFM SHOWN WITH AIR PATTERNS SET AS INDICATED ON DRAWINGS (OR WITHIN 10 CFM WHEN BELOW 100 CFM). FAN RPMS AND ZONE DAMPERS SHALL BE ADJUSTED AND SHEAVES SHALL BE REPLACED AS REQUIRED TO ACHIEVE AIR BALANCE. ALL ZONES OR PORTIONS THEREOF SERVING OTHER SPACES AND WHICH MAY BE AFFECTED BY THE PROJECT SHALL BE TRAVERSED PRIOR TO CONSTRUCTION. THE FINAL AIR BALANCE SHALL RESTORE THESE AIR QUANTITIES. BEFORE AND AFTER AIR QUANTITIES SHALL BE LISTED IN THE AIR BALANCE REPORT

7. SHOULD THE AIR BALANCE REPORT INDICATE UNACCEPTABLE DUCT LEAKAGE, AS DETERMINED BY THE ENGINEER, THEN DUCT LEAKAGE TEST SHALL BE PERFORMED IN ACCORDANCE WITH AABC STANDARDS. DUCT SHALL BE RESEALED AND/OR REPAIRED AS REQUIRED TO MEET DESIGN REQUIREMENTS. ALL, OR PORTIONS OF THE SYSTEM SHALL BE REBALANCED AS REQUIRED UNTIL ALL SYSTEMS ARE WITHIN THE PERFORMANCE STANDARDS LISTED ABOVE.

8. CLEAN ALL MECHANICAL EQUIPMENT AND DUCTWORK OF ALL CONSTRUCTION DUST AT PROJECT COMPLETION. REPLACE ALL FILTERS PRIOR TO AIR BALANCING. PROVIDE ONE SPARE SET OF FILTERS FOR EACH PIECE OF EQUIPMENT TO THE OWNER.

9. START UP AND PLACE ALL SYSTEMS IN OPERATION AND TAG ALL SWITCHES AND CONTROLS WITH PERMANENT LABELS.

10. PROVIDE OWNER TRAINING AND DEMONSTRATION OF ALL MECHANICAL SYSTEMS AND EQUIPMENT. INSTRUCT OWNER ON PROPER OPERATION AND PREVENTATIVE MAINTENANCE OF SYSTEM. SUBMIT OPERATING AND MAINTENANCE MANUAL ON ALL EQUIPMENT AND SYSTEMS.

11. AIR QUALITY TESTING SHALL BE PERFORMED BY AN AABC CERTIFIED CONTRACTOR, THIS CONTRACTOR SHALL BE ACCEPTABLE UPON APPROVAL OF THE ENGINEER. CONDUCT BASELINE INDOOR AIR QUALITY TESTING AFTER CONSTRUCTION ENDS AND BEFORE OCCUPANCY. TESTING PROCEDURES SHALL BE PER THE U.S. E.P.A. COMPENDIUM OF METHODS FOR THE DETERMINATION OF AIR POLLUTANTS IN INDOOR AIR AND AS DETAILED BY THE U.S.G.B.C. IN THE LEED-NC VERSION 3.0 REFERENCE GUIDE. CONTRACTOR SHALL DEMONSTRATE THAT THE CONTAMINANT MAXIMUM CONCENTRATIONS LISTED UNDER EQ CREDIT 3.2 IN THE LEED REFERENCE GUIDE ARE NOT EXCEEDED. CONTRACTOR SHALL INCLUDE ONE ADDITIONAL SAMPLING / RE-TESTING OF EACH BUILDING AREA IN HIS BID

PERFORATED FACE DIFFUSER - TITUS MODEL PSS OR APPROVED EQUAL. 24" X 24" FACE OR 12" X 12" (AS APPLICABLE OR AS SHOWN ON DRAWINGS), STEEL CONSTRUCTION, WHITE FINISH, FLUSH FACE, LAY IN BORDER, STAR PATTERN. PROVIDE SURFACE MOUNT BORDER FOR INSTALLATION IN DRYWALL CEILING. ROUND NECK. SEE SCHEDULE FOR NECK AND FLEX DUCT SIZE.
PERFORATED FACE CEILING RETURN AIR GRILLES - TITUS MODEL PAR OR APPROVED EQUAL. 24" X 24" FACE, STEEL CONSTRUCTION, WHITE FINISH, FLUSH FACE, LAY-IN BORDER (TYPICAL). PROVIDE SURFACE MOUNT BORDER FOR INSTALLATIONS IN DRYWALL CEILING. SEE SCHEDULE FOR REQUIRED NECK SIZE ON DUCTED APPLICATIONS.

LINEAR SLOT SUPPLY DIFFUSERS - TITUS MODEL TBDI-80 (TWO 1" SLOTS), FL-20, OR AS INDICATED ON SCHEDULES AND FLOOR PLAN, OR APPROVED EQUAL. STEEL CONSTRUCTION, FULLY INSULATED PLENUM, PATTERN CONTROLLERS WITH ADJUSTABLE GASKETED BLADE AS APPLICABLE.

SUPPLY AIR REGISTERS - TITUS MODEL 300 FS OR APPROVED EQUAL. ALUMINUM CONSTRUCTION, DOUBLE DEFLECTION BLADES SHALL HAVE 3/4" SPACING WITH FRONT BLADES PARALLEL TO THE SHORT DIMENSION. ALL BLADES SHALL BE INDIVIDUALLY ADJUSTABLE, WITH OPPOSED BLADE DAMPER ADJUSTABLE FROM THE FACE OF THE REGISTER. SEE FLOOR PLAN FOR REQUIRED SIZES. REGISTERS SHALL BE FIELD PAINTABLE IN COLOR SELECTED BY ARCHITECT.

RETURN / TRANSFER GRILLES - TITUS MODEL 350 FL OR APPROVED EQUAL. ALUMINUM CONSTRUCTION, BLADES SHALL HAVE 3/4" SPACING & 35° FIXED DEFLECTION. GRILLES SHALL BE FIELD PAINTABLE IN COLOR SELECTED BY ARCHITECT.

LOUVERED DOOR GRILLES - TITUS MODEL T-700L OR APPROVED EQUAL. STEEL CONSTRUCTION, SIGHT PROOF, 20 GAUGE STEEL BLADES, BLADES PARALLEL TO THE LONG DIMENSION. LOUVER SHALL HAVE A MINIMUM 2.0 SQUARE FOOT OF FREE AREA.

TORK TIME CLOCK INFO:
PROVIDE TORK TIME CLOCK MODEL E101 OR APPROVED EQUAL. SET TO OWNERS OCCUPIED SCHEDULE.

CONDENSATE PUMP:
LITTLE GIANT, OR APPROVED EQUAL MODEL VCMA PRO SERIES, 120/1ϕ. 1.5 AMPS WITH STAINLESS STEEL MOTOR SHAFT, AUTO START/STOP, OVERFLOW DETECTION (WIRED TO SHUT DOWN UNIT UPON ACTIVATION), ANTI-SWEAT SLEEVE, CHECK VALVE, POWER CABLE AND 3 YEAR WARRANTY.

REFRIGERANT LEAK DETECTOR STAND ALONE SENSOR:
BACHARACH/MURCO MODEL IAM, OR APPROVED EQUAL, 120/1ϕ, WITH PRESET ALARM LEVELS 1,000 PPM AND 10,000 PPM, VISUAL AND AUDIBLE ALARM.

GAS DETECTION SYSTEM:
HONEYWELL, OR APPROVED EQUAL. SYSTEM SHALL BE FULLY FUNCTIONAL, STAND-ALONE, DUAL GAS MONITORING AND, SHALL CONSIST OF THE FOLLOWING MINIMUM REQUIREMENTS: E3POINT CONTROLLER WITH VISUAL AND AUDIBLE ALARMS, REMOTE VISUAL AND AUDIBLE ALARM, 120V TO 17-27 VAC STEP-DOWN TRANSFORMER, CARBON MONOXIDE GAS DETECTION SENSOR WITH A RANGE OF 0-250 PPM, NITROGEN DIOXIDE GAS DETECTION TRANSMITTERS WITH A RANGE OF 0-10PPM, AND RELAYS. INSTALL SENSORS AT MANUFACTURER RECOMMENDED HEIGHTS (CO SENSOR 3'-5' ABOVE FINISHED FLOOR AND NO2 SENSOR 1'-3' FROM FINISHED CEILING). PROVIDE AUDIBLE AND VISUAL ALARMS IN SLEEPING QUARTERS IN ACCORDANCE WITH NFPA REQUIREMENTS.

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPMO REVIEW	4/17/2024
4.	ISSUED FOR BPMO RESUBMISSION	5/10/2024
5.	ISSUED FOR BPMO RESUBMISSION	6/10/2024
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
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DEWEY BEACH, DELAWARE

MECHANICAL
SPECIFICATIONS

Allen + Shariff
MEP Engineering
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SCALE	: NONE
DESIGN BY	: ZCIO
DRAWN BY	: ZCIO
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DATE	: 8-30-2024

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TIMOTHY R. CHATTERTON
LICENSE
No. 15702
STATE OF DELAWARE
PROFESSIONAL ENGINEER

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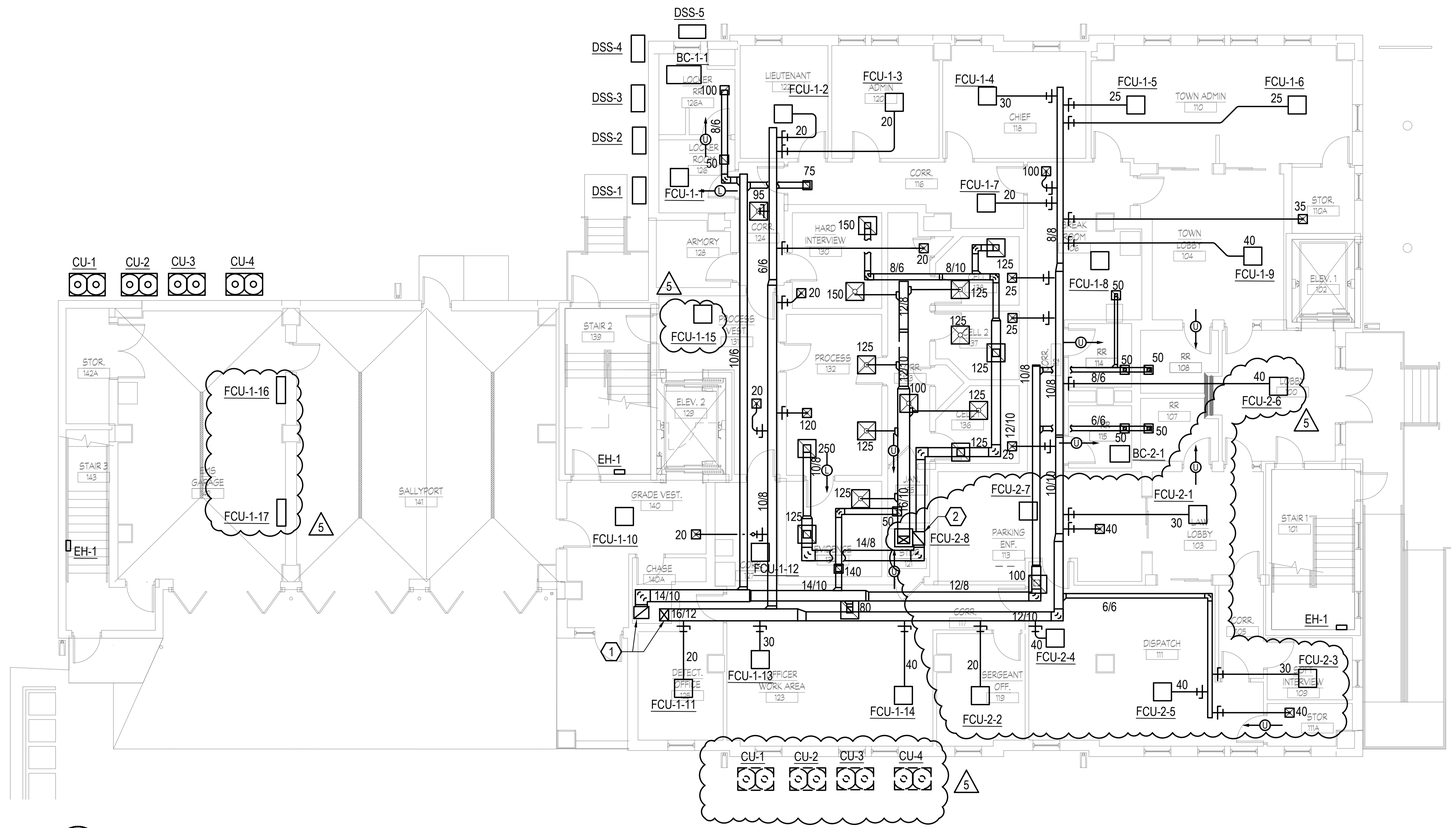

1 M1.1 MECHANICAL FIRST FLOOR PLAN
1/8" = 1'-0"

MECHANICAL GENERAL NOTES:

1. ALL GRD'S IN SECURITY CEILING SHALL BE SECURITY TYPE. GREENHECK MODEL XG-SG5500 OR APPROVED EQUAL. REFER TO ARCHITECTURAL DRAWING FOR LOCATIONS OF SECURITY CEILINGS.
2. SEE M2.1 FOR CONDENSATE ROUTING AND CONTROLS LOCATION.
3. CU-1, CU-2, CU-3 AND CU-4 SHOWN IN THEIR FINAL LOCATION FOR PHASE 2. CONTRACTOR TO COORDINATE TEMPORARY LOCATION FOR INSTALLATION DURING PHASE 1 THAT WILL WORK WITH PROPOSED LAY-DOWN AREAS, ETC. POTENTIAL LOCATION SHOWN IN 1/M1.1, PLAN SOUTH.

MECHANICAL KEY NOTES: (#)

1. 16/12 RA AND SA DROP FROM SECOND FLOOR. SEE M1.2 FOR CONTINUATION.
2. 18/12 RA DROP TO FCU-1-15.

1' 0 4' 8' 12' 16'
GRAPHIC SCALE 1/8" = 1'-0"

NO.	REVISION	DATE
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MECHANICAL FIRST FLOOR PLAN

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M1.1

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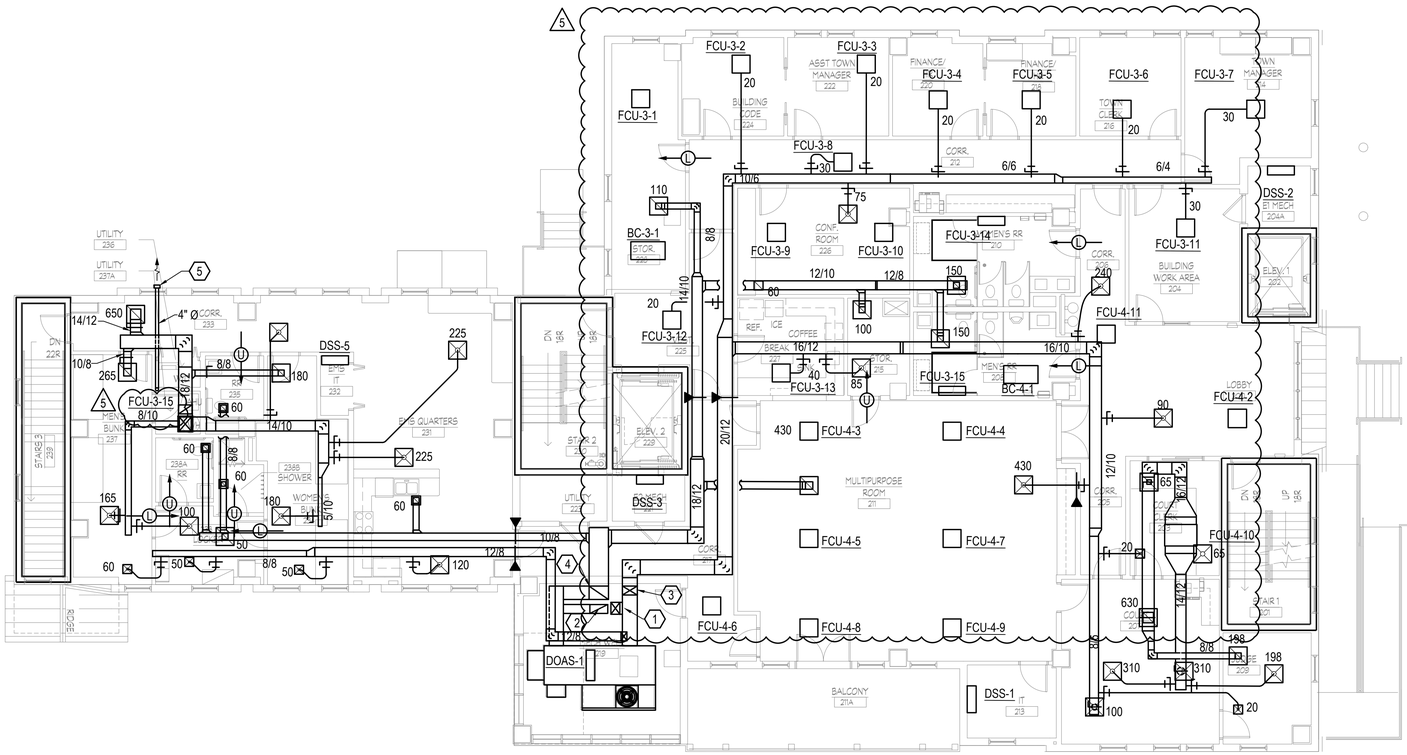

1 M1.2 MECHANICAL SECOND FLOOR PLAN

1/8" = 1'-0"

MECHANICAL GENERAL NOTES:

1. COORDINATE ALL DUCT RUNS AND BULKHEADS PRIOR TO DUCT FABRICATION. NOTIFY ARCHITECT OF ANY CONCERNS.

MECHANICAL KEY NOTES: (#)

1. 16/12 SA DROP TO FIRST FLOOR.
2. 16/12 RA DROP TO FIRST FLOOR.
3. 20/12 SA RISE TO ABOVE CEILING, COORDINATE EXACT RISE HEIGHT WITH ARCHITECTURAL PLANS.
4. 22/12 RA RISE TO ABOVE CEILING, COORDINATE EXACT RISE HEIGHT WITH ARCHITECTURAL PLANS.
5. TERMINATE LAUNDRY EXHAUST WITH WALL CAP. SIZE AND ROUTE ACCORDING TO MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.

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

NO.	REVISION	DATE
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MECHANICAL
SECOND FLOOR
PLAN

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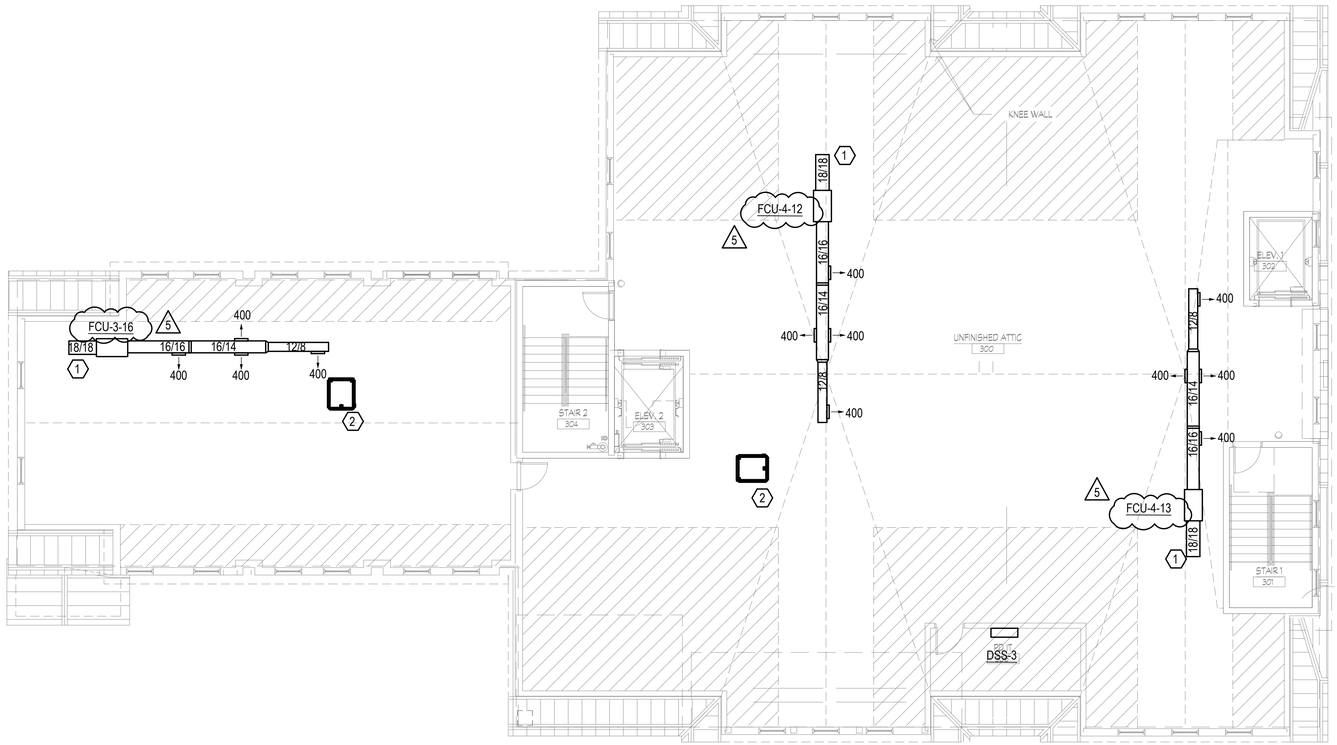

1 M1.3 MECHANICAL THIRD FLOOR PLAN

1/8" = 1'-0"

MECHANICAL KEY NOTES: (#)

1. EXTEND RETURN DUCTWORK 4'-0" AND TERMINATE WITH WIRE MESH SCREEN. MOUNT THERMOSTAT TO RETURN DUCT WITH AN ADDITIONAL OF 100' OF THERMOSTAT WIRING.
2. 36"/30" SINGLE LEAF SMOKE VENT TO BE INSTALLED ON THE ROOF. COORDINATE ROOF CURB WITH SLOPE OF ROOF. BILCO MODEL S-50SV OR APPROVED EQUAL.

1'0 4' 8' 12' 16'

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

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BID	11/5/2024
5.	ISSUED FOR ADDENDUM #3	01/10/2025

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

MECHANICAL
THIRD FLOOR
PLAN

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: 1/8" = 1'-0"
DESIGN BY	: ZCIO
DRAWN BY	: ZCIO
CHECKED BY	: TCHA
GMB FILE	: 220242
DATE	: 01-10-2025

M1.3

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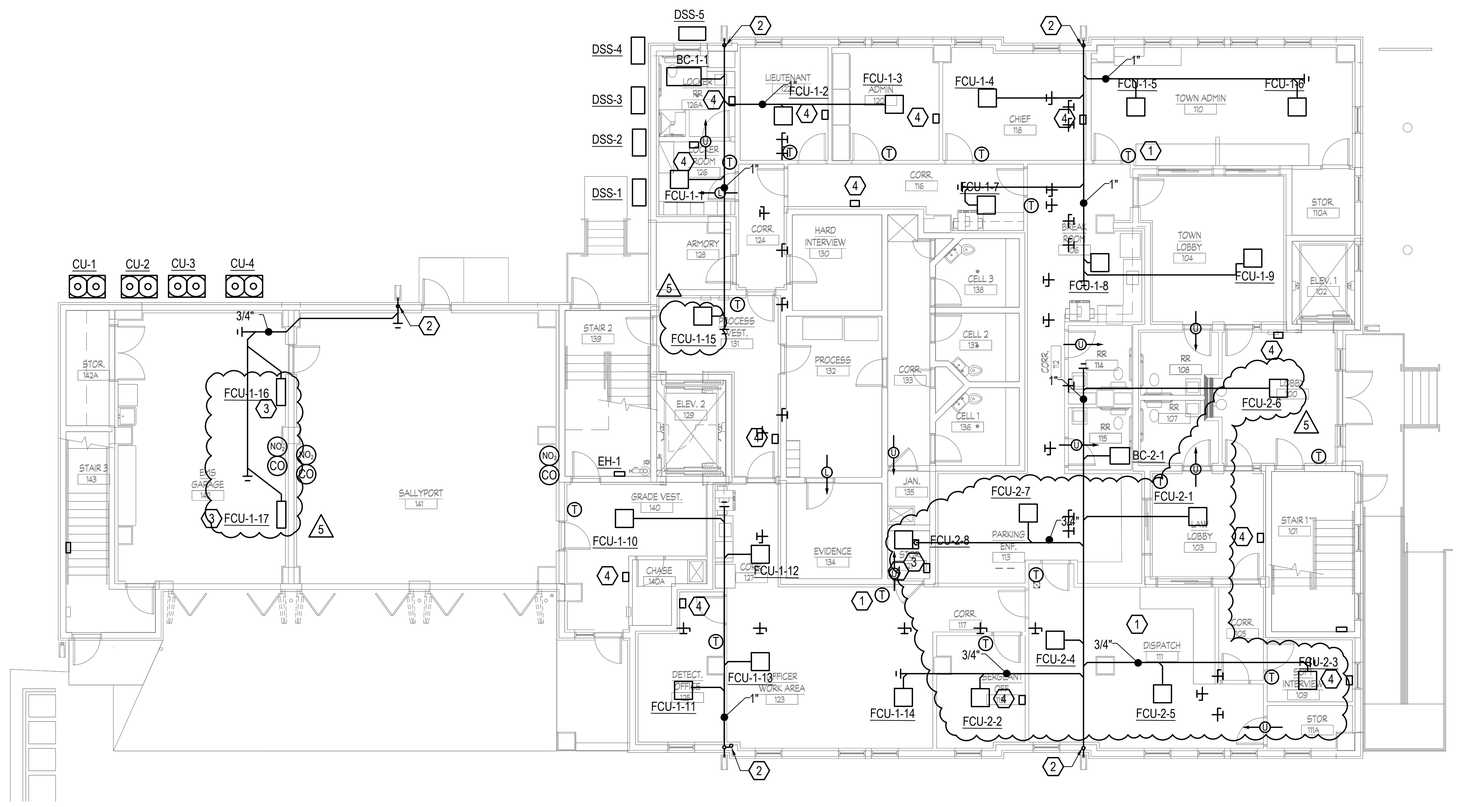
ALLEN + SHARIFF JOB# : 2331073



1 M2.1 MECHANICAL FIRST FLOOR PLAN

1/8" = 1'-0"

MECHANICAL GENERAL NOTES:

1. ALL CONDENSATE LINES SHALL BE 3/4"Ø UNLESS NOTED OTHERWISE.

MECHANICAL KEY NOTES: (#)

1. UNITS SHALL BE SETUP IN THE MASTER SLAVE CONFIGURATION.
2. 1-1/4" CONDENSATE UP TO SECOND FLOOR. SEE M2.2 FOR COORDINATION.
3. PROVIDE CONDENSATE PUMP.
4. REFRIGERANT LEAK DETECTOR.

1'-0" 4" 8" 12" 16"

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

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	95% SET FOR BID	11/15/2024
5.	ISSUED FOR ADDENDUM #3	01/10/2025

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NEW CONSTRUCTION FOR:
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DEWEY BEACH, DELAWARE

MECHANICAL
FIRST FLOOR
CONDENSATE AND
CONTROL PLAN

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: 1/8" = 1'-0"
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GMB FILE	: 220242
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M2.1

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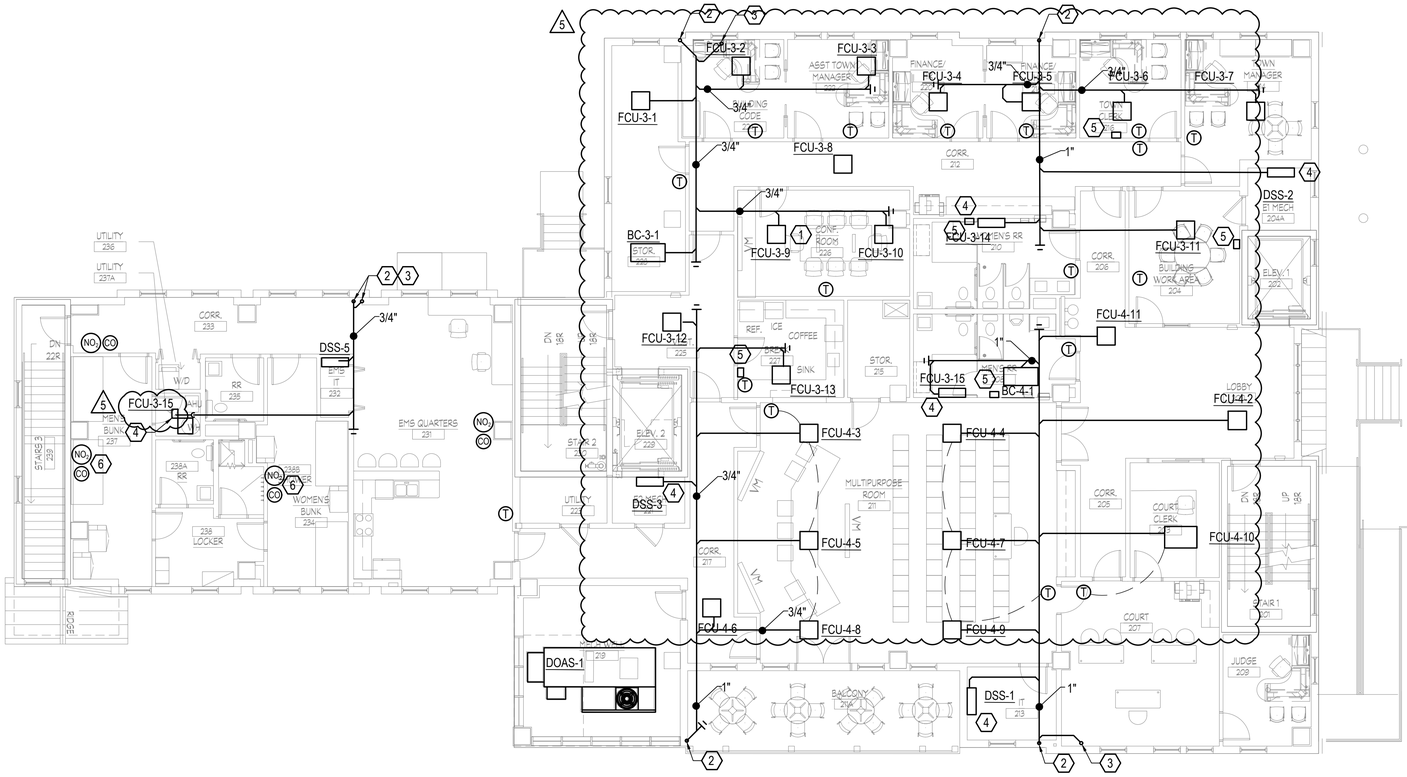
ALLEN + SHARIFF JOB# : 2331073



1 M2.2 MECHANICAL SECOND FLOOR PLAN
1/8" = 1'-0"

MECHANICAL GENERAL NOTES:

1. ALL CONDENSATE LINES SHALL BE 3/4"Ø UNLESS NOTED OTHERWISE.

MECHANICAL KEY NOTES: (#)

1. UNITS SHALL BE SETUP IN THE MASTER SLAVE CONFIGURATION.
2. 1-1/4" CONDENSATE DOWN TO FIRST FLOOR. SEE M2.1 FOR CONTINUATION.
3. 1" CONDENSATE UP TO THIRD FLOOR. SEE M2.3 FOR CONTINUATION.
4. PROVIDE CONDENSATE PUMP.
5. REFRIGERANT LEAK DETECTOR.
6. PROVIDE AUDIBLE AND VISUAL SENSORS FOR GAS DETECTION SENSORS IN SLEEPING QUARTERS IN ACCORDANCE WITH NFPA REQUIREMENTS.

1' 0 4' 8' 12' 16'
GRAPHIC SCALE 1/8" = 1'-0"

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	95% SET FOR BID	11/5/2024
5.	ISSUED FOR ADDENDUM #3	01/10/2025

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

MECHANICAL
SECOND FLOOR
CONDENSATE AND
CONTROL PLAN

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: 1/8" = 1'-0"
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M2.2

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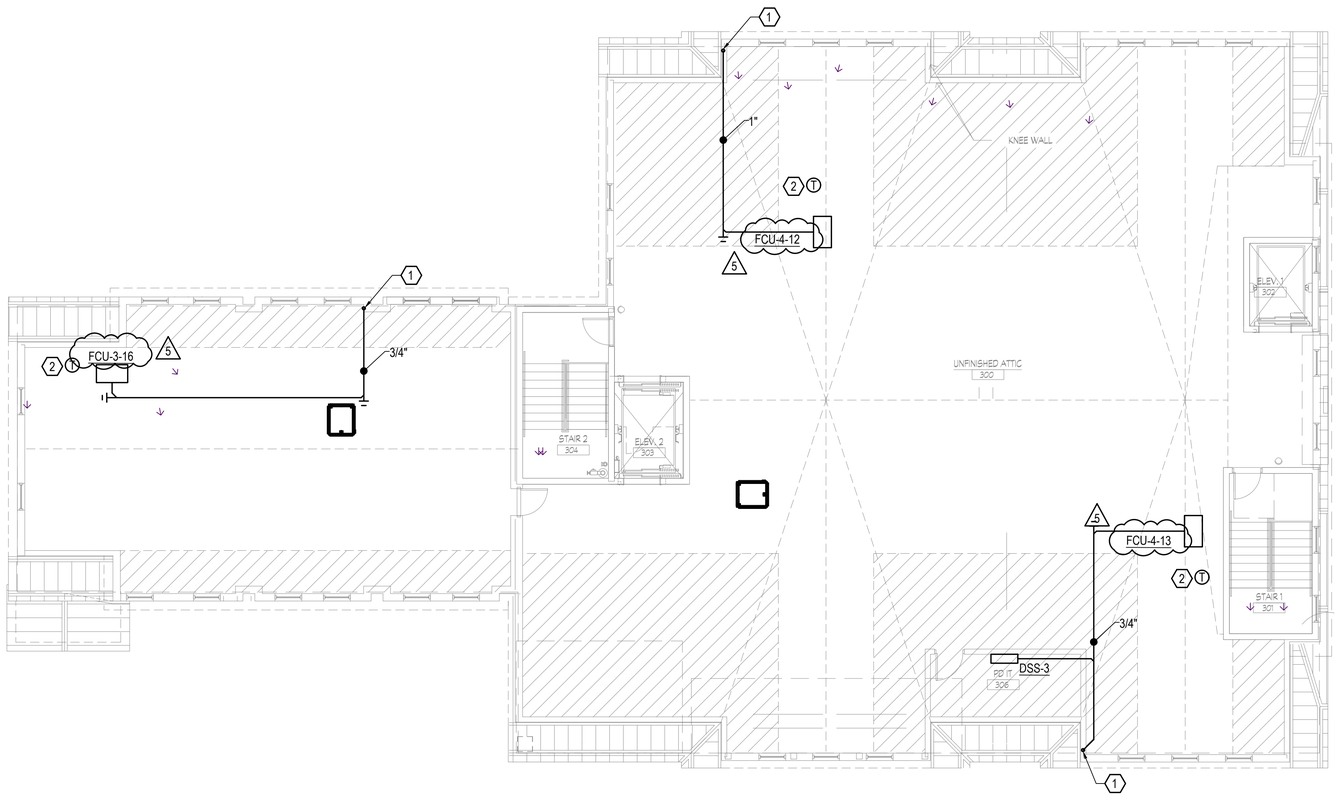

1 M2.3 MECHANICAL SECOND FLOOR PLAN

1/8" = 1'-0"

MECHANICAL KEY NOTES: (#)

1. DROP CONDENSATE LINE DOWN TO FIRST FLOOR. SEE M2.1 FOR CONTINUATION.
2. THERMOSTAT TO BE MOUNTED TO RETURN AIR DUCTWORK WITH A MINIMUM OF 100'-0" OF ADDITIONAL THERMOSTAT WIRE.

1' 0 4' 8' 12' 16'

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

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BID	11/5/2024
5.	ISSUED FOR ADDENDUM #3	01/10/2025

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

MECHANICAL
THIRD FLOOR
CONDENSATE AND
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SCALE	: 1/8" = 1'-0"
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M2.3

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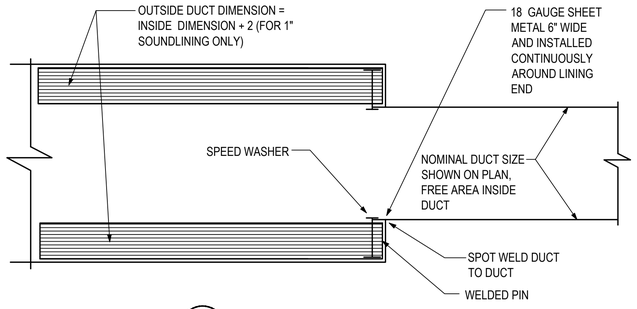
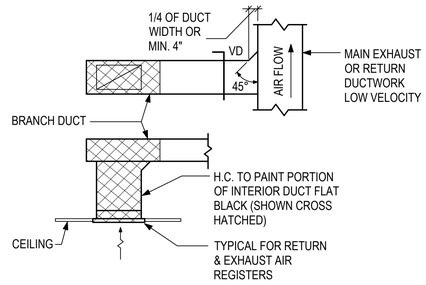
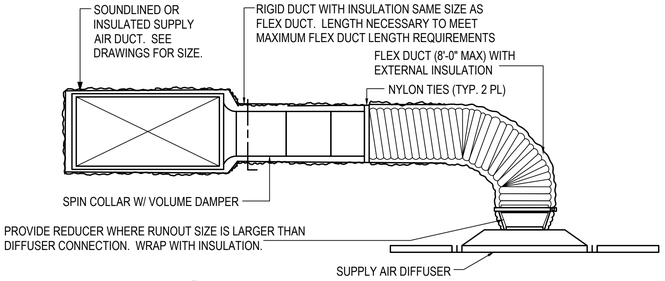
ALLEN + SHARIFF JOB# : 2331073



1 M3.1 **SOUNDLINER DETAIL**
NOT TO SCALE

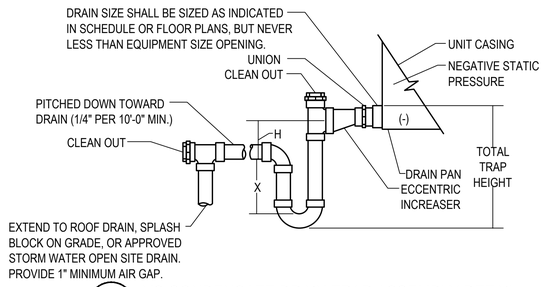


2 M3.1 **LOW VELOCITY BRANCH DUCT CONNECTION DETAIL**
NOT TO SCALE
NOTE: AIRFLOW IN OPPOSITE DIRECTION IS SIMILAR.

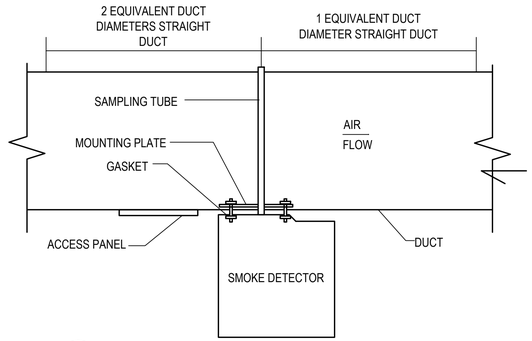


3 M3.1 **SUPPLY AIR DIFFUSER CONNECTION DETAIL**
NOT TO SCALE

TRAP SIZING
"H" MUST EQUAL 1 INCH PLUS CASING STATIC PRESSURE
"X" = 1/2 "H"
TOTAL TRAP HEIGHT = "X" + "H" + (1.5 X PIPE DIAMETER) + INSULATION THICKNESS

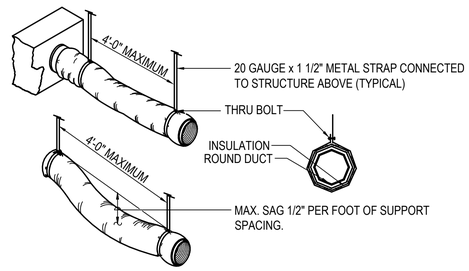


4 M3.1 **A/C CONDENSATE DRAIN TRAP ASSEMBLY DETAIL - TYPICAL DRAW-THROUGH OR NEGATIVE PRESSURE**
NOT TO SCALE



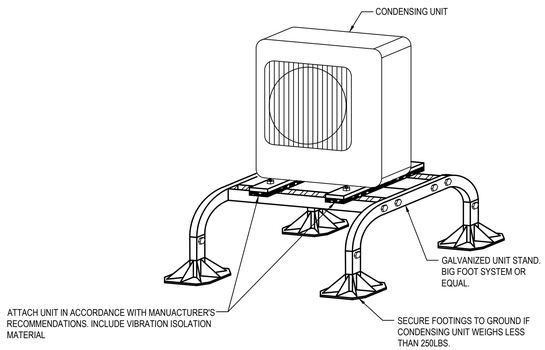
5 M3.1 **DUCT SMOKE DETECTOR MOUNTING DETAIL**
NOT TO SCALE

NOTES:
1. SMOKE DETECTOR, SAMPLING TUBES, MOUNTING PLATE, AND GASKET AS SPECIFIED.
2. LOCATE ACCESS PANEL UP STREAM OF SMOKE DETECTOR.
3. INSTALL SAMPLING TUBE AND SMOKE DETECTOR AS PER SPECIFICATION.
4. HOLE IN INTERNAL INSULATION TO BE ONLY AS LARGE AS SAMPLING TUBE.

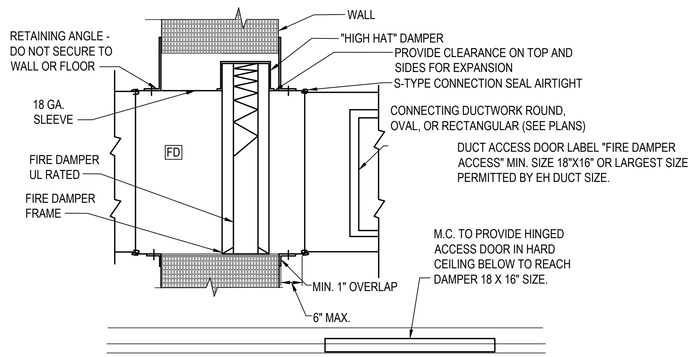


6 M3.1 **FLEXIBLE DUCT RUN-OUT SUPPORT DETAIL**
NOT TO SCALE

NOTES:
1. FLEXIBLE DUCT SHOULD EXTEND STRAIGHT FOR SEVERAL INCHES FROM RECTANGULAR DUCT CONNECTION BEFORE BENDING.
2. FLEXIBLE DUCT SHOULD NOT EXCEED 8'-0" IN LENGTH. USE RIGID ROUND DUCTWORK WHEN RUNOUTS EXCEED 8'-0".



7 M3.1 **CONDENSING UNIT STAND DETAIL**
NO SCALE



8 M3.1 **VERTICAL FIRE DAMPERS**
NOT TO SCALE

NOTES:
1. INSTALL DAMPER WHERE IS SHOWN ON DRAWINGS.
2. INSTALL PER NFPA PAMPHLET NO. 90A & PER LOCAL CODES.
3. EXTERNAL DUCT INSULATION SHALL STOP AT WALL.
4. INFILL ANY FLOOR VOID OPENINGS AROUND FRAMES WITH SUITABLE MATERIAL TO MAINTAIN FIRE RATING.

TIMOTHY R. CHATTERTON LICENSE No. 15702 STATE OF DELAWARE PROFESSIONAL ENGINEER

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPVO REVIEW	4/7/2024
4.	ISSUED FOR BPVO RESUBMISSION	5/10/2024
5.	ISSUED FOR BPVO RESUBMISSION	6/10/2024
7.	ISSUED FOR TOWN RESUBMISSION	

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

MECHANICAL
DETAILS

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: NONE
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DATE	: 8-30-2024

M3.1

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ALLEN + SHARIFF JOB# : 2331073

Indoor Units:	17 / 1 to 30	
Capacity:	129 / 60 to 180 (107.5%)	
* Connectable capacity is not actual capacity.		
Total Pipe Length:	848.0 / 1798.5	feet
Furthest Actual:	182.0 / 541.0	feet
Furthest Equiv.:	182.0 / 623.0	feet
Furthest IU from BC Actual:	82.0 / 131.0	feet
Furthest IU from BC Equiv.:	82.0 / 131.0	feet
Furthest IU from BC Thru Sub BC Actual:	0.0 / 0.0	feet
Furthest IU from BC Thru Sub BC Equiv.:	0.0 / 0.0	feet

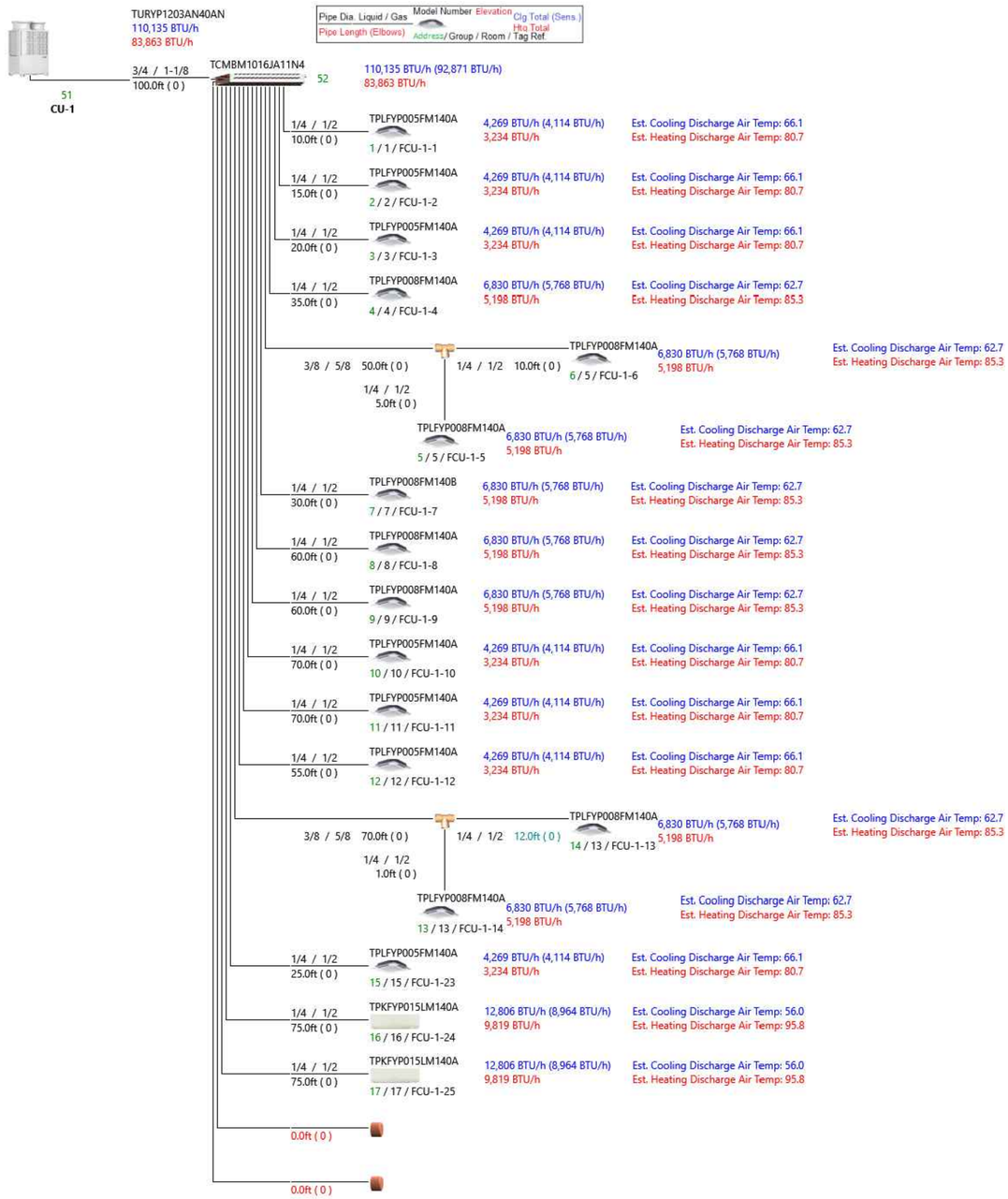
Correction Factors

Outdoor Unit Capacity:	1.02	1.00
Temperature:	1.01	0.67
Piping Length:	0.89	0.97
Defrosting:	-	0.95
User Derate:	1.00	1.00
Total Derate:	0.92	0.62
Additional Refrigerant:	37.25 lb	
Total Refrigerant Amount:	54.89 lb	

Conditions (°F)

Cooling
Indoor DB 80.0 Humidity 51.8% Indoor WB 67.0
Outdoor DB 93.0

Heating
Indoor DB 70.0
Outdoor DB 12.0 Humidity 72.8% Outdoor WB 10.8



1 / M3.2 VRF PIPING SCHEMATIC CU-1
NONE

NOTES:

1. PIPING SHOWN IN SCHEMATIC ARE SOLELY FOR REFERENCE PURPOSES ONLY. INSTALL PIPING IN AS SHORT AND DIRECT ARRANGEMENT AS POSSIBLE TO MINIMIZE PRESSURE DROPS. EXACT PIPE ROUTING AND LENGTHS TO BE COORDINATED IN FIELD WITH CONSIDERATION TO BUILDING CONDITIONS AND CONSTRUCTION. ALL PIPING LENGTHS AND ROUTING TO BE DETERMINED BY THE CONTRACTOR.

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPMO REVIEW	4/17/2024
4.	ISSUED FOR BPMO RESUBMISSION	5/10/2024
5.	ISSUED FOR BPMO RESUBMISSION	6/10/2024
7.	ISSUED FOR PERMISSION	

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

MECHANICAL
DETAILS

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: NONE
DESIGN BY	: ZCIO
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GMB FILE	: 220242
DATE	: 8-30-2024

M3.2

TIMOTHY R. CHATTERTON LICENSE No. 15702 STATE OF DELAWARE PROFESSIONAL ENGINEER

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ALLEN + SHARIFF JOB# : 2331073

NOTES:

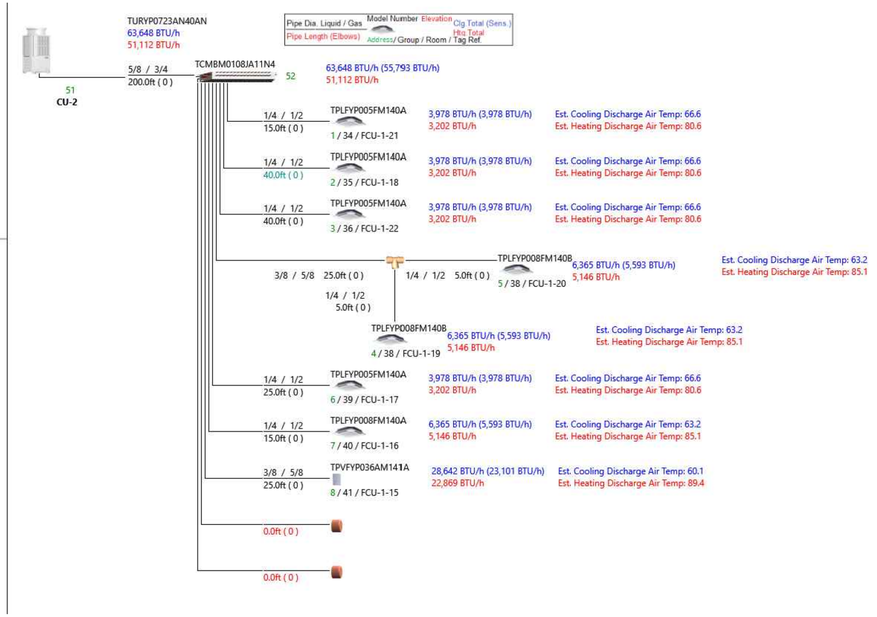
1. PIPING SHOWN IN SCHEMATIC ARE SOLELY FOR REFERENCE PURPOSES ONLY. INSTALL PIPING IN AS SHORT AND DIRECT ARRANGEMENT AS POSSIBLE TO MINIMIZE PRESSURE DROPS. EXACT PIPE ROUTING AND LENGTHS TO BE COORDINATED IN FIELD WITH CONSIDERATION TO BUILDING CONDITIONS AND CONSTRUCTION. ALL PIPING LENGTHS AND ROUTING TO BE DETERMINED BY THE CONTRACTOR.

Indoor Units:	8 / 1 to 18	
Capacity:	80 / 36 to 108	(111.1%)
* Connectable capacity is not actual capacity.		
Total Pipe Length:	395.0 / 1384.4	feet
Furthest Actual:	240.0 / 541.0	feet
Furthest Equiv.:	240.0 / 623.0	feet
Furthest IU from BC Actual:	40.0 / 131.0	feet
Furthest IU from BC Equiv.:	40.0 / 131.0	feet
Furthest IU from BC Thru Sub BC Actual:	0.0 / 0.0	feet
Furthest IU from BC Thru Sub BC Equiv.:	0.0 / 0.0	feet
Correction Factors		
Outdoor Unit Capacity:	1.02	1.01
Temperature:	1.01	0.70
Piping Length:	0.86	0.96
Defrosting:	-	0.95
User Derate:	1.00	1.00
Total Derate:	0.88	0.64
Additional Refrigerant:	30.67 lb	
Total Refrigerant Amount:	42.13 lb	

Conditions (°F)

Cooling
Indoor DB 80.0 Humidity 51.8% Indoor WB 67.0
Outdoor DB 93.0

Heating
Indoor DB 70.0
Outdoor DB 12.0 Humidity 72.8% Outdoor WB 10.8



1 M3.3 VRF PIPING SCHEMATIC CU-2

NONE

NOTES:

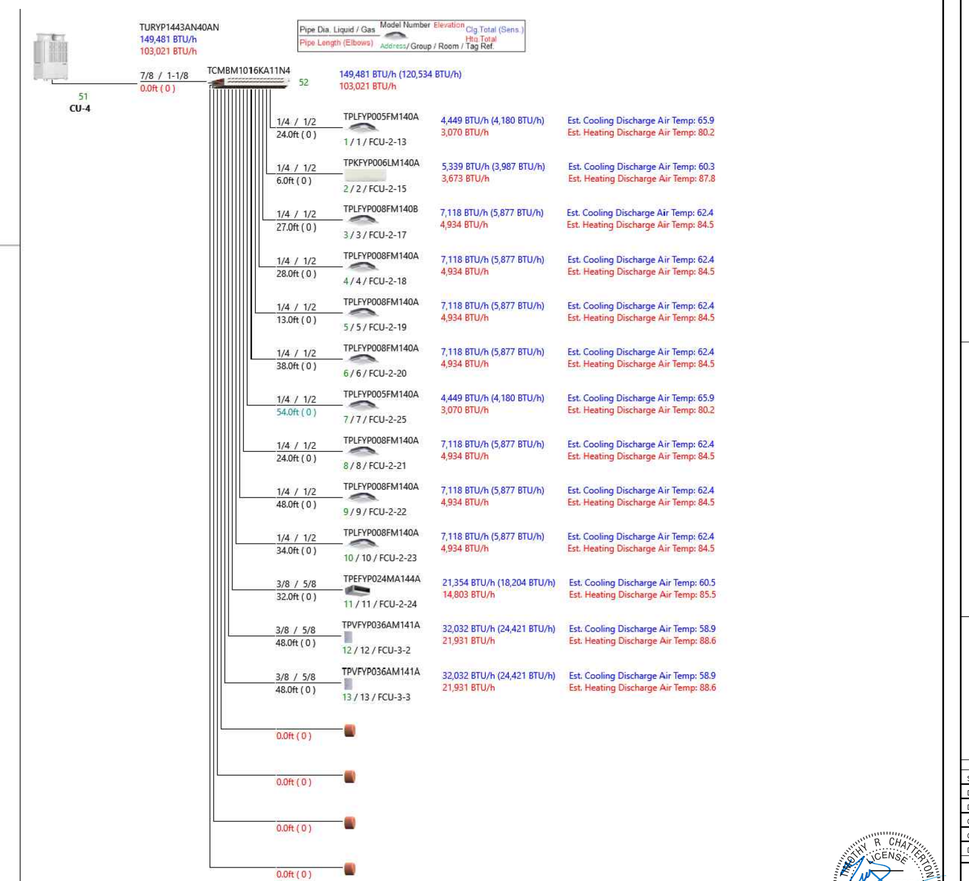
1. PIPING SHOWN IN SCHEMATIC ARE SOLELY FOR REFERENCE PURPOSES ONLY. INSTALL PIPING IN AS SHORT AND DIRECT ARRANGEMENT AS POSSIBLE TO MINIMIZE PRESSURE DROPS. EXACT PIPE ROUTING AND LENGTHS TO BE COORDINATED IN FIELD WITH CONSIDERATION TO BUILDING CONDITIONS AND CONSTRUCTION. ALL PIPING LENGTHS AND ROUTING TO BE DETERMINED BY THE CONTRACTOR.

Indoor Units:	13 / 1 to 36	
Capacity:	168 / 72 to 216	(116.7%)
* Connectable capacity is not actual capacity.		
Total Pipe Length:	424.0 / 1968.5	feet
Furthest Actual:	54.0 / 541.0	feet
Furthest Equiv.:	54.0 / 623.0	feet
Furthest IU from BC Actual:	54.0 / 131.0	feet
Furthest IU from BC Equiv.:	54.0 / 131.0	feet
Furthest IU from BC Thru Sub BC Actual:	0.0 / 0.0	feet
Furthest IU from BC Thru Sub BC Equiv.:	0.0 / 0.0	feet
Correction Factors		
Outdoor Unit Capacity:	1.04	1.01
Temperature:	1.01	0.68
Piping Length:	0.99	0.99
Defrosting:	-	0.95
User Derate:	1.00	1.00
Total Derate:	1.04	0.64
Additional Refrigerant:	37.12 lb	
Total Refrigerant Amount:	60.93 lb	

Conditions (°F)

Cooling
Indoor DB 80.0 Humidity 51.8% Indoor WB 67.0
Outdoor DB 93.0

Heating
Indoor DB 70.0
Outdoor DB 12.0 Humidity 72.8% Outdoor WB 10.8



2 M3.3 VRF PIPING SCHEMATIC CU-4

NONE

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPMO REVIEW	4/17/2024
4.	ISSUED FOR BPMO RESUBMISSION	5/10/2024
5.	ISSUED FOR BPMO RESUBMISSION	6/10/2024
7.	ISSUED FOR PERMISSION	

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

MECHANICAL
DETAILS

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: NONE
DESIGN BY	: ZCIO
DRAWN BY	: ZCIO
CHECKED BY	: TCHA
GMB FILE	: 220242
DATE	: 8-30-2024

M3.3

TIMOTHY R. CHATTERTON LICENSE No. 15702 STATE OF DELAWARE PROFESSIONAL ENGINEER

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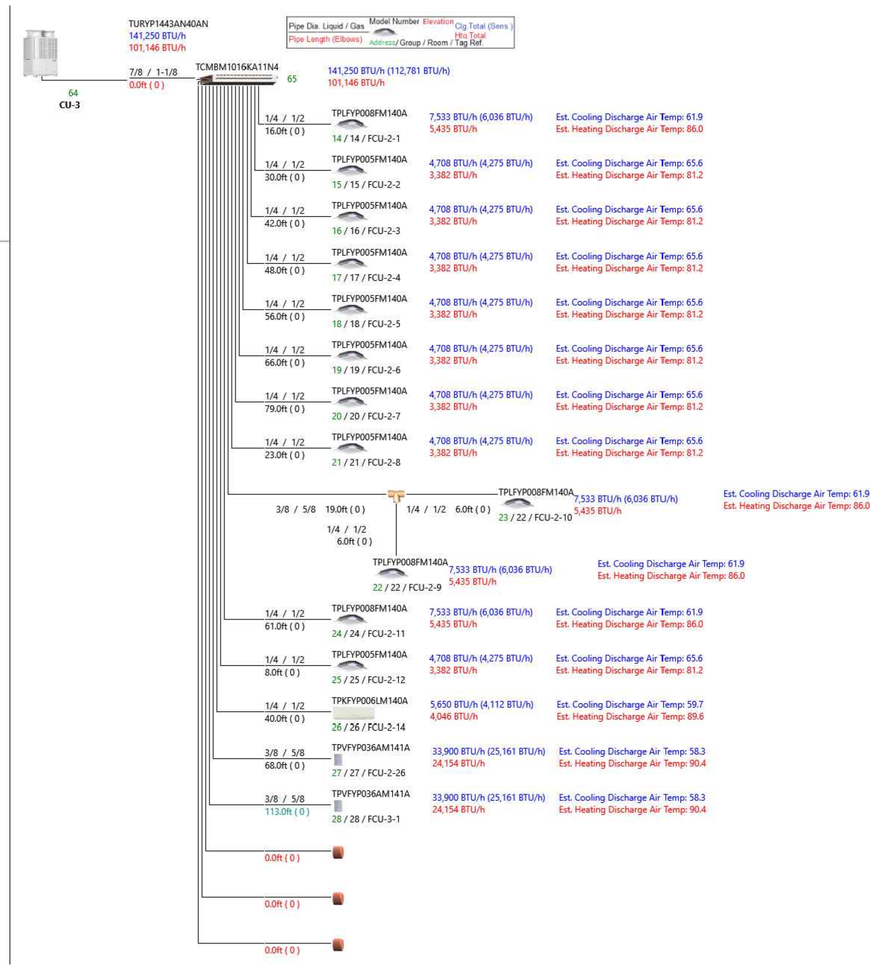
ALLEN + SHARIFF JOB# : 2331073

Indoor Units:		15 / 1 to 36
Capacity:		150 / 72 to 216 (104.2%)
* Connectable capacity is not actual capacity.		
Total Pipe Length:		681.0 / 1968.5 feet
Furthest Actual:		113.0 / 541.0 feet
Furthest Equiv.:		113.0 / 623.0 feet
Furthest IU from BC Actual:		113.0 / 131.0 feet
Furthest IU from BC Equiv.:		113.0 / 131.0 feet
Furthest IU from BC Thru Sub BC Actual:		0.0 / 0.0 feet
Furthest IU from BC Thru Sub BC Equiv.:		0.0 / 0.0 feet
Correction Factors		
Outdoor Unit Capacity:	1.01	1.00
Temperature:	1.01	0.68
Piping Length:	0.96	0.98
Defrosting:	-	0.95
User Derate:	1.00	1.00
Total Derate:	0.98	0.63
Additional Refrigerant:	34.59 lb	
Total Refrigerant Amount:	58.40 lb	

Conditions (°F)

Cooling
Indoor DB 80.0 Humidity 51.8% Indoor WB 67.0
Outdoor DB 93.0

Heating
Indoor DB 70.0
Outdoor DB 12.0 Humidity 72.8% Outdoor WB 10.8



1 / M3.4 VRF PIPING SCHEMATIC CU-3
NONE

NOTES:

1. PIPING SHOWN IN SCHEMATIC ARE SOLELY FOR REFERENCE PURPOSES ONLY. INSTALL PIPING IN AS SHORT AND DIRECT ARRANGEMENT AS POSSIBLE TO MINIMIZE PRESSURE DROPS. EXACT PIPE ROUTING AND LENGTHS TO BE COORDINATED IN FIELD WITH CONSIDERATION TO BUILDING CONDITIONS AND CONSTRUCTION. ALL PIPING LENGTHS AND ROUTING TO BE DETERMINED BY THE CONTRACTOR.

TIMOTHY R. CHATTERTON LICENSE No. 15702 DELAWARE PROFESSIONAL ENGINEER

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPMO REVIEW	4/17/2024
4.	ISSUED FOR BPMO RESUBMISSION	5/10/2024
5.	ISSUED FOR BPMO RESUBMISSION	6/10/2024
7.	ISSUED FOR PERMISSION RESUBMISSION	

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NEW CONSTRUCTION FOR:
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Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: NONE
DESIGN BY	: ZCIO
DRAWN BY	: ZCIO
CHECKED BY	: TCHA
GMB FILE	: 220242
DATE	: 8-30-2024

M3.4

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ALLEN + SHARIFF JOB# : 2331073

EXHAUST REGISTER SCHEDULE

CFM RANGE	DUCT / NECK SIZE
0 - 75	6 X 6
76 - 150	8 X 8
151 - 225	10 X 10
226 - 350	12 X 12
351 - 450	14 X 14
451 - 650	16 X 20
651 - 850	16 X 28
851 - 1025	22 X 22
1026-1850	24 X 24

NOTE: INSTALL AT SIZES ABOVE UNLESS NOTED OTHERWISE ON FLOOR PLANS.

DIFFUSER NECK SIZE & RUNOUT LENGTH SCHEDULE

CFM RANGE	NECK SIZE	MAX LENGTH
0 - 50	4"Ø	4'-0"
51 - 125	6"Ø	4'-0"
126 - 230	8"Ø	5-0"
231 - 420	10"Ø	5'-0"
421 - 650	12"Ø	6'-0"
651 - 900	14"Ø	6'-0"

NOTE: DIAMETER OF DIFFUSER FLEXIBLE DUCT CONNECTOR IS EQUAL DIFFUSER NECK SIZE. SEE PLANS AND SPECIFICATIONS FOR FACE TYPE AND MODEL NUMBERS.

24/24 PERFORATED FACE RETURN AIR GRILLE SCHEDULE

CFM RANGE	SQUARE NECK SIZE	ROUND NECK SIZE
0 - 125	6 X 6	6"Ø
126 - 240	8 X 8	8"Ø
241 - 375	10 X 10	10"Ø
376 - 510	12 X 12	12"Ø
511 - 725	14 X 14	16"Ø
726 - 850	18 X 18	N.A.
851 - 1190	22 X 22	N.A.

NOTE: ALL SIZES ABOVE ARE FOR DUCTED APPLICATIONS MODEL PAR NON-DUCTED UNITS SHALL BE MODEL PXP.

DIVISION OF MECHANICAL/ ELECTRICAL WORK

ITEM	MECH/ DIV 22 AND 23	ELEC/ DIV 26
AUTOMATIC TEMPERATURE CONTROLS	FURNISH, INSTALL & WIRE	POWER WIRE
CONTROL PANELS FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
LOW VOLTAGE CONTROL WIRING FOR MECH EQUIP.	FURNISH & INSTALL	
LINE VOLTAGE CONTROL WIRING FOR MECH. EQUIP.	FURNISH, INSTALL & WIRE	
MECHANICAL FLOW SWITCHES	FURNISH, INSTALL & WIRE	
THERMOSTATS/ SENSORS	FURNISH, INSTALL & WIRE	
P/E & E/P SWITCHES	FURNISH, INSTALL & WIRE	
DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
MECHANICAL EQUIPMENT MONITORS	FURNISH & INSTALL	POWER WIRE
MANUAL STARTERS FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
MAGNETIC STARTERS FOR MECHANICAL EQUIPMENT	FURNISH	INSTALL & POWER WIRE
MOTOR CONTROL CENTERS	CONTROL WIRING	FURNISH, INSTALL, & POWER WIRE
VARIABLE SPEED CONTROLLERS	FURNISH & INSTALL	POWER WIRE
MOTORIZED DAMPERS & VALVES	FURNISH, INSTALL & WIRE	
DUCT SMOKE DETECTORS	INSTALL	FURNISH & WIRE
HEAT TRACE CABLE FOR PIPING	FURNISH & INSTALL	POWER WIRE
OIL/ GAS EMERGENCY SHUT-OFF SWITCHES		FURNISH, INSTALL, & POWER WIRE
SPRINKLER FLOW & TAMPER SWITCHES	BY SPRINKLER CONTRACTOR	WIRE

DUCTLESS SPLIT SYSTEM SCHEDULE

UNIT DES.	SERVICE	E.A.T. DB / WB	INDOOR UNIT			OUTDOOR UNIT				REMARKS
			CFM	SEER	BASIS OF DESIGN MITSUBISHI	NOM. TONS	AMBIENT AIR °F	BASIS OF DESIGN MITSUBISHI	VOLTS / PHASE	
DSS-1	I.T. 213	80/67	455	21	TPKA0A012	1	95	TRUYA012	208/1	1 THRU 8
DSS-2	E1 MECH 204A	80/67	455	21	TPKA0A012	1	95	TRUYA012	208/1	1 THRU 8
DSS-3	E2 MECH 221	80/67	455	21	TPKA0A012	1	95	TRUYA012	208/1	1 THRU 8
DSS-4	PD IT 306	80/67	455	21	TPKA0A012	1	95	TRUYA012	208/1	1 THRU 8
DSS-5	EMS I.T. 232	80/67	455	21	TPKA0A012	1	95	TRUYA012	208/1	1 THRU 8

REMARKS:
1. PROVIDE LOW AMBIENT CONTROL TO 14°F (PROVIDE WIND BAFFLES IF REQUIRED).
2. PROVIDE DISCONNECT SWITCH FOR OUTDOOR UNIT.
3. PROVIDE CONDENSATE PUMP FROM FACTORY AND CONDENSATE OVERFLOW SENSOR.
4. PROVIDE REMOTE WALL MOUNTED HARD WIRED THERMOSTAT.
5. PROVIDE INSULATED REFRIGERANT PIPING BETWEEN INDOOR AND OUTDOOR UNITS. SIZE AND INSTALL PER MANUFACTURES RECOMMENDATIONS.
6. PROVIDE DC ROTARY COMPRESSOR WITH INDENTER TECHNOLOGY / VARIABLE SPEED.
7. INSTALL OUTDOOR UNIT ON FACTORY SUPPLIED WALL MOUNT KIT.
8. INDOOR UNIT IS POWERED BY OUTDOOR UNIT.

DEDICATED OUTSIDE AIR UNIT (DOAS) SCHEDULE

TAG	NOMINAL TONS	SUPPLY FAN DATA				EXHAUST FAN DATA				DX COOLING COIL DATA					HEATING CAPACITY		ELECTRICAL DATA			WEIGHT (LBS)	BASIS OF DESIGN
		NOMINAL CFM	E.S.P. IN. WG	RPM	HP	NOMINAL CFM	E.S.P. IN. WG	RPM	HP	E.A.T. DB/WB	L.A.T. DB/WB	TOTAL MBH	SENSIBLE MBH	REFRIGERANT TYPE	HEAT TYPE	KW	VOLTS/ PH	MCA	MOCP		
DOAS-1	7.5	3000	3.2	1932	3	2500	2.47	1705	2	95/78	53.7/53.7	94.5	50.1	R-410a	ELECTRIC	32.8	208/3	91.3	125	3239	GREENHECK/RVE-40-15

NOTES:
3. PROVIDE MERV 8 - 4" PLEATED DISPOSABLE FILTERS, OUTSIDE AIR INTAKE HOOD.
4. PROVIDE DISCONNECT SWITCH, PHASE MONITOR.
3. UNIT TO HAVE MODULATING HOT GAS REHEAT.
5. PROGRAM UNIT TO SUPPLY NEUTRAL AIR INTO THE SPACE (70°F).

VRF SYSTEM SCHEDULE

UNIT DES.	TYPE	TOTAL CAP. MBTU/H	SENS. CAP. MBTU/H	E.A.T. DB / WB	L.A.T. DB	REVERSE CYCLE HEAT CAP. MBTU/H @43° O.A.T.	INDOOR UNIT			OUTDOOR UNIT			ELEC. VOLTS / PHASE	MCA	MOCP	REMARKS
							CFM	E.S.P. IN W.G.	MITSUBISHI TRANE / MODEL	UNIT DES.	NOM. TONS	MANUFACTURER / MODEL				
FCU-1-1	CEILING-CASSETTE	4.53	4.21	80.0/67.0	78.0	3.49	280	-	TPLFYP005	CU-1	10	MITSUBISHI TRANE TURYP1203	208/3	50	80	ALL
FCU-1-2	CEILING-CASSETTE	4.53	4.21	80.0/67.0	78.0	3.49	280	-	TPLFYP005							ALL
FCU-1-3	CEILING-CASSETTE	4.53	4.21	80.0/67.0	78.0	3.49	280	-	TPLFYP005							ALL
FCU-1-4	CEILING-CASSETTE	7.24	5.92	80.0/67.0	78.0	5.61	315	-	TPLFYP008							ALL
FCU-1-5	CEILING-CASSETTE	7.24	5.92	80.0/67.0	78.0	5.61	315	-	TPLFYP008							ALL
FCU-1-6	CEILING-CASSETTE	7.24	5.92	80.0/67.0	78.0	5.61	315	-	TPLFYP008							ALL
FCU-1-7	CEILING-CASSETTE	7.24	5.92	80.0/67.0	78.0	5.61	315	-	TPLFYP008							ALL
FCU-1-8	CEILING-CASSETTE	7.24	5.92	80.0/67.0	78.0	5.61	315	-	TPLFYP008							ALL
FCU-1-9	CEILING-CASSETTE	7.24	5.92	80.0/67.0	78.0	5.61	315	-	TPLFYP008							ALL
FCU-1-10	CEILING-CASSETTE	4.53	4.21	80.0/67.0	78.0	3.49	280	-	TPLFYP005							ALL
FCU-1-11	CEILING-CASSETTE	4.53	4.21	80.0/67.0	78.0	3.49	280	-	TPLFYP005							ALL
FCU-1-12	CEILING-CASSETTE	4.53	4.21	80.0/67.0	78.0	3.49	280	-	TPLFYP005							ALL
FCU-1-13	CEILING-CASSETTE	7.24	5.92	80.0/67.0	78.0	5.61	315	-	TPLFYP008							ALL
FCU-1-14	CEILING-CASSETTE	7.24	5.92	80.0/67.0	78.0	5.61	315	-	TPLFYP008							ALL
FCU-1-15	CEILING-CASSETTE	4.53	4.21	80.0/67.0	78.0	3.49	280	-	TPLFYP005							ALL
FCU-1-16	WALL MOUNTED	12.8	9.0	80.0/67.0	78.0	9.82	353	-	TPKFYP015							ALL
FCU-1-17	WALL MOUNTED	12.8	9.0	80.0/67.0	78.0	9.82	353	-	TPKFYP015							ALL
FCU-2-1	CEILING-CASSETTE	3.98	3.98	80.0/67.0	78.0	3.20	280	-	TPLFYP005	CU-2	6	MITSUBISHI TRANE TURYP0723	208/3	30	50	ALL
FCU-2-2	CEILING-CASSETTE	3.98	3.98	80.0/67.0	78.0	3.20	280	-	TPLFYP005							ALL
FCU-2-3	CEILING-CASSETTE	3.98	3.98	80.0/67.0	78.0	3.20	280	-	TPLFYP005							ALL
FCU-2-4	CEILING-CASSETTE	6.36	5.59	80.0/67.0	78.0	5.15	315	-	TPLFYP008							ALL
FCU-2-5	CEILING-CASSETTE	6.36	5.59	80.0/67.0	78.0	5.15	315	-	TPLFYP008							ALL
FCU-2-6	CEILING-CASSETTE	3.98	3.98	80.0/67.0	78.0	3.20	280	-	TPLFYP005							ALL
FCU-2-7	CEILING-CASSETTE	6.36	5.59	80.0/67.0	78.0	5.15	315	-	TPLFYP008							ALL
FCU-2-8	MULTI-POSITION AHU	28.64	23.10	80.0/67.0	78.0	22.87	1095	0.8	TPVFYP036							ALL

REMARKS:
1. PROVIDE 1" NEOPRENE VIBRATION ISOLATORS FOR CONDENSING UNIT.
2. PROVIDE ENERGY STAR RATED PROGRAMMABLE THERMOSTAT WITH ADAPTIVE RECOVERY TECHNOLOGY, PER PLANS.
3. PROVIDE DISCONNECT SWITCH FOR INDOOR UNIT AND OUTDOOR UNIT(S)
4. INTERLOCK AC WITH ASSOCIATED CU.
5. OUTDOOR UNIT TO HAVE ANTI-CORROSION SEA-COAST SPRAY APPLIED BY THE MANUFACTURER. IN LIEU OF MANUFACTURER PROVIDED COATING, A THIRD-PARTY COATING THAT PRESERVES THE MANUFACTURER'S WARRANTY MAY BE USED.
6. SYSTEM SHALL PROVIDE HEAT RECOVERY.

ELECTRIC HEATER SCHEDULE

UNIT DES.	LOCATION	TYPE	MBTUH	KW	AMPS	ELECTRICAL VOLTS/ PHASE	DIMENSIONS or HEIGHT ABOVE FLOOR	BASIS OF DESIGN	MODEL	REMARKS
EH-1	STAIRWELLS	WALL HEATER	5.1	1.5	12.5	120/1	6" AFF	QMARK	AWH3150	1, 2, 5 THRU 7

REMARKS:
1. PROVIDE DISCONNECT SWITCH.
2. PROVIDE INTEGRAL BUILT-IN THERMOSTAT.
3. PROVIDE UNIVERSAL WALL MOUNT BRACKET.
4. UNIT TO BE CONTROLLED BY THERMOSTAT SET TO 55°F.
5. CUSTOM COLOR SELECTED BY ARCHITECT.
6. PROVIDE UNIVERSAL RECESSED WALL MOUNT BRACKET.
7. UNIT TO BE CONTROLLED BY THERMOSTAT SET TO 68°F.

VRF BRANCH CONTROLLER BOX SCHEDULE

UNIT TAG	MODEL NUMBER	TYPE (MAIN, SINGLE, SUB)	NUMBER OF PORTS	VOLTAGE/PHASE	MCA/MOCP	REMARKS
BC-1-1	TCMBM1016	MAIN	16	208/1	1.57/15	ALL
BC-2-1	TCMBM0108	MAIN	8	208/1	1.57/15	ALL
BC-3-1	TCMBM1016	MAIN	16	208/1	1.57/15	ALL
BC-4-1	TCMBM1016	MAIN	16	208/1	1.57/15	ALL

REMARKS:
1. PROVIDE CONDENSATE PUMP WITH RESERVOIR AND SENSOR. CONNECT INTO 3/4"Ø PIPE.
2. INCLUDE DIAMONDBACK BALL VALVES BV-SERIES OR EQUIVALENT ON ALL PORTS.

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
3.	ISSUED FOR BID	11/15/2024

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
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410.546.0166
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

MECHANICAL SCHEDULES

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Project Management
205 East Market Street
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ALLEN + SHARIFF JOB# : 2331073

VRF SYSTEM SCHEDULE

UNIT DES.	TYPE	TOTAL CAP. MBTU/H	SENS. CAP. MBTU/H	E.A.T. DB / WB	L.A.T. DB	REVERSE CYCLE HEAT CAP. MBTU/H @43° O.A.T.	INDOOR UNIT			OUTDOOR UNIT			ELEC. VOLTS / PHASE	MCA	MOCP	REMARKS
							CFM	E.S.P. IN W.G.	MITSUBISHI TRANE / MODEL	UNIT DES.	NOM. TONS	MANUFACTURER / MODEL				
FCU-3-1	Ceiling-Cassette	7.53	6.04	80.0/67.0	55	5.43	315	-	TPLFYP008	CU-3	12	TRANE / MITSUBISHI TURYP1443	208/3	60	100	1-6
FCU-3-2	Ceiling-Cassette	4.71	4.28	80.0/67.0	55	3.38	280	-	TPLFYP005							
FCU-3-3	Ceiling-Cassette	4.71	4.28	80.0/67.0	55	3.38	280	-	TPLFYP005							
FCU-3-4	Ceiling-Cassette	4.71	4.28	80.0/67.0	55	3.38	280	-	TPLFYP005							
FCU-3-5	Ceiling-Cassette	4.71	4.28	80.0/67.0	55	3.38	280	-	TPLFYP005							
FCU-3-6	Ceiling-Cassette	4.71	4.28	80.0/67.0	55	3.38	280	-	TPLFYP005							
FCU-3-7	Ceiling-Cassette	4.71	4.28	80.0/67.0	55	3.38	280	-	TPLFYP005							
FCU-3-8	Ceiling-Cassette	4.71	4.28	80.0/67.0	55	3.38	280	-	TPLFYP005							
FCU-3-9	Ceiling-Cassette	7.53	6.04	80.0/67.0	55	5.43	315	-	TPLFYP008							
FCU-3-10	Ceiling-Cassette	7.53	6.04	80.0/67.0	55	5.43	315	-	TPLFYP008							
FCU-3-11	Ceiling-Cassette	7.53	6.04	80.0/67.0	55	5.43	315	-	TPLFYP008							
FCU-3-12	Ceiling-Cassette	4.71	4.28	80.0/67.0	55	3.38	280	-	TPLFYP005							
FCU-3-13	Ceiling-Cassette	4.71	4.28	80.0/67.0	55	3.38	280	-	TPLFYP005							
FCU-3-14	Wall -Mounted	5.65	4.11	80.0/67.0	55	4.05	191	-	TPKFYP006							
FCU-3-15	Muli-Position Air	33.90	25.16	80.0/67.0	55	24.15	1095	-	TPVFYP036							
FCU-3-16	Muli-Position Air	33.90	25.16	80.0/67.0	55	24.15	1095	-	TPVFYP036							
FCU-4-1	Wall -Mounted	5.34	3.99	80.0/67.0	55	3.67	191	-	TPKFYP006	CU-4	12	TRANE / MITSUBISHI TURYP1443	208/3	60	100	1-6
FCU-4-2	Ceiling-Cassette	7.12	5.88	80.0/67.0	55	4.93	315	-	TPLFYP008							
FCU-4-3	Ceiling-Cassette	7.12	5.88	80.0/67.0	55	4.93	315	-	TPLFYP008							
FCU-4-4	Ceiling-Cassette	7.12	5.88	80.0/67.0	55	4.93	315	-	TPLFYP008							
FCU-4-5	Ceiling-Cassette	7.12	5.88	80.0/67.0	55	4.93	315	-	TPLFYP008							
FCU-4-6	Ceiling-Cassette	4.45	4.18	80.0/67.0	55	3.07	280	-	TPLFYP005							
FCU-4-7	Ceiling-Cassette	7.12	5.88	80.0/67.0	55	4.93	315	-	TPLFYP008							
FCU-4-8	Ceiling-Cassette	7.12	5.88	80.0/67.0	55	4.93	315	-	TPLFYP008							
FCU-4-9	Ceiling-Cassette	7.12	5.88	80.0/67.0	55	4.93	315	-	TPLFYP008							
FCU-4-10	Ceiling-Concealed	21.35	18.20	80.0/67.0	55	14.80	883	-	TPEFYP024							
FCU-4-11	Ceiling-Cassette	4.45	4.18	80.0/67.0	55	3.07	280	-	TPLFYP005							
FCU-4-12	Muli-Position Air	32.03	24.42	80.0/67.0	55	21.93	1095	-	TPVFYP036							
FCU-4-13	Muli-Position Air	32.03	24.42	80.0/67.0	55	21.93	1095	-	TPVFYP036							

REMARKS:

1. PROVIDE 1" NEOPRENE VIBRATION ISOLATORS FOR CONDENSING UNIT.
2. PROVIDE ENERGY STAR RATED PROGRAMMABLE THERMOSTAT WITH ADAPTIVE RECOVERY TECHNOLOGY, PER PLANS.
3. PROVIDE DISCONNECT SWITCH FOR INDOOR UNIT AND OUTDOOR UNIT(S)
4. INTERLOCK AC WITH ASSOCIATED CU.
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6. SYSTEM SHALL PROVIDE HEAT RECOVERY.

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
3.	ISSUED FOR BID	11/15/2024

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NEW CONSTRUCTION FOR:
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DEWEY BEACH, DELAWARE

MECHANICAL
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M4.2

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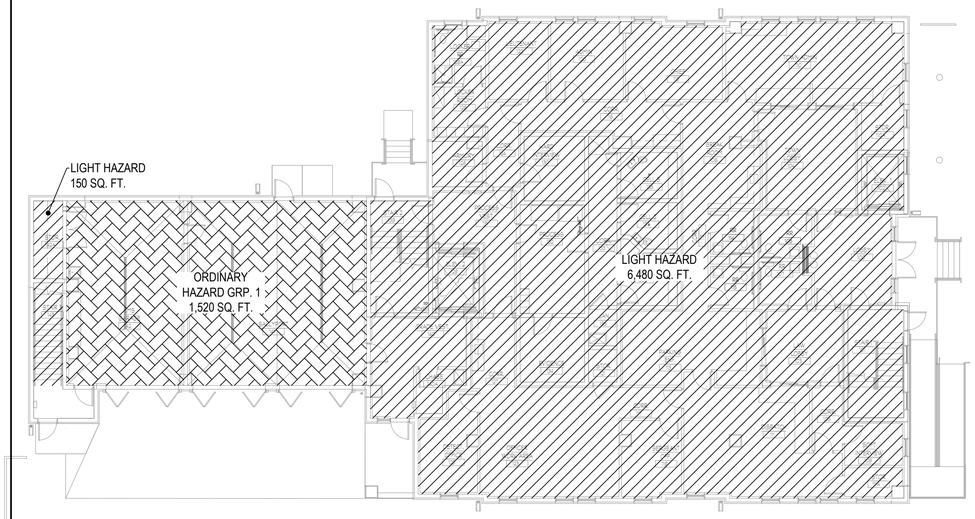
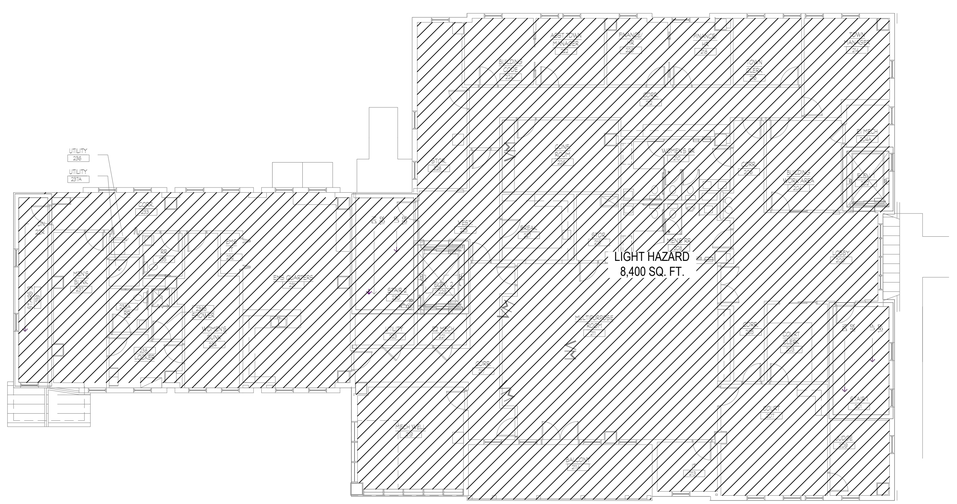
ALLEN + SHARIFF JOB# : 2331073



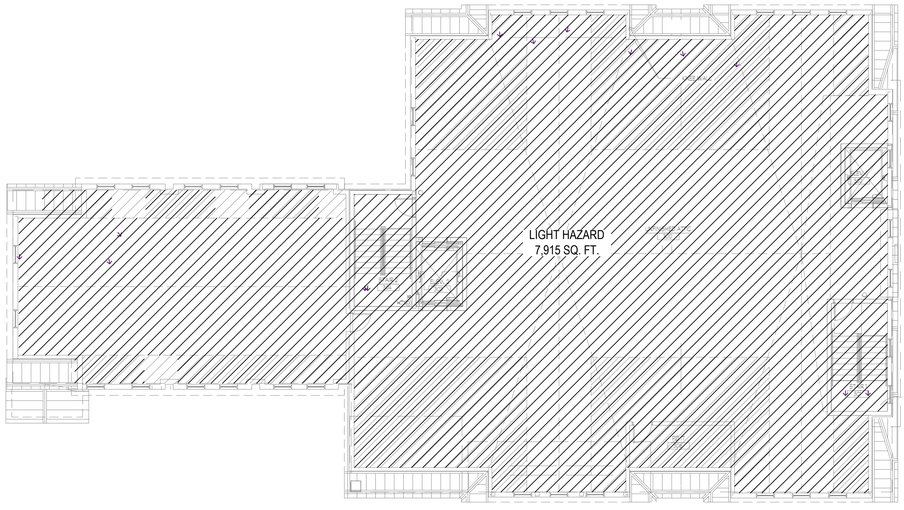
1 FP0.1 FIRST FLOOR FIRE PROTECTION ZONE PLAN
NO SCALE



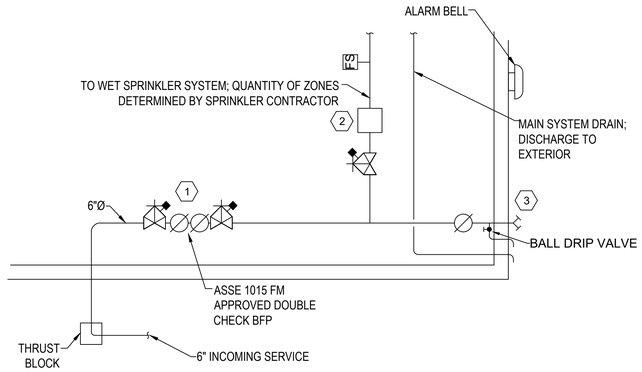
2 FP0.1 SECOND FLOOR FIRE PROTECTION ZONE PLAN
NO SCALE

ZONE TOTAL SQ. F.T:

- ORDINARY HAZARD GRP. 1: 1,520 SQ. FT.
- LIGHT HAZARD:
  - FIRST FLOOR: 6,630 SQ. FT.
  - SECOND FLOOR: 8,400 SQ. FT.
  - THIRD FLOOR: 7,915 SQ. FT.
  - TOTAL LIGHT HAZARD: 22,945 SQ. FT.



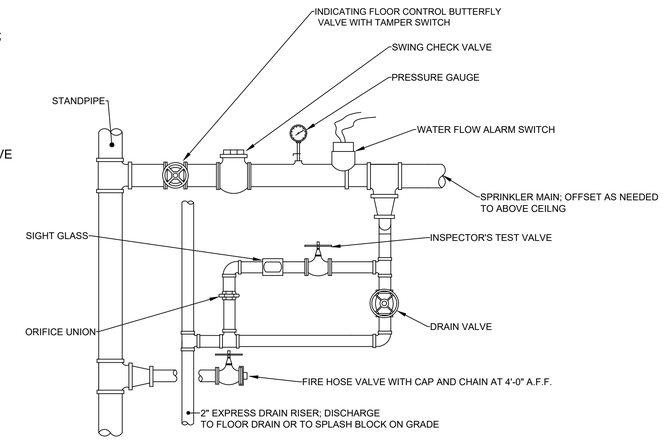
3 FP0.1 THIRD FLOOR FIRE PROTECTION ZONE PLAN
NO SCALE



4 FP0.1 FIRE PROTECTION SERVICE ENTRANCE DETAIL
NO SCALE

SPRINKLER RISER NOTES:

1. DOUBLE CHECK BACKFLOW PREVENTOR WITH DOUBLE SHUT-OFF VALVES. (VALVES TO BE TAMPERED"). BFP MAY BE INSTALLED IN THE VERTICAL POSITION TO ALLOW FOR CLEARANCES.
2. "WET" SPRINKLER RISER COMPRISED OF TAMPERED SHUT-OFF VALVE, RISER CHECK VALVE AND ELECTRIC WATER FLOW SWITCH.
3. FIRE DEPARTMENT CONNECTION OF A TYPE APPROVED BY LOCAL JURISDICTION. PROVIDE AUTOMATIC BALL DRIP VALVE FOR DRAINAGE OF INTERCONNECTED PIPING.
4. THE RESULTS OF THE FLOW TEST CONDUCTED ON 09/28/2023 ON RODNEY STREET HALFWAY FFROM ROUTE 1 AND THE OCEAN FRONT ARE AS FOLLOWS:
   - STATIC PRESSURE: 52 PSI
   - RESIDUAL PRESSURE: 48 PSI
   - FLOW: 1,021 GPM
   - FLOW AT 20 PSI: 3,137 GPM



5 FP0.1 COMBINATION STANDPIPE AND SPRINKLER SUPPLY RISER DETAIL
NO SCALE

FIRE PROTECTION DEFERRED SUBMITTAL REQUIREMENTS:

THE FIRE PROTECTION PLANS IN THIS SET OF DRAWINGS IS FOR DESIGN INTENT. THE GENERAL CONTRACTOR SHALL ENGAGE THE FIRE SPRINKLER CONTRACTOR TO COMPLETE AN INSTALLATION THAT IS COMPLIANT WITH APPLICABLE CODES. THE FIRE PROTECTION CONTRACTOR SHOULD INCLUDE THE COST FOR PROVIDING SUBMITTALS AND HYDRAULIC CALCULATIONS SUBMITTED TO THE JURISDICTION AS REQUIRED TO SECURE PERMIT AND CERTIFICATE OF OCCUPANCY. INCLUDE ALL DESIGN AND JURISDICTIONAL FEES AS REQUIRED FOR THIS WORK.

TIMOTHY R. CHATTERTON
LICENSE
No. 15702
DELAWARE
PROFESSIONAL ENGINEER

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/1/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPPO REVIEW	4/1/2024
4.	ISSUED FOR BPPO RESUBMISSION	5/10/2024
5.	ISSUED FOR BPPO RESUBMISSION	6/10/2024
7.	ISSUED FOR TOWN RESUBMISSION	

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 410-546-0818
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

FIRE PROTECTION ZONE PLAN

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: NONE
DESIGN BY	: PLS
DRAWN BY	: PLS
CHECKED BY	: JSRO
GMB FILE	: 220242
DATE	: 8-30-2024

FP0.1

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ALLEN + SHARIFF JOB# : 2331073

DIVISION OF MECHANICAL/ ELECTRICAL WORK

ITEM	MECH/ DIV 22 AND 23	ELEC/ DIV 26
AUTOMATIC TEMPERATURE CONTROLS	FURNISH, INSTALL & WIRE	POWER WIRE
CONTROL PANELS FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
LOW VOLTAGE CONTROL WIRING FOR MECH EQUIP.	FURNISH & INSTALL	
LINE VOLTAGE CONTROL WIRING FOR MECH. EQUIP.	FURNISH, INSTALL & WIRE	
MECHANICAL FLOW SWITCHES	FURNISH, INSTALL & WIRE	
THERMOSTATS/ SENSORS	FURNISH, INSTALL & WIRE	
P/E & E/P SWITCHES	FURNISH, INSTALL & WIRE	
DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
MECHANICAL EQUIPMENT MONITORS	FURNISH & INSTALL	POWER WIRE
MANUAL STARTERS FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
MAGNETIC STARTERS FOR MECHANICAL EQUIPMENT	FURNISH	INSTALL & POWER WIRE
MOTOR CONTROL CENTERS	CONTROL WIRING	FURNISH, INSTALL & POWER WIRE
VARIABLE SPEED CONTROLLERS	FURNISH & INSTALL	POWER WIRE
MOTORIZED DAMPERS & VALVES	FURNISH, INSTALL & WIRE	
DUCT SMOKE DETECTORS	INSTALL	FURNISH & WIRE
HEAT TRACE CABLE FOR PIPING	FURNISH & INSTALL	POWER WIRE
OIL/ GAS EMERGENCY SHUT-OFF SWITCHES		FURNISH, INSTALL & POWER WIRE
SPRINKLER FLOW & TAMPER SWITCHES	BY SPRINKLER CONTRACTOR	WIRE

GENERAL NOTES (ALL DRAWINGS):

1. IN ACCORDANCE WITH FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AND THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP), ALL MECHANICAL EQUIPMENT INSTALLED IN NEW STRUCTURES SHALL BE INSTALLED AT AN ELEVATION ABOVE BASE FLOOD ELEVATION (BFE) OR DESIGNED IN A MANNER THAT FLOOD WATERS SHALL NOT INFILTRATE, ACCUMLATE, OR CAUSE DAMAGE WITHIN ANY COMPONENT OF THE SYSTEM. THESE SYSTEMS INCLUDE BUT NOT LIMITED TO THE FOLLOWING: HEATING, PLUMBING, VENTILAION, ELECTRICAL, AC EQUIPMENT, AND OTHER SERVICE UTILITIES. PER "DEWEY FLOOD MITIGATION EVALUATIONS" MEMO DATED JULY 16, 2024, THE PROJECT SHALL HAVE A FINISHED FLOOR ELEVATION (FFE) OF 7'-0" WHICH IS 2'-0" ABOVE THE FEMA LOCALITY BFE OF 5'-0."

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PLUMBING LEGEND

SYMBOL	ABRV.	DESCRIPTION
SAN	SAN., W.	SANITARY PIPING
V	V	VENT PIPING
CW	CW	COLD WATER PIPING
HW	HW	HOT WATER PIPING
HWR	HWR	HOT WATER RETURN PIPING
CD	CD	CONDENSATE DRAIN PIPING
PD	PD	PUMP DISCHARGE PIPING
		PIPE UP
		PIPE DOWN
		PIPE TEE DOWN
		CAPPED PIPE
		PIPE UNION
		BALL VALVE OR SHUTOFF VALVE
		BALL VALVE OR SHUTOFF VALVE IN RISE
		GLOBE VALVE
		BUTTERFLY VALVE
	MV	MIXING VALVE
		VACUUM RELIEF VALVE
	VB	VACUUM BREAKER
	BV	THERMOSTATIC BALANCING VALVE
	PRV	PRESSURE REDUCING/REGULATING VALVE
	CV	CHECK VALVE
		"Y" TYPE STRAINER
	P&TRV	PRESSURE AND/OR TEMPERATURE RELIEF VALVE
	BFP	BACK FLOW PREVENTER
		THERMOMETER
		PRESSURE GAUGE
		AQUASTAT
		HOT WATER RECIRCULATION PUMP
		HOSE BIB OR HOSE END DRAIN VALVE
		HOSE BIB, EXTERNAL
X		DOMESTIC SHOCK ABSORBER/WATER HAMMER ARRESTER; TEXT DENOTES SIZE (PDI: A ~ F)
	CO	CLEAN OUT, FLOOR
	CO	CLEAN OUT, EXPOSED
		FLOOR DRAIN; OPEN SITE DRAIN
TP	TP	FLOOR DRAIN WITH TRAP PRIMER
		FLOOR SINK/RECEPTOR WITH HALF GRATE
	OS&Y	OS&Y VALVE
	T.S.	OS&Y VALVE WITH TAMPER SWITCH
		FIRE DEPARTMENT SIAMESE CONNECTION
		FIRE SPRINKLER, PENDANT TYPE
I.E. XX.XX		INVERT ELEVATION (IN FEET)
#		DRAWING NOTE
XX		REVISION NUMBER

IN. W.C.	INCHES WATER COLUMN
UNO	UNLESS NOTED OTHERWISE
GW	GREASE WASTE DRAIN LINE
FCO	FLOOR CLEAN OUT
WCO	WALL CLEAN OUT
COTG	CLEAN OUT TO GRADE
A.F.F.	ABOVE FINISHED FLOOR ELEVATION
B.F.F.	BELOW FINISHED FLOOR ELEVATION
F.F.E.	FINISHED FLOOR ELEVATION
DN.	DOWN
VTR	VENT THROUGH ROOF TERMINATION
ETR	EXISTING TO REMAIN
RX	REMOVE EXISTING
TBR	TO BE RELOCATED

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

PLUMBING DATA SHEET

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205 East Market Street
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SCALE	: NONE
DESIGN BY	: BAW
DRAWN BY	: BAW
CHECKED BY	: PJS
GMB FILE	: 220242
DATE	: 8-30-2024

P0.1

TIMOTHY R. CHATTERTON
LICENSE
No. 15702
STATE OF DELAWARE
PROFESSIONAL ENGINEER

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ALLEN + SHARIFF JOB# : 2331073

PLUMBING SPECIFICATIONS

PLUMBING GENERAL CONDITIONS (220100)

1. GENERAL

a. CONFORM TO ALL GENERAL AND SPECIAL CONDITIONS OF CONTRACT AS SPECIFIED BY ARCHITECT AND/OR OWNER.

b. PRODUCTS AND INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LAWS, CODES, GOVERNMENT REGULATIONS, UTILITY COMPANY REQUIREMENTS, ETC. OF ALL AUTHORITIES HAVING JURISDICTION. WORK SHALL COMPLY WITH THE FOLLOWING CODES, STANDARDS AND ORGANIZATIONS:

INTERNATIONAL BUILDING CODE
INTERNATIONAL MECHANICAL CODE
INTERNATIONAL PLUMBING CODE
INTERNATIONAL ENERGY CONSERVATION CODE
NATIONAL ELECTRIC CODE
NFPA
UNDERWRITERS LABORATORY (UL), IRI, FM
SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" GUIDELINES, DETAILS, & MODEL SPECIFICATION
ASHRAE

c. WHERE CONFLICTS EXIST BETWEEN CODES, STANDARDS OR THIS SPECIFICATION THE HIGHER REQUIREMENT SHALL APPLY. DEVIATIONS FROM THE CONTRACT DOCUMENTS REQUIRED BY THE ABOVE AUTHORITIES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. OBTAIN PERMITS AND PAY ALL FEES. ARRANGE FOR ALL REQUIRED INSPECTIONS AND APPROVALS. CONFIRM ALL UTILITY COMPANY REQUIREMENTS AND CONNECTION POINTS IN FIELD, PRIOR TO STARTING WORK.

d. ALL SPECIFICATIONS AND DRAWINGS, I.E., ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL ARE COMPLIMENTARY AND MUST BE USED IN COMBINATION TO OBTAIN COMPLETE CONSTRUCTION INFORMATION. ANY INFORMATION CONFLICTS WITHIN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION. DRAWINGS ARE DIAGRAMMATIC. CONFIRM ALL DIMENSIONS BY FIELD MEASUREMENT. THE EXACT LOCATIONS FOR APPARATUS, FIXTURES, EQUIPMENT AND PIPING WHICH IS NOT COVERED BY DRAWINGS, SHALL BE OBTAINED FROM THE ARCHITECT OR HIS REPRESENTATIVE IN THE FIELD, AND THE WORK SHALL BE LAID OUT ACCORDINGLY.

e. EACH CONTRACTOR SHALL PROVIDE FOR HIS OWN CLEAN-UP, REMOVAL AND LEGAL DISPOSAL OF ALL RUBBISH DAILY. CONTRACTOR SHALL PROTECT THEIR WORK AND EXISTING OR ADJACENT PROPERTY AGAINST WEATHER, TO MAINTAIN THEIR WORK, MATERIALS, APPARATUS AND FIXTURES FREE FROM INJURY OR DAMAGE. ANY WORK DAMAGED BY FAILURE TO PROVIDE PROTECTION REQUIRED, SHALL BE REMOVED AND REPLACED WITH NEW WORK AT THE CONTRACTOR'S EXPENSE.

f. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, SEQUENCES OF CONSTRUCTION AND THE SAFETY OF WORKERS.

g. NO MEP, IT, FP SYSTEMS OR COMPONENTS SHALL BE INSTALLED OR ROUTED ABOVE ELECTRICAL PANELS AND EQUIPMENT OR THROUGH ELEVATOR ROOMS, FIRE PUMP ROOMS, OR STAIR TOWERS UNLESS SERVING THE MACHINE ROOM, FIRE PUMP ROOM OR STAIR TOWER.

h. THE CONTRACTOR SHALL COORDINATE AND OBTAIN A WRITTEN LISTING OF ELECTRICAL CHARACTERISTICS OF ALL MECHANICAL EQUIPMENT FROM THE ELECTRICAL CONTRACTOR PRIOR TO THE ORDERING OF EQUIPMENT. NO ADDITIONAL PAYMENT WILL BE MADE FOR LACK OF CONTRACTOR COORDINATION OF ELECTRICAL CHARACTERISTICS.

i. IN CASES OF DOUBT AS TO THE WORK INTENDED, OR IN THE EVENT OF NEED FOR EXPLANATION THEREOF, THE CONTRACTOR SHALL REQUEST SUPPLEMENTARY INSTRUCTIONS FROM THE ENGINEER. NO CHANGES ARE TO BE MADE TO THE WORK OF THIS CONTRACT WITHOUT PRIOR KNOWLEDGE AND APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL HOLD THE OWNER AND ITS CONSULTANTS HARMLESS AGAINST ALL CLAIMS AND JUDGMENTS ARISING OUT OF THE CONTRACTOR'S PERFORMANCE OF THE WORK OF THIS CONTRACT. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK, WHICH HE EXPECTS ADDITIONAL COMPENSATION BEYOND THE CONTRACT AMOUNT, WITHOUT WRITTEN AUTHORIZATION FROM THE APPROPRIATE AUTHORITY. FAILURE TO OBTAIN SUCH AUTHORIZATION SHALL INVALIDATE ANY CLAIM FOR EXTRA COMPENSATION.

j. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO INSTALL THE HEATING, VENTILATION AND AIR CONDITIONING SYSTEM SO AS TO INSURE QUIET OPERATION. NO VIBRATION OR SOUND SHALL BE TRANSMITTED TO THE BUILDING, STRUCTURE OR OCCUPIED AREAS. THE DECISION OF THE ENGINEER AS TO THE QUIETNESS OF THE SYSTEM AND EQUIPMENT SHALL BE FINAL. IT SHALL BE THIS CONTRACTORS' RESPONSIBILITY TO CORRECT OR REPLACE ANY NOISY SYSTEM OR EQUIPMENT AS REQUIRED.

k. OBTAIN PERMITS AND PAY ALL FEES. ARRANGE FOR ALL REQUIRED INSPECTIONS AND APPROVALS.

4. BASIS OF DESIGN AND SUBSTITUTIONS (012300)

a. WHEREVER THE WORDS "APPROVED BY", "APPROVED EQUAL", "AS DIRECTED" OR SIMILAR PHRASES ARE USED IN THE FOLLOWING SPECIFICATIONS, THEY SHALL BE UNDERSTOOD TO REFER TO THE OWNER AS THE APPROVING AGENCY. THE NAME OR MAKE OF ANY EQUIPMENT OR MATERIALS NAMED IN THE SPECIFICATION (WHETHER OR NOT THE WORDS "OR APPROVED EQUAL" ARE USED) SHALL BE KNOWN AS THE "STANDARD".

5. SUBMITTAL PROCEDURES (013300)

a. SUBMIT SHOP DRAWINGS FOR MECHANICAL EQUIPMENT, FIRE PROTECTION SYSTEMS, DUCTWORK, AND PLUMBING FIXTURES AND EQUIPMENT WITH ADEQUATE DETAILS AND SCALES TO CLEARLY SHOW CONSTRUCTION. INDICATE THE OPERATING CHARACTERISTICS FOR EACH REQUIRED ITEM. CLEARLY IDENTIFY EACH ITEM ON THE SUBMITTAL AS TO MARK, LOCATION AND USE, USING SAME IDENTIFICATION AS PROVIDED ON DESIGN DRAWINGS. SHOP DRAWINGS TO BE SUBMITTED INCLUDE BUT NOT LIMITED TO:

- FIXTURES
- VALVES & PIPING
- ALL EQUIPMENT

b. CONTRACTOR SHALL REVIEW AND INDICATE HIS APPROVAL OF EACH SHOP DRAWING PRIOR TO SUBMITTAL FOR REVIEW. DO NOT START WORK OR FABRICATION UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED BY THE ENGINEER AND RETURNED TO THE CONTRACTOR.

c. SUBMITTALS WILL BE REVIEWED ONLY FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND NOT FOR DIMENSIONS OR QUANTITIES. THE SUBMITTAL REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PURCHASE OF ANY ITEM IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS OR ITS COMPLETE AND PROPER INSTALLATION.

d. WHERE SUBMITTALS VARY FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL CLEARLY INDICATE THE NATURE AND REASON FOR VARIATIONS ON SUBMITTAL OR ACCOMPANYING DOCUMENTS.

e. EACH MANUFACTURER OR HIS REPRESENTATIVE MUST CHECK THE APPLICATION OF HIS EQUIPMENT AND CERTIFY AT TIME OF SHOP DRAWING SUBMITTAL THAT EQUIPMENT HAS BEEN PROPERLY APPLIED AND CAN BE INSTALLED, SERVICED AND MAINTAINED WHERE INDICATED ON DRAWINGS. ADVISE ENGINEER IN WRITING WITH SUBMITTAL DRAWINGS OF ANY POTENTIAL PROBLEMS. THE MANUFACTURER SHALL BE RESPONSIBLE FOR ANY CHANGES THAT MIGHT BE NECESSARY BECAUSE OF PHYSICAL CHARACTERISTICS OF EQUIPMENT THAT HAVE NOT BEEN CALLED TO THE ENGINEER'S ATTENTION AT THE TIME OF SUBMITTAL.

6. CUTTING, PATCHING AND DRILLING (017329)

a. ALL CUTTING AND PATCHING OF THE BUILDING CONSTRUCTION REQUIRED FOR THIS WORK SHALL BE BY THIS CONTRACTOR UNLESS SHOWN ON ARCHITECTURAL DRAWINGS AND CONFIRMED AS TO SIZE AND LOCATION PRIOR TO NEW CONSTRUCTION. CUTTING SHALL BE IN A NEAT AND WORKMANLIKE MANNER. NEATLY SAW CUT ALL RECTANGULAR OPENINGS, SET SLEEVE THROUGH OPEN ING, AND FINISH PATCH OR PROVIDE TRIM FLANGE AROUND OPENING. CORE DRILL AND SLEEVE ALL ROUND OPENINGS. DO NOT CUT ANY STRUCTURAL COMPONENTS WITHOUT THE ARCHITECT'S APPROVAL.

b. PATCH AND FINISH TO MATCH ADJACENT AREAS THAT HAVE BEEN CUT, DAMAGED OR MODIFIED AS A RESULT OF THE INSTALLATION OF MECHANICAL OR ELECTRICAL EQUIPMENT. FIRE STOP ALL PENETRATIONS OF FIRE RATED CONSTRUCTION IN A CODE APPROVED MANNER.

c. ALL CONTRACTORS SHALL CONFIRM WITH OWNER, PRIOR TO BID, TIMES AVAILABLE FOR NOISE PRODUCING WORK SUCH AS CUTTING AND CORE DRILLING OF FLOORS, WALLS, ETC., AS WELL AS TIMES FOR WORK WHICH REQUIRE ACCESS INTO ADJOINING TENANT SPACES. INCLUDE ANY PREMIUM TIME IN BID.

d. THE EXACT LOCATION OF ROOFTOP EQUIPMENT SHALL BE APPROVED BY OWNER'S STRUCTURAL ENGINEER.

e. INFORMATION REGARDING REQUIRED PIPE OPENINGS IN WALLS, FLOORS, CHASES, ETC., AND CONCRETE EQUIPMENT PADS OR FOUNDATIONS SHALL BE GIVEN TO THE GENERAL CONTRACTOR BY THIS CONTRACTOR PRIOR TO THE CONSTRUCTION PERIOD. IF THIS CONTRACTOR FAILS TO COMPLY WITH THIS REQUEST, OR IF INCORRECT INFORMATION IS GIVEN, THE NECESSARY CUTTING AND PATCHING WILL BE PERFORMED BY THE GENERAL CONTRACTOR, AT THIS CONTRACTOR'S EXPENSE.

7. FIRESTOPPING (SAME AS 017329)

a. ALL SERVICES THAT PASS THRU FIRE OR SMOKE RATED PARTITIONS, WALLS, FLOORS, SHALL BE FIRESTOPPED. FIRE STOPPING RATING SHALL MATCH PARTITION RATING. ALL FIRE STOPPING SYSTEM SHALL MEET THE REQUIREMENTS OF ASTM E 814,UL 1479, AND BE FACTORY MUTUAL APPROVED.

b. ALL FIRESTOPPING AND/OR SMOKE STOPPING MATERIAL AND INSTALLATION SHALL BE AS MANUFACTURED BY HILTI OR APPROVED EQUAL.

8. ACCESS DOORS & PANELS (083113)

a. ACCESS DOORS SHALL BE PROVIDED IN WALLS AND CEILINGS WHERE REQUIRED TO PERMIT PROPER ACCESS TO VALVES AND ANY OTHER SUCH DEVICES WHICH REQUIRE MAINTENANCE OR SERVICE. DOORS PLACED IN WALLS, PARTITIONS OR OTHER FIRE-RATED CONSTRUCTION SHALL HAVE A LABEL SIGNIFYING THAT THE DOOR HAS THE SAME FIRE RATING AS THE FIRE-RATED CONSTRUCTION.

b. THIS CONTRACTOR SHALL FURNISH ACCESS PANELS TO THE GENERAL CONTRACTOR FOR INSTALLATION.

c. ACCESS PANELS SHALL BE CONSTRUCTED OF 14 GAUGE STEEL, WITH 16 GAUGE STEEL FRAMES. DOORS SHALL FINISH FLUSH WITH THE SURROUNDING SURFACE. F

d. FRAMES SHALL HAVE 3-INCH-WIDE EXPANDED METAL FOR PLASTERED SURFACES AND PLAIN FLANGED TYPE FRAME FOR TILE, MASONRY OR GYPSUM BOARD SURFACES. DOORS AND FRAMES SHALL BE FURNISHED PRIME COATED. DOORS INSTALLED IN CERAMIC TILE OR OTHER NON-PAINTED SURFACES SHALL BE STAINLESS STEEL. HINGES SHALL BE CONCEALED SPRING TYPE, TO ALLOW DOORS TO BE OPENED 175 DEGREES. LOCKS SHALL BE FLUSH SCREWDRIVER TYPE WITH STEEL CAMS. ACCESS PANELS SHALL BE 16 INCHES BY 16 INCHES OR LARGER AS MAY BE REQUIRED FOR PROPER ACCESS TO THE DEVICE BEING SERVED.

e. ACCESS PANELS ARE NOT REQUIRED IN COMPLETELY ACCESSIBLE LIFT-OUT-TILE CEILINGS. CONTRACTOR SHALL REVIEW THE ROOM FINISH SCHEDULE ON THE ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY THE NEED FOR ACCESS PANEL

9. EXCAVATION AND BACKFILL (312000)

a. PERFORM EXCAVATION AND BACKFILL REQUIRED FOR INSTALLATION OF PIPING.

b. EXCAVATE TO DEPTH REQUIRED TO INSTALL PIPING AT THE REQUIRED LEVEL AND PITCH. PIPE SHALL BE INSTALLED ON SAND BEDDING TO GIVE UNIFORM BEARING ALONG LENGTH OF PIPE (SAND INSIDE BUILDING AND INTERLOCKING AGGREGATE OUTSIDE BUILDING).

c. BACKFILL WITH BEDDING MATERIAL TO A MINIMUM OF TWELVE (12) INCHES ABOVE TOP OF PIPES AND COMPACT. BALANCE OF BACKFILL IN GRASS AREAS SHALL BE CLEAN EARTH UP TO SIX (6) INCHES ABOVE SURROUNDING GRADES, UNDER FLOORS SAND, AND UNDER PAVING INTERLOCKING AGGREGATE. BACKFILL SHALL BE COMPACTED IN MAXIMUM SIX (6) INCH LAYERS.

d. OTHER EXCAVATIONS SHALL BE BACKFILLED WITH CLEAN EARTH, EXCLUDING RUBBISH AND BOULDERS AND THE DIRT SHALL BE PROPERLY COMPACTED.

e. PATCH FLOOR TO MATCH EXISTING.

10. PAINTING (099113 AND 099123)

a. IN FINISHED SPACES, PAINTING OF ALL MECHANICAL EQUIPMENT, APPARATUS, AND PIPING SHALL BE DONE BY THE PAINTING TRADE UNDER THE GENERAL CONTRACTOR SPECIFICATION, EXCEPT WHERE SPECIFIED TO BE DONE BY THE MECHANICAL CONTRACTOR.

11. RECORD DRAWINGS (017839)

a. EACH CONTRACTOR OR SUBCONTRACTOR SHALL KEEP ONE (1) COMPLETE SET OF THE CONTRACT WORKING DRAWINGS ON THE JOB SITE ON WHICH HE SHALL REGULARLY RECORD ANY DEVIATIONS OR CHANGES FROM SUCH CONTRACT DRAWINGS MADE DURING CONSTRUCTION.

b. THESE DRAWINGS SHALL RECORD THE LOCATION OF ALL CONCEALED EQUIPMENT, PIPING, ELECTRIC SERVICE, SEWERS, WASTES, VENTS, DUCTS, CONDUIT AND OTHER PIPING, BY MEASURED DIMENSIONS TO EACH SUCH ITEM FROM READILY IDENTIFIABLE AND ACCESSIBLE WALLS OR CORNERS OF THE BUILDING. PLANS ALSO SHALL SHOW INVERT ELEVATION OF SEWERS AND TOP ELEVATION OF ALL OTHER BELOW-GRADE LINES.

c. RECORD DRAWINGS SHALL BE KEPT CLEAN AND UNDAMAGED AND SHALL NOT BE USED FOR ANY PURPOSE OTHER THAN RECORDING DEVIATIONS FROM WORKING DRAWINGS AND EXACT LOCATIONS OF CONCEALED WORK.

d. AFTER THE PROJECT IS COMPLETED, THESE SETS OF DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT IN GOOD CONDITION, AS A PERMANENT RECORD OF THE INSTALLATION AS ACTUALLY CONSTRUCTED.

12. WARRANTY (017700)

a. FULLY WARRANT ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FOR ONE (1) YEAR FROM DATE OF ACCEPTANCE. EXTEND ALL MANUFACTURER'S WARRANTIES TO THE OWNER, INCLUDING ALL EXTENDED WARRANTIES ON HVAC EQUIPMENT.

b. REPAIR OR REPLACE WITHOUT CHARGE TO THE OWNER ALL ITEMS FOUND DEFECTIVE DURING THE WARRANTY PERIOD. IN THE CASE OF REPLACEMENT OR REPAIR DUE TO FAILURE WITHIN THE WARRANTY PERIOD, THE WARRANTY ON THAT PORTION OF THE WORK SHALL BE EXTENDED FOR A MINIMUM PERIOD OF ONE (1) YEAR FROM THE DATE OF SUCH REPLACEMENT OR REPAIR.

13. PIPING SYSTEMS (220000)

a. CONNECTIONS BETWEEN DISSIMILAR PIPING MATERIALS SHALL BE MADE WITH SUITABLE DIELECTRIC INSULATING FITTINGS. ISOLATE COPPER PIPING FROM DISSIMILAR METALS, SUCH AS METAL STUDS AND VENT PIPING..

b. ALL PIPING SHALL RUN CONCEALED ABOVE CEILING OR IN WALL CHASE, UNLESS OTHERWISE NOTED. EXPOSED PIPING SHALL BE 3/4 INCH MINIMUM FROM ANY WALL SURFACE. EXCEPT WHERE OTHERWISE INDICATED ON THE DRAWINGS, PIPING IS SHOWN ON THE FLOOR WHERE IT ACTUALLY OCCURS IN THE BUILDING.

14. SANITARY (221316)

a. PROVIDE SANITARY, STACKS, VENTS, FLOOR DRAINS, HUBS FOR DOWN SPOUTS AND CLEANOUTS FOR PROJECT AND EXTEND TO EXISTING BUILDING FACILITIES AS INDICATED ON THE DRAWINGS.

b. EXCEPT WHERE OTHERWISE INDICATED, HORIZONTAL SANITARY, SEWAGE AND WASTE PIPING SHALL SLOPE AT 1/4 INCH PER FOOT FOR PIPES 2 INCHES AND SMALLER, PIPES 3 INCHES AND LARGER SHALL SLOPE AT 1/8 INCH PER FOOT. ALL VERTICAL SANITARY SEWER PIPING, WHICH TURN 90° AFTER PASSING THROUGH A FLOOR, SHALL BE INSTALLED AS TIGHT AS POSSIBLE TO THE UNDERSIDE OF THE STRUCTURE.

c. CHANGES IN DIRECTION AND BRANCH CONNECTIONS SHALL BE MADE WITH CODE APPROVED DRAINAGE FITTINGS COMPATIBLE WITH THE PIPING SYSTEM MATERIAL. CLEAN-OUTS SHALL BE PROVIDED IN PIPING AT EACH CHANGE IN DIRECTION, IN ALL HORIZONTAL STRAIGHT RUNS MORE THAN 50 FEET LONG OR AS ALLOWED BY CODE, AND AT ALL OTHER LOCATIONS AS NOTED ON THE DRAWINGS. ALL CLEAN-OUTS SHALL BE THE SAME SIZE AS THE PIPE DIAMETER UP TO AND INCLUDING PIPE 4 INCHES IN DIAMETER. FOUR INCH CLEAN-OUTS SHALL BE USED FOR ALL PIPE LARGER THAN 4 INCHES, UNLESS NOTED OTHERWISE. ALL CLEAN-OUT LOCATIONS SHALL BE NO MORE THAN 5 FEET ABOVE THE BASE OF THE HORIZONTAL OFFSET AND BE APPROVED BY THE ARCHITECT. FOR CARPETED AREAS, PROVIDE A PERMANENT IDENTIFYING MARK IN THE CARPET DIRECTLY ABOVE THE CLEAN-OUT. THE CLEAN-OUT SHALL HAVE A SMOOTH POLISHED BRONZE FINISH WITH THE LETTERS "C.O." CAST IN THE COVER. FOR WALLS, PROVIDE AN ACCESS PANEL WITH CLEARANCE FOR RODDING. THE FLOOR CLEAN-OUTS SHALL BE ZURN MODEL ZN-1400-T OR APPROVED EQUAL WITH BRONZE PLUG, SQUARE NICKEL BRONZE FRAME AND COVER. THE WALL CLEAN-OUTS SHALL BE ZURN MODEL ZN-1443-BP OR APPROVED EQUAL WITH BRONZE PLUG AND 7 INCHES X 7 INCHES NICKEL BRONZE COVER. NO SANITARY, SOIL OR WASTE PIPE SHALL EXTEND GREATER THAN 2'-0" TO A DEAD-END.

d. PROVIDE ONE TRAP PRIMER VALVE FOR EACH FLOOR DRAIN WITHOUT A CONSTANT SOURCE OF WATER SUPPLY TO MAINTAIN TRAP SEAL. PRIMER VALVE SHALL BE LOCATED IN AN ACCESSIBLE AREA AND CONNECTED TO THE NEAREST 3/4 INCH COLD WATER LINE SERVING A FIXTURE. TRAP PRIMER VALVE SHALL CONFORM TO ASSE 1018 AND 1044. BARRIER TYPE TRAP SEAL PROTECTION DEVICES COMPLYING WITH ASSE 1072 MAY BE USED IN LIEU OF TRAP PRIMER VALVES AS ALLOWED BY LOCAL CODE AND AHJ. PROVIDE FLOAT TYPE BACKWATER VALVE (SIZED FOR ANTICIPATED FLOW RATE) IN ALL OPEN SITE DRAINS AND FLOOR RECEPTORS RECEIVING A/C UNIT CONDENSATE, AND/OR CLEAR WATER WASTE, SUCH AS SPRINKLER FLOW TESTING.

e. FIXTURES AND SANITARY DRAINS SHALL BE VENTED AS INDICATED ON DRAWINGS AND IN ACCORDANCE WITH CODE. VENTS ARE TO BE EXTENDED TO EXISTING BUILDING FACILITIES THROUGH ROOF AS INDICATED ON DRAWING AND FLASHED BY OWNER APPROVED ROOFING CONTRACTOR.

f. PVC PIPING:

- WHERE PVC PIPING IS USED, PROVIDE CODE APPROVED FIRE STOPPING MATERIAL AT FIRE RATED WALL PENETRATIONS.

g. INSIDE BUILDING BELOW GRADE SEWER AND VENT MATERIAL SHALL BE AS FOLLOWS:

- SERVICE WEIGHT - CAST IRON PIPE ASTM A-74-82 WITH ASTM C-564-70 NEOPRENE COMPRESSION JOINTS. CAST IRON SOIL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE (CISPI) AND BE LISTED BY NSF INTERNATIONAL.
- SOLID WALL PVC-DWV PLASTIC ASTM D-1785 WITH ASTM D-2665 DWV SOLVENT WELD SOCKET FITTINGS. FOAM CORE PVC SHALL NOT BE USED.

h. ABOVE GRADE VENTS AND SANITARY -

- NO-HUB CAST IRON PIPE CISPI 1-301-78. CAST IRON SOIL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE (CISPI) AND BE LISTED BY NSF INTERNATIONAL.
- NO-HUB COUPLINGS:
  - HEAVY-DUTY, 4 BAND, SHIELDED FOR 4" AND SMALLER.
  - HEAVY-DUTY, 6 BAND, SHIELDED FOR 5" AND LARGER.
- SOLID WALL PVC-DWV PLASTIC ASTM D-1785 WITH ASTM D-2665 DWV SOLVENT WELD SOCKET FITTINGS. NOT FOR USE IN RETURN AIR PLENUM. FOAM CORE PVC SHALL NOT BE USED.
- DWV COPPER ASTM B306.

15. DOMESTIC WATER PIPING (221116)

a. POTABLE WATER PIPING AND COMPONENTS SHALL COMPLY WITH NSF 14, NSF 372, AND NSF 61 ANNEX G. PLASTIC PIPING COMPONENTS SHALL BE MARKED WITH "NSF-PW." GASKETS, JOINTS, CONNECTORS, SPECIALTIES, AND PIPE SHALL BE MANUFACTURED AND PROVIDED BY THE SAME MANUFACTURER. ALL PIPING SHALL BE SUPPORTED DIRECTLY ON EACH SIDE OF A JOINT. ALL PIPING SUPPORTS AND RESTRAINTS SHALL BE IN STRICT ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION GUIDELINES.

b. PROVIDE VALVES AND UNIONS WHERE NEEDED TO PERMIT DISCONNECTIONS OF EACH PIECE OF EQUIPMENT FOR REPAIRS. MAKE CONNECTIONS TO EQUIPMENT WITH SHUT-OFF VALVES ON SUPPLY AND BALANCE VALVES ON RETURNS. INSTALL UNIONS IN PIPES 2" AND SMALLER, ADJACENT TO EACH VALVE, AT FINAL CONNECTIONS EACH PIECE OF EQUIPMENT AND ELSEWHERE AS INDICATED. UNIONS ARE NOT REQUIRED ON FLANGED DEVICES.

c. LEVER TYPE HANDLE OPERATORS SHALL BE PROVIDED ON VALVES UP TO 4". GEAR OPERATORS SHALL BE PROVIDED ON VALVES OVER 4", AND ON VALVES REQUIRING CHAIN OPERATION. VALVES USED FOR BALANCING SHALL HAVE INFINITE POSITION LEVER OR GEAR OPERATORS WITH ADJUSTABLE, OPEN POSITION "MEMORY" STOP. PROVIDE 2" EXTENSION NECKS ON ALL VALVES INSTALLED IN INSULATED LINES.

d. DOMESTIC WATER PRESSURE REDUCING VALVE ASSEMBLIES SHALL BE SELECTED TO PROVIDE STABLE FLOW CONDITIONS WITHOUT CAVITATION OR VALVE CHATTER.

e. PROVIDE STOP VALVES AT ALL FIXTURE AND EQUIPMENT SUPPLIES. ALL EXPOSED FIXTURE CONNECTIONS SHALL BE CHROME PLATED, STAINLESS STEEL OR FITTED WITH CHROME PLATED SLEEVES. PROVIDE VACUUM BREAKERS WHERE REQUIRED BY CODE INCLUDE UNIONS, OR OTHER DISCONNECT MEANS, STOPS OR VALVES FOR ISOLATION OF FIXTURES AND EQUIPMENT. VALVES SHALL FULLY BE COMPATIBLE WITH PIPING FOR SERVICE INTENDED. AS MANUFACTURED BY APOLLO, NIBCO, CRANE, OR OTHER APPROVED MANUFACTURER. INCLUDE HOSE OR DRAIN VALVES AT LOW POINTS WHERE FIXTURES CANNOT BE USED FOR DRAINAGE.

f. WATER PIPING ABOVE GRADE SHALL BE:

- TYPE "L" HARD COPPER ASTM B 88-832 WITH WROUGHT COPPER FITTINGS ASTM B 16.22 1980 AND NON-LEAD OR ANTIMONY SOLDER JOINTS.
- TYPE "L" HARD COPPER ASTM B 88-832 WITH WROUGHT COPPER FITTINGS ASTM B 16.22 1980 AND PRESS-FIT JOINTS.
- PEX TUBING TYPE "A" (CROSS-LINKED POLYETHYLENE) MEETING SECTION 6.6 OF ASTM F876 AND USING "PROPEX" FITTINGS MEETING ASTM F1980, CSA B137.5, NSF/AMSI 14, & NSF/ANSI 61.
- CPVC (CHLORINATED POLYVINYL CHLORIDE) - COPPER TUBE SIZE, (CTS.); ASTM D2846, ASTM F441, ASTM 442, CSA B137.6. FITTINGS SHALL COMPLY WITH ASTM D2846, ASTM F437, ASTM 438, ASTM F439, CSA B137.8, ASSE 1061.
- 2"Ø AND SMALLER, COPPER PIPE FITTINGS MAY BE PRESS-CONNECT CAST-BRONZE OR WROUGHT-COPPER FITTING WITH EPDM-RUBBER, O-RING SEAL IN EACH END. PRESS-CONNECT FITTINGS SHALL CONFORM TO ASME B16.51 STANDARD.

g. WATER PIPING BELOW GRADE SHALL BE TYPE "K" SOFT COPPER WITHOUT JOINTS.

h. ALL COLD WATER, HOT WATER, AND HOT WATER RETURN PIPING THAT IS PART OF A NEW SYSTEM OR AN ADDITION OF AN EXISTING SYSTEM SHALL BE THOROUGHLY CLEANED AND DISINFECTED AS PER AWWA C651 OR AWWA C652 GUIDELINES. THE DISINFECTION PROCESS SHALL BE PERFORMED AFTER ALL PIPES, COMPONENTS, VALVES, AND FIXTURES ARE INSTALLED AND THE REQUIRED LEAK/PRESSURE TESTS HAVE BEEN COMPLETED. THE SYSTEM SHALL BE FLUSHED WITH CLEAN, POTABLE WATER UNTIL THE SYSTEM IS COMPLETELY CLEAR OF ALL DIRT, SEDIMENT, AND DEBRIS. THE SYSTEM SHALL BE FILLED WITH A WATER/CHLORINE SOLUTION AS PER CODE AND SHALL BE VALVED OFF FROM THE MAIN WATER SUPPLY AND ALLOWED TO STAND FOR A MINIMUM OF 24 HOURS. AFTER THE REQUIRED STANDING TIME, THE SYSTEM SHALL BE FLUSHED WITH CLEAN POTABLE WATER UNTIL THE DISINFECTANT SOLUTION IS COMPLETELY PURGED FROM THE SYSTEM, FIXTURES, AND COMPONENTS. REPEAT DISINFECTION PROCEDURE AS NEEDED IF BACTERIOLOGICAL EXAMINATION INDICATES THAT CONTAMINATES ARE STILL PRESENT IN THE SYSTEM. CONTRACTOR SHALL PROVIDE THE FINAL STERILIZATION TESTING REPORT TO THE ENGINEER FOR REVIEW.

i. IF CONTRACTOR CHOOSES PRESS-CONNECT OPTION: AFTER PRESS-CONNECT FITTINGS HAVE BEEN INSTALLED A "TWO STEP TEST" SHALL BE FOLLOWED. PRESSURIZE THE SYSTEM WITH APPLICATION APPROPRIATE TEST MEDIUM, WATER BETWEEN 15 AND 85 PSI, OR AIR/DRY NITROGEN BETWEEN .5 AND 45 PSI. CHECK THE PRESSURE GAUGE FOR PRESSURE LOSS. IF THE SYSTEM DOES NOT HOLD PRESSURE, WALK THE SYSTEM AND CHECK FOR UN-PRESSED FITTINGS. SHOULD ANY UNPRESSED FITTINGS BE IDENTIFIED FOLLOWING TEST, ENSURE THE TUBE IS FULLY INSERTED INTO THE FITTING AND PROPERLY MARKED PRIOR TO PRESSING THE JOINT. AFTER APPROPRIATE REPAIRS HAVE BEEN MADE, RETEST THE SYSTEM PER LOCAL CODE AND SPECIFICATION REQUIREMENTS, NOT TO EXCEED 600 PSI WITH WATER OR, 200 PSI WHEN USING AIR.

j. DOMESTIC HOT AND COLD WATER PIPING UNDER CONCRETE FLOOR TO BE COVERED WITH SAND SO THAT PIPING WILL NOT BECOME EMBEDDED IN THE CONCRETE. PIPING UNDER CONCRETE FLOOR SHALL BE TYPE "K" SOFT COPPER OR PEX - TYPE A TUBING AND SHALL BE CONTINUOUS. SPLICES OR FITTINGS SHALL NOT BE PERMITTED.

k. EXTREME CAUTION MUST BE TAKEN SO THAT COPPER LINES AND INSULATION UNDER CONCRETE ARE NOT CRUSHED, CUT, SPLIT, RUPTURED OR DEFORMED DURING THE POURING OF THE FLOOR SLAB.

18. FIXTURES AND EQUIPMENT (224000)

a. FURNISH FIXTURES AND EQUIPMENT INDICATED AND SCHEDULED ON DRAWINGS, COMPLETE WITH ACCESSORIES, CONTROLS AND INSTALLATION ITEMS REQUIRED.

b. INSTALL IN FULL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND PLACE IN SATISFACTORY OPERATION.

c. FIXTURES AND EQUIPMENT SHALL BE AS INDICATED ON THE PLUMBING FIXTURE SCHEDULE.

19. CLEANOUTS (221319)

a. CLEANOUTS SHALL BE INSTALLED FLUSH WITH FINISHED FLOOR OR WALLS WITH PLATED COVERS.

b. CLEANOUTS SHALL BE AS SCHEDULED ON DRAWINGS.

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No. 15702
DELAWARE
PROFESSIONAL ENGINEER

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPVC REVIEW	4/17/2024
4.	ISSUED FOR BPVC RESUBMISSION	5/10/2024
5.	ISSUED FOR BPVC RESUBMISSION	6/10/2024
7.	ISSUED FOR PERMISSION	

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20. INSULATION (220716 AND 220719)

a. REFER TO INSULATION SCHEDULE FOR INSULATION R-VALUE AND THICKNESS REQUIREMENTS.
b. CONDENSATE PIPING SHALL BE INSULATED WITH 1-INCH-THICK FIBERGLASS INSULATION WITH STANDARD VAPOR BARRIER JACKET OR WITH 1" THICK FLEXIBLE UNICELLULAR ("ARMAFLEX").
c. FIBERGLASS PIPE INSULATION SHALL BE PROVIDED WITH STANDARD VAPOR BARRIER JACKET AND HAVE A MAXIMUM CONDUCTIVITY OF 0.27 BTU PER "/HR-FT2-°F. ALL INSULATION SHALL BE APPLIED IN FULL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
d. INSULATE FITTINGS, JOINTS, AND VALVES WITH INSULATION OF LIKE MATERIAL AND THICKNESS AS ADJOINING PIPE. PROVIDE REMOVABLE INSULATION SECTIONS TO COVER PARTS OF EQUIPMENT WHICH MUST BE OPENED PERIODICALLY FOR MAINTENANCE. FINISH WITH GLASS CLOTH OR PVC FITTING COVERS.
e. ALL PRODUCTS LOCATED WITHIN PLENUM AREAS, INCLUDING BUT NOT LIMITED TO INSULATION AND ADHESIVE SYSTEMS, SHALL HAVE A COMPOSITE FIRE HAZARD RATING NOT TO EXCEED 25 FLAME SPREAD AND 50 SMOKE DEVELOPED PER ASTM E-84, NFPA 255 AND UL 723.
f. ALL WASTE LINES FROM DRINKING WATER FOUNTAINS SHALL BE INSULATED WITH 1-INCH-THICK HEAVY-DUTY FIBERGLASS MATERIAL WITH ALL PURPOSE NONCOMBUSTIBLE VAPOR BARRIER JACKET. INSULATION SHALL HAVE A MAXIMUM THERMAL CONDUCTIVITY (K) OF 0.23 BTU"IN/HR*FT2*°F AT 75°F. ALL DRAINAGE PIPE SHALL BE SUPPORTED DIRECTLY ON EACH SIDE OF A JOINT.
g. EXTREME CAUTION MUST BE TAKEN SO THAT COPPER LINES AND INSULATION UNDER CONCRETE ARE NOT CRUSHED, CUT, SPLIT, RUPTURED OR DEFORMED DURING THE POURING OF THE FLOOR SLAB.

21. HANGERS AND SUPPORTS (220529)

a. INSTALL PIPING SYSTEMS TO PERMIT FREE MOVEMENT FOR EXPANSION. SUPPORT ALL PIPING FROM STRUCTURE WITH UL LISTED HANGERS AND SUPPORTS SUITABLE FOR THE INTENDED INSTALLATION. DESIGN, SELECTION, SPACING, AND APPLICATION OF HANGERS AND SUPPORTS SHALL COMPLY WITH ANSI B31.1, MSS SP-69, AND PIPE MANUFACTURER'S RECOMMENDED SPACING REQUIREMENTS.
b. PROVIDE INSULATION HANGER WITH PROTECTIVE SHIELDS ON SYSTEMS REQUIRING A VAPOR BARRIER. HANGER SHALL BE PROVIDED AT EACH CHANGE OF DIRECTION. HANGERS AND SUPPORTS SHALL BE SPACED AT INTERVALS WHICH WILL PREVENT SAGGING AND REDUCE STRAIN ON VALVES AND SPECIALTIES; ALL PIPING SUPPORTS AND RESTRAINTS SHALL BE IN STRICT ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION GUIDELINES. HANGERS SHALL ALLOW FOR EXPANSION AND CONTRACTION.
c. RISER CLAMPS SHALL BE INSTALLED ABOVE THE FLOOR AT EACH LEVEL. RISER CLAMPS MAY BE SUSPENDED BELOW FLOOR LEVEL, WITH HANGER RODS AND INSERTS, WHERE THE INSTALLATION OF ESCUTCHEON PLATES IS REQUIRED.
d. HANGER SPACING SHALL BE NO GREATER AND ROD SIZE SHALL BE NO SMALLER THAN THAT SHOWN IN THE ON THE HANGER SCHEDULE.
e. HANGERS FOR BLACK OR GALVANIZED STEEL PIPE SHALL BE MANUFACTURED BY MICHIGAN HANGER CO., MODEL NO. 100, OR APPROVED EQUAL.
f. HANGERS FOR CAST IRON PIPE SHALL BE MANUFACTURED BY MICHIGAN HANGER CO., MODEL NO. 400, OR APPROVED EQUAL.
g. HANGERS FOR COPPER TUBING SHALL BE MANUFACTURED BY MICHIGAN HANGER CO., MODEL NO. 102-A, OR APPROVED EQUAL.
h. TRAPEZE HANGERS OF A TYPE APPROVED BY THE ENGINEER. MAINTAIN PIPE INSULATION AT PIPE ANCHORS. PROVIDE INSULATION COUPLERS AS SPECIFIED ABOVE.
i. CONTRACTOR SHALL PROVIDE INSULATION HANGER WITH PROTECTIVE SHIELDS, SUCH AS MICHIGAN HANGER CO., MODEL NO. 103, OR APPROVED EQUAL. 5-INCH-LONG SECTION OF 1/2 INCH THICK CALCIUM SILICATE SECTIONAL PIPE INSULATION WITH FACTORY LONGITUDINAL LAP SHALL BE PROVIDED AT HANGER POINTS. BUTT JOINTS SHALL BE SEALED WITH INSULATING CEMENT.
j. STRAP HANGERS SHALL NOT BE PERMITTED.
k. CONTRACTOR SHALL PROVIDE RISER CLAMPS FOR VERTICAL PIPING AT EACH LEVEL. RISER CLAPS SHALL BE MICHIGAN HANGER CO., MODEL NO. 510 FOR STEEL PIPING AND MODEL NO. 511 FOR COPPER TUBING OR APPROVED EQUAL. USE "SHORT-END" RISER CLAMPS WHERE SPACE IS LIMITED.
l. IN CONCRETE, MICHIGAN HANGER CO., MODEL NO. 355 INSERTS, OR APPROVED EQUAL. INSERTS SHALL PERMIT ADJUSTMENT FROM 3/4 INCH THROUGH 1-1/4 INCH. IN METAL DECKS, CONTRACTOR SHALL PROVIDE REDHEAD SDI INSERTS, OR APPROVED EQUAL. POWDER PROPELLED INSERTS WILL BE PERMITTED IN NEW CONSTRUCTION WHERE TYPE AND LOCATION ARE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
m. CONTRACTOR SHALL PROVIDE SIDE BEAM CLAMPS FOR SUPPORTING PIPING FROM STRUCTURAL STEEL MEMBERS. BEAM CLAMPS SHALL BE MANUFACTURED BY MICHIGAN HANGER CO., MODEL 300 OR APPROVED EQUAL.
n. WHERE OTHER MEANS OF SUPPORT PIPING ARE REQUIRED OR DESIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE ENGINEER'S APPROVAL PRIOR TO INSTALLING THOSE SUPPORTS.
o. HANGER SHALL BE PROVIDED AT EACH CHANGE OF DIRECTION.
p. HANGERS AND SUPPORTS SHALL BE SPACED AT INTERVALS WHICH WILL PREVENT SAGGING AND REDUCE STRAIN ON VALVES AND SPECIALTIES. HANGERS SHALL ALLOW FOR EXPANSION AND CONTRACTION.
q. RISER CLAMPS SHALL BE INSTALLED ABOVE THE FLOOR AT EACH LEVEL. RISER CLAMPS MAY BE SUSPENDED BELOW FLOOR LEVEL, WITH HANGER RODS AND INSERTS, WHERE THE INSTALLATION OF ESCUTCHEON PLATES IS REQUIRED.

22. PIPE WALL SEALS (220500)

a. WALL PIPE SEALS WITH RUBBER LINKS SHALL BE THUNDERLINE LINK SEAL, OR APPROVED EQUAL. WALL PIPE SEALS WITH INORGANIC MATERIAL LINKS THE PENETRATIONS OF FIRE RATED WALLS SHALL BE THUNDERLINE PYRO-PAC, OR APPROVED EQUAL.
b. SEALS SHALL BE MODULAR MECHANICAL TYPE CONSISTING OF INTERLOCKING SYNTHETIC RUBBER OR INORGANIC MATERIAL LINKS SHAPED TO CONTINUOUSLY FILL THE ANNULAR SPACE BETWEEN THE PIPE AND WALL OPENING.
c. LINKS SHALL BE LOOSELY ASSEMBLED WITH BOLTS TO FORM A CONTINUOUS BELT AROUND THE PIPE. A PRESSURE PLATE SHALL BE PROVIDED UNDER THE BOLT HEAD AND NUT OF EACH LINK.
d. AFTER THE SEAL ASSEMBLY IS POSITIONED IN THE SLEEVE, THE TIGHTENING OF THE BOLTS SHALL CAUSE THE SEALING ELEMENTS TO EXPAND AND PROVIDE AN ABSOLUTELY WATER-TIGHT SEAL BETWEEN THE PIPE AND SLEEVE.
e. SEALS SHALL BE CONSTRUCTED TO PROVIDE ELECTRICAL INSULATION BETWEEN THE PIPE AND SLEEVE, THUS REDUCING THE CHANCES OF CATHODIC REACTION BETWEEN THESE TWO MEMBERS.
f. SLEEVES SHALL BE MANUFACTURED FROM HEAVY-WALL, WELDED OR SEAMLESS STEEL PIPE. A FULL CIRCLE CONTINUOUSLY WELDED WATER STOP PLATE SHALL BE PROVIDED TO ASSURE POSITIVE WATER SEALING OF THE SLEEVE. SLEEVES SHALL BE PROTECTED BY A COATING OF ENRICHED RED PRIMER.

23. VALVES (220523) AND SPECIALTIES (221119)

a. DOMESTIC WATER SHUT-OFF VALVES INSTALLED ON CPVC PIPING SHALL BE THREE PIECE BALL VALVE, FULL PORT, TRUE UNION TYPE, WITH PLASTIC BODY, BLOW-OUT PROOF STEM DESIGN AND O-RING STEM SEAL. PLASTIC PARTS SHALL BE CPVC. DOMESTIC WATER SHUT-OFF VALVES INSTALLED ON COPPER PIPING SHALL BE TWO PIECE BALL VALVE, FULL PORT, WITH BRASS BODY, STAINLESS STEEL BALL AND TRIM, BLOW-OUT PROOF STEM, AND REPLACEABLE "TEFLON OR TFE" SEATS AND SEALS. VALVES SHALL BE NIBCO OR EQUAL.
b. BALL VALVES 2-INCHES AND SMALLER SHALL BE 150 PSI SWP, 600 PSI WOG, BRONZE, 2-PIECE DESIGN, WITH PTFE TEFLON SEATS AND SEALS, AND BLOW-OUT PROOF STEMS MADE OF LEAD FREE BRONZE. VALVES SHALL HAVE THREADED ENDS FOR USE IN STEEL PIPING AND SOLDER OR PRESS-FIT ENDS FOR USE IN COPPER TUBING. BALL VALVES SHALL BE APOLLO 70LF-11/70LF-200-11, OR APPROVED EQUAL. PROVIDE THERMA-SEAL INSULATING TEE HANDLES FOR VALVES USED IN LINES WHICH ARE TO BE INSULATED.
c. BUTTERFLY VALVES SHALL BE LUG WAFER TYPE, SUITABLE FOR 150 PSI WOG AT TEMPERATURE RANGING FROM 25 DEGREES F THROUGH 230 DEGREES F.
d. BUTTERFLY VALVES SHALL HAVE FULLY REPLACEABLE SEATS MADE OF EPDM ELASTOMER. BUTTERFLY VALVES CLOSURE SHALL BE BUBBLE TIGHT.
e. BUTTERFLY VALVES SHALL HAVE CAST IRON OR SEMI-STEEL BODIES, ONE PIECE TYPE 416 STAINLESS STEEL STEMS, AND BRONZE DISCS. DISCS SHALL BE ANCHORED TO STEM WITH BRONZE DRIVE PINS. SEMI-STEEL DISCS WITH WELDED NICKEL EDGE MAY BE USED IN LIEU OF BRONZE DISCS.
f. PROVIDE 2 INCH EXTENSION NECKS ON VALVES INSTALLED IN INSULATED LINES.
g. LEVER TYPE HANDLE OPERATORS SHALL BE PROVIDED ON VALVES UP TO 4 INCHES IN SIZE. GEAR OPERATORS SHALL BE PROVIDED ON VALVES OVER 4 INCHES IN SIZE, AND ON VALVES REQUIRING CHAIN OPERATION. VALVES USED FOR BALANCING SHALL HAVE INFINITE POSITION LEVER OR GEAR OPERATORS WITH ADJUSTABLE, OPEN POSITION "MEMORY" STOP.
h. BUTTERFLY VALVES SHALL BE NIBCO LD-2000, ITT GRINNELL 8000 SERIES, OR APPROVED EQUAL.
i. GLOBE VALVES FOR COPPER PIPING UP TO AND INCLUDING 2-1/2 INCHES SHALL BE NIBCO NO. S-235 OR APPROVED EQUAL, CLASS 150, 300# WOG, BRONZE BODY, BRONZE RISING STEM, UNION BONNET, RENEWABLE SEAT AND SOLDERED ENDS. DOMESTIC WATER GLOBE VALVES FOR COPPER PIPING 3 INCHES AND 4 INCHES SHALL BE CRANE NO. 351 OR APPROVED EQUAL, CLASS 125, 200# WOG CAST IRON OS&Y VALVES WITH ANSI B16.1 FLANGED ENDS, YOKE BONNET, RENEWABLE SEAT AND BRONZE TRIM: STEMS, DISC FACES, SEAT FACES AND BUSHINGS CONSTRUCTED OF BRONZE. ALL OF THE ABOVE GLOBE VALVES SHALL BE USED FOR BALANCING OR THROTTLING VALVE APPLICATIONS.
j. CHECK VALVES (3 INCH AND SMALLER) SHALL BE 125# WITH REMOVABLE, REGRINDABLE DISCS AND THREADED OR SOLDER JOINT ENDS. CHECK VALVES TO BE INSTALLED IN HORIZONTAL LINES SHALL BE HAMMOND, MODEL IB940, OR APPROVED EQUAL, (SCREWED JOINTS) OR HAMMOND, MODEL IB941, OR APPROVED EQUAL (SOLDER JOINTS). CHECK VALVES TO BE INSTALLED IN VERTICAL PIPING SHALL BE HAMMOND, MODEL, IB939, OR APPROVED EQUAL. CONTRACTOR SHALL PROVIDE SWEAT-TO-THREAD ADAPTERS FOR SOLDER JOINT CONNECTIONS.
k. DOMESTIC WATER GATE VALVES FOR COPPER PIPING UP TO AND INCLUDING 2-1/2 INCHES SHALL BE NIBCO NO. S-111 OR APPROVED EQUAL, CLASS 125, 200 PSIG WOG, BRONZE BODY WITH SOLDERED ENDS, RISING STEM, SOLID WEDGE, AND SCREWED BONNET. DOMESTIC WATER GATE VALVES FOR COPPER PIPING 3 INCHES AND 4 INCHES SHALL BE CRANE NO. 465-1/2 OR APPROVED EQUAL, 200# WOG CAST IRON OS&Y VALVE WITH CLASS 125 ANSI B16.1 FLAT FACED FLANGED ENDS AND BRONZE TRIM: STEMS, DISC FACES, SEAT FACES, SEAT RINGS AND BONNET BUSHINGS CONSTRUCTED OF BRONZE. ALL OF THE ABOVE GATE VALVES SHALL BE USED FOR STOP OR ISOLATION VALVE APPLICATIONS. IN LIEU OF GATE VALVES FOR PIPING 2 INCHES AND SMALLER, NIBCO 585-70 BALL VALVES MAY BE USED.
l. GATE VALVES FOR UNDERGROUND WATER SERVICE SHALL BE UL LISTED AND FM APPROVED, 175#, WWP, WITH CAST IRON BODIES BRONZE MOUNTED, NON-RISING STEMS, SOLID WEDGE DISCS, AND INDICATOR POST FLANGES. VALVES SHALL BE STOCKHAM VALVE MODEL, G-635, WITH CONVENTIONAL PACKING AND MECHANICAL JOINT ENDS.
m. SHOCK ARRESTORS SHALL BE LOCATED DOWNSTREAM OF THE DOMESTIC WATER SERVICE VALVE, AT EACH SERVICE TO A GROUP OF FIXTURES, OR AS INDICATED ON THE DRAWINGS. SHOCK ARRESTORS SHALL BE AS MANUFACTURED BY PRECISION PLUMBING PRODUCTS OR APPROVED EQUAL AND CONFORM TO THE REQUIREMENTS OF THE PLUMBING AND DRAINAGE INSTITUTE. INSTALL SHOCK ABSORBERS AT EACH FIXTURE OR WHERE REQUIRED TO PREVENT WATER HAMMER IN ACCORDANCE WITH STANDARD PDI-WH 201.
n. PROVIDE STOP VALVES AT ALL FIXTURE AND EQUIPMENT SUPPLIES. ALL EXPOSED FIXTURE CONNECTIONS SHALL BE CHROME PLATED, STAINLESS STEEL OR FITTED WITH CHROME PLATED SLEEVES. PROVIDE VACUUM BREAKERS WHERE REQUIRED BY CODE INCLUDE UNIONS, OR OTHER DISCONNECT MEANS, STOPS OR VALVES FOR ISOLATION OF FIXTURES AND EQUIPMENT. VALVES SHALL FULLY BE COMPATIBLE WITH PIPING FOR SERVICE INTENDED. AS MANUFACTURED BY APOLLO, NIBCO, CRANE, OR OTHER APPROVED MANUFACTURER. INCLUDE HOSE OR DRAIN VALVES AT LOW POINTS WHERE FIXTURES CANNOT BE USED FOR DRAINAGE.
o. REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY SHALL BE WATTS NO# LF909-S SERIES OR APPROVED EQUAL. IF IT COMPLIES WITH THESE SPECIFICATIONS EQUIPMENT MANUFACTURED BY CLA-VAL COMPANY, FEBCO, HERSEY PRODUCTS, INC., OR WATTS REGULATION COMPANY WILL BE ACCEPTABLE. ASSEMBLY SHALL BE COMPLETE WITH STRAINER, DRAIN LINES, INLET AND OUTLET SHUT-OFF VALVES AND WATTS SERIES 'AG' AIR GAP. THE PRESSURE LOSS OVER THE ENTIRE ASSEMBLY SHALL NOT EXCEED 10 PSI AT THE DESIGN FLOW. THE SIZE OF THE ASSEMBLY SHALL NOT BE SMALLER THAN THE LINE SIZE IN WHICH IT IS INSTALLED. BACKFLOW PREVENTER ASSEMBLY SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION. RELIEF OUTLET PIPE SHALL DISCHARGE TO NEAREST FLOOR DRAIN OR OTHER APPROVED LOCATION OF DISCHARGE. DO NOT INSTALL ABOVE FINISHED CEILINGS, UNLESS NOTED OR INDICATED OTHERWISE.
p. STRAINERS:
  - Y-TYPE STRAINERS - BRONZE 3" AND SMALLER: STRAINER BODY TO BE ASTM B584 OR B62 BRONZE WITH THREADED OR SOLDER END CONNECTIONS AND .033 INCH PERFORATED TYPE 304 STAINLESS STEEL SCREEN OR 20 MESH TYPE 304 STAINLESS STEEL SCREEN ACCESSIBLE WITHOUT REMOVING THE STRAINER FROM THE LINE.
  - Y-TYPE STRAINERS - IRON 3" AND SMALLER: STRAINER BODY TO BE CLASS 250 THREADED, TAPPED SCREW-IN BONNET WITH PLUG AND STAINLESS-STEEL SCREEN. BODY AND BONNET TO BE ASTM A126. SCREEN MUST BE ACCESSIBLE WITHOUT REMOVING THE STRAINER FROM THE LINE.
  - Y-TYPE STRAINERS - IRON 2 1/2" AND LARGER: STRAINER BODY TO BE CLASS 125 FLANGED, TAPPED BOLTED BONNET WITH PLUG AND STAINLESS-STEEL SCREEN. BODY AND BONNET TO BE ASTM A126. SCREEN MUST BE ACCESSIBLE WITHOUT REMOVING THE STRAINER FROM THE LINE.
q. ACCEPTABLE MANUFACTURERS:
  - NIBCO
  - APOLLO
  - WATTS
r. FLOOR CEILING AND WALL PLATES: FIT PIPE PASSING THROUGH WALLS, FLOORS OR CEILINGS IN FINISHED ROOMS WITH STEEL OR BRASS ESCUTCHEONS. WHERE SURFACE IS TO RECEIVE A PAINT FINISH ESCUTCHEONS SHALL BE PRIME PAINTED; OTHERWISE MAKE ESCUTCHEONS NICKEL OR CHROME PLATED. WHERE PIPING IS INSULATED, FIT ESCUTCHEONS OUTSIDE INSULATION.

24. EQUIPMENT (220500)

a. MAKE ALL FINAL EQUIPMENT AND FIXTURE CONNECTIONS AND PROVIDE THE NECESSARY ADAPTORS, FITTINGS, VALVES, DEVICES, ETC. FOR A COMPLETE AND OPERABLE SYSTEM. PROVIDE COMPLETE WITH BASES, ISOLATORS, SUPPORTS AND OTHER REQUIRED ACCESSORIES. PROVIDE VALVES AND UNIONS WHERE NEEDED TO PERMIT DISCONNECTIONS OF EACH PIECE OF EQUIPMENT FOR REPAIRS. PLUMBING CONNECTIONS SHOWN ARE NOMINAL. VERIFY EXACT CONNECTION SIZE WITH EACH PIECE OF EQUIPMENT SUPPLIED.
b. EQUIPMENT SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE MANUFACTURER'S DATA AND INSTALLATION INSTRUCTIONS, INCLUDING CLEARANCES, LUBRICATE AND ADJUST AS REQUIRED. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO CHECK AND CONFORM TO THESE REQUIREMENTS PRIOR TO STARTING WORK. FURNISH AND INSTALL CLEAN SET OF FILTERS PRIOR TO BALANCING.
c. THE CONTRACTOR SHALL COORDINATE THE ELECTRICAL CHARACTERISTICS OF ALL MECHANICAL EQUIPMENT PRIOR TO ORDERING OF EQUIPMENT. COORDINATE REQUIREMENT FOR PROVISION OF MOTOR STARTERS, DISCONNECTS, CONTACTORS, CONTROL WIRING, ETC. AS REQUIRED FOR A PROPER FUNCTIONING SYSTEM WITH ELECTRICAL CONTRACTOR. NO ADDITIONAL PAYMENT WILL BE MADE FOR LACK OF CONTRACTOR COORDINATION OF ELECTRICAL CHARACTERISTICS.
d. ALL FLOOR MOUNTED EQUIPMENT SHALL BE INSTALLED ON CONCRETE HOUSEKEEPING PADS. MINIMUM PAD THICKNESS SHALL BE NOMINAL 4". PAD SHALL EXTEND BEYOND THE EQUIPMENT A MINIMUM OF 4" ON EACH SIDE. CONCRETE PADS SHALL BE PROVIDED BY THIS CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE THIS CONTRACTOR TO COORDINATE THE SIZE AND LOCATION OF THE CONCRETE HOUSEKEEPING PADS WITH THE GENERAL CONTRACTOR.
e. ALL EQUIPMENT SHALL BE MOUNTED ON VIBRATION ISOLATORS TO PREVENT THE TRANSMISSION OF VIBRATION AND MECHANICALLY TRANSMITTED SOUND TO THE BUILDING STRUCTURE.
f. ISOLATION EQUIPMENT SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER AND SHALL BE DESIGNED SPECIFICALLY FOR THE APPLICATION REQUIRED. THIS INCLUDES, BUT IS NOT LIMITED TO, PIPING DUCTWORK, PUMPS, COMPRESSORS. VIBRATION ISOLATORS SHALL BE RATED FOR THE WEIGHT AND SPACING REQUIRED FOR THE EQUIPMENT REQUIRING ISOLATION.
g. ALL CONDENSATE DRAINS SHALL BE TRAPPED PER DETAIL ON MECHANICAL DRAWINGS. PROVIDE CLEANOUT(S). PROVIDE AUXILIARY DRAIN PANS AT ALL EQUIPMENT WHERE DAMAGE TO ANY BUILDING COMPONENT COULD OCCUR AS A RESULT OF OVERFLOW OR STOPPAGE OF THE PRIMARY SYSTEM. WATER LEVEL DETECTION SHALL BE PROVIDED IN AUXILIARY PAN TO PROVIDE SHUT DOWN OF EQUIPMENT.
h. PROVIDE CURBS FOR ALL ROOF OPENINGS FOR DUCTS, FLUES, PIPING AND EQUIPMENT. CURBS SHALL BE FURNISHED AS ACCESSORIES TO THE EQUIPMENT OR 8" HIGH PATE OR EQUAL EQUIPMENT SUPPORTS SPANNING STRUCTURE AND FLASHED INTO ROOFING. ALL CUTTING, FLASHING, AND PATCHING OF THE ROOF SHALL BE BY OWNER'S ROOFING CONTRACTOR AND PAID FOR BY PLUMBING CONTRACTOR.
i. SEAL JOINTS BETWEEN PLUMBING FIXTURES AND THE SURFACE TO WHICH THEY ARE MOUNTED USING SANITARY-TYPE, ONE-PART, MILDEW RESISTANT SILICONE SEALANT. MATCH SEALANT COLOR TO FIXTURE COLOR.

25. IDENTIFICATION (220553)

a. CONTRACTOR SHALL PROVIDE IDENTIFICATION LABELS, TAGS, ETC. AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN. THE IDENTIFICATION SHALL BE IN ACCORDANCE WITH ANSI STANDARD A13.1. PRESSURE SENSITIVE MARKERS SHALL BE MANUFACTURED BY THE BRADY CO., OR APPROVED EQUAL. MARKERS SHALL BE MANUFACTURER'S STANDARD PRODUCT. PRESSURE SENSITIVE PIPE MARKERS SHALL BE MANUFACTURED BY THE BRADY CO., OR APPROVED EQUAL. PIPE MARKERS SHALL BE MANUFACTURER'S STANDARD PRODUCT.
b. PIPE LABEL LOCATIONS: LOCATE PIPE LABELS WHERE PIPING IS EXPOSED OR ABOVE ACCESSIBLE CEILINGS IN FINISHED SPACES; MACHINE ROOMS; ACCESSIBLE MAINTENANCE SPACES SUCH AS SHAFTS, TUNNELS, AND PLENUMS; AND EXTERIOR EXPOSED LOCATIONS AS FOLLOWS:
  - NEAR EACH VALVE AND CONTROL DEVICE.
  - NEAR EACH BRANCH CONNECTION, EXCLUDING SHORT TAKEOFFS FOR FIXTURES AND TERMINAL UNITS. WHERE FLOW PATTERN IS NOT OBVIOUS, MARK EACH PIPE AT BRANCH.
  - NEAR PENETRATIONS AND ON BOTH SIDES OF THROUGH WALLS, FLOORS, CEILINGS, AND INACCESSIBLE ENCLOSURES.
  - AT ACCESS DOORS, MANHOLES, AND SIMILAR ACCESS POINTS THAT PERMIT VIEW OF CONCEALED PIPING.
  - NEAR MAJOR EQUIPMENT ITEMS AND OTHER POINTS OF ORIGINATION AND TERMINATION.
  - SPACED AT MAXIMUM INTERVALS OF 50 FEET (15 m) ALONG EACH RUN. REDUCE INTERVALS TO 25 FEET (7.6 m) IN AREAS OF CONGESTED PIPING AND EQUIPMENT.
c. PROVIDE VALVE TAGS AND VALVE CHART PER ASME A13.1 SCHEME FOR THE IDENTIFICATION OF PIPING SYSTEMS.

FIRE PROTECTION PERFORMANCE SPECIFICATION

1. THE CONTRACTOR SHALL PROVIDE THE DESIGN, MATERIALS, AND INSTALLATION OF A HYDRAULICALLY CALCULATED WET/DRY SPRINKLER AND WET STANDPIPE SYSTEM IN CONFORMANCE WITH THE REQUIREMENTS OF NFPA STANDARD NOS. 13, 14, AND LOCAL CODES. THE CONTRACTOR SHALL PREPARE SPRINKLER SHOP DRAWINGS FOR SUBMISSION TO AND APPROVAL BY THE PROJECT ENGINEER, LOCAL AUTHORITIES, AND THE FIRE MARSHAL. ALL HYDRAULIC CALCULATIONS AND SPRINKLER SYSTEM DESIGN SHALL BE BASED ON THE AVAILABLE WATER PRESSURE. THE CONTRACTOR SHALL PERFORM THE REQUIRED WATER FLOW TESTS BEFORE PROCEEDING WITH DESIGN. SPRINKLER CONTRACTOR SHALL EMPLOY A NICET LEVEL III OR GREATER SPRINKLER DESIGNER TO LAYOUT AND SIZE SYSTEM AND STAMP DRAWINGS.

2. SPRINKLER HEAD LAYOUTS SHALL BE SYMMETRICAL. SPRINKLER CONTRACTOR SHALL COORDINATE LOCATIONS OF SPRINKLER PIPING AND SPRINKLER HEADS WITH LIGHT FIXTURES, DIFFUSERS, STRUCTURAL ELEMENTS, CEILING ELEVATIONS, DUCTWORK, PIPING AND CEILING ELEVATIONS FOR PROPER FIRE PROTECTION COVERAGE. SPRINKLER PIPING WILL NOT BE ALLOWED TO COMPROMISE LIGHTING, HVAC, OR ARCHITECTURAL ELEMENTS AND/OR THEIR LOCATIONS. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR PROPOSED SPRINKLER HEAD LOCATIONS WHERE APPLICABLE. ALL SPRINKLER HEADS MOUNTED IN REMOVABLE ACCESSIBLE CEILINGS SHALL BE LOCATED AT THE CENTER (+1") OF THE CEILING TILE.

3. SPRINKLER HEADS SHALL BE RATED AND UL LISTED FOR THE INTENDED TEMPERATURE CLASSIFICATION. SPRINKLERS IN AREAS REQUIRING TEMPERATURE CLASSIFICATIONS OF INTERMEDIATE AND GREATER SHALL REQUIRE THE USE OF A TEMPERATURE MEASURING DEVICE TO DETERMINE THE APPROPRIATE TEMPERATURE CLASSIFICATION.

4. UNLESS OTHERWISE NOTED, SPRINKLER HEADS SHALL BE AS SPECIFIED IN THE CONTRACT DOCUMENTS OR AS OTHERWISE SPECIFIED BY THE ARCHITECT. WHERE NO STANDARD IS SPECIFIED, THE SPRINKLER HEADS SHALL BE CHROME PLATED SEMI-RECESSED TYPE IN AREAS WITH CEILING AND CHROME PLATED UPRIGHT TYPE IN OTHER AREAS. SPRINKLER HEADS, VALVES, ALARMS, ETC. SHALL BE MANUFACTURED BY VIKING, GRINNELL, CENTRAL, STAR, OR RELIABLE. INSTITUTIONAL PENAL STYLE HEADS SHALL BE INSTALLED IN HOLDING CELLS AND ADJACENT AREAS WHERE DETAINED INDIVIDUALS MAY BE EXPOSED TO; COORDINATE SPECIFIC AREAS WITH ARCHITECT AND OWNER.

5. SUPPORT ALL PIPING STRUCTURE WITH UL LISTED HANGERS AND SUPPORTS SUITABLE FOR THE INTENDED INSTALLATION. DESIGN, SELECTION, SPACING AND APPLICATION OF HANGERS AND SUPPORTS SHALL COMPLY WITH NFPA STANDARDS, ANSI B31.1 AND MSS SP-69.

6. ALL TRAPPED PIPING SHALL BE PROVIDED WITH ACCESSIBLE DRAIN VALVES, NIPPLE, AND CAP.

7. ALL NEW FIRE PROTECTION PIPING BELOW GRADE SHALL BE DUCTILE IRON, THICKNESS CLASS 52, LINED, CONFORMING TO ANSI/AWWA C151/A2151. PIPE FITTINGS SHALL BE EITHER DUCTILE CAST IRON, PRESSURE CLASS 350, BELL & SPIGOT CONFIGURATION WITHOUT BEAD, LINED, WITH BELL ENDS FORMED FOR RUBBER GASKETS; OR MECHANICAL JOINT CONFIGURATION, LINED, CONFORMING TO ANSI/AWWA C110/A21.10.

8. FIRE PROTECTION PIPING MATERIAL AT AND UPSTREAM OF THE MAIN CONTROL VALVES SHALL BE ASTM 120 OR A-53, SCHEDULE 40, BLACK STEEL OR DUCTILE IRON, IN ACCORDANCE WITH NFPA STANDARD NO. 13.

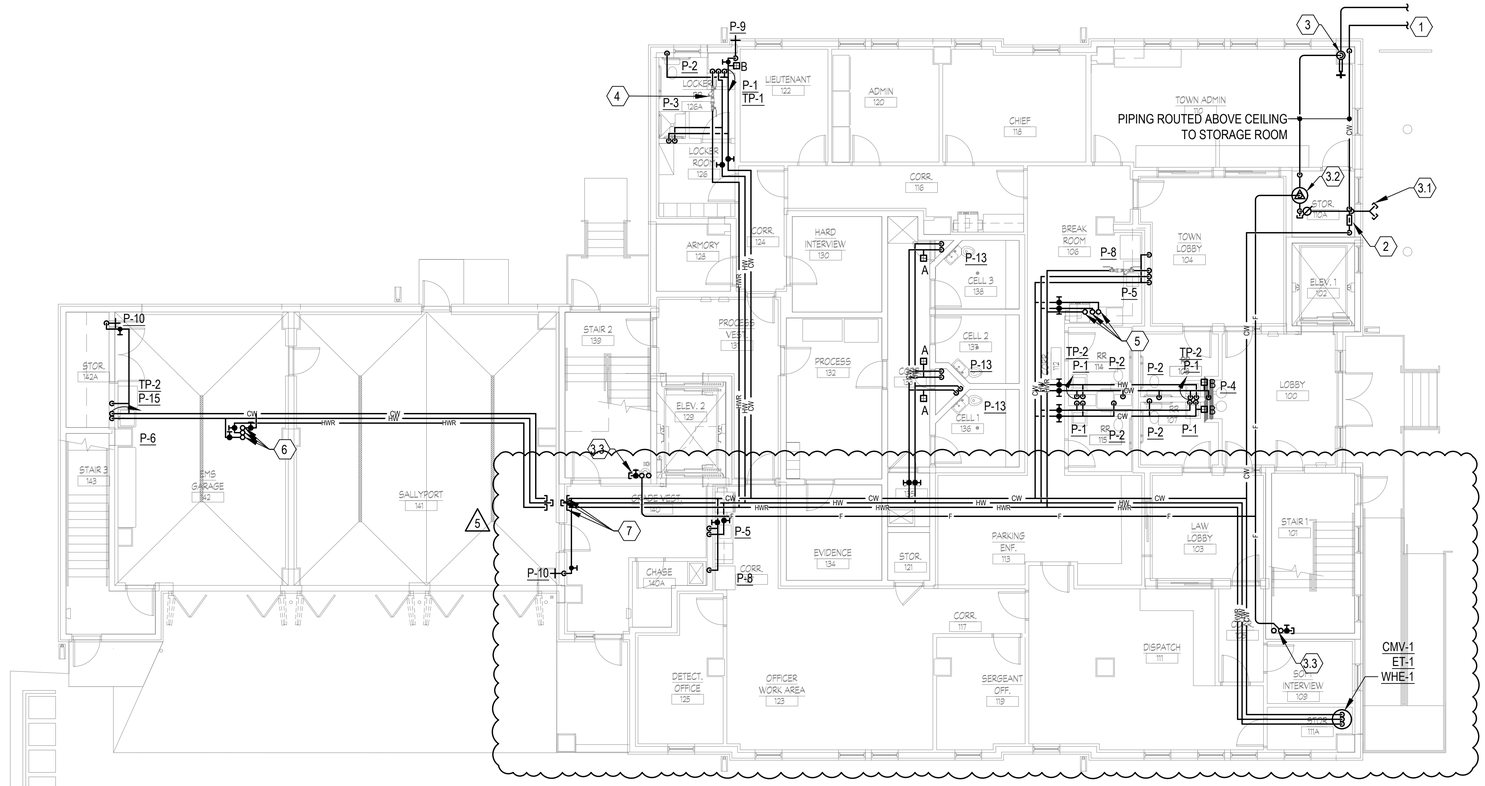
9. PIPING MATERIALS AND CONNECTIONS DOWNSTREAM OF MAIN CONTROL VALVES SHALL BE IN COMPLIANCE WITH NFPA STANDARD NO. 13 AND SHALL BE LISTED AND LABELED AS SUCH. PIPING SHALL BE EITHER ASTM 120, A-53, SCHEDULE 40, BLACK STEEL, TYPE L HARD DRAWN, SEAMLESS COPPER, SCHEDULE 10 (LARGER THAN 2 INCHES), OR THREADABLE THIN WALL STEEL (2 INCHES AND SMALLER). FITTINGS SHALL BE CAST FITTINGS. PLASTIC FIRE PROTECTION PIPING WITHIN PLENUM SPACES IS ONLY ALLOWABLE WITH WET SYSTEMS. PIPING SHALL HAVE A MAXIMUM PEAK OPTICAL DENSITY OF 0.50, A MAXIMUM AVERAGE OPTICAL DENSITY OF 0.15, AND A FLAME SPREAD NOT GREATER THAN 5 FEET WHEN TESTED IN ACCORDANCE WITH UL 1887.

10. ALL NEW FIRE PROTECTION PIPING SHALL HAVE THE OPTION TO BE U.L. LISTED AND FACTORY MUTUAL APPROVED PAINTED DUCTILE IRON VICTAULIC STYLE 77 OR 75 COUPLINGS ON BRANCH LINES AND VICTAULIC STYLE 07 "ZERO FLEX" COUPLINGS ON THE RISER AND MAINS, AND VICTAULIC FULL FLOW FITTINGS. VICTAULIC FLANGES, REDUCING COUPLINGS AND OUTLET COUPLINGS SHALL NOT BE ALLOWED. VICTAULIC GASKETS SHALL BE U.L. LISTED AND FACTORY MUTUAL APPROVED FOR THE SERVICE AND WORKING PRESSURE OF THE SYSTEM. GROOVE CUTTING OR ROLLING AND INSTALLATION OF GASKETS AND COUPLINGS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS.

11. FIRE PROTECTION PIPING GATE VALVES UP TO AND INCLUDING 2 INCHES SHALL BE KENNEDY FIGURE 66 OR APPROVED EQUAL, RATED FOR 175 PSIG WORKING PRESSURE, UL LISTED AND APPROVED, AND HAVE A BRONZE BODY, BRONZE TRIM, SINGLE DISC, OUTSIDE SCREW AND YOKE, SCREWED BONNET VALVES WITH SEATS OF BRONZE AND SCREWED ENDS. GATE VALVES 2-1/2" AND ABOVE SHALL BE KENNEDY FIGURE 68 OR APPROVED EQUAL, RATED FOR 175 PSIG WORKING PRESSURE, UL LISTED AND APPROVED, AND HAVE A IRON BODY, OUTSIDE SCREW AND YOKE BOLTED BONNET VALVES WITH DOUBLE OR SINGLE DISC, CLASS 125 ANSI B16.1 FLANGED ENDS, BRONZE TRIM AND BRONZE SEATS.

12. FIRE PROTECTION PIPING SWING CHECK VALVES SHALL BE UL LISTED AND APPROVED, RATED FOR 175 PSIG WORKING PRESSURE, AND HAVE A IRON BODY, BRONZE TRIM, CAST IRON OR BRONZE DISC, BOLTED COVER AND SCREWED OR FLANGED ENDS. SWING CHECK VALVES SHALL BE INSTALLED IN HORIZONTAL PIPING ONLY. VALVES MANUFACTURED BY KENNEDY, CRANE, JENKINS, GRINNELL, STOCKHAM OR NIBCO-SCOTT WILL BE ACCEPTABLE IF THEY COMPLY WITH THESE SPECIFICATIONS.

13. FLOW AND TAMPER SWITCH ALARM ANNUNCIATION SHALL BE INTERLOCKED WITH THE CORRESPONDING ALARM SYSTEMS FOR PROPER ANNUNCIATION. WATER FLOW SWITCHES SHALL BE SIMILAR TO AUTOCALL WF-4. COORDINATE ALL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR. IF THEY COMPLY WITH THESE SPECIFICATIONS, WATER FLOW SWITCHES MANUFACTURED BY AUTOCALL, POTTER ELECTRIC SIGNAL COMPANY, GRINNELL, OR STAR SPRINKLER CORPORATION WILL BE ACCEPTABLE. SUPERVISORY (TAMPER) SWITCHES SHALL BE SINGLE POLE, DOUBLE THROW TYPE WITH CAST ALUMINUM HOUSING AND TAMPER-PROOF COVER. SWITCH RATING SHALL BE AT LEAST 7 AMPERES AT 125/250 VOLTS. SWITCHES SHALL BE POTT



1 P1.1 PLUMBING SUPPLY FLOOR PLAN

1/8" = 1'-0"

PLUMBING GENERAL NOTES:

1. PIPING LOCATED IN EXTERIOR WALL SHALL BE INSTALLED ON CONDITIONED SIDE OF INSULATION. PIPING SHALL NOT COMPROMISE R-VALUE OF WALL INSULATION.

PLUMBING KEY NOTES: (#)

1. 2" DOMESTIC WATER SERVICE; INVERT: 3.00' REFER TO CIVIL DOCUMENTS FOR CONTINUATION.
2. 2" SERVICE "NECKED-UP" TO 3" CW ASSE 1013 RPZ BFP.
3. 6" FIRE PROTECTION SERVICE UP TO ASSE 1015 BFP; BFP MAY BE INSTALLED IN THE VERTICAL POSITION AS ALLOWED BY CODE TO ALLOW FOR CLEARANCES.
   - 3.1. PROPOSED LOCATION OF FIRE DEPARTMENT CONNECTION. EXACT LOCATION TO BE DETERMINED BY CIVIL ENGINEER AND LOCAL FIRE MARSHAL.
   - 3.2. WET SYSTEM ALARM VALVE AND RISER.
   - 3.3. CLASS 1 COMBINATION MANUAL STANDPIPE AND SPRINKLER RISER WITH 2" EXPRESS DRAIN. COORDINATE LOCATION WITH ADA TURN RADIUS OF LANDING.
4. THERMOSTATIC BALANCING VALVE (TYPICAL).
5. 2" CW, 3/4" HW, 3/4" HWR UP TO FLOOR ABOVE.
6. 2" CW, 1" HW, 3/4" HWR UP TO FLOOR ABOVE.
7. CAPPED HW/CW/HWR MAINS FOR FUTURE PHASE 2.

5

FIRE PROTECTION DEFERRED SUBMITTAL REQUIREMENTS:

THE FIRE PROTECTION PLANS IN THIS SET OF DRAWINGS IS FOR DESIGN INTENT. THE GENERAL CONTRACTOR SHALL ENGAGE THE FIRE SPRINKLER CONTRACTOR TO COMPLETE AN INSTALLATION THAT IS COMPLIANT WITH APPLICABLE CODES. THE FIRE PROTECTION CONTRACTOR SHOULD INCLUDE THE COST FOR PROVIDING SUBMITTALS AND HYDRAULIC CALCULATIONS SUBMITTED TO THE JURISDICTION AS REQUIRED TO SECURE PERMIT AND CERTIFICATE OF OCCUPANCY. INCLUDE ALL DESIGN AND JURISDICTIONAL FEES AS REQUIRED FOR THIS WORK.

1' 0 4' 8' 12' 16'

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

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/9/2024
3.	95% SET FOR BID	11/5/2024
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DEWEY BEACH, DELAWARE

PLUMBING SUPPLY
FLOOR PLAN

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

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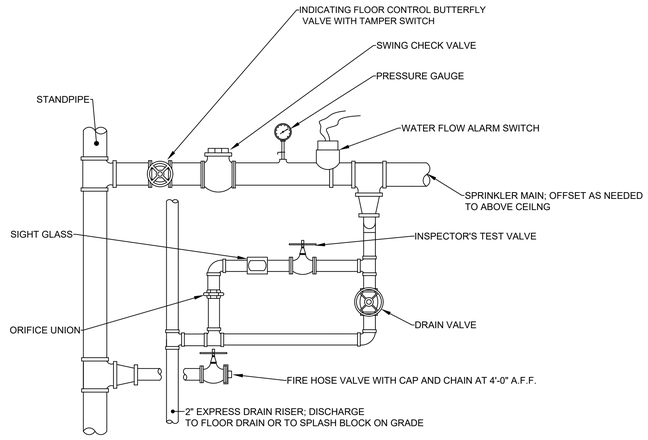
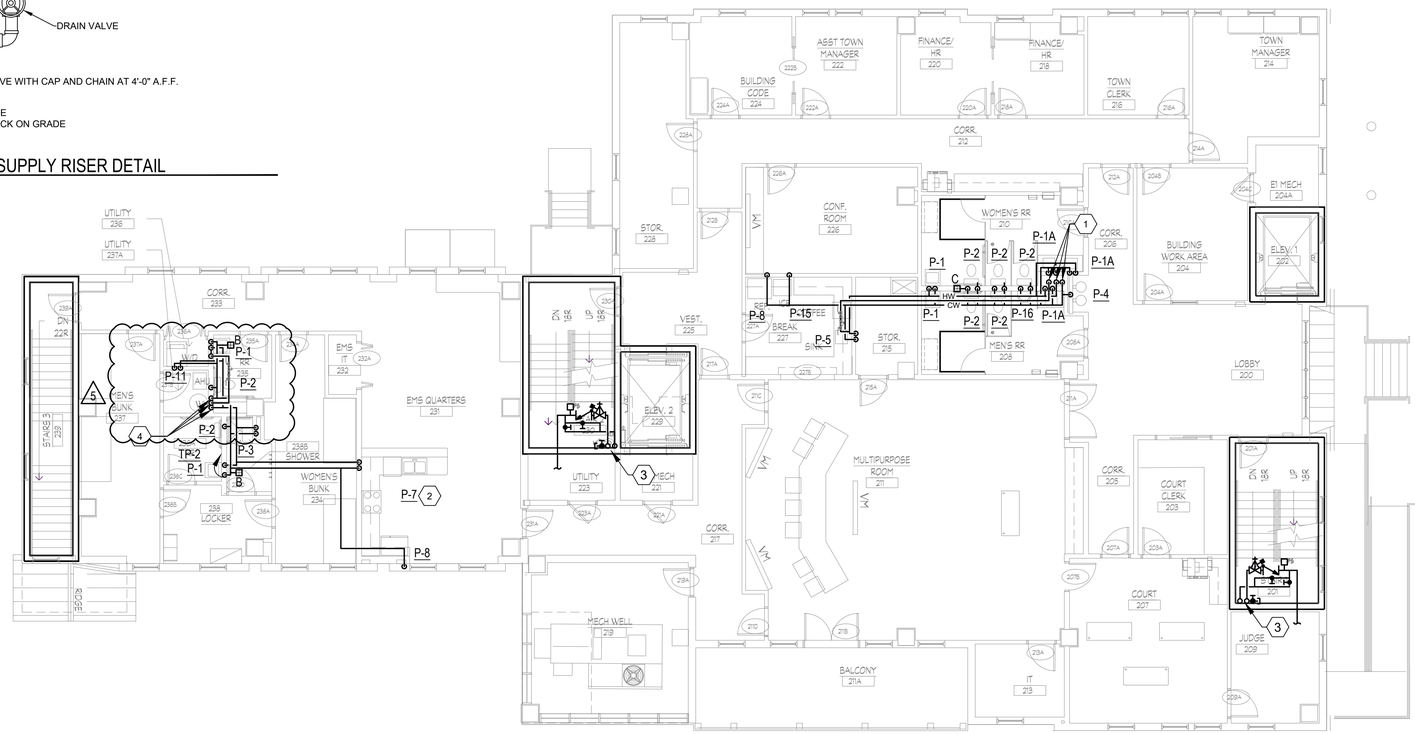


2 / P1.2 COMBINATION STANDPIPE AND SPRINKLER SUPPLY RISER DETAIL
NOT TO SCALE



1 / P1.2 PLUMBING SUPPLY SECOND FLOOR PLAN
1/8" = 1'-0"

PLUMBING KEY NOTES: (#)

1. 2" CW, 3/4" HW, 3/4" HWR DN TO FLOOR BELOW.
2. ROUTE 1/2" HW FROM SINK SUPPLY TO SERVE DISHWASHER.
3. CLASS 1 COMBINATION MANUAL STANDPIPE AND SPRINKLER RISER WITH 2" EXPRESS DRAIN AND FLOOR CONTROL VALVES. COORDINATE LOCATION OF STANDPIPE AND DRAIN WITH ADA TURN RADIUS OF LANDING.
4. 2" CW, 1" HW, 3/4" HWR DN TO FLOOR BELOW.

FIRE PROTECTION DEFERRED SUBMITTAL REQUIREMENTS:

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1' 0 4' 8' 12' 16'
GRAPHIC SCALE 1/8" = 1'-0"

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PLUMBING SUPPLY SECOND FLOOR PLAN

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Project Management
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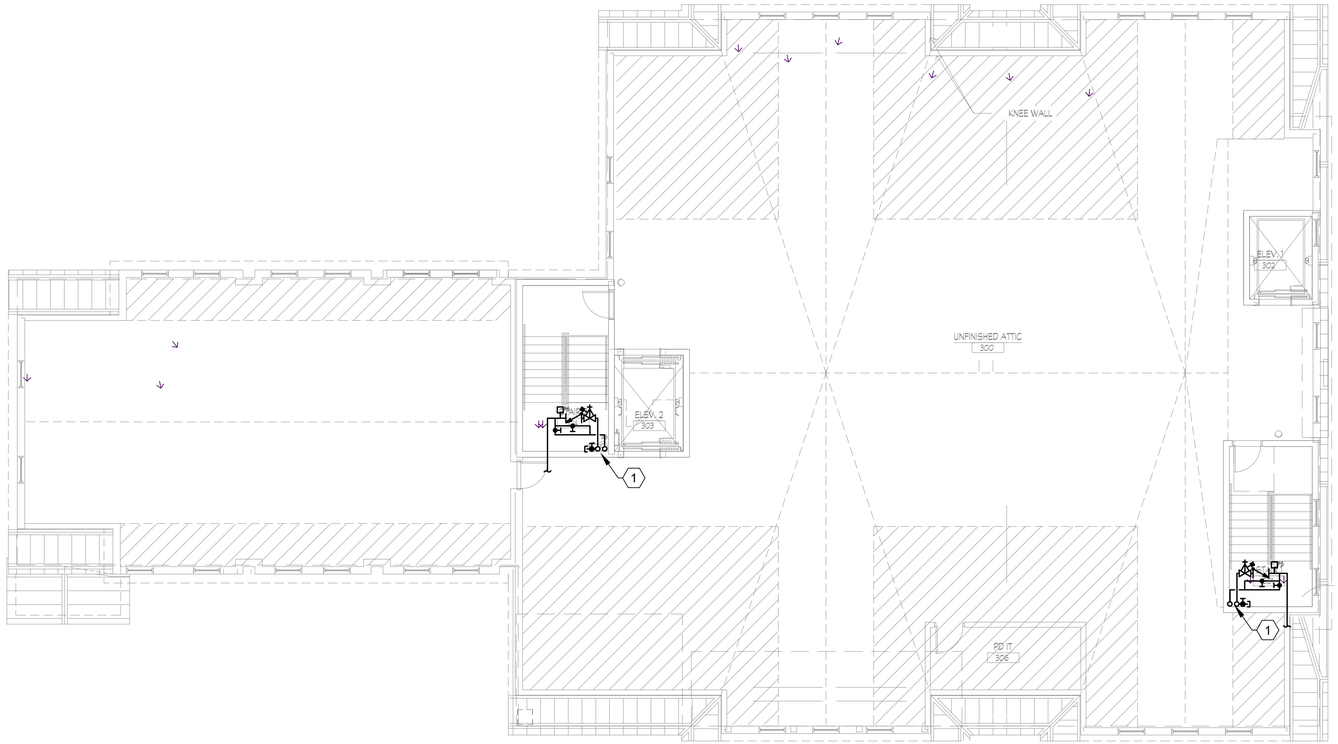

1 P1.3 PLUMBING SUPPLY THIRD FLOOR PLAN
1/8" = 1'-0"

PLUMBING KEY NOTES: (#)

1. CLASS 1 COMBINATION MANUAL STANDPIPE AND SPRINKLER RISER WITH 2" EXPRESS DRAIN AND FLOOR CONTROL VALVES. COORDINATE LOCATION OF STANDPIPE AND DRAIN WITH ADA TURN RADIUS OF LANDING.

FIRE PROTECTION DEFERRED SUBMITTAL REQUIREMENTS:

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1' 0 4' 8' 12' 16'
GRAPHIC SCALE 1/8" = 1'-0"

TIMOTHY R CHATTERTON LICENSE No. 15702 DELAWARE PROFESSIONAL ENGINEER

NO.	REVISION	DATE
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5.	ISSUED FOR BPMO RESUBMISSION	6/10/2024
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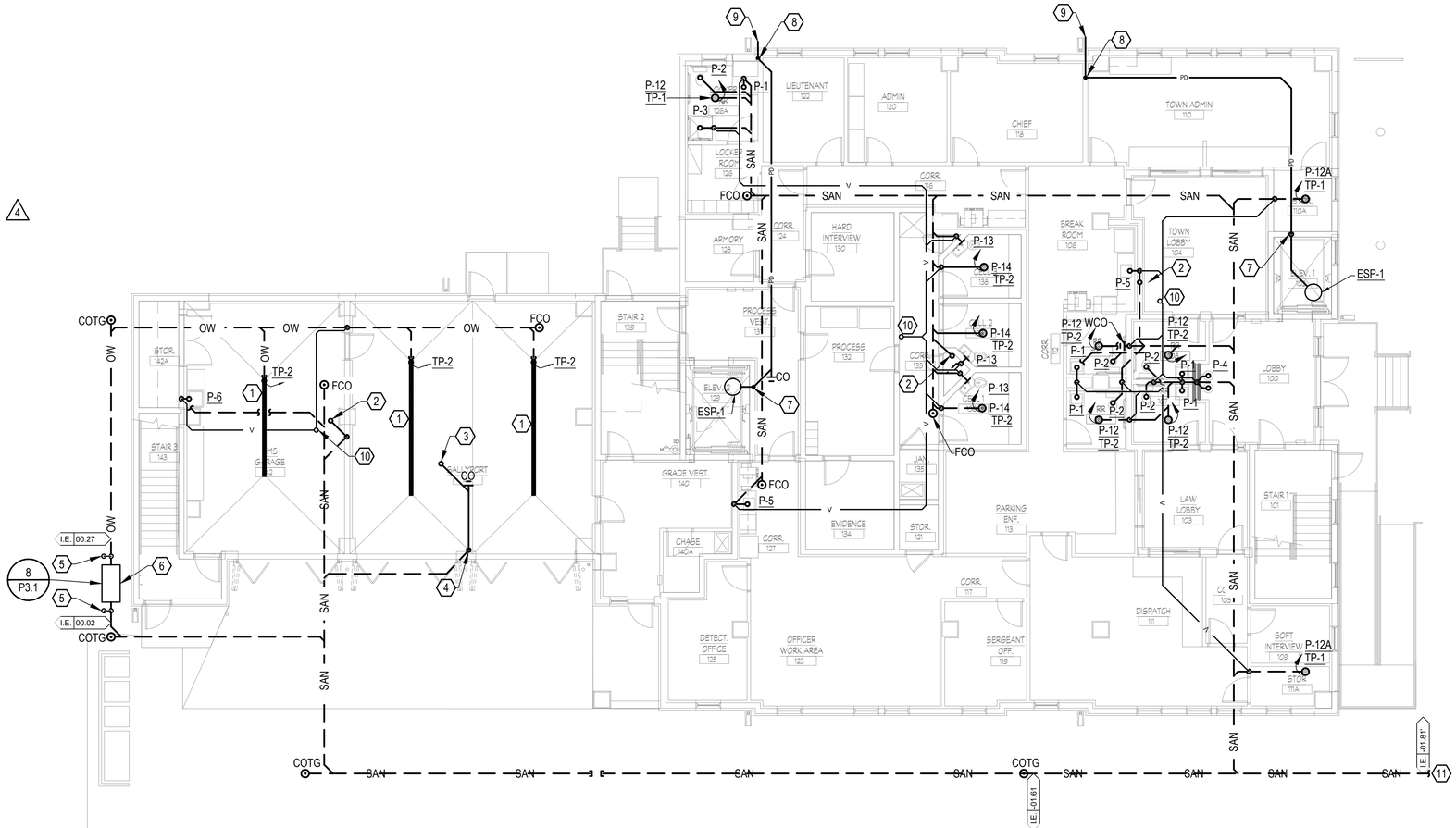

1 P2.1 PLUMBING DRAINAGE FIRST FLOOR PLAN

1/8" = 1'-0"

PLUMBING KEY NOTES: (#)

1. (TD-1) 8" TRENCH DRAIN POLYETHYLENE BODY WITH STEEL COATED GRATE AND TRAP PRIMER TAP. 2 DEEP SEAL TRAPS FILLED WITH MINERAL OIL.
2. 4" WASTE STACK SERVING FLOOR ABOVE.
3. 2" WASTE STACK SERVING FLOOR ABOVE.
4. 2" WASTE STACK DN TO BELOW GRADE.
5. 2" V. GOOSE NECK TO TERMINATE 18" ABOVE GRADE.
6. PROPOSED LOCATION OF OIL INTERCEPTOR. REFER TO CIVIL DOCUMENTS FOR EXACT LOCATION OF INTERCEPTOR. OIL INTERCEPTOR BASIS OF DESIGN: HIGHLAND TANK 350 GALLON OIL WATER SEPARATOR, HIGH GUARD, SINGLE WALL. FOR MORE INFORMATION REFER TO P3.1/ OIL/WATER SEPARATOR DETAIL.
7. 2" PD UP IN WALL TO CEILING SPACE.
8. 2" PD DN IN WALL.
9. 2" PD TO DISCHARGE TO SPILL ON SPLASH BLOCK AT GRADE.
10. 2" V. UP TO FLOOR ABOVE.
11. 4" SAN. BUILDING DRAINAGE; FOR MORE INFORMATION REFER TO CIVIL DOCUMENTS.
12. CAPPED SANITARY MAIN FOR FUTURE PHASE 2.

5

1'0 4' 8' 12' 16'

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

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PLUMBING DRAINAGE
FIRST
FLOOR PLAN

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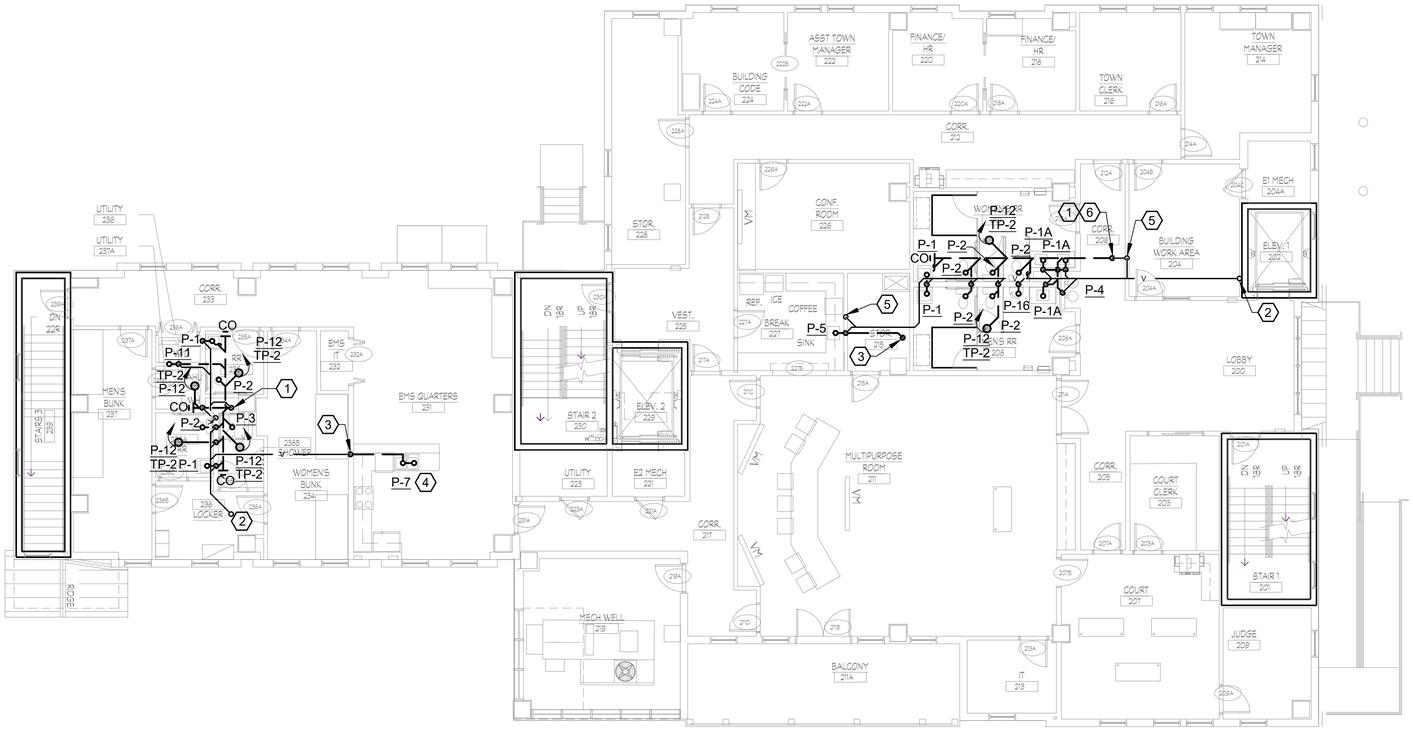

1 P2.2 PLUMBING DRAINAGE SECOND FLOOR PLAN

1/8" = 1'-0"

PLUMBING KEY NOTES: ⟨#⟩

1. 4" SAN. DN TO FLOOR BELOW.
2. 2" V. UP TO FLOOR ABOVE.
3. 2" SAN. DN TO FLOOR BELOW.
4. ROUTE DISHWASHER DRAIN AS HIGH AS POSSIBLE IN CABINETRY AND CONNECT TO BARBED FITTING ON SINK TAILPIECE.
5. 2" V. DN IN WALL TO BELOW FLOOR.
6. 2" V. OFF TOP OF 4" SAN.

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

TIMOTHY R. CHATTERTON LICENSE No. 15702 DELAWARE PROFESSIONAL ENGINEER

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5.	ISSUED FOR BPMO RESUBMISSION	6/10/2024
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PLUMBING DRAINAGE
SECOND FLOOR PLAN

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205 East Market Street
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443.545.1300

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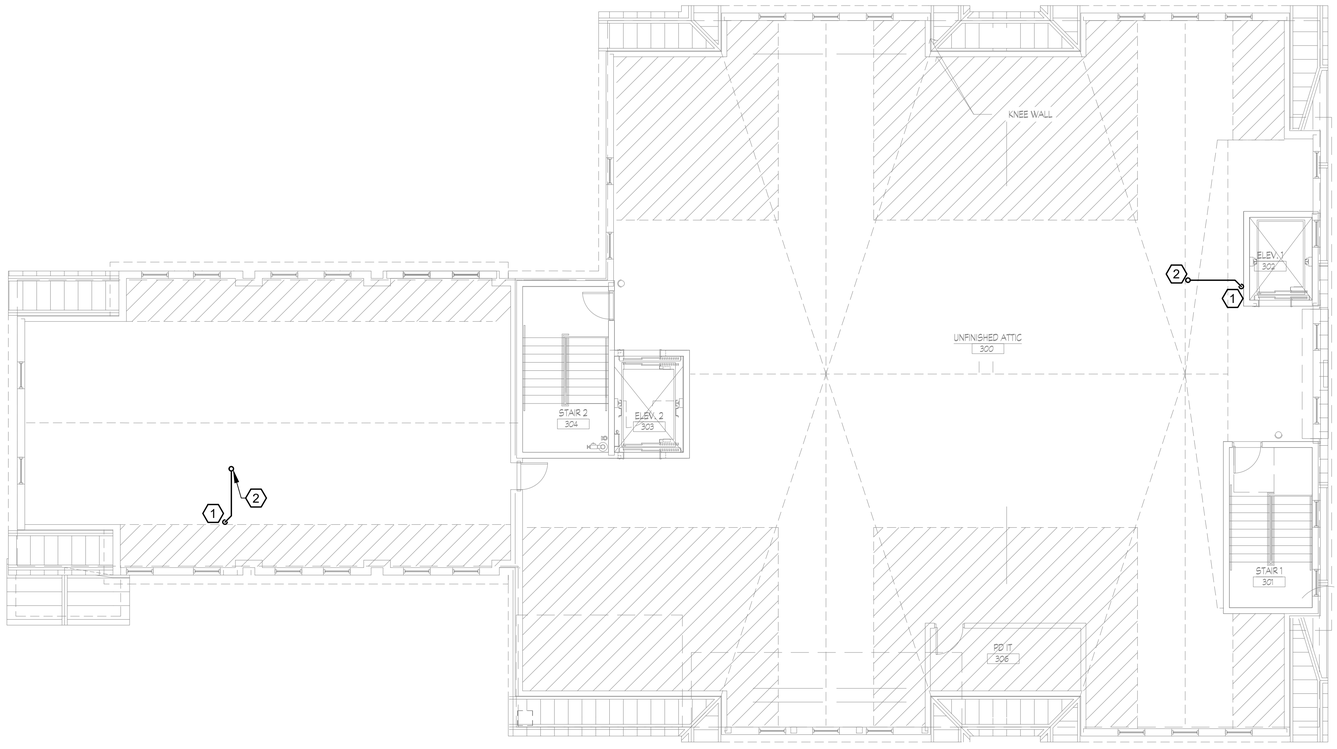

1 P2.3 PLUMBING DRAINAGE THIRD FLOOR PLAN
1/8" = 1'-0"

PLUMBING KEY NOTES: ⟨#⟩

1. 2" V. DN TO FLOOR BELOW; 2" V. UP TO CEILING SPACE
2. 2" V. UP TO 3" VTR.

1'0 4' 8' 12' 16'
GRAPHIC SCALE 1/8" = 1'-0"

TIMOTHY R. CHATTERTON LICENSE NO. 15702 STATE OF DELAWARE PROFESSIONAL ENGINEER

NO.	REVISION	DATE
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

PLUMBING DRAINAGE
THIRD FLOOR PLAN

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: AS NOTED
DESIGN BY	: BKW
DRAWN BY	: BKW
CHECKED BY	: PJS
GMB FILE	: 220242
DATE	: 8-30-2024

P2.3

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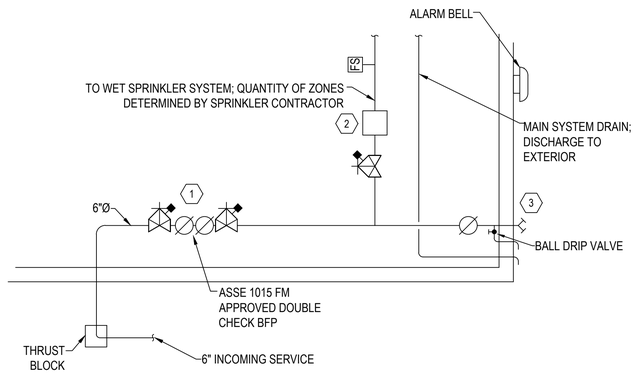
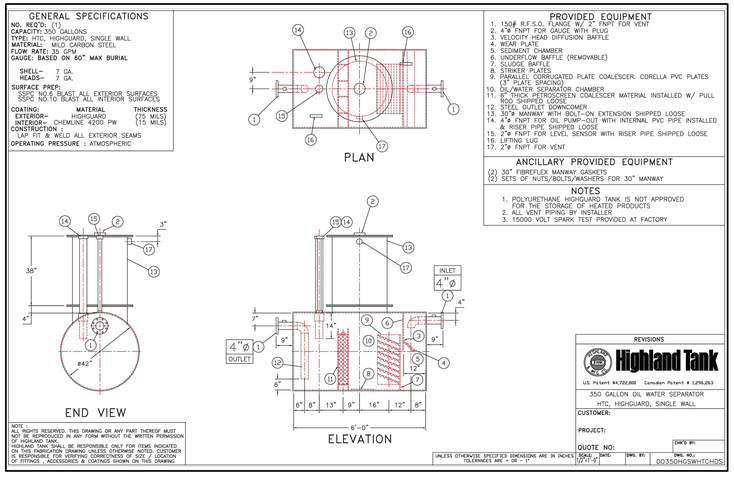
ALLEN + SHARIFF JOB# : 2331073



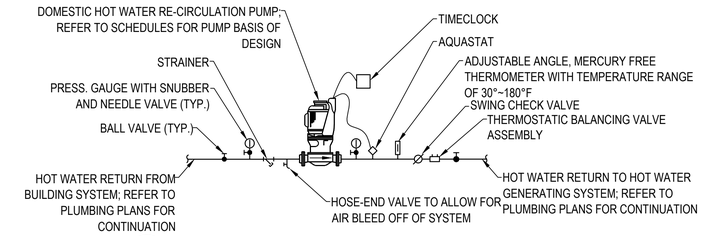
9 / P3.1 FIRE PROTECTION SERVICE ENTRANCE DETAIL
NOT TO SCALE

SPRINKLER RISER NOTES:

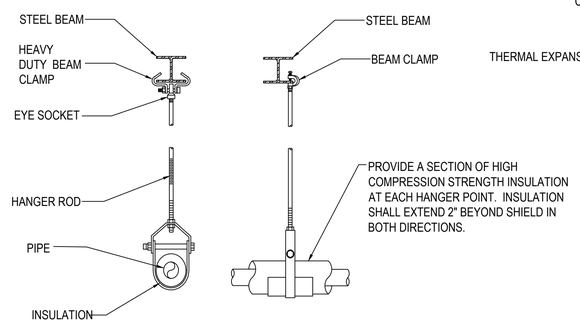
1. DOUBLE CHECK BACKFLOW PREVENTOR WITH DOUBLE SHUT-OFF VALVES. (VALVES TO BE TAMPERED"). BFP MAY BE INSTALLED IN THE VERTICAL POSITION TO ALLOW FOR CLEARANCES.
2. "WET" SPRINKLER RISER COMPRISED OF TAMPERED SHUT-OFF VALVE, RISER CHECK VALVE AND ELECTRIC WATER FLOW SWITCH.
3. FIRE DEPARTMENT CONNECTION OF A TYPE APPROVED BY LOCAL JURISDICTION. PROVIDE AUTOMATIC BALL DRIP VALVE FOR DRAINAGE OF INTERCONNECTED PIPING.
4. THE RESULTS OF THE FLOW TEST CONDUCTED ON 09/28/2023 ON RODNEY STREET HALFWAY FFROM ROUTE 1 AND THE OCEAN FRONT ARE AS FOLLOWS:
   - STATIC PRESSURE: 52 PSI
   - RESIDUAL PRESSURE: 48 PSI
   - FLOW: 1,021 GPM
   - FLOW AT 20 PSI: 3,137 GPM



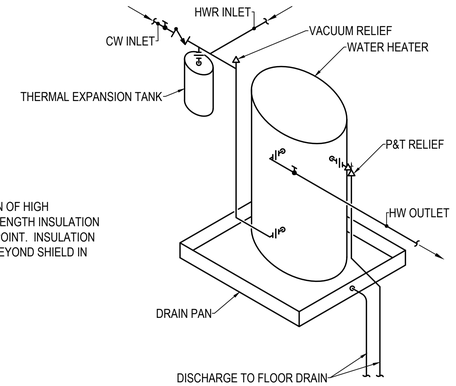
8 / P3.1 OIL/WATER SEPARATOR DETAIL
NOT TO SCALE



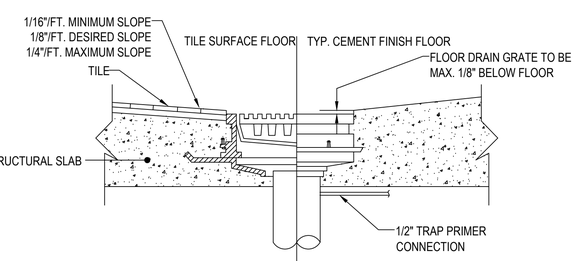
4 / P3.1 DOMESTIC HOT WATER RE-CIRCULATION PUMP PIPING DETAIL
SCALE: NONE



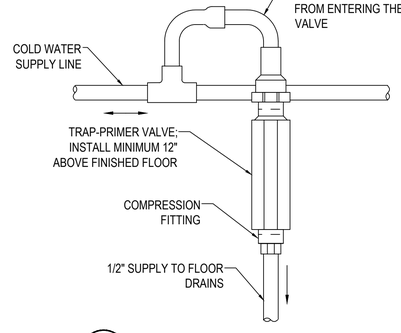
7 / P3.1 CLEVIS PIPE HANGER - STEEL CONSTRUCTION
NOT TO SCALE



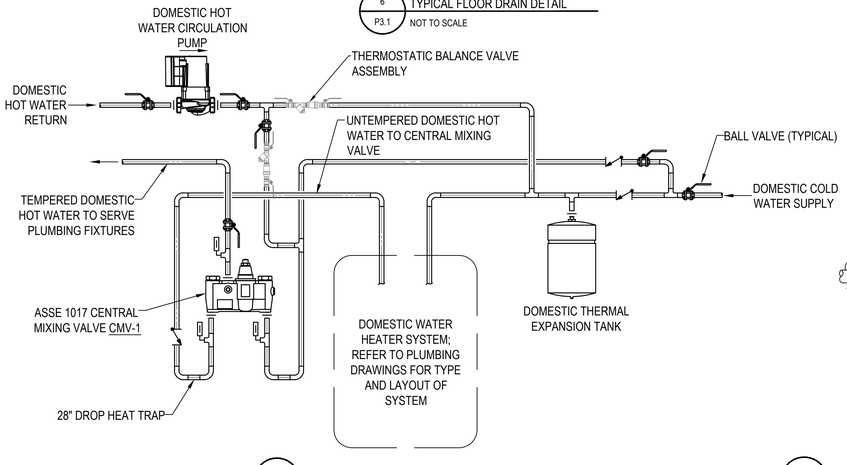
3 / P3.1 DOMESTIC WATER HEATER DETAIL
NOT TO SCALE



6 / P3.1 TYPICAL FLOOR DRAIN DETAIL
NOT TO SCALE

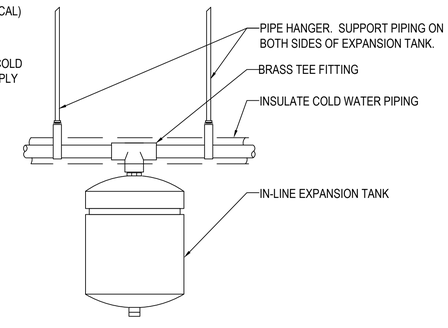


2 / P3.1 PRESSURE ACTUATED TRAP PRIMER DETAIL
NOT TO SCALE



5 / P3.1 CMV-1 - CENTRAL MIXING VALVE PIPING DETAIL
NOT TO SCALE

NOTES:
1. REFER TO PLUMBING DRAWINGS FOR EQUIPMENT SPECIFICATIONS.
2. REFER TO PLUMBING RISERS FOR PIPING SIZES.
3. REFER TO EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER REQUIREMENTS.



1 / P3.1 IN-LINE EXPANSION TANK SUPPORT DETAIL
NOT TO SCALE

NOTE:
1. AS AN OPTION, HOLDRITE EXPANSION TANK MOUNTING BRACKET MODEL# QS-5 MAY BE USED.

TIMOTHY R CHATTERTON LICENSE NO. 15702 DELAWARE PROFESSIONAL ENGINEER

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
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5.	ISSUED FOR BPVO RESUBMISSION	6/10/2024
7.	ISSUED FOR TOWN RESUBMISSION	

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PLUMBING DETAILS

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THERMOSTATIC BALANCE VALVE ASSEMBLY SPECIFICATION (BASIS OF DESIGN):

I. FURNISH AND INSTALL CIRCUITSOLVER® AS INDICATED ON THE PLANS. CIRCUITSOLVER® SHALL BE SELF CONTAINED AND FULLY AUTOMATIC WITHOUT ADDITIONAL PIPING OR CONTROL MECHANISMS. VALVE SHALL BE A CIRCUITSOLVER® AS MANUFACTURED BY THERMOMEGATECH®, INC., OR EQUIVALENT.

A. CIRCUITSOLVER® SHALL REGULATE THE FLOW OF RECIRCULATED DOMESTIC HOT WATER BASED ON WATER TEMPERATURE ENTERING THE CIRCUITSOLVER® REGARDLESS OF SYSTEM OPERATING PRESSURE.
1. EVEN WHEN FULLY CLOSED THE CIRCUITSOLVER® SHALL BYPASS A SMALL AMOUNT HOT WATER TO MAINTAIN DYNAMIC CONTROL OF THE RECIRCULATING LOOP.
2. CIRCUITSOLVER® SHALL BE FACTORY ADJUSTABLE AS REQUIRED BY PROJECT CONDITIONS.
3. CIRCUITSOLVER® SHALL BE AVAILABLE IN SIZES RANGING FROM ½" NPT TO 2" NPT.

II. CIRCUITSOLVER® BODY AND ALL INTERNAL COMPONENTS SHALL BE CONSTRUCTED OF STAINLESS STEEL WITH MAJOR COMPONENTS CONSTRUCTED OF TYPE 303 STAINLESS STEEL.

A. CIRCUITSOLVER® SIZES ½" THROUGH 2" SHALL BE RATED TO 200 PSIG MAXIMUM WORKING PRESSURE.
1. ALL CIRCUITSOLVER® SHALL BE STANDARD TAPERED FEMALE PIPE THREAD, NPT.

B. ALL CIRCUITSOLVER® SHALL BE RATED TO 300°F (148.9°C) MAXIMUM WORKING TEMPERATURE.

C. ALL CIRCUITSOLVER® SHALL BE NSF-61 CERTIFIED FOR USE IN ALL DOMESTIC WATER SYSTEMS.

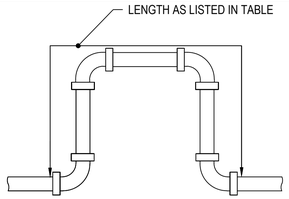
D. THERMAL ACTUATOR SHALL BE SPRING LOADED AND SELF CLEANING, DELIVERING CLOSING THRUST SUFFICIENT TO KEEP ORIFICE OPENING FREE OF SCALE DEPOSITS.

III. INSTALLATION OF CIRCUITSOLVER® SHALL BE MADE BY QUALIFIED TRADESMEN. INSTALL CIRCUITSOLVER® IN EACH DOMESTIC HOT WATER RETURN PIPING BRANCH BEYOND LAST HOT WATER DEVICE IN THAT BRANCH.

A. PROVIDE SUITABLE LINE SIZE ISOLATION VALVES, UNIONS, AND STRAINER AS INDICATED IN PIPING DETAIL SHOWN ON THE DRAWINGS. CIRCUITSOLVER® SHALL COME WITH INTEGRAL CHECK VALVE INSTALLED BY THE MANUFACTURER.

B. PROVIDE SUITABLE ACCESS PANEL AS REQUIRED IN NON-ACCESSIBLE CEILINGS AND WALLS.

IV. BASIS OF DESIGN PRODUCT MODEL#: CSUAS-3/4-125-CV1 CIRCUITSOLVER ASSEMBLY WITH ISOLATION VALVES, STRAINER, INTEGRAL CHECK VALVE, AND 125°F CLOSING TEMPERATURE. PRESSURE LOSS THROUGH THE VALVE SHALL NOT BE MORE THAN 2 PSI @ 1.7 GPM FLOW.



DEVELOPED LENGTH OF EXPANSION LOOP TO ACCOMMODATE 1-1/2" MOVEMENT

NOMINAL PIPE DIA.	LENGTH PIPING IN FEET		
	STEEL PIPE	COPPER PIPE	SCH. 40 CPVC
1/2"	4.7'	5.3'	1.7'
3/4"	5.2'	6.2'	1.9'
1"	5.9'	7.1'	2.1'
1-1/4"	6.6'	7.8'	2.3'
1-1/2"	7.0'	8.5'	2.5'
2"	7.9'	9.7'	2.8'
2-1/2"	8.7'	10.8'	3.1'
3"	9.6'	11.8'	3.4'
4"	10.8'	13.5'	3.8'

NOTES:

1. EXPANSION LOOPS SHALL BE IN STALLED AT INTERVALS AS RECOMMENDED BY PIPE MANUFACTURER.
2. PRE-MANUFACTURED EXPANSION JOINTS MAY BE USED IN-LIEU OF EXPANSION LOOPS.
3. NOT ALL SIZES AND MATERIALS ARE USED ON PROJECT.

PLUMBING FIXTURE SCHEDULE (BASIS OF DESIGN)

DESIGNATION	FIXTURE TYPE	C.W.	H.W.	WASTE	MANUFACTURER	MODEL NO.	TRIM	DRAIN	TRAP	SUPPLY	ACCESSORIES	REMARKS
P-1	LAVATORY - WALL HUNG; ADA	1/2"	1/2"	1-1/4"	KOHLER	CHESAPEAKE K-1728	ZURN / Z86500-XL	POP-UP DRAIN	CHROME PLATE W/ CLEAN OUT PLUG	BRASSCRAFT B-1**A SUPPLIES W/ WHEEL HANDLE STOPS	-	1, 2, 3, 4, 7
P-1A	LAVATORY - COUNTERTOP	1/2"	1/2"	1-1/4"	KOHLER	CAXTON K-2209	ZURN / Z86500-XL	POP-UP DRAIN	CHROME PLATE W/ CLEAN OUT PLUG	BRASSCRAFT B-1**A SUPPLIES W/ WHEEL HANDLE STOPS	-	1, 2, 3, 4
P-2	WATER CLOSET - FLUSHOMETER; ADA	1"	-	3"	KOHLER	KINGSTON K-96057	SLOAN / 111-1.28	-	INTEGRAL	BRASSCRAFT B-3**DL SUPPLY W/ WHEEL HANDLE STOP	BEMIS / 1955SSTFR SEAT	1, 2, 4, 5, 6
P-3	SHOWER	1/2"	1/2"	2"	CUSTOM TILE W/ SHOWER PAN		T13H332-25	FD2250 SHOWER DRAIN	SAME SIZE AS OUTLET	CONCEALED	ASSE 1016-P MIXING VALVE WITH DIVERTER VALVE, HAND SHOWER, AND VACUUM BREAKER	1, 4
P-4	DRINKING FOUNTAIN;BI-LEVEL W/ BOTTLE FILLER	1/2"	-	1-1/2"	ELKAY	LVRCGRNTL8WSK	-	PROVIDE INSULATION ON DRIAN PIPING	-	-	IN-WALL CARRIER	1, 2, 4
P-5	BREAKROOM SINK; SINGLE BOWL	1/2"	1/2"	1-1/2"	ELKAY	ELKAY / ELUHAD131645PD	CHICAGO FAUCETS / 895-GN2AE35ABCP	GRID DRAIN	CHROME PLATED W/ CLEAN OUT PLUG	BRASSCRAFT B1-**A SUPPLIES W/ 1/4 TURN VALVE	-	1, 4, 11
P-6	UTILITY SINK	1/2"	1/2"	1-1/2"	FIAT	FL-1	A-1	GRID DRAIN	SAME SIZE AS OUTLET	-	-	1, 4
P-7	BREAKROOM SINK; DOUBLE BOWL, DROP IN	1/2"	1/2"	1-1/2"	KOHLER	K-3346	CHICAGO FAUCETS / 895-GN2AE35ABCP	GRID DRAIN	CHROME PLATED W/ CLEAN OUT PLUG	BRASSCRAFT B1-**A SUPPLIES W/ 1/4 TURN VALVE	-	1, 4
P-8	REFRIGERATOR SUPPLY BOX	1/2"	-	-	IPS WATER TITE	AB9700HA	1/4" TURN VALVE W/ ARRESTOR	-	-	-	-	1
P-9	HOSE BIB; EXTERIOR	3/4"	-	-	PRIER	C-634NXX W/ C-634BX3 COVER	VACUUM BREAKER W/ BOX COVER	-	-	-	-	1, 8
P-10	INTERIOR HOSE BIB	3/4"	-	-	PRIER	C-255/ KEY OPERATED	-	-	-	-	-	1, 4
P-11	WASHING MACHINE UTILITY BOX	1/2"	1/2"	2"	WATER TITE	W4700HA	1/4 TURN VALVES W/ ARRETORS	-	-	BRASSCRAFT BL12-**WA SUPPLY HOSES	-	1, 4
P-12	FLOOR DRAIN	-	-	3"	ZURN	Z415B-P-V	HEEL PROOF ROUND GRATE	-	SAME SIZE AS OUTLET	-	-	1,4
P-12A	FLOOR DRAIN	-	-	3"	ZURN	Z455B-P-V	HEEL PROOF ROUND GRATE	-	SAME SIZE AS OUTLET	-	-	1,4
P-13	WATER CLOSET/LAVATORY COMBO; INSTITUTIONAL/PENAL GRADE	1"	1/2"	4"	ACORN	PENAL WARE 1432-AL/AR-2-BP-03-FV-MVC_FV1.6-LPFV-PT-CO1-PBH-TF		INTEGRAL	COMBO	-	TMV-1 OR APPLICABLE TO PROVIDE TEMPERED HOT WATER	1, 2, 4, 9, 10
P-14	FLOOR DRAIN; INSTITUTIONAL	-	-	3"	ZURN	Z355	VANDAL RESISTANT GRATE	-	INTEGRAL	-	-	1, 4
P-15	ICE MACHINE SUPPLY BOX	1/2"	1/2"	-	IPS WATER TITE	FRIB12ABSHA	1/4 TURN VALVES W/ ARRETORS	-	-	-	-	1, 4
P-16	URINAL	3/4"	-	2"	SLOAN	SOLIS WEUS-1000.1201		-	INTEGRAL	-	-	1, 4, 7

REMARKS

1. PROVIDE ALL REQUIRED COMPONENTS FOR COMPLETE FIXTURE ROUGH-IN, I.E., SUPPLIES, STOPS, TRAPS, CARRIERS, GRID DRAINS, TAILPIECES, ETC. NOT ALL REQUIRED COMPONENTS ARE SPECIFIED ABOVE. CARRIERS FOR LAVATORIES AND WATER CLOSETS SHALL COMPLY WITH ANSI STANDARD A112.6.1M AND PLUMBING DRAIN INSTITUTE (PDI) ARTICLE "MINIMUM SPACE REQUIREMENTS FOR ENCLOSED PLUMBING FIXTURE SUPPORTS."
2. FIXTURES SHALL BE ADA COMPLIANT. PROVIDED WITH ADA COMPLIANT ACCESSORIES. MOUNT ADA COMPLIANT. SEE ARCHITECTURAL PLANS FOR ELEVATIONS.
3. PROVIDE SKAL+GUARD INSULATING DEVICES ON EXPOSED UNDER-COUNTER PLUMBING.
4. REFER TO RISER DIAGRAM FOR VENT PIPE SIZES AND CONNECTIONS.
5. COORDINATE ADA GRAB BAR INSTALLATION WITH WATER CLOSET. GRAB BARS SHALL NOT INTERFERE WITH USE AND MAINTENANCE OF TANK.
6. COORDINATE SCHEDULED WATER CLOSET MODEL NUMBERS WITH INSTALLED ORIENTATION OF FIXTURE. FIXTURE FLUSH LEVER SHALL BE ACCESSIBLE FROM THE OPEN / APPROACH SIDE OF FIXTURE.
7. REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS.
8. COORDINATE MODEL NUMBER SUFFIX "XX" WITH WALL THICKNESS.
9. COORDINATE MODEL NUMBER "AL/AR" AND WALL THICKNESS WITH INSTALLATION LOCATION.
10. FLUSH VALVE PUSH BUTTON ACTUATOR SHALL BE LOCATED IN PROCESSING ROOM. COORDINATE TRANSFORMER LOCATION WITH ELECTRICAL DRAWINGS AND CONTRACTOR. PROVIDE ACORN FRONT MOUNT REMOTE PUSHBUTTON BOX MODEL# ENG017-1 WITH ACTUATOR; PROVIDE SIGNAGE TO DIFFERENTIATE WHICH ROOMS THE VALVES SERVE.

SHOCK ARRESTOR SCHEDULE

DESG.	W.S.F.U.'S	CONN. SIZE	MODEL NO. (BASIS OF DESIGN)
A	1 TO 11	1/2"	500A
B	12 TO 32	3/4"	750B
C	33 TO 60	1"	1000C
D	61 TO 113	1"	1250D

NOTES:

1. W.S.F.U. COUNT BASED UPON PLUMBING DRAINAGE INSTITUTE (PDI) STANDARD PDI-WH 201.
2. MODEL NUMBERS BASED ON PRECISION PLUMBING PRODUCTS PISTON TYPE ARRESTORS.
3. NOT ALL MODEL #'S LISTED ARE USED ON PROJECT. REFER TO FLOOR PLANS FOR LOCATIONS AND MODELS USED.

TRAP PRIMER VALVE SCHEDULE (BASIS OF DESIGN)

DESG.	MANUFACTURER / MODEL#	TYPE	REMARKS
TP-1	PRECISION PLUMBING PRODUCTS / P2-500	PRESSURE ACTUATED	1, 2
TP-2	PRECISION PLUMBING PRODUCTS / P1-500	PRESSURE ACTUATED	1, 2, 3
TP-3	PRECISION PLUMBING PRODUCTS / MP-500	ELECTRONIC; 120V/1Ø	1, 2, 3

REMARKS:

1. NOT ALL MODEL #'S LISTED ARE USED ON PROJECT. REFER TO FLOOR PLANS FOR LOCATIONS AND MODELS USED.
2. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. PROVIDE DISTRIBUTION UNIT WITH VALVE TO SERVE MULTIPLE FLOOR DRAINS AS REQUIRED.

DOMESTIC AND STORM PIPING INSULATION SCHEDULE

SYSTEM OR SERVICE	FLUID TEMPERATURE RANGE (°F)	INSULATION TYPE	INSULATION THICKNESS (INCHES) PIPE SIZE (INCHES)			
			1/2" TO <1-1/2"	1-1/2" TO <4"	4" TO <8"	≥8"
DOMESTIC HOT WATER AND HOT WATER CIRCULATION	105 TO 140	MINERAL FIBER	1"	1-1/2"	1-1/2"	1-1/2"
DOMESTIC COLD WATER	40 TO 60	MINERAL FIBER	1/2"	1/2"	1"	1"

NOTES:

1. NOT ALL PIPE SIZES LISTED ARE USED ON PROJECT.
2. SIZES LISTED ARE BASED UPON 2018 IECC TABLE C403.11.3.
3. ALL PIPING INSULATION SHALL HAVE A MAXIMUM THERMAL CONDUCTIVITY FACTOR (K) OF 0.27 BTU*IN/HR*FT2*°F.
4. OTHER INSULATION MATERIAL THAT MEETS OR EXCEEDS THE PERFORMANCE CHARACTERISTICS OF THE LISTED MATERIAL MAY BE USED. CONTRACTOR SHALL PROVIDE INSULATION PERFORMANCE CUT SHEET PRIOR TO INSTALLATION.

EXPANSION TANK SCHEDULE (BASIS OF DESIGN)

DESIG.	DESCRIPTION	MANUFACTURER / MODEL#	LOCATION	TANK SIZE	REMARKS
ET-1	DOMESTIC HOT WATER EXPANSION TANK	AMTROL / ST-5	AS NOTED ON PLANS	2 GALLONS	1, 2

REMARKS:

1. MAXIMUM WORKING PRESSURE 150 PSIG.
2. MAXIMUM SYSTEM TEMPERATURE 140°F

ELECTRIC WATER HEATER SCHEDULE (BASIS OF DESIGN)

DESIG.	DESCRIPTION	MANUFACTURER / MODEL#	LOCATION	STORAGE VOLUME	GPH RECOVERY AT 100 DEG. F RISE	ELEMENT WATTAGE	VOLTAGE	REMARKS
WHE-1	ELECTRIC WATER HEATER	AO SMITH / CSB 82	AS NOTED ON PLANS	80	46	12 KW	240V/1Ø	1, 2, 3, 4

REMARKS:

1. PROVIDE EXPANSION TANK. REFER TO EXPANSION TANK SCHEDULE ON THIS DRAWING.
2. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER INSTALLATION REQUIREMENTS.
3. PROVIDE METAL DRAIN PAN WITH WATER HEATER INSTALLATION.
4. ROUTE T&P RELIEF AND DRAIN PAN DRAIN TO DISCHARGE VIA AIR GAP TO NEAREST FLOOR DRAIN.

MIXING VALVE SCHEDULE (BASIS OF DESIGN)

DESIGNATION	DESCRIPTION	LOCATION	MANUFACTURER / MODEL#	OPTIONS	LOAD RANGE
TMV-1	POINT OF USE MIXING VALVE CONFORMING TO ASSE 1070 STANDARD	AS NOTED IN PLUMBING FIXTURE SCHEDULE	WATTS / LFMMV	INTEGRAL STRAINERS AND CHECKS ON INLET PIPING	0.5 GPM AT 0.8 PSI LOSS SET TEMP: 105°- 110°
CMV-1	DOMESTIC HOT WATER SERVICE MIXING VALVE CONFORMING TO ASSE 1017 STANDARD	AT WATER HEATER	BRADLEY / S59-3045	INTEGRAL STRAINERS ON INLET PIPING, THERMOMETERS FOR EACH VALVE, PRE-MOUNTED ON UNISTRUT, COLD WATER BYPASS	11.0 GPM AT 4.2 PSI DROP; OUTLET TEMPERATURE SET TO 125°F

TIMOTHY R. CHATTERTON LICENSE NO. 15702 STATE OF DELAWARE PROFESSIONAL ENGINEER

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7.	ISSUED FOR PERMITTING	

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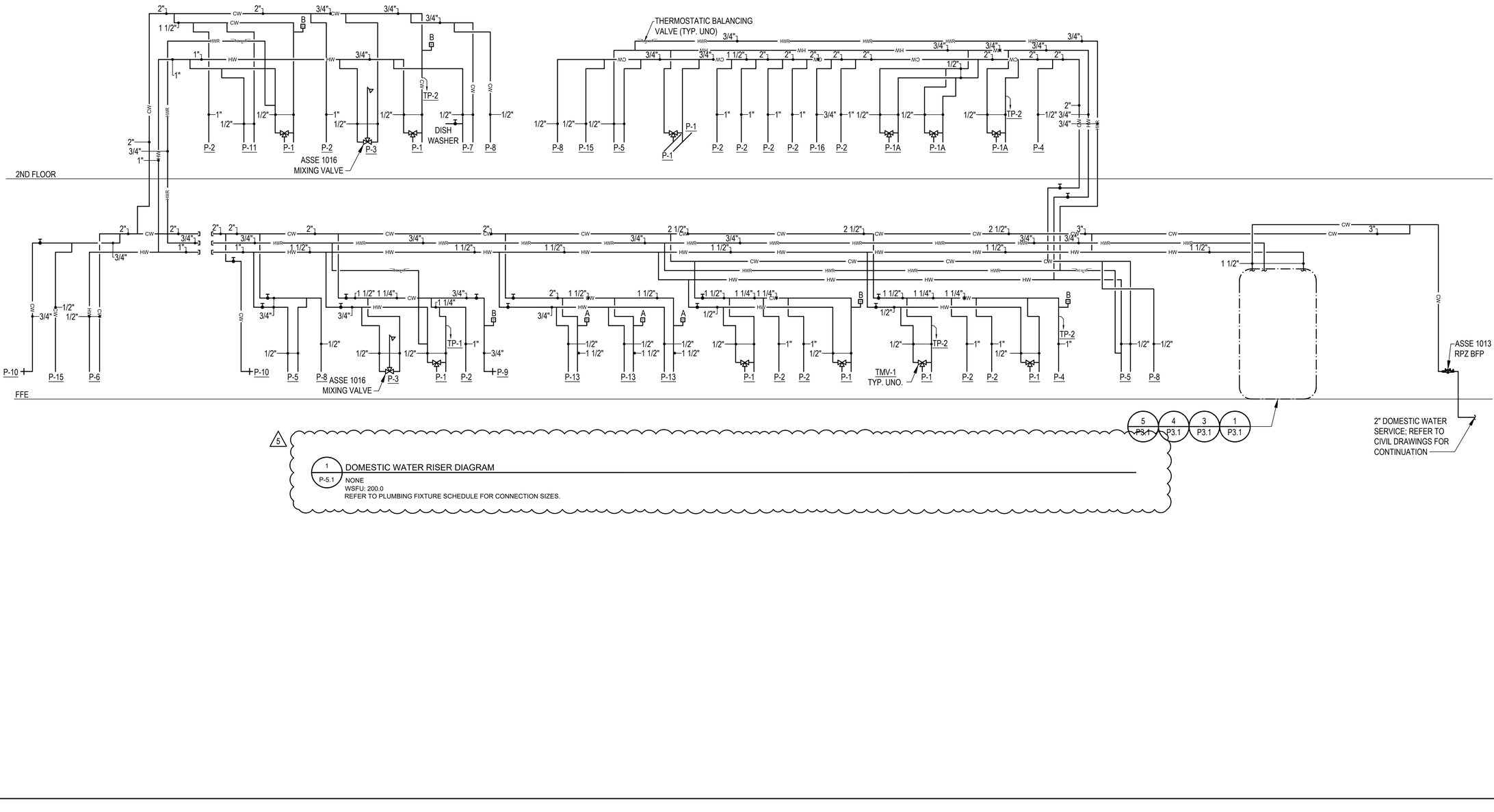

5

1 P-5.1 DOMESTIC WATER RISER DIAGRAM

NONE
WSFU: 200.0
REFER TO PLUMBING FIXTURE SCHEDULE FOR CONNECTION SIZES.

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	95% BID SET FOR BID	11/5/2024
5.	ISSUED FOR ADDENDUM #3	01/10/2025

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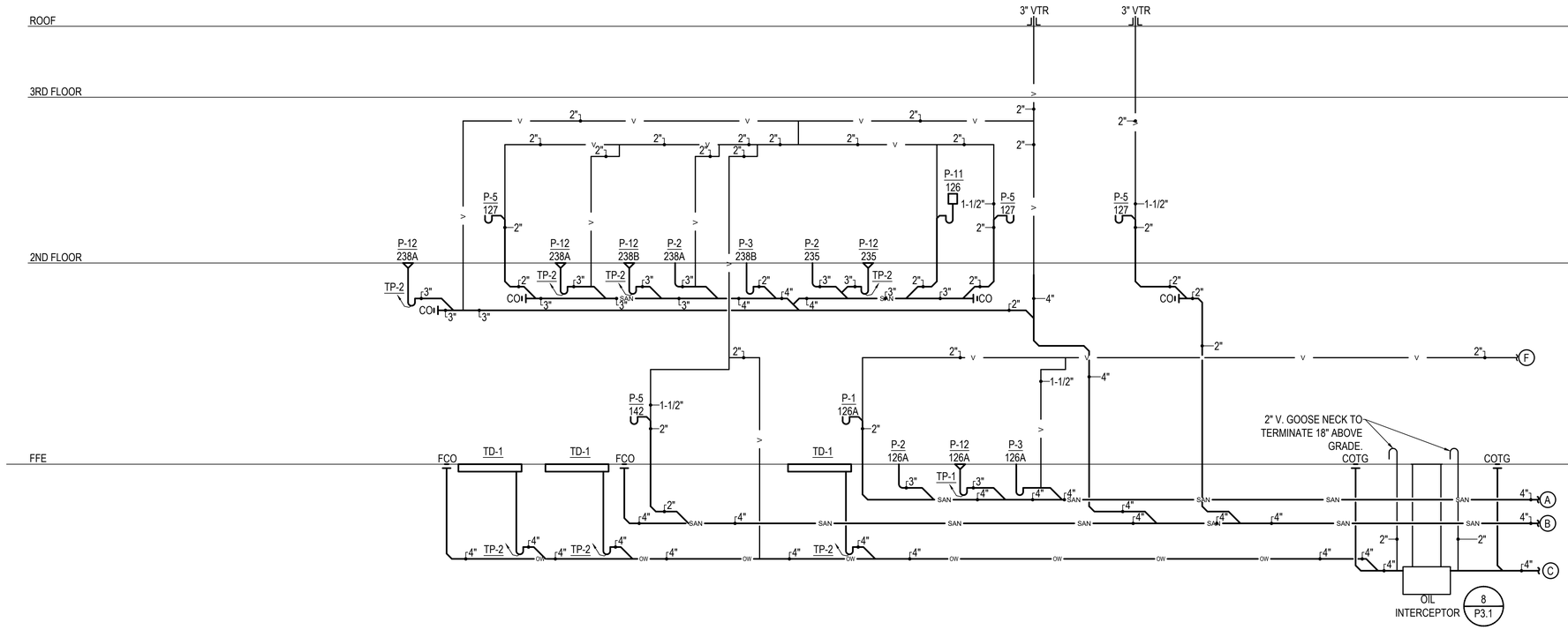
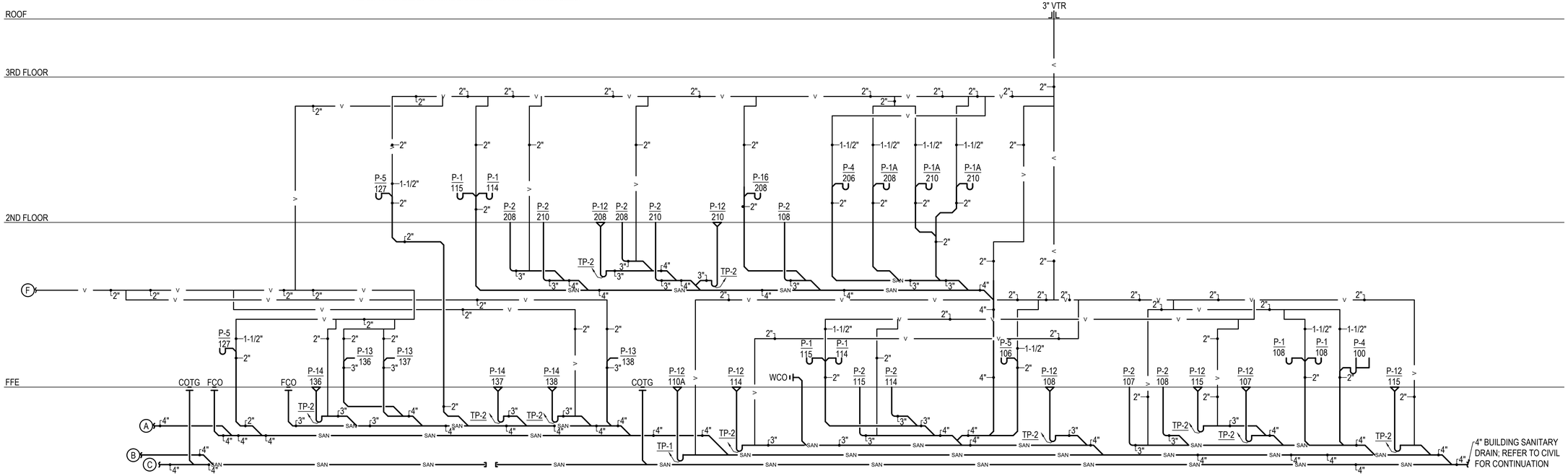


1 P5.2 SANITARY RISER DIAGRAM

NONE
DFU: 101.0
REFER TO PLUMBING FIXTURE SCHEDULE FOR CONNECTION SIZES.



5 2 P5.2 SANITARY RISER DIAGRAM

NONE
DFU: 101.0
REFER TO PLUMBING FIXTURE SCHEDULE FOR CONNECTION SIZES.

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	95% BID SET	11/5/2024
5.	ISSUED FOR ADDENDUM #3	01/10/2025

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

PLUMBING RISER DIAGRAMS

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: AS NOTED
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ELECTRICAL ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CURRENT
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO/VISUAL
BFG	BELOW FINISHED GRADE
C	CONDUIT
CATV	CABLE ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CFL	COMPACT FLUORESCENT
CKT	CIRCUIT
EBU	EMERGENCT BATTERY UNIT
EC	EMPTY CONDUIT
EC	ELECTRICAL CONTRACTOR
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
ERU	ENERGY RECOVERY UNIT
EQUIP	EQUIPMENT
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXIST	EXISTING
FLA	FULL LOAD AMPS
FPC	FIRE PROTECTION CONTRACTOR
FPVAV	FAN POWERED VARIABLE AIR VOLUME
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HP	HORSE POWER/HEAT PUMP
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
IG	ISOLATED GROUND
JB	JUNCTION BOX
KVA	KILO-VOLT AMPERE
KW	KILO-WATT
LC	LIGHTING CONTACTOR
LTG	LIGHTING
MAU	MAKE UP AIR UNIT
MCA	MINIMUM CIRUIT AMPS
MC	MECHANICAL CONTRACTOR
MC	METAL CLAD
MCB	MAIN CIRCUIT BREAKER
MFR	MANUFACTURER
MLO	MAIN LUGS ONLY
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
P	POLE
PC	PLUMBING CONTRACTOR
PCP	PUMP CONTROL PANEL
PF	POWER FACTOR
PL	PROPERTY LINE
PNL	PANEL
PNLBD	PANELBOARD
Ø	PHASE
PRI	PRIMARY
RECP	RECEPTACLE
RTU	ROOF TOP UNIT
SE	SERVICE ENTRANCE
SEC	SECONDARY
TBB	TELEPHONE BACKBOARD
TR	TAMPER RESISTANT
TRT	TRIPLE TUBE FLUORESCENT LAMP
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLTS

POWER

	SINGLE RECEPTACLE, 20A, 120V, 18"AFF, UON.
E	DUPLEX RECEPTACLE, 20A, 120V, 18"AFF, UON.
	DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTING TYPE, 20A, 120V, 18"AFF, UON.
	DUPLEX RECEPTACLE WITH ADDITIONAL ISOLATED GROUND WIRE, 20A, 120V, 18"AFF, UON.
	DUPLEX RECEPTACLE, 20A, 120V, 40"AFF OR 4" ABOVE COUNTER TOP OR IN CASEWORK (AS APPLICABLE), OR IN CASEWORK, AS APPLICABLE, UON.
	DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTING TYPE, 20A, 120V, 40" AFF TO 4" ABOVE COUNTER TOP OR IN CASEWORK (AS APPLICABLE), OR IN CASEWORK, AS APPLICABLE, UON.
	QUADRUPLEX RECEPTACLES IN COMMON BOX, 20A, 120V, 18"AFF, UON.
WP	DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTING TYPE, 20A, 120V, WITH COOPER MODEL WIU-1D (OR EQUAL) "WHILE-IN-USE" WEATHERPROOF COVER, 18"AFG UON.
EWC	ELECTRIC WATER COOLER CONNECTION, PROVIDE 20A, 120V GROUND FAULT INTERRUPTING TYPE DUPLEX RECEPTACLE. COORDINATE WITH EWC MANUFACTURER'S ROUGH-IN REQUIREMENTS. RECEPTACLE SHALL BE ACCESSIBLE THROUGH REMOVAL OF EWC COVER.
	FLOORBOX WITH DUPLEX RECEPTACLE. COORDINATE EXACT LOCATION IN FIELD WITH IN-FLOOR DISTRIBUTION SYSTEM.
	FLOORBOX WITH DUPLEX RECEPTACLE AND TELE/DATA. COORDINATE EXACT LOCATION IN FIELD WITH IN-FLOOR DISTRIBUTION SYSTEM.
	SURFACE METAL RACEWAY WITH 20A, 120V SINGLE RECEPTACLES MOUNTED AT 12" ON CENTER. MOUNT 1" ABOVE COUNTERTOP BACKSPLASH.
	SPECIAL RECEPTACLE. NEMA CONFIGURATION AS NOTED. MOUNT 18"AFF UON.
J J	JUNCTION BOX - ABOVE CEILINGS OR FLUSH IN WALLS.
MGB	MAIN GROUND BAR
GB	GROUND BAR
J	DISCONNECT SWITCH - SIZE AS INDICATED ON PLANS 30/2/20/3R — NEMA RATING (IF OTHER THAN 1) FUSE SIZE (AMPS), N.F. INDICATES NON-FUSED No. OF POLES SIZE (AMPS)
M	HORSEPOWER RATED MOTOR SWITCH
	MOTOR CONNECTION.
J	COMBINATION MOTOR STARTER AND DISCONNECT SWITCH, MOUNT WITHIN SITE OF MOTOR 5'-0"AFF, MAXIMUM, UON.
FF WF	FLEXIBLE FURNITURE CONNECTION, 6"AFF UON. PROVIDE (1) JUNCTION BOX FOR CONNECTION OF POWER CIRCUITRY (CIRCUITS AS INDICATED ON DRAWINGS) AND PROVIDE (1) JUNCTION BOX WITH 1"C STUBBED ABOVE ACCESSIBLE CEILING FOR TELEPHONE AND DATA CONNECTIONS. PROVIDE POWER AND CONDUIT CONNECTIONS TO FURNITURE. COORDINATE FURNITURE WIRING REQUIREMENTS AND CONNECTIONS WITH FURNITURE EQUIPMENT PROVIDER. PROVIDE LIQUID-TIGHT RACEWAY CONNECTION FROM JUNCTION BOX TO FURNITURE PARTITION.
PP	POWER POLE
CR	DROP CORD/REEL, 20A, 120V, MOUNTED TO CEILING WITH (3) SINGLE RECEPTACLES AT CORD END.
M	EMON DMON METER. REFER TO POWER PLAN FOR ADDITIONAL INFORMATION.
VFD	VARIABLE FREQUENCY DRIVE (FURNISHED WITH ASSOCIATED MECHANICAL EQUIPMENT, INSTALLED BY EC), WITH INTEGRAL DISCONNECT SWITCH.
SPD	SURGE PROTECTIVE DEVICE
FCU	FAN COIL UNIT.
	ELECTRICAL METER. MOUNT 54" AFF (MINIMUM).
	ELECTRICAL PANELBOARD
	ELECTRICAL CIRCUIT RUN IN CONDUIT AND CIRCUIT HOMERUN TO PANELBOARD (PANEL AND CIRCUIT DESIGNATION AS INDICATED). AS A MINIMUM CONDITION, EACH SINGLE PHASE CIRCUIT SHALL HAVE 1 #12 PHASE CONDUCTOR, 1 #12 NEUTRAL CONDUCTOR, AND 1 #12 GROUNDING CONDUCTOR IN 3/4" CONDUIT. PROVIDE ADDITIONAL PHASE CONDUCTORS AS REQUIRED FOR "MULTIPLE PHASED" ELECTRICAL LOADS. PROVIDE ADDITIONAL "SWITCH LEG" CONDUCTORS TO PROVIDE THE LIGHT FIXTURE CONTROL INDICATED. MULTIPLE SINGLE PHASE CONDUCTORS SHALL BE GROUPED TOGETHER IN A COMMON CONDUIT IN ACCORDANCE WITH THE NEC AND AT THE CONTRACTOR'S DISCRETION. NEUTRAL AND GROUNDING CONDUCTORS SHALL BE SHARED AS ALLOWED BY THE NEC. CONDUIT LARGER THAN 3/4" AND CONDUCTORS LARGER THAN #12 SHALL BE AS INDICATED.

LIGHTING

	LIGHTING FIXTURE.
	LIGHTING FIXTURE ON EMERGENCY CIRCUIT. SUBSCRIPT "NL" WHERE USED, INDICATES NIGHT LIGHT CONNECTED AHEAD OF LIGHTING CONTROLS. TYPICAL ALL FIXTURE TYPES.
	DOWNLIGHT FIXTURE.
	PENDANT LIGHTING FIXTURE.
	WALL WASH LIGHTING FIXTURE. SHADED AREA INDICATES LIGHT THROW DIRECTION.
	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT. SUBSCRIPT "NL" WHERE USED, INDICATES NIGHT LIGHT CONNECTED AHEAD OF LIGHTING CONTROLS.
	WALL MOUNTED LIGHTING FIXTURE.
	WALL MOUNTED LIGHTING FIXTURE ON EMERGENCY CIRCUIT. SUBSCRIPT "NL" WHERE USED, INDICATES NIGHT LIGHT CONNECTED AHEAD OF LIGHTING CONTROLS.
	TRACK LIGHTING FIXTURE. INDICATES AN INDIVIDUAL FIXTURE ON THE TRACK.
	AREA SITE LIGHTING FIXTURE.
	EMERGENCY LIGHTING REMOTE UNIT.
	EMERGENCY BATTERY LIGHTING UNIT, CONNECT AHEAD OF LOCAL SWITCH.
	EXIT LIGHTING FIXTURE WITH DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS. CONNECT TO DEDICATED EMERGENCY BRANCH CIRCUIT. SHADED AREA DENOTES LIGHTED FACE.
$a	DUAL SWITCH (SINGLE POLE OR AS INDICATED BY SUBSCRIPT). 20A, 120/277V, 44"AFF, UON. CONNECT EACH TO SEPARATELY CONTROL INBOARD AND OUTBOARD LAMPS OF EACH FIXTURE INDICATED. CONTROL INBOARD AND OUTBOARD LAMPS CONSISTENTLY. SUBSCRIPT "a" INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
$a	SINGLE POLE SWITCH, 20A, 120/277V, 44"AFF UON. SUBSCRIPT "a" INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
$4a	FOUR-WAY SWITCH, 20A, 120/277V, 44"AFF UON. SUBSCRIPT "a" INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
$Ka	SINGLE POLE KEYED SWITCH, 20A, 120/277V, 44" AFF UON. SUBSCRIPT "a" INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
$Pa	SINGLE POLE SWITCH WITH PILOT LIGHT, 20A, 120/277V, 44" AFF UON. SUBSCRIPT "a" INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
$3a	THREE-WAY SWITCH, 20A, 120/277V, 44"AFF UON. SUBSCRIPT "a" INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
$Da	DIMMER SWITCH, 44" AFF UON. SUBSCRIPT "a", WHERE USED, INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
$OC	WALL SWITCH OCCUPANCY SENSOR, 44" AFF UON.
$VS	WALL SWITCH VACANCY SENSOR, 44" AFF UON.
$LV1a	LOW VOLTAGE SWITCH, 44" AFF UON. SUBSCRIPT "1" INDICATES LOW VOLTAGE SWITCH DESIGNATION. SUBSCRIPT "a" INDICATES LOW VOLTAGE BUTTON DESIGNATION.
O#	OCCUPANCY SENSOR. "#" DENOTES OCCUPANCY SENSOR TYPE. SUBSCRIPT "a", WHERE USED, INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
V#	VACANCY SENSOR. "#" DENOTES VACANCY SENSOR TYPE. SUBSCRIPT "a", WHERE USED, INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
PC	PHOTOCELL FOR EXTERIOR LIGHTING CONTROL. MOUNT ON ROOF OF BUILDING AND AIM NORTH.
DS	DAYLIGHT SENSOR.

LIGHTING FIXTURE KEY

A LP-B-3a	1. LETTER "A" DENOTES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE. 2. SUBSCRIPT "LP-B" INDICATES NAME OF PANELBOARD FROM WHICH FIXTURE IS FED. ASSOCIATED NUMBER "3" INDICATES CIRCUIT NUMBER IN PANELBOARD FROM WHICH FIXTURE IS FED. ASSOCIATED LETTER "a", WHERE USED, INDICATES LIGHTING FIXTURE CONTROL DEVICE DESIGNATION.

LINEWEIGHTS

	NEW
	EXISTING
	REMOVE EXISTING

GENERAL

1	KEYNOTE.
	LIMIT OF DEMOLITION WORK.
	POINT OF CONNECTION, NEW TO EXISTING.
X X.X	DETAIL OR SECTION NOTATION: ENUMERATION: A = DETAIL, 1 = SECTION ENUMERATION NUMBER OR LETTER SHEET WHERE DETAIL OR SECTION IS SHOWN

FIRE ALARM

FACP	FIRE ALARM CONTROL PANEL, SURFACE MOUNTED, TOP 5'-9" AFF.
FAAP	FIRE ALARM ANNUNCIATOR PANEL, RECESSED, TOP 5'-0" AFF.
NACP	FIRE ALARM NOTIFICATION APPLIANCE CIRCUIT EXTENDER PANEL, SURFACE MOUNTED, TOP, 5'-9" AFF.
FATP	FIRE ALARM TRANSPONDER PANEL, SURFACE MOUNTED, TOP 5'-9" AFF.
F	FIRE ALARM MANUAL PULL STATION, 44"AFF TO ACTUATING ARM, UON.
SD	ADDRESSABLE FIRE ALARM SYSTEM PHOTO-ELECTRIC SMOKE DETECTOR, CEILING MOUNTED.
DD	DUCT MOUNTED ADDRESSABLE FIRE ALARM SYSTEM PHOTO-ELECTRIC SMOKE DETECTOR.
HD	ADDRESSABLE FIRE ALARM SYSTEM HEAT DETECTOR, FIXED TEMPERATURE/RATE OF RISE TYPE. CEILING MOUNTED.
IM	FIRE ALARM SYSTEM ADDRESSABLE INPUT MONITOR MODULE.
MM	FIRE ALARM SYSTEM MONITOR MODULE.
CM	FIRE ALARM SYSTEM CONTROL MODULE.
RT	FIRE ALARM SYSTEM ADDRESSABLE REMOTE TEST SWITCH.
30	FIRE ALARM VISUAL (STROBE) APPLIANCE, MOUNT 80"AFF, OR 6" BELOW FINISHED CEILING, WHICHEVER IS LOWER, UON. SUBSCRIPT INDICATES MINIMUM CANDELA RATING, WHERE GREATER THAN 15.
	FIRE ALARM SYSTEM VISUAL (STROBE) APPLIANCE, WALL MOUNTED AT 80" AFF TO BOTTOM OF LENS, OR 6" BELOW FINISHED CEILING, WHICHEVER IS LOWER, UON. SUBSCRIPT INDICATES MINIMUM CANDELA RATING.
AV 30	FIRE ALARM AUDIO/VISUAL (HORN/STROBE) APPLIANCE, 80"AFF, OR 6" BELOW FINISHED CEILING, WHICHEVER IS LOWER, UON. SUBSCRIPT INDICATES MINIMUM CANDELA RATING, WHERE GREATER THAN 15.
AV	FIRE ALARM SYSTEM HORN/STROBE, WALL MOUNTED AT 80" AFF TO BOTTOM OF LENS, OR 6" BELOW FINISHED CEILING, WHICHEVER IS LOWER, UON. SUBSCRIPT INDICATES MINIMUM CANDELA RATING. SUBSCRIPT "WP" INDICATES WEATHERPROOF DEVICE.
TS	SPRINKLER SYSTEM SUPERVISORY VALVE TAMPER SWITCH CONNECTION.
FS	SPRINKLER SYSTEM SUPERVISORY FLOW SWITCH CONNECTION.
PS	SPRINKLER SYSTEM PRESSURE SWITCH CONNECTION.
DH	FIRE ALARM MAGNETIC DOOR HOLDER CONNECTION POWERED THROUGH FIRE ALARM SYSTEM. COORDINATE MOUNTING HEIGHT WITH ASSOCIATED DOOR MOUNTED DEVICE.
B	SPRINKLER SYSTEM BELL ALARM APPLIANCE, WEATHERPROOF. MOUNT 80" AFG.
PIV	POST INDICATOR VALVE CONNECTION, COORDINATE EXACT LOCATION WITH SITE DRAWINGS.
MFSD	SMOKE DAMPER CONNECTION, 120V.
	FIREMAN TELEPHONE OUTLET, 46"AFF, UON.

COMMUNICATIONS

	TELE/DATA BOX, 4"X4"X2 1/4"D BOX WITH SINGLE GANG PLASTER RING 18"AFF, UON, WITH 1"C WITH PULL STRING STUBBED ABOVE ACCESSIBLE CEILING AND TERMINATED WITH PLASTIC BUSHING.
	TELE/DATA BOX, 4"X4"X2 1/4"D BOX WITH SINGLE GANG PLASTER RING 40"AFF OR 4" ABOVE COUNTER TOP OR BACKSPLASH (WHICHEVER IS HIGHER) OR IN CASEWORK AS APPLICABLE, UON, WITH 1"C WITH PULL STRING STUBBED ABOVE ACCESSIBLE CEILING AND TERMINATED WITH PLASTIC BUSHING.
	TELEPHONE PLYWOOD BACKBOARD 3/4"x8'x4', FIRE RETARDANT. BOTTOM AT 0'-4" AFF.
TV	CABLE TELEVISION OUTLET WITH DUPLEX RECEPTACLE, PROVIDE DUPLEX RECEPTACLE AND ADDITIONAL 4"X4"X2 1/4"D BOX WITH SINGLE GANG PLASTER RING, WITH 3/4"C WITH PULL STRING STUBBED ABOVE ACCESSIBLE CEILING AND TERMINATED WITH BUSHING. MOUNT 18"AFF UON.

DIVISION OF MECHANICAL/ ELECTRICAL WORK

ITEM	MECH/ DIV 22 AND 23	ELEC/ DIV 26
AUTOMATIC TEMPERATURE CONTROLS	FURNISH, INSTALL & WIRE	POWER WIRE
CONTROL PANELS FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
LOW VOLTAGE CONTROL WIRING FOR MECH EQUIP.	FURNISH & INSTALL	
LINE VOLTAGE CONTROL WIRING FOR MECH. EQUIP.	FURNISH, INSTALL & WIRE	
MECHANICAL FLOW SWITCHES	FURNISH, INSTALL & WIRE	
THERMOSTATS/ SENSORS	FURNISH, INSTALL & WIRE	
P/E & E/P SWITCHES	FURNISH, INSTALL & WIRE	
DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
MECHANICAL EQUIPMENT MONITORS	FURNISH & INSTALL	POWER WIRE
MANUAL STARTERS FOR MECHANICAL EQUIPMENT	FURNISH & INSTALL	POWER WIRE
MAGNETIC STARTERS FOR MECHANICAL EQUIPMENT	FURNISH	INSTALL & POWER WIRE
MOTOR CONTROL CENTERS	CONTROL WIRING	FURNISH, INSTALL, & POWER WIRE
VARIABLE SPEED CONTROLLERS	FURNISH & INSTALL	POWER WIRE
MOTORIZED DAMPERS & VALVES	FURNISH, INSTALL & WIRE	
DUCT SMOKE DETECTORS	INSTALL	FURNISH & WIRE
HEAT TRACE CABLE FOR PIPING	FURNISH & INSTALL	POWER WIRE
OIL/ GAS EMERGENCY SHUT-OFF SWITCHES		FURNISH, INSTALL, & POWER WIRE
SPRINKLER FLOW & TAMPER SWITCHES	BY SPRINKLER CONTRACTOR	WIRE

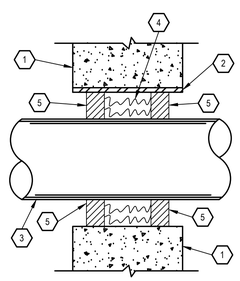
GENERAL NOTES (ALL DRAWINGS):

1. IN ACCORDANCE WITH FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AND THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP), ALL MECHANICAL EQUIPMENT INSTALLED IN NEW STRUCTURES SHALL BE INSTALLED AT AN ELEVATION ABOVE BASE FLOOD ELEVATION (BFE) OR DESIGNED IN A MANNER THAT FLOOD WATERS SHALL NOT INFILTRATE, ACCUMLATE, OR CAUSE DAMAGE WITHIN ANY COMPONENT OF THE SYSTEM. THESE SYSTEMS INCLUDE BUT NOT LIMITED TO THE FOLLOWING: HEATING, PLUMBING, VENTILAION, ELECTRICAL, AC EQUIPMENT, AND OTHER SERVICE UTILITIES. PER "DEWEY FLOOD MITIGATION EVALUATIONS" MEMO DATED JULY 16, 2024, THE PROJECT SHALL HAVE A FINISHED FLOOR ELEVATION (FFE) OF 7'-0" WHICH IS 2'-0" ABOVE THE FEMA LOCALITY BFE OF 5'-0."

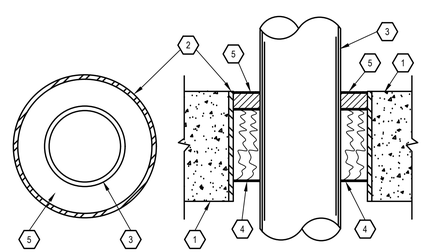
7

ELECTRICAL ABBREVIATIONS

VAC	VOLTS ALTERNATING CURRENT
VAV	VARIABLE AIR VOLUME
VDC	VOLTS DIRECT CURRENT
VFD	VARIABLE REQUENCY DRIVE
W	WATTS/WIRE
WG	WIRE GUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER



WALL ASSEMBLY



FLOOR ASSEMBLY

1 / E001 FIRE STOP DETAIL
N.T.S.

KEYED NOTES:

1. FLOOR OR WALL ASSEMBLY MINIMUM 5" THICK NORMAL WEIGHT CONCRETE FLOOR OR WALL OR MINIMUM 7-5/8" THICK MASONRY WALL HAVING A MINIMUM 2 HOUR FIRE RESISTIVE RATING WITH A NOMINAL 6" DIAMETER OPENING.

2. STEEL PIPE SLEEVE (OPTIONAL) NOMINAL 6" DIAMETER SCHEDULE 40 OR HEAVIER STEEL PIPE SLEEVE. (2 TRADE SIZES LARGER THAN CONDUIT).

3. STEEL OR EMT CONDUIT NOMINAL 4" DIAMETER CENTERED THROUGH THE OPENING.

4. FORMING MATERIAL MINERAL WOOL, MINIMUM DENSITY OF 4.4 PCF FIRMLY PACKED WITHIN THE OPENING TO A NOMINAL THICKNESS OF 3" FOR FLOORS. FOR WALLS, THE MINERAL WOOL SHALL BE CENTERED IN THE OPENING.

5. FILL VOID OR CAVITY MATERIAL* - FILL MATERIAL THAT IS TROWELED INTO THE OPENING TO A MINIMUM THICKNESS OF 1/2" IN ACCORDANCE WITH THE ACCOMPANYING INSTALLATION INSTRUCTIONS. IN WALLS, THE FILL MATERIAL SHALL BE INSTALLED ON BOTH SURFACES OF THE OPENING.

* BEARING THE "UL" CLASSIFICATION MARKING

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BP/PD REVIEW	4/7/2024
4.	ISSUED FOR BP/PD RESUBMISSION	5/10/2024
5.	ISSUED FOR BP/PD RESUBMISSION	6/10/2024
7.	ISSUED FOR TOWN RESUBMISSION	

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ELECTRICAL
DATA SHEET

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: XXX
DESIGN BY	: PRD
DRAWN BY	: PRD
CHECKED BY	: JTH
GMB FILE	: 220242
DATE	: 8-30-2024

E0.1

TIMOTHY R. CHATTERTON
LICENSE
No. 15702
DELAWARE
PROFESSIONAL ENGINEER

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ALLEN + SHARIFF JOB# : 2331073

ELECTRICAL SPECIFICATIONS

GENERAL

CODES AND STANDARDS - THE LATEST EFFECTIVE PUBLICATIONS OF ALL APPLICABLE STANDARDS, CODES, ETC., AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION, STATE AND LOCAL GOVERNMENTS, AS THEY APPLY, FORM PART OF THESE SPECIFICATIONS AS IF WERE WRITTEN FULLY HEREIN AND CONSTITUTE MINIMUM REQUIREMENTS. THE FOLLOWING WILL BE REFERRED TO THROUGHOUT IN ABBREVIATED FORMS.

NATIONAL ELECTRICAL CODE, (NFPA 70) (NEC).
INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE).
NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA).
AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) / COMAR IN MARYLAND.
APPLICABLE STATE AND LOCAL CODES.
APPLICABLE STANDARDS OF UNDERWRITER'S LABORATORIES, INC. (UL).
APPLICABLE STANDARDS OF NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).
THE INTERNATIONAL BUILDING CODE (IBC).
THE INTERNATIONAL FIRE CODE (IFC)
THE AMERICANS WITH DISABILITIES ACT (ADA).
INTERNATIONAL ELECTRICAL TESTING ASSOCIATION (NETA).
THE INTERNATIONAL ENERGY CONSERVATION CODE (IECC).
ASHRAE 90.1

A. SCOPE OF WORK - PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, APPURTENANCES AND SERVICES TO PROVIDE A COMPLETE ELECTRICAL INSTALLATION AS SHOWN ON THE DRAWINGS AND AS DESCRIBED IN THESE SPECIFICATIONS.

B. SITE VISIT - THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING HIS BID TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND DETERMINE THE EXTENT OF WORK. LACK OF KNOWLEDGE OF EXISTING CONDITIONS WILL NOT BE CONSIDERED A BASIS FOR CHANGE ORDERS. PRIOR TO ORDERING EQUIPMENT, CONTRACTOR SHALL VERIFY THAT EQUIPMENT TO BE PROVIDED UNDER THIS CONTRACT IS ACCEPTABLE AND CAN FIT INTO BUILDING AND ROOM. EXPENSE INCURRED BY THE CONTRACTOR, WHICH IN THE ENGINEER'S OPINION COULD HAVE BEEN AVOIDED BY THIS STEP, SHALL NOT BE A BASIS FOR CHANGE ORDERS.

C. DRAWINGS AND SPECIFICATIONS - THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT, CHARACTER AND ARRANGEMENT OF EQUIPMENT, FIXTURES AND CONDUIT AND WIRING SYSTEMS. IT IS THE INTENTION OF THESE SPECIFICATIONS AND DRAWINGS TO FULLY COVER ALL WORK AND MATERIALS FOR A COMPLETE, FIRST-CLASS ELECTRICAL INSTALLATION, AND ANY DEVICES SUCH AS PULL BOXES, STARTERS, AND DISCONNECT SWITCHES, USUALLY EMPLOYED IN THIS CLASS OF WORK THOUGH NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS OR IN THIS SPECIFICATION, BUT WHICH MAY BE NECESSARY FOR THE SATISFACTORY COMPLETION OF THE WORK, SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AS A PART OF HIS TOTAL WORK UNDER THIS DIVISION. CONSULT THE SPECIFICATIONS AND DRAWINGS OF ALL OTHER TRADES AND PERFORM ALL ELECTRICAL WORK REQUIRED THEREIN. COOPERATE WITH ALL OTHER CONTRACTORS OR SUBCONTRACTORS TO FURNISH COMPLETE WORKABLE SYSTEMS.

D. DURING CONSTRUCTION - KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK AS SHOWN ON THE CONTRACT DRAWINGS AND THAT WHICH IS ACTUALLY INSTALLED ON A SET OF PRINTS OF THE ELECTRICAL DRAWINGS, AND NOTE CHANGES THEREON WITH RED MARKS, IN A NEAT AND ACCURATE MANNER. WHEN ALL REVISIONS HAVE BEEN SHOWN ON THESE PRINTS TO INDICATE THE WORK AS FINALLY INSTALLED, THE PRINTS SHALL BE DELIVERED TO THE ENGINEER, BEFORE FINAL PAYMENT.

E. PERMITS, INSPECTION AND TESTS - THE RIGHT IS RESERVED TO INSPECT AND TEST ANY PORTION OF THE INSTALLATION/EQUIPMENT DURING THE PROGRESS OF ITS ERECTION. THIS CONTRACTOR SHALL TEST ALL WIRING FOR CONTINUITY AND GROUNDS BEFORE CONNECTING ANY FIXTURES OR DEVICES. THIS CONTRACTOR SHALL TEST THE ENTIRE SYSTEM WHEN THE WORK IS FINALLY COMPLETED TO INSURE THAT ALL PORTIONS ARE FREE FROM SHORT CIRCUITS AND GROUNDS.

F. SECURE AND PAY - FOR ALL REQUIRED PERMITS AND INSPECTIONS. INSPECTION CERTIFICATES FROM LOCAL AUTHORITIES HAVING JURISDICTION SHALL BE DELIVERED TO THE OWNER BEFORE FINAL PAYMENT.

G. SUBMITTALS - SUBMIT SHOP DRAWINGS, PRODUCT DATA AND SAMPLES WITHIN THIRTY (30) DAYS OF AWARD OF CONTRACT AND IN ACCORDANCE WITH THE GENERAL CONDITIONS AND SUPPLEMENTARY CONDITIONS. SUBMITTALS ARE REQUIRED FOR ALL SAFETY SWITCHES, ENCLOSED CIRCUIT BREAKERS, PANELBOARDS, TRANSIENT VOLTAGE SURGE SUPPRESSORS, SURGE PROTECTIVE DEVICE (SPD), TRANSFORMERS, LIGHTING FIXTURES, FIRE ALARM SYSTEM, AND SPECIALTY DEVICES PROVIDED UNDER THIS SPECIFICATION. REVIEW OF SUBMITTALS BY THE ENGINEER AND ANY ASSOCIATED ACTION TAKEN BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF ANY REQUIREMENTS SET FORTH BY THE CONTRACT DOCUMENTS.

H. PROVIDE ALL CUTTING, PATCHING, PAINTING AND REFINISHING REQUIRED FOR INSTALLATION OF THE ELECTRICAL WORK.

I. DAILY AND WHEN DIRECTED BY THE OWNER OR ENGINEER REMOVE ALL DEBRIS FROM THE PREMISES.

J. DEFINITIONS:

K. "FURNISH" SHALL MEAN TO PURCHASE, DELIVER TO JOB SITE, AND UNLOAD FROM TRUCK AT JOB SITE. "INSTALL" SHALL MEAN TO MOUNT IN PLACE, MAKE ALL NECESSARY CONNECTIONS AS SPECIFIED ON PLANS, AND ON SHOP DRAWINGS.

L. "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL.

M. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL EQUIPMENT VOLTAGES WITH MECHANICAL CONTRACTORS AND/OR OWNER'S/ARCHITECT'S PROVIDED EQUIPMENT PRIOR TO EQUIPMENT ORDER.

PRODUCTS

A. MANUFACTURING STANDARDS - MATERIAL SHALL BE NEW AND APPROVED AND LABELED BY UL WHEREVER STANDARDS HAVE BEEN ESTABLISHED BY THAT AGENCY. DEFECTIVE EQUIPMENT OR EQUIPMENT DAMAGED IN THE COURSE OF INSTALLATION OR TEST SHALL BE REPLACED OR REPAIRED IN A MANNER MEETING THE APPROVAL OF THE OWNER. ALL ITEMS OF THE SAME TYPE AND RATING SHALL BE IDENTICAL.

B. TRADE NAMES - UNLESS SPECIFICALLY IDENTIFIED OTHERWISE, MANUFACTURERS' NAMES AND CATALOG NUMBERS INDICATED HEREIN AND ON THE DRAWINGS ARE NOT INTENDED TO BE PROPRIETARY DESIGNATIONS. THEY ARE TO INDICATE GENERAL TYPE AND QUALITY OF MATERIALS AND EQUIPMENT REQUIRED. EQUIPMENT AND MATERIAL BY OTHER MANUFACTURERS WHICH IN THE OPINION OF THE ENGINEER ARE OF EQUAL QUALITY AND WHICH WILL PRODUCE THE SAME RESULTS WILL BE CONSIDERED ACCEPTABLE.

C. MOTORS - MOTORS SHALL BE PROVIDED WITH DISCONNECTING MEANS.

D. POWER WIRING - UP TO AND INCLUDING MOTOR CONNECTIONS FOR ALL EQUIPMENT PROVIDED UNDER OTHER DIVISIONS OF THIS SPECIFICATION SHALL BE INCLUDED IN THIS DIVISION. WHERE MANUAL MOTOR CONTROL SWITCHES FOR SINGLE PHASE MOTORS ARE INDICATED, THEY SHALL BE PROVIDED AND WIRED COMPLETE UNDER THIS DIVISION. MOTOR CONTROLLERS AND MOTOR STARTERS FURNISHED UNDER OTHER DIVISIONS SHALL BE SET IN PLACE AND CONNECTED TO SOURCE AND LOAD UNDER THIS DIVISION. IN GENERAL, MOTORS WILL BE PROVIDED WITH THE EQUIPMENT THEY DRIVE AND ARE NOT PART OF THIS WORK UNDER THIS DIVISION, EXCEPT THAT THEY SHALL BE CONNECTED HEREUNDER.

E. OBTAIN APPROVED SHOP DRAWINGS - SHOWING WIRING DIAGRAMS, CONNECTION DIAGRAMS, ROUGH-IN AND HOOKUP DETAILS, FROM ALL CONTRACTORS FOR ALL EQUIPMENT AND COMPLY THEREWITH.

F. CONTROL, INTERLOCK AND INTERNAL EQUIPMENT - WIRING REGARDLESS OF VOLTAGE SHALL BE PROVIDED BY OTHERS UNLESS SPECIFICALLY SHOWN HERE.

G. TEMPORARY ELECTRICAL SERVICE - TEMPORARY ELECTRICAL SERVICE AT 120/240V, 1-PHASE AND OR 120/208V, 3-PHASE WITH GROUND FAULT INTERRUPTER WITH SOLIDLY GROUNDED NEUTRAL SHALL BE PROVIDED. AMPERAGE AND VOLTAGE SHALL BE COORDINATED WITH SITE AND PROJECT SPECIFIC REQUIREMENTS. PROVIDE ALL NECESSARY TEMPORARY LIGHTING AND RECEPTACLES. GENERAL CONTRACTOR WILL PAY ALL CHARGES, WHICH MAY BE MADE BY THE POWER COMPANY FOR TEMPORARY SERVICE.

H. GROUNDING - THE ENTIRE ELECTRICAL SYSTEM, INCLUDING EQUIPMENT FRAMES, CONDUIT, SWITCHES, CONTROLLERS, WIREWAYS, AND ALL OTHER SUCH EQUIPMENT SHALL BE PERMANENTLY AND EFFECTIVELY GROUNDED IN ACCORDANCE WITH THE NEC. GROUNDING OF EACH TRANSFORMER SECONDARY SHALL BE PROVIDED AND EACH SHALL BE CONSIDERED AS A SEPARATE SERVICE GROUND. PROVIDE A SEPARATE GROUND CONDUCTOR IN ALL BRANCH CIRCUIT CONDUITS SIZED IN ACCORDANCE WITH THE NEC.

I. SCHEDULE OF WORK - THE SCHEDULE OF THE ELECTRICAL WORK SHALL BE ARRANGED TO SUIT THE PROGRESS OF WORK BY THE OTHER TRADES AND SHALL IN NO WAY RETARD PROGRESS OF CONSTRUCTION OF THE PROJECT.

J. WORK UNDER THIS DIVISION - SHALL PROCEED IN ADVANCE OF THE WORK OF OTHERS WHENEVER POSSIBLE, ELIMINATING ALL CUTTING AND PATCHING. WHEN SUCH PROCEDURE IS IMPOSSIBLE, CUTTING AND PATCHING SHALL BE DONE IN AN APPROVED MANNER. CUTTING SHALL NOT ENDANGER STRUCTURAL INTEGRITY IN ANY WAY. PATCHING SHALL EXACTLY MATCH CONTIGUOUS WORK. ACTUAL WORK OF CUTTING AND PATCHING OF EXISTING SURFACES SHALL BE PERFORMED BY THE SUBCONTRACTOR WHO ORIGINALLY PREPARED THESE SURFACES, E.G., CUTTING AND PATCHING OF MASONRY WALL WILL BE PERFORMED BY THE MASONRY SUBCONTRACTOR. COSTS OF SUCH CUTTING AND PATCHING SHALL BE BORNE BY THE ELECTRICAL SUBCONTRACTOR. CUTTING SHALL BE CAREFULLY DONE AND DAMAGE TO BUILDING, PIPING, WIRING OR EQUIPMENT AS A RESULT OF CUTTING SHALL BE REPAIRED BY SKILLED MECHANICS OF TRADE INVOLVED.

K. STORAGE AND MATERIALS - SPACE WILL BE ASSIGNED TO THE CONTRACTOR BY THE OWNER FOR THE STORAGE OF MATERIAL. THIS CONTRACTOR WILL BE RESPONSIBLE FOR THE PROTECTION AND SAFEKEEPING OF MATERIALS, TOOLS, AND EQUIPMENT. ALL MATERIALS AND EQUIPMENT SHALL BE KEPT IN ITS ASSIGNED PLACE UNTIL THE TIME OF ITS INSTALLATION. EXCESS MATERIALS, DIRT AND REFUSE SHALL BE PROMPTLY REMOVED FROM THE WORK SITE.

L. LABELING OF EQUIPMENT - ALL PANELBOARDS, CABINETS, SAFETY SWITCHES, MOTOR DISCONNECT SWITCHES, AND MOTOR CONTROLLERS SHALL BE IDENTIFIED BY MACHINE ENGRAVED LAMINATED PLASTIC DESIGNATION PLATES PERMANENTLY ATTACHED THERETO WITH SELF-TAPPING SCREWS OR RIVETS. ALL COMPONENT PARTS OF EACH ITEM OF EQUIPMENT OR DEVICE SHALL BEAR THE MANUFACTURER'S NAMEPLATE, GIVING NAME OF MANUFACTURER, DESCRIPTION, SIZE TYPE, SERIAL AND MODEL NUMBER AND ELECTRICAL CHARACTERISTICS IN ORDER TO FACILITATE MAINTENANCE OR REPLACEMENT. PROVIDE UPDATED PANEL DIRECTORIES FOR ALL NEW AND MODIFIED EXISTING PANELS TO INDICATE CORRECT CIRCUITING DESIGNATIONS.

M. COORDINATION - COOPERATE AND COORDINATE EFFORTS WITH ALL CONTRACTORS ON THE PROJECT. THIS IS ESPECIALLY IMPORTANT IN DETERMINING EXACT LOCATIONS OF ALL SWITCHES, RECEPTACLES AND LIGHTING FIXTURES. ARRANGE LIGHTING FIXTURES IN ACCORDANCE WITH THE ARCHITECTURAL REFLECTED CEILING PLANS UNLESS OTHERWISE INDICATED. COORDINATE LIGHTING FIXTURE LOCATIONS WITH GRILLES, DIFFUSERS, ACCESS PANELS, ETC. VERIFY CEILING AND WALL CONSTRUCTION AND MATERIAL PRIOR TO ORDERING LIGHTING FIXTURES OR OTHER DEVICES TO ENSURE PROPER FIXTURE OR DEVICE IS FURNISHED TO MATCH CONSTRUCTION. THIS VERIFICATION MUST BE EXECUTED REGARDLESS OF INFORMATION PLACED ON THE DRAWINGS. ANY COST INCURRED WHICH IN THE OPINION OF THE OWNER, COULD HAVE BEEN AVOIDED BY THIS STEP SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

N. GUARANTEE OF WORK - CONTRACTOR GUARANTEES BY HIS ACCEPTANCE OF THE CONTRACT THAT ALL WORK INSTALLED IS FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS, AND THAT THE APPARATUS WILL DEVELOP CAPACITIES AND CHARACTERISTICS SPECIFIED, AND THAT IF, DURING THE PERIOD OF ONE YEAR OR AS OTHERWISE SPECIFIED, FROM DATE OF CERTIFICATE OF COMPLETION AND ACCEPTANCE OF THE WORK ANY SUCH DEFECTS IN WORKMANSHIP, MATERIAL OR PERFORMANCE APPEAR, HE WILL, WITHOUT COST TO THE OWNER, REMEDY SUCH DEFECTS WITHIN A REASONABLE TIME TO BE SPECIFIED IN NOTICE. IN DEFAULT THEREOF, THE OWNER MAY HAVE SUCH WORK DONE AND CHARGE COST TO CONTRACTOR. EQUIPMENT GUARANTEES FROM DATE OF "START-UP" WILL NOT BE RECOGNIZED.

O. ALL ELECTRICAL WORK SHALL BE INSTALLED TO MAINTAIN ALL CLEARANCES AS DEFINED IN ARTICLE NEC 110.26 AND ITS SUBSEQUENT SUBSECTIONS. NO DUCT, CONDUIT, PIPE, ETC. NOT DIRECTLY ASSOCIATED WITH THAT PIECE OF ELECTRICAL EQUIPMENT SHALL BE LOCATED IN THE CLEARANCE SPACE AS DEFINED BY THE NEC. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF OTHER TRADES TO MAINTAIN THESE CLEARANCES.

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

GENERAL

A. SUBMITTALS
1. PRODUCT DATA: FOR EACH TYPE OF PRODUCT.

PRODUCTS

A. COPPER BUILDING WIRE
1. DESCRIPTION: FLEXIBLE, INSULATED AND UNINSULATED, DRAWN COPPER CURRENT-CARRYING CONDUCTOR WITH AN OVERALL INSULATION LAYER OR JACKET, OR BOTH, RATED 600 V OR LESS.
2. CONDUCTOR INSULATION:
   a. TYPE THHN AND TYPE THWN-2: COMPLY WITH UL 83.
   b. TYPE XHHW-2: COMPLY WITH UL 44.

B. METAL-CLAD CABLE, TYPE MC
1. DESCRIPTION: A FACTORY ASSEMBLY OF ONE OR MORE CURRENT-CARRYING INSULATED CONDUCTORS IN AN OVERALL METALLIC SHEATH.
2. STANDARDS:
   a. LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND USE.
   b. COMPLY WITH UL 1569.
3. GROUND CONDUCTOR SHALL BE INSULATED. CONDUCTOR INSULATION TYPE THHN/THWN-2 SHALL COMPLY WITH UL 83. CONDUCTOR INSULATION TYPE XHHW-2 SHALL COMPLY WITH UL 44.
4. ARMOR SHALL BE STEEL OR ALUMINUM, INTERLOCKED. JACKET SHALL BE PVC APPLIED OVER ARMOR.

C. CONNECTORS AND SPLICES
1. DESCRIPTION: FACTORY-FABRICATED CONNECTORS, SPLICES, AND LUGS OF SIZE, AMPACITY RATING, MATERIAL, TYPE, AND CLASS FOR APPLICATION AND SERVICE INDICATED; LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND USE.
2. JACKETED CABLE CONNECTORS: FOR STEEL AND ALUMINUM JACKETED CABLES, ZINC DIE-CAST WITH SET SCREWS, DESIGNED TO CONNECT CONDUCTORS SPECIFIED IN THIS SECTION.
3. LUGS: ONE PIECE, SEAMLESS, DESIGNED TO TERMINATE CONDUCTORS SPECIFIED IN THIS SECTION. MATERIAL SHALL BE COPPER. TYPE SHALL BE ONE OR TWO HOLE WITH STANDARD OR LONG BARRELS. TERMINATIONS SHALL BE COMPRESSION.

EXECUTION

A. CONDUCTOR MATERIAL APPLICATIONS
1. FEEDERS: COPPER. CONDUCTORS SHALL BE SOLID OR STRANDED FOR NO. 10 AWG AND SMALLER; STRANDED FOR NO. 8 AWG AND LARGER.
2. BRANCH CIRCUITS: COPPER. SOLID OR STRANDED FOR NO. 10 AWG AND SMALLER; STRANDED FOR NO. 8 AWG AND LARGER. WIRE SMALLER THAN NO. 12 AWG SHALL NOT BE USED FOR LIGHTING AND POWER CIRCUITS.
3. POWER-LIMITED FIRE ALARM AND CONTROL: SOLID FOR NO. 12 AWG AND SMALLER.

B. CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS
1. SERVICE ENTRANCE: TYPE THHN-THWN OR XHHW-2, SINGLE CONDUCTORS IN RACEWAY.
2. FEEDERS AND BRANCH CIRCUITING: TYPE THHN-THWN, SINGLE CONDUCTORS IN RACEWAY.
3. METAL-CLAD CABLE, TYPE MC, SHALL BE PERMISSIBLE WHERE INSTALLED AS BRANCH CIRCUITING CONCEALED IN ACCESSIBLE CEILINGS, WALLS, AND PARTITIONS, OR WHERE INSTALLED BELOW RAISED FLOORING.

C. INSTALLATION OF CONDUCTORS AND CABLES
1. CONCEAL CABLES IN FINISHED WALLS, CEILINGS, AND FLOORS UNLESS OTHERWISE INDICATED.
2. USE MANUFACTURER-APPROVED PULLING COMPOUND OR LUBRICANT WHERE NECESSARY; COMPOUND USED MUST NOT DETERIORATE CONDUCTOR OR INSULATION. DO NOT EXCEED MANUFACTURER'S RECOMMENDED MAXIMUM PULLING TENSIONS AND SIDEWALL PRESSURE VALUES.
3. INSTALL EXPOSED CABLES PARALLEL AND PERPENDICULAR TO SURFACES OF EXPOSED STRUCTURAL MEMBERS, AND FOLLOW SURFACE CONTOURS WHERE POSSIBLE.
4. METAL CLAD CABLING SHALL BE SECURED EVERY SIX FEET AND WITHIN 12 INCHES OF EVERY BOX OR TERMINATION AS REQUIRED BY CODE. INSTALLATION OF METAL CLAD CABLING SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER AND FOLLOW OR BE PERPENDICULAR TO BUILDING LINES.
5. EACH DESIGNED CIRCUIT HOMERUN SHALL HAVE ITS OWN INDIVIDUAL GROUND CONDUCTOR. CONDUIT SHALL NOT BE USED A GROUND CONDUCTOR.

D. CONNECTIONS
1. TIGHTEN ELECTRICAL CONNECTORS AND TERMINALS ACCORDING TO MANUFACTURER'S PUBLISHED TORQUE-TIGHTENING VALUES. IF MANUFACTURER'S TORQUE VALUES ARE NOT INDICATED, USE THOSE SPECIFIED IN UL 486A-486B.
2. MAKE SPLICES, TERMINATIONS, AND TAPS THAT ARE COMPATIBLE WITH CONDUCTOR MATERIAL AND THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN UNSPLICED CONDUCTORS.
3. WIRING AT OUTLETS: INSTALL CONDUCTOR AT EACH OUTLET, WITH AT LEAST 6 INCHES OF SLACK.
4. PUSH-ON WIRE CONNECTORS, OTHER THAN FOR LUMINAIRE DISCONNECTS, ARE NOT PERMITTED.
5. ALL EXTERIOR WIRING CONNECTIONS, AND THOSE MADE AT OR BELOW GRADE SHALL BE WATERPROOF WITH UL LISTED WATERPROOF CONNECTORS.
6. COPPER CONDUCTORS #10 AWG AND SMALLER SHALL BE TERMINATED AND SPLICED WITH WIRE NUT CONNECTORS. THE NYLON SELF_INSULATED TYPE SHALL BE USED TO ISOLATE THE TERMINATION FROM OTHER METAL PARTS AND EQUIPMENT.
7. COPPER CONDUCTORS #8 AWG AND LARGER SHALL BE TERMINATED, SPLICED, AND TAPPED WITH COLOR_KEYED COMPRESSION CONNECTORS. THE MANUFACTURERS RECOMMENDED TOOLS AND DIES SHALL BE USED.
8. COPPER CABLE LUG CONNECTIONS #8 AND LARGER TO COPPER BUS BAR MAINS AND BRANCHES SHALL USE COPPER SOLDERLESS CONNECTORS HAVING EITHER 2_BOLT CAST COPPER CLAMPS OR COMPRESSION CONNECTORS, WITH MANUFACTURER'S RECOMMENDED HEXAGONAL DIES AND HYDRAULIC COMPRESSION TOOLS.
9. PLENUM RATED CABLE OR WIRING IN METAL CONDUIT SHALL BE UTILIZED IN ALL PLENUM RATED SPACES.
10. WHERE AC CABLE IS PERMITTED FOR INSTALL AND INSTALLED IN ACCESSIBLE ATTICS, THE INSTALLATION SHALL FOLLOW ALL GUIDELINES OF NEC 320.23.

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

GENERAL

A. SUBMITTALS
1. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.

PRODUCTS

A. SYSTEM DESCRIPTION
1. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
2. COMPLY WITH UL 467 FOR GROUNDING AND BONDING MATERIALS AND EQUIPMENT.

B. CONDUCTORS
1. INSULATED CONDUCTORS: COPPER OR TINNED-COPPER WIRE OR CABLE INSULATED FOR 600 V UNLESS OTHERWISE REQUIRED BY APPLICABLE CODE OR AUTHORITIES HAVING JURISDICTION.
2. GROUNDING BUS: PREDRILLED RECTANGULAR BARS OF ANNEALED COPPER, 1/4 BY 4 INCHES IN CROSS SECTION, WITH 9/32-INCH HOLES SPACED 1-1/8 INCHES APART. STAND-OFF INSULATORS FOR MOUNTING SHALL COMPLY WITH UL 891 FOR USE IN SWITCHBOARDS, 600 V AND SHALL BE LEXAN OR PVC, IMPULSE TESTED AT 5000 V. MINIMUM SIZE SHALL BE 24" IN LENGTH.

C. CONNECTORS
1. LISTED AND LABELED BY AN NRTL ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION FOR APPLICATIONS IN WHICH USED AND FOR SPECIFIC TYPES, SIZES, AND COMBINATIONS OF CONDUCTORS AND OTHER ITEMS CONNECTED.

D. GROUNDING ELECTRODES
1. GROUND RODS: COPPER-CLAD STEEL; 3/4 INCH BY 10 FEET.
2. GROUND PLATES: 1/4 INCH THICK, HOT-DIP GALVANIZED.

EXECUTION

A. APPLICATIONS
1. CONDUCTORS: INSTALL SOLID CONDUCTOR FOR NO. 8 AWG AND SMALLER, AND STRANDED CONDUCTORS FOR NO. 6 AWG AND LARGER UNLESS OTHERWISE INDICATED.
2. UNDERGROUND GROUNDING CONDUCTORS: INSTALL BARE COPPER CONDUCTOR, NO. 3/0 AWG MINIMUM. BURY AT LEAST 24 INCHES BELOW GRADE.
3. ISOLATED GROUNDING CONDUCTORS: GREEN-COLORED INSULATION WITH CONTINUOUS YELLOW STRIPE. ON FEEDERS WITH ISOLATED GROUND, IDENTIFY GROUNDING CONDUCTOR WHERE VISIBLE TO NORMAL INSPECTION, WITH ALTERNATING BANDS OF GREEN AND YELLOW TAPE, WITH AT LEAST THREE BANDS OF GREEN AND TWO BANDS OF YELLOW.
4. GROUNDING BUS: INSTALL IN ELECTRICAL EQUIPMENT ROOMS, IN ROOMS HOUSING SERVICE EQUIPMENT, IN ALL IDF AND MDF ROOMS, AND ELSEWHERE AS INDICATED.
   a. INSTALL BUS HORIZONTALLY, ON INSULATED SPACERS 2 INCHES MINIMUM FROM WALL, 6 INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED.
   b. WHERE INDICATED ON BOTH SIDES OF DOORWAYS, ROUTE BUS UP TO TOP OF DOOR FRAME, ACROSS TOP OF DOORWAY, AND DOWN; CONNECT TO HORIZONTAL BUS.
5. CONDUCTOR TERMINATIONS AND CONNECTIONS:
   a. PIPE AND EQUIPMENT GROUNDING CONDUCTOR TERMINATIONS: BOLTED CONNECTORS.
   b. UNDERGROUND CONNECTIONS: WELDED CONNECTORS EXCEPT AT TEST WELLS AND AS OTHERWISE INDICATED.
   c. CONNECTIONS TO GROUND RODS AT TEST WELLS: BOLTED CONNECTORS.
   d. CONNECTIONS TO STRUCTURAL STEEL: WELDED CONNECTORS.

B. GROUNDING AT THE SERVICE
1. EQUIPMENT GROUNDING CONDUCTORS AND GROUNDING ELECTRODE CONDUCTORS SHALL BE CONNECTED TO THE GROUND BUS. INSTALL A MAIN BONDING JUMPER BETWEEN THE NEUTRAL AND GROUND BUSES.

C. EQUIPMENT GROUNDING
1. INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH ALL FEEDERS AND BRANCH CIRCUITS.
2. INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH THE FOLLOWING ITEMS, IN ADDITION TO THOSE REQUIRED BY NFPA 70:
   a. FEEDERS AND BRANCH CIRCUITS.
   b. LIGHTING CIRCUITS.
   c. RECEPTACLE CIRCUITS.
   d. SINGLE-PHASE MOTOR AND APPLIANCE BRANCH CIRCUITS.
   e. THREE-PHASE MOTOR AND APPLIANCE BRANCH CIRCUITS.
   f. FLEXIBLE RACEWAY RUNS.
   g. METAL-CLAD CABLE RUNS.
   h. COMPUTER AND RACK-MOUNTED ELECTRONIC EQUIPMENT CIRCUITS: INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTOR IN BRANCH-CIRCUIT RUNS FROM EQUIPMENT-AREA POWER PANELS AND POWER-DISTRIBUTION UNITS.
3. WHERE UNGROUNDED CONDUCTORS ARE INCREASED IN SIZE FROM THE MINIMUM SIZE THAT HAS SUFFICIENT AMPACITY FOR THE INTENDED INSTALLATION, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCREASED PER NEC 250.122(B).

D. INSTALLATION
1. GROUNDING CONDUCTORS: ROUTE ALONG SHORTEST AND STRAIGHTEST PATHS POSSIBLE UNLESS OTHERWISE INDICATED OR REQUIRED BY CODE. AVOID OBSTRUCTING ACCESS OR PLACING CONDUCTORS WHERE THEY MAY BE SUBJECTED TO STRAIN, IMPACT, OR DAMAGE.
2. GROUND RODS: DRIVE RODS UNTIL TOPS ARE 6 INCHES BELOW FINISHED FLOOR OR FINAL GRADE UNLESS OTHERWISE INDICATED.
   a. INTERCONNECT GROUND RODS WITH GROUNDING ELECTRODE CONDUCTOR BELOW GRADE AND AS OTHERWISE INDICATED. MAKE CONNECTIONS WITHOUT EXPOSING STEEL OR DAMAGING COATING IF ANY.
   b. USE EXOTHERMIC WELDS FOR ALL BELOW-GRADE CONNECTIONS.
   c. FOR GROUNDING ELECTRODE SYSTEM, INSTALL AT LEAST THREE RODS SPACED AT LEAST ONE-ROD LENGTH FROM EACH OTHER AND LOCATED AT LEAST THE SAME DISTANCE FROM OTHER GROUNDING ELECTRODES, AND CONNECT TO THE SERVICE GROUNDING ELECTRODE CONDUCTOR. SYSTEM SHALL MEET REQUIREMENTS OF NEC 250.52 AND 250.53.
3. TEST WELLS: GROUND ROD DRIVEN THROUGH DRILLED HOLE IN BOTTOM OF HANDHOLE. HANDHOLES SHALL BE AT LEAST 12 INCHES DEEP, WITH COVER.
   a. INSTALL AT LEAST ONE TEST WELL FOR EACH SERVICE UNLESS OTHERWISE INDICATED. INSTALL AT THE GROUND ROD ELECTRICALLY CLOSEST TO SERVICE ENTRANCE. SET TOP OF TEST WELL FLUSH WITH FINISHED GRADE OR FLOOR.
4. BONDING STRAPS AND JUMPERS: INSTALL IN LOCATIONS ACCESSIBLE FOR INSPECTION AND MAINTENANCE EXCEPT WHERE ROUTED THROUGH SHORT LENGTHS OF CONDUIT.
   a. BONDING TO STRUCTURE: BOND STRAPS DIRECTLY TO BASIC STRUCTURE, TAKING CARE NOT TO PENETRATE ANY ADJACENT PARTS.
   b. BONDING TO EQUIPMENT MOUNTED ON VIBRATION ISOLATION HANGERS AND SUPPORTS: INSTALL BONDING SO VIBRATION IS NOT TRANSMITTED TO RIGIDLY MOUNTED EQUIPMENT.
   c. USE EXOTHERMIC-WELDED CONNECTORS FOR OUTDOOR LOCATIONS; IF A DISCONNECT-TYPE CONNECTION IS REQUIRED, USE A BOLTED CLAMP.
5. GROUNDING AND BONDING FOR PIPING:
   a. METAL WATER SERVICE PIPE: INSTALL INSULATED COPPER GROUNDING CONDUCTORS, IN PVC CONDUIT OR METAL CONDUIT WHERE GROUND WIRE IS TIED TO CONDUIT, FROM BUILDING'S MAIN SERVICE EQUIPMENT, OR GROUNDING BUS, TO MAIN METAL WATER SERVICE ENTRANCES TO BUILDING. CONNECT GROUNDING CONDUCTORS TO MAIN METAL WATER SERVICE PIPES; USE A BOLTED CLAMP CONNECTOR OR BOLT A LUG-TYPE CONNECTOR TO A PIPE FLANGE BY USING ONE OF THE LUG BOLTS OF THE FLANGE. WHERE A DIELECTRIC MAIN WATER FITTING IS INSTALLED, CONNECT GROUNDING CONDUCTOR ON STREET SIDE OF FITTING. BOND METAL GROUNDING CONDUCTOR CONDUIT OR SLEEVE TO CONDUCTOR AT EACH END.
   b. WATER METER PIPING: USE BRAIDED-TYPE BONDING JUMPERS TO ELECTRICALLY BYPASS WATER METERS. CONNECT TO PIPE WITH A BOLTED CONNECTOR.
   c. BOND EACH ABOVEGROUND PORTION OF GAS PIPING SYSTEM DOWNSTREAM FROM EQUIPMENT SHUTOFF VALVE.
6. BONDING INTERIOR METAL DUCTS: BOND METAL AIR DUCTS TO EQUIPMENT GROUNDING CONDUCTORS OF ASSOCIATED FANS, BLOWERS, ELECTRIC HEATERS, AND AIR CLEANERS. INSTALL TINNED BONDING JUMPER TO BOND ACROSS FLEXIBLE DUCT CONNECTIONS TO ACHIEVE CONTINUITY.
7. GROUNDING FOR STEEL BUILDING STRUCTURE: INSTALL A DRIVEN GROUND ROD AT BASE OF EACH CORNER COLUMN AND AT INTERMEDIATE EXTERIOR COLUMNS AT DISTANCES NOT MORE THAN 60 FEET APART.
8. CONNECTIONS: MAKE CONNECTIONS SO POSSIBILITY OF GALVANIC ACTION OR ELECTROLYSIS IS MINIMIZED. SELECT CONNECTORS, CONNECTION HARDWARE, CONDUCTORS, AND CONNECTION METHODS SO METALS IN DIRECT CONTACT ARE GALVANICALLY COMPATIBLE.
   a. USE ELECTROPLATED OR HOT-TIN-COATED MATERIALS TO ENSURE HIGH CONDUCTIVITY AND TO MAKE CONTACT POINTS CLOSER IN ORDER OF GALVANIC SERIES.
   b. MAKE C

EXECUTION

A. RACEWAY APPLICATION
1. OUTDOORS: APPLY RACEWAY PRODUCTS AS SPECIFIED BELOW UNLESS OTHERWISE INDICATED:
   a. EXPOSED CONDUIT: GRC, IMC, RNC, TYPE EPC-80-PVC.
   b. CONCEALED CONDUIT, ABOVEGROUND: GRC, IMC AND EMT.
   c. UNDERGROUND CONDUIT: RNC, TYPE EPC-80-PVC, DIRECT BURIED AND CONCRETE ENCASED WHERE UNDER DRIVES AND PARKING AREAS.
   d. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID, OR MOTOR-DRIVEN EQUIPMENT): LFMC AND LFNC.
   e. BOXES AND ENCLOSURES, ABOVEGROUND: NEMA 250, TYPE 3R AND TYPE 4 OR 4X.
2. INDOORS: APPLY RACEWAY PRODUCTS AS SPECIFIED BELOW UNLESS OTHERWISE INDICATED:
   a. EXPOSED, NOT SUBJECT TO PHYSICAL DAMAGE: EMT.
   b. EXPOSED, NOT SUBJECT TO SEVERE PHYSICAL DAMAGE: EMT.
   c. EXPOSED AND SUBJECT TO SEVERE PHYSICAL DAMAGE: GRC. RACEWAY LOCATIONS INCLUDE THE FOLLOWING: LOADING DOCK, CORRIDORS USED FOR TRAFFIC OF MECHANIZED CARTS, FORKLIFTS, AND PALLET-HANDLING UNITS, MECHANICAL ROOMS.
   d. CONCEALED IN CEILINGS AND INTERIOR WALLS AND PARTITIONS: EMT.
   e. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID, OR MOTOR-DRIVEN EQUIPMENT): FMC, EXCEPT USE LFMC IN DAMP OR WET LOCATIONS.
   f. DAMP OR WET LOCATIONS: GRC.
   g. BOXES AND ENCLOSURES: NEMA 250, TYPE 1, EXCEPT USE NEMA 250, TYPE 4 STAINLESS STEEL IN INSTITUTIONAL AND COMMERCIAL KITCHENS AND DAMP OR WET LOCATIONS.
3. MINIMUM RACEWAY SIZE: 3/4-INCH TRADE SIZE.
4. RACEWAY FITTINGS: COMPATIBLE WITH RACEWAYS AND SUITABLE FOR USE AND LOCATION.
   a. RIGID AND INTERMEDIATE STEEL CONDUIT: USE THREADED RIGID STEEL CONDUIT FITTINGS UNLESS OTHERWISE INDICATED. COMPLY WITH NEMA FB 2.10.
   b. PVC EXTERNALLY COATED, RIGID STEEL CONDUITS: USE ONLY FITTINGS LISTED FOR USE WITH THIS TYPE OF CONDUIT. PATCH AND SEAL ALL JOINTS, NICKS, AND SCRAPES IN PVC COATING AFTER INSTALLING CONDUITS AND FITTINGS. USE SEALANT RECOMMENDED BY FITTING MANUFACTURER AND APPLY IN THICKNESS AND NUMBER OF COATS RECOMMENDED BY MANUFACTURER.
   c. EMT: USE SETSCREW, STEEL FITTINGS. COMPLY WITH NEMA FB 2.10.
   d. FLEXIBLE CONDUIT: USE ONLY FITTINGS LISTED FOR USE WITH FLEXIBLE CONDUIT. COMPLY WITH NEMA FB 2.20.
5. DO NOT INSTALL ALUMINUM CONDUITS, BOXES, OR FITTINGS IN CONTACT WITH CONCRETE OR EARTH.
6. INSTALL SURFACE RACEWAYS ONLY WHERE INDICATED ON DRAWINGS.

B. INSTALLATION
1. COMPLY WITH NECA 1 AND NECA 101 FOR INSTALLATION REQUIREMENTS EXCEPT WHERE REQUIREMENTS ON DRAWINGS OR IN THIS ARTICLE ARE STRICTER. COMPLY WITH NECA 102 FOR ALUMINUM CONDUITS. COMPLY WITH NFPA 70 LIMITATIONS FOR TYPES OF RACEWAYS ALLOWED IN SPECIFIC OCCUPANCIES AND NUMBER OF FLOORS.
2. KEEP RACEWAYS AT LEAST 6 INCHES AWAY FROM PARALLEL RUNS OF FLUES AND STEAM OR HOT-WATER PIPES. INSTALL HORIZONTAL RACEWAY RUNS ABOVE WATER AND STEAM PIPING.
3. ARRANGE STUB-UPS SO CURVED PORTIONS OF BENDS ARE NOT VISIBLE ABOVE FINISHED SLAB.
4. INSTALL NO MORE THAN THE EQUIVALENT OF THREE 90-DEGREE BENDS IN ANY CONDUIT RUN EXCEPT FOR CONTROL WIRING CONDUITS, FOR WHICH FEWER BENDS ARE ALLOWED. SUPPORT WITHIN 12 INCHES OF CHANGES IN DIRECTION.
5. CONCEAL CONDUIT AND EMT WITHIN FINISHED WALLS, CEILINGS, AND FLOORS UNLESS OTHERWISE INDICATED. INSTALL CONDUITS PARALLEL OR PERPENDICULAR TO BUILDING LINES.
6. SUPPORT CONDUIT WITHIN 12 INCHES OF ENCLOSURES TO WHICH ATTACHED.
7. ALL JUNCTION BOXES SHALL REMAIN ACCESSIBLE PER NEC REQUIREMENTS.
8. RACEWAYS EMBEDDED IN SLABS:
   RUN CONDUIT LARGER THAN 1-INCH TRADE SIZE, PARALLEL OR AT RIGHT ANGLES TO MAIN REINFORCEMENT. WHERE AT RIGHT ANGLES TO REINFORCEMENT, PLACE CONDUIT CLOSE TO SLAB SUPPORT. SECURE RACEWAYS TO REINFORCEMENT AT MAXIMUM 10-FOOTINTERVALS. ARRANGE RACEWAYS TO CROSS BUILDING EXPANSION JOINTS AT RIGHT ANGLES WITH EXPANSION FITTINGS. ARRANGE RACEWAYS TO KEEP A MINIMUM OF 3 INCHES OF CONCRETE COVER IN ALL DIRECTIONS.
   DO NOT EMBED THREADLESS FITTINGS IN CONCRETE UNLESS SPECIFICALLY APPROVED BY ARCHITECT FOR EACH SPECIFIC LOCATIONS. SOME AUTHORITIES HAVING JURISDICTION MAY NOT PERMIT NONMETALLIC TUBING IN FIRE-RATED SLABS IN SUBPARAGRAPH BELOW. CHANGE FROM ENT TO GRC OR IMC BEFORE RISING ABOVE FLOOR.
9. STUB-UPS TO ABOVE RECESSED CEILINGS: USE EMT, IMC, OR RMC FOR RACEWAYS.
   USE A CONDUIT BUSHING OR INSULATED FITTING TO TERMINATE STUB-UPS NOT TERMINATED IN HUBS OR IN AN ENCLOSURE.
10. THREADED CONDUIT JOINTS, EXPOSED TO WET, DAMP, CORROSIVE, OR OUTDOOR CONDITIONS: APPLY LISTED COMPOUND TO THREADS OF RACEWAY AND FITTINGS BEFORE MAKING UP JOINTS. FOLLOW COMPOUND MANUFACTURER'S WRITTEN INSTRUCTIONS.
11. COAT FIELD-CUT THREADS ON PVC-COATED RACEWAY WITH A CORROSION-PREVENTING CONDUCTIVE COMPOUND PRIOR TO ASSEMBLY.
12. RACEWAY TERMINATIONS AT LOCATIONS SUBJECT TO MOISTURE OR VIBRATION: USE INSULATING BUSHINGS TO PROTECT CONDUCTORS INCLUDING CONDUCTORS SMALLER THAN NO. 4 AWG.
13. TERMINATE THREADED CONDUITS INTO THREADED HUBS OR WITH LOCKNUTS ON INSIDE AND OUTSIDE OF BOXES OR CABINETS. INSTALL BUSHINGS ON CONDUITS UP TO 1-1/4-INCH TRADE SIZE AND INSULATED THROAT METAL BUSHINGS ON 1-1/2-INCH TRADE SIZE AND LARGER CONDUITS TERMINATED WITH LOCKNUTS. INSTALL INSULATED THROAT METAL GROUNDING BUSHINGS ON SERVICE CONDUITS.
14. INSTALL RACEWAYS SQUARE TO THE ENCLOSURE AND TERMINATE AT ENCLOSURES WITH LOCKNUTS. INSTALL LOCKNUTS HAND TIGHT PLUS 1/4 TURN MORE.
15. DO NOT RELY ON LOCKNUTS TO PENETRATE NONCONDUCTIVE COATINGS ON ENCLOSURES. REMOVE COATINGS IN THE LOCKNUT AREA PRIOR TO ASSEMBLING CONDUIT TO ENCLOSURE TO ASSURE A CONTINUOUS GROUND PATH.
16. CUT CONDUIT PERPENDICULAR TO THE LENGTH. FOR CONDUITS 2-INCH TRADE SIZE AND LARGER, USE ROLL CUTTER OR A GUIDE TO MAKE CUT STRAIGHT AND PERPENDICULAR TO THE LENGTH.
17. INSTALL PULL WIRES IN EMPTY RACEWAYS.
18. FLEXIBLE CONDUIT CONNECTIONS: COMPLY WITH NEMA RV 3. USE A MAXIMUM OF 72 INCHES OF FLEXIBLE CONDUIT FOR EQUIPMENT SUBJECT TO VIBRATION, NOISE TRANSMISSION, OR MOVEMENT; AND FOR TRANSFORMERS AND MOTORS.
   a. USE LFMC IN DAMP OR WET LOCATIONS SUBJECT TO SEVERE PHYSICAL DAMAGE.
   b. USE LFMC OR LFNC IN DAMP OR WET LOCATIONS NOT SUBJECT TO SEVERE PHYSICAL DAMAGE.
19. MOUNT BOXES AT HEIGHTS INDICATED ON DRAWINGS. IF MOUNTING HEIGHTS OF BOXES ARE NOT INDIVIDUALLY INDICATED, GIVE PRIORITY TO ADA REQUIREMENTS. INSTALL BOXES WITH HEIGHT MEASURED TO CENTER OF BOX UNLESS OTHERWISE INDICATED.
20. RECESSED BOXES IN MASONRY WALLS: SAW-CUT OPENING FOR BOX IN CENTER OF CELL OF MASONRY BLOCK, AND INSTALL BOX FLUSH WITH SURFACE OF WALL. PREPARE BLOCK SURFACES TO PROVIDE A FLAT SURFACE FOR A RAINTIGHT CONNECTION BETWEEN BOX AND COVER PLATE OR SUPPORTED EQUIPMENT AND BOX.
21. HORIZONTALLY SEPARATE BOXES MOUNTED ON OPPOSITE SIDES OF WALLS SO THEY ARE NOT IN THE SAME VERTICAL CHANNEL.
22. LOCATE BOXES SO THAT COVER OR PLATE WILL NOT SPAN DIFFERENT BUILDING FINISHES.
23. SUPPORT BOXES OF THREE GANGS OR MORE FROM MORE THAN ONE SIDE BY SPANNING TWO FRAMING MEMBERS OR MOUNTING ON BRACKETS SPECIFICALLY DESIGNED FOR THE PURPOSE.
24. FASTEN JUNCTION AND PULL BOXES TO OR SUPPORT FROM BUILDING STRUCTURE. DO NOT SUPPORT BOXES BY CONDUITS.

OVERCURRENT PROTECTIVE DEVICE COORDINATION

GENERAL

A. SUMMARY
1. THIS SECTION INCLUDES COMPUTER-BASED, FAULT-CURRENT, OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDIES, AND ARC FLASH HAZARD STUDY. PROTECTIVE DEVICES SHALL BE SET BASED ON RESULTS OF THE PROTECTIVE DEVICE COORDINATION STUDY.
2. THE POWER DISTRIBUTION EQUIPMENT MANUFACTURER SHALL CARRY IN THEIR BID TO THE ELECTRICAL SUBCONTRACTOR, A SUFFICIENT ALLOWANCE TO PROVIDE MODIFICATIONS TO THE EQUIPMENT, IF NECESSARY, BASED ON THE RESULTS OF THE STUDIES IDENTIFIED HEREIN. EQUIPMENT SHOULD NOT BE PROCURED UNTIL THE RESULTS OF THIS STUDY ARE CONFIRMED. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL MODIFICATIONS TO EQUIPMENT TO MATCH THIS STUDY WHERE EQUIPMENT ORDERS ARE PLACED PRIOR TO APPROVED RESULTS.

B. SUBMITTALS
1. PRODUCT DATA: FOR COMPUTER SOFTWARE PROGRAM TO BE USED FOR STUDIES. CERTIFY SOFTWARE COMPLIANCE WITH IEEE 399.
2. OTHER ACTION SUBMITTALS: THE FOLLOWING SUBMITTALS SHALL BE MADE AFTER THE APPROVAL PROCESS FOR SYSTEM PROTECTIVE DEVICES HAS BEEN COMPLETED. SUBMITTALS MAY BE IN DIGITAL FORM. (THE FOLLOWING SUBMITTALS SHALL BE MADE PRIOR TO GRANTING FINAL APPROVAL OF THE DISTRIBUTION EQUIPMENT SHOP DRAWINGS AND PRIOR TO RELEASE OF EQUIPMENT FOR MANUFACTURE.)
   a. COORDINATION-STUDY INPUT DATA, INCLUDING COMPLETED COMPUTER PROGRAM INPUT DATA SHEETS.
   b. STUDY AND EQUIPMENT EVALUATION REPORTS. THIS SHALL INCLUDE A LISTING OF ALL DEVICES AND PASS/FAIL EVALUATION FOR EACH DEVICE.
   c. COORDINATION-STUDY REPORT.
   d. ARC FLASH HAZARD STUDY

C. QUALITY ASSURANCE
1. STUDIES SHALL USE COMPUTER PROGRAMS THAT ARE DISTRIBUTED NATIONALLY AND ARE IN WIDE USE. SOFTWARE ALGORITHMS SHALL COMPLY WITH REQUIREMENTS OF STANDARDS AND GUIDES SPECIFIED IN THIS SECTION. MANUAL CALCULATIONS ARE NOT ACCEPTABLE.
2. COMPLY WITH IEEE 242 FOR SHORT-CIRCUIT CURRENTS AND COORDINATION TIME INTERVALS.
3. COMPLY WITH IEEE 399 FOR GENERAL STUDY PROCEDURES.

PRODUCTS

A. COMPUTER SOFTWARE DEVELOPERS AND REQUIREMENTS
1. BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE SKM SYSTEMS ANALYSIS, INC.
2. COMPLY WITH IEEE 399.
3. COMPUTER SOFTWARE PROGRAM SHALL BE CAPABLE OF PLOTTING AND DIAGRAMMING TIME-CURRENT-CHARACTERISTIC CURVES AS PART OF ITS OUTPUT. COMPUTER SOFTWARE PROGRAM SHALL REPORT DEVICE SETTINGS AND RATINGS OF ALL OVERCURRENT PROTECTIVE DEVICES AND SHALL DEMONSTRATE SELECTIVE COORDINATION BY COMPUTER-GENERATED, TIME-CURRENT COORDINATION PLOTS.

EXECUTION

A. EXAMINATION
1. COMPLETE STUDY PRIOR TO FINAL RELEASE OF EQUIPMENT FOR MANUFACTURE.
2. EXAMINE PROJECT OVERCURRENT PROTECTIVE DEVICE SUBMITTALS FOR COMPLIANCE WITH ELECTRICAL DISTRIBUTION SYSTEM COORDINATION REQUIREMENTS AND OTHER CONDITIONS AFFECTING PERFORMANCE. DEVICES TO BE COORDINATED ARE INDICATED ON DRAWINGS.
   a. PROCEED WITH COORDINATION STUDY ONLY AFTER RELEVANT EQUIPMENT SUBMITTALS HAVE BEEN ASSEMBLED. OVERCURRENT PROTECTIVE DEVICES THAT HAVE NOT BEEN SUBMITTED AND PRELIMINARILY APPROVED PRIOR TO COORDINATION STUDY MAY NOT BE USED IN STUDY.

B. POWER SYSTEM DATA
1. GATHER AND TABULATE THE FOLLOWING INPUT DATA TO SUPPORT COORDINATION STUDY:
   a. PRODUCT DATA FOR OVERCURRENT PROTECTIVE DEVICES SPECIFIED IN OTHER DIVISION 26 SECTIONS AND INVOLVED IN OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDIES. USE EQUIPMENT DESIGNATION TAGS THAT ARE CONSISTENT WITH ELECTRICAL DISTRIBUTION SYSTEM DIAGRAMS, OVERCURRENT PROTECTIVE DEVICE SUBMITTALS, INPUT AND OUTPUT DATA, AND RECOMMENDED DEVICE SETTINGS.
   b. IMPEDANCE OF UTILITY SERVICE ENTRANCE, COORDINATE WITH UTILITY.
   c. ELECTRICAL DISTRIBUTION SYSTEM DIAGRAM: IN HARD-COPY AND ELECTRONIC-COPY FORMATS, SHOWING THE FOLLOWING:
      - CIRCUIT-BREAKER AND FUSE-CURRENT RATINGS AND TYPES.
      - RELAYS AND ASSOCIATED POWER AND CURRENT TRANSFORMER RATINGS AND RATIOS.
      - TRANSFORMER KILOVOLT AMPERES, PRIMARY AND SECONDARY VOLTAGES, CONNECTION TYPE, IMPEDANCE, AND X/R RATIOS.
      - GENERATOR KILOVOLT AMPERES, SIZE, VOLTAGE, AND SOURCE IMPEDANCE.
      - CABLES: INDICATE CONDUIT MATERIAL, SIZES OF CONDUCTORS, CONDUCTOR MATERIAL, INSULATION, AND LENGTH.
      - BUSWAY AMPACITY AND IMPEDANCE.
      - MOTOR HORSEPOWER AND CODE LETTER DESIGNATION ACCORDING TO NEMA MG 1.
   d. DATA SHEETS TO SUPPLEMENT ELECTRICAL DISTRIBUTION SYSTEM DIAGRAM, CROSS-REFERENCED WITH TAG NUMBERS ON DIAGRAM, SHOWING THE FOLLOWING:
      - SPECIAL LOAD CONSIDERATIONS, INCLUDING STARTING INRUSH CURRENTS AND FREQUENT STARTING AND STOPPING.
      - TRANSFORMER CHARACTERISTICS, INCLUDING PRIMARY PROTECTIVE DEVICE, MAGNETIC INRUSH CURRENT, AND OVERLOAD CAPABILITY.
      - MOTOR FULL-LOAD CURRENT, LOCKED ROTOR CURRENT, SERVICE FACTOR, STARTING TIME, TYPE OF START, AND THERMAL-DAMAGE CURVE.
      - GENERATOR THERMAL-DAMAGE CURVE.
      - RATINGS, TYPES, AND SETTINGS OF UTILITY COMPANY'S OVERCURRENT PROTECTIVE DEVICES.
      - SPECIAL OVERCURRENT PROTECTIVE DEVICE SETTINGS OR TYPES STIPULATED BY UTILITY COMPANY.
      - TIME-CURRENT-CHARACTERISTIC CURVES OF DEVICES INDICATED TO BE COORDINATED.
      - MANUFACTURER, FRAME SIZE, INTERRUPTING RATING IN AMPERES RMS SYMMETRICAL, AMPERE OR CURRENT SENSOR RATING, LONG-TIME ADJUSTMENT RANGE, SHORT-TIME ADJUSTMENT RANGE, INSTANTANEOUS AND GFCI ADJUSTMENT RANGE FOR CIRCUIT BREAKERS.
      - MANUFACTURER AND TYPE, AMPERE-TAP ADJUSTMENT RANGE, TIME-DELAY ADJUSTMENT RANGE, INSTANTANEOUS ATTACHMENT ADJUSTMENT RANGE, AND CURRENT TRANSFORMER RATIO FOR OVERCURRENT RELAYS.
      - PANELBOARDS, SWITCHGEAR, SWITCHBOARDS AND MOTOR-CONTROL CENTER AMPACITY, AND INTERRUPTING RATING IN AMPERES RMS SYMMETRICAL.

C. FAULT-CURRENT STUDY
1. CALCULATE THE MAXIMUM AVAILABLE SHORT-CIRCUIT CURRENT IN AMPERES RMS SYMMETRICAL AT CIRCUIT-BREAKER POSITIONS OF THE ELECTRICAL POWER DISTRIBUTION SYSTEM. THE CALCULATION SHALL BE FOR A CURRENT IMMEDIATELY AFTER INITIATION AND FOR A THREE-PHASE BOLTED SHORT CIRCUIT AT EACH OF THE FOLLOWING:
   a. SWITCHBOARD BUS.
   b. DISTRIBUTION PANELBOARD.
   c. AUTOMATIC TRANSFER SWITCH.
   d. FIRE PUMP CONTROLLER.
   e. BRANCH CIRCUIT PANELBOARDS.
2. STUDY ELECTRICAL DISTRIBUTION SYSTEM FROM NORMAL AND ALTERNATE POWER SOURCES THROUGHOUT ELECTRICAL DISTRIBUTION SYSTEM FOR PROJECT. INCLUDE STUDIES OF SYSTEM-SWITCHING CONFIGURATIONS AND ALTERNATE OPERATIONS THAT COULD RESULT IN MAXIMUM FAULT CONDITIONS.
3. CALCULATE MOMENTARY AND INTERRUPTING DUTIES ON THE BASIS OF MAXIMUM AVAILABLE FAULT CURRENT.
4. STUDY REPORT:
   a. SHOW CALCULATED X/R RATIOS AND EQUIPMENT INTERRUPTING RATING (1/2-CYCLE) FAULT CURRENTS ON ELECTRICAL DISTRIBUTION SYSTEM DIAGRAM.
   b. SHOW INTERRUPTING (5-CYCLE) AND TIME-DELAYED CURRENTS (6 CYCLES AND ABOVE) ON MEDIUM- VOLTAGE BREAKERS AS NEEDED TO SET RELAYS AND ASSESS THE SENSITIVITY OF OVERCURRENT RELAYS.
5. EQUIPMENT EVALUATION REPORT:
   a. FOR 600-V OVERCURRENT PROTECTIVE DEVICES, ENSURE THAT INTERRUPTING RATINGS ARE EQUAL TO OR HIGHER THAN CALCULATED 1/2-CYCLE SYMMETRICAL FAULT CURRENT.
   b. FOR DEVICES AND EQUIPMENT RATED FOR ASYMMETRICAL FAULT CURRENT, APPLY MULTIPLICATION FACTORS LISTED IN THE STANDARDS TO 1/2-CYCLE SYMMETRICAL FAULT CURRENT.
   c. VERIFY ADEQUACY OF PHASE CONDUCTORS AT MAXIMUM THREE-PHASE BOLTED FAULT CURRENTS; VERIFY ADEQUACY OF EQUIPMENT GROUNDING CONDUCTORS AND GROUNDING ELECTRODE CONDUCTORS AT MAXIMUM GROUND-FAULT CURRENTS. ENSURE THAT SHORT-CIRCUIT WITHSTAND RATINGS ARE EQUAL TO OR HIGHER THAN CALCULATED 1/2-CYCLE SYMMETRICAL FAULT CURRENT.

D. COORDINATION STUDY
1. PERFORM COORDINATION STUDY USING APPROVED COMPUTER SOFTWARE PROGRAM. PREPARE A WRITTEN REPORT USING RESULTS OF FAULT-CURRENT STUDY. COMPLY WITH IEEE 399.
   a. CALCULATE THE MAXIMUM AND MINIMUM 1/2-CYCLE SHORT-CIRCUIT CURRENTS.
   b. CALCULATE THE MAXIMUM AND MINIMUM INTERRUPTING DUTY (5 CYCLES TO 2 SECONDS) SHORT-CIRCUIT CURRENTS.
   c. CALCULATE THE MAXIMUM AND MINIMUM GROUND-FAULT CURRENTS.
2. COMPLY WITH IEEE 241 AND IEEE 242 RECOMMENDATIONS FOR FAULT CURRENTS AND TIME INTERVALS.
3. TRANSFORMER PRIMARY OVERCURRENT PROTECTIVE DEVICES:
   a. DEVICE SHALL NOT OPERATE IN RESPONSE TO THE FOLLOWING:
      - INRUSH CURRENT WHEN FIRST ENERGIZED.
      - SELF-COOLED, FULL-LOAD CURRENT OR FORCED-AIR-COOLED, FULL-LOAD CURRENT, WHICHEVER IS SPECIFIED FOR THAT TRANSFORMER.
      - PERMISSIBLE TRANSFORMER OVERLOADS ACCORDING TO IEEE C57.96 IF REQUIRED BY UNUSUAL LOADING OR EMERGENCY CONDITIONS.
   b. DEVICE SETTINGS SHALL PROTECT TRANSFORMERS ACCORDING TO IEEE C57.12.00, FOR FAULT CURRENTS.
4. CONDUCTOR PROTECTION: PROTECT CABLES AGAINST DAMAGE FROM FAULT CURRENTS ACCORDING TO ICEA P-32-382, ICEA P-45-482, AND CONDUCTOR MELTING CURVES IN IEEE 242. DEMONSTRATE THAT EQUIPMENT WITHSTANDS THE MAXIMUM SHORT-CIRCUIT CURRENT FOR A TIME EQUIVALENT TO THE TRIPPING TIME OF THE PRIMARY RELAY PROTECTION OR TOTAL CLEARING TIME OF THE FUSE. TO DETERMINE TEMPERATURES THAT DAMAGE INSULATION, USE CURVES FROM CABLE MANUFACTURERS OR FROM LISTED STANDARDS INDICATING CONDUCTOR SIZE AND SHORT-CIRCUIT CURRENT.
5. COORDINATION-STUDY REPORT: PREPARE A WRITTEN REPORT INDICATING THE FOLLOWING RESULTS OF COORDINATION STUDY:
   a. TABULAR FORMAT OF SETTINGS SELECTED FOR OVERCURRENT PROTECTIVE DEVICES:
      - DEVICE TAG.
      - RELAY-CURRENT TRANSFORMER RATIOS; AND TAP, TIME-DIAL, AND INSTANTANEOUS-PICKUP VALUES.
      - CIRCUIT-BREAKER SENSOR RATING; AND LONG-TIME, SHORT-TIME, AND INSTANTANEOUS SETTINGS.
      - FUSE-CURRENT RATING AND TYPE.
      - GROUND-FAULT RELAY-PICKUP AND TIME-DELAY SETTINGS.
   b. COORDINATION CURVES: PREPARED TO DETERMINE SETTINGS OF OVERCURRENT PROTECTIVE DEVICES TO ACHIEVE SELECTIVE COORDINATION. GRAPHICALLY ILLUSTRATE THAT ADEQUATE TIME SEPARATION EXISTS BETWEEN DEVICES INSTALLED IN SERIES, INCLUDING POWER UTILITY COMPANY'S UPSTREAM DEVICES. PREPARE SEPARATE SETS OF CURVES FOR THE SWITCHING SCHEMES AND FOR EMERGENCY PERIODS WHERE THE POWER SOURCE IS LOCAL GENERATION. SHOW THE FOLLOWING INFORMATION:
      - DEVICE TAG.
      - VOLTAGE AND CURRENT RATIO FOR CURVES.
      - THREE-PHASE AND SINGLE-PHASE DAMAGE POINTS FOR EACH TRANSFORMER.
      - NO DAMAGE, MELTING, AND CLEARING CURVES FOR FUSES.
      - CABLE DAMAGE CURVES.
      - TRANSFORMER INRUSH POINTS.
      - MAXIMUM FAULT-CURRENT CUTOFF POINT.
   6. COMPLETED DATA SHEETS FOR SETTING OF OVERCURRENT PROTECTIVE DEVICES.

E. ARC FLASH STUDY
1. COMPLETE AN ARC FLASH ANALYSIS FOR ALL ELECTRICAL EQUIPMENT INCLUDED IN THE FAULT-CURRENT AND COORDINATION STUDIES. THE ARC FLASH ANALYSIS SHALL BE COMPLETED USING THE APPROVED COMPUTER SOFTWARE PROGRAM.
2. THE ANALYSIS SHALL BE PERFORMED UNDER WORST-CASE ARC-FLASH CONDITIONS, AND THE FINAL REPORT SHALL DESCRIBE, WHEN APPLICABLE, HOW THESE CONDITIONS DIFFER FROM WORST-CASE BOLTED FAULT CONDITIONS.
3. ANALYSIS SHALL BE PERFORMED IN COMPLIANCE WITH IEEE STANDARD 1584 - IEEE GUIDE FOR PERFORMING ARC-FLASH CALCULATIONS.
4. REPORT SHALL INCLUDE RECOMMENDATIONS FOR REDUCING ARC-FLASH LEVELS AND ENHANCING WORKER SAFETY.
5. STUDY SHALL INCLUDE ALL MAJOR ELECTRICAL DISTRIBUTION EQUIPMENT AND DOWNSTREAM DISTRIBUTION AND UTILIZATION EQUIPMENT. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO:
   a. SWITCHBOARDS
   b. DISTRIBUTION PANELBOARDS
   c. LIGHTING AND APPLIANCE PANELBOARDS
   d. DISCONNECT SWITCHES
   e. CONTROLLER EQUIPMENT SUCH AS VARIABLE FREQUENCY DRIVES
   f. FUSES AND CIRCUIT BREAKERS
   g. GENERATOR
   h. AUTOMATIC TRANSFER SWITCHES
   i. FEEDERS
6. STUDY REPORT
   a. SUMMARIZE THE RESULTS OF THE ARC FLASH ANALYSIS IN A TABLE WHICH IDENTIFIES THE FOLLOWING:
   b. BUS ARCING FAULT (KA)
   c. PROTECTIVE DEVICE ARCING FAULT (KA)
   d. TRIP/DELAY TIME (SEC.)
   e. ARC FLASH BOUNDARY (IN.)
   f. WORKING DISTANCE (IN.)
   g. INCIDENT ENERGY (CAL/CM2/)
   h. REQUIRED PROTECTIVE FR CLOTHING CATEGORY

F. ARC FLASH WARNING LABELS
1. PROVIDE A 3.5 INCH BY 5 INCH THERMAL TRANSFER TYPE LABEL OF HIGH ADHESION POLYESTER FOR EACH WORK LOCATION ANALYZED. LABELS SHALL MEET REQUIREMENTS OF NFPA 70E.
2. THE LABEL SHALL HAVE AN ORANGE HEADER WITH THE WORDING, "WARNING, ARC FLASH HAZARD, APPROPRIATE PPE REQUIRED." AND SHALL INCLUDE THE FOLLOWING INFORMATION:
   a. LOCATION DESIGNATION
   b. NOMINAL VOLTAGE
   c. FLASH PROTECTION BOUNDARY
   d. HAZARD RISK CATEGORY/PPE LEVEL
   e. INCIDENT ENERGY
   f. WORKING DISTANCE - LIMITED APPROACH
   g. ENGINEERING REPORT NUMBER, REVISION NUMBER, AND ISSUE DATE.
3. LABELS SHALL BE MACHINE PRINTED, WITH NO FIELD MARKING.
4. ARC FLASHING LABELS SHALL BE PROVIDED IN THE FOLLOWING MANNER, AND ALL LABELS SHALL BE BASED ON RECOMMENDED OVERCURRENT DEVICE SETTINGS.
   a. FOR EACH 480 AND APPLICABLE 208 VOLT PANELBOARDS AND DISCONNECTS, ONE ARC FLASH LABEL SHALL BE PROVIDED.
   b. FOR EACH LOW VOLTAGE SWITCHBOARD, ONE ARC FLASH LABEL SHALL BE PROVIDED.
   c. SURFACE MOUNTED PANELS SHALL BE LABELED ON THE OUTSIDE. FLUSH MOUNTED PANELBOARDS SHALL BE LABELED ON THE PANEL INTERIOR.

G. DEMONSTRATION AND TRAINING

H. THE EQUIPMENT VENDOR SHALL TRAIN PERSONNEL OF THE POTENTIAL ARC FLASH HAZARDS ASSOCIATED WITH WORKING ON ENERGIZED EQUIPMENT (MINIMUM OF 4 HOURS). MAINTENANCE PROCEDURES IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 70E, STANDARD FOR ELECTRICAL SAFETY REQUIREMENTS FOR EMPLOYEE WORKPLACES, SHALL BE PROVIDED IN THE EQUIPMENT MANUALS.

LIGHTING CONTROL DEVICES

GENERAL

A. SUBMITTALS
1. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.

B. COORDINATION
1. COORDINATE LAYOUT AND INSTALLATION OF CEILING-MOUNTED DEVICES WITH OTHER CONSTRUCTION THAT PENETRATES CEILINGS OR IS SUPPORTED BY THEM, INCLUDING LIGHT FIXTURES, HVAC EQUIPMENT, SMOKE DETECTORS, FIRE-SUPPRESSION SYSTEM, AND PARTITION ASSEMBLIES.

PRODUCTS

A. TIME SWITCHES
1. LOW VOLTAGE DIGITAL TIME SWITCH: SPECIFIC PRODUCT AS INDICATED ON DRAWINGS.
   a. THE DIGITAL TIME SWITCH SHALL BE PROGRAMMABLE TO TURN LOADS OFF AFTER A PRESET TIME.
   b. TIME SWITCH SHALL BE A FIVE WIRE, COMPLETELY SELF CONTAINED CONTROL SYSTEM THAT REPLACES A STANDARD TOGGLE SWITCH. SWITCHING MECHANISM SHALL BE A 30V, 1A AIR GAP RELAY.
   c. TIME SWITCH SHALL OPERATE AT EITHER 24 VAC OR 24 VDC, 60 HZ.
   d. TIME SWITCH SHALL HAVE NO MINIMUM LOAD REQUIREMENT.
   e. TIME SWITCH SHALL BE 6-BUTTON WITH 30 MINUTE/1HOUR/2HOUR/4 HOUR/8 HOUR/12 HOUR OPTIONS, WITH EACH OPTION ENGRAVED ON THE BUTTONS TO REFLECT THOSE TIMES.
   f. TIME SWITCH SHALL GIVE VISUAL WARNING AT 5 MINUTES UNTIL LIGHTS TURN OFF, AND AUDIBLE/VISUAL WARNING AT 1 MINUTE BEFORE THE LIGHTS TURN OFF.
   g. TIME SWITCH SHALL HAVE THE OPTION FOR A BEEP WARNING THAT SHALL SOUND EVERY FIVE SECONDS ONCE THE TIME SWITCH COUNTDOWN REACHES ONE MINUTE.
   h. TIME SWITCH SHALL HAVE MANUAL FEATURE FOR TIMER RESET WHERE PRESSING THE ON/OFF SWITCH FOR MORE THAN 2 SECONDS RESETS THE TIMER TO THE PROGRAMMED TIME-OUT PERIOD.
   i. TIME SWITCH SHALL BE CAPABLE OF OPERATING AS AN ON/OFF SWITCH.
   j. TIME SWITCH CAN OPERATE WITH POWER PACKS IN ORDER TO CONTROL ADDITIONAL LOADS.

B. ELECTRONIC TIME CLOCKS
1. ELECTRONIC TIME SWITCHES: DIGITAL, PROGRAMMABLE, WITH ALPHANUMERIC DISPLAY; COMPLYING WITH UL 917.
2. LISTED AND LABELED IN ACCORDANCE WITH NFPA 70, BY A QUALIFIED ELECTRICAL TESTING LABORATORY RECOGNIZED BY AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
3. PROGRAMS:
4. EIGHT CHANNELS; EACH CHANNEL IS INDIVIDUALLY PROGRAMMABLE WITH 40 ON-OFF OPERATIONS PER WEEK AND AN ANNUAL HOLIDAY SCHEDULE THAT OVERRIDES THE WEEKLY OPERATION ON HOLIDAYS.
5. CIRCUITRY: ALLOW CONNECTION OF A PHOTOELECTRIC RELAY AS SUBSTITUTE FOR ON-OFF FUNCTION OF A PROGRAM.
6. ASTRONOMIC TIME: ALL CHANNELS.
7. AUTOMATIC DAYLIGHT SAVINGS TIME CHANGEOVER.
8. BATTERY BACKUP: NOT LESS THAN SEVEN DAYS RESERVE, TO MAINTAIN SCHEDULES AND TIME CLOCK.

C. OUTDOOR PHOTOELECTRIC SWITCHES
1. DESCRIPTION: SOLID STATE, WITH DPST DRY CONTACTS RATED FOR 1800-VA TUNGSTEN OR 1000-VA INDUCTIVE, TO OPERATE CONNECTED RELAY, CONTACTOR COILS, OR MICROPROCESSOR INPUT; COMPLYING WITH UL 773A. ADJUSTABLE IN 15 DEGREE INCREMENTS. SPECIFIC PRODUCT AS INDICATED ON DRAWINGS.

D. DAYLIGHTING SENSORS
1. DESCRIPTION: SOLID-STATE, LIGHT-LEVEL SENSOR UNIT, WITH SEPARATE RELAY UNIT, TO DETECT CHANGES IN LIGHTING LEVELS THAT ARE PERCEIVED BY THE EYE. COMPATIBLE WITH LIGHTING SYSTEM AS SPECIFIED.

E. INDOOR OCCUPANCY AND VACANCY SENSORS
1. GENERAL DESCRIPTION: WALL- OR CEILING-MOUNTING, SOLID-STATE UNITS WITH A SEPARATE RELAY UNIT. SPECIFIC PRODUCT AS INDICATED ON DRAWINGS. SENSORS SH

LOW-VOLTAGE DISTRIBUTION TRANSFORMERS

GENERAL

A. SUBMITTALS
1. PRODUCT DATA: FOR EACH TYPE OF PRODUCT.
   a. INCLUDE CONSTRUCTION DETAILS, MATERIAL DESCRIPTIONS, DIMENSIONS OF INDIVIDUAL COMPONENTS AND PROFILES, AND FINISHES FOR EACH TYPE AND SIZE OF TRANSFORMER.
   b. INCLUDE RATED NAMEPLATE DATA, CAPACITIES, WEIGHTS, DIMENSIONS, MINIMUM CLEARANCES, INSTALLED DEVICES AND FEATURES, AND PERFORMANCE FOR EACH TYPE AND SIZE OF TRANSFORMER.

PRODUCTS

A. GENERAL TRANSFORMER REQUIREMENTS
1. DESCRIPTION: FACTORY-ASSEMBLED AND -TESTED, AIR-COOLED UNITS FOR 60-HZ SERVICE.
2. COMPLY WITH NFPA 70.
   a. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND USE.
3. TRANSFORMERS RATED 15 KVA AND LARGER:
   a. COMPLY WITH 10 CFR 431 (DOE 2016) EFFICIENCY LEVELS.
   b. MARKED AS COMPLIANT WITH DOE 2016 EFFICIENCY LEVELS BY AN NRTL.

B. DISTRIBUTION TRANSFORMERS
1. COMPLY WITH NFPA 70, AND LIST AND LABEL AS COMPLYING WITH UL 1561.
2. CORES: ELECTRICAL GRADE, NON-AGING SILICON STEEL WITH HIGH PERMEABILITY AND LOW HYSTERESIS LOSSES.
   a. ONE LEG PER PHASE.
   b. CORE VOLUME SHALL ALLOW EFFICIENT TRANSFORMER OPERATION AT 10 PERCENT ABOVE THE NOMINAL TAP VOLTAGE.
   c. GROUNDED TO ENCLOSURE.
3. COILS: CONTINUOUS WINDINGS WITHOUT SPLICES EXCEPT FOR TAPS.
   a. COIL MATERIAL: COPPER/ALUMINUM
   b. INTERNAL COIL CONNECTIONS: BRAZED OR PRESSURE TYPE.
4. ENCAPSULATION: TRANSFORMERS SMALLER THAN 30 KVA SHALL HAVE CORE AND COILS COMPLETELY RESIN ENCAPSULATED.
5. ENCLOSURE: VENTILATED.
   a. NEMA 250, TYPE 2 TYPE 3R: CORE AND COIL SHALL BE ENCAPSULATED WITHIN RESIN COMPOUND USING A VACUUM-PRESSURE IMPREGNATION PROCESS TO SEAL OUT MOISTURE AND AIR.
   b. KVA RATINGS: BASED ON CONVECTION COOLING ONLY AND NOT RELYING ON AUXILIARY FANS.
   c. WIRING COMPARTMENT: SIZED FOR CONDUIT ENTRY AND WIRING INSTALLATION.
   d. FINISH: COMPLY WITH NEMA 250.
      - FINISH COLOR: GRAY. ANSI 49 OR GRAY ANSI 61 GRAY WEATHER-RESISTANT ENAMEL.
6. TAPS FOR TRANSFORMERS 3 KVA AND SMALLER: NONE.
7. TAPS FOR TRANSFORMERS 7.5 TO 24 KVA: ONE 5 PERCENT TAP ABOVE AND ONE 5 PERCENT TAP BELOW NORMAL FULL CAPACITY.
8. TAPS FOR TRANSFORMERS 25 KVA AND LARGER: TWO 2.5 PERCENT TAPS ABOVE AND FOUR 2.5 PERCENT TAPS BELOW NORMAL FULL CAPACITY.
9. INSULATION CLASS, SMALLER THAN 30 KVA: 180 DEG C, UL-COMPONENT-RECOGNIZED INSULATION SYSTEM WITH A MAXIMUM OF 115 DEG C RISE ABOVE 40 DEG C AMBIENT TEMPERATURE.
10. INSULATION CLASS, 30 KVA AND LARGER: 220 DEG C, UL-COMPONENT-RECOGNIZED INSULATION SYSTEM WITH A MAXIMUM OF 150 DEG C RISE ABOVE 40 DEG C AMBIENT TEMPERATURE.
11. GROUNDING: PROVIDE GROUND-BAR KIT OR A GROUND BAR INSTALLED ON THE INSIDE OF THE TRANSFORMER ENCLOSURE.
12. ELECTROSTATIC SHIELDING: EACH WINDING SHALL HAVE AN INDEPENDENT, SINGLE, FULL-WIDTH COPPER ELECTROSTATIC SHIELD ARRANGED TO MINIMIZE INTERWINDING CAPACITANCE.
   a. ARRANGE COIL LEADS AND TERMINAL STRIPS TO MINIMIZE CAPACITIVE COUPLING BETWEEN INPUT AND OUTPUT TERMINALS.
   b. INCLUDE SPECIAL TERMINAL FOR GROUNDING THE SHIELD.
13. WALL BRACKETS: WALL BRACKETS FABRICATED FROM DESIGN DRAWINGS SIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER.
14. SOUND LEVEL REQUIREMENTS SHALL BE A MINIMUM OF 3 DB BELOW REQUIREMENTS OF NEMA ST-20.
15. REFER TO DRAWINGS FOR SPECIALTY REQUIREMENTS OF TRANSFORMERS OF K-RATED TYPES.
16. K-FACTOR RATING: TRANSFORMERS INDICATED TO BE K-FACTOR RATED SHALL COMPLY WITH UL 1561 REQUIREMENTS FOR NONSINUSOIDAL LOAD CURRENT-HANDLING CAPABILITY TO THE DEGREE DEFINED BY DESIGNATED K-FACTOR.
   a. UNIT SHALL NOT OVERHEAT WHEN CARRYING FULL-LOAD CURRENT WITH HARMONIC DISTORTION CORRESPONDING TO DESIGNATED K-FACTOR, WITHOUT EXCEEDING THE INDICATED INSULATION CLASS IN A 40 DEG C MAXIMUM AMBIENT AND A 24-HOUR AVERAGE AMBIENT OF 30 DEG C.
   b. INDICATE VALUE OF K-FACTOR ON TRANSFORMER NAMEPLATE.
   c. UNIT SHALL COMPLY WITH REQUIREMENTS OF DOE 2016 EFFICIENCY LEVELS WHEN TESTED ACCORDING TO NEMA TP 2 WITH A K-FACTOR EQUAL TO ONE.
   d. NEUTRAL RATED 200 PERCENT OF FULL LOAD CURRENT FOR K-RATED TRANSFORMERS

EXECUTION

A. EXAMINATION
1. EXAMINE CONDITIONS FOR COMPLIANCE WITH ENCLOSURE- AND AMBIENT-TEMPERATURE REQUIREMENTS FOR EACH TRANSFORMER.
2. VERIFY THAT FIELD MEASUREMENTS ARE AS NEEDED TO MAINTAIN WORKING CLEARANCES REQUIRED BY NFPA 70 AND MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. ENVIRONMENT: ENCLOSURES SHALL BE RATED FOR THE ENVIRONMENT IN WHICH THEY ARE LOCATED. COVERS FOR NEMA 250, TYPE 4X ENCLOSURES SHALL NOT CAUSE ACCESSIBILITY PROBLEMS.

B. INSTALLATION
1. INSTALL WALL-MOUNTED TRANSFORMERS LEVEL AND PLUMB WITH WALL BRACKETS FABRICATED FROM DESIGN DRAWINGS SIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER.
   a. COORDINATE INSTALLATION OF WALL-MOUNTED AND STRUCTURE-HANGING SUPPORTS WITH ACTUAL TRANSFORMER PROVIDED.
   b. BRACE WALL-MOUNTED TRANSFORMERS AS SPECIFIED IN SECTION 260548.16 "SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS."
2. INSTALL TRANSFORMERS LEVEL AND PLUMB ON A CONCRETE BASE WITH VIBRATION-DAMPENING SUPPORTS. LOCATE TRANSFORMERS AWAY FROM CORNERS AND NOT PARALLEL TO ADJACENT WALL SURFACE.
3. CONSTRUCT CONCRETE BASES AND ANCHOR FLOOR-MOUNTED TRANSFORMERS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS, AND SEISMIC CODES APPLICABLE TO PROJECT.
   a. COORDINATE SIZE AND LOCATION OF CONCRETE BASES WITH ACTUAL TRANSFORMER PROVIDED. CAST ANCHOR-BOLT INSERTS INTO BASES. CONCRETE, REINFORCEMENT, AND FORMWORK REQUIREMENTS ARE SPECIFIED WITH CONCRETE.

C. CONNECTIONS
1. GROUND EQUIPMENT ACCORDING TO SECTION 260526 "GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS."
2. CONNECT WIRING ACCORDING TO SECTION 260519 "LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES."
3. TIGHTEN ELECTRICAL CONNECTORS AND TERMINALS ACCORDING TO MANUFACTURER'S PUBLISHED TORQUE-TIGHTENING VALUES. IF MANUFACTURER'S TORQUE VALUES ARE NOT INDICATED, USE THOSE SPECIFIED IN UL 486A-486B.
4. PROVIDE FLEXIBLE CONNECTIONS AT ALL CONDUIT AND CONDUCTOR TERMINATIONS AND SUPPORTS TO ELIMINATE SOUND AND VIBRATION TRANSMISSION TO THE BUILDING STRUCTURE.

D. CLEANING
1. VACUUM DIRT AND DEBRIS; DO NOT USE COMPRESSED AIR TO ASSIST IN CLEANING.

PANELBOARDS

GENERAL

A. SUBMITTALS
1. PRODUCT DATA: FOR EACH TYPE OF PANELBOARD.
   a. INCLUDE MATERIALS, SWITCHING AND OVERCURRENT PROTECTIVE DEVICES, SPDS, ACCESSORIES, AND COMPONENTS INDICATED.
   b. INCLUDE DIMENSIONS AND MANUFACTURERS' TECHNICAL DATA ON FEATURES, PERFORMANCE, ELECTRICAL CHARACTERISTICS, RATINGS, AND FINISHES.
   c. PANELBOARD SCHEDULES: FOR INSTALLATION IN PANELBOARDS. SUBMIT FINAL VERSIONS AFTER LOAD BALANCING.

B. MAINTENANCE MATERIAL SUBMITTALS
1. FURNISH EXTRA MATERIALS THAT MATCH PRODUCTS INSTALLED AND THAT ARE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE AND IDENTIFIED WITH LABELS DESCRIBING CONTENTS.
   a. KEYS: TWO SPARES FOR EACH TYPE OF PANELBOARD CABINET LOCK.
   b. CIRCUIT BREAKERS INCLUDING GFCI AND GFEP TYPES: TWO SPARES FOR EACH PANELBOARD.
   c. FUSES FOR FUSED SWITCHES: EQUAL TO 10 PERCENT OF QUANTITY INSTALLED FOR EACH SIZE AND TYPE, BUT NO FEWER THAN THREE OF EACH SIZE AND TYPE.
   d. FUSES FOR FUSED POWER-CIRCUIT DEVICES: EQUAL TO 10 PERCENT OF QUANTITY INSTALLED FOR EACH SIZE AND TYPE, BUT NO FEWER THAN THREE OF EACH SIZE AND TYPE.

PRODUCTS

A. PANELBOARDS COMMON REQUIREMENTS
1. ENCLOSURES: FLUSH AND SURFACE-MOUNTED, DEAD-FRONT CABINETS.
   a. RATED FOR ENVIRONMENTAL CONDITIONS AT INSTALLED LOCATION.
      - INDOOR DRY AND CLEAN LOCATIONS: NEMA 250, TYPE 1.
      - OUTDOOR LOCATIONS: NEMA 250, TYPE 3R.
      - KITCHEN WASH-DOWN AREAS: NEMA 250, TYPE 4X, STAINLESS STEEL.
      - OTHER WET OR DAMP INDOOR LOCATIONS: NEMA 250, TYPE 4.
      - INDOOR LOCATIONS SUBJECT TO DUST, FALLING DIRT, AND DRIPPING NONCORROSIVE LIQUIDS: NEMA 250, TYPE 5 OR TYPE 12.
   b. HEIGHT: 84 INCHES MAXIMUM.
   c. FRONT: SECURED TO BOX WITH CONCEALED TRIM CLAMPS. FOR SURFACE-MOUNTED FRONTS, MATCH BOX DIMENSIONS; FOR FLUSH-MOUNTED FRONTS, OVERLAP BOX. TRIMS SHALL COVER ALL LIVE PARTS AND SHALL HAVE NO EXPOSED HARDWARE.
   d. HINGED FRONT COVER: ENTIRE FRONT TRIM HINGED TO BOX AND WITH STANDARD DOOR WITHIN HINGED TRIM COVER. TRIMS SHALL COVER ALL LIVE PARTS AND SHALL HAVE NO EXPOSED HARDWARE.
   e. SKIRT FOR SURFACE-MOUNTED PANELBOARDS: SAME GAGE AND FINISH AS PANELBOARD FRONT WITH FLANGES FOR ATTACHMENT TO PANELBOARD, WALL, AND CEILING OR FLOOR.
2. INCOMING MAINS SHALL BE CONVERTIBLE BETWEEN TOP AND BOTTOM. MAIN LUG INTERIORS UP TO 400 AMPERES SHALL BE FIELD CONVERTIBLE TO MAIN BREAKER.
3. PHASE, NEUTRAL, AND GROUND BUSES:
   a. MATERIAL: HARD-DRAWN COPPER, 98 PERCENT CONDUCTIVITY. PLATING SHALL RUN ENTIRE LENGTH OF BUS. BUS SHALL BE FULLY RATED THE ENTIRE LENGTH.
   b. INTERIORS SHALL BE FACTORY ASSEMBLED INTO A UNIT. REPLACING SWITCHING AND PROTECTIVE DEVICES SHALL NOT DISTURB ADJACENT UNITS OR REQUIRE REMOVING THE MAIN BUS CONNECTORS.
   c. EQUIPMENT GROUND BUS: ADEQUATE FOR FEEDER AND BRANCH-CIRCUIT EQUIPMENT GROUNDING CONDUCTORS; BONDED TO BOX.
4. CONDUCTOR CONNECTORS: SUITABLE FOR USE WITH CONDUCTOR MATERIAL AND SIZES.
   a. MATERIAL: HARD-DRAWN COPPER, 98 PERCENT CONDUCTIVITY.
   b. TERMINATIONS SHALL ALLOW USE OF 75 DEG C RATED CONDUCTORS WITHOUT DERATING.
   c. SIZE: LUGS SUITABLE FOR INDICATED CONDUCTOR SIZES, WITH ADDITIONAL GUTTER SPACE, IF REQUIRED, FOR LARGER CONDUCTORS.
   d. MAIN AND NEUTRAL LUGS: MECHANICAL TYPE, WITH A LUG ON THE NEUTRAL BAR FOR EACH POLE IN THE PANELBOARD.
   e. GROUND LUGS AND BUS-CONFIGURED TERMINATORS: MECHANICAL TYPE, WITH A LUG ON THE BAR FOR EACH POLE IN THE PANELBOARD.
   f. FEED-THROUGH LUGS: MECHANICAL TYPE, SUITABLE FOR USE WITH CONDUCTOR MATERIAL. LOCATE AT OPPOSITE END OF BUS FROM INCOMING LUGS OR MAIN DEVICE.
   g. SUBFEED (DOUBLE) LUGS: MECHANICAL TYPE SUITABLE FOR USE WITH CONDUCTOR MATERIAL. LOCATE AT SAME END OF BUS AS INCOMING LUGS OR MAIN DEVICE.
   h. GUTTER-TAP LUGS: MECHANICAL TYPE SUITABLE FOR USE WITH CONDUCTOR MATERIAL AND WITH MATCHING INSULATING COVERS. LOCATE AT SAME END OF BUS AS INCOMING LUGS OR MAIN DEVICE.
5. FUTURE DEVICES: PANELBOARDS SHALL HAVE MOUNTING BRACKETS, BUS CONNECTIONS, FILLER PLATES, AND NECESSARY APPURTENANCES REQUIRED FOR FUTURE INSTALLATION OF DEVICES.
6. PANELBOARD SHORT-CIRCUIT CURRENT RATING: FULLY RATED TO INTERRUPT SYMMETRICAL SHORT-CIRCUIT CURRENT AVAILABLE AT TERMINALS. ASSEMBLY LISTED BY AN NRTL FOR 100 PERCENT INTERRUPTING CAPACITY.
7. SURGE SUPPRESSION: FACTORY INSTALLED AS AN INTEGRAL PART OF INDICATED PANELBOARDS, COMPLYING WITH UL 1449 SPD TYPE 1 AT SERVICE AND TYPE 2 FOR ADDITIONAL ELECTRICAL INSTALLATIONS. ALL INSTALLATIONS SHALL COMPLY WITH NEC 285 REQUIREMENTS.
   a. PEAK SURGE CURRENT RATING: THE MINIMUM SINGLE-PULSE SURGE CURRENT WITHSTAND RATING PER PHASE SHALL NOT BE LESS THAN 100 KA. THE PEAK SURGE CURRENT RATING SHALL BE THE ARITHMETIC SUM OF THE RATINGS OF THE INDIVIDUAL MOVS IN A GIVEN MODE.
   b. PROTECTION MODES AND UL 1449 VPR FOR GROUNDED WYE CIRCUITS WITH 480Y/277 V OR 208Y/120 V, THREE-PHASE, FOUR-WIRE CIRCUITS SHALL NOT EXCEED THE FOLLOWING:
      - LINE TO NEUTRAL: 1200 V FOR 480Y/277 V, 700 V FOR 208Y/120 V.
      - LINE TO GROUND: 1200 V FOR 480Y/277 V, 700 V FOR 208Y/120 V.
      - NEUTRAL TO GROUND: 1200 V FOR 480Y/277 V, 700 V FOR 208Y/120 V.
      - LINE TO LINE: 2000 V FOR 480Y/277 V, 1200 V FOR 208Y/120 V.
   c. PROTECTION MODES AND UL 1449 VPR FOR 240/120-V, SINGLE-PHASE, THREE-WIRE CIRCUITS SHALL NOT EXCEED THE FOLLOWING:
      - LINE TO NEUTRAL: 700 V.
      - LINE TO GROUND: 700 V.
      - NEUTRAL TO GROUND: 700 V.
      - LINE TO LINE: 1200 V.
   d. SCCR: EQUAL TO THE SCCR OF THE PANELBOARD IN WHICH INSTALLED

B. DISTRIBUTION PANELBOARDS. POWER PANELBOARDS, AS SPECIFIED IN THIS ARTICLE, FALL UNDER REQUIREMENTS OF "DISTRIBUTION PANELBOARDS" IN NEMA PB 1.
1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING: EATON, SQUARE D, OR GE.
2. PANELBOARDS: NEMA PB 1, DISTRIBUTION TYPE.
3. DOORS: SECURED WITH VAULT-TYPE LATCH WITH TUMBLER LOCK; KEYED ALIKE.
4. MAINS: CIRCUIT BREAKER OR LUGS ONLY. REFER TO SINGLE LINE DRAWING.
5. BRANCH OVERCURRENT PROTECTIVE DEVICES: BOLT-ON CIRCUIT BREAKERS.

C. LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS PANELBOARDS, AS SPECIFIED IN THIS ARTICLE. COMPLY WITH REQUIREMENTS OF "LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS" IN NEMA PB 1.
1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING: EATON, SQUARE D, OR GE.
2. PANELBOARDS: NEMA PB 1, LIGHTING AND APPLIANCE BRANCH-CIRCUIT TYPE.
3. MAINS: CIRCUIT BREAKER OR LUGS ONLY. REFER TO SINGLE LINE DRAWING.
4. BRANCH OVERCURRENT PROTECTIVE DEVICES: BOLT-ON CIRCUIT BREAKERS, REPLACEABLE WITHOUT DISTURBING ADJACENT UNITS.
5. DOORS: DOOR-IN-DOOR CONSTRUCTION WITH CONCEALED HINGES; SECURED WITH MULTIPOINT LATCH WITH TUMBLER LOCK; KEYED ALIKE. OUTER DOOR SHALL PERMIT FULL ACCESS TO THE PANEL INTERIOR. INNER DOOR SHALL PERMIT ACCESS TO BREAKER OPERATING HANDLES AND LABELING, BUT CURRENT CARRYING TERMINALS AND BUS SHALL REMAIN CONCEALED.
6. PANELS KNOWN AS LOADCENTERS ARE NOT ACCEPTABLE.

D. IDENTIFICATION
1. PANELBOARD LABEL: MANUFACTURER'S NAME AND TRADEMARK, VOLTAGE, AMPERAGE, NUMBER OF PHASES, AND NUMBER OF POLES SHALL BE LOCATED ON THE INTERIOR OF THE PANELBOARD DOOR.
2. BREAKER LABELS: FACEPLATE SHALL LIST CURRENT RATING, UL AND IEC CERTIFICATION STANDARDS, AND AIC RATING.
3. CIRCUIT DIRECTORY: DIRECTORY CARD INSIDE PANELBOARD DOOR, MOUNTED IN METAL FRAME WITH TRANSPARENT PROTECTIVE COVER.
   a. CIRCUIT DIRECTORY SHALL IDENTIFY SPECIFIC PURPOSE WITH DETAIL SUFFICIENT TO DISTINGUISH IT FROM ALL OTHER CIRCUITS.

EXECUTION

A. INSTALLATION
1. COORDINATE LAYOUT AND INSTALLATION OF PANELBOARDS AND COMPONENTS WITH OTHER CONSTRUCTION THAT PENETRATES WALLS OR IS SUPPORTED BY THEM, INCLUDING ELECTRICAL AND OTHER TYPES OF EQUIPMENT, RACEWAYS, PIPING, ENCUMBRANCES TO WORKSPACE CLEARANCE REQUIREMENTS, AND ADJACENT SURFACES. MAINTAIN REQUIRED WORKSPACE CLEARANCES AND REQUIRED CLEARANCES FOR EQUIPMENT ACCESS DOORS AND PANELS.
2. COMPLY WITH NECA 1. INSTALL PANELBOARDS AND ACCESSORIES ACCORDING TO NECA 407 AND NEMA PB 1.1.
3. MOUNT TOP OF TRIM 90 INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED.
4. MAINTAIN ALL CLEARANCES ABOVE, BELOW, AND IN FRONT OF PANEL AS REQUIRED BY NEC 110.

WIRING DEVICES

GENERAL

A. SUBMITTALS
1. PRODUCT DATA: FOR EACH TYPE OF PRODUCT.

PRODUCTS

A. GENERAL WIRING-DEVICE REQUIREMENTS
1. WIRING DEVICES, COMPONENTS, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
2. DEVICES THAT ARE MANUFACTURED FOR USE WITH MODULAR PLUG-IN CONNECTORS MAY BE SUBSTITUTED UNDER THE FOLLOWING CONDITIONS:
3. CONNECTORS SHALL COMPLY WITH UL 2459 AND SHALL BE MADE WITH STRANDING BUILDING WIRE.
4. DEVICES SHALL COMPLY WITH THE REQUIREMENTS IN THIS SECTION.
5. DEVICES FOR OWNER-FURNISHED EQUIPMENT: RECEPTACLES: MATCH PLUG CONFIGURATIONS. CORD AND PLUG SETS: MATCH EQUIPMENT REQUIREMENTS.
6. SOURCE LIMITATIONS: OBTAIN EACH TYPE OF WIRING DEVICE AND ASSOCIATED WALL PLATE FROM SINGLE SOURCE FROM SINGLE MANUFACTURER. ACCEPTABLE MANUFACTURERS ARE EATON, HUBBELL, PASS & SEYMOUR, AND LEVITON, UNLESS OTHERWISE NOTED.

B. STRAIGHT-BLADE RECEPTACLES
1. DUPLEX CONVENIENCE RECEPTACLES: 125 V, 20 A; COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION 5-20R, UL 498, AND FS W-C-596.
2. ISOLATED-GROUND, DUPLEX CONVENIENCE RECEPTACLES: 125 V, 20 A; COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION 5-20R, UL 498, AND FS W-C-596.
   a. DESCRIPTION: STRAIGHT BLADE; EQUIPMENT GROUNDING CONTACTS SHALL BE CONNECTED ONLY TO THE GREEN GROUNDING SCREW TERMINAL OF THE DEVICE AND WITH INHERENT ELECTRICAL ISOLATION FROM MOUNTING STRAP. ISOLATION SHALL BE INTEGRAL TO RECEPTACLE CONSTRUCTION AND NOT DEPENDENT ON REMOVABLE PARTS.

C. USB CHARGER DEVICES
1. TAMPER-RESISTANT, USB CHARGER RECEPTACLES: 12 V DC, 2.0 A, USB DUAL TYPE A; COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION 5-20R, UL 498, UL 1310, AND FS W-C-596.
   a. DESCRIPTION: SINGLE-PIECE, RIVETLESS, NICKEL-PLATED, ALL-BRASS GROUNDING SYSTEM. NICKEL-PLATED, BRASS MOUNTING STRAP.

D. GFCI RECEPTACLES
1. DUPLEX RECEPTACLE, 125 V, 20 A, STRAIGHT BLADE, NON-FEED-THROUGH TYPE.
   COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION 5-20R, UL 498, UL 943 CLASS A, AND FS W-C-596.
   INCLUDE INDICATOR LIGHT THAT SHOWS WHEN THE GFCI HAS MALFUNCTIONED AND NO LONGER PROVIDES PROPER GFCI PROTECTION.

E. TWIST-LOCKING RECEPTACLES
1. TWIST-LOCK, SINGLE CONVENIENCE RECEPTACLES: 125 V, 20 A; COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION L5-20R, AND UL 498.

F. SPECIALTY AND CONTROLLED RECEPTACLES
1. REFER TO DRAWING FOR NEMA CONFIGURATION OF ALL SPECIALTY RECEPTACLES.
2. CONTROLLED RECEPTACLES SHALL BE SPLIT CONTROLLED (UNLESS OTHERWISE NOTED ON DRAWINGS.) ALL MARKINGS FOR CONTROL SHALL MEET NEC 406.3 AND BE UL498B LISTED. RATING SHALL BE 20A UNLESS OTHERWISE NOTED ON DRAWINGS.

G. PENDANT CORD-CONNECTOR DEVICES
1. DESCRIPTION:
   a. MATCHING, LOCKING-TYPE PLUG AND RECEPTACLE BODY CONNECTOR.
   b. NEMA WD 6 CONFIGURATIONS L5-20P AND L5-20R, HEAVY-DUTY GRADE, AND FS W-C-596.
   c. BODY: NYLON, WITH SCREW-OPEN, CABLE-GRIPPING JAWS AND PROVISION FOR ATTACHING EXTERNAL CABLE GRIP.
   d. EXTERNAL CABLE GRIP: WOVEN WIRE-MESH TYPE MADE OF HIGH-STRENGTH, GALVANIZED-STEEL WIRE STRAND, MATCHED TO CABLE DIAMETER, AND WITH ATTACHMENT PROVISION DESIGNED FOR CORRESPONDING CONNECTOR.

H. CORD AND PLUG SETS
1. DESCRIPTION:
   a. MATCH VOLTAGE AND CURRENT RATINGS AND NUMBER OF CONDUCTORS TO REQUIREMENTS OF EQUIPMENT BEING CONNECTED.
   b. CORD: RUBBER-INSULATED, STRANDED-COPPER CONDUCTORS, WITH TYPE SOW-A JACKET; WITH GREEN-INSULATED GROUNDING CONDUCTOR AND AMPACITY OF AT LEAST 130 PERCENT OF THE EQUIPMENT RATING.
   c. PLUG: NYLON BODY AND INTEGRAL CABLE-CLAMPING JAWS. MATCH CORD AND RECEPTACLE TYPE FOR CONNECTION.

I. TOGGLE SWITCHES
1. COMPLY WITH NEMA WD 1, UL 20, AND FS W-S-896.
2. SWITCHES, 120/277 V, 20 A:
3. PILOT-LIGHT SWITCHES: 120/277 V, 20 A.
   a. DESCRIPTION: SINGLE POLE, WITH LED-LIGHTED HANDLE, ILLUMINATED WHEN SWITCH IS OFF.
   b. KEY-OPERATED SWITCHES: 120/277 V, 20 A.
   c. `DESCRIPTION: SINGLE POLE, WITH FACTORY-SUPPLIED KEY IN LIEU OF SWITCH HANDLE.

J. WALL SWITCH SENSOR LIGHT SWITCH, DUAL TECHNOLOGY
1. DESCRIPTION: SWITCHBOX-MOUNTED, COMBINATION LIGHTING-CONTROL SENSOR AND CONVENTIONAL SWITCH LIGHTING-CONTROL UNIT USING DUAL TECHNOLOGY. ADJUSTABLE TIME DELAY OF 20 MINUTES. ABLE TO BE LOCKED TO AUTOMATIC-ON OR MANUAL-ON MODE. COMPLY WITH NEMA WD 1, UL 20, AND FS W-S-896.

K. WALL-BOX DIMMERS
1. DESCRIPTION: MODULAR, FULL-WAVE, SOLID-STATE DIMMER SWITCH WITH INTEGRAL, QUIET ON-OFF SWITCHES, WITH AUDIBLE FREQUENCY AND EMI/RFI SUPPRESSION FILTERS.
2. CONTROL: CONTINUOUSLY ADJUSTABLE SLIDER WITH SINGLE-POLE OR THREE-WAY SWITCHING.
3. STANDARDS: COMPLY WITH UL 1472.
4. INCANDESCENT LAMP DIMMERS: 120 V; CONTROL SHALL FOLLOW SQUARE-LAW DIMMING CURVE. ON-OFF SWITCH POSITIONS SHALL BYPASS DIMMER MODULE.
5. LED LAMP DIMMER SWITCHES: MODULAR; COMPATIBLE WITH LED LAMPS; TRIM POTENTIOMETER TO ADJUST LOW-END DIMMING; CAPABLE OF CONSISTENT DIMMING WITH LOW END NOT GREATER THAN 20 PERCENT OF FULL BRIGHTNESS.

L. WALL PLATES
1. SINGLE AND COMBINATION TYPES SHALL MATCH CORRESPONDING WIRING DEVICES.
2. PLATE-SECURING SCREWS: METAL WITH HEAD COLOR TO MATCH PLATE FINISH.
3. MATERIAL FOR FINISHED SPACES: SMOOTH, HIGH-IMPACT THERMOPLASTIC.
4. MATERIAL FOR UNFINISHED SPACES: SMOOTH, HIGH-IMPACT THERMOPLASTIC.
5. MATERIAL FOR DAMP LOCATIONS: THERMOPLASTIC WITH SPRING-LOADED LIFT COVER, AND LISTED AND LABELED FOR USE IN WET AND DAMP LOCATIONS.
6. WET-LOCATION, WEATHERPROOF COVER PLATES: NEMA 250, COMPLYING WITH TYPE 3R, WEATHER-RESISTANT THERMOPLASTIC WITH LOCKABLE COVER.

M. FLOOR SERVICE FITTINGS
1. TYPE: MODULAR, DUAL-SERVICE UNITS SUITABLE FOR WIRING METHOD USED. TYPE AS INDICATED ON DRAWINGS.
2. COMPARTMENTS: BARRIER SEPARATES POWER FROM VOICE AND DATA COMMUNICATION CABLING.
3. SERVICE PLATE: AS INDICATED BY ARCHITECT WITH SATIN FINISH.
4. POWER RECEPTACLE: NEMA WD 6 CONFIGURATION 5-20R, GRAY FINISH, UNLESS OTHERWISE INDICATED.
5. DATA COMMUNICATION OUTLET: AS DIRECTED BY THE OWNER.

N. POKE-THROUGH ASSEMBLIES
1. DESCRIPTION:
   a. FACTORY-FABRICATED AND -WIRED ASSEMBLY OF BELOW-FLOOR JUNCTION BOX WITH MULTICHANNELED, THROUGH-FLOOR RACEWAY/FIRESTOP UNIT AND DETACHABLE MATCHING FLOOR SERVICE-OUTLET ASSEMBLY.
   b. COMPLY WITH UL 514 SCRUB WATER EXCLUSION REQUIREMENTS.
   c. SERVICE-OUTLET ASSEMBLY: TYPE AS INDICATED ON DRAWINGS.
   d. SIZE: SELECTED TO FIT NOMINAL CORED HOLES IN FLOOR AND MATCHED TO FLOOR THICKNESS.
   e. FIRE RATING: UNIT IS LISTED AND LABELED FOR FIRE RATING OF FLOOR-CEILING ASSEMBLY.
   f. CLOSURE PLUG: ARRANGED TO CLOSE UNUSED CORED OPENINGS AND REESTABLISH FIRE RATING OF FLOOR.

O. FINISHES
1. DEVICE COLOR:
   a. WIRING DEVICES CONNECTED TO NORMAL POWER SYSTEM: AS SELECTED BY ARCHITECT UNLESS OTHERWISE INDICATED OR REQUIRED BY NFPA 70 OR DEVICE LISTING.
   b. WIRING DEVICES CONNECTED TO EMERGENCY POWER SYSTEM: RED
   c. ISOLATED-GROUND RECEPTACLES: AS SPECIFIED ABOVE, WITH ORANGE TRIANGLE ON FACE.
2. WALL PLATE COLOR: FOR PLASTIC COVERS, MATCH DEVICE COLOR.

EXECUTION

A. INSTALLATION
1. COMPLY WITH NECA 1, INCLUDING MOUNTING HEIGHTS LISTED IN THAT STANDARD, UNLESS OTHERWISE INDICATED.
2. COORDINATION WITH OTHER TRADES:
   a. PROTECT INSTALLED DEVICES AND THEIR BOXES. DO NOT PLACE WALL FINISH MATERIALS OVER DEVICE BOXES AND DO NOT CUT HOLES FOR BOXES WITH ROUTERS THAT ARE GUIDED BY RIDING AGAINST OUTSIDE OF BOXES.
   b. KEEP OUTLET BOXES FREE OF PLASTER, DRYWALL JOINT COMPOUND, MORTAR, CEMENT, CONCRETE, DUST, PAINT, AND OTHER MATERIAL THAT MAY CONTAMINATE THE RACEWAY SYSTEM, CONDUCTORS, AND CABLES.
   c. INSTALL DEVICE BOXES IN BRICK OR BLOCK WALLS SO THAT THE COVER PLATE DOES NOT CROSS A JOINT UNLESS THE JOINT IS TROWELED FLUSH WITH THE FACE OF THE WALL.
   d. INSTALL WIRING DEVICES AFTER ALL WALL PREPARATION, INCLUDING PAINTING, IS COMPLETE.
3. CONDUCTORS:
   a. DO NOT STRIP INSULATION FROM CONDUCTORS UNTIL RIGHT BEFORE THEY ARE SPLICED OR TERMINATED ON DEVICES.
   b. STRIP INSULATION EVENLY AROUND THE CONDUCTOR USING TOOLS DESIGNED FOR THE PURPOSE. AVOID SCORING OR NICKING OF SOLID WIRE OR CUTTING STRANDS FROM STRANDED WIRE.
   c. THE LENGTH OF FREE CONDUCTORS AT OUTLETS FOR DEVICES SHALL MEET PROVISIONS OF NFPA 70, ARTICLE 300, WITHOUT PIGTAILS.
4. EXISTING CONDUCTORS:
   a. CUT BACK AND PIGTAIL, OR REPLACE ALL DAMAGED CONDUCTORS.
   b. STRAIGHTEN CONDUCTORS THAT REMAIN AND REMOVE CORROSION AND FOREIGN MATTER.
   c. PIGTAILING EXISTING CONDUCTORS IS PERMITTED, PROVIDED THE OUTLET BOX IS LARGE ENOUGH.
5. DEVICE INSTALLATION:
   a. REPLACE DEVICES THAT HAVE BEEN IN TEMPORARY USE DURING CONSTRUCTION AND THAT WERE INSTALLED BEFORE BUILDING FINISHING OPERATIONS WERE COMPLETE.
   b. KEEP EACH WIRING DEVICE IN ITS PACKAGE OR OTHERWISE PROTECTED UNTIL IT IS TIME TO CONNECT CONDUCTORS.
   c. DO NOT REMOVE SURFACE PROTECTION, SUCH AS PLASTIC FILM AND SMUDGE COVERS, UNTIL THE LAST POSSIBLE MOMENT.
   d. CONNECT DEVICES TO BRANCH CIRCUITS USING PIGTAILS THAT ARE NOT LESS THAN 6 INCHES (152 MM) IN LENGTH.
   e. WHEN THERE IS A CHOICE, USE SIDE WIRING WITH BINDING-HEAD SCREW TERMINALS. WRAP SOLID CONDUCTOR TIGHT

ENCLOSED SWITCHES AND CIRCUIT BREAKERS

GENERAL

A. SUBMITTALS
1. PRODUCT DATA: FOR EACH TYPE OF ENCLOSED SWITCH, CIRCUIT BREAKER, ACCESSORY, AND COMPONENT INDICATED. INCLUDE NAMEPLATE RATINGS, DIMENSIONED ELEVATIONS, SECTIONS, WEIGHTS, AND MANUFACTURERS' TECHNICAL DATA ON FEATURES, PERFORMANCE, ELECTRICAL CHARACTERISTICS, RATINGS, ACCESSORIES, AND FINISHES.

B. MAINTENANCE MATERIAL SUBMITTALS
1. FURNISH EXTRA MATERIALS THAT MATCH PRODUCTS INSTALLED AND THAT ARE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE AND IDENTIFIED WITH LABELS DESCRIBING CONTENTS.
   a. FUSES: EQUAL TO 10 PERCENT OF QUANTITY INSTALLED FOR EACH SIZE AND TYPE, BUT NO FEWER THAN THREE OF EACH SIZE AND TYPE.

PRODUCTS

A. GENERAL REQUIREMENTS
1. SOURCE LIMITATIONS: OBTAIN ENCLOSED SWITCHES AND CIRCUIT BREAKERS, OVERCURRENT PROTECTIVE DEVICES, COMPONENTS, AND ACCESSORIES, WITHIN SAME PRODUCT CATEGORY, FROM SINGLE MANUFACTURER.
2. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY AN NRTL, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
3. ACCEPTABLE MANUFACTURERS ARE EATON, SIEMENS, SQUARE D, AND GE.

B. FUSIBLE SWITCHES
1. FUSIBLE SWITCH, 800 A AND SMALLER: NEMA KS 1, TYPE HD, WITH CLIPS OR BOLT PADS TO ACCOMMODATE SPECIFIED FUSES, LOCKABLE HANDLE WITH CAPABILITY TO ACCEPT TWO PADLOCKS, AND INTERLOCKED WITH COVER IN CLOSED POSITION.
2. ACCESSORIES:
   a. EQUIPMENT GROUND KIT: INTERNALLY MOUNTED AND LABELED FOR COPPER AND ALUMINUM GROUND CONDUCTORS.
   b. NEUTRAL KIT: INTERNALLY MOUNTED; INSULATED, CAPABLE OF BEING GROUNDED, AND BONDED; AND LABELED FOR COPPER AND ALUMINUM NEUTRAL CONDUCTORS.
   c. AUXILIARY CONTACT KIT: AUXILIARY SET OF CONTACTS ARRANGED TO OPEN BEFORE SWITCH BLADES OPEN. PROVIDE WHEN USED AS REMOTE DISCONNECT FOR VARIABLE FREQUENCY MOTOR CONTROLLER CIRCUITS.
   d. SERVICE-RATED SWITCHES: LABELED FOR USE AS SERVICE EQUIPMENT.

C. NONFUSIBLE SWITCHES
1. NONFUSIBLE SWITCH, 800 A AND SMALLER: NEMA KS 1, TYPE HD, LOCKABLE HANDLE WITH CAPABILITY TO ACCEPT TWO PADLOCKS, AND INTERLOCKED WITH COVER IN CLOSED POSITION.
2. ACCESSORIES:
   a. EQUIPMENT GROUND KIT: INTERNALLY MOUNTED AND LABELED FOR COPPER AND ALUMINUM GROUND CONDUCTORS.
   b. NEUTRAL KIT: INTERNALLY MOUNTED; INSULATED, CAPABLE OF BEING GROUNDED, AND BONDED; AND LABELED FOR COPPER AND ALUMINUM NEUTRAL CONDUCTORS.
   c. AUXILIARY CONTACT KIT: AUXILIARY SET OF CONTACTS ARRANGED TO OPEN BEFORE SWITCH BLADES OPEN. PROVIDE WHEN USED AS REMOTE DISCONNECT FOR VARIABLE FREQUENCY MOTOR CONTROLLER CIRCUITS.
   d. SERVICE-RATED SWITCHES: LABELED FOR USE AS SERVICE EQUIPMENT.

D. MOLDED-CASE CIRCUIT BREAKERS
1. MOLDED-CASE CIRCUIT BREAKER: NEMA AB 1, WITH INTERRUPTING CAPACITY TO MEET AVAILABLE FAULT CURRENTS.
   a. THERMAL-MAGNETIC CIRCUIT BREAKERS: INVERSE TIME-CURRENT ELEMENT FOR LOW-LEVEL OVERLOADS AND INSTANTANEOUS MAGNETIC TRIP ELEMENT FOR SHORT CIRCUITS. ADJUSTABLE MAGNETIC TRIP SETTING FOR CIRCUIT-BREAKER FRAME SIZES 250 A AND LARGER.
   b. ADJUSTABLE INSTANTANEOUS-TRIP CIRCUIT BREAKERS: MAGNETIC TRIP ELEMENT WITH FRONT-MOUNTED, FIELD-ADJUSTABLE TRIP SETTING.
   c. ELECTRONIC TRIP-UNIT CIRCUIT BREAKERS: RMS SENSING; FIELD-REPLACEABLE RATING PLUG; WITH THE FOLLOWING FIELD-ADJUSTABLE SETTINGS:
      - INSTANTANEOUS TRIP.
      - LONG- AND SHORT-TIME PICKUP LEVELS.
      - LONG- AND SHORT-TIME TIME ADJUSTMENTS.
      - GROUND-FAULT PICKUP LEVEL, TIME DELAY, AND I2T RESPONSE.
2. MOLDED-CASE CIRCUIT-BREAKER FEATURES AND ACCESSORIES:
   a. STANDARD FRAME SIZES, TRIP RATINGS, AND NUMBER OF POLES.
   b. LUGS: MECHANICAL STYLE SUITABLE FOR NUMBER, SIZE, TRIP RATINGS, AND CONDUCTOR MATERIAL.
   c. APPLICATION LISTING: HACR FOR HEATING, AIR-CONDITIONING, AND REFRIGERATING EQUIPMENT.
   d. GROUND-FAULT PROTECTION: INTEGRALLY MOUNTED RELAY AND TRIP UNIT WITH ADJUSTABLE PICKUP AND TIME-DELAY SETTINGS, PUSH-TO-TEST FEATURE, AND GROUND-FAULT INDICATOR.
   e. SHUNT TRIP: 120-V TRIP COIL ENERGIZED FROM SEPARATE CIRCUIT, SET TO TRIP AT 55 PERCENT OF RATED VOLTAGE.
   f. UNDERVOLTAGE TRIP: SET TO OPERATE AT 35 TO 75 PERCENT OF RATED VOLTAGE WITHOUT INTENTIONAL OR WITH FIELD-ADJUSTABLE 0.1- TO 0.6-SECOND TIME DELAY.
   g. AUXILIARY SWITCH: ONE SPDT SWITCH OR TWO SPDT SWITCHES WITH "A" AND "B" CONTACTS; "A" CONTACTS MIMIC CIRCUIT-BREAKER CONTACTS, "B" CONTACTS OPERATE IN REVERSE OF CIRCUIT-BREAKER CONTACTS.

E. ENCLOSURES
1. NEMA AB 1 AND NEMA KS 1 TO MEET ENVIRONMENTAL CONDITIONS OF INSTALLED LOCATION.
   a. INDOOR LOCATIONS: NEMA 250, TYPE 1.
   b. OUTDOOR LOCATIONS: NEMA 250, TYPE 3R.
   c. OTHER WET OR DAMP INDOOR LOCATIONS: NEMA 250, TYPE 4.
2. CONDUIT ENTRY: NEMA 250 TYPES 4, 4X, AND 12 ENCLOSURES SHALL CONTAIN NO KNOCKOUTS. NEMA 250 TYPES 7 AND 9 ENCLOSURES SHALL BE PROVIDED WITH THREADED CONDUIT OPENINGS IN BOTH ENDWALLS.
3. ENCLOSURES DESIGNATED AS NEMA 250 TYPE 4, 4X STAINLESS STEEL, 12, OR 12K SHALL HAVE A DUAL COVER INTERLOCK MECHANISM TO PREVENT UNINTENTIONAL OPENING OF THE ENCLOSURE COVER WHEN THE CIRCUIT BREAKER IS ON AND TO PREVENT TURNING THE CIRCUIT BREAKER ON WHEN THE ENCLOSURE COVER IS OPEN.
4. ALL ENCLOSURES SHALL INCLUDE A BONDED EQUIPMENT BUS.

EXECUTION

A. INSTALLATION
1. COORDINATE LAYOUT AND INSTALLATION OF SWITCHES, CIRCUIT BREAKERS, AND COMPONENTS WITH EQUIPMENT SERVED AND ADJACENT SURFACES. MAINTAIN REQUIRED WORKSPACE CLEARANCES AND REQUIRED CLEARANCES FOR EQUIPMENT ACCESS DOORS AND PANELS.
2. INSTALL INDIVIDUAL WALL-MOUNTED SWITCHES AND CIRCUIT BREAKERS WITH TOPS AT UNIFORM HEIGHT UNLESS OTHERWISE INDICATED.
3. INSTALL FUSES IN FUSIBLE DEVICES.
4. COMPLY WITH NFPA 70 AND NECA 1.

LED LIGHTING

GENERAL

A. SUBMITTALS
1. PRODUCT DATA: FOR EACH TYPE OF PRODUCT.
2. PRODUCT SCHEDULE: FOR LUMINAIRES AND LAMPS. USE SAME DESIGNATIONS INDICATED ON DRAWINGS.

B. QUALITY ASSURANCE
1. LUMINAIRE PHOTOMETRIC DATA TESTING LABORATORY QUALIFICATIONS: PROVIDED BY AN INDEPENDENT AGENCY, WITH THE EXPERIENCE AND CAPABILITY TO CONDUCT THE TESTING INDICATED, THAT IS AN NRTL AS DEFINED BY OSHA IN 29 CFR 1910.7, ACCREDITED UNDER THE NVLAP FOR ENERGY EFFICIENT LIGHTING PRODUCTS, AND COMPLYING WITH THE APPLICABLE IES TESTING STANDARDS.
2. PROVIDE LUMINAIRES FROM A SINGLE MANUFACTURER FOR EACH LUMINAIRE TYPE.
3. EACH LUMINAIRE TYPE SHALL BE BINNED WITHIN A THREE-STEP MACADAM ELLIPSE TO ENSURE COLOR CONSISTENCY AMONG LUMINAIRES.
4. MOCKUPS: FOR INTERIOR LUMINAIRES IN ROOM OR MODULE MOCKUPS, COMPLETE WITH POWER AND CONTROL CONNECTIONS.
   a. OBTAIN ARCHITECT'S APPROVAL OF LUMINAIRES IN MOCKUPS BEFORE STARTING INSTALLATIONS.
   b. MAINTAIN MOCKUPS DURING CONSTRUCTION IN AN UNDISTURBED CONDITION AS A STANDARD FOR JUDGING THE COMPLETED WORK.
   c. APPROVAL OF MOCKUPS DOES NOT CONSTITUTE APPROVAL OF DEVIATIONS FROM THE CONTRACT DOCUMENTS CONTAINED IN MOCKUPS UNLESS ARCHITECT SPECIFICALLY APPROVES SUCH DEVIATIONS IN WRITING.
   d. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, APPROVED MOCKUPS MAY BECOME PART OF THE COMPLETED WORK IF UNDISTURBED AT TIME OF SUBSTANTIAL COMPLETION.

C. DELIVERY, STORAGE, AND HANDLING
1. PROTECT FINISHES OF EXPOSED SURFACES BY APPLYING A STRIPPABLE, TEMPORARY PROTECTIVE COVERING BEFORE SHIPPING.

D. WARRANTY
1. WARRANTY: MANUFACTURER AND INSTALLER AGREE TO REPAIR OR REPLACE COMPONENTS OF LUMINAIRES THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD. WARRANTY PERIOD: FIVE YEAR(S) FROM DATE OF SUBSTANTIAL COMPLETION.

PRODUCTS

A. LUMINAIRE REQUIREMENTS
1. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
2. CRI AS INDICATED IN LIGHTING FIXTURE SCHEDULE. CCT AS INDICATED IN LIGHTING FIXTURE SCHEDULE.
3. RATED LAMP LIFE OF 50,000 HOURS TO L70.
4. LAMPS DIMMABLE FROM 100 PERCENT TO 0 PERCENT OF MAXIMUM LIGHT OUTPUT.
5. LAMPS, BOTH INTEGRAL TO THE FIXTURE AND SCREW-IN TYPE, SHALL POSSESS A MINIMUM 75% EFFICACY TO MEET ENERGY CODES. LAMPS WITH EFFICACY LESS THAN 75% ARE NOT ACCEPTABLE AND SHALL NOT BE UTILIZED.
6. INTERNAL DRIVER.
7. WHERE DIMMING DRIVERS ARE UTILIZED, THEY SHALL BE COMPATIBLE WITH LIGHTING CONTROLS DESIGNATED FOR OPERATION OF THOSE FIXTURES.
8. NOMINAL OPERATING VOLTAGE: AS INDICATED IN LIGHTING FIXTURE SCHEDULE.

B. LUMINAIRE SUPPORT
1. SINGLE-STEM HANGERS: 1/2-INCH (13-MM) STEEL TUBING WITH SWIVEL BALL FITTINGS AND CEILING CANOPY. FINISH SAME AS LUMINAIRE.
2. WIRES: ASTM A 641/A 641 M, CLASS 3, SOFT TEMPER, ZINC-COATED STEEL, 12 GAGE (2.68 MM)
3. ROD HANGERS: 3/16-INCH (5-MM) MINIMUM DIAMETER, CADMIUM-PLATED, THREADED STEEL ROD.
4. HOOK HANGERS: INTEGRATED ASSEMBLY MATCHED TO LUMINAIRE, LINE VOLTAGE, AND EQUIPMENT WITH THREADED ATTACHMENT, CORD, AND LOCKING-TYPE PLUG.

C. INTERNAL TYPE EMERGENCY POWER UNIT: SELF-CONTAINED, MODULAR, BATTERY-INVERTER UNIT, FACTORY MOUNTED WITHIN LUMINAIRE BODY.
1. EMERGENCY CONNECTION: OPERATE ALL FIXTURE LAMP(S) CONTINUOUSLY AT AN OUTPUT OF FULL LUMEN OUTPUT OF FIXTURE UPON LOSS OF NORMAL POWER. CONNECT UNSWITCHED CIRCUIT TO BATTERY-INVERTER UNIT AND SWITCHED CIRCUIT TO LUMINAIRE BALLAST.
2. OPERATION: RELAY AUTOMATICALLY TURNS LAMP ON WHEN POWER-SUPPLY CIRCUIT VOLTAGE DROPS TO 80 PERCENT OF NOMINAL VOLTAGE OR BELOW. LAMP AUTOMATICALLY DISCONNECTS FROM BATTERY WHEN VOLTAGE APPROACHES DEEP-DISCHARGE LEVEL. WHEN NORMAL VOLTAGE IS RESTORED, RELAY DISCONNECTS LAMPS FROM BATTERY, AND BATTERY IS AUTOMATICALLY RECHARGED AND FLOATED ON CHARGER.
3. TEST PUSH-BUTTON AND INDICATOR LIGHT: VISIBLE AND ACCESSIBLE WITHOUT OPENING LUMINAIRE OR ENTERING CEILING SPACE.
4. PUSH BUTTON: PUSH-TO-TEST TYPE, IN UNIT HOUSING, SIMULATES LOSS OF NORMAL POWER AND DEMONSTRATES UNIT OPERABILITY.
5. INDICATOR LIGHT: LED INDICATES NORMAL POWER ON. NORMAL GLOW INDICATES TRICKLE CHARGE; BRIGHT GLOW INDICATES CHARGING AT END OF DISCHARGE CYCLE.
6. BATTERY: SEALED, MAINTENANCE-FREE, NICKEL-CADMIUM TYPE.
7. CHARGER: FULLY AUTOMATIC, SOLID-STATE, CONSTANT-CURRENT TYPE WITH SEALED POWER TRANSFER RELAY.
8. INTEGRAL SELF-TEST: FACTORY-INSTALLED ELECTRONIC DEVICE AUTOMATICALLY INITIATES CODE-REQUIRED TEST OF UNIT EMERGENCY OPERATION AT REQUIRED INTERVALS. TEST FAILURE IS ANNUNCIATED BY AN INTEGRAL AUDIBLE ALARM AND A FLASHING RED LED.

EXECUTION

A. INTERIOR LIGHTING INSTALLATION
1. COMPLY WITH NECA 1.
2. INSTALL LUMINAIRES LEVEL, PLUMB, AND SQUARE WITH CEILINGS AND WALLS UNLESS OTHERWISE INDICATED.
3. INSTALL LAMPS IN EACH LUMINAIRE.
4. SUPPORTS:
   a. SIZED AND RATED FOR LUMINAIRE WEIGHT.
   b. ABLE TO MAINTAIN LUMINAIRE POSITION AFTER CLEANING AND RELAMPING.
   c. PROVIDE SUPPORT FOR LUMINAIRE WITHOUT CAUSING DEFLECTION OF CEILING OR WALL.
   d. LUMINAIRE MOUNTING DEVICES SHALL BE CAPABLE OF SUPPORTING A HORIZONTAL FORCE OF 100 PERCENT OF LUMINAIRE WEIGHT AND VERTICAL FORCE OF 400 PERCENT OF LUMINAIRE WEIGHT.
5. FLUSH-MOUNTED LUMINAIRE SUPPORT:
   a. SECURED TO OUTLET BOX.
   b. ATTACHED TO CEILING STRUCTURAL MEMBERS AT FOUR POINTS EQUALLY SPACED AROUND CIRCUMFERENCE OF LUMINAIRE.
   c. TRIM RING FLUSH WITH FINISHED SURFACE.
6. WALL-MOUNTED LUMINAIRE SUPPORT:
   a. ATTACHED TO STRUCTURAL MEMBERS IN WALLS.
   b. DO NOT ATTACH LUMINAIRES DIRECTLY TO GYPSUM BOARD.
7. CEILING-MOUNTED LUMINAIRE SUPPORT:
   a. CEILING MOUNT WITH FOUR-POINT PENDANT MOUNT WITH 5/32-INCH- (4-MM-) DIAMETER AIRCRAFT CABLE SUPPORTS ADJUSTABLE TO 120 INCHES (6 M) IN LENGTH.
   b. CEILING MOUNT WITH HOOK MOUNT.
8. SUSPENDED LUMINAIRE SUPPORT:
   a. PENDANTS AND RODS: WHERE LONGER THAN 48 INCHES (1200 MM), BRACE TO LIMIT SWINGING.
   b. STEM-MOUNTED, SINGLE-UNIT LUMINAIRES: SUSPEND WITH TWIN-STEM HANGERS. SUPPORT WITH APPROVED OUTLET BOX AND ACCESSORIES THAT HOLD STEM AND PROVIDE DAMPING OF LUMINAIRE OSCILLATIONS. SUPPORT OUTLET BOX VERTICALLY TO BUILDING STRUCTURE USING APPROVED DEVICES.
   c. CONTINUOUS ROWS OF LUMINAIRES: USE TUBING OR STEM FOR WIRING AT ONE POINT AND WIRE SUPPORT FOR SUSPENSION FOR EACH UNIT LENGTH OF LUMINAIRE CHASSIS, INCLUDING ONE AT EACH END.
   d. DO NOT USE CEILING GRID AS SUPPORT FOR PENDANT LUMINAIRES. CONNECT SUPPORT WIRES OR RODS TO BUILDING STRUCTURE.
9. CEILING-GRID-MOUNTED LUMINAIRES:
   a. SECURE TO ANY REQUIRED OUTLET BOX.
   b. SECURE LUMINAIRE TO THE LUMINAIRE OPENING USING APPROVED FASTENERS IN A MINIMUM OF FOUR LOCATIONS, SPACED NEAR CORNERS OF LUMINAIRE.
   c. USE APPROVED DEVICES AND SUPPORT COMPONENTS TO CONNECT LUMINAIRE TO CEILING GRID AND BUILDING STRUCTURE IN A MINIMUM OF FOUR LOCATIONS, SPACED NEAR CORNERS OF LUMINAIRE.

B. ADJUSTING
1. OCCUPANCY ADJUSTMENTS: WHEN REQUESTED WITHIN 12 MONTHS OF DATE OF SUBSTANTIAL COMPLETION, PROVIDE ON-SITE ASSISTANCE IN ADJUSTING THE DIRECTION OF AIM OF LUMINAIRES TO SUIT OCCUPIED CONDITIONS. MAKE UP TO TWO VISITS TO PROJECT DURING OTHER-THAN-NORMAL HOURS FOR THIS PURPOSE. SOME OF THIS WORK MAY BE REQUIRED DURING HOURS OF DARKNESS. ADJUST THE AIM OF LUMINAIRES IN THE PRESENCE OF THE ARCHITECT.

C. GENERAL EXTERIOR LIGHTING INSTALLATION REQUIREMENTS
1. COMPLY WITH NECA 1.
2. USE FASTENING METHODS AND MATERIALS SELECTED TO RESIST SEISMIC FORCES DEFINED FOR THE APPLICATION AND APPROVED BY MANUFACTURER.
3. INSTALL LAMPS IN EACH LUMINAIRE.
4. FASTEN LUMINAIRE TO STRUCTURAL SUPPORT.
5. SUPPORTS:
   a. SIZED AND RATED FOR LUMINAIRE WEIGHT.
   b. ABLE TO MAINTAIN LUMINAIRE POSITION AFTER CLEANING AND RELAMPING.
   c. SUPPORT LUMINAIRES WITHOUT CAUSING DEFLECTION OF FINISHED SURFACE.
   d. LUMINAIRE-MOUNTING DEVICES SHALL BE CAPABLE OF SUPPORTING A HORIZONTAL FORCE OF 100 PERCENT OF LUMINAIRE WEIGHT AND A VERTICAL FORCE OF 400 PERCENT OF LUMINAIRE WEIGHT.
6. INSTALL LUMINAIRES LEVEL, PLUMB, AND SQUARE WITH FINISHED GRADE UNLESS OTHERWISE INDICATED. INSTALL LUMINAIRES AT HEIGHT AND AIMING ANGLE AS INDICATED ON DRAWINGS.
7. COORDINATE LAYOUT AND INSTALLATION OF LUMINAIRES WITH OTHER CONSTRUCTION.
8. ADJUST LUMINAIRES THAT REQUIRE FIELD ADJUSTMENT OR AIMING.

D. BOLLARD LUMINAIRE INSTALLATION:
1. ALIGN UNITS FOR OPTIMUM DIRECTIONAL ALIGNMENT OF LIGHT DISTRIBUTION.
   a. INSTALL ON CONCRETE BASE WITH TOP 4 INCHES (100 MM) ABOVE FINISHED GRADE OR SURFACE AT LUMINAIRE LOCATION. CAST CONDUIT INTO BASE, AND SHAPE BASE TO MATCH SHAPE OF BOLLARD BASE. FINISH BY TROWELING AND RUBBING SMOOTH.

E. INSTALLATION OF INDIVIDUAL GROUND-MOUNTED LUMINAIRES
1. AIM AS INDICATED ON DRAWINGS.
2. INSTALL ON CONCRETE BASE WITH TOP 4 INCHES (100 MM) ABOVE FINISHED GRADE OR SURFACE AT LUMINAIRE LOCATION. CAST CONDUIT INTO BASE, AND FINISH BY TROWELING AND RUBBING SMOOTH.

F. INSTALLATION IN PLENUM RATED SPACES
1. PROVIDE METAL HOUSING WITH GLASS LENS TO MEET UL2043 (SMOKE/FIRE SPREAD: 50/25 OR LESS) IN PLENUM SPACES.

ADDRESSABLE FIRE ALARM SYSTEM

GENERAL

A. GENERAL DESCRIPTION - PROVIDE ADDRESSABLE DIGITAL FIRE ALARM SYSTEM INSTALLED AS SHOWN ON DRAWINGS AND DESCRIBED HEREIN. THE OPERATION SHALL BE SUCH THAT ACTUATION OF ANY MANUAL FIRE ALARM STATION OR ANY OTHER INITIATION DEVICE SHALL CAUSE AUDIBLE/VISIBLE SIGNAL DEVICES THROUGHOUT THE BUILDING TO OPERATE, SHALL CAUSE THE MAIN ANNUNCIATOR TO DISPLAY THE "ADDRESS"/"ZONE" OF THE INITIATING DEVICE UNTIL THE DEVICE IS RESTORED TO ITS NORMAL POSITION AND THE CONTROL PANEL IS RESET AND SHALL CAUSE AN ALARM SIGNAL TO BE TRANSMITTED TO A CENTRAL STATION. ALL INITIATING DEVICES SHALL BE FULLY COMPATIBLE WITH EXISTING SYSTEMS AND SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL COMPONENTS SHALL BE ADDRESSABLE OR BE PROVIDED WITH ADDRESSABLE ZONE INTERFACE MODULES.

B. SUBMITTALS
1. GENERAL SUBMITTAL REQUIREMENTS:
   a. SUBMITTALS SHALL BE APPROVED BY AUTHORITIES HAVING JURISDICTION PRIOR TO SUBMITTING THEM TO ARCHITECT.
   b. SHOP DRAWINGS SHALL BE PREPARED BY PERSONS WITH THE FOLLOWING QUALIFICATIONS:
      - TRAINED AND CERTIFIED BY MANUFACTURER IN FIRE-ALARM SYSTEM DESIGN.
      - NICET-CERTIFIED FIRE-ALARM TECHNICIAN, LEVEL III MINIMUM.
      - LICENSED OR CERTIFIED BY AUTHORITIES HAVING JURISDICTION.
2. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.
3. SHOP DRAWINGS: FOR FIRE-ALARM SYSTEM. INCLUDE PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK.
   a. COMPLY WITH RECOMMENDATIONS IN THE "DOCUMENTATION" SECTION OF THE "FUNDAMENTALS OF FIRE ALARM SYSTEMS" CHAPTER IN NFPA 72.
   b. INCLUDE VOLTAGE DROP CALCULATIONS FOR NOTIFICATION APPLIANCE CIRCUITS.
   c. INCLUDE BATTERY-SIZE CALCULATIONS.
   d. INCLUDE PERFORMANCE PARAMETERS AND INSTALLATION DETAILS FOR EACH DETECTOR, VERIFYING THAT EACH DETECTOR IS LISTED FOR COMPLETE RANGE OF AIR VELOCITY, TEMPERATURE, AND HUMIDITY POSSIBLE WHEN AIR-HANDLING SYSTEM IS OPERATING.
   e. INCLUDE AUDIO/ALARM SIGNALING-SERVICE EQUIPMENT RACK OR CONSOLE LAYOUT, GROUNDING SCHEMATIC, AMPLIFIER POWER CALCULATION, AND SINGLE-LINE CONNECTION DIAGRAM.
   f. INCLUDE FLOOR PLANS TO INDICATE FINAL OUTLET LOCATIONS SHOWING ADDRESS OF EACH ADDRESSABLE DEVICE. SHOW SIZE AND ROUTE OF CABLE AND CONDUITS.

C. QUALITY ASSURANCE
1. INSTALLER QUALIFICATIONS: PERSONNEL SHALL BE TRAINED AND CERTIFIED BY MANUFACTURER FOR INSTALLATION OF UNITS REQUIRED FOR THIS PROJECT.
2. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
3. NFPA CERTIFICATION: OBTAIN CERTIFICATION ACCORDING TO NFPA 72 BY A UL-LISTED ALARM COMPANY.

D. EXTRA MATERIALS
1. FURNISH EXTRA MATERIALS THAT MATCH PRODUCTS INSTALLED AND THAT ARE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE AND IDENTIFIED WITH LABELS DESCRIBING CONTENTS.
   a. LAMPS FOR REMOTE INDICATING LAMP UNITS: QUANTITY EQUAL TO 10 PERCENT OF AMOUNT INSTALLED.
   b. LAMPS FOR STROBE UNITS: QUANTITY EQUAL TO 10 PERCENT OF AMOUNT INSTALLED.
   c. SMOKE DETECTORS, FIRE DETECTORS: QUANTITY EQUAL TO 10 PERCENT OF AMOUNT OF EACH TYPE INSTALLED, BUT NO FEWER THAN 1 UNIT OF EACH TYPE.
   d. DETECTOR BASES: QUANTITY EQUAL TO 2 PERCENT OF AMOUNT OF EACH TYPE INSTALLED, BUT NO FEWER THAN 1 UNIT OF EACH TYPE.
   e. KEYS AND TOOLS: ONE EXTRA SET FOR ACCESS TO LOCKED AND TAMPERPROOFED COMPONENTS.
   f. AUDIBLE AND VISUAL NOTIFICATION APPLIANCES: ONE OF EACH TYPE INSTALLED.
   g. FUSES: TWO OF EACH TYPE INSTALLED IN THE SYSTEM.

E. SEQUENCING AND SCHEDULING
1. EXISTING FIRE-ALARM EQUIPMENT: MAINTAIN EXISTING EQUIPMENT FULLY OPERATIONAL UNTIL NEW EQUIPMENT HAS BEEN TESTED AND ACCEPTED. AS NEW EQUIPMENT IS INSTALLED, LABEL IT "NOT IN SERVICE" UNTIL IT IS ACCEPTED. REMOVE LABELS FROM NEW EQUIPMENT WHEN PUT INTO SERVICE, AND LABEL EXISTING FIRE-ALARM EQUIPMENT "NOT IN SERVICE" UNTIL REMOVED FROM THE BUILDING.
2. EQUIPMENT REMOVAL: AFTER ACCEPTANCE OF NEW FIRE-ALARM SYSTEM, REMOVE EXISTING DISCONNECTED FIRE-ALARM EQUIPMENT AND WIRING.

F. WARRANTY
1. SPECIAL WARRANTY: MANUFACTURER AGREES TO REPAIR OR REPLACE FIRE-ALARM SYSTEM EQUIPMENT AND COMPONENTS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.
   a. WARRANTY EXTENT: ALL EQUIPMENT AND COMPONENTS NOT COVERED IN THE MAINTENANCE SERVICE AGREEMENT.
   b. WARRANTY PERIOD: FIVE YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

PRODUCTS

A. MANUFACTURERS
MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
1. NOTIFIER; A HONEYWELL COMPANY.
2. SIEMENS BUILDING TECHNOLOGIES, INC.; FIRE SAFETY DIVISION.
3. SIMPLEX GRINNELL LP; A TYCO INTERNATIONAL COMPANY.
4. EDWARDS

B. SYSTEM DESCRIPTION
1. NONCODED, UL-CERTIFIED ADDRESSABLE SYSTEM, WITH MULTIPLEXED SIGNAL TRANSMISSION AND HORN/STROBE EVACUATION.
2. AUTOMATIC SENSITIVITY CONTROL OF CERTAIN SMOKE DETECTORS.
3. ALL COMPONENTS PROVIDED SHALL BE LISTED FOR USE WITH THE SELECTED SYSTEM.
4. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

C. FIRE-ALARM CONTROL UNIT
1. GENERAL REQUIREMENTS FOR FIRE-ALARM CONTROL UNIT:
   a. FIELD-PROGRAMMABLE, MICROPROCESSOR-BASED, MODULAR, POWER-LIMITED DESIGN WITH ELECTRONIC MODULES, COMPLYING WITH UL 864 AND LISTED AND LABELED BY AN NRTL.
      - SYSTEM SOFTWARE AND PROGRAMS SHALL BE HELD IN NONVOLATILE FLASH, ELECTRICALLY ERASABLE, PROGRAMMABLE, READ-ONLY MEMORY, RETAINING THE INFORMATION THROUGH FAILURE OF PRIMARY AND SECONDARY POWER SUPPLIES.
      - INCLUDE A REAL-TIME CLOCK FOR TIME ANNOTATION OF EVENTS ON THE EVENT RECORDER AND PRINTER.
      - PROVIDE COMMUNICATION BETWEEN THE FACP AND REMOTE CIRCUIT INTERFACE PANELS, ANNUNCIATORS, AND DISPLAYS.
      - THE FACP SHALL BE LISTED FOR CONNECTION TO A CENTRAL-STATION SIGNALING SYSTEM SERVICE.
      - PROVIDE NONVOLATILE MEMORY FOR SYSTEM DATABASE, LOGIC, AND OPERATING SYSTEM AND EVENT HISTORY. THE SYSTEM SHALL REQUIRE NO MANUAL INPUT TO INITIALIZE IN THE EVENT OF A COMPLETE POWER DOWN CONDITION. THE FACP SHALL PROVIDE A MINIMUM 500-EVENT HISTORY LOG.
   b. ADDRESSABLE INITIATING DEVICES THAT COMMUNICATE DEVICE IDENTITY AND STATUS.
      - SMOKE SENSORS SHALL ADDITIONALLY COMMUNICATE SENSITIVITY SETTING AND ALLOW FOR ADJUSTMENT OF SENSITIVITY AT FIRE-ALARM CONTROL UNIT.
      - TEMPERATURE SENSORS SHALL ADDITIONALLY TEST FOR AND COMMUNICATE THE SENSITIVITY RANGE OF THE DEVICE.
   c. ADDRESSABLE CONTROL CIRCUITS FOR OPERATION OF MECHANICAL EQUIPMENT.
2. ALPHANUMERIC DISPLAY AND SYSTEM CONTROLS: ARRANGED FOR INTERFACE BETWEEN HUMAN OPERATOR AT FIRE-ALARM CONTROL UNIT AND ADDRESSABLE SYSTEM COMPONENTS INCLUDING ANNUNCIATION AND SUPERVISION, DISPLAY ALARM, SUPERVISORY, AND COMPONENT STATUS MESSAGES AND THE PROGRAMMING AND CONTROL MENU.
3. INITIATING-DEVICE, NOTIFICATION-APPLIANCE, AND SIGNALING-LINE CIRCUITS:
   a. PATHWAY CLASS DESIGNATIONS: NFPA 72, CLASS B.
4. PRIMARY POWER: 24-V DC OBTAINED FROM 120-V AC SERVICE AND A POWER-SUPPLY MODULE. INITIATING DEVICES, NOTIFICATION APPLIANCES, SIGNALING LINES, TROUBLE SIGNALS, SUPERVISORY AND DIGITAL ALARM COMMUNICATOR TRANSMITTERS SHALL BE POWERED BY 24-V DC SOURCE.
   a. ALARM CURRENT DRAW OF ENTIRE FIRE-ALARM SYSTEM SHALL NOT EXCEED 80 PERCENT OF THE POWER-SUPPLY MODULE RATING.
5. SECONDARY POWER: 24-V DC SUPPLY SYSTEM WITH BATTERIES, AUTOMATIC BATTERY CHARGER, AND AUTOMATIC TRANSFER SWITCH.
   a. BATTERIES: SEALED LEAD CALCIUM.
   b. GENERAL DESCRIPTION - PROVIDE ADDRESSABLE DIGITAL FIRE ALARM SYSTEM INSTALLED AS SHOWN ON DRAWINGS AND DESCRIBED HEREIN. THE OPERATION SHALL BE SUCH THAT ACTUATION OF ANY MANUAL FIRE ALARM STATION OR ANY OTHER INITIATION DEVICE SHALL CAUSE AUDIBLE/VISIBLE SIGNAL DEVICES THROUGHOUT THE BUILDING TO OPERATE, SHALL CAUSE THE MAIN ANNUNCIATOR TO DISPLAY THE "ADDRESS"/"ZONE" OF THE INITIATING DEVICE UNTIL THE DEVICE IS RESTORED TO ITS NORMAL POSITION AND THE CONTROL PANEL IS RESET AND SHALL CAUSE AN ALARM SIGNAL TO BE TRANSMITTED TO A CENTRAL STATION. ALL INITIATING DEVICES SHALL BE FULLY COMPATIBLE WITH EXISTING SYSTEMS AND SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. ALL COMPONENTS SHALL BE ADDRESSABLE OR BE PROVIDED WITH ADDRESSABLE ZONE INTERFACE MODULES.

D. MANUAL FIRE-ALARM BOXES
1. PROVIDE NON-CODED DOUBLE ACTION MANUAL STATIONS WHERE SHOWN ON THE DRAWINGS, TO BE FLUSH OR SURFACE MOUNTED AS REQUIRED. PULL STATION ACTIVATION SHALL PROVIDE ALARM INPUT TO THE SYSTEM AND ALARM OUTPUT FROM THE SYSTEM WITHIN FOUR (4) SECONDS. THE MANUAL STATION SHALL BE EQUIPPED WITH TERMINAL STRIP AND PRESSURE STYLE SCREW TERMINALS FOR THE CONNECTION OF FIELD WIRING. HOUSINGS SHALL BE MADE OF THERMOPLASTIC MATERIAL WITH RAISED

EXECUTION

A. EQUIPMENT INSTALLATION
1. COMPLY WITH NFPA 72, NFPA 101, AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION FOR INSTALLATION AND TESTING OF FIRE-ALARM EQUIPMENT. INSTALL ALL ELECTRICAL WIRING TO COMPLY WITH REQUIREMENTS IN NFPA 70 INCLUDING, BUT NOT LIMITED TO, ARTICLE 760, "FIRE ALARM SYSTEMS."
2. CONNECTING TO EXISTING EQUIPMENT: VERIFY THAT EXISTING FIRE-ALARM SYSTEM IS OPERATIONAL BEFORE MAKING CHANGES OR CONNECTIONS.
3. INSTALL WALL-MOUNTED EQUIPMENT, WITH TOPS OF CABINETS NOT MORE THAN 78 INCHES (1980 MM) ABOVE THE FINISHED FLOOR.
4. MANUAL FIRE-ALARM BOXES:
   a. INSTALL MANUAL FIRE-ALARM BOX IN THE NORMAL PATH OF EGRESS WITHIN 60 INCHES (1520 MM) OF THE EXIT DOORWAY.
   b. MOUNT MANUAL FIRE-ALARM BOX ON A BACKGROUND OF A CONTRASTING COLOR.
   c. THE OPERABLE PART OF MANUAL FIRE-ALARM BOX SHALL BE BETWEEN 42 INCHES (1060 MM) AND 48 INCHES (1220 MM) ABOVE FLOOR LEVEL. ALL DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT UNLESS OTHERWISE INDICATED.
5. SMOKE- OR HEAT-DETECTOR SPACING: COMPLY WITH NFPA 72.
6. DUCT SMOKE DETECTORS: COMPLY WITH NFPA 72 AND NFPA 90A. INSTALL SAMPLING TUBES SO THEY EXTEND THE FULL WIDTH OF DUCT. TUBES MORE THAN 36 INCHES (9100 MM) LONG SHALL BE SUPPORTED AT BOTH ENDS. REFER TO MECHANICAL DRAWINGS FOR INSTALLATION LOCATION. LOCATE A MINIMUM OF 3' FROM ANY DIFFUSER.
7. SINGLE-STATION SMOKE DETECTORS: WHERE MORE THAN ONE SMOKE ALARM IS INSTALLED WITHIN A DWELLING OR SUITE, THEY SHALL BE CONNECTED SO THAT THE OPERATION OF ANY SMOKE ALARM CAUSES THE ALARM IN ALL SMOKE ALARMS TO SOUND. LOCATE A MINIMUM OF 3' FROM ANY DIFFUSER.
8. REMOTE STATUS AND ALARM INDICATORS: INSTALL IN A VISIBLE LOCATION NEAR EACH SMOKE DETECTOR, SPRINKLER WATER-FLOW SWITCH, AND VALVE-TAMPER SWITCH THAT IS NOT READILY VISIBLE FROM NORMAL VIEWING POSITION.
9. AUDIBLE ALARM-INDICATING DEVICES: INSTALL NOT LESS THAN 6 INCHES (150 MM) BELOW THE CEILING. INSTALL BELLS AND HORNS ON FLUSH-MOUNTED BACK BOXES WITH THE DEVICE-OPERATING MECHANISM CONCEALED BEHIND A GRILLE. INSTALL ALL DEVICES AT THE SAME HEIGHT UNLESS OTHERWISE INDICATED.
10. VISIBLE ALARM-INDICATING DEVICES: INSTALL ADJACENT TO EACH ALARM BELL OR ALARM HORN AND AT LEAST 6 INCHES (150 MM) BELOW THE CEILING. INSTALL ALL DEVICES AT THE SAME HEIGHT UNLESS OTHERWISE INDICATED.
11. DEVICE LOCATION-INDICATING LIGHTS: LOCATE IN PUBLIC SPACE NEAR THE DEVICE THEY MONITOR.

B. PATHWAYS
1. PATHWAYS SHALL BE INSTALLED IN EMT. FIRE ALARM MC CABLE IS SUITABLE ONLY WHERE NOT EXPOSED.
2. FIRE ALARM BOXES SHALL BE PAINTED RED ENAMEL.
3. WIRING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE AND NFPA 72, AND ALL OTHER APPLICABLE STATE AND LOCAL CODES. THE CONTRACTOR SHALL PROVIDE, IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, ALL WIRING, CONDUIT, AND OUTLET BOXES REQUIRED FOR THE ERECTION OF THE COMPLETE SYSTEM AS DESCRIBED HEREIN AND AS SHOWN ON THE DRAWINGS. CONDUIT AND WIRE SHALL CONFORM TO THE APPLICABLE REQUIREMENTS FOR LIGHTING AND RECEPTACLE BRANCH CIRCUITS. THE SIZES OF THE DIFFERENT WIRES SHALL BE AS REQUIRED FOR SYSTEM OPERATION. COLOR-CODED WIRES SHALL BE USED.

C. CONNECTIONS
1. FOR FIRE-PROTECTION SYSTEMS RELATED TO DOORS IN FIRE-RATED WALLS AND PARTITIONS AND TO DOORS IN SMOKE PARTITIONS, COMPLY WITH REQUIREMENTS IN SECTION 087100 "DOOR HARDWARE." CONNECT HARDWARE AND DEVICES TO FIRE-ALARM SYSTEM.
   a. VERIFY THAT HARDWARE AND DEVICES ARE LISTED FOR USE WITH INSTALLED FIRE-ALARM SYSTEM BEFORE MAKING CONNECTIONS.
2. MAKE ADDRESSABLE CONNECTIONS WITH A SUPERVISED INTERFACE DEVICE TO THE FOLLOWING DEVICES AND SYSTEMS. INSTALL THE INTERFACE DEVICE LESS THAN 36 INCHES (910 MM) FROM THE DEVICE CONTROLLED. MAKE AN ADDRESSABLE CONFIRMATION CONNECTION WHEN SUCH FEEDBACK IS AVAILABLE AT THE DEVICE OR SYSTEM BEING CONTROLLED.
   a. SMOKE DAMPERS IN AIR DUCTS OF DESIGNATED HVAC DUCT SYSTEMS.
   b. MAGNETICALLY HELD-OPEN DOORS.
   c. ELECTRONICALLY LOCKED DOORS AND ACCESS GATES.
   d. ALARM-INITIATING CONNECTION TO ELEVATOR RECALL SYSTEM AND COMPONENTS.
   e. ALARM-INITIATING CONNECTION TO ACTIVATE EMERGENCY LIGHTING CONTROL.
   f. ALARM-INITIATING CONNECTION TO ACTIVATE EMERGENCY SHUTOFFS FOR GAS AND FUEL SUPPLIES.
   g. SUPERVISORY CONNECTIONS AT VALVE SUPERVISORY SWITCHES.
   h. SUPERVISORY CONNECTIONS AT LOW-AIR-PRESSURE SWITCH OF EACH DRY-PIPE SPRINKLER SYSTEM.
   i. SUPERVISORY CONNECTIONS AT ELEVATOR SHUNT-TRIP BREAKER.
   j. SUPERVISORY CONNECTIONS AT FIRE-EXTINGUISHER LOCATIONS.

D. GROUNDING
1. GROUND FIRE-ALARM CONTROL UNIT AND ASSOCIATED CIRCUITS; COMPLY WITH IEEE 1100. INSTALL A GROUND WIRE FROM MAIN SERVICE GROUND TO FIRE-ALARM CONTROL UNIT.

E. FIELD QUALITY CONTROL
1. FIELD TESTS SHALL BE WITNESSED BY AUTHORITIES HAVING JURISDICTION.
2. PERFORM THE FOLLOWING TESTS AND INSPECTIONS WITH THE ASSISTANCE OF A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE:
   a. VISUAL INSPECTION: CONDUCT VISUAL INSPECTION PRIOR TO TESTING.
      - INSPECTION SHALL BE BASED ON COMPLETED RECORD DRAWINGS AND SYSTEM DOCUMENTATION THAT IS REQUIRED BY NFPA 72 IN ITS "COMPLETION DOCUMENTS, PREPARATION" TABLE IN THE "DOCUMENTATION" SECTION OF THE "FUNDAMENTALS" CHAPTER.
      - COMPLY WITH THE "VISUAL INSPECTION FREQUENCIES" TABLE IN THE "INSPECTION" SECTION OF THE "INSPECTION, TESTING AND MAINTENANCE" CHAPTER IN NFPA 72; RETAIN THE "INITIAL/REACCEPTANCE" COLUMN AND LIST ONLY THE INSTALLED COMPONENTS.
   b. SYSTEM TESTING: COMPLY WITH THE "TEST METHODS" TABLE IN THE "TESTING" SECTION OF THE "INSPECTION, TESTING AND MAINTENANCE" CHAPTER IN NFPA 72.
   c. TEST AUDIBLE APPLIANCES FOR THE PUBLIC OPERATING MODE ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. PERFORM THE TEST USING A PORTABLE SOUND-LEVEL METER COMPLYING WITH TYPE 2 REQUIREMENTS IN ANSI S1.4.
   d. TEST AUDIBLE APPLIANCES FOR THE PRIVATE OPERATING MODE ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
   e. TEST VISIBLE APPLIANCES FOR THE PUBLIC OPERATING MODE ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
   f. FACTORY-AUTHORIZED SERVICE REPRESENTATIVE SHALL PREPARE THE "FIRE ALARM SYSTEM RECORD OF COMPLETION" IN THE "DOCUMENTATION" SECTION OF THE "FUNDAMENTALS" CHAPTER IN NFPA 72 AND THE "INSPECTION AND TESTING FORM" IN THE "RECORDS" SECTION OF THE "INSPECTION, TESTING AND MAINTENANCE" CHAPTER IN NFPA 72.
3. REACCEPTANCE TESTING: PERFORM REACCEPTANCE TESTING TO VERIFY THE PROPER OPERATION OF ADDED OR REPLACED DEVICES AND APPLIANCES.
4. FIRE-ALARM SYSTEM WILL BE CONSIDERED DEFECTIVE IF IT DOES NOT PASS TESTS AND INSPECTIONS.

F. DEMONSTRATION
1. TRAIN OWNER'S MAINTENANCE PERSONNEL TO ADJUST, OPERATE, AND MAINTAIN FIRE-ALARM SYSTEM.

TIMOTHY R. CHATTERTON LICENSE No. 15702 STATE OF DELAWARE PROFESSIONAL ENGINEER

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/1/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPVC REVIEW	4/1/2024
4.	ISSUED FOR BPVC RESUBMISSION	5/10/2024
5.	ISSUED FOR BPVC RESUBMISSION	6/10/2024
6.	ISSUED FOR PERMISSION	
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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ELECTRICAL
SPECIFICATIONS

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: XXX
DESIGN BY	: PRD
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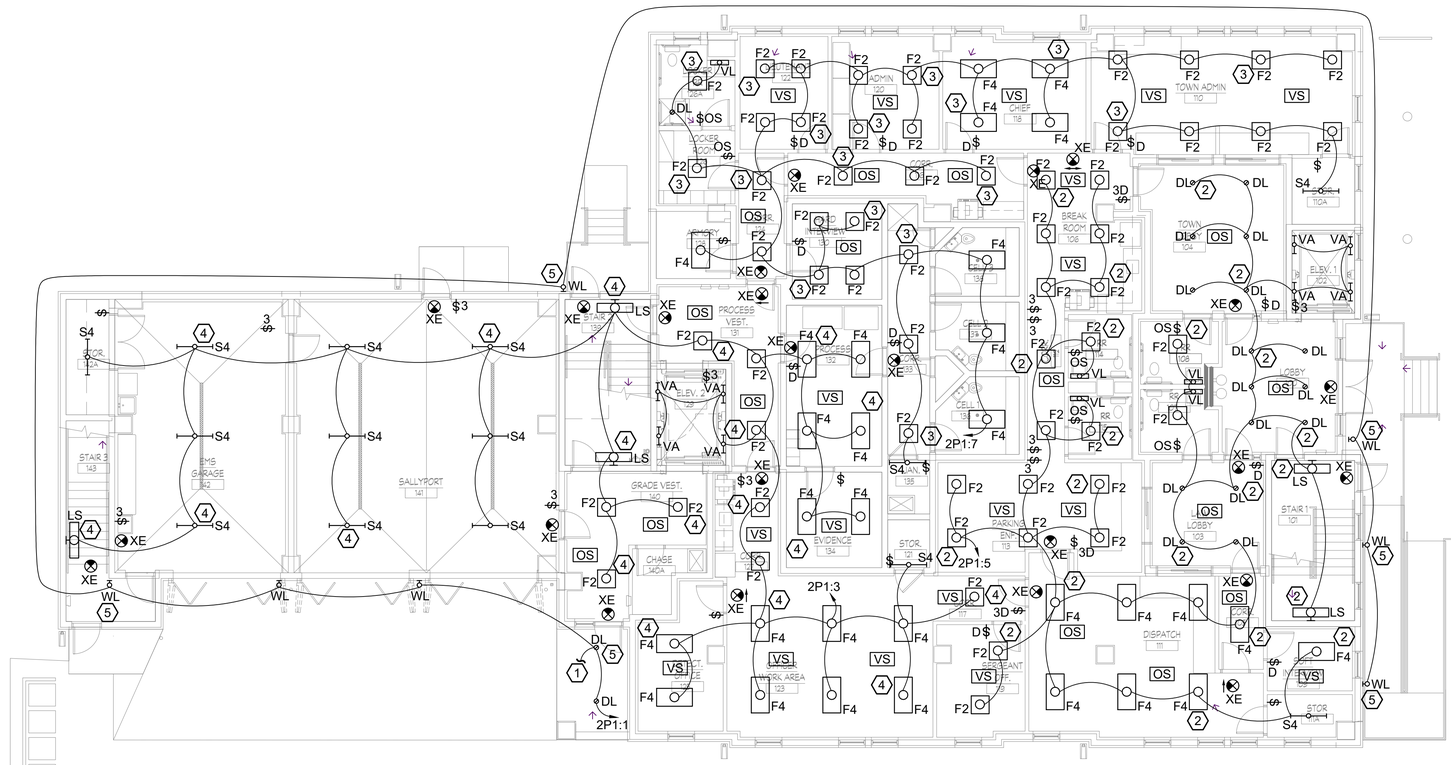

1 E1.1 ELECTRICAL LIGHTING FIRST FLOOR PLAN

1/8" = 1'-0"

LIGHTING GENERAL NOTES:

1. FIRE STOP ALL FIRE RATED FLOORS, CEILINGS, AND WALLS AS REQUIRED BY CODE. PENETRATIONS INTO OR THROUGH FIRE RESISTANCE RATED WALLS SHALL COMPLY WITH IBC CHAPTER 7.
2. PROVIDE EXPANSION FITTINGS AS REQUIRED AT ALL EXPANSION JOINTS. COORDINATE WITH ARCHITECTURAL PLANS.
3. WHERE EXPOSED, BRANCH CIRCUITS SHALL BE RUN IN EMT CONDUIT ROUTED PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE WHERE CONCEALED WITHIN WALLS OR ABOVE CEILING, MC CABLE IS PERMISSIBLE.
4. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES AND EXACT LIGHTING FIXTURE LOCATIONS, DIMENSIONAL INFORMATION, AND MOUNTING HEIGHTS.
5. EXIT SIGNS, EM SIGNS, EM BATTERY-BACKUP LIGHTING, AND NIGHT LIGHTS (NL) SHALL BE CIRCUITED HOT, AHEAD OF LOCAL CONTROLS.
6. UTILIZE RETAINED LIGHTING BRANCH CIRCUITS FOR NEW LIGHTING, UON.
7. WHERE WIRE SIZE IS NOT INDICATED, #12 AWG MINIMUM SHALL BE USED FOR CIRCUITS LESS THAN 100 FEET IN LENGTH, #10 AWG SHALL BE USED FOR CIRCUITS FROM 100 TO 150 FEET IN LENGTH,AND #8 AWG SHALL BE USED FOR CIRCUITS FROM 150 TO 250 FEET IN LENGTH. CIRCUIT LENGTHS GREATER THAN 250 FEET SHALL BE WIRED USING #6 MINIMUM, SUBJECT TO FIELD DETERMINED BY THE EC. PER ALL APPLICABLE CODES BASED ON ACTUAL CONDUIT AND WIRE ROUTING. THE INFORMATION ABOVE SHALL BE USED FOR PRICING PURPOSES ONLY.

LIGHTING KEY NOTES: (#)

1. CIRCUIT CONTINUES TO SECOND FLOOR.
2. PROVIDE FIXTURE WITH GTD CONNECT BACK TO CIRCUIT 2E1:1.
3. PROVIDE FIXTURE WITH GTD CONNECT BACK TO CIRCUIT 2E1:3.
4. PROVIDE FIXTURE WITH GTD CONNECT BACK TO CIRCUIT 2E1:5.
5. PROVIDE FIXTURE WITH GTD CONNECT BACK TO CIRCUIT 2E1:4.

1'0 4' 8' 12' 16'

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

TIMOTHY R. CHATTERTON LICENSE No. 15702 DELAWARE PROFESSIONAL ENGINEER

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPMO REVIEW	4/17/2024
4.	ISSUED FOR BPMO RESUBMISSION	5/10/2024
5.	ISSUED FOR BPMO RESUBMISSION	6/10/2024
7.	ISSUED FOR TOWN RESUBMISSION	

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ELECTRICAL LIGHTING FIRST FLOOR PLAN

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

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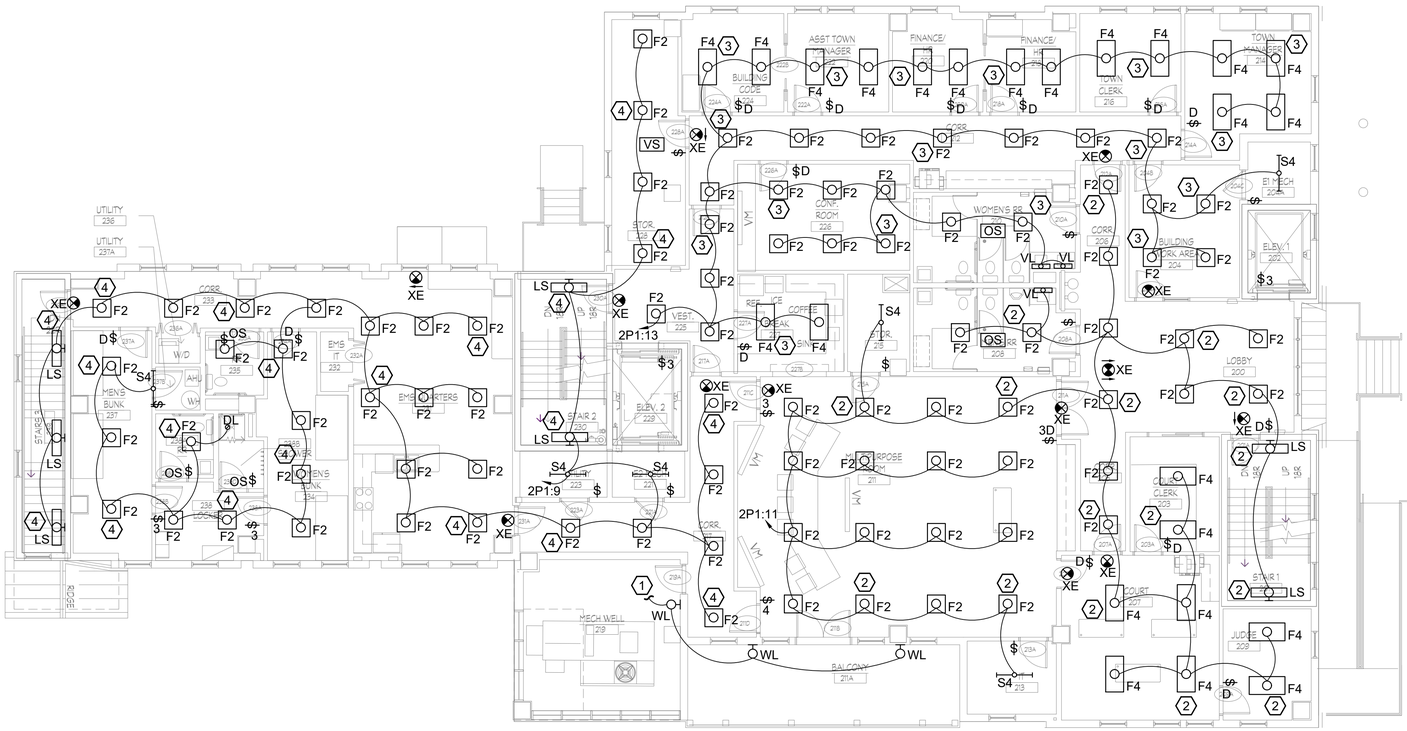

1 E1.2 ELECTRICAL LIGHTING SECOND FLOOR PLAN

1/8" = 1'-0"

LIGHTING GENERAL NOTES:

1. FIRE STOP ALL FIRE RATED FLOORS, CEILINGS, AND WALLS AS REQUIRED BY CODE. PENETRATIONS INTO OR THROUGH FIRE RESISTANCE RATED WALLS SHALL COMPLY WITH IBC CHAPTER 7.
2. PROVIDE EXPANSION FITTINGS AS REQUIRED AT ALL EXPANSION JOINTS. COORDINATE WITH ARCHITECTURAL PLANS.
3. WHERE EXPOSED, BRANCH CIRCUITS SHALL BE RUN IN EMT CONDUIT ROUTED PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE WHERE CONCEALED WITHIN WALLS OR ABOVE CEILING, MC CABLE IS PERMISSIBLE.
4. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES AND EXACT LIGHTING FIXTURE LOCATIONS, DIMENSIONAL INFORMATION, AND MOUNTING HEIGHTS.
5. EXIT SIGNS, EM SIGNS, EM BATTERY-BACKUP LIGHTING, AND NIGHT LIGHTS (NL) SHALL BE CIRCUITED HOT, AHEAD OF LOCAL CONTROLS.
6. UTILIZE RETAINED LIGHTING BRANCH CIRCUITS FOR NEW LIGHTING, UON.
7. WHERE WIRE SIZE IS NOT INDICATED, #12 AWG MINIMUM SHALL BE USED FOR CIRCUITS LESS THAN 100 FEET IN LENGTH, #10 AWG SHALL BE USED FOR CIRCUITS FROM 100 TO 150 FEET IN LENGTH,AND #8 AWG SHALL BE USED FOR CIRCUITS FROM 150 TO 250 FEET IN LENGTH. CIRCUIT LENGTHS GREATER THAN 250 FEET SHALL BE WIRED USING #6 MINIMUM, SUBJECT TO FIELD DETERMINED BY THE EC. PER ALL APPLICABLE CODES BASED ON ACTUAL CONDUIT AND WIRE ROUTING. THE INFORMATION ABOVE SHALL BE USED FOR PRICING PURPOSES ONLY.

LIGHTING KEY NOTES: (#)

1. CIRCUIT CONTINUES TO FIRST FLOOR.
2. PROVIDE FIXTURE WITH GTD CONNECT BACK TO CIRCUIT 2E1:7.
3. PROVIDE FIXTURE WITH GTD CONNECT BACK TO CIRCUIT 2E1:9.
4. PROVIDE FIXTURE WITH GTD CONNECT BACK TO CIRCUIT 2E1:11.

1'0 4' 8' 12' 16'

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

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ELECTRICAL LIGHTING SECOND FLOOR PLAN

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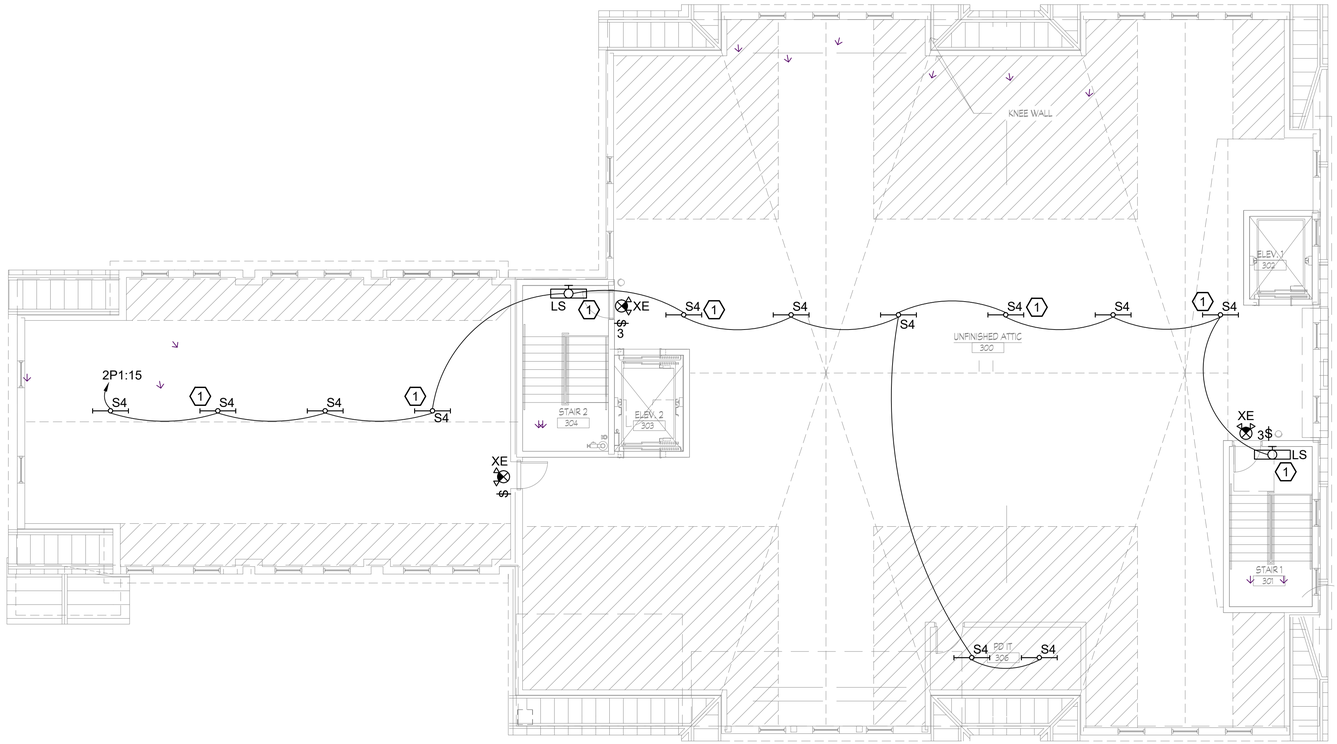

1 E2.3 ELECTRICAL LIGHTING THIRD FLOOR PLAN
1/8" = 1'-0"

LIGHTING GENERAL NOTES:

1. FIRE STOP ALL FIRE RATED FLOORS, CEILINGS, AND WALLS AS REQUIRED BY CODE. PENETRATIONS INTO OR THROUGH FIRE RESISTANCE RATED WALLS SHALL COMPLY WITH IBC CHAPTER 7.
2. PROVIDE EXPANSION FITTINGS AS REQUIRED AT ALL EXPANSION JOINTS. COORDINATE WITH ARCHITECTURAL PLANS.
3. WHERE EXPOSED, BRANCH CIRCUITS SHALL BE RUN IN EMT CONDUIT ROUTED PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE WHERE CONCEALED WITHIN WALLS OR ABOVE CEILING, MC CABLE IS PERMISSIBLE.
4. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES AND EXACT LIGHTING FIXTURE LOCATIONS, DIMENSIONAL INFORMATION, AND MOUNTING HEIGHTS.
5. EXIT SIGNS, EM SIGNS, EM BATTERY-BACKUP LIGHTING, AND NIGHT LIGHTS (NL) SHALL BE CIRCUITED HOT, AHEAD OF LOCAL CONTROLS.
6. UTILIZE RETAINED LIGHTING BRANCH CIRCUITS FOR NEW LIGHTING, UON.
7. WHERE WIRE SIZE IS NOT INDICATED, #12 AWG MINIMUM SHALL BE USED FOR CIRCUITS LESS THAN 100 FEET IN LENGTH, #10 AWG SHALL BE USED FOR CIRCUITS FROM 100 TO 150 FEET IN LENGTH,AND #8 AWG SHALL BE USED FOR CIRCUITS FROM 150 TO 250 FEET IN LENGTH. CIRCUIT LENGTHS GREATER THAN 250 FEET SHALL BE WIRED USING #6 MINIMUM, SUBJECT TO FIELD DETERMINED BY THE EC. PER ALL APPLICABLE CODES BASED ON ACTUAL CONDUIT AND WIRE ROUTING. THE INFORMATION ABOVE SHALL BE USED FOR PRICING PURPOSES ONLY.

LIGHTING KEY NOTES: (#)

1. PROVIDE FIXTURE WITH GTD CONNECT BACK TO CIRCUIT 2E1:13.

1'0 4' 8' 12' 16'
GRAPHIC SCALE 1/8" = 1'-0"

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1.	60% PROGRESS SET	11/7/2023
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5.	ISSUED FOR BPMO RESUBMISSION	6/10/2024
7.	ISSUED FOR TOWN RESUBMISSION	

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NEW CONSTRUCTION FOR:
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ELECTRICAL
LIGHTING THIRD
FLOOR PLAN

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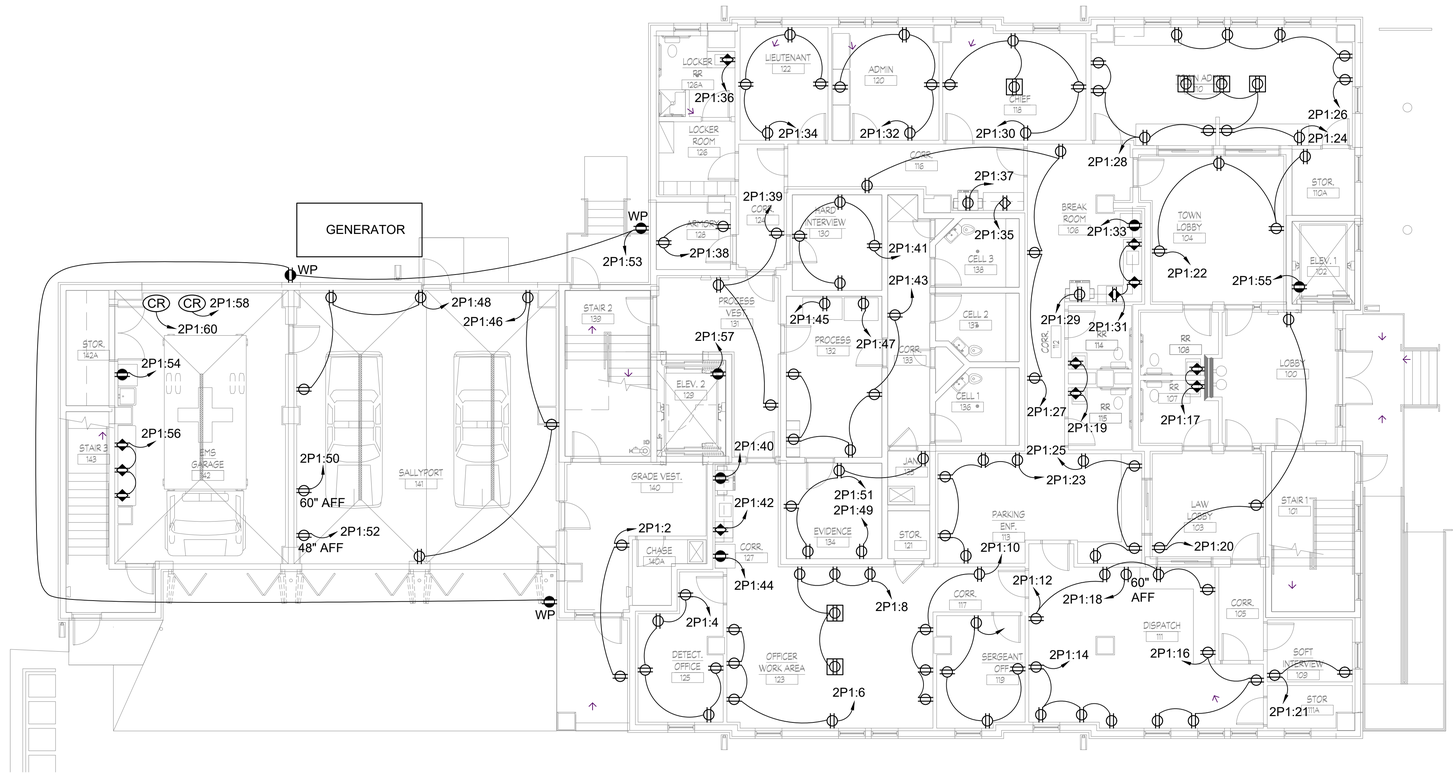

1 E2.1 ELECTRICAL POWER FLOOR PLAN

1/8" = 1'-0"

POWER GENERAL NOTES:

1. FIRE STOP ALL FIRE RATED FLOORS,CEILINGS, AND WALLS AS REQUIRED BY CODE. PENETRATIONS INTO OR THROUGH FIRE RESISTANCE RATED WALLS SHALL COMPLY WITH IBC CHAPTER 7.
2. PROVIDE EXPANSION FITTINGS AS REQUIRED AT ALL EXPANSION JOINTS. COORDINATE WITH ARCHITECTURAL PLANS.
3. WHERE EXPOSED, BRANCH CIRCUITS SHALL BE RUN IN EMT CONDUIT ROUTED PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE. WHERE CONCEALED WITHIN WALLS OR ABOVE CEILING, MC CABLE IS PERMISSIBLE.
4. EC SHALL NOT HAVE MORE THAN THREE CURRENT CARRYING CONDUCTORS IN A CONDUIT WITHOUT DERATING AMPACITIES PER THE NEC.
5. VERIFY EXACT LOCATIONS OF ALL DEVICES WITH ARCHITECTURAL PLANS PRIOR TO ROUGH-IN.
6. WHERE DEVICES ARE DIMENSIONED ON ARCHITECTURAL DRAWINGS, INSTALL DEVICES PER THOSE DIMENSIONS. WHERE DEVICE LOCATIONS ARE NOT DIMENSIONED ON ARCHITECTURAL DRAWINGS, INSTALL IN ACCORDANCE WITH DEFAULT LOCATIONS IN ELECTRICAL SPECIFICATIONS.
7. WHERE WIRE SIZE IS NOT INDICATED, #12 AWG MINIMUM SHALL BE USED FOR CIRCUITS LESS THAN 100 FEET IN LENGTH, #10 AWG SHALL BE USED FOR CIRCUITS FROM 100 TO 150 FEET IN LENGTH, AND #8 AWG SHALL BE USED FOR CIRCUITS FROM 150 TO 250 FEET IN LENGTH. CIRCUIT LENGTHS GREATER THAN 250 FEET SHALL BE WIRED USING #6 MINIMUM, SUBJECT TO FIELD VERIFICATION. ALL EXACT CONDUIT FOOTINGS, LENGTHS, AND WIRE SIZES SHALL BE FIELD DETERMINED BY THE E.C. PER ALL APPLICABLE CODES BASED ON ACTUAL CONDUIT AND WIRE ROUTING. THE INFORMATION ABOVE SHALL BE USED FOR PRICING PURPOSES ONLY.
8. ALL EXISTING RECEPTACLES THAT ARE TO REMAIN SHALL RECEIVE NEW DEVICES AND COVERPLATES.

1'0 4' 8' 12' 16'

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

TIMOTHY R. CHATTERTON LICENSE NO. 15702 STATE OF DELAWARE PROFESSIONAL ENGINEER

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPW REVIEW	4/17/2024
4.	ISSUED FOR BPW RESUBMISSION	5/10/2024
5.	ISSUED FOR BPW RESUBMISSION	6/10/2024
7.	ISSUED FOR TOWN RESUBMISSION	

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ELECTRICAL
POWER FIRST
FLOOR PLAN

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: 1/8"=1'-0"
DESIGN BY	: PRD
DRAWN BY	: PRD
CHECKED BY	: JTH
GMB FILE	: 220242
DATE	: 8-30-2024

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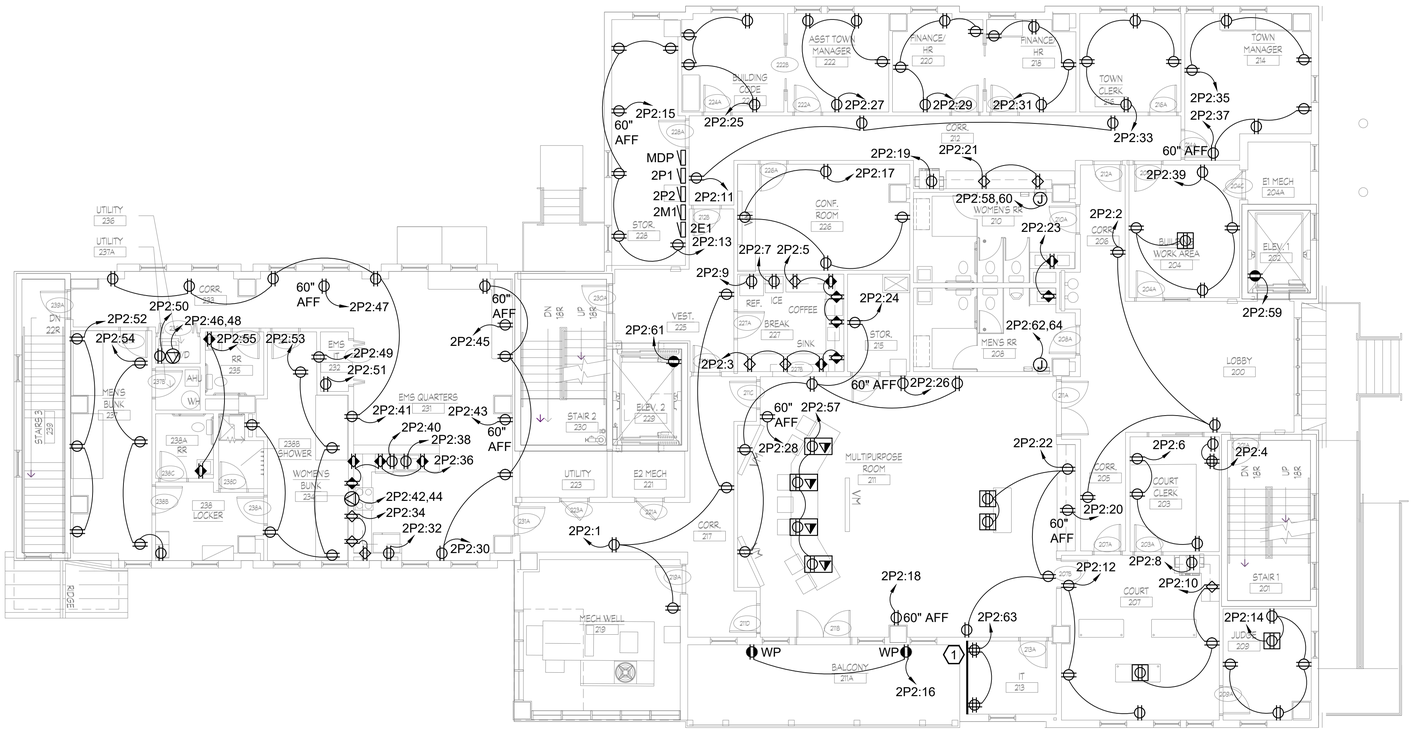

1 E2.2 ELECTRICAL POWER SECOND FLOOR PLAN

1/8" = 1'-0"

POWER GENERAL NOTES:

1. FIRE STOP ALL FIRE RATED FLOORS,CEILINGS, AND WALLS AS REQUIRED BY CODE. PENETRATIONS INTO OR THROUGH FIRE RESISTANCE RATED WALLS SHALL COMPLY WITH IBC CHAPTER 7.
2. PROVIDE EXPANSION FITTINGS AS REQUIRED AT ALL EXPANSION JOINTS. COORDINATE WITH ARCHITECTURAL PLANS.
3. WHERE EXPOSED, BRANCH CIRCUITS SHALL BE RUN IN EMT CONDUIT ROUTED PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE. WHERE CONCEALED WITHIN WALLS OR ABOVE CEILING, MC CABLE IS PERMISSIBLE.
4. EC SHALL NOT HAVE MORE THAN THREE CURRENT CARRYING CONDUCTORS IN A CONDUIT WITHOUT DERATING AMPACITIES PER THE NEC.
5. VERIFY EXACT LOCATIONS OF ALL DEVICES WITH ARCHITECTURAL PLANS PRIOR TO ROUGH-IN.
6. WHERE DEVICES ARE DIMENSIONED ON ARCHITECTURAL DRAWINGS, INSTALL DEVICES PER THOSE DIMENSIONS. WHERE DEVICE LOCATIONS ARE NOT DIMENSIONED ON ARCHITECTURAL DRAWINGS, INSTALL IN ACCORDANCE WITH DEFAULT LOCATIONS IN ELECTRICAL SPECIFICATIONS.
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8. ALL EXISTING RECEPTACLES THAT ARE TO REMAIN SHALL RECEIVE NEW DEVICES AND COVERPLATES.
9. ALL WORK PERFORMED BY THE LANDLORD, GENERAL CONTRACTOR OR SUBCONTRACTOR SHOULD FOLLOW.THE 2013 EDITION GENERAL PERFORMANCE STANDARDS AND SPECIFICATIONS

POWER KEY NOTES: (#)

1. PROVIDE 3/4" THICK X 8' HIGH FIRE RATED PLYWOOD, UNPAINTED, RATING LABELS EXPOSED. ROUGH IN ALL ELECTRICAL OUTLETS IN BACKBOARD FOR FLUSH MOUNT INSTALLATION OF FACEPLATES. TOP OF BACKBOARD SHALL BE 8'-6" AFF AND BOTTOM OF BACKBOARD SHALL BE 6" AFF.

1'0 4' 8' 12' 16'

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

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DEWEY BEACH, DELAWARE

ELECTRICAL
POWER SECOND
FLOOR PLAN

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

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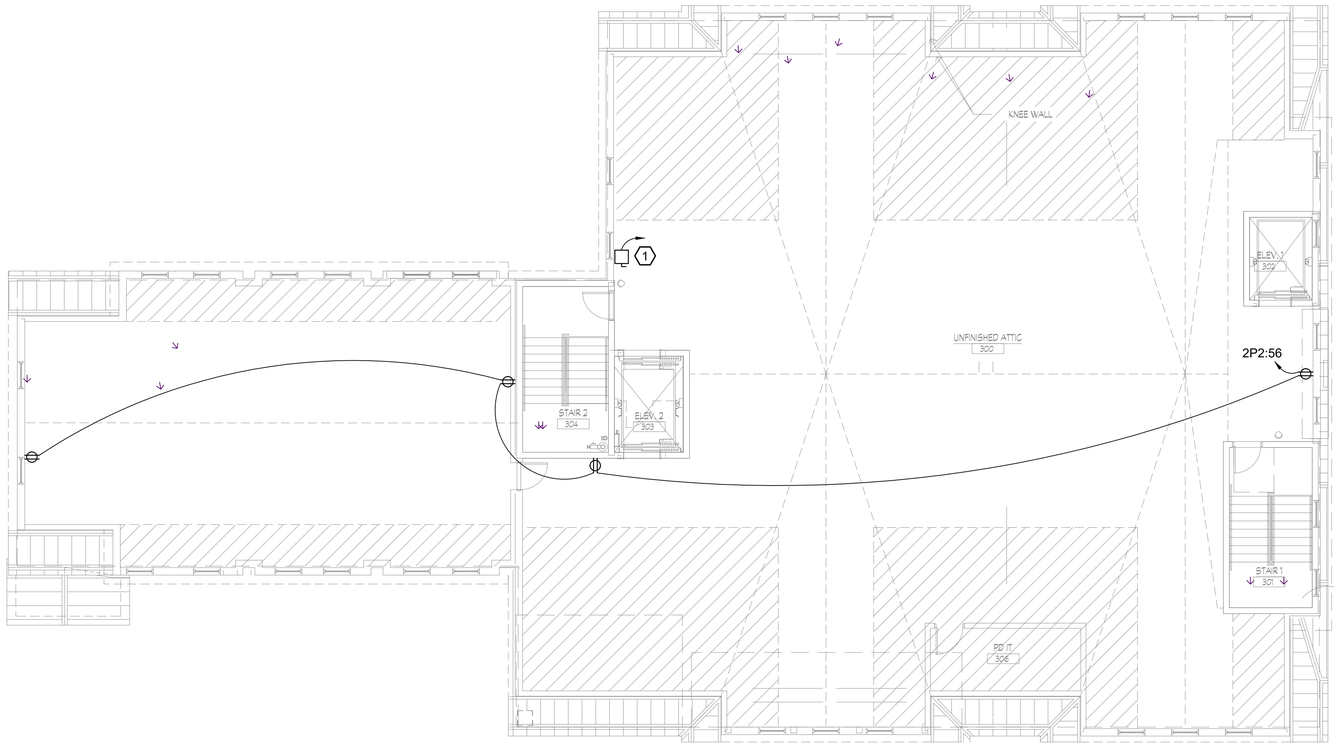

1 E2.3 ELECTRICAL POWER THIRD FLOOR PLAN
1/8" = 1'-0"

POWER GENERAL NOTES:

1. FIRE STOP ALL FIRE RATED FLOORS,CEILINGS, AND WALLS AS REQUIRED BY CODE. PENETRATIONS INTO OR THROUGH FIRE RESISTANCE RATED WALLS SHALL COMPLY WITH IBC CHAPTER 7.
2. PROVIDE EXPANSION FITTINGS AS REQUIRED AT ALL EXPANSION JOINTS. COORDINATE WITH ARCHITECTURAL PLANS.
3. WHERE EXPOSED, BRANCH CIRCUITS SHALL BE RUN IN EMT CONDUIT ROUTED PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE. WHERE CONCEALED WITHIN WALLS OR ABOVE CEILING, MC CABLE IS PERMISSIBLE.
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9. ALL WORK PERFORMED BY THE LANDLORD, GENERAL CONTRACTOR OR SUBCONTRACTOR SHOULD FOLLOW.THE 2013 EDITION GENERAL PERFORMANCE STANDARDS AND SPECIFICATIONS

POWER KEY NOTES: (#)

1. 100A SAFETY SWITCH FOR FUTURE SOLAR CONNECTION.

1'0 4' 8' 12' 16'
GRAPHIC SCALE 1/8" = 1'-0"

TIMOTHY R. CHATTERTON LICENSE No. 15702 DELAWARE PROFESSIONAL ENGINEER

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3.	ISSUED FOR BPMO REVIEW	4/17/2024
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7.	ISSUED FOR TOWN RESUBMISSION	

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DEWEY BEACH, DELAWARE

ELECTRICAL
POWER THIRD
FLOOR PLAN

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

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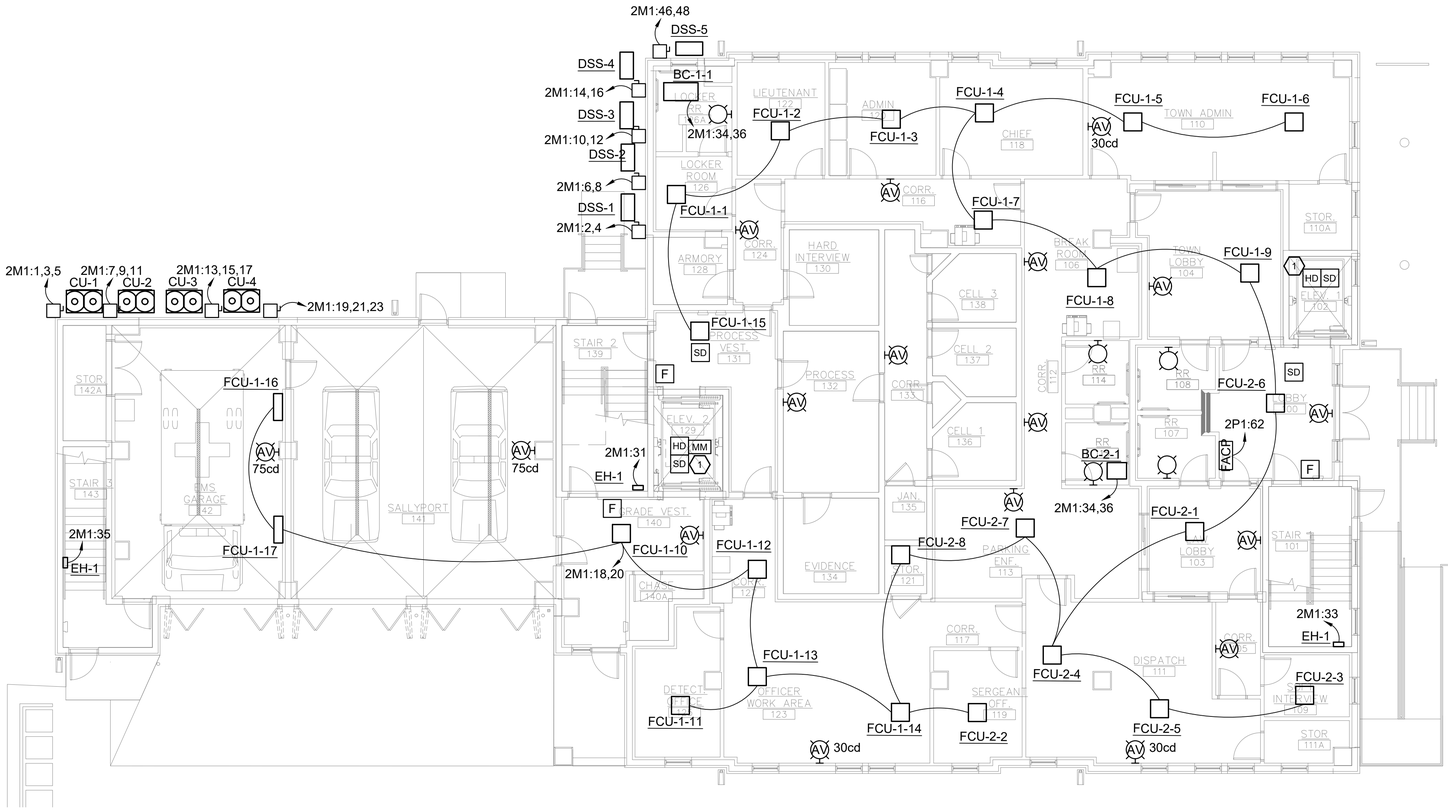

1 E3.1 ELECTRICAL POWER FLOOR PLAN

1/8" = 1'-0"

FIRE ALARM GENERAL NOTES:

1. REFER TO FIRE ALARM RISER DIAGRAM, SHEET E4.1 FOR GENERAL FIRE ALARM SYSTEM NOTES.
2. FIRE STOP ALL FIRE RATED FLOORS,CEILINGS, AND WALLS AS REQUIRED BY CODE. PENETRATIONS INTO OR THROUGH FIRE RESISTANCE RATED WALLS SHALL COMPLY WITH IBC CHAPTER 7.
3. PROVIDE EXPANSION FITTINGS AS REQUIRED AT ALL EXPANSION JOINTS. COORDINATE WITH ARCHITECTURAL PLANS.
4. WHERE EXPOSED, BRANCH CIRCUITS SHALL BE RUN IN EMT CONDUIT ROUTED PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE. WHERE CONCEALED WITHIN WALLS OR ABOVE CEILING, MC CABLE IS PERMISSIBLE.
5. THE COLOR OF FIRE ALARM DEVICES SHALL BE VERIFIED WITH ARCHITECT PRIOR TO PROCUREMENT.
6. THE EXACT LOCATION OF ALL DEVICES AND ASSOCIATED EQUIPMENT SHALL BE LOCATED PER NFPA, ADA, AND ALL OTHER CODES HAVING JURISDICTION.
7. PROVIDE CONTROL MODULES TO INTERFACE WITH ALL ACCESS CONTROLLED DOORS AS REQUIRED BY CODE. CONTROL MODULES SHALL FUNCTION TO SIGNAL DOORS TO FAIL SAFE UPON ACTIVATION OF FIRE ALARM.

FIRE ALARM KEY NOTES: (#)

1. PROVIDE MONITOR MODULES FOR FIRE ALARM CIRCUIT AT THE ELEVATOR DISCONNECT FA INTERFACE POINT.

1'0 4' 8' 12' 16'

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

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
3.	ISSUED FOR BID	11/15/2024

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ELECTRICAL FIRE ALARM FIRST FLOOR PLAN

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MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

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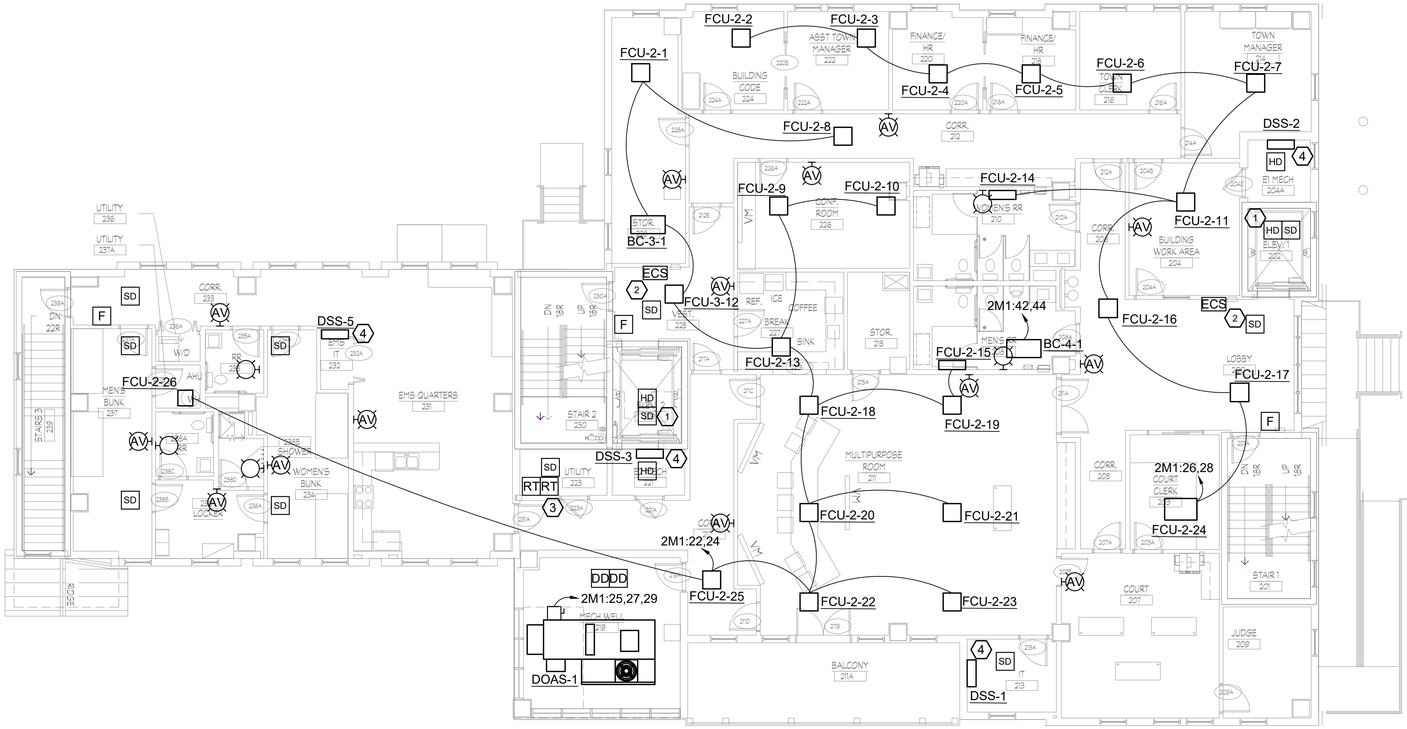

1 E3.2 ELECTRICAL POWER SECOND FLOOR PLAN

1/8" = 1'-0"

FIRE ALARM GENERAL NOTES:

1. REFER TO FIRE ALARM RISER DIAGRAM, SHEET E4.1 FOR GENERAL FIRE ALARM SYSTEM NOTES.
2. FIRE STOP ALL FIRE RATED FLOORS,CEILINGS, AND WALLS AS REQUIRED BY CODE. PENETRATIONS INTO OR THROUGH FIRE RESISTANCE RATED WALLS SHALL COMPLY WITH IBC CHAPTER 7.
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7. PROVIDE CONTROL MODULES TO INTERFACE WITH ALL ACCESS CONTROLLED DOORS AS REQUIRED BY CODE. CONTROL MODULES SHALL FUNCTION TO SIGNAL DOORS TO FAIL SAFE UPON ACTIVATION OF FIRE ALARM.

FIRE ALARM KEY NOTES: (#)

1. PROVIDE MONITOR MODULES FOR FIRE ALARM CIRCUIT AT THE ELEVATOR DISCONNECT FA INTERFACE POINT.
2. PROVIDE AREA OF REFUGE TWO WAY COMMUNICATIONS FLUSH MOUNT CALL BOX EQUAL TO RATH 2400-808NSP. PROVIDE ALL REQUIRED SIGNAGE, POWER, AND 2 HOUR RATED CABLE AS REQUIRED FOR COMPLETE INSTALLATION.
3. REMOTE TEST SWITCHES FOR DUCT DETECTORS.
4. INDOOR UNIT POWERED BY EXTERIOR UNIT.

1'0 4' 8' 12' 16'

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

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DEWEY BEACH, DELAWARE

ELECTRICAL FIRE ALARM SECOND FLOOR PLAN

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MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

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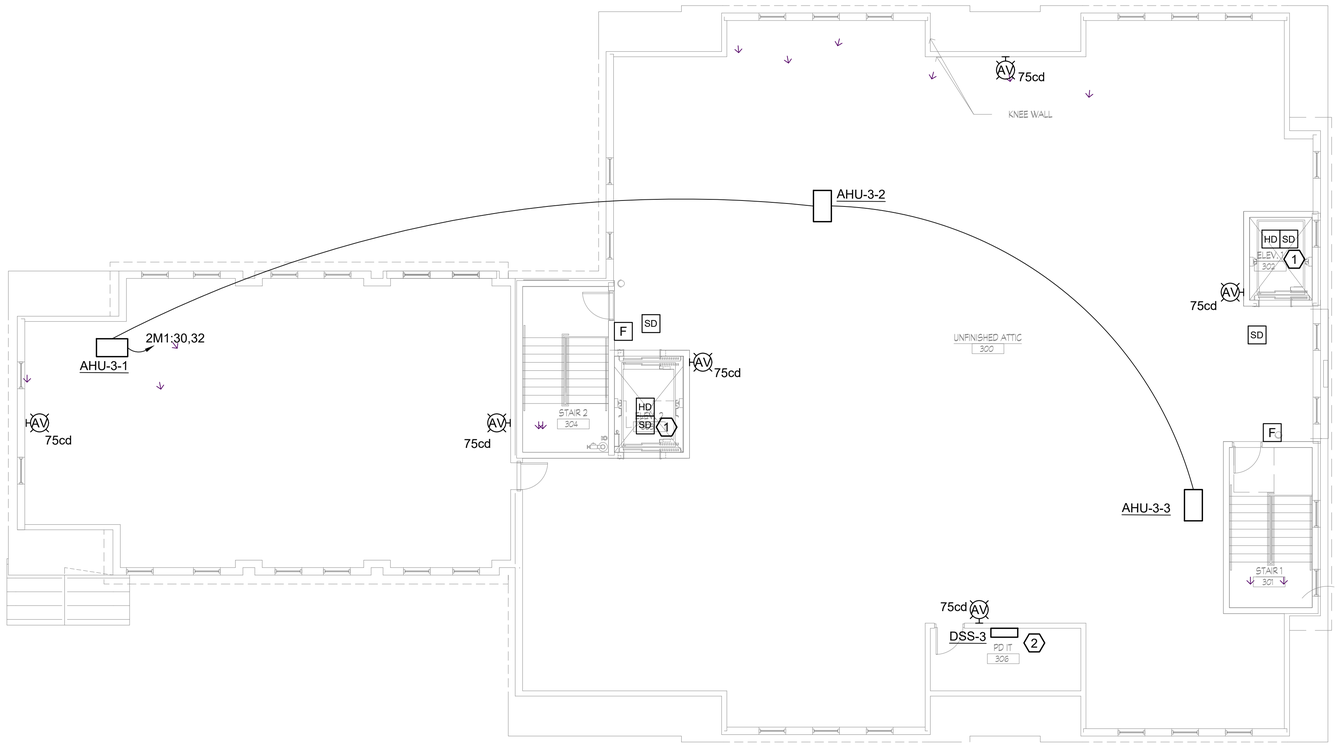

1 E3.3 ELECTRICAL POWER THIRD FLOOR PLAN
1/8" = 1'-0"

FIRE ALARM GENERAL NOTES:

1. REFER TO FIRE ALARM RISER DIAGRAM, SHEET E4.1 FOR GENERAL FIRE ALARM SYSTEM NOTES.
2. FIRE STOP ALL FIRE RATED FLOORS,CEILINGS, AND WALLS AS REQUIRED BY CODE. PENETRATIONS INTO OR THROUGH FIRE RESISTANCE RATED WALLS SHALL COMPLY WITH IBC CHAPTER 7.
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FIRE ALARM KEY NOTES: (#)

1. PROVIDE MONITOR MODULES FOR FIRE ALARM CIRCUIT AT THE ELEVATOR DISCONNECT FA INTERFACE POINT.
2. INDOOR UNIT POWERED BY EXTERIOR UNIT.

1'0 4' 8' 12' 16'
GRAPHIC SCALE 1/8" = 1'-0"

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DEWEY BEACH, DELAWARE

ELECTRICAL FIRE ALARM THIRD FLOOR PLAN

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MEP Engineering
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205 East Market Street
Salisbury, Maryland 21801
443.545.1300

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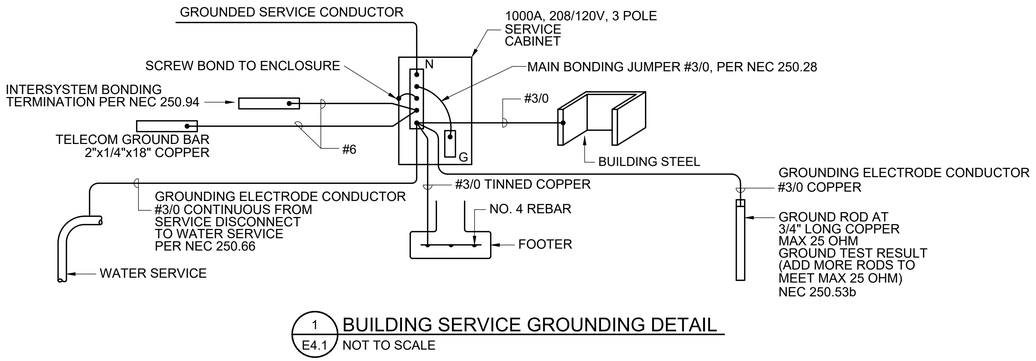


1 E4.1 BUILDING SERVICE GROUNDING DETAIL
NOT TO SCALE

LIGHTING FIXTURE SCHEDULE

TYPE	FIXTURE DESCRIPTION	MANUFACTURER	MODEL	DRIVER/ BALLAST	INPUT WATTS	VOLTS	MOUNTING	NOTES
DL	6" LED DOWNLIGHT	LITHONIA	LDN6 35/10 L06 AR MVOLT GZ10	0-10V	10.8	120-277	RECESSED	
F2	2X4 LED FLAT PANEL	LITHONIA	EPANL 2X2 4800LM 80CRI 35K MIN10 ZT MVOLT	0-10V	45	120-277	RECESSED	
F4	2X4 LED FLAT PANEL	LITHONIA	EPANL 2X4 4800LM 80CRI 35K MIN10 ZT MVOLT	0-10V	45	120-277	RECESSED	
LS	4' LED STAIRWELL LINEAR W/ BUILT-IN OCCUPANCY SENSOR AND INTEGRAL	LITHONIA	WL4 40L GZ10 LP840 MSD7 DIM10 EL7L	0-10V	40	120-277	WALL	
S4	4' LED STRIPLIGHT	LITHONIA	ZL1D L48 3000LM FST MVOLT 35K 80CRI	0-10V	30	120-277	SURFACE	
VA	4' LED VAPORTITE LINEAR	LITHONIA	FMVTSL 24IN MVOLT 35K 90CRI BN	0-10V	24	120-277	WALL	
VL	2' LED VANITY LIGHT	LITHONIA	FMVCSLS 24 MVOLT 30K35K40K 90CRI	0-10V	18	120-277	WALL	
WL	EXTERIOR LED WALL SCONCE	LITHONIA	WDGE 1 LED P1 35K 80CRI VW MVOLT	0-10V	4	120-277	WALL	
XE	EMERGENCY EXIT SIGN	LITHONIA	LHQM WITH REMOTE HEADS	N/A	4.3	120-277	SURFACE	

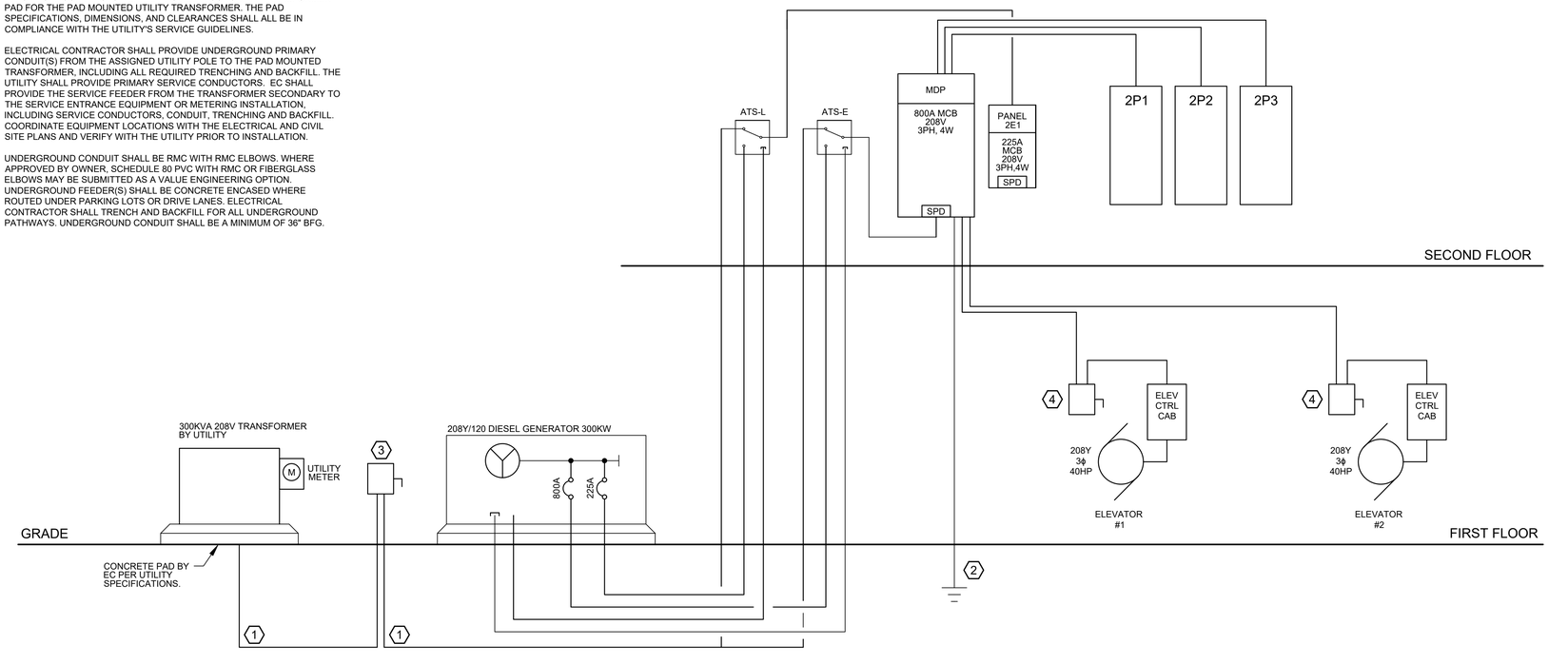
NOTES:
1. ARCHITECT SHALL SPECIFY / VERIFY ALL FINISH SELECTIONS.
2. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL MOUNTING ACCESSORIES.
4. LIGHTING FIXTURE SUBSTITUTIONS THAT ARE CONSIDERED EQUAL TO THE SPECIFIED PRODUCTS MAY BE SUBMITTED AND WILL BE REVIEWED BY ARCHITECT AND ELECTRICAL ENGINEER. ACCEPTANCE WILL BE EVALUATED BASED ON AESTHETICS, PERFORMANCE, AND QUALITY. DO NOT PROVIDE VALUE ENGINEERING OPTIONS UNLESS SPECIFICALLY DIRECTED BY THE OWNER, ARCHITECT, OR ENGINEER.
5. THE STANDARD DRIVER OPTION FOR MOST FIXTURES IS 0-10V DIM. THE CONTRACTOR IS ONLY REQUIRED TO PROVIDE 0-10V WIRING WHERE DIMMING CONTROLS ARE SHOWN ON THE LIGHTING PLAN.
6. FIXTURES WITH HALF FILLED OR FILLED CENTERS SHALL BE PROVIDED WITH A 1100 LUMEN MIN EMERGENCY BATTERY BACKUP.

POWER RISER GENERAL NOTES:

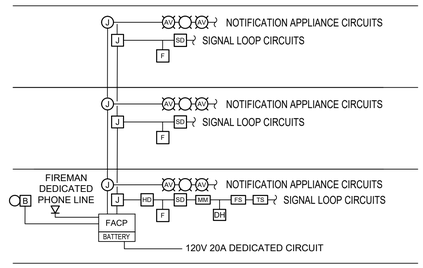
1. THE RISER DIAGRAM IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO SHOW SYSTEM CONNECTIVITY AND FEEDER SIZES. REFER TO POWER PLANS FOR EQUIPMENT LAYOUTS AND LOCATIONS. ELECTRICAL CONTRACTOR SHALL VERIFY THAT THE SUBMITTED EQUIPMENT DIMENSIONS FIT WITHIN THE CORRESPONDING ELECTRICAL SPACE(S). ALL EQUIPMENT CLEARANCES AND MOUNTING HEIGHTS REQUIRED BY THE NEC SHALL BE MAINTAINED.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE SITE WORK WITH CIVIL SITE PLANS, WHERE APPLICABLE, AND EXISTING SITE CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK.
3. THE ELECTRICAL SERVICE INSTALLATION AND METERING STRATEGY SHALL BE APPROVED BY THE UTILITY COMPANY PRIOR TO THE COMMENCEMENT OF WORK. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH UTILITY RULES AND REGULATIONS.
4. ELECTRICAL CONTRACTOR SHALL COORDINATE THE PROCUREMENT AND INSTALLATION OF ALL METERING EQUIPMENT WITH THE UTILITY, INCLUDING METERS, METER SOCKETS, METER TRANSOCKETS, INSTRUMENT CABINETS, CURRENT TRANSFORMERS (CT'S), AND VOLTAGE TRANSFORMERS (VT'S). THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT THAT IS THE RESPONSIBILITY OF THE "CUSTOMER" PER THE UTILITY'S SERVICE GUIDELINES.
5. ELECTRICAL CONTRACTOR SHALL PROVIDE A CONCRETE TRANSFORMER PAD FOR THE PAD MOUNTED UTILITY TRANSFORMER. THE PAD SPECIFICATIONS, DIMENSIONS, AND CLEARANCES SHALL ALL BE IN COMPLIANCE WITH THE UTILITY'S SERVICE GUIDELINES.
6. ELECTRICAL CONTRACTOR SHALL PROVIDE UNDERGROUND PRIMARY CONDUIT(S) FROM THE ASSIGNED UTILITY POLE TO THE PAD MOUNTED TRANSFORMER, INCLUDING ALL REQUIRED TRENCHING AND BACKFILL. THE UTILITY SHALL PROVIDE PRIMARY SERVICE CONDUCTORS. EC SHALL PROVIDE THE SERVICE FEEDER FROM THE TRANSFORMER SECONDARY TO THE SERVICE ENTRANCE EQUIPMENT OR METERING INSTALLATION, INCLUDING SERVICE CONDUCTORS, CONDUIT, TRENCHING AND BACKFILL. COORDINATE EQUIPMENT LOCATIONS WITH THE ELECTRICAL AND CIVIL SITE PLANS AND VERIFY WITH THE UTILITY PRIOR TO INSTALLATION.
7. UNDERGROUND CONDUIT SHALL BE RMC WITH RMC ELBOWS. WHERE APPROVED BY OWNER, SCHEDULE 80 PVC WITH RMC OR FIBERGLASS ELBOWS MAY BE SUBMITTED AS A VALUE ENGINEERING OPTION. UNDERGROUND FEEDER(S) SHALL BE CONCRETE ENCASED WHERE ROUTED UNDER PARKING LOTS OR DRIVE LANES. ELECTRICAL CONTRACTOR SHALL TRENCH AND BACKFILL FOR ALL UNDERGROUND PATHWAYS. UNDERGROUND CONDUIT SHALL BE A MINIMUM OF 36" BFG.
8. EXPOSED EXTERIOR CONDUIT SHALL BE RMC. WHERE APPROVED BY OWNER, SCHEDULE 80 PVC MAY BE SUBMITTED AS A VALUE ENGINEERING OPTION. ALL EXTERIOR BUILDING MOUNTED CONDUIT SHALL BE PAINTED PER THE ARCHITECT'S SPECIFICATIONS.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE CONCRETE PADS FOR ALL ELECTRICAL EQUIPMENT REQUIRING A HOUSEKEEPING PAD. THIS INCLUDES GENERATORS, TRANSFORMERS, SWITCHBOARDS, LARGE DISTRIBUTION PANELS, ETC. ALL PADS SHALL BE PROVIDED PER THE EQUIPMENT SPECIFICATIONS.
10. PROVIDE PULL BOXES WHERE REQUIRED PER NEC FOR CONDUIT BENDS.
11. THE BASIS OF DESIGN MATERIAL FOR ALL EQUIPMENT BUSES IS COPPER.
12. PRIMARY HORIZONTAL BUSES IN SWITCHBOARDS SHALL NOT BE TAPERED.
13. REFER TO THE GROUNDING RISER DIAGRAM FOR MORE INFORMATION ON THE BUILDING GROUNDING SYSTEM.

POWER RISER KEY NOTES: (#)

1. SERVICE ENTRANCE FEEDER SHALL BE (3) SETS OF 4#500 IN 3-1/2"C FOR EACH RUN.
2. REFER TO GROUNDING DETAIL ON THIS SHEET.
3. 208V,3Ø,800A FUSED DISCONNECT SWITCH.
4. 208V,3Ø,400A DISCONNECT SWITCH.



2 E4.1 ELECTRICAL RISER DIAGRAM
NOT TO SCALE



3 E4.1 FIRE ALARM DEVICE CONNECTION
NOT TO SCALE

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
3.	ISSUED FOR BID	11/15/2024

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 410.546.0166
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ELECTRICAL
DETAILS

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: XXX
DESIGN BY	: XXX
DRAWN BY	: XXX
CHECKED BY	: XXX
GMB FILE	: 220242
DATE	: 8-30-2024

E4.1

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ALLEN + SHARIFF JOB# : 2331073

Branch Panel: MDP

Location: STOR 228
Supply From: UTILITY
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 208/120V
Phases: 3
Wires: 4

A.I.C. Rating: 35 KAIC
Mains Type: MCB
Mains Rating: 800
MCB Rating: 800

CKT	Circuit Description	Notes	Wire Size	Trip	Pole	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	Pole	Trip	Wire Size	Notes	Circuit Description	CKT
1						5702 14248								2
3	ELEVATOR		4#4/0,1#4G,2-1/2"C	225	3		5702 14467		3	200	4#4/0,1#6G,2-1/2"C		2P1	4
5								5702 13536						6
7	SHUNT TRIP		-	-	-	- 16520								8
9							5702 14467		3	200	4#4/0,1#6G,2-1/2"C		2P2	10
11	ELEVATOR		4#4/0,1#4G,2-1/2"C	225	3			5702 13536						12
13						5702 30873								14
15	SHUNT TRIP		-	-	-		- 30929		3	400	4#600,1#3G,3-1/2"C		2M1	16
17	SPACE		-	-	-			- 30873						18
19	SPACE		-	-	-	- -								20
21	SPACE		-	-	-		- -		3	30	3#10,1#10G,3/4"C		SPD	22
23	SPACE		-	-	-			- -						24
					Total Load:	73045	71267	69349						
					Amps:		593.1							

NOTES:

Branch Panel: 2E1

Location: STOR 228
Supply From: MDP
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 208/120V
Phases: 3
Wires: 4

A.I.C. Rating: 10 KAIC
Mains Type: MLO
Mains Rating: 225
MCB Rating: -

CKT	Circuit Description	Notes	Wire Size	Trip	Pole	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	Pole	Trip	Wire Size	Notes	Circuit Description	CKT
1	EM LTG 1ST FL EAST		2#12,1#12G,3/4"C	20	1	775 500			1	20	2#12,1#12G,3/4"C	1	FACP	2
3	EM LTG 1ST FL NORTH		2#12,1#12G,3/4"C	20	1		765 -		-	-	-		SPACE	4
5	EM LTG 1ST FL WEST		2#12,1#12G,3/4"C	20	1			780 -	-	-	-		SPACE	6
7	EM LTG 2ND FL EAST		2#12,1#12G,3/4"C	20	1	368 -			-	-	-		SPACE	8
9	EM LTG 2ND FL NORTH		2#12,1#12G,3/4"C	20	1		900 -		-	-	-		SPACE	10
11	EM LTG 2ND FL WEST		2#12,1#12G,3/4"C	20	1			880 -	-	-	-		SPACE	12
13	RM LTG 3RD FL		2#12,1#12G,3/4"C	20	1	150 -			-	-	-		SPACE	14
15	SPACE		-	-	-		- -		-	-	-		SPACE	16
17	SPACE		-	-	-			- -	-	-	-		SPACE	18
19						- -			-	-	-		SPACE	20
21	SPD		3#10,1#10G,3/4"C	30	3		- -		-	-	-		SPACE	22
23								- -	-	-	-		SPACE	24
					Total Load:	1793	1665	1660						
					Amps:		14.2							

NOTES:
PROVIDE RED CIRCUIT BREAKER WITH UL LISTED LOCKING DEVICE CAPABLE OF BEING LOCKED IN THE CLOSED POSITION.

Branch Panel: 2P1

Location: STOR 228
Supply From: MDP
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 208/120V
Phases: 3
Wires: 4

A.I.C. Rating: 22 KAIC
Mains Type: MLO
Mains Rating: 225
MCB Rating: -

CKT	Circuit Description	Notes	Wire Size	Trip	Pole	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	Pole	Trip	Wire Size	Notes	Circuit Description	CKT
1	LTG EXTERIOR		2#12,1#12G,3/4"C	20	1	34 180			1	20	2#12,1#12G,3/4"C		REC GRADE VEST 104	2
3	LTG 1ST FLOOR WEST		2#12,1#12G,3/4"C	20	1		1581 900		1	20	2#12,1#12G,3/4"C		REC OFFICE 125	4
5	LTG 1ST FLOOR EAST		2#12,1#12G,3/4"C	20	1			1720 720	1	20	2#12,1#12G,3/4"C		REC OFFICER WORK 123	6
7	LTG 1ST FLOOR NORTH		2#12,1#12G,3/4"C	20	1	1770 900			1	20	2#12,1#12G,3/4"C		REC OFFICER WORK 123	8
9	LTG 2ND FLOOR WEST		2#12,1#12G,3/4"C	20	1		1846 720		1	20	2#12,1#12G,3/4"C		REC OFFICER WORK 123	10
11	LTG 2ND FLOOR EAST		2#12,1#12G,3/4"C	20	1			1796 720	1	20	2#12,1#12G,3/4"C		REC DISPATCH 111	12
13	LTG 2ND FLOOR NORTH		2#12,1#12G,3/4"C	20	1	1884 720			1	20	2#12,1#12G,3/4"C		REC DISPATCH 111	14
15	LTG 3RD FLOOR		2#12,1#12G,3/4"C	20	1		300 720		1	20	2#12,1#12G,3/4"C		REC DISPATCH 111	16
17	REC RR 107,108		2#12,1#12G,3/4"C	20	1			360 180	1	20	2#12,1#12G,3/4"C		REC DISPATCH 111	18
19	REC RR 114,115		2#12,1#12G,3/4"C	20	1	360 540			1	20	2#12,1#12G,3/4"C		REC LOBBY 100,103	20
21	REC INTERVIEW 109		2#12,1#12G,3/4"C	20	1		360 720		1	20	2#12,1#12G,3/4"C		REC LOBBY 104	22
23	REC PARKING ENF 113		2#12,1#12G,3/4"C	20	1			900 900	1	20	2#12,1#12G,3/4"C		REC TOWN ADMIN 110	24
25	REC PARKING ENF 113		2#12,1#12G,3/4"C	20	1	720 900			1	20	2#12,1#12G,3/4"C		REC TOWN ADMIN 110	26
27	REC CORR 112,116		2#12,1#12G,3/4"C	20	1		720 720		1	20	2#12,1#12G,3/4"C		REC TOWN ADMIN 110	28
29	REC PRINTER 106		2#12,1#12G,3/4"C	20	1			1000 720	1	20	2#12,1#12G,3/4"C		REC CHIEF 118	30
31	REC BREA RM 106		2#12,1#12G,3/4"C	20	1	540 720			1	20	2#12,1#12G,3/4"C		REC ADMIN 120	32
33	REFRIGERATOR 106		2#12,1#12G,3/4"C	20	1		1000 720		1	20	2#12,1#12G,3/4"C		REC LIEUTENANT 122	34
35	REC CORR 116		2#12,1#12G,3/4"C	20	1			180 180	1	20	2#12,1#12G,3/4"C		REC LOCKER RR 126A	36
37	REC PRINTER 116		2#12,1#12G,3/4"C	20	1	1000 360			1	20	2#12,1#12G,3/4"C		REC ARMORY 128	38
39	REC PROCESS 131,124		2#12,1#12G,3/4"C	20	1		540 1000		1	20	2#12,1#12G,3/4"C		REC PRINTER 127	40
41	REC HARD INTERVIEW 130		2#12,1#12G,3/4"C	20	1			720 180	1	20	2#12,1#12G,3/4"C		REC CORR 127	42
43	REC PROCESS 132		2#12,1#12G,3/4"C	20	1	720 1000			1	20	2#12,1#12G,3/4"C		REFRIGERATOR 127	44
45	REC PROCESS 132		2#12,1#12G,3/4"C	20	1		180 540		1	20	2#12,1#12G,3/4"C		REC SALLYPORT 141	46
47	REC PROCESS 132		2#12,1#12G,3/4"C	20	1			180 540	1	20	2#12,1#12G,3/4"C		REC SALLYPORT 141	48
49	REFRIGERATOR 134		2#12,1#12G,3/4"C	20	1	1000 180			1	20	2#12,1#12G,3/4"C		REC SALLYPORT 141	50
51	REC EVIDENCE 134		2#12,1#12G,3/4"C	20	1		540 180		1	20	2#12,1#12G,3/4"C		REC SALLYPORT 141	52
53	REC EXTERIOR		2#12,1#12G,3/4"C	20	1			540 1000	1	20	2#12,1#12G,3/4"C		REC EMS GARAGE 142	54
55	REC ELEVATOR		2#12,1#12G,3/4"C	20	1	180 540			1	20	2#12,1#12G,3/4"C		REC EMS GARAGE 142	56
57	REC ELEVATOR		2#12,1#12G,3/4"C	20	1		180 1000		1	20	2#12,1#12G,3/4"C		CORD REEL GARAGE 142	58
59	SPACE		-	-	-			- 1000	1	20	2#12,1#12G,3/4"C		CORD REEL GARAGE 142	60
61	SPACE		-	-	-	- -			-	-	-		SPACE	62
63	SPACE		-	-	-		- -		-	-	-		SPACE	64
65	SPACE		-	-	-			- -	-	-	-		SPACE	66
67	SPACE		-	-	-	- -			-	-	-		SPACE	68
69	SPACE		-	-	-		- -		-	-	-		SPACE	70
71	SPACE		-	-	-			- -	-	-	-		SPACE	72
73	SPACE		-	-	-	- -			-	-	-		SPACE	74
75	SPACE		-	-	-		- -		-	-	-		SPACE	76
77	SPACE		-	-	-			- -	-	-	-		SPACE	78
79	SPACE		-	-	-	- -			-	-	-		SPACE	80
81	SPACE		-	-	-		- -		-	-	-		SPACE	82
83	SPACE		-	-	-			- -	-	-	-		SPACE	84
					Total Load:	14248	14467	13536						
					Amps:		117.3							

NOTES:

Branch Panel: 2M1

Location: STOR 228
Supply From: MDP
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 208/120V
Phases: 3
Wires: 4

A.I.C. Rating: 10 KAIC
Mains Type: MLO
Mains Rating: 400
MCB Rating: -

CKT	Circuit Description	Notes	Wire Size	Trip	Pole	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	Pole	Trip	Wire Size	Notes	Circuit Description	CKT
1						3840 915								2
3	CU-1		3#4, 1#10G, 1"C	60	3		3840 915		2	30	2#10, 1#10G, 3/4"C		DSS-1	4
5								3840 915						6
7						2880 915			2	30	2#10, 1#10G, 3/4"C		DSS-2	8
9	CU-2		3#6, 1#10G, 3/4"C	50	3		2880 915							10
11								2880 915						12
13						4992 915			2	30	2#10, 1#10G, 3/4"C		DSS-4	14
15	CU-3 A		3#3, 1#8G, 1-1/4"C	80	3		4992 915							16
17								4992 859						18
19						4992 859			2	20	2#12, 1#12G, 3/4"C		FCU	20
21	CU-3 B		3#3, 1#8G, 1-1/4"C	80	3		4992 -							22
23								4992 -						24
25						8765 -			2	20	2#12, 1#12G, 3/4"C		FCU	26
27	DOAS-1		3#1, 1#6G, 1-1/2"C	125	3		8765 -							28
29								8765 -						30
31	EH-1		2#12, 1#12G, 3/4"C	20	1	1800 -			2	20	2#12, 1#12G, 3/4"C		FCU	32
33	EH-1		2#12, 1#12G, 3/4"C	20	1		1800 -							34
35	EH-1		2#12, 1#12G, 3/4"C	20	1			1800 -						36
37	SPACE	-	-	-	-	- -			2	20	2#12, 1#12G, 3/4"C		BC-1-1	38
39	SPACE	-	-	-	-		- -							40
41	SPACE	-	-	-	-			- -	2	20	2#12, 1#12G, 3/4"C		BC-2-1	42
43	SPACE	-	-	-	-	- -								44
45	SPACE	-	-	-	-		- 915		2	30	2#10, 1#10G, 3/4"C		BC-3-1	46
47	SPACE	-	-	-	-			- 915						48
49	SPACE	-	-	-	-	- -			-	-	-		DSS-5	50
51	SPACE	-	-	-	-		- -		-	-	-		SPACE	52
53	SPACE	-	-	-	-			- -	-	-	-		SPACE	54
55	SPACE	-	-	-	-	- -			-	-	-		SPACE	56
57	SPACE	-	-	-	-		- -		-	-	-		SPACE	58
59	SPACE	-	-	-	-			- -	-	-	-		SPACE	60
61	SPACE	-	-	-	-	- -			-	-	-		SPACE	62
63	SPACE	-	-	-	-		- -		-	-	-		SPACE	64
65	SPACE	-	-	-	-			- -	-	-	-		SPACE	66
67	SPACE	-	-	-	-	- -			-	-	-		SPACE	68
69	SPACE	-	-	-	-		- -		-	-	-		SPACE	70
71	SPACE	-	-	-	-			- -	-	-	-		SPACE	72
73	SPACE	-	-	-	-	- -			-	-	-		SPACE	74
75	SPACE	-	-	-	-		- -		-	-	-		SPACE	76
77	SPACE	-	-	-	-			- -	-	-	-		SPACE	78
79	SPACE	-	-	-	-	- -			-	-	-		SPACE	80
81	SPACE	-	-	-	-		- -		-	-	-		SPACE	82
83	SPACE	-	-	-	-			- -	-	-	-		SPACE	84
					Total Load:	30873	30929	30873						
					Amps:		257.2							

NOTES:

Branch Panel: 2P2

Location: STOR 228
Supply From: MDP
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 208/120V
Phases: 3
Wires: 4

A.I.C. Rating: 22 KAIC
Mains Type: MLO
Mains Rating: 225
MCB Rating: -

CKT	Circuit Description	Notes	Wire Size	Trip	Pole	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	Pole	Trip	Wire Size	Notes	Circuit Description	CKT
1	REC CORR 217		2#12, 1#12G, 3/4"C	20	1	720 540			1	20	2#12,1#12G,3/4"C		REC WORK AREA 204	2
3	REC BREAK 227		2#12, 1#12G, 3/4"C	20	1		720 540		1	20	2#12,1#12G,3/4"C		REC COURT CLERK 203	4
5	REC BREAK 227		2#12, 1#12G, 3/4"C	20	1			720 540	1	20	2#12,1#12G,3/4"C		REC COURT CLERK 203	6
7	REC ICE		2#12, 1#12G, 3/4"C	20	1	500 1000			1	20	2#12,1#12G,3/4"C		REC PRINTER COURT 207	8
9	REFRIGERATOR		2#12, 1#12G, 3/4"C	20	1		1000 540		1	20	2#12,1#12G,3/4"C		REC COURT 207	10
11	REC CORR 212		2#12, 1#12G, 3/4"C	20	1			540 540	1	20	2#12,1#12G,3/4"C		REC COURT 207	12
13	REC STOR 228		2#12, 1#12G, 3/4"C	20	1	900 900			1	20	2#12,1#12G,3/4"C		REC JUDGE 209	14
15	REC STOR 229		2#12, 1#12G, 3/4"C	20	1		180 360		1	20	2#12,1#12G,3/4"C		REC BALCONY 211A	16
17	REC CONF RM 226		2#12, 1#12G, 3/4"C	20	1			720 180	1	20	2#12,1#12G,3/4"C		REC MULTIPURPOSE 211	18
19	REC PRINTER CORR 212		2#12, 1#12G, 3/4"C	20	1	1000 180			1	20	2#12,1#12G,3/4"C		REC MULTIPURPOSE 211	20
21	REC CORR 212		2#12, 1#12G, 3/4"C	20	1		360 900		1	20	2#12,1#12G,3/4"C		REC MULTIPURPOSE 211	22
23	REC RR 208,210		2#12, 1#12G, 3/4"C	20	1			360 900	1	20	2#12,1#12G,3/4"C		REC MULTIPURPOSE 211	24
25	REC BUILDING CODE 224		2#12, 1#12G, 3/4"C	20	1	720 180			1	20	2#12,1#12G,3/4"C		REC MULTIPURPOSE 211	26
27	REC BUILDING CODE 222		2#12, 1#12G, 3/4"C	20	1		720 180		1	20	2#12,1#12G,3/4"C		REC MULTIPURPOSE 211	28
29	REC FINANCE HR 220		2#12, 1#12G, 3/4"C	20	1			720 720	1	20	2#12,1#12G,3/4"C		REC EMS QUARTERS 231	30
31	REC FINANCE 218		2#12, 1#12G, 3/4"C	20	1	720 1000			1	20	2#12,1#12G,3/4"C		REFRIGERATOR 231	32
33	REC TOWN CLERK 216		2#12, 1#12G, 3/4"C	20	1		720 540		1	20	2#12,1#12G,3/4"C		REC EMS KITCHEN 231	34
35	REC TOWN MANAGER 214		2#12, 1#12G, 3/4"C	20	1			540 720	1	20	2#12,1#12G,3/4"C		REC EMS KITCHEN 231	36
37	REC TOWN MANAGER 214		2#12, 1#12G, 3/4"C	20	1	540 500			1	20	2#12,1#12G,3/4"C	1	REC DISHWASHER 231	38
39	REC BUILDING AREA 204		2#12, 1#12G, 3/4"C	20	1		900 500		1	20	2#12,1#12G,3/4"C	1	REC DISPOSAL 231	40
41	REC EMS QUARTERS 231		2#12, 1#12G, 3/4"C	20	1			900 4000	2	50	2#6, 1#10G, 3/4"C		RANGE EMS KITCHEN 231	42
43	REC EMS QUARTERS 231		2#12, 1#12G, 3/4"C	20	1	180 4000								44
45	REC EMS QUARTERS 231		2#12, 1#12G, 3/4"C	20	1		180 2500		2	30	2#10, 1#10G, 3/4"C		RANGE EMS CORR 233	46
47	REC EMS QUARTERS 231		2#12, 1#12G, 3/4"C	20	1			180 2500						48
49	REC EMS IT 232		2#12, 1#12G, 3/4"C	20	1	180 1500			1	25	2#10, 1#10G, 3/4"C		WASHER CORR 233	50
51	REC EMS IT 232		2#12, 1#12G, 3/4"C	20	1		180 540		1	20	2#12,1#12G,3/4"C		REC MENS BUNK 237	52
53	REC WOMENS BUNK 234		2#12, 1#12G, 3/4"C	20	1			720 540	1	20	2#12,1#12G,3/4"C		REC MENS BUNK 237	54
55	REC RR 235		2#12, 1#12G, 3/4"C	20	1	360 720			1	20	2#12,1#12G,3/4"C		REC 3RD FLOOR	56
57	REC MULTIPURPOSE 211		2#12, 1#12G, 3/4"C	20	1		720 -		2	20	2#12,1#12G,3/4"C		HAND DRYER	58
59	REC ELEVATOR		2#12, 1#12G, 3/4"C	20	1			180 -						60
61	REC ELEVATOR		2#12, 1#12G, 3/4"C	20	1	180 -			2	20	2#12,1#12G,3/4"C		HAND DRYER	62
63	REC IT 213		2#12, 1#12G, 3/4"C	20	1		720 -							64
65	SPACE		-	-	-			- -	-	-	-		SPACE	66
67	SPACE		-	-	-	- -			-	-	-		SPACE	68
69	SPACE		-	-	-		- -		-	-	-		SPACE	70
71	SPACE		-	-	-			- -	-	-	-		SPACE	72
73	SPACE		-	-	-	- -			-	-	-		SPACE	74
75	SPACE		-	-	-		- -		-	-	-		SPACE	76
77	SPACE		-	-	-			- -	-	-	-		SPACE	78
79	SPACE		-	-	-	- -			-	-	-		SPACE	80
81	SPACE		-	-	-		- -		-	-	-		SPACE	82
83	SPACE		-	-	-			- -	-	-	-		SPACE	84
					Total Load:	16520	13000	16220						
					Amps:		127.0							

NOTES:
1. PROVIDE GFCI BREAKER

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/7/2023
2.	75% PROGRESS SET	2/9/2024
3.	ISSUED FOR BPVO REVIEW	4/7/2024
4.	ISSUED FOR BPVO RESUBMISSION	5/10/2024
5.	ISSUED FOR BPVO RESUBMISSION	6/10/2024
7.	ISSUED FOR TOWN RESUBMISSION	

GMB
GEORGE, MILES & BUHR, LLC
ARCHITECTS & ENGINEERS
SALISBURY, MARYLAND 410.546.0166
www.gmbnet.com

NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ELECTRICAL
SCHEDULES

REVISED

443.545.1300

SCALE : XXX
DESIGN BY : PRD
DRAWN BY : PRD
CHECKED BY : PRD
GMB FILE : 220242
DATE : 8-30-2024

E5.1

TIMOTHY R. CHATTERTON
LICENSE
No. 15702
DELAWARE
PROFESSIONAL ENGINEER

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ALLEN + SHARIFF JOB# : 2331073

Branch Panel: MDP

Location: STOR 228
Supply From: UTILITY
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 208/120V
Phases: 3
Wires: 4

A.I.C. Rating: 35 KAIC
Mains Type: MCB
Mains Rating: 800
MCB Rating: 800

CKT	Circuit Description	Notes	Wire Size	Trip	Pole	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	Pole	Trip	Wire Size	Notes	Circuit Description	CKT
1						5702	14748							2
3	ELEVATOR		4#4/0,1#4G,2-1/2"C	225	3		5702	14467	3	200	4#4/0,1#6G,2-1/2"C		2P1	4
5								5702	13536					6
7	SHUNT TRIP		-	-	-	-	16520							8
9							5702	14467						10
11	ELEVATOR		4#4/0,1#4G,2-1/2"C	225	3			5702	13536	3	200	4#4/0,1#6G,2-1/2"C		2P2	12
13						5702	30873							14
15	SHUNT TRIP		-	-	-		-	30929		3	400	4#600,1#3G,3-1/2"C		2M1	16
17	SPACE		-	-	-			-	30873						18
19	SPACE		-	-	-	-	-								20
21	SPACE		-	-	-		-	-		3	30	3#10,1#10G,3/4"C		SPD	22
23	SPACE		-	-	-				-	-					24
				Total Load:		73545	71267	69349						
				Amps:		594.5								

NOTES:

Branch Panel: 2E1

Location: STOR 228
Supply From: UTILITY
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 208/120V
Phases: 3
Wires: 4

A.I.C. Rating: 10 KAIC
Mains Type: MLO
Mains Rating: 225
MCB Rating: -

CKT	Circuit Description	Notes	Wire Size	Trip	Pole	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	Pole	Trip	Wire Size	Notes	Circuit Description	CKT
1	EM LTG 1ST FL EAST		2#12,1#12G,3/4"C	20	1	775	-		-	-	-		SPACE	2
3	EM LTG 1ST FL NORTH		2#12,1#12G,3/4"C	20	1		765	-	-	-	-		SPACE	4
5	EM LTG 1ST FL WEST		2#12,1#12G,3/4"C	20	1			780	-	-	-		SPACE	6
7	EM LTG 2ND FL EAST		2#12,1#12G,3/4"C	20	1	368	-		-	-	-		SPACE	8
9	EM LTG 2ND FL NORTH		2#12,1#12G,3/4"C	20	1		900	-	-	-	-		SPACE	10
11	EM LTG 2ND FL WEST		2#12,1#12G,3/4"C	20	1			880	-	-	-		SPACE	12
13	RM LTG 3RD FL		2#12,1#12G,3/4"C	20	1	150	-		-	-	-		SPACE	14
15	SPACE		-	-	-		-	-		-	-		SPACE	16
17	SPACE		-	-	-			-	-	-	-		SPACE	18
19						-	-			-	-		SPACE	20
21	SPD		3#10,1#10G,3/4"C	30	3		-	-		-	-		SPACE	22
23								-	-	-	-		SPACE	24
				Total Load:		1293	1665	1660						
				Amps:			12.8							

NOTES:

Branch Panel: 2M1

Location: STOR 228
Supply From: MDP
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 208/120V
Phases: 3
Wires: 4

A.I.C. Rating: 10 KAIC
Mains Type: MLO
Mains Rating: 400
MCB Rating: -

CKT	Circuit Description	Notes	Wire Size	Trip	Pole	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	Pole	Trip	Wire Size	Notes	Circuit Description	CKT
1						3840	915							2
3	CU-1		3#4, 1#10G, 1"C	60	3			3840	915	2	30	2#10, 1#10G, 3/4"C	DSS-1	4
5									3840	915				6
7						2880	915							8
9	CU-2		3#6, 1#10G, 3/4"C	50	3			2880	915	2	30	2#10, 1#10G, 3/4"C	DSS-3	10
11									2880	915				12
13						4992	915							14
15	CU-3 A		3#3, 1#8G, 1-1/4"C	80	3		4992	915		2	30	2#10, 1#10G, 3/4"C	DSS-4	16
17									4992	859				18
19						4992	859							20
21	CU-3 B		3#3, 1#8G, 1-1/4"C	80	3		4992	-		2	20	2#12, 1#12G, 3/4"C	FCU	22
23									4992	-				24
25						8765	-							26
27	DOAS-1		3#1, 1#6G, 1-1/2"C	125	3			8765	-	2	20	2#12, 1#12G, 3/4"C	FCU	28
29									8765	-				30
31	EH-1		2#12, 1#12G, 3/4"C	20	1	1800	-			2	20	2#12, 1#12G, 3/4"C	FCU	32
33	EH-1		2#12, 1#12G, 3/4"C	20	1			1800	-					34
35	EH-1		2#12, 1#12G, 3/4"C	20	1				1800	-				36
37	SPACE	-	-	-	-	-	-			2	20	2#12, 1#12G, 3/4"C	BC-1-1	38
39	SPACE	-	-	-	-			-	-					40
41	SPACE	-	-	-	-					-	-			42
43	SPACE	-	-	-	-	-	-							44
45	SPACE	-	-	-	-			-	915					46
47	SPACE	-	-	-	-					-	915			48
49	SPACE	-	-	-	-	-	-			-	-	-	SPACE	50
51	SPACE	-	-	-	-			-	-					52
53	SPACE	-	-	-	-					-	-			54
55	SPACE	-	-	-	-	-	-							56
57	SPACE	-	-	-	-			-	-					58
59	SPACE	-	-	-	-					-	-			60
61	SPACE	-	-	-	-	-	-							62
63	SPACE	-	-	-	-			-	-					64
65	SPACE	-	-	-	-					-	-			66
67	SPACE	-	-	-	-	-	-							68
69	SPACE	-	-	-	-			-	-					70
71	SPACE	-	-	-	-					-	-			72
73	SPACE	-	-	-	-	-	-							74
75	SPACE	-	-	-	-			-	-					76
77	SPACE	-	-	-	-					-	-			78
79	SPACE	-	-	-	-	-	-							80
81	SPACE	-	-	-	-			-	-					82
83	SPACE	-	-	-	-					-	-			84
				Total Load:		30873	30929	30873						
				Amps:			257.2							

NOTES:

Branch Panel: 2P1

Location: STOR 228
Supply From: MDP
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 208/120V
Phases: 3
Wires: 4

A.I.C. Rating: 22 KAIC
Mains Type: MLO
Mains Rating: 225
MCB Rating: -

CKT	Circuit Description	Notes	Wire Size	Trip	Pole	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	Pole	Trip	Wire Size	Notes	Circuit Description	CKT
1	LTG EXTERIOR		2#12,1#12G,3/4"C	20	1	34	180		1	20	2#12,1#12G,3/4"C		REC GRADE VEST 104	2
3	LTG 1ST FLOOR WEST		2#12,1#12G,3/4"C	20	1			1581	900	1	20	2#12,1#12G,3/4"C	REC OFFICE 125	4
5	LTG 1ST FLOOR EAST		2#12,1#12G,3/4"C	20	1					1720	720	1	20	2#12,1#12G,3/4"C	REC OFFICER WORK 123	6
7	LTG 1ST FLOOR NORTH		2#12,1#12G,3/4"C	20	1	1770	900					1	20	2#12,1#12G,3/4"C	REC OFFICER WORK 123	8
9	LTG 2ND FLOOR WEST		2#12,1#12G,3/4"C	20	1			1846	720			1	20	2#12,1#12G,3/4"C	REC OFFICER WORK 123	10
11	LTG 2ND FLOOR EAST		2#12,1#12G,3/4"C	20	1					1796	720	1	20	2#12,1#12G,3/4"C	REC DISPATCH 111	12
13	LTG 2ND FLOOR NORTH		2#12,1#12G,3/4"C	20	1	1884	720					1	20	2#12,1#12G,3/4"C	REC DISPATCH 111	14
15	LTG 3RD FLOOR		2#12,1#12G,3/4"C	20	1			300	720			1	20	2#12,1#12G,3/4"C	REC DISPATCH 111	16
17	REC RR 107,108		2#12,1#12G,3/4"C	20	1					360	180	1	20	2#12,1#12G,3/4"C	REC DISPATCH 111	18
19	REC RR 114,115		2#12,1#12G,3/4"C	20	1	360	540					1	20	2#12,1#12G,3/4"C	REC LOBBY 100,103	20
21	REC INTERVIEW 109		2#12,1#12G,3/4"C	20	1			360	720			1	20	2#12,1#12G,3/4"C	REC LOBBY 104	22
23	REC PARKING ENF 113		2#12,1#12G,3/4"C	20	1					900	900	1	20	2#12,1#12G,3/4"C	REC TOWN ADMIN 110	24
25	REC PARKING ENF 113		2#12,1#12G,3/4"C	20	1	720	900					1	20	2#12,1#12G,3/4"C	REC TOWN ADMIN 110	26
27	REC CORR 112,116		2#12,1#12G,3/4"C	20	1			720	720			1	20	2#12,1#12G,3/4"C	REC TOWN ADMIN 110	28
29	REC PRINTER 106		2#12,1#12G,3/4"C	20	1					1000	720	1	20	2#12,1#12G,3/4"C	REC CHIEF 118	30
31	REC BREA RM 106		2#12,1#12G,3/4"C	20	1	540	720					1	20	2#12,1#12G,3/4"C	REC ADMIN 120	32
33	REFRIGERATOR 106		2#12,1#12G,3/4"C	20	1			1000	720			1	20	2#12,1#12G,3/4"C	REC LIEUTENANT 122	34
35	REC CORR 116		2#12,1#12G,3/4"C	20	1					180	180	1	20	2#12,1#12G,3/4"C	REC LOCKER RR 126A	36
37	REC PRINTER 116		2#12,1#12G,3/4"C	20	1	1000	360					1	20	2#12,1#12G,3/4"C	REC ARMORY 128	38
39	REC PROCESS 131,124		2#12,1#12G,3/4"C	20	1			540	1000			1	20	2#12,1#12G,3/4"C	REC PRINTER 127	40
41	REC HARD INTERVIEW 130		2#12,1#12G,3/4"C	20	1					720	180	1	20	2#12,1#12G,3/4"C	REC CORR 127	42
43	REC PROCESS 132		2#12,1#12G,3/4"C	20	1	720	1000					1	20	2#12,1#12G,3/4"C	REFRIGERATOR 127	44
45	REC PROCESS 132		2#12,1#12G,3/4"C	20	1			180	540			1	20	2#12,1#12G,3/4"C	REC SALLYPORT 141	46
47	REC PROCESS 132		2#12,1#12G,3/4"C	20	1					180	540	1	20	2#12,1#12G,3/4"C	REC SALLYPORT 141	48
49	REFRIGERATOR 134		2#12,1#12G,3/4"C	20	1	1000	180					1	20	2#12,1#12G,3/4"C	REC SALLYPORT 141	50
51	REC EVIDENCE 134		2#12,1#12G,3/4"C	20	1			540	180			1	20	2#12,1#12G,3/4"C	REC SALLYPORT 141	52
53	REC EXTERIOR		2#12,1#12G,3/4"C	20	1					540	1000	1	20	2#12,1#12G,3/4"C	REC EMS GARAGE 142	54
55	REC ELEVATOR		2#12,1#12G,3/4"C	20	1	180	540					1	20	2#12,1#12G,3/4"C	REC EMS GARAGE 142	56
57	REC ELEVATOR		2#12,1#12G,3/4"C	20	1			180	1000			1	20	2#12,1#12G,3/4"C	CORD REEL GARAGE 142	58
59	SPACE		-	-	-					-	1000	1	20	2#12,1#12G,3/4"C	CORD REEL GARAGE 142	60
61	SPACE		-	-	-	-	500					1	20	2#12,1#12G,3/4"C	1 FACP	62
63	SPACE		-	-	-			-	-			-	-	-	SPACE	64
65	SPACE		-	-	-					-	-	-	-	-	SPACE	66
67	SPACE		-	-	-	-	-					-	-	-	SPACE	68
69	SPACE		-	-	-			-	-			-	-	-	SPACE	70
71	SPACE		-	-	-					-	-	-	-	-	SPACE	72
73	SPACE		-	-	-	-	-					-	-	-	SPACE	74
75	SPACE		-	-	-			-	-			-	-	-	SPACE	76
77	SPACE		-	-	-					-	-	-	-	-	SPACE	78
79	SPACE		-	-	-	-	-					-	-	-	SPACE	80
81	SPACE		-	-	-			-	-			-	-	-	SPACE	82
83	SPACE		-	-	-					-	-	-	-	-	SPACE	84
				Total Load:		14748		14467		13536				
				Amps:			118.7							

NOTES:
PROVIDE RED CIRCUIT BREAKER WITH UL LISTED LOCKING DEVICE CAPABLE OF BEING LOCKED IN THE CLOSED POSITION.

Branch Panel: 2P2

Location: STOR 228
Supply From: MDP
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 208/120V
Phases: 3
Wires: 4

A.I.C. Rating: 22 KAIC
Mains Type: MLO
Mains Rating: 225
MCB Rating: -

CKT	Circuit Description	Notes	Wire Size	Trip	Pole	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	Pole	Trip	Wire Size	Notes	Circuit Description	CKT
1	REC CORR 217		2#12,1#12G,3/4"C	20	1	720	540		1	20	2#12,1#12G,3/4"C		REC WORK AREA 204	2
3	REC BREAK 227		2#12,1#12G,3/4"C	20	1			720	540	1	20	2#12,1#12G,3/4"C	REC COURT CLERK 203	4
5	REC BREAK 227		2#12,1#12G,3/4"C	20	1					720	540	1	20	2#12,1#12G,3/4"C	REC COURT CLERK 203	6
7	REC ICE		2#12,1#12G,3/4"C	20	1	500	1000					1	20	2#12,1#12G,3/4"C	REC PRINTER COURT 207	8
9	REFRIGERATOR		2#12,1#12G,3/4"C	20	1			1000	540			1	20	2#12,1#12G,3/4"C	REC COURT 207	10
11	REC CORR 212		2#12,1#12G,3/4"C	20	1					540	540	1	20	2#12,1#12G,3/4"C	REC COURT 207	12
13	REC STOR 228		2#12,1#12G,3/4"C	20	1	900	900					1	20	2#12,1#12G,3/4"C	REC JUDGE 209	14
15	REC STOR 229		2#12,1#12G,3/4"C	20	1			180	360			1	20	2#12,1#12G,3/4"C	REC BALCONY 211A	16
17	REC CONF RM 226		2#12,1#12G,3/4"C	20	1					720	180	1	20	2#12,1#12G,3/4"C	REC MULTIPURPOSE 211	18
19	REC PRINTER CORR 212		2#12,1#12G,3/4"C	20	1	1000	180					1	20	2#12,1#12G,3/4"C	REC MULTIPURPOSE 211	20
21	REC CORR 212		2#12,1#12G,3/4"C	20	1			360	900			1	20	2#12,1#12G,3/4"C	REC MULTIPURPOSE 211	22
23	REC RR 208,210		2#12,1#12G,3/4"C	20	1					360	900	1	20	2#12,1#12G,3/4"C	REC MULTIPURPOSE 211	24
25	REC BUILDING CODE 224		2#12,1#12G,3/4"C	20	1	720	180					1	20	2#12,1#12G,3/4"C	REC MULTIPURPOSE 211	26
27	REC BUILDING CODE 222		2#12,1#12G,3/4"C	20	1			720	180			1	20	2#12,1#12G,3/4"C	REC MULTIPURPOSE 211	28
29	REC FINANCE HR 220		2#12,1#12G,3/4"C	20	1					720	720	1	20	2#12,1#12G,3/4"C	REC EMS QUARTERS 231	30
31	REC FINANCE 218		2#12,1#12G,3/4"C	20	1	720	1000					1	20	2#12,1#12G,3/4"C	REFRIGERATOR 231	32
33	REC TOWN CLERK 216		2#12,1#12G,3/4"C	20	1			720	540			1	20	2#12,1#12G,3/4"C	REC EMS KITCHEN 231	34
35	REC TOWN MANAGER 214		2#12,1#12G,3/4"C	20	1					540	720	1	20	2#12,1#12G,3/4"C	REC EMS KITCHEN 231	36
37	REC TOWN MANAGER 214		2#12,1#12G,3/4"C	20	1	540	500					1	20	2#12,1#12G,3/4"C	1 REC DISHWASHER 231	38
39	REC BUILDING AREA 204		2#12,1#12G,3/4"C	20	1			900	500			1	20	2#12,1#12G,3/4"C	1 REC DISPOSAL 231	40
41	REC EMS QUARTERS 231		2#12,1#12G,3/4"C	20	1					900	4000	2	50	2#6,1#10G,3/4"C	RANGE EMS KITCHEN 231	42
43	REC EMS QUARTERS 231		2#12,1#12G,3/4"C	20	1	180	4000									44
45	REC EMS QUARTERS 231		2#12,1#12G,3/4"C	20	1			180	2500			2	30	2#10,1#10G,3/4"C	RANGE EMS CORR 233	46
47	REC EMS QUARTERS 231		2#12,1#12G,3/4"C	20	1					180	2500					48
49	REC EMS IT 232		2#12,1#12G,3/4"C	20	1	180	1500					1	25	2#10,1#10G,3/4"C	WASHER CORR 233	50
51	REC EMS IT 232		2#12,1#12G,3/4"C	20	1			180	540			1	20	2#12,1#12G,3/4"C	REC MENS BUNK 237	52
53	REC WOMENS BUNK 234		2#12,1#12G,3/4"C	20	1					720	540	1	20	2#12,1#12G,3/4"C	REC MENS BUNK 237	54
55	REC RR 235		2#12,1#12G,3/4"C	20	1	360	720					1	20	2#12,1#12G,3/4"C	REC 3RD FLOOR	56
57	REC MULTIPURPOSE 211		2#12,1#12G,3/4"C	20	1			720	-			2	20	2#12,1#12G,3/4"C	HAND DRYER	58
59	REC ELEVATOR		2#12,1#12G,3/4"C	20	1					180	-					60
61	REC ELEVATOR		2#12,1#12G,3/4"C	20	1	180	-					2	20	2#12,1#12G,3/4"C	HAND DRYER	62
63	REC IT 213		2#12,1#12G,3/4"C	20	1			720	-							64
65	SPACE		-	-	-					-	-	-	-	-	SPACE	66
67	SPACE		-	-	-	-	-					-	-	-	SPACE	68
69	SPACE		-	-	-			-	-			-	-	-	SPACE	70
71	SPACE		-	-	-					-	-	-	-	-	SPACE	72
73	SPACE		-	-	-	-	-					-	-	-	SPACE	74
75	SPACE		-	-	-			-	-			-	-	-	SPACE	76
77	SPACE		-	-	-					-	-	-	-	-	SPACE	78
79	SPACE		-	-	-	-	-					-	-	-	SPACE	80
81	SPACE		-	-	-			-	-			-	-	-	SPACE	82
83	SPACE		-	-	-					-	-	-	-	-	SPACE	84
				Total Load:		16520		13000		16220				
				Amps:			127.0							

NOTES:
1. PROVIDE GFCI BREAKER

NO.	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/18/2024
3.	ISSUED FOR BID	11/15/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

ELECTRICAL
SCHEDULES

Allen + Shariff
MEP Engineering
Project Management
205 East Market Street
Salisbury, Maryland 21801
443.545.1300

SCALE	: XXX
DESIGN BY	: PRD
DRAWN BY	: PRD
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DATE	: 8-30-2024

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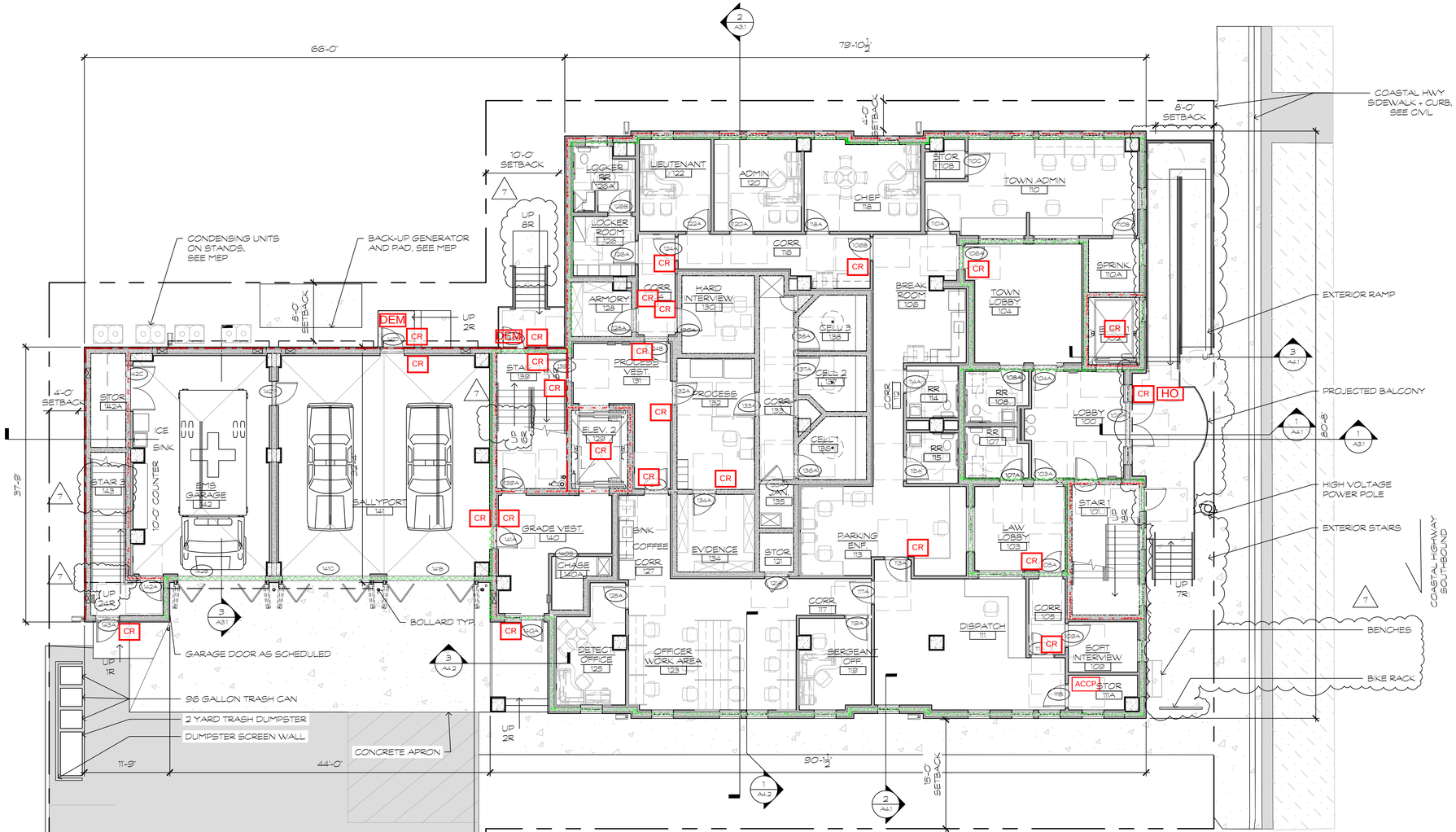

CR Card Reader

DEM Delayed Egress Maglock

HO Handicap Operator

ACCP Access Control Panels

LEGEND:

- NEW CONSTRUCTION
- MIN. 1 HR FIRE RATED CONSTRUCTION
- MIN. 2 HR FIRE RATED CONSTRUCTION
- MIN. HPSA LEVEL 3 BALLISTIC RESISTANCE

PROJECT NORTH

0 8' 16' 32'

1/8" = 1'-0"

1 FLOOR PLAN - FIRST
1/8" = 1'-0"

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
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3.	ISSUED FOR SHPO REVIEW	4/17/2024
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7.	ISSUED FOR TOWN RESUBMISSION	9/27/2024

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DEWEY BEACH, DELAWARE

FLOOR PLAN - FIRST

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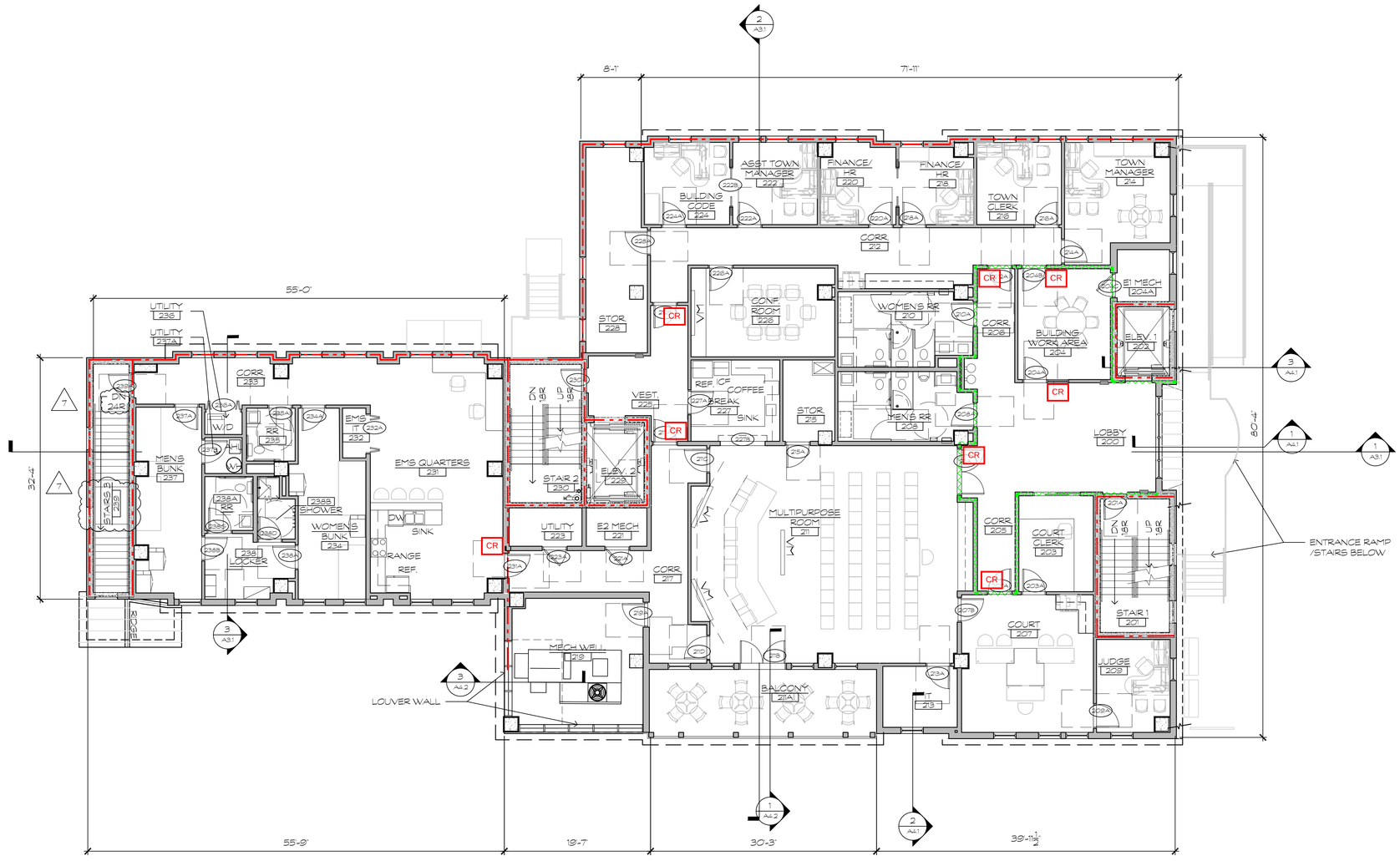

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DEWEY BEACH, DELAWARE

FLOOR PLAN - SECOND

REVISED

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1 FLOOR PLAN - SECOND
1/8" = 1'-0"

PROJECT NORTH

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

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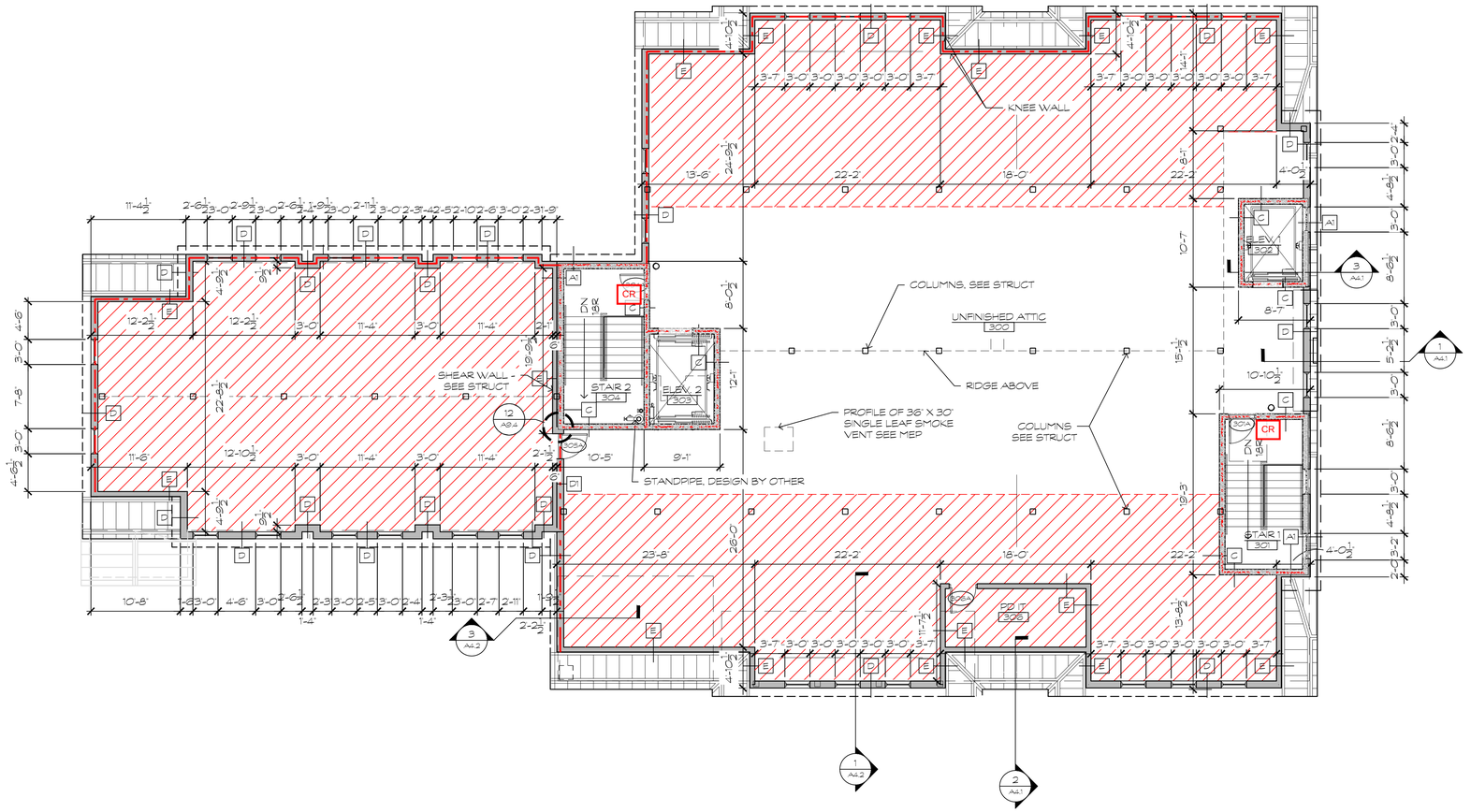

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DEWEY BEACH, DELAWARE

FLOOR PLAN - THIRD

REVISED

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 5-10-2024

ACC. CTRL:
Add. # 2
3 / 3

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

PROJECT NORTH

1 FLOOR PLAN - THIRD FLOOR (UNFINISHED)
1/8" = 1'-0"

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LEGEND:

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- MIN. 2 HR FIRE RATED CONSTRUCTION
- MIN. HPSA LEVEL 3 BALLISTIC RESISTANCE

66'-0"
79'-10½"
8'-0" SETBACK
4'-0" SETBACK
10'-0" SETBACK
COASTAL HWY SIDEWALK + CURB, SEE CIVIL
CONDENSING UNITS ON STANDS, SEE MEP
BACK-UP GENERATOR AND PAD, SEE MEP
EXTERIOR RAMP
PROJECTED BALCONY
HIGH VOLTAGE POWER POLE
EXTERIOR STAIRS
BENCHES
BIKE RACK
COASTAL HIGHWAY SOUTHBOUND
BOLLARD TYP.
GARAGE DOOR AS SCHEDULED
96 GALLON TRASH CAN
2 YARD TRASH DUMPSTER
DUMPSTER SCREEN WALL
CONCRETE APRON
37'-9"
11'-9"
44'-0"
90'-1½"
15'-0" SETBACK
80'-6"
LOCKER RM 126A
LOCKER RM 126
LIEUTENANT 122
ADMIN 120
CHIEF 118
STOR 108
TOWN ADMIN 110
CORR 116
CORR 124
ARMORY 128
HARD INTERVIEW 130
BREAK ROOM 106
TOWN LOBBY 104
SPRINK 110A
ELEV. 1 102
CELL 3 135
CELL 2 136
CELL 1 136A
PROCESS VEST 131
PROCESS 132
CORR 133
CORR 112
RR 114
RR 108
RR 107
RR 115
LOBBY 100
STAIR 2 138
ELEV. 2 129
STOR 112A
ICE
SINK
10'-0" COUNTER
STAIR 3 143
EMS GARAGE 142
BALLYPORT 141
GRADE VEST. 140
CHARGE 140A
SINK
COFFEE
CORR 127
EVIDENCE 134
JAN 135
STOR 137
PARKING ENF. 113
LAW LOBBY 103
STAIR 1 101
CORR 117
CORR 105
DISPATCH 111
SOFT INTERVIEW 109
STOR 111A
DETECT. OFFICE 125
OFFICER WORK AREA 123
SERGEANT OFF. 119
UP 8R
UP 2R
UP 1R
UP 24R
UP 7R
DN 7R

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1/8" = 1'-0"

PROJECT NORTH

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FLOOR PLAN - FIRST

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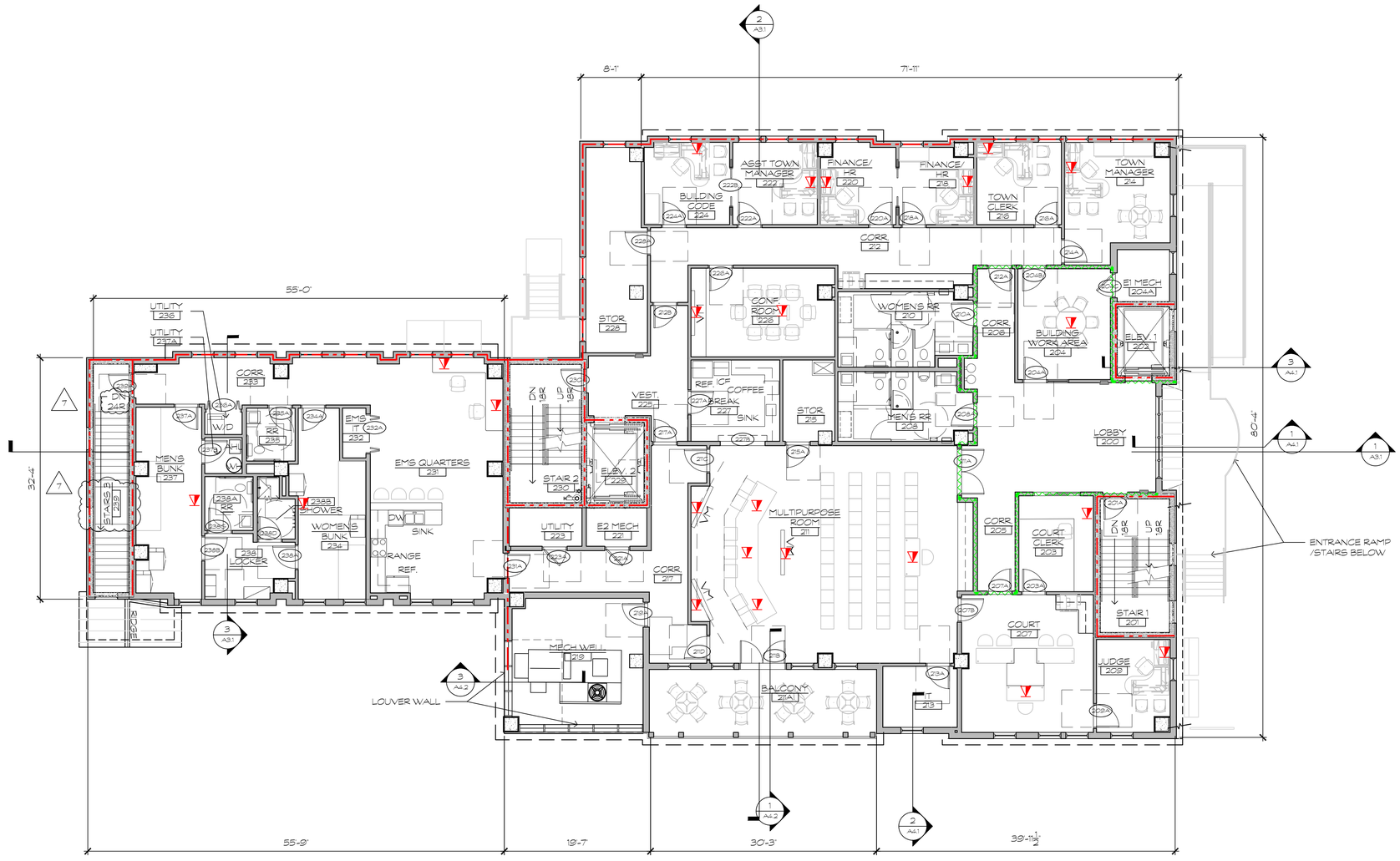

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NEW CONSTRUCTION FOR:
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FLOOR PLAN - SECOND

REVISED

SCALE	: AS NOTED
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2 / 3

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

PROJECT NORTH

1 FLOOR PLAN - SECOND
1/8" = 1'-0"

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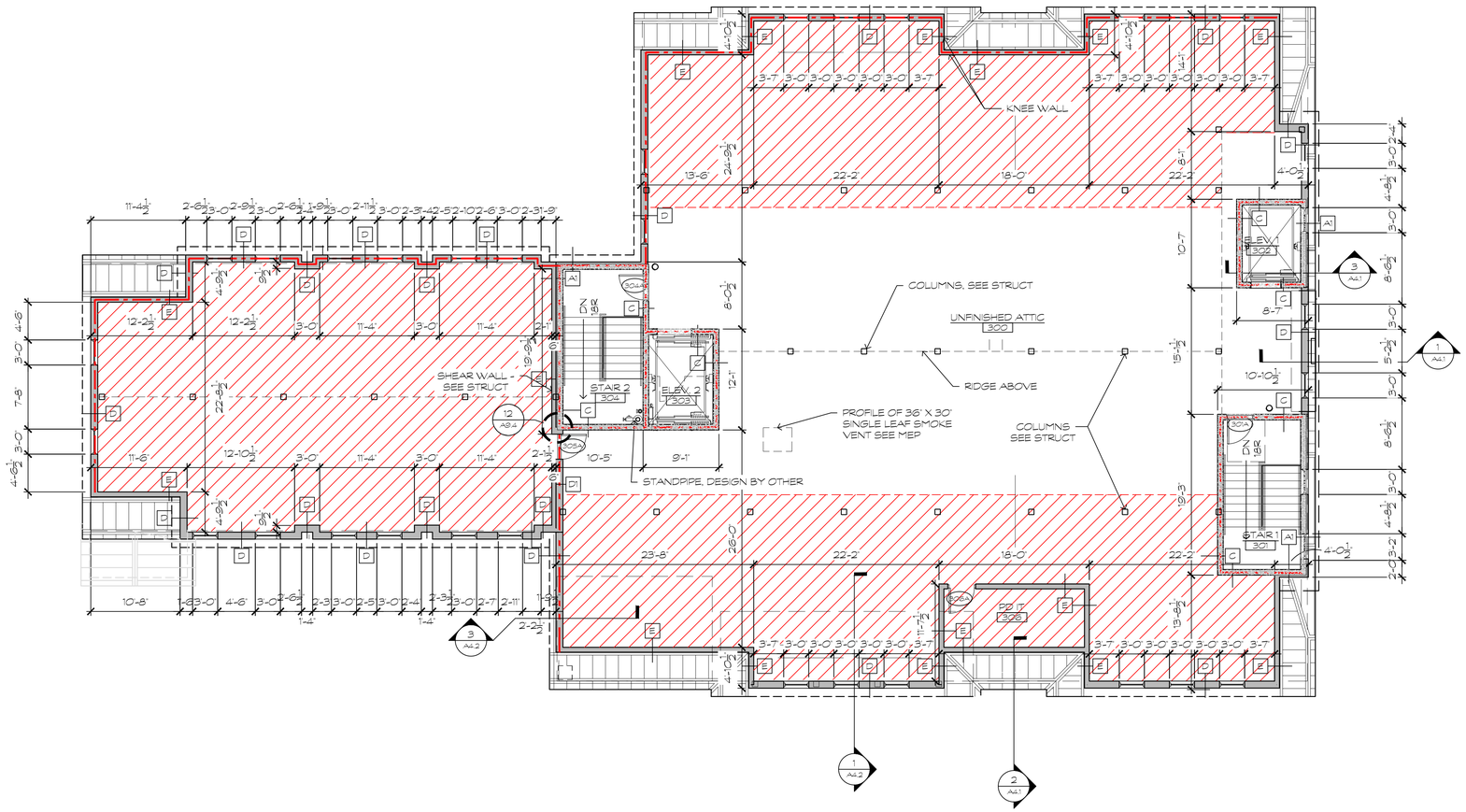

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- PORTIONS UNDER MIN. 7'-6" CEILING HEIGHT.*

*IBC 1208.2 (2): SLOPED CEILINGS PERMITTED TO BE LESS THAN 7'-6", PROVIDED THAT IT IS LESS THAN ½ OF THE OCCUPIABLE AREA

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DEWEY BEACH, DELAWARE

FLOOR PLAN - THIRD

REVISED

SCALE	: AS NOTED
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CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 5-10-2024

DATA:
Add. # 2

3 / 3

0 8' 16' 32'

1/8" = 1'-0"

PROJECT NORTH

1 FLOOR PLAN - THIRD FLOOR (UNFINISHED)
1/8" = 1'-0"

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LEGEND:

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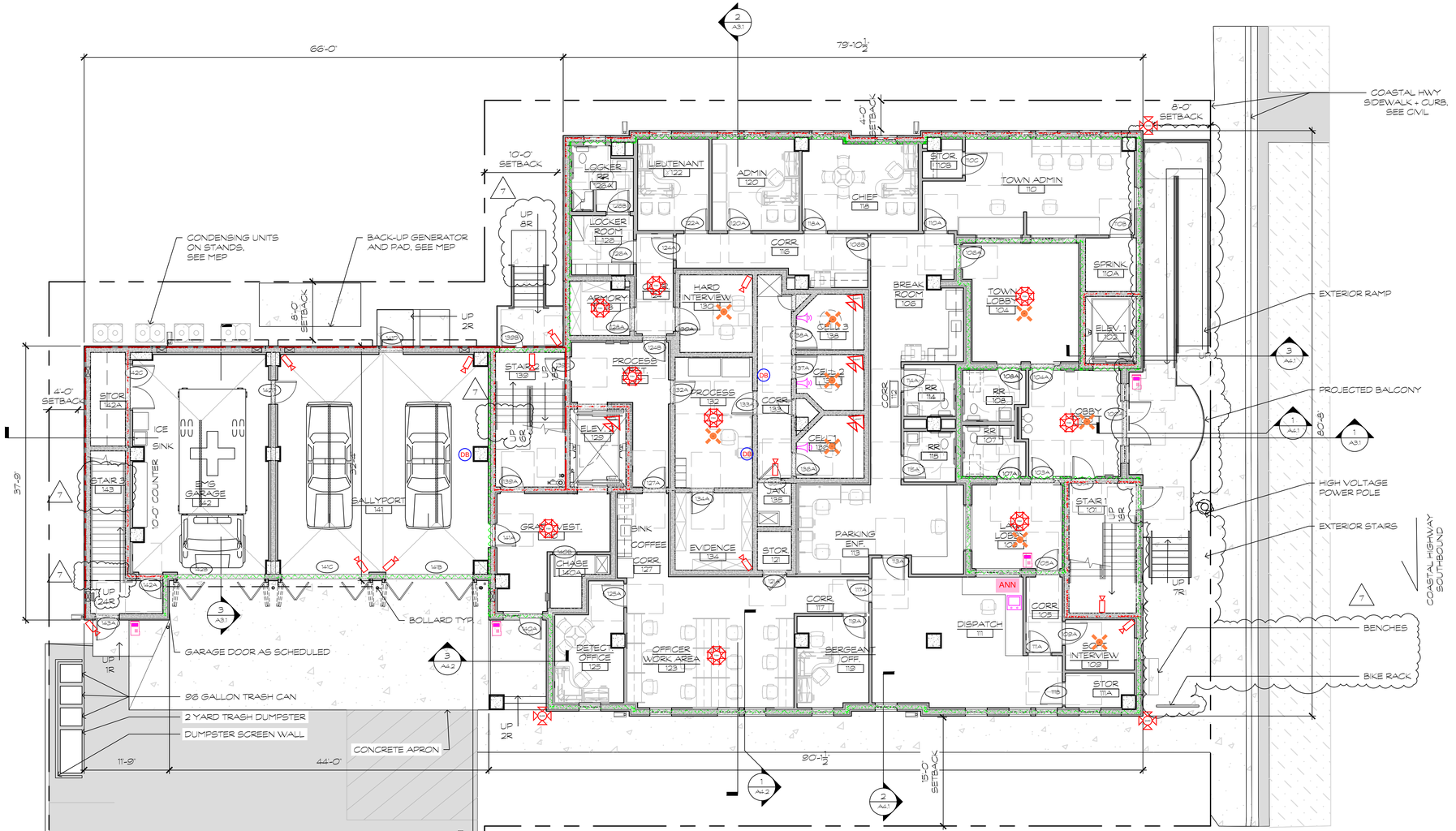

1 FLOOR PLAN - FIRST
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PROJECT NORTH

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DEWEY BEACH, DELAWARE

FLOOR PLAN - FIRST

REVISED

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VS + PANIC:
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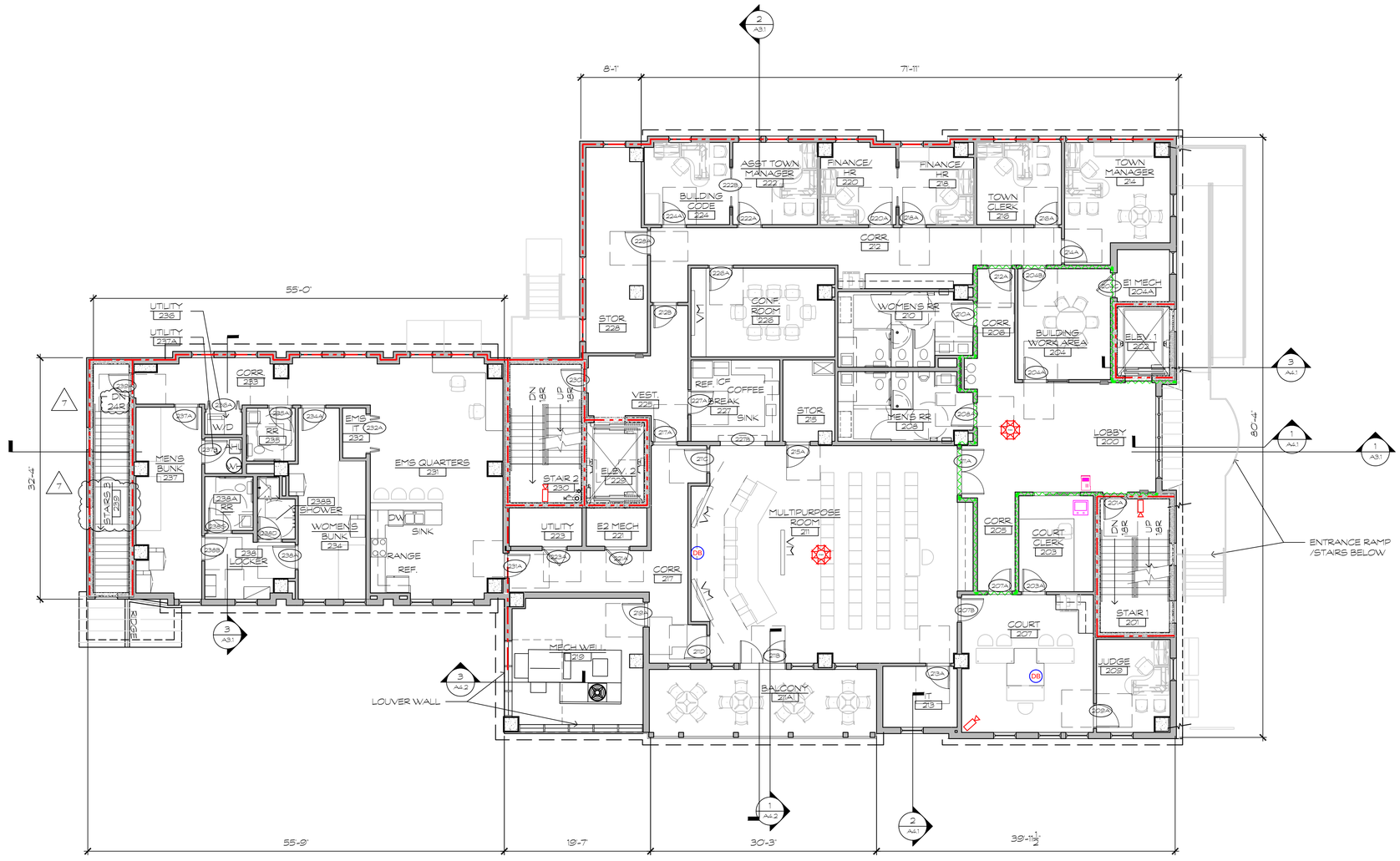

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1/8" = 1'-0"

PROJECT NORTH

0 8' 16' 32'
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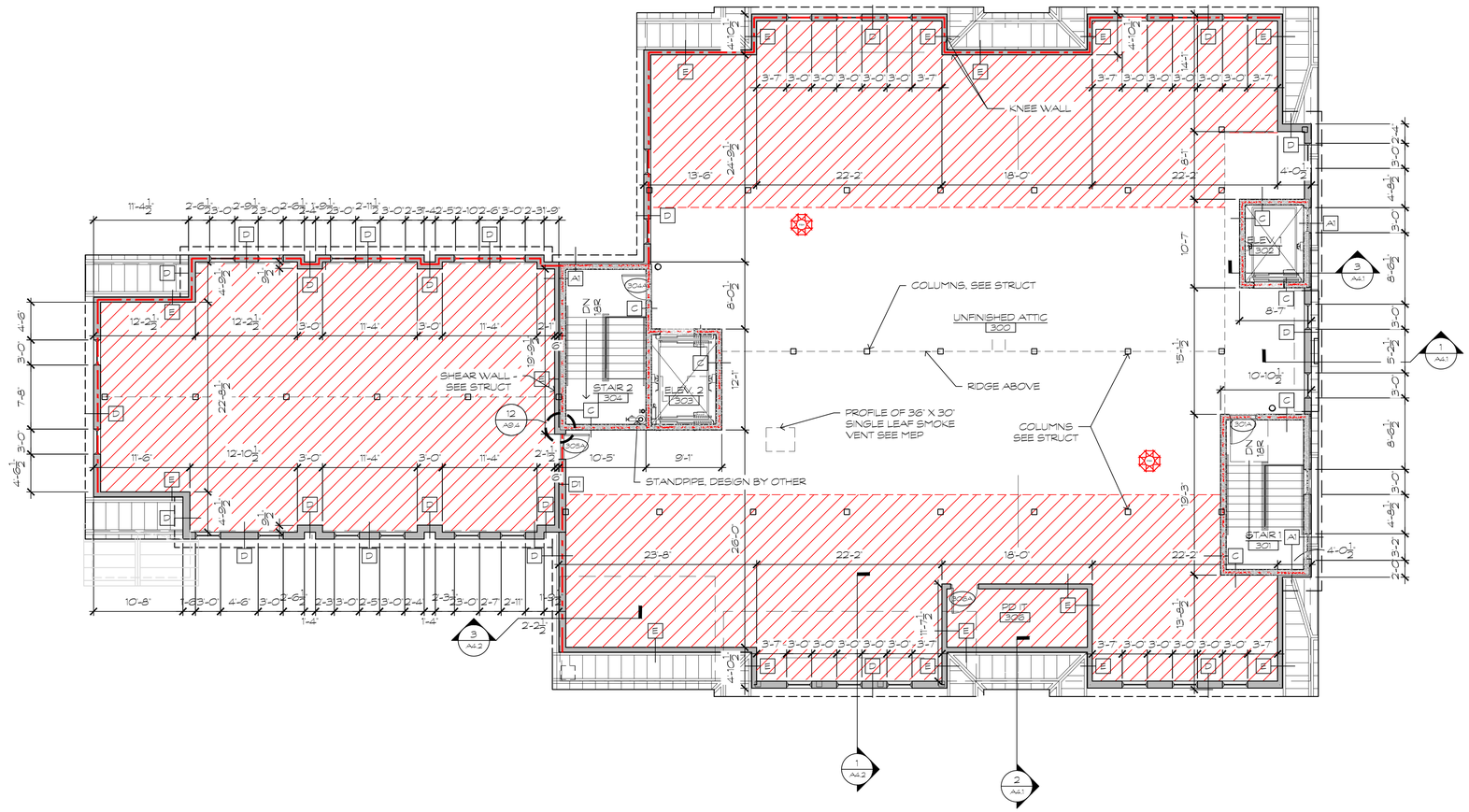

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FLOOR PLAN - THIRD

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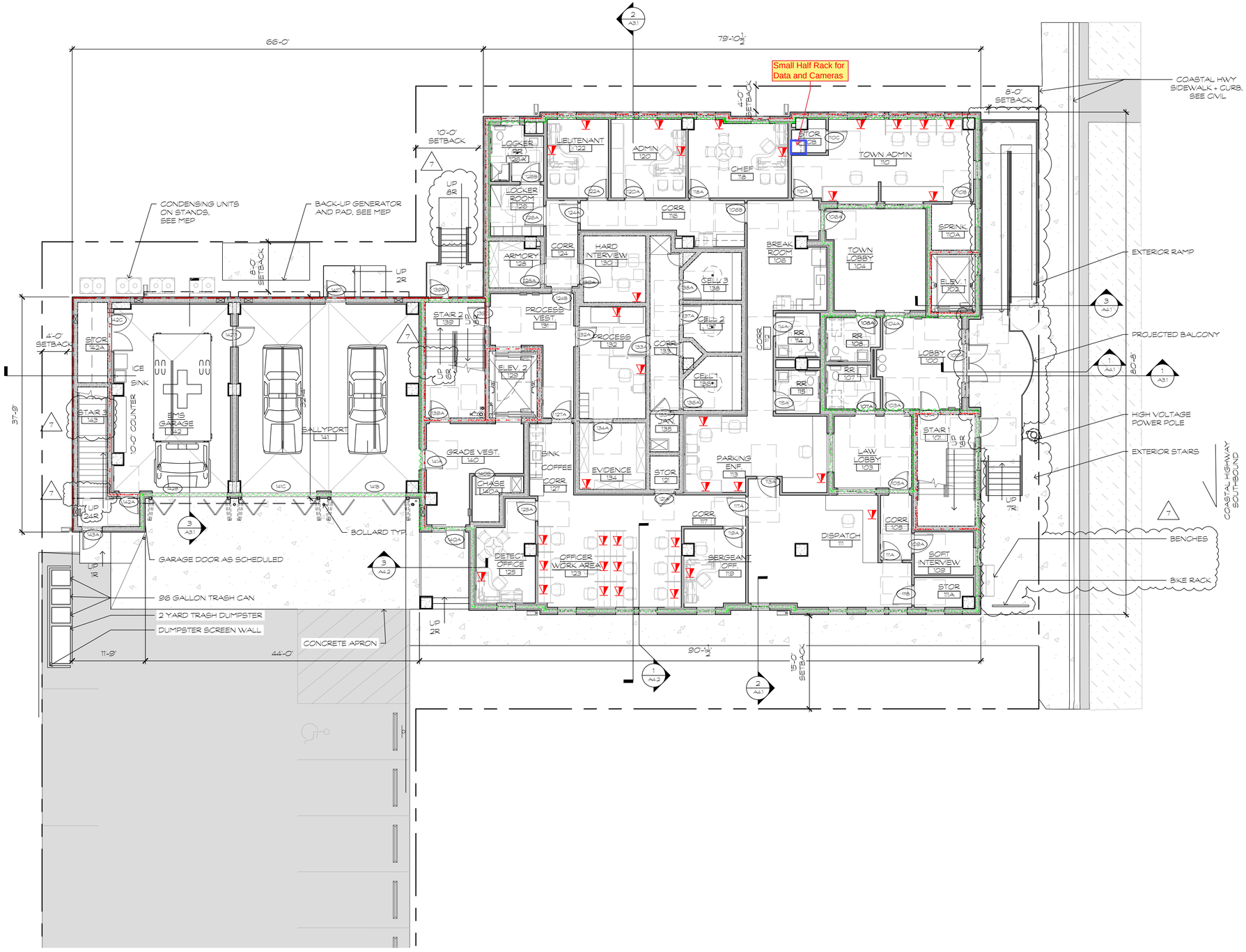
Electrical/Telecom

Description	Quantity	Unit
1 Voice 1 Data	35	Count



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FLOOR PLAN - FIRST

REVISED

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IT: Add. # 3
1 / 3

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

1 FLOOR PLAN - FIRST
1/8" = 1'-0"

PROJECT NORTH

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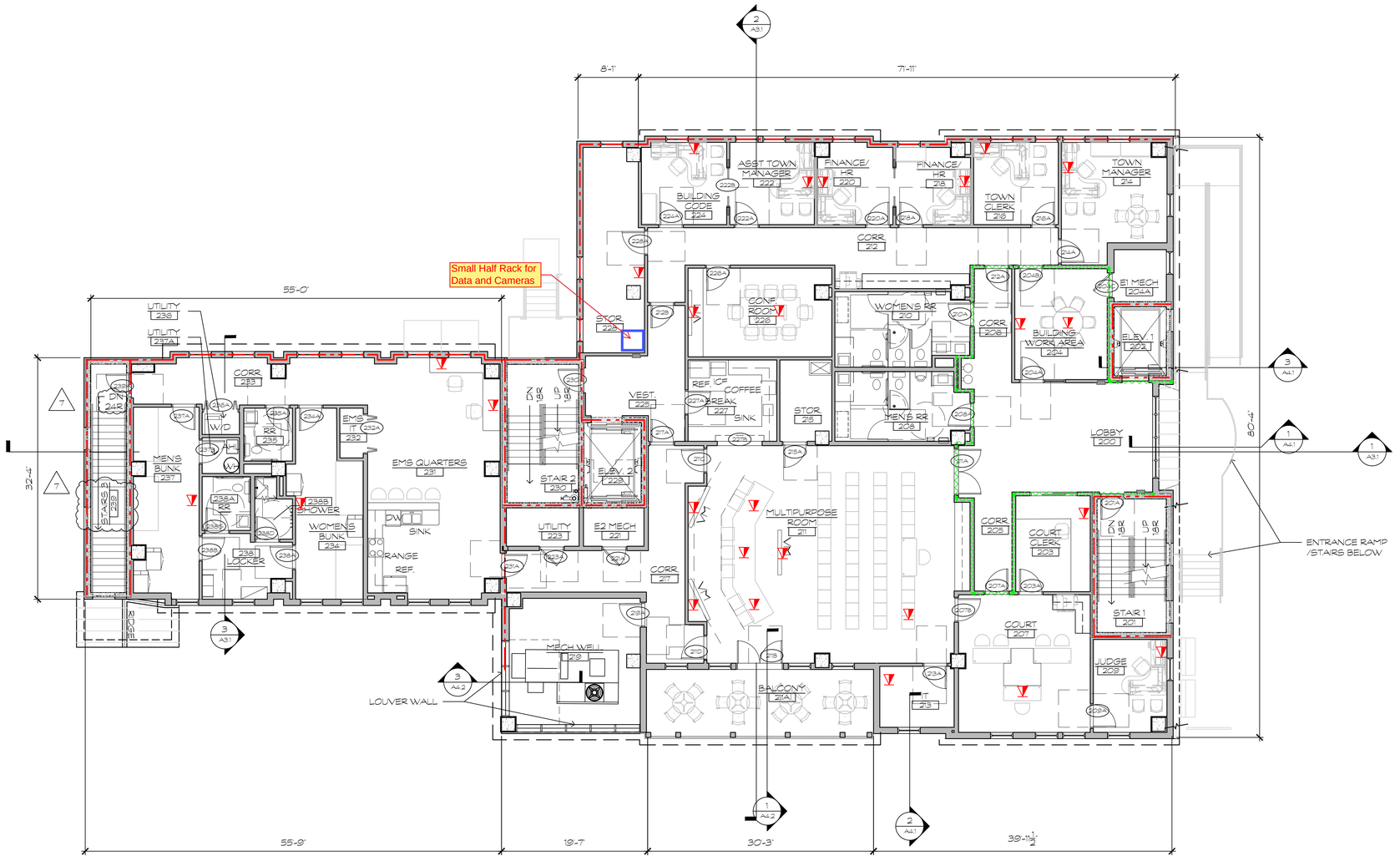
Electrical/Telecom

Description	Quantity	Unit
1 Voice 1 Data	26	Count



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- MIN. HPSA LEVEL 3 BALLISTIC RESISTANCE

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR SHPO REVIEW	4/17/2024
4.	ISSUED FOR SHPO RESUBMISSION	5/10/2024
5.	ISSUED FOR SHPO RESUBMISSION	6/7/2024
6.	ISSUED FOR BUILDING PLAN REVIEW	6/25/2024
7.	ISSUED FOR TOWN RESUBMISSION	9/27/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL & POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

FLOOR PLAN - SECOND

REVISED

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 9-27-2024

IT: Add. # 3
2 / 3

1 FLOOR PLAN - SECOND
1/8" = 1'-0"

PROJECT NORTH

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

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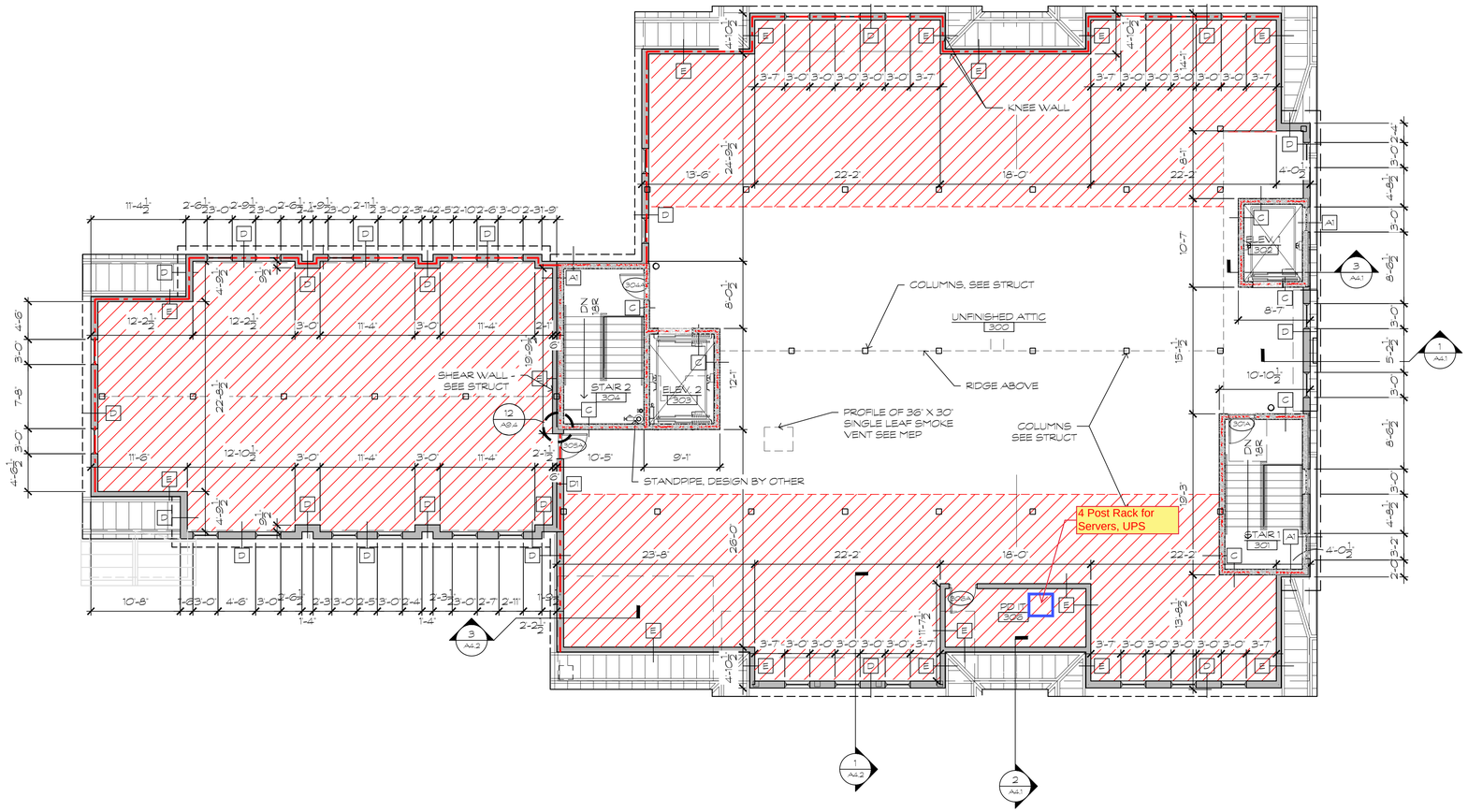
G:\Projects\2022\220242 Dewey Beach New Town Hall Design\Drawings\Working Sets\A1.2 FLOOR PLAN - SECOND.dwg, 9/27/2024 11:09 AM, Deane L. Townsend



LEGEND:

- NEW CONSTRUCTION
- MIN. 1 HR FIRE RATED CONSTRUCTION
- MIN. 2 HR FIRE RATED CONSTRUCTION
- PORTIONS UNDER MIN. 7'-6" CEILING HEIGHT.*

*IBC 1208.2 (2): SLOPED CEILINGS PERMITTED TO BE LESS THAN 7'-6", PROVIDED THAT IT IS LESS THAN 1/3 OF THE OCCUPIABLE AREA

NO	REVISION	DATE
1.	60% PROGRESS SET	11/17/2023
2.	75% PROGRESS SET	2/8/2024
3.	ISSUED FOR SHPO REVIEW	4/17/2024
4.	ISSUED FOR SHPO RESUBMISSION	5/10/2024
5.	ISSUED FOR SHPO RESUBMISSION	6/7/2024
6.	ISSUED FOR BUILDING PLAN REVIEW	6/25/2024

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NEW CONSTRUCTION FOR:
DEWEY TOWN HALL &
POLICE DEPARTMENT
DEWEY BEACH, DELAWARE

FLOOR PLAN - THIRD

REVISED

SCALE	: AS NOTED
DESIGN BY	: MHH
DRAWN BY	: DLT
CHECKED BY	: MHH
GMB FILE	: 220242
DATE	: 5-10-2024

IT: Add. # 3
3 / 3

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

PROJECT NORTH

1 FLOOR PLAN - THIRD FLOOR (UNFINISHED)
1/8" = 1'-0"

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