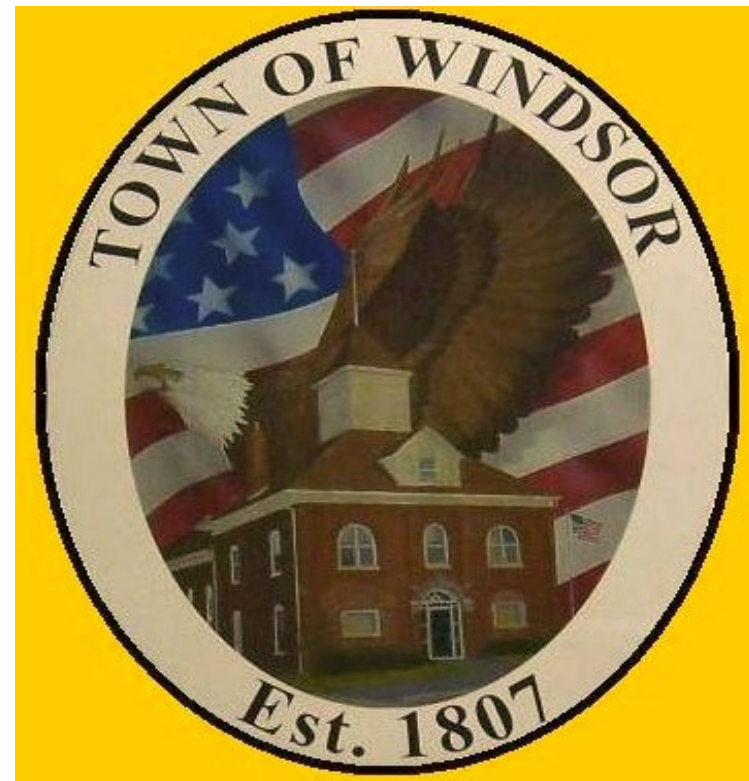


# TOWN OF WINDSOR HIGHWAY DEPARTMENT MAINTENANCE GARAGE

174 CHAPEL STREET,  
WINDSOR, NEW YORK 13865



**GRIFFITHS ENGINEERING**  
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Seal

Designed by: DC/PM	Date: 03-01-2023	Rev.#
Drawn by: Cld by JCG	Project No.: 2020-117	Rev. 1
<small>MANUFACTURING, ARCHITECTURE OR THIS DRAWING IS A VIOLATION OF THE PROFESSIONAL SEAL ACT OF SECTION 1300.</small>		Plot Scale: AS NOTED

Drawing Name:  
**COVER SHEET**

Project Location:  
WINDSOR HIGHWAY DEPARTMENT  
174 CHAPEL STREET  
WINDSOR, NY 13865

Project Name:  
TOWN OF WINDSOR HIGHWAY  
DEPARTMENT MAINTENANCE GARAGE

Drawing Reference Number:  
**CS**  
OF

### LIST OF DRAWINGS

DWG. NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION		
ARCHECTURAL		MECHANICAL		ELECTRICAL		PLUMBING		CIVIL	
CS	COVER SHEET	M001	MECHANICAL COVER SHEET	E001	ELECTRICAL COVER SHEET	P001	PLUMBING COVER SHEET	C-1	EXISTING CONDITIONS & DEMOLITION PLAN
GN-1.0	GENERAL NOTES	M101	MECHANICAL FLOOR PLANS	E101	ELECTRICAL LIGHTING PLAN	P101	PLUMBING FLOOR PLANS - WATER	C-2	SITE PLAN
A-1.0	EGRESS PLANS	M102	MECHANICAL SCHEDULES	E102	ELECTRICAL LIGHTING CALCULATIONS	P102	PLUMBING FLOOR PLANS - SANITARY & VENT	C-3	SITE DETAILS
A-1.1	FLOOR PLANS			E103	ELECTRICAL POWER PLAN	P103	PLUMBING FLOOR PLANS - STORM		
A-1.2	FIRST FLOOR CEILING PLAN			E201	POWER RISER DIAGRAM AND DETAILS				
A-1.3	ROOF PLAN			E202	SCHEDULES				
A-2.1	EXTERIOR ELEVATIONS								
A-2.2	EXTERIOR ELEVATIONS								
A-3.1	BUILDING SECTIONS							S1.0	STRUCTURAL FOUNDATION PLAN
A-3.2	WALL SECTIONS							S2.0	MEZZANINE FRAMING PLAN
A-4.1	DOOR / ROOM FINISH SCHEDULE							S3.0	GENERAL NOTES AND DETAILS
A-5.1	ENLARGED OFFICE PLAN								
A-5.2	ENLARGED TOILET ROOM								

**ACOUSTICAL PERFORMANCE NOTES:**

ALL NEW STC RATED PARTITIONS SHALL HAVE SOUND ATTENUATION INSULATION BLANKETS FROM CONCRETE SLAB TO UNDERSIDE OF DECK ABOVE. THICKNESS OF SAID INSULATION TO MATCH THICKNESS OF STUD FRAME TO FILL VOIDS COMPLETELY. SEE PARTITION LEGEND FOR ADDITIONAL INFORMATION

ALL PERIMETER EDGES OF STC RATED PARTITIONS SHALL BE CAULKED WITH AN ACOUSTICAL SEALER (CONTINUOUS).

AT ALL PENETRATIONS (DUCTS, PIPES, CONDUITS, ETC.) THRU ANY STC RATED PARTITIONS, PROVIDE 1" SPACE AROUND PERIMETER. VOID SHALL BE PACKED WITH SOUND ATTENUATION BLANKETS AND CAULKED WITH ACOUSTICAL SEALANT. SEE MECHANICAL DRAWINGS FOR DETAIL.

WRAP BACKSIDE OF BOXES WITH MOLDABLE ACOUSTIC DEADENING SOUND MAT AND PACK AROUND ALL ELECTRICAL OUTLETS AND SWITCH BOXES WITH SOUND ATTENUATION INSULATION (THICKNESS TO MATCH VOID) AND CAULK WITH ACOUSTICAL SEALANT. ELECTRICAL CONTRACTOR SHALL NOT INSTALL ANY OUTLETS BACK TO BACK. INSTALL ONLY ONE BOX PER STUD CAVITY.

ALL WALL PANELS TO BE RECESSED IN A SOUND ATTENUATION LINED BOX. CONDUITS INTO BOX TO BE ACOUSTICALLY PACKED AND CAULKED WITH ACOUSTICAL SEALANT.

INSULATE AROUND ALL CONDUITS, PIPES, ETC. - RUN IN STUD PARTITIONS WITH 3" SOUND ATTENUATION INSULATION.

**PULL TEST REQUIREMENTS FOR FASTENERS**

- 1. PULL OUT TESTS SHALL BE PERFORMED BY THE FASTENER MFG. CONFORM TO FACTORY MUTUAL'S LOST PREVENTION DATA SHEET 1-49. THE RESULTS OF THESE TESTS, AND ASSESSMENT BY THE FASTENER MFG. REGARDING THE SUITABILITY OF THE FASTENER FOR THE INTENDED PROJECT IS REQUIRED. FASTENER INSTALLATION INSTRUCTIONS SHALL BE PROVIDED TO THE APPLICATOR PRIOR TO THE JOB START.
- 2. FASTENERS AND PLATES SHALL MEET FACTORY MUTUAL STANDARD 4470 FOR CORROSION RESISTANCE AND WIND UPLIFT RESISTANCE.
- 3. FASTENER MFG. SHALL WARRANT THE PERFORMANCE OF THE FASTENER AND PLATES FOR THE DURATION OF THE ROOFING WARRANTY.
- 4. FASTENER AND PLATES SHALL BE APPROVED IN WRITING BY THE FASTENER MANUFACTURER FOR THE INTENDED USAGE.
- 5. THE CONTRACTOR IS TO VERIFY THE PULL OUT PERFORMANCE OF THE WOOD NAILERS TO CONFIRM THAT THEY MEET FACTORY MUTUAL'S LOSS PREVENTION DATA 1-49. ANY NAILERS THAT DO NOT MEET THIS REQUIREMENT SHALL BE REPLACED.
- 6. IN AREAS WHERE EXISTING WOOD BLOCKING IS TO REMAIN IN EXISTING PARAPET WALLS FASTENER MANUFACTURER TO PROVIDE THE PULL OUT TEST PERFORMANCE CERTIFICATE PRIOR TO THE START OF ANY INSTALLATION.

**GENERAL NOTES**

- 1. THE CONTRACTOR SHALL INVESTIGATE JOB SITE TO COMPARE CONTRACT DOCUMENTS AND EXISTING CONDITIONS. INCLUDE COST FOR ALL WORK DESCRIBED IN CONTRACT DOCUMENTS AND REQUIRED OR IMPLIED BY EXISTING CONDITIONS. NOTIFY ARCHITECT OF ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND NEW WORK, OMISSIONS OR CONFLICTS IN THE DRAWINGS AND ANY RESTRICTIONS RELATED TO THE EXECUTION OF THE WORK.
- 2. THE CONTRACTOR SHALL ISSUE COMPLETE SETS OF THE CONTRACT DOCUMENTS TO EACH OF THE SUBCONTRACTORS FOR COORDINATION OF THEIR WORK AND DESCRIPTION OF SCOPE. COORDINATE ALL DEMOLITION AND CONSTRUCTION WITH OTHER TRADES. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL, MECHANICAL, PLUMBING AND FIRE PROTECTION CONTRACTORS UNDER DIRECTION OF THE CONSTRUCTION MANAGER TO COORDINATE THEIR WORK. THE HVAC CONTRACTOR SHALL TAKE THE LEAD IN THE COORDINATION EFFORT AND PRODUCE THE COORDINATION DRAWINGS. COORDINATION DRAWINGS SHALL BE SUBMITTED FOR APPROVAL BY THE ARCHITECT PRIOR TO STARTING ANY WORK. THE PURPOSE OF THESE DRAWINGS IS TO COORDINATE THE LOCATIONS OF ALL PIPING, DUCTWORK, AND ELECTRICAL EQUIPMENT. SPECIAL ATTENTION IS CALLED TO ARTICLE 110-26 (F) OF THE NATIONAL ELECTRIC CODE. THE SPACE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT AND EXTENDING FROM THE FLOOR TO A HEIGHT OF 6 FT. ABOVE THE EQUIPMENT OR TO STRUCTURAL CEILING, WHICHEVER IS LOWER, SHALL BE DEDICATED TO THE ELECTRICAL INSTALLATION. NO PIPING, DUCTS, LEAK PROTECTION APPARATUS, OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS ZONE. THIS COORDINATION IS REQUIRED FOR ALL PHASES OF THIS PROJECT.
- 3. THE CONTRACTOR SHALL APPLY FOR, OBTAIN AND PAY FOR ALL PERMITS, FEES, INSPECTIONS AND APPROVALS BY LOCAL AUTHORITIES HAVING JURISDICTION OVER THE PROJECT. PROVIDE COPIES OF ALL TRANSACTIONS TO OWNER. NOTIFY ARCHITECT OF ANY VARIANCE WITH CODES IN FORCE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK.
- 4. THE CONTRACTOR SHALL PROVIDE, AND PAY FOR ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, CONSTRUCTION EQUIPMENT, WAREHOUSING, TRANSPORTATION AND DELIVERY COSTS, HOISTING, REMOVAL OF TRASH AND DEBRIS, AND OTHER FACILITIES AND SERVICES NECESSARY FOR THE EXECUTION AND COMPLETION OF THE WORK.
- 5. ALL WORK SHALL BE PERFORMED BY THE GENERAL CONTRACTOR UNLESS OTHERWISE NOTED. ALL REFERENCES TO THE "CONTRACTOR" INCLUDE THE GENERAL CONTRACTOR AND THE SUBCONTRACTORS.
- 6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR, AND HAVE CONTROL OVER, ALL CONSTRUCTION MEANS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK REQUIRED BY THE CONTRACT DOCUMENTS.
- 7. THE ARCHITECT/ENGINEER IS NOT RESPONSIBLE FOR ERRORS, OMISSIONS OR DELAYS BY THE CONTRACTOR.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACTS AND OMISSIONS OF THE CONTRACTOR'S EMPLOYEES, SUBCONTRACTORS AND THEIR AGENTS AND EMPLOYEES, AND ANY OTHER PERSONS PERFORMING ANY OF THE WORK UNDER A CONTRACT WITH A CONTRACTOR.
- 9. OTHER CONTRACTORS AND THEIR SUBCONTRACTORS MAY BE WORKING ON THE PREMISES SIMULTANEOUS WITH THE DURATION OF THIS CONTRACT. NO ACTION SHALL BE TAKEN ON THE PART OF THIS CONTRACTOR OR ANY SUBCONTRACTOR TO IMPEDE THE ACCESS OR OPERATION OF ANY OTHER CONTRACTOR ON THE PREMISES. UNION OR NON-UNION.
- 10. WORK SHALL BE DONE DURING NORMAL WORKING HOURS. CONTRACTOR SHALL SCHEDULE AND PERFORM ALL WORK SO AS NOT TO UNREASONABLY DISTURB ANY TENANT IN THE BUILDING AND SHALL BE RESPONSIBLE FOR ANY OVERTIME COSTS INCURRED THEREBY.
- 11. THE CONTRACTOR SHALL COMPLY AND COORDINATE ALL WORK WITH BUILDING OWNER REGARDING HEAT, WATER, ELECTRICITY, DELIVERIES, ACCESS, ELEVATOR AVAILABILITY, NOISE CONTROL, TRASH AND DEBRIS REMOVAL, HOISTING, AND ANY OTHER UTILITIES OR OWNER'S RULES AND REGULATIONS CONCERNING THE PROJECT SITE.
- 12. THE CONTRACTOR SHALL PROCURE MATERIALS SO AS NOT TO DELAY SUBSTANTIAL COMPLETION. NOTIFY ARCHITECT WITHIN 5 DAYS OF EXECUTION OF CONTRACT OF ANY MATERIAL DELIVERY WHICH COULD DELAY COMPLETION OF CONTRACT.
- 13. THE CONTRACTOR SHALL COORDINATE SCHEDULING, PROVISIONS FOR INSTALLATION, LOCATIONS AND THE ACTUAL INSTALLATION OF ITEMS FURNISHED BY OWNER OR BY OTHERS.
- 14. WORK WITH ALL TRADES ON THE PROJECT NOT UNDER CONTRACT TO THE CONTRACTOR (I.E.: TELEPHONE, COMPUTER INSTALLERS, ETC.). ANY CHANGES OR DELAYS ARISING FROM CONFLICTS BETWEEN SUCH TRADES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 15. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD. CONTRACT DRAWINGS ARE NOT INTENDED TO REPRESENT EXACT DIMENSIONS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR FOR ALL PHASES INCLUDING BIDDING, FABRICATION, COORDINATION AND CONSTRUCTION.
- 16. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN. LARGE SCALE DETAILS GOVERN OVER SMALL SCALE DETAILS.
- 17. THE CONTRACTOR SHALL SUBMIT FOR ARCHITECT'S REVIEW ALL BUILDING STANDARD SAMPLES AND PRODUCT LITERATURE. CONTRACTOR TO ALSO SUBMIT SAMPLES AND PRODUCT LITERATURE AND OTHER PERTINENT DATA FOR ARCHITECT'S CONSIDERATION OF ANY PROPOSED SUBSTITUTIONS.

- 18. THE CONTRACTOR SHALL SUBMIT FOR ARCHITECT'S REVIEW PRIOR TO FABRICATION OR PURCHASE, SHOP DRAWINGS OR SAMPLES FOR ALL MILLWORK, CUSTOM METALWORK, CUSTOM CASEWORK, AND ALL OTHER ITEMS AS REQUESTED BY THE ARCHITECT FOR ALL ABOVE BUILDING STANDARD ITEMS.
- 19. CHANGES IN DRAWINGS OR ACTUAL WORK SHALL BE ISSUED BY THE ARCHITECT.
- 20. THE CONTRACTOR SHALL EXAMINE ALL SURFACES TO DETERMINE THAT THEY ARE SOUND, DRY, CLEAN AND READY TO RECEIVE FINISHES PRIOR TO INSTALLATION. START OF INSTALLATION SHALL IMPLY ACCEPTANCE OF SUBSTRATE AND SHALL NOT BE GROUNDS FOR CLAIMS AGAINST IMPROPER PERFORMANCE OF INSTALLED MATERIALS. ADVISE ARCHITECT OF ANY EXISTING CONSTRUCTION NOT LEVEL, SMOOTH AND PLUMB WITHIN INDUSTRY STANDARDS PRIOR TO START OF CONSTRUCTION.
- 21. WORK DAMAGED DURING CONSTRUCTION OR NOT CONFORMING TO SPECIFIED STANDARDS, TOLERANCES OR MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION SHALL BE REPLACED, BY THE CONTRACTOR, AT NO ADDITIONAL CHARGE TO THE OWNER.
- 22. EXIT DOORS, EGRESS DOORS, AND OTHER DOORS REQUIRED FOR MEANS OF EGRESS SHALL BE OPERABLE FROM THE INSIDE WITHOUT USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
- 23. VERIFY ALL KEYING REQUIREMENTS OF ALL LOCKS WITH OWNER.
- 24. 24 HOURS PRIOR TO OCCUPANCY OF ANY PHASE, THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL SURFACES OF DUST, DEBRIS, LOOSE CONSTRUCTION MATERIAL AND EQUIPMENT. VACUUM OR MOP ALL FLOORS AND CLEAN WINDOWS.
- 25. SUBSTANTIAL COMPLETION SHALL BE THE DATE ON WHICH THE PREMISES ARE AVAILABLE FOR OCCUPANCY FROM THE CONTRACTOR AND SHALL BE AS DEFINED IN AIA DOCUMENT A201. ADDITIONAL TOUCH-UP OR MINOR INSTALLATION WORK MAY BE INCOMPLETE.
- 26. THE CONTRACTOR SHALL PROVIDE A WARRANTY TO THE OWNER THAT ALL MATERIALS, AND EQUIP. FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE NEW, UNLESS OTHERWISE SPECIFIED, AND THAT ALL WORK SHALL BE OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND SHALL CONFORM TO THE CONTRACT DOCUMENTS. ALL WORK, DETAILS, METHODS, ETC. SHALL CONFORM TO INDUSTRY STANDARDS UNLESS OTHERWISE NOTED.
- 27. FOR A PERIOD OF ONE YEAR BEGINNING AT THE DATE OF SUBSTANTIAL COMPLETION, CONTRACTOR SHALL PROMPTLY CORRECT WORK FOUND NOT TO BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL BEAR ALL COST OF CORRECTIONS.
- 28. CONTRACTOR SHALL FULLY ACQUAINT HIMSELF WITH THE CONDITIONS OF THE CONTRACT, LOCAL CONDITIONS RELATING TO LOCATION, ACCESSIBILITY AND GENERAL CHARACTER OF THE CONSTRUCTION SITE AND LOCAL LABOR CONDITIONS SO THAT HE UNDERSTANDS THE NATURE, EXTENT, DIFFICULTIES, AND RESTRICTIONS RELATED TO THE EXECUTION OF WORK. NOTIFY ARCHITECT OF ALL DISCREPANCIES PRIOR TO COMMENCING WORK.
- 29. ALL WOOD TO BE FIRE RETARDANT (TYP.)
- 30. ALL EXTERIOR DOOR FRAMES SHALL RECEIVE FOAM INSULATION INSERTS TYP. AT HEAD AND JAMBS.
- 31. CONTRACTOR SHALL FRAME AND FINISH WHERE NECESSARY ALL MECHANICAL AND ELECTRICAL WALL PENETRATIONS.
- 32. CONTRACTOR TO COORDINATE WITH E.C. THE MOUNTING HEIGHT OF ALL SWITCHES AND OUTLETS AT MILLWORK, COUNTERS, SHELVING, SINKS, ETC...
- 33. CONTRACTOR IS TO PROVIDE ALL MISC. FRAMING, BLOCKING, ETC. TO HANG SCREENS, BULLETIN BOARDS, RAILS, TOILET ACCESSORIES, WOODWORK, ETC.
- 34. CONTRACTOR IS TO COORDINATE WITH ALL TRADES FOR CEILING PENETRATIONS AND PROVIDE BRACING FOR EXTRA SUPPORT AS NECESSARY FOR PROPER INSTALLATION.
- 35. CONTRACTOR IS TO PROVIDE TEMPORARY WATERTIGHT WEATHERPROOF CLOSURES AT ALL ROOF OPENINGS UNTIL AFTER INSTALLATION OF MECHANICAL UNITS, DRAINS, VENTS, ETC. ROOF IS THEN TO BE RESEALED WEATHER-TIGHT.
- 36. SEE (INSERT DRAWING HERE) FOR FIRE EXTINGUISHER INSTALLATION DETAIL AND LOCATION OF FIRE EXTINGUISHERS AND FIRE HOSE REELS.
- 37. CONTRACTOR TO PROVIDE CONTROL JOINTS IN DRYWALL ON STRIKE SIDE OF DOORS.
- 38. CONTROL JOINTS IN GYPSUM BOARD PARTITIONS AND GYPSUM BOARD CEILINGS SHALL BE SPACED AS FOLLOWS:
  - PARTITIONS - 30 FT. MAXIMUM IN EITHER DIRECTION.
  - INTERIOR CEILINGS (WITH PERIMETER RELIEF) - 50 FT MAXIMUM IN EITHER DIRECTION.
  - INTERIOR CEILINGS (WITHOUT PERIMETER RELIEF) - 30 FT MAXIMUM IN EITHER DIRECTION.
  - EXTERIOR CEILINGS - 30 FT. MAXIMUM IN EITHER DIRECTION.
- 39. ALL PENETRATIONS THROUGH RATED WALLS ARE TO BE SEALED TO MAINTAIN INTEGRITY OF WALL CONSTRUCTION AND RATING.
- 40. ALL INSULATION EXPOSED TO CEILING PLENUM IS TO BE FIRE AND DUST PROOF.
- 41. ALL NEW SUPPLY AIR AND RETURN GRILLES SHALL BE LOCATED IN THE CENTER LINE OF ACOUSTICAL TILES UNLESS OTHERWISE INDICATED ON PLANS.
- 42. PIPE SLEEVES ARE TO BE CONDUIT (LENGTH TO MATCH THE THICKNESS OF THE WALL), WITH INSULATED BUSHINGS AND ARE TO BE SEALED BY CONTRACTOR AFTER CONDUIT INSTALLATION TO MAINTAIN RATING. SLEEVES ARE TO BE PLACED IN FIRST BLOCK COURSE.
- 43. FOR PREFABRICATED PARTITION ATTACHMENT TO FLOOR AND EXISTING PARTITIONS, SEE MANUFACTURER'S SPECIFICATIONS AND DETAILS.
- 44. CONTRACTOR SHALL COMPLY WITH MANUFACTURER'S INSTRUCTIONS WHEN RELOCATING AND/OR INSTALLING ANY EQUIPMENT AND FURNISHINGS.
- 45. GENERAL CONTRACTOR SHALL VERIFY EQUIPMENT LOCATIONS WITH OWNER PRIOR TO INSTALLATION.
- 46. CONTRACTOR SHALL VERIFY EXISTING EQUIPMENT CONDITIONS. EQUIPMENT CURRENTLY ANCHORED TO FLOOR SHALL RECEIVE SIMILAR TREATMENT WHEN RELOCATED.
- 47. ALL PENETRATIONS THROUGH DRYWALL AND MASONRY SURFACES INCLUDING BUT NOT LIMITED TO PIPE, CONDUIT, DUCTWORK, GRILLES, REGISTERS, DEVICE BOXES, HANGER RODS, ETC. SHALL HAVE THEIR COMMON JOINTS WITH DRYWALL AND/OR MASONRY CAULKED TO PROVIDE AN AIR-TIGHT SEAL.
- 48. CONTRACTOR TO REMOVE ANY STRAY PAINT, DIRT, OR STAINS INCURRED DURING THE CONSTRUCTION PROCESS. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TEMPORARY EQUIPMENT COVERINGS USED DURING CONSTRUCTION AND HE SHALL ALSO BE RESPONSIBLE FOR REMOVING HIS TRASH OFF OF THE JOB SITE DAILY.
- 49. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND WELDING IN COMPLIANCE WITH THE PUBLISHED STANDARDS OF NFPA. THE CONTRACTOR SHALL PROVIDE FIRE WATCHES FOR ALL CUTTING, GRINDING, AND WELDING OPERATIONS. THE TRAINING OF THESE FIRE WATCHES AND THE USE OF THE CONTRACTOR'S SUPPLIED FIRE EXTINGUISHERS IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 50. REFER TO MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR DETAILS OF UTILITY WALL PENETRATIONS.
- 51. ALL FIXTURES LABELED "H" INDICATE HANDICAP FIXTURES.
- 52. PROVIDE ADA COMPLIANT PIPE INSULATION AT ALL EXPOSED PIPING UNDER HANDICAPPED SINKS.
- 53. ANY STEEL NOT SHOWN ON THE STRUCTURAL DRAWINGS IS TO BE FURNISHED BY THE MISCELLANEOUS IRON CONTRACTOR (M.I. CONTR.)
- 54. ALL STRUCTURAL STEEL MEMBERS TO HAVE ONE SHOP COAT OF PAINT (PRIMER ONLY).
- 55. WHERE TWO DISSIMILAR METALS MEET, PAINT FACE OF ONE WITH BITUMINOUS PAINT.
- 56. PROVIDE OPENINGS AS REQUIRED FOR MECH. AND ELECT. EQUIPMENT. DRYWALL CONTRACTOR TO PROVIDE STUD BRACING AS REQUIRED TO STABILIZE WALLS ABOVE CEILINGS AT HIGH AND LOW PARTITIONS.

- 57. GYPSUM WALL BOARD CEILING SUBCONTRACTOR SHALL BE RESPONSIBLE FOR PROVISION AND INSTALLATION OF ALL SUPPLEMENTAL MISCELLANEOUS IRON AND/OR STRUCTURAL STEEL (16 GA.) STUDDING REQUIRED TO ADEQUATELY SUPPORT ALL GYPSUM WALLBOARD DROPS SOFFITS, CORNICES, ETC. FROM THE STRUCTURAL STEEL ABOVE.
- 58. SAID CONTRACTOR AS WELL AS THE GENERAL CONTRACTOR SHALL CLOSELY COORDINATE THE INSTALLATION OF THE REQUIRED SUPPLEMENTAL MISC. IRON AND/OR STRUCTURAL STEEL STUDDING SO AS CONDUIT, SPRINKLER SYSTEM AND/OR ACOUSTICAL SUSPENDED CEILING SYSTEM ETC... CAN BE INSTALLED PROPERLY.
- 59. GYPSUM WALLBOARD CEILING SUBCONTRACTOR TO SUBMIT DETAILED SHOP DRAWING OF SUPPLEMENTAL MISC. IRON AND/OR STRUCT. STL. STUDDING TO ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION OF SAME.
- 60. ALL EXTERIOR ENTRANCE DOORS AND FRAMES TO RECEIVE PERIMETER WEATHER STRIPPING AS PER SPECIFICATIONS.
- 61. CONTRACTOR IS TO PROVIDE STUD BRACING AS REQUIRED FOR METAL STUD PARTITIONS ABOVE 10'-0".
- 62. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL WEEP JOINTS AROUND WINDOWS AND EXTRUDED ALUM. STORE FRONTS FREE OF CAULK.
- 63. EPOXY PAINT SYSTEMS TO BE USED IN WET AREAS UNLESS OTHERWISE NOTED
- 64. CONTRACTOR IS TO VERIFY ALL LOUVER SIZES AND LOCATIONS PRIOR TO STEEL AND AGGREGATE PANEL INSTALLATION.
- 65. WHEREVER A FOAM BACKER ROD AND SEALANT ARE USED, THE SEALANT AND BACKER ROD MUST BE COMPATIBLE WITH EACH OTHER. USE A SIZE BACKER ROD THAT COMPRESSES 25% WHEN INSERTED INTO THE JOINT. (TYPICAL ALL JOINTS)
- 66. ALL EXTERIOR WINDOWS, DOORS, LOUVERS, VENTS, EXHAUST FANS, PIPE PENETRATIONS, AND ALL OTHER PENETRATIONS THRU EXTERIOR WALLS SHALL BE SEALED ALL AROUND WITH SEALANT. (BOTH ON EXTERIOR AND INTERIOR SIDES)
- 67. FIRE EXTINGUISHER CABINETS TO BE MOUNTED 4'-6" A.F.F. TO TOP MAXIMUM AS PER ADA REQUIREMENTS. (FIRE EXTINGUISHERS WITH GROSS WEIGHT OVER 40LBS. MUST BE MOUNTED 3'-6" MAX.). CLEARANCE BETWEEN THE BOTTOM OF THE FLOOR AND THE EXTINGUISHER MAY NOT BE LESS THAN 4").
- 68. STRUCTURAL STEEL FABRICATOR AND INSTALLER SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL FRAMED OPENINGS IN ROOF WITH APPROVED EQUIPMENT MANUFACTURERS. (OPENINGS SUCH AS, BUT NOT LIMITED TO MECHANICAL UNITS, EXHAUST FANS, CURB MOUNTED EQUIPMENT, ROOF DRAINS, SKYLIGHTS, STAIR OPENINGS, ROOF HATCHES, SMOKE HATCHES, DUCT THRU ROOF PENETRATIONS, EXPANSION JOINTS, ETC.) EXACT SIZES AND EXACT LOCATIONS OF ALL OPENINGS ARE TO BE VERIFIED WITH THE APPROVED SHOP DRAWINGS ISSUED FOR THE INSTALLATION. THE EXACT SIZES SHALL BE COORDINATED PRIOR TO ANY FABRICATION AND INSTALLATION BY ANY/ALL TRADES. (SIZES AND LOCATIONS INDICATED ON CONTRACT DRAWINGS ARE DIAGRAMMATIC AND FOR INFORMATION ONLY.) ANY FABRICATION AND/OR INSTALLATION WHICH HAS NOT BEEN PROPERLY COORDINATED WITH APPROVED EQUIPMENT MANUFACTURE AND MUST BE REPAIRED, RELOCATED, ALTERED, REPLACED, RE-INSTALLED OR MODIFIED IN ANY MANNER WILL BE DONE TO THE SATISFACTION OF THE OWNER WITH NO ADDITIONAL COST TO THE OWNER OR DESIGN PROFESSIONAL.
- 69. FOR INSTALLATION OF INSULATION & VAPOR / AIR BARRIERS, INCLUDING ALL TYPES OF INSULATION: BATTS, SPRAY INSULATION, ACOUSTICAL, ETC. (REFER TO DRAWINGS AND SPECIFICATIONS FOR TYPES) CONTRACTOR MUST INSTALL INSULATIONS & VAPOR / AIR BARRIERS AS PER MANUFACTURER'S INSTRUCTIONS, SPECIFICATIONS, METHODS, RECOMMENDATIONS, STANDARDS, PROCEDURES, ETC. FOR EACH TYPE OF INSULATION & VAPOR / AIR BARRIER. SEALING OF ALL GAPS TO PROVIDE A CONTINUOUS ENVELOPE, ATTACHMENT, JOINT SEALING, CONDENSATION CONTROL, THERMAL PERFORMANCE, ACOUSTICAL PERFORMANCE, FIRE PERFORMANCE RATINGS, AESTHETICS, ASTM STANDARDS COMPLIANCE, INTERNATIONAL BUILDING CODE, LOCAL CODES, UNDERWRITERS LABORATORIES, FACTORY MUTUAL, EPA, ETC. MUST ALL BE FOLLOWED. ALL OF THE ABOVE MUST BE PERFORMED IN A PROFESSIONAL MANNER AS PER INDUSTRY STANDARDS.
- 70. MASONRY CONTRACTOR TO INSTALL BRICK WALLS AS PER DRAWINGS AND SPECIFICATIONS. ALL INSTALLATION METHODS, DETAILS, RECOMMENDATIONS, LATEST TECHNICAL DEVELOPMENTS, ETC. SHALL BE AS PER THE BRICK INSTITUTE OF AMERICA, 11490 COMMERCE PARK DRIVE RESTON VIRGINIA 22091. 703-620-0010.
- 71. ALL CONCRETE MASONRY WALLS (C.M.U) TO BE INSTALLED IN ACCORDANCE WITH THE NATIONAL CONCRETE MASONRY ASSOCIATION. 2302 HORSE PEN ROAD, HERNDON, VIRGINIA 22071-3406



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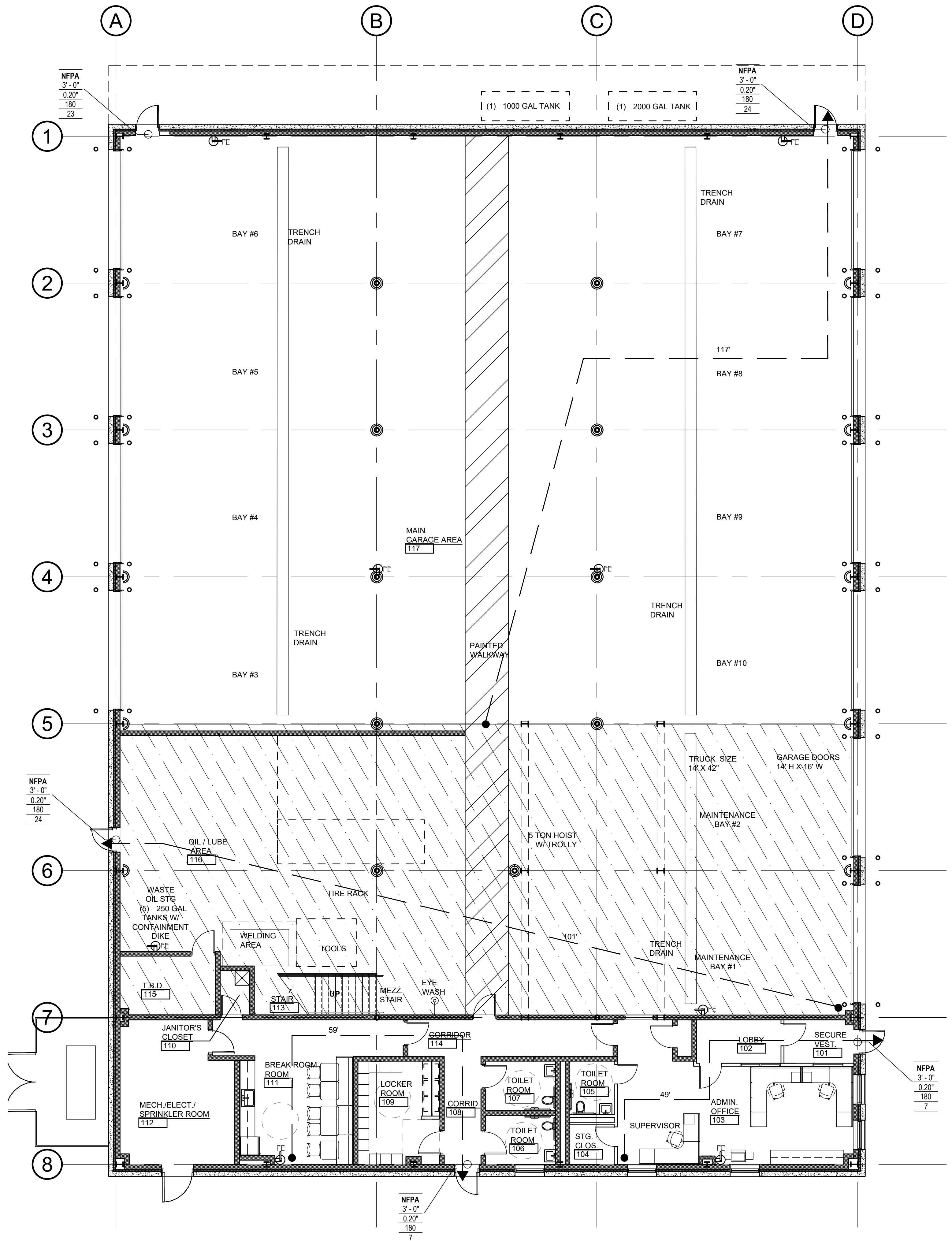
Seal

Designed by:	DC/gm	Date:	03-01-2023	Rev.#	
Drawn by:	Cld by/jcc	Project No.:	2020-117		
MANUFACTURER'S INSTRUCTIONS FOR THE INSTALLATION OF THE PRODUCT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.				Plot Scale:	AS NOTED

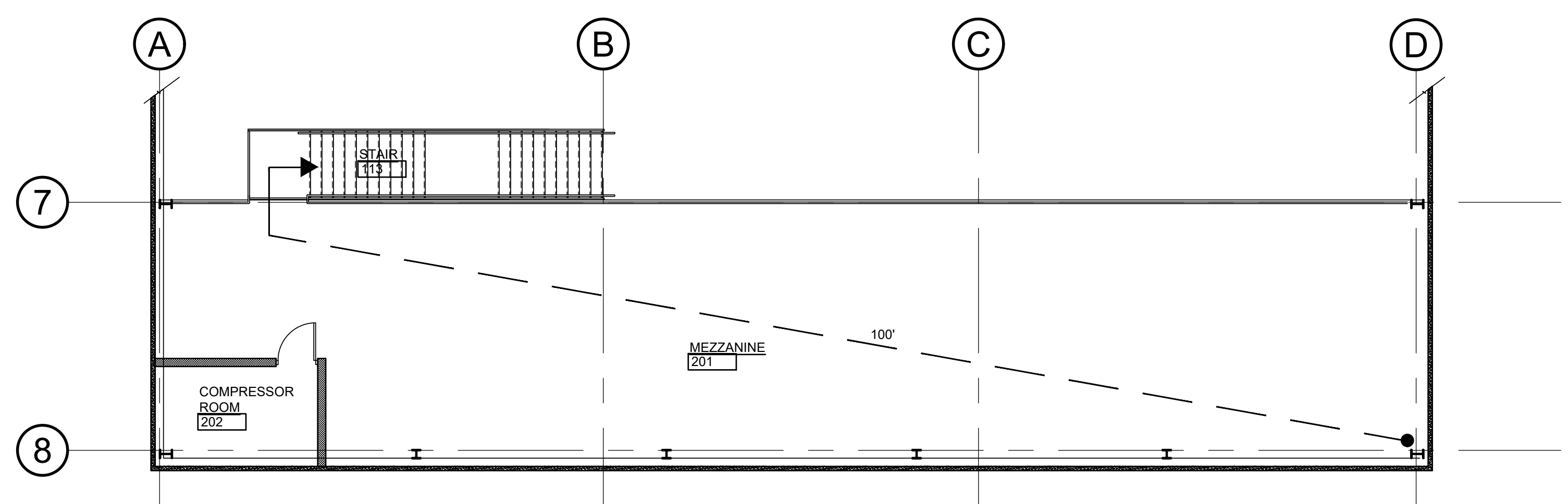
**GENERAL NOTES**

Project Location: WINDSOR HIGHWAY DEPARTMENT  
174 CHAPEL STREET  
WINDSOR, NY 13665  
Project Name: TOWN OF WINDSOR HIGHWAY DEPARTMENT MAINTENANCE GARAGE

Drawing Reference Number:  
**GN-1.0**  
OF



**1**  
A-1.0  
**FIRST FLOOR EGRESS PLAN**  
SCALE: 1/8"=1'-0"

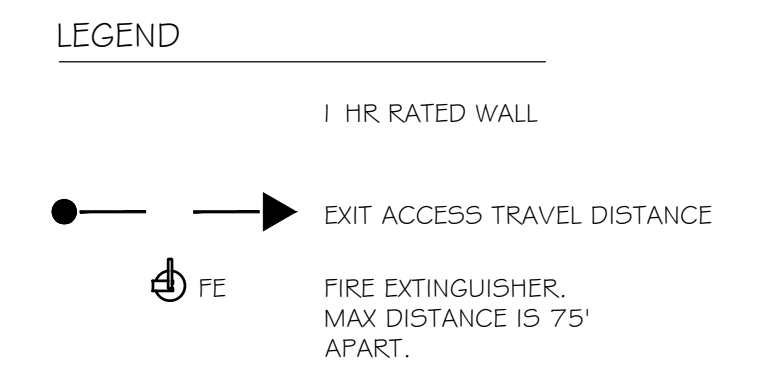


**2**  
A-1.0  
**MEZZANINE EGRESS PLAN**  
SCALE: 1/8"=1'-0"

Code Review  
Town of Windsor Highway Maintenance Garage  
174 Chapel Street, Windsor NY  
Building Square Footage w mezz. 16,962 S.F.  
Building is Sprinklered

Applicable Codes  
NYSC 2020, NFPA, IBC 2018, NY Energy Conservation Code, ADA

Occupancy (SECT 311)	S-1 Storage
Type of Construction (Sect 601)	2B
Allowable Height (Sect 504.3)	55-0
Allowable Sq Ft (Sect 506.2)	104,000
Fire Resistive Ratings (Sect601)	
Primary Struct	0hr
Bearing Walls	0hr
Nonbearing walls	0hr
Floor Construction	0hr
Corridors (Sect1020.1)	0hr
Dead end corridor(Sect 1020.4)	50-0
Travel Distance (sect1017.2)	250-0
Min number of exits(Sect 1006.3.2)	2
Occup Load (Sect 1004.5)	
Garage / Mezzanine	200 sf per occup / 14,041 sf = 71 occup.
Office	150 sf per occup / 1,976 sf = 14 occup.
Total Occup.	85 occup.
Toilet Room (sect 2902.1)	wc 1/100 m &w, lav 1/100, 1 ss, 1 df per 1000
Fire extinguishers(Sect 906.1)	75-0
Interior wall and ceiling (893.13)	Class C



**GRIFFITHS ENGINEERING**  
15 South Washington Street, Suite 1  
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Telephone (607) 734-2400  
Fax (607) 734-2466

Date: 03-01-2023	Rev.#
Project No.: 2020-117	
Designed by: DC/PM	
Drawn by: JCC	
Checked by: JCC	
Plot Scale: AS NOTED	

Drawing Name:  
**EGRESS PLANS / CODE REVIEW**

Project Location:  
WINDSOR HIGHWAY DEPARTMENT  
174 CHAPEL STREET  
WINDSOR, NY 13865

Project Name:  
TOWN OF WINDSOR HIGHWAY  
DEPARTMENT MAINTENANCE GARAGE

Drawing Reference Number:  
**A-1.0**  
OF



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 Fax (607) 724-2466

Designed by: DC/PM  
 Drawn by: Cld by: JCC  
 Date: 03-01-2023  
 Project No.: 2020-117  
 Plot Scale: AS NOTED

Drawing Name:  
**FLOOR PLANS**

Project Location:  
 WINDSOR HIGHWAY DEPARTMENT  
 174 CHAPEL STREET  
 WINDSOR, NY 13665

Project Name:  
 TOWN OF WINDSOR HIGHWAY  
 DEPARTMENT MAINTENANCE GARAGE

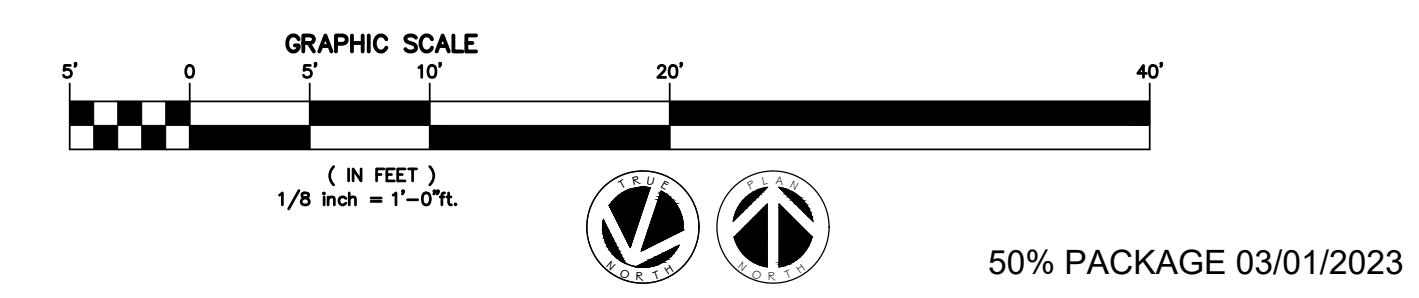
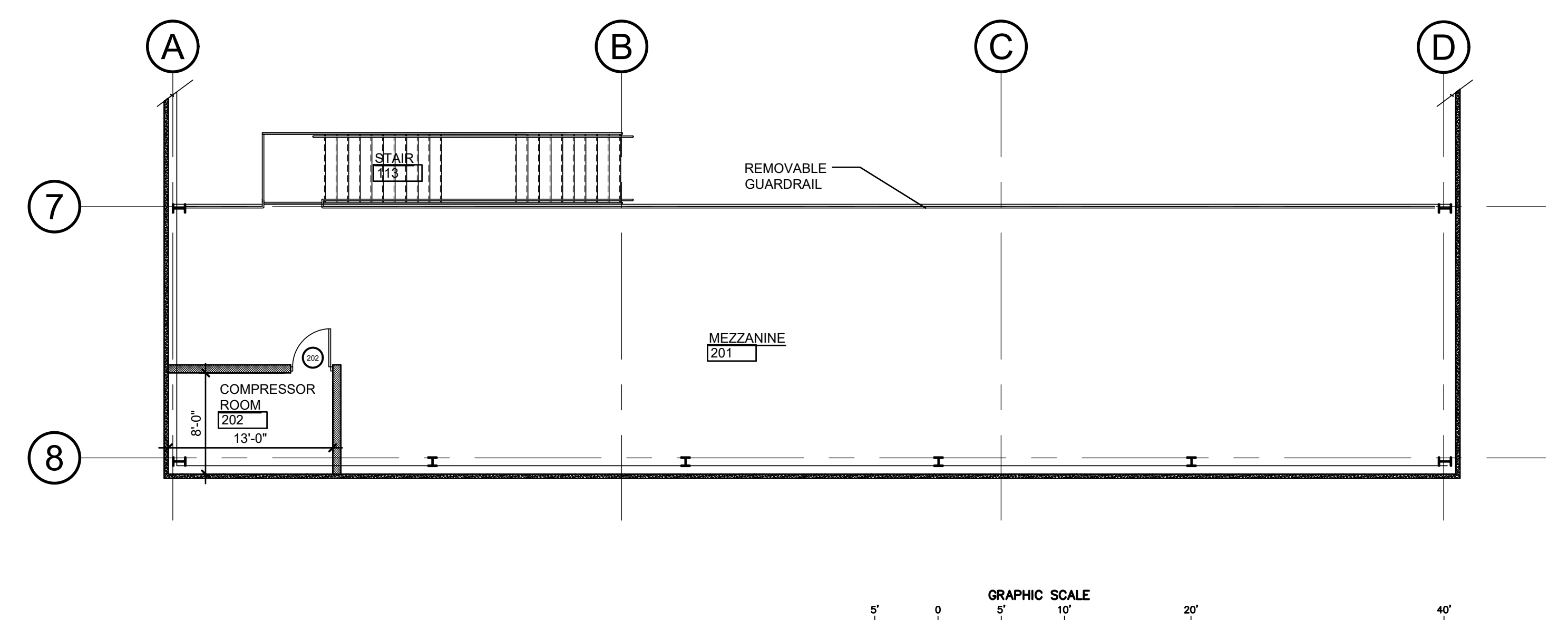
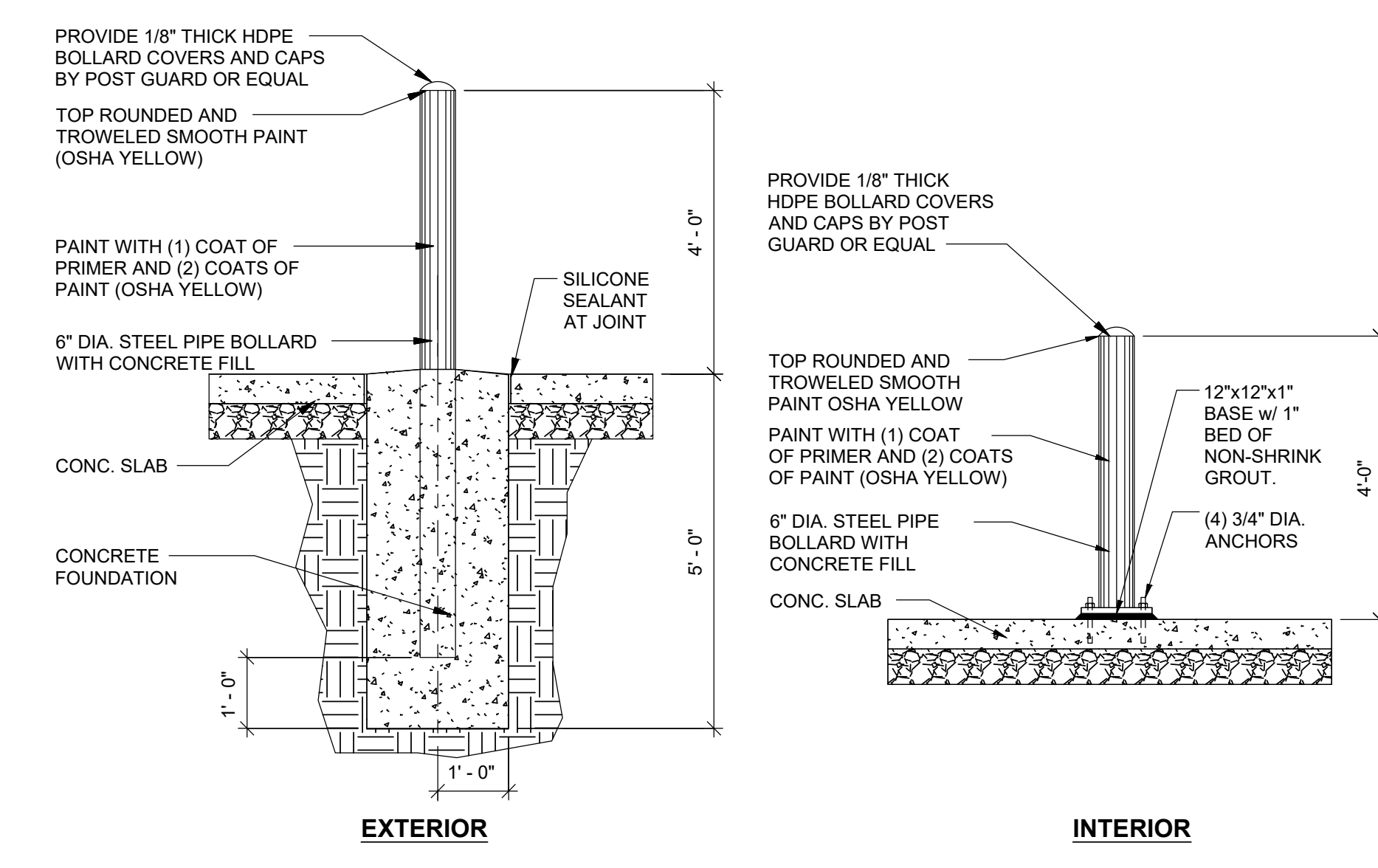
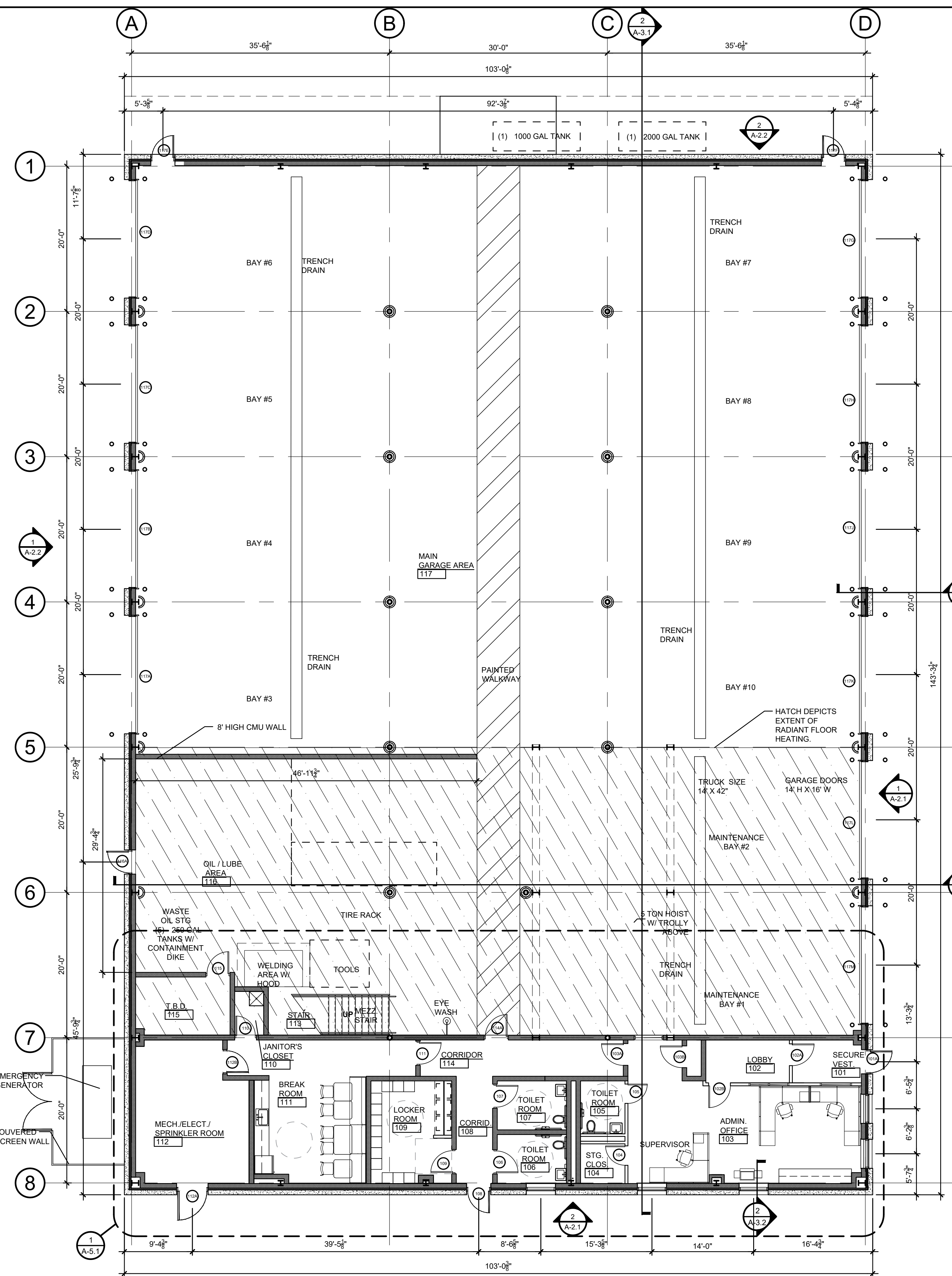
Drawing Reference Number:  
**A-1.1**  
 OF

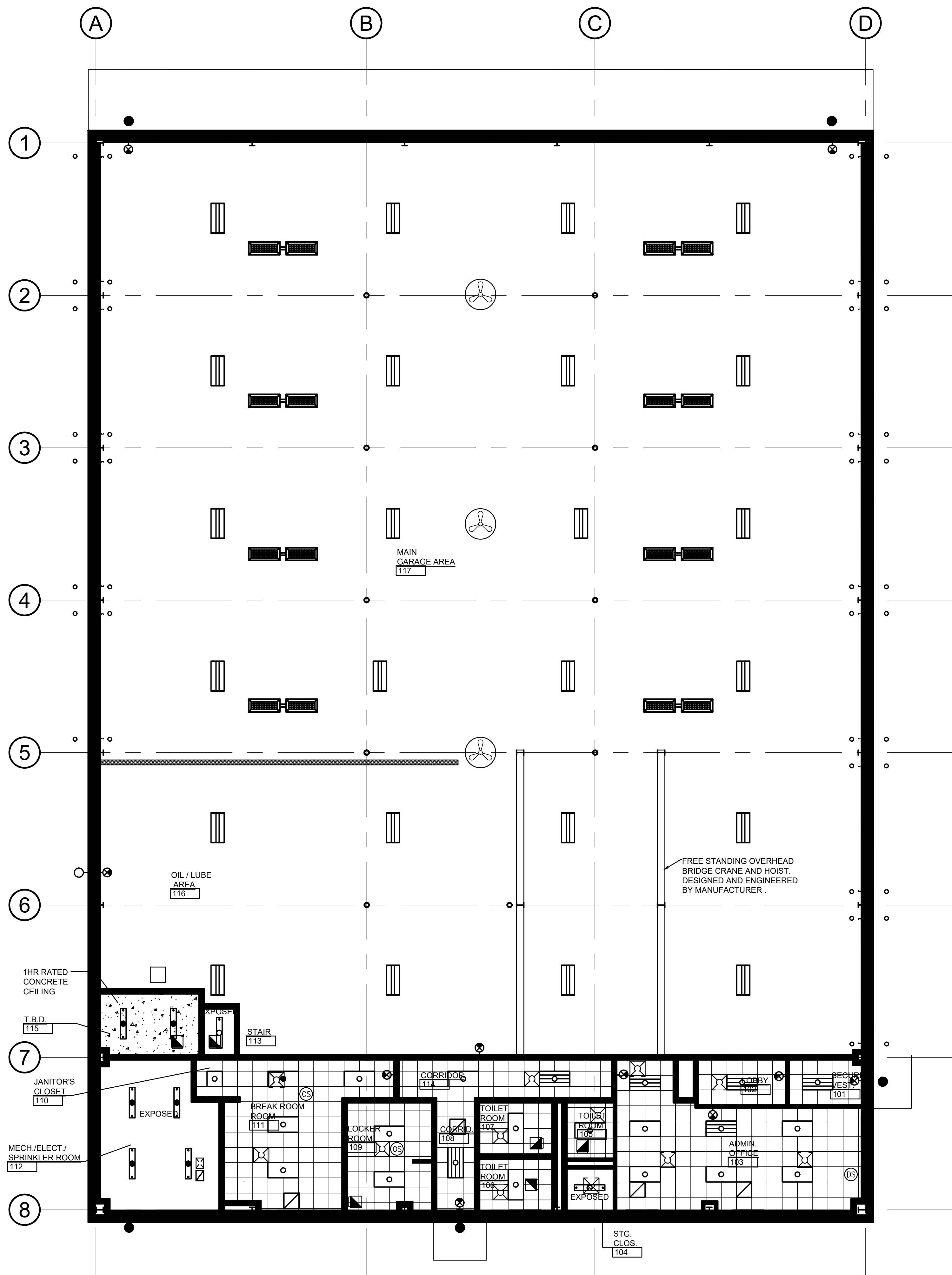
**SYMBOL LEGEND**

- ELEVATION KEY X = ELEVATION NUMBER  
A-X = DWG. NUMBER
- SECTION KEY X = SECTION NUMBER  
A-X = DWG. NUMBER
- DOOR TAG
- ROOM NAME & NUMBER TAG
- DETAIL TAG X = DETAIL NUMBER  
A-X = DWG. NUMBER
- DIRT WALL SYSTEM TAG  
SEE SHEETS A-6, A-7, A-8,  
FOR ELEVATIONS

**PARTITION LEGEND**

- 3/8" METAL STUDS WITH 5/8" GYPSUM BOARD ON BOTH SIDES. (PAINT).
- C.M.U. W/ HORIZONTAL TRUSS REINFORCING EVERY 2ND COURSE. #5 REINFORCING BARS @ 4'-0" O.C., GROUT CORES FULLY @ REBAR LOCATIONS





1  
A-1.2  
FIRST FLOOR CEILING PLAN  
SCALE: 1/8"=1'-0"

CEILING LEGEND	
TYPE	DESCRIPTION
	A 2'x4' RECESSED LED
	B 2'x4' RECESSED LED
	C 4' LINEAR LED
	D HIGH BAY LIGHT
	L1 ARCHITECTURAL WALL PACK
	EXIT SIGN
	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR
	SUPPLY: DIFFUSER, CEILING REGISTER, WALL REGISTER
	RETURN: GRILLE, CEILING REGISTER, WALL REGISTER
	EXHAUST FAN
	CEILING FAN
	ELECTRIC CEILING MOUNTED RADIANT HEATERS.



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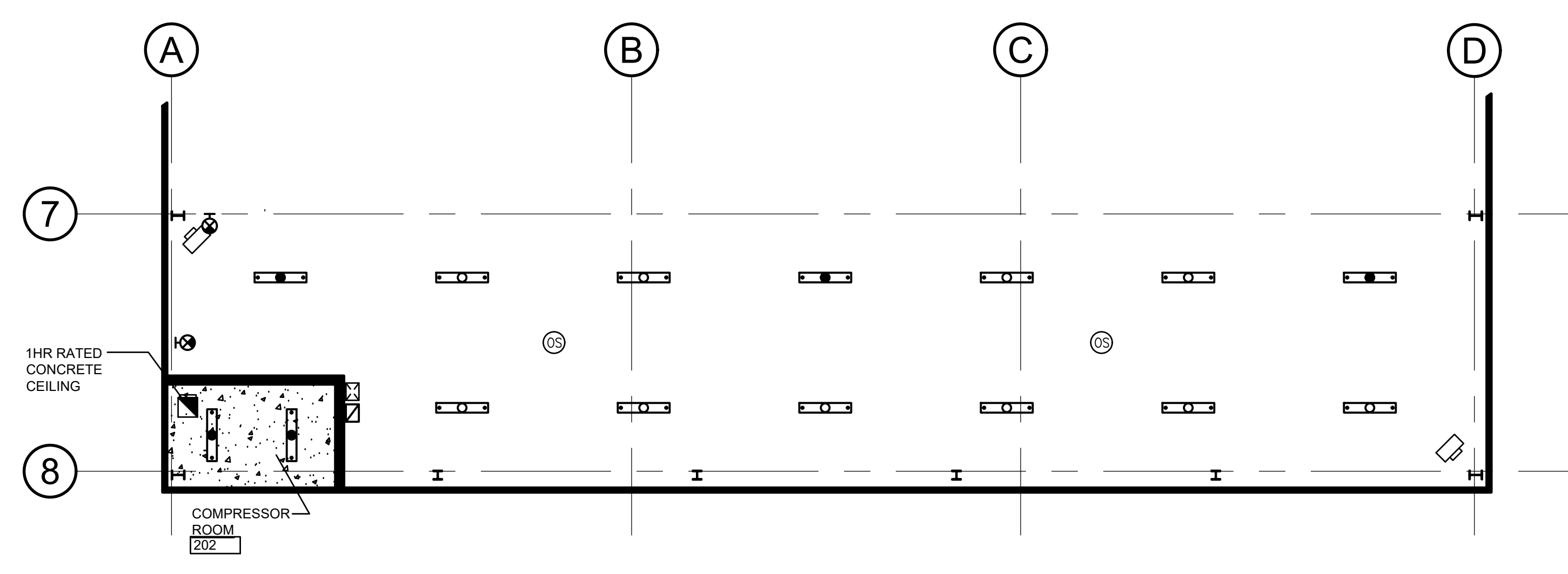
Designed by: DC/PM	Date: 03-01-2023	Rev.#
Drawn by: Cld by: JCG	Project No.: 2020-117	
MANUFACTURER'S MATERIALS TO BE USED AS SHOWN IN A SECTION OF THE DRAWING IS A SECTION OF THE SECTION ROOM.	Plot Scale: AS NOTED	

Drawing Name:  
**CEILING PLANS**

Project Location: WINDSOR HIGHWAY DEPARTMENT  
174 CHAPEL STREET  
WINDSOR, NY 13685

Project Name: TOWN OF WINDSOR HIGHWAY DEPARTMENT MAINTENANCE GARAGE

Drawing Reference Number:  
A-1.2  
OF



2  
A-1.2  
MEZZANINE CEILING PLAN  
SCALE: 1/8"=1'-0"



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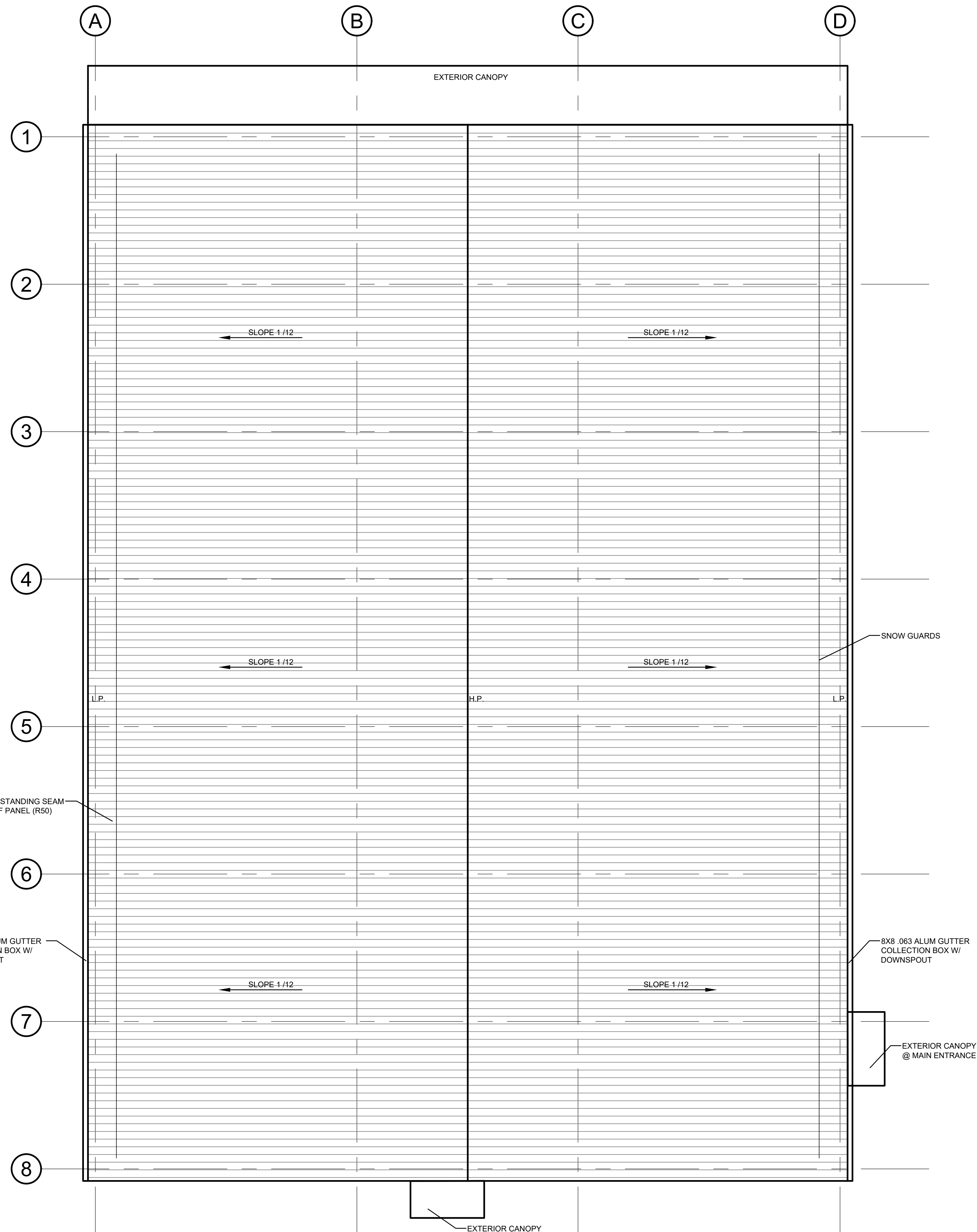
Designed by: DC/PM	Date: 03-01-2023	Rev.#
Drawn by: JGc	Project No.: 2020-117	
<small>MANUFACTURER'S MATERIALS TO BE USED IN THIS DRAWING IS A PORTION OF THE "SPECIFICATIONS FOR SUBMITTALS" SECTION 0500.</small>		Plot Scale: AS NOTED

Drawing Name:  
**ROOF PLAN**

Project Location:  
 WINDSOR HIGHWAY DEPARTMENT  
 174 CHAPEL STREET  
 WINDSOR, NY 13665

Project Name:  
 TOWN OF WINDSOR HIGHWAY  
 DEPARTMENT MAINTENANCE GARAGE

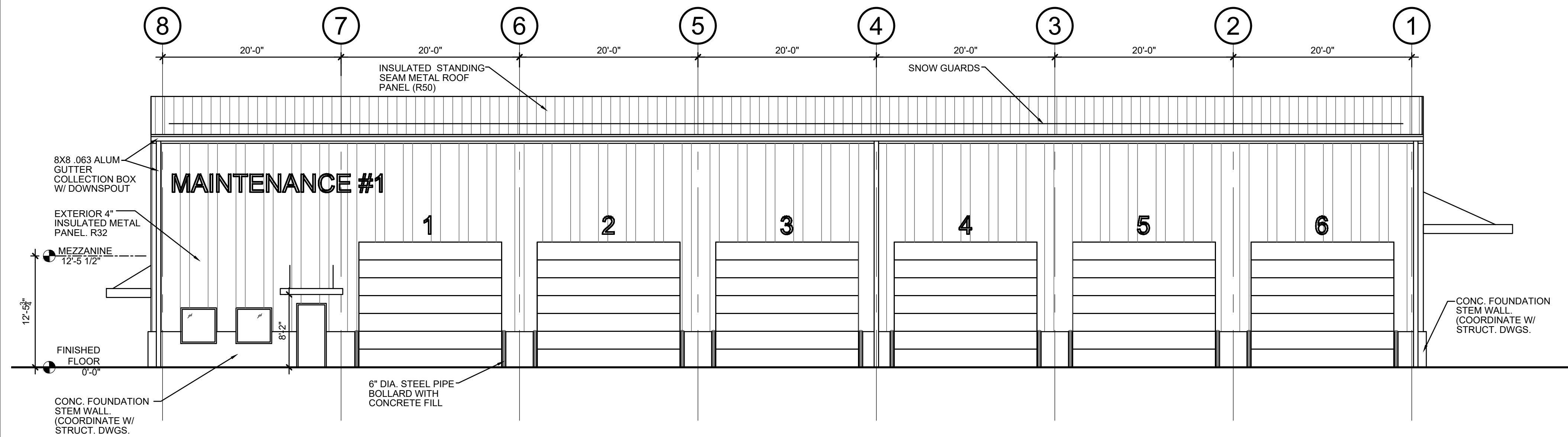
Drawing Reference Number:  
**A-1.3**  
 OF



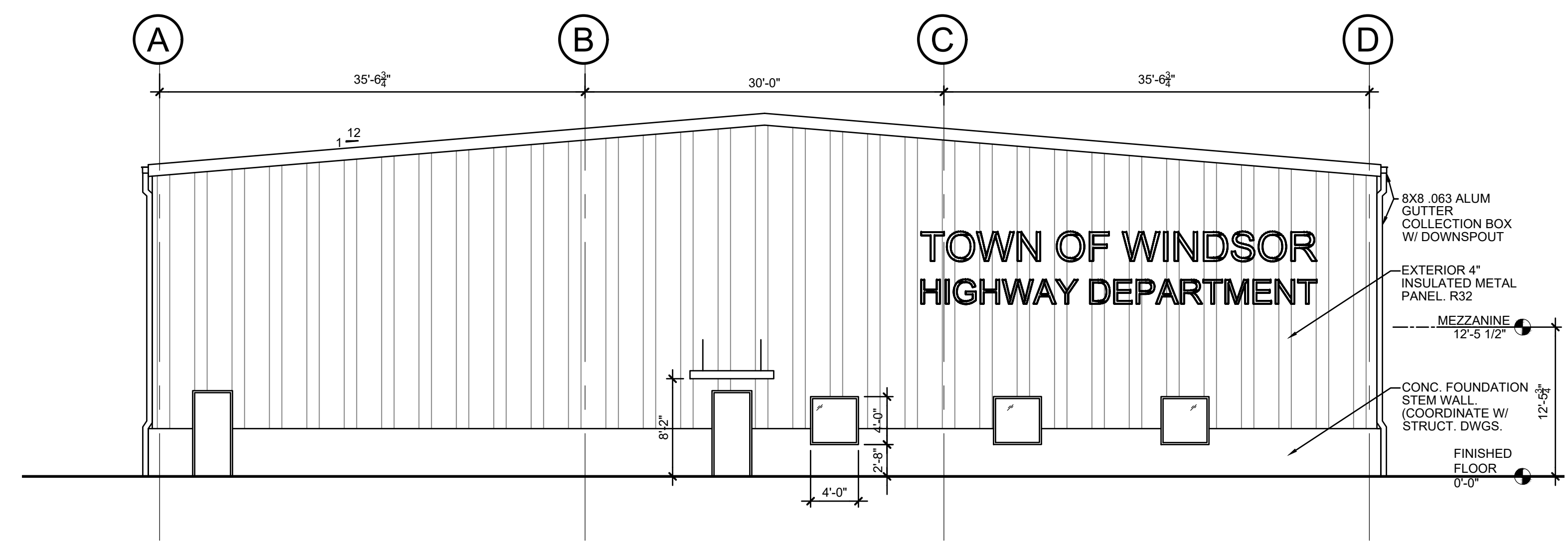
**1**  
**ROOF PLAN**  
 SCALE: 1/8"=1'-0"



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



**2**  
**ELEVATION**  
 SCALE: 1/8"=1'-0"

Designed by: DC/PM	Date: 03-01-2023	Rev.#
Drawn by: JCG	Project No.: 2020-117	
<small>DESIGNER'S RESPONSIBILITY: THIS DRAWING IS A PRELIMINARY DESIGN AND IS SUBJECT TO CHANGE WITHOUT NOTICE. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND REGULATORY APPROVALS.</small>		Plot Scale: AS NOTED

Drawing Name:  
**ELEVATIONS**

Project Location:  
 WINDSOR HIGHWAY DEPARTMENT  
 174 CHAPEL STREET  
 WINDSOR, NY 13665

Project Name:  
 TOWN OF WINDSOR HIGHWAY  
 DEPARTMENT MAINTENANCE GARAGE

Drawing Reference Number:  
**A-2.1**  
 OF



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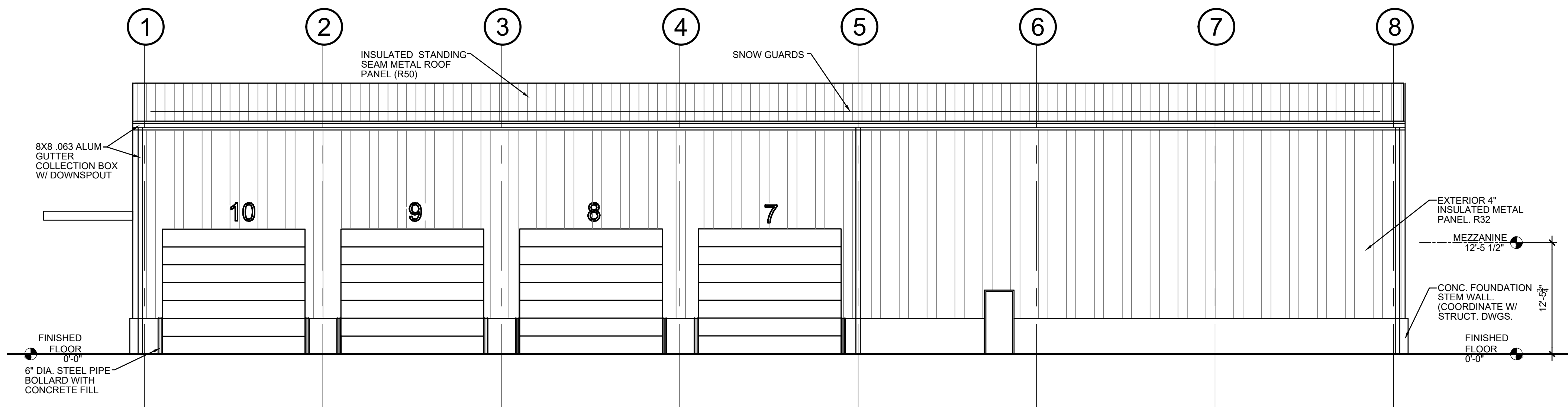
Designed by: DC/PM	Date: 03-01-2023	Rev.#
Drawn by: JG	Project No.: 2020-117	
<small>MANUFACTURER'S MATERIALS TO BE USED IN THIS DRAWING IS A PORTION OF THE "AS SHOWN" SECTION 200.</small>		Plot Scale: AS NOTED

ELEVATIONS

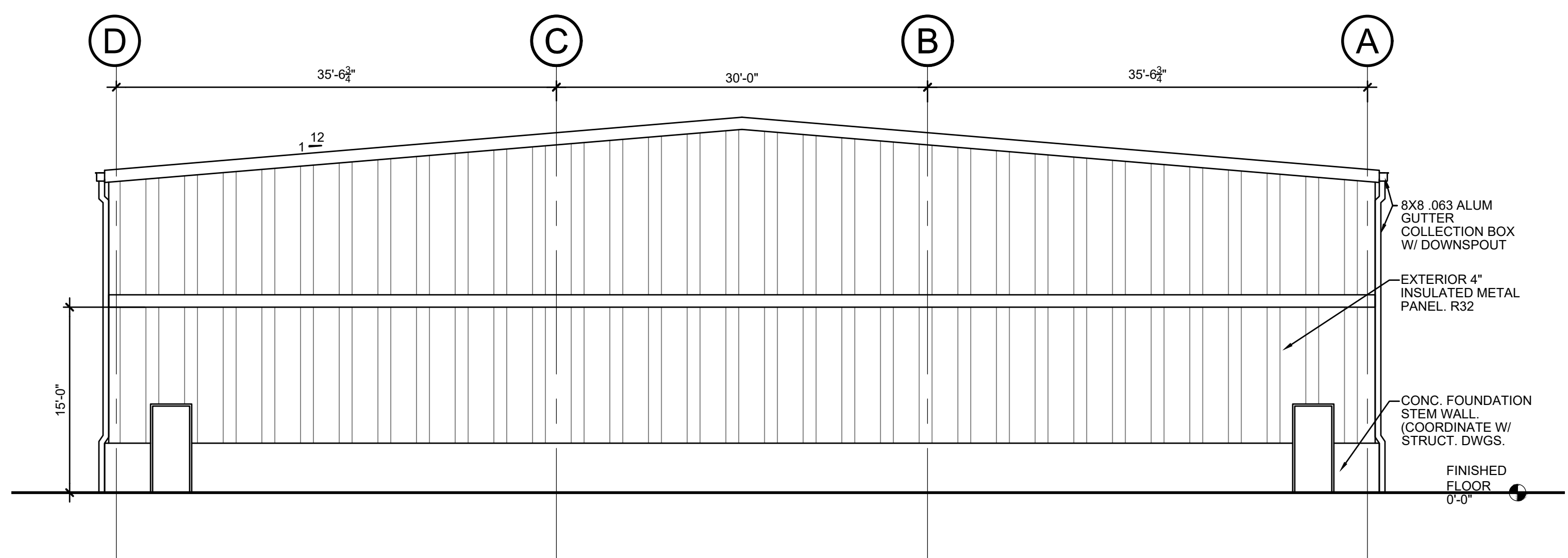
Project Location: WINDSOR HIGHWAY DEPARTMENT  
 174 CHAPEL STREET  
 WINDSOR, NY 13665

Project Name: TOWN OF WINDSOR HIGHWAY DEPARTMENT MAINTENANCE GARAGE

Drawing Reference Number:  
 A-2.2  
 OF



**1**  
 A-2.2 ELEVATION  
 SCALE: 1/8"=1'-0"



**2**  
 A-2.2 ELEVATION  
 SCALE: 1/8"=1'-0"





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Seal

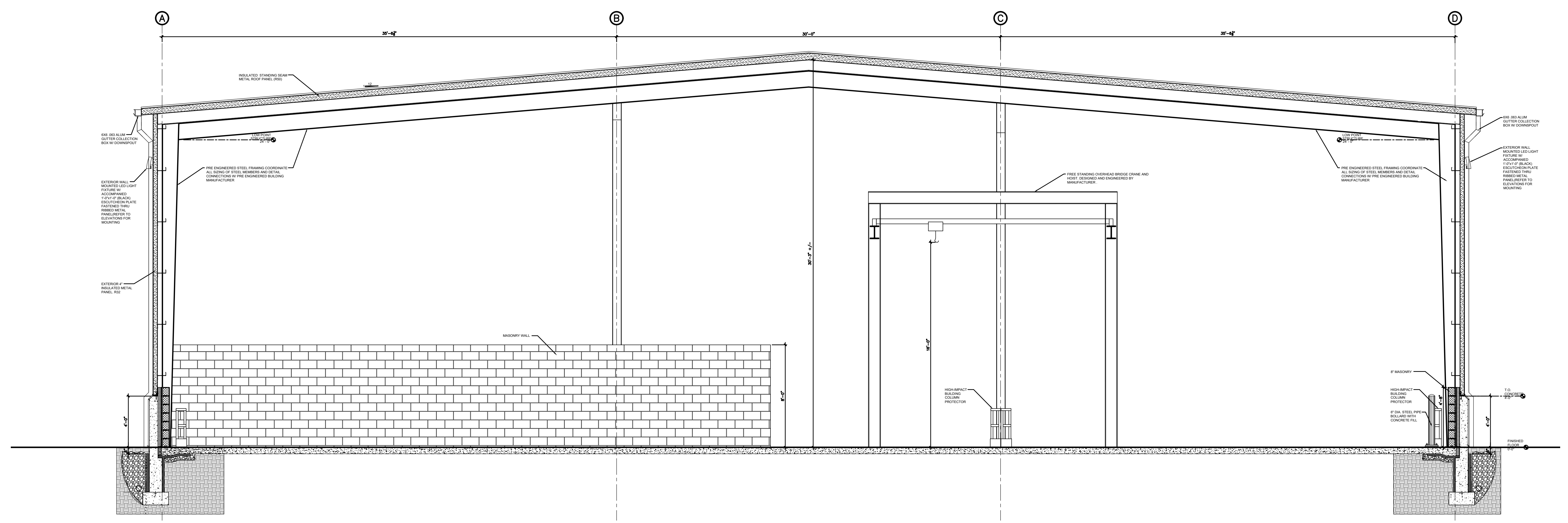
Designed by:	DC/PM	Date:	03-01-2023
Drawn by:	Cld by/DC	Project No.:	2020-117
MANUFACTURER'S DRAWINGS OF THIS DRAWING IS A SELECTION OF THE BUILDING SECTION 2020.		Plot Scale:	AS NOTED

**BUILDING SECTIONS**

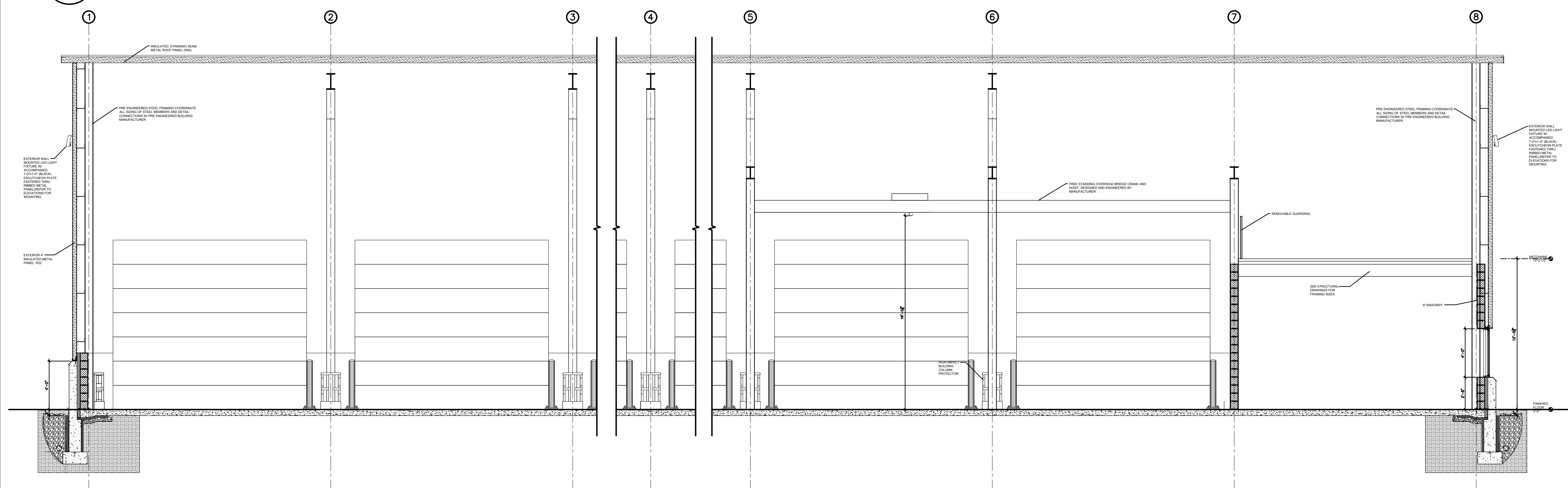
Drawing Name:  
**WINDSOR HIGHWAY DEPARTMENT**  
 174 CHAPEL STREET  
 WINDSOR, NY 13665

Project Location:  
**TOWN OF WINDSOR HIGHWAY DEPARTMENT MAINTENANCE GARAGE**

Drawing Reference Number:  
**A-3.1**  
 OF



**1 BUILDING SECTION**  
 SCALE: 1/4"=1'-0"



**2 BUILDING SECTION**  
 SCALE: 1/4"=1'-0"



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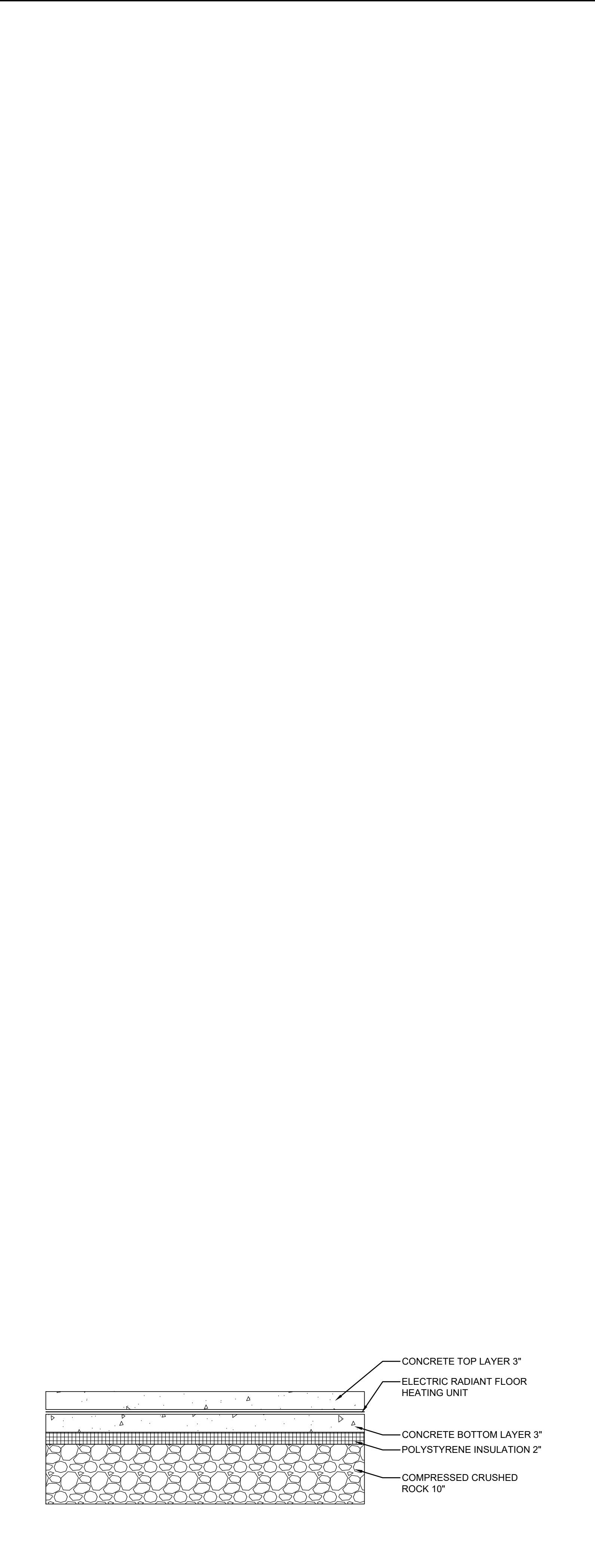
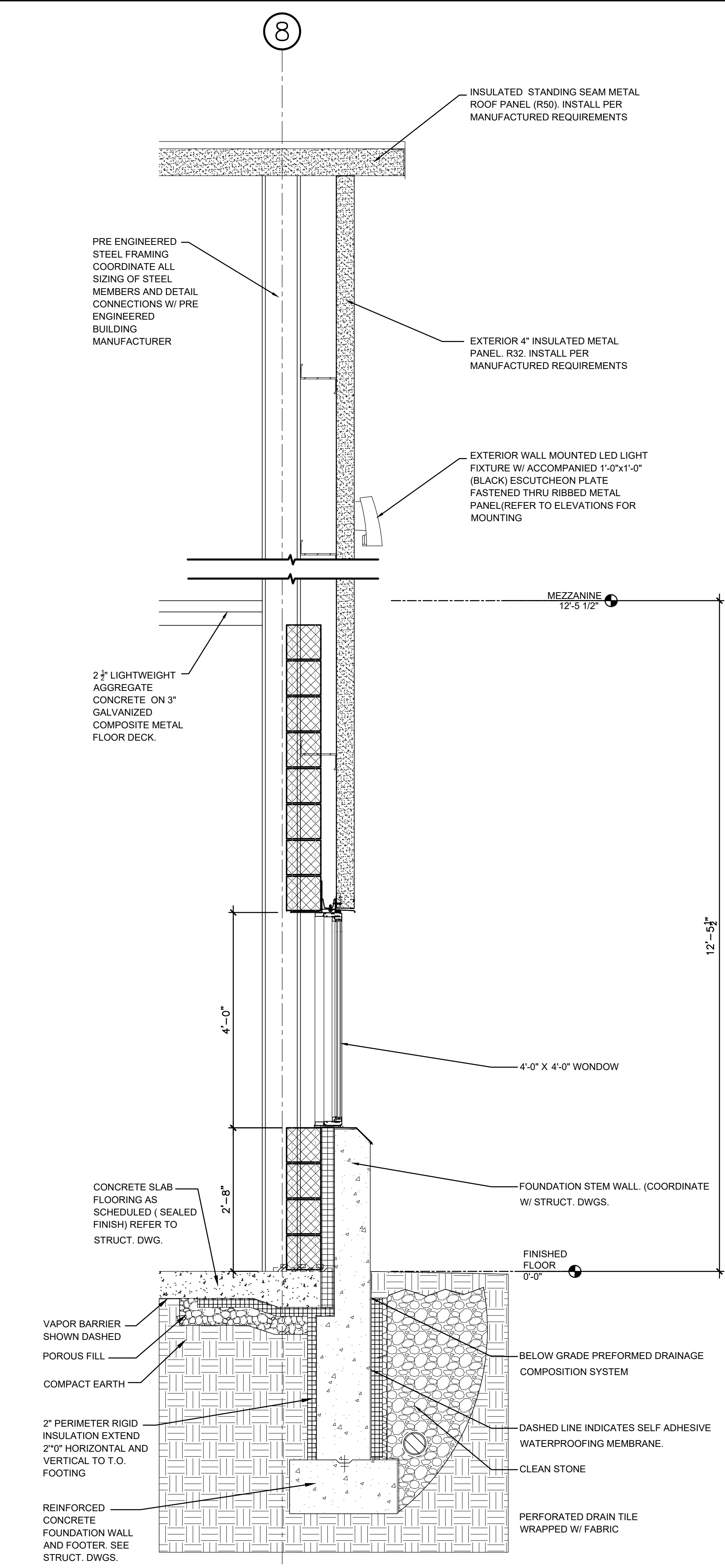
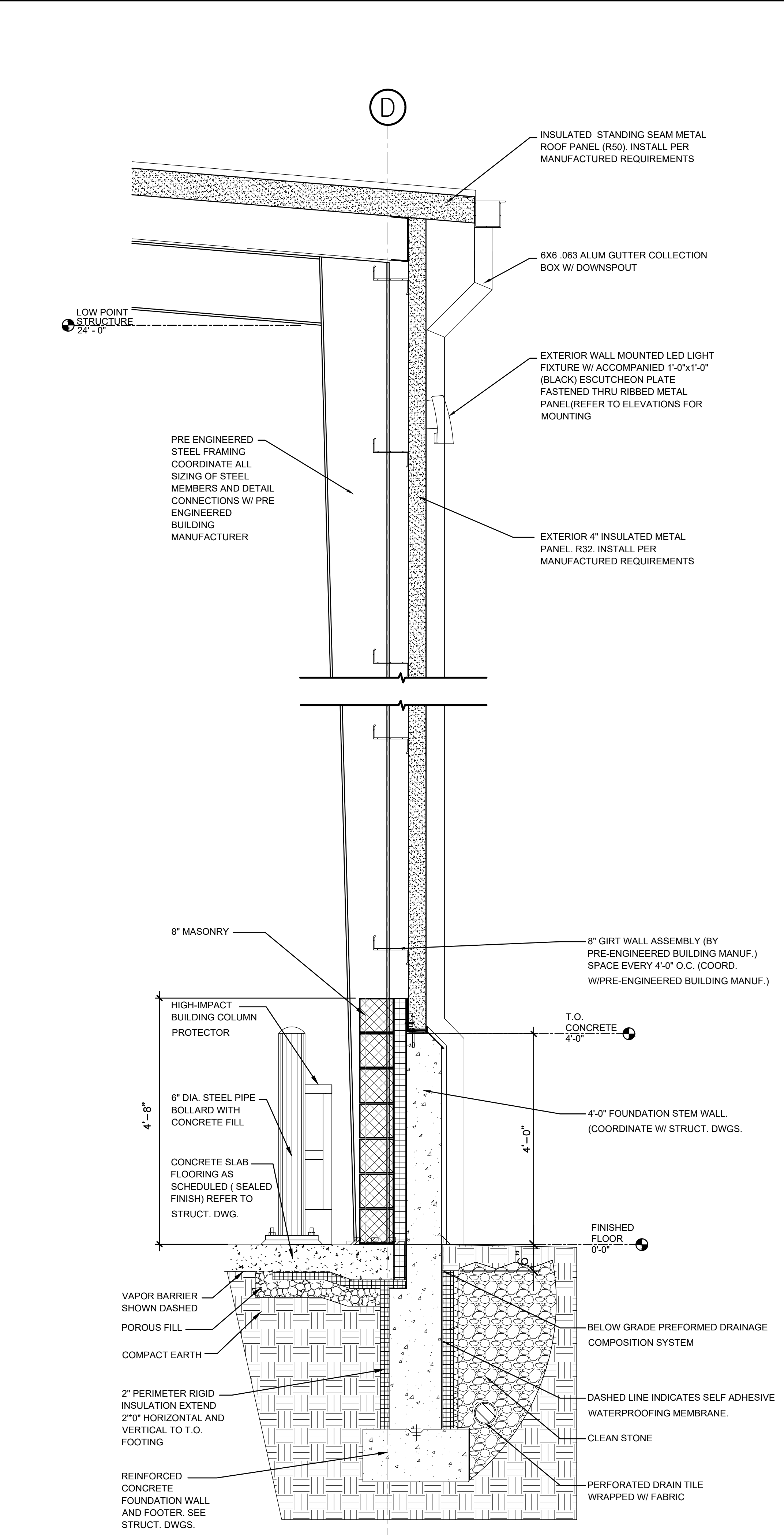
Designed by: DC/PM	Drawn by: JG	Date: 03-01-2023	Rev.#
Checked by: JG		Project No.: 2020-117	AS NOTED
Manufactured with the use of pre-engineered building components in accordance with the manufacturer's specifications.		Plot Scale:	AS NOTED

Drawing Name:  
**WALL SECTIONS**

Project Location:  
 WINDSOR HIGHWAY DEPARTMENT  
 174 CHAPEL STREET  
 WINDSOR, NY 13665

Project Name:  
 TOWN OF WINDSOR HIGHWAY  
 DEPARTMENT MAINTENANCE GARAGE

Drawing Reference Number:  
**A-3.2**  
 OF



**1 WALL SECTION**  
 SCALE: 3/4"=1'-0"

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

**3 RADIANT FLOOR DETAIL**  
 SCALE: 1"=1'-0"

# DOOR SCHEDULE

DOOR NO.	TYPE	MAT'L	NOMINAL SIZE			GLASS TYPE	LOUVER		FRAME		JAMB		HEAD		THRESHOLD		HARDWARE SET	FIRE RATING	REMARKS
			WIDTH	HEIGHT	THKNS.		WIDTH	HEIGHT	TYPE	MAT'L	TYPE	MAT'L	TYPE	MAT'L	TYPE	MAT'L			
101A	D	AL.	3'-0"	7'-0"	1 1/2"	TEMP	-	-	F-1	AL	J-1	AL	H-1	AL	T-1	AL	-	-	
102A	D	AL.	3'-0"	7'-0"	1 1/2"	TEMP	-	-	F-3	AL	J-3	AL	H-3	AL	T-1	AL	-	-	
102B	D	AL.	3'-0"	7'-0"	1 1/2"	TEMP	-	-	F-3	AL	J-3	AL	H-3	AL	T-1	AL	-	-	
103A	C	HM	3'-0"	7'-0"	1 1/2"	TEMP	-	-	F-4	HM	J-4	HM	H-4	HM	T-1	AL	-	-	
103B	C	HM	3'-0"	7'-0"	1 1/2"	TEMP	-	-	F-4	HM	J-4	HM	H-4	HM	T-1	AL	-	-	
104	A	HM	3'-0"	7'-0"	1 1/2"	-	-	-	F-4	HM	J-4	HM	H-4	HM	T-1	AL	-	-	
105	A	HM	3'-0"	7'-0"	1 1/2"	-	-	-	F-4	HM	J-4	HM	H-4	HM	T-1	AL	-	-	
106	A	HM	3'-0"	7'-0"	1 1/2"	-	-	-	F-4	HM	J-4	HM	H-4	HM	T-1	AL	-	-	
107	A	HM	3'-0"	7'-0"	1 1/2"	-	-	-	F-4	HM	J-4	HM	H-4	HM	T-1	AL	-	-	
108	C	HM	3'-0"	7'-0"	1 1/2"	TEMP	-	-	F-1	HM	J-1	HM	H-1	HM	T-1	AL	-	-	
109	A	HM	3'-0"	7'-0"	1 1/2"	-	-	-	F-4	HM	J-4	HM	H-4	HM	T-1	AL	-	-	
110	A	HM	3'-0"	7'-0"	1 1/2"	-	-	-	F-4	HM	J-4	HM	H-4	HM	T-1	AL	-	-	
111	C	HM	3'-0"	7'-0"	1 1/2"	TEMP	-	-	F-1	HM	J-1	HM	H-1	HM	T-1	AL	-	-	
112A	A	HM	4'-0"	7'-0"	1 1/2"	-	-	-	F-1	HM	J-1	HM	H-1	HM	T-1	AL	-	-	
112B	A	HM	3'-0"	7'-0"	1 1/2"	-	-	-	F-1	HM	J-1	HM	H-1	HM	T-1	AL	-	-	
114A	C	HM	3'-0"	7'-0"	1 1/2"	TEMP	-	-	F-1	HM	J-1	HM	H-1	HM	T-1	AL	-	-	
115	A	HM	3'-0"	7'-0"	1 1/2"	-	-	-	F-1	HM	J-1	HM	H-1	HM	T-1	AL	-	-	
116A	C	HM	3'-0"	7'-0"	1 1/2"	TEMP	-	-	F-1	HM	J-1	HM	H-1	HM	T-1	AL	-	-	
117A	B	STL.	16'-0"	14'-0"	3"	-	-	-	F-2	-	J-2	STL.	-	STL.	-	-	-	-	
117B	B	STL.	16'-0"	14'-0"	3"	-	-	-	F-2	-	J-2	STL.	-	STL.	-	-	-	-	
117C	B	STL.	16'-0"	14'-0"	3"	-	-	-	F-2	-	J-2	STL.	-	STL.	-	-	-	-	
117D	B	STL.	16'-0"	14'-0"	3"	-	-	-	F-2	-	J-2	STL.	-	STL.	-	-	-	-	
117E	C	HM	3'-0"	7'-0"	1 1/2"	TEMP	-	-	F-1	HM	J-1	HM	H-1	HM	T-1	AL	-	-	
117F	C	HM	3'-0"	7'-0"	1 1/2"	TEMP	-	-	F-1	HM	J-1	HM	H-1	HM	T-1	AL	-	-	
117G	B	STL.	16'-0"	14'-0"	3"	-	-	-	F-2	-	J-2	STL.	-	STL.	-	-	-	-	
117H	B	STL.	16'-0"	14'-0"	3"	-	-	-	F-2	-	J-2	STL.	-	STL.	-	-	-	-	
117J	B	STL.	16'-0"	14'-0"	3"	-	-	-	F-2	-	J-2	STL.	-	STL.	-	-	-	-	
117K	B	STL.	16'-0"	14'-0"	3"	-	-	-	F-2	-	J-2	STL.	-	STL.	-	-	-	-	
117L	B	STL.	16'-0"	14'-0"	3"	-	-	-	F-2	-	J-2	STL.	-	STL.	-	-	-	-	
117M	B	STL.	16'-0"	14'-0"	3"	-	-	-	F-2	-	J-2	STL.	-	STL.	-	-	-	-	
202	A	HM	3'-0"	7'-0"	1 1/2"	-	-	-	F-4	HM	J-4	HM	H-4	HM	T-1	AL	-	-	

## MATERIALS

HOLLOW METAL - HM  
STEEL - STL.  
GLASS - GL  
WOOD - WD  
ALUMINUM - AL

## RATING

\*A LABEL - 3 HR. MIN. RATING  
\*B LABEL - 1 1/2 HR. MIN. RATING  
\*C LABEL - 1 HR. MIN. RATING

## GLASS

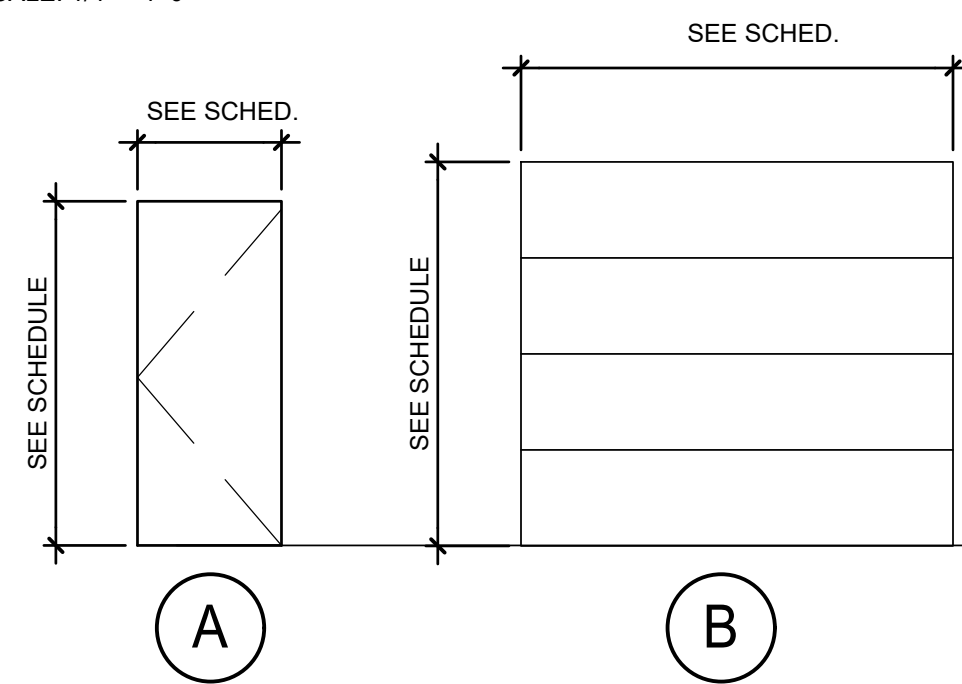
TEMP TEMPERED

## NOTES:

- ALL NEW EXTERIOR DOORS ARE SOLID STEEL ASSEMBLIES INCLUDING PREFINISHED HEAVY-DUTY, NON-CORRODING, INSULATED DOORS WITH FRAME.
- PROVIDE ALUMINUM FLASHING AT BOTTOM OF ALL EXTERIOR DOOR OPENINGS.
- DOOR JAMES TO BE GROUT FILLED WELD STEEL FRAMES WITH MASONRY ANCHORS.

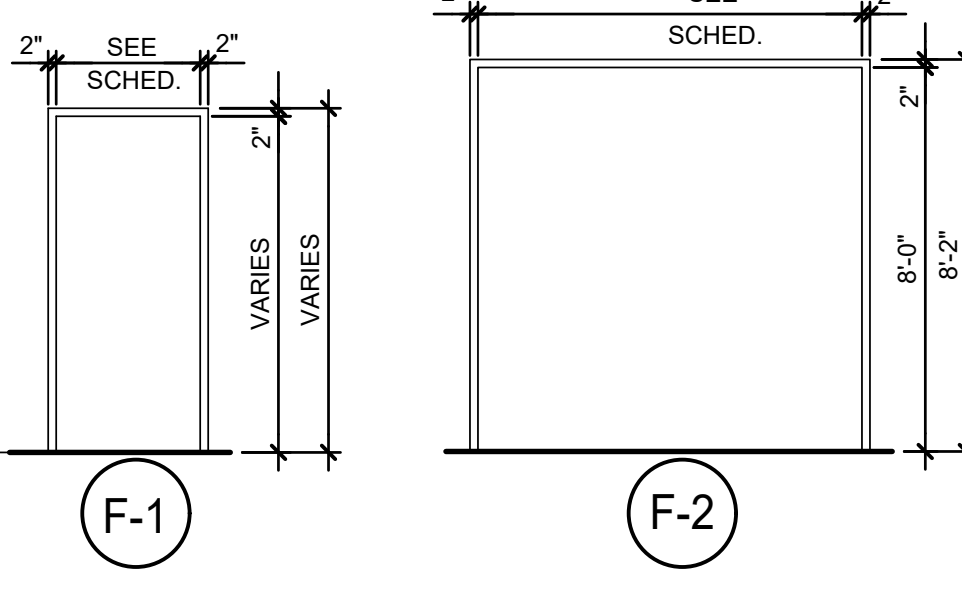
## DOOR TYPES

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



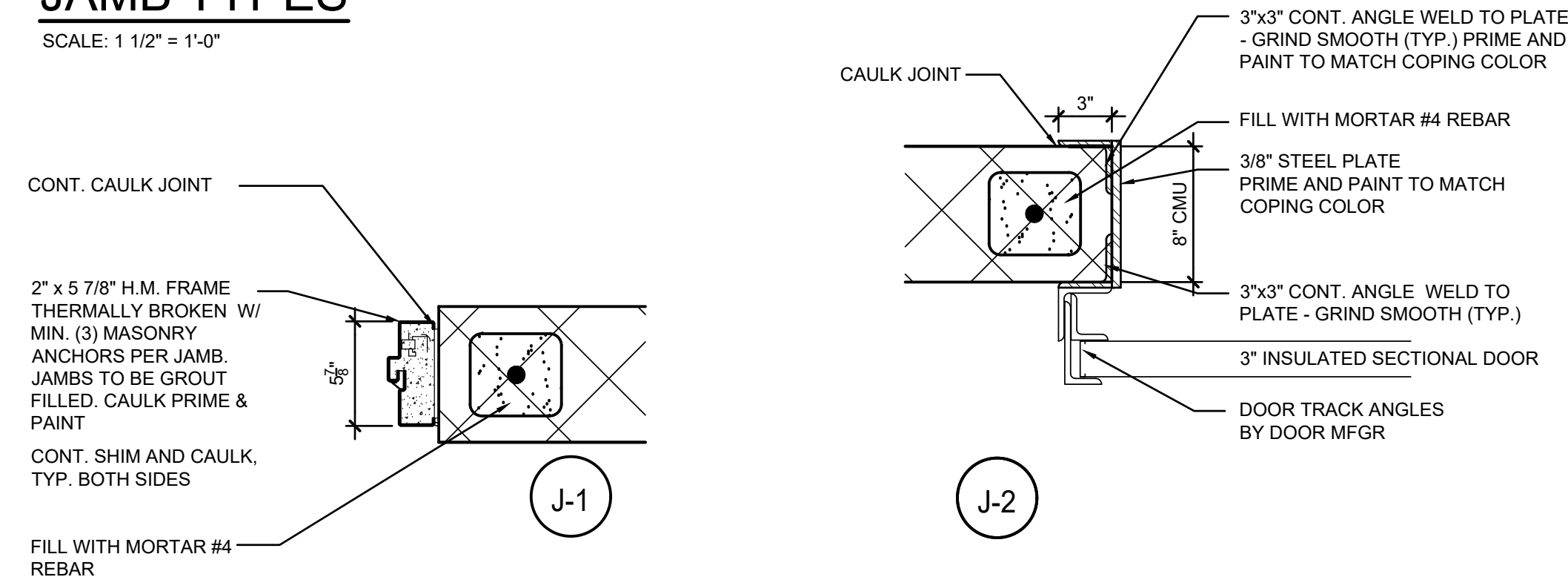
## FRAME TYPES

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



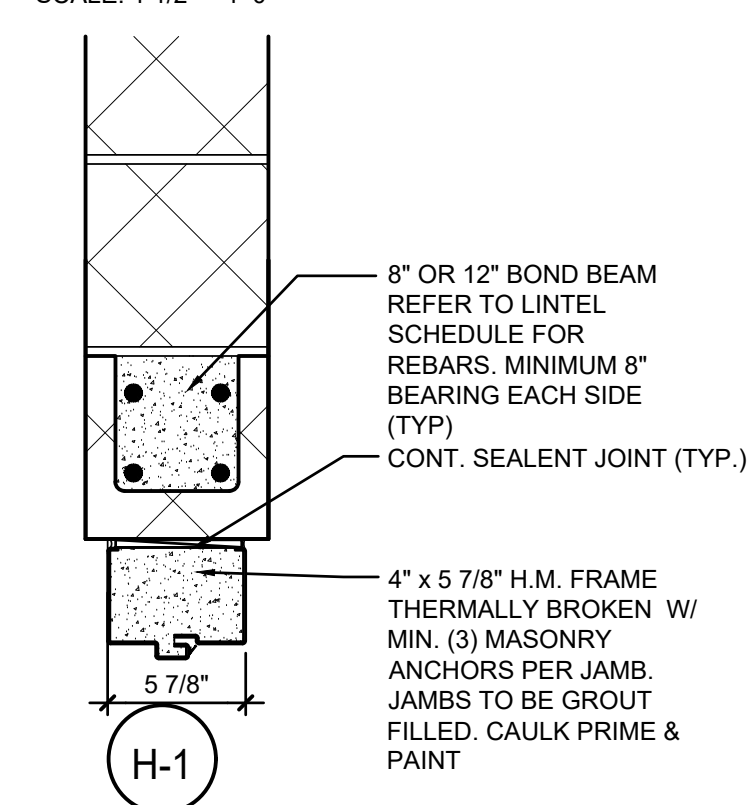
## JAMB TYPES

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



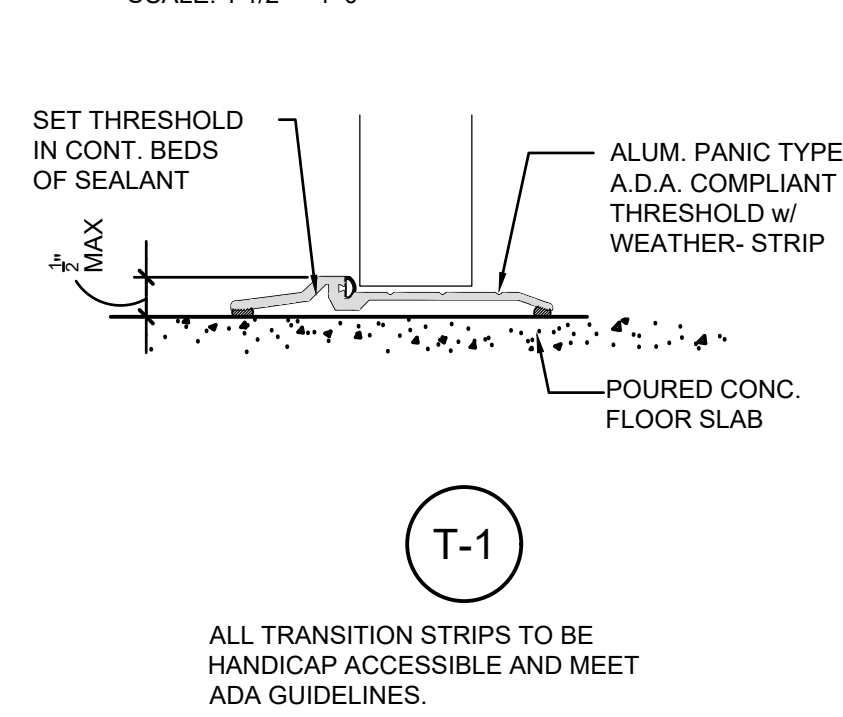
## HEAD TYPES

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



## THRESHOLD TYPES

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



# ROOM FINISH SCHEDULE

NO.	SPACE / NAME / SIGNAGE NAME	FLOOR	BASE	WALLS				CEILING		FINISH NOTES
				N	E	S	W	FIN.	HGT.	
101	SECURE VEST.									
102	LOBBY									
103	ADMIN OFFICE									
104	STORAGE CLOSET									
105	TOILET ROOM									
106	TOILET ROOM									
107	TOILET ROOM									
108	CORRIDOR									
109	LOCKER ROOM									
110	JANITOR'S CLOSET									
111	BREAK ROOM									
112	MECH/ELECT / SPRINKLER ROOM									
113	STAIR									
114	CORRIDOR									
115	T.B.D.									
116	OIL / LUBE AREA									
117	MAIN GARAGE AREA									
201	MEZZANINE									
202	COMPRESSOR ROOM									

## FINISH LEGEND:

### FLOORS:

- F-1 MODULAR CARPET  
MANUF: TBD  
STYLE: TBD  
COLOR: TBD  
SIZE: TBD  
CONTACT:
- F-2 WALK-OFF CARPET TILE  
MANUF: TBD  
STYLE: TBD  
COLOR: TBD  
SIZE: TBD  
CONTACT: TBD
- F-3 POLISHED CONCRETE  
MANUF: TBD  
STYLE: TBD  
CONTACT:
- F-2 EPOXY FLOOR  
MANUF: STONHARD  
STYLE: STONSHIELD  
COLOR: TBD  
SIZE: TBD  
CONTACT: CARL VOSE  
TEL: 508-274-5521
- B-1 RUBBER BASE  
MANUF: JONSONITE  
COLOR: TBD  
SIZE: 4 1/2" HGT.

### BASE (CONTD):

- B-2 EPOXY COVE BASE  
MANUF: STONHARD  
COLOR: TBD  
SIZE: TBD.
- WALLS:  
P-1 PAINT  
MANUF: SHERWIN WILLIAMS  
COLOR: TBD  
FINISH: EGGSHELL
- P-2 EPOXY PAINT  
MANUF: SHERWIN WILLIAMS  
COLOR: TBD  
FINISH: EGGSHELL

### DOOR FRAMES:

- FR-1 PAINT  
MANUF: SHERWIN WILLIAM  
COLOR: TBD
- MILLWORK:  
PL-1 PLASTIC LAMINATE VERTICAL  
MANUF: WILSONART  
COLOR: TBD
- PL-2 PLASTIC LAMINATE HORIZONTAL  
MANUF: WILSONART  
COLOR: TBD

### CEILING:

- C-1 ACOUSTICAL CEILING TILE  
MANUF: ARMSTRONG CEILINGS  
STYLE: FINE FISURED #705  
COLOR: WHITE  
GRID: 1/2" ANGLED TEGULAR
- C-2 PAINTED DRYWALL  
MANUF: SHERWIN WILLIAMS  
COLOR: CEILING WHITE
- C-3 PAINTED EXPOSED CEILING  
MANUF: SHERWIN WILLIAMS  
COLOR: TBD
- LOCKER RM:  
LOCKERS  
MANUF: SCRANTON PRODUCTS  
STYLE: TUFFTEC- 1 TIER  
COLOR: TBD

### WINDOW COVERINGS:

- SHADES  
MANUF: DRAPER  
STYLE: ITEM# C053.051.16  
COLOR: BLACK  
CONTACT: ZAC FARBER  
TEL # 732-539-7404



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Fax (607) 724-2466

Rev # 2020-117  
Date: 03-01-2023  
Project No.: 2020-117  
Designed by: DC/PM  
Drawn by: Cld by: JCG  
Checked by: JCG  
AS NOTED

DOOR / ROOM FINISH SCHEDULE

WINDSOR HIGHWAY DEPARTMENT  
174 CHAPEL STREET  
WINDSOR, NY 13665

TOWN OF WINDSOR HIGHWAY  
DEPARTMENT MAINTENANCE GARAGE

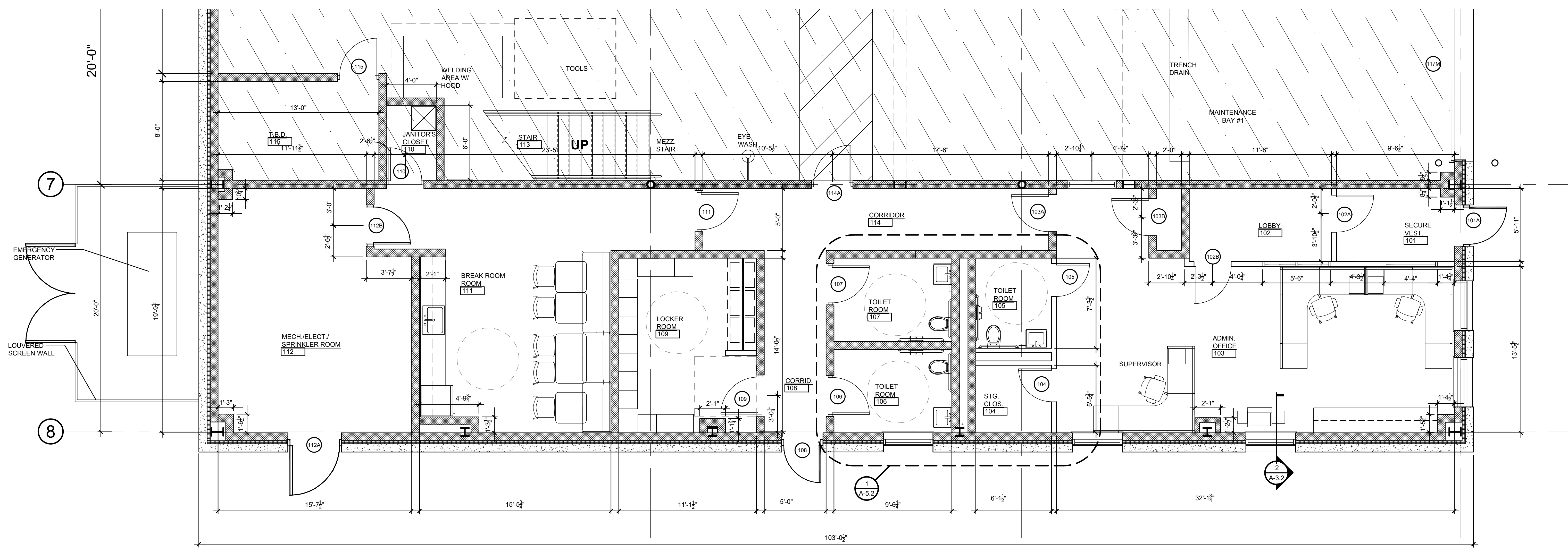
Drawing Reference Number:  
A-4.1  
OF



**GRIFFITHS ENGINEERING**  
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### SYMBOL LEGEND

- ELEVATION KEY X = ELEVATION NUMBER  
A-X = DWG. NUMBER
- SECTION KEY X = SECTION NUMBER  
A-X = DWG. NUMBER
- DOOR TAG
- ROOM NAME & NUMBER TAG
- DETAIL TAG X = DETAIL NUMBER  
A-X = DWG. NUMBER
- DIRT WALL SYSTEM TAG  
SEE SHEETS A-6, A-7, A-8,  
FOR ELEVATIONS



**1 ENLARGED OFFICE AREA**  
 SCALE: 1/4"=1'-0"

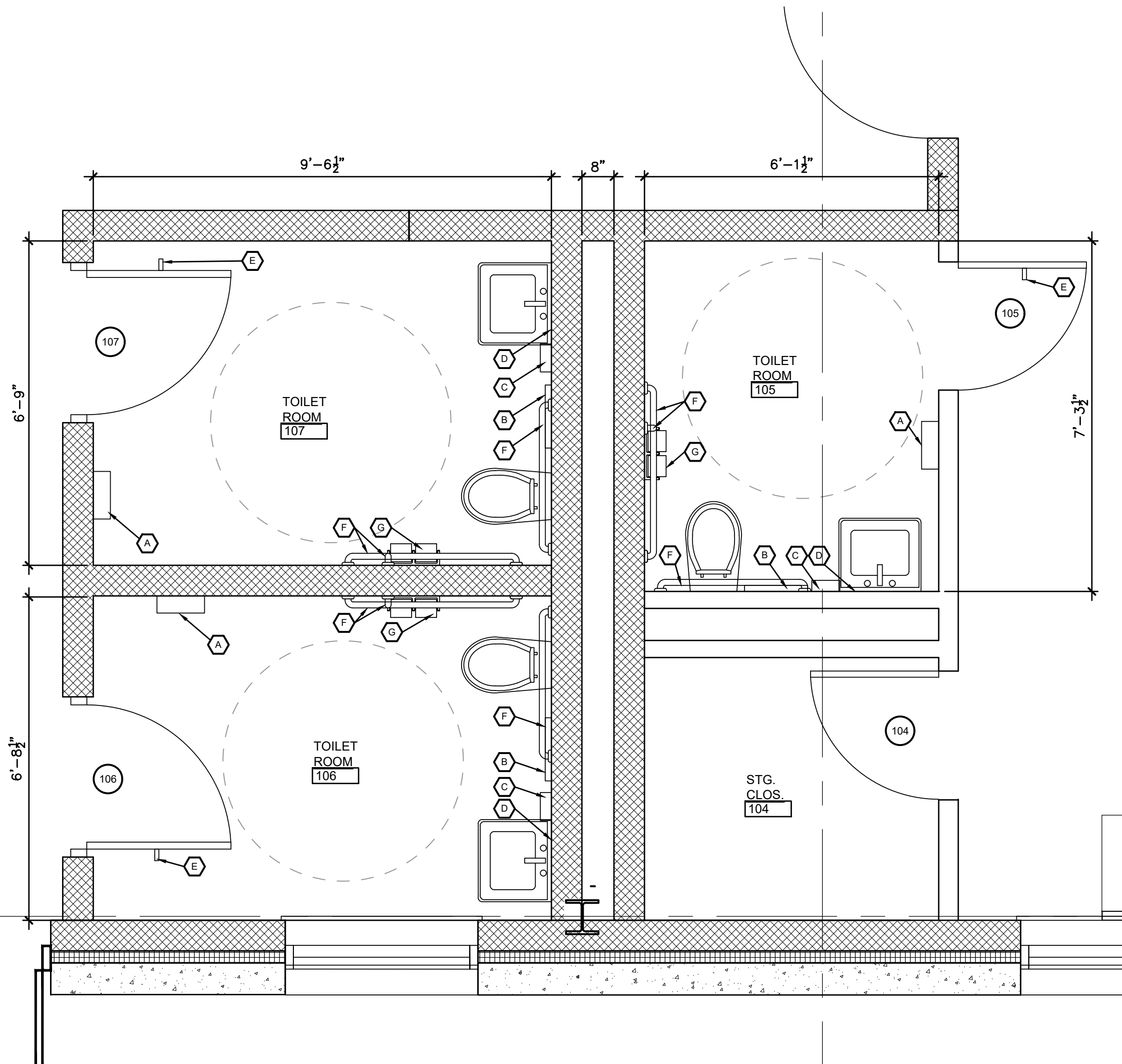
Designed by: DC/PM	Date: 03-01-2023	Rev.#
Drawn by: Cld by/DC	Project No.: 2020-117	
<small>MANUFACTURER'S MATERIALS TO BE USED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND THE SPECIFICATIONS.</small>		Plot Scale: AS NOTED

Drawing Name:  
**ENLARGED FLOOR PLANS**

Project Location: WINDSOR HIGHWAY DEPARTMENT  
 174 CHAPEL STREET  
 WINDSOR, NY 13665

Project Name: TOWN OF WINDSOR HIGHWAY DEPARTMENT MAINTENANCE GARAGE

Drawing Reference Number:  
**A-5.1**  
 OF



1 ENLARGED OFFICE AREA  
A-5.2 SCALE: 1/2"=1'-0"

TAG	DESCRIPTION	MANUF. / MODEL NO.	REMARKS
A	PAPER TOWEL DISPENSER (SURFACE MOUNTED)	CONTRACTOR SUPPLIED / CONTRACTOR INSTALLED	MOUNT 40" A.F.F. MAX
B	TOILET SEAT COVER HOLDER	CONTRACTOR SUPPLIED / CONTRACTOR INSTALLED	MOUNT BELOW GRAB BAR
C	SOAP DISPENSER	CONTRACTOR SUPPLIED / CONTRACTOR INSTALLED	MOUNT 42" A.F.F. TO USABLE LEVERS (WHITE) (1000 ML)
D	MIRROR 18x36	CONTRACTOR SUPPLIED / CONTRACTOR INSTALLED	MOUNT 40" A.F.F. MAX TO BOTTOM OF MIRROR
E	COAT AND BUMPER HOOK	CONTRACTOR SUPPLIED / CONTRACTOR INSTALLED	MOUNT 48" A.F.F. TO CENTERLINE
F	18" 36", 42" GRAB BARS (PEENED)	CONTRACTOR SUPPLIED / CONTRACTOR INSTALLED	REFER TO TOILET ROOM ELEVATIONS
G	TOILET PAPER DISPENSER	CONTRACTOR SUPPLIED / CONTRACTOR INSTALLED	MOUNT 28" A.F.F. TO CENTERLINE (WHITE)

**TOILET ACCESSORY SCHEDULE NOTES :**

- PROVIDE REQUIRED WOOD OR STEEL BLOCKING FOR ALL ACCESSORIES SUPPLIED BY THE CONTRACTOR & OWNER. REINFORCING IN WALLS FOR GRAB BARS SHALL BE CAPABLE SUPPORTING AT LEAST A 250 lb. POINT LOAD, THE SHEAR AND TENSILE STRESSES SHALL ALSO MEET THE 250 lb. POINT LOAD REQUIREMENT.
- ALL ACCESSORIES TO BE INSTALLED PER CURRENT A.D.A. & ANSI REQUIREMENTS.
- "H" INDICATES HANDICAP ACCESSIBLE FIXTURES
- ALL GYPSUM BOARD IN TOILET ROOMS IS TO BE MOISTURE RESISTANT.
- HANDICAP FIXTURE MOUNTING HEIGHTS:  
WATER CLOSET- 18" MAX. A.F.F. TO TOP OF SEAT  
LAVATORY- 27" MIN. KNEE CLEARANCE  
34" MAX TO TOP OF RIM  
29" MIN. TO BOTTOM OF RIM
- PLUMBING CONTRACTOR TO PROVIDE AND GENERAL CONTRACTOR TO INSTALL ACCESS PANELS AT ALL SHOCK ARRESTOR LOCATIONS. COORDINATE WITH PLUMBING.
- INSTALL INSULATION ON PLUMBING PIPING UNDER LAV'S AS REQUIRED BY A.D.A. & ANSI

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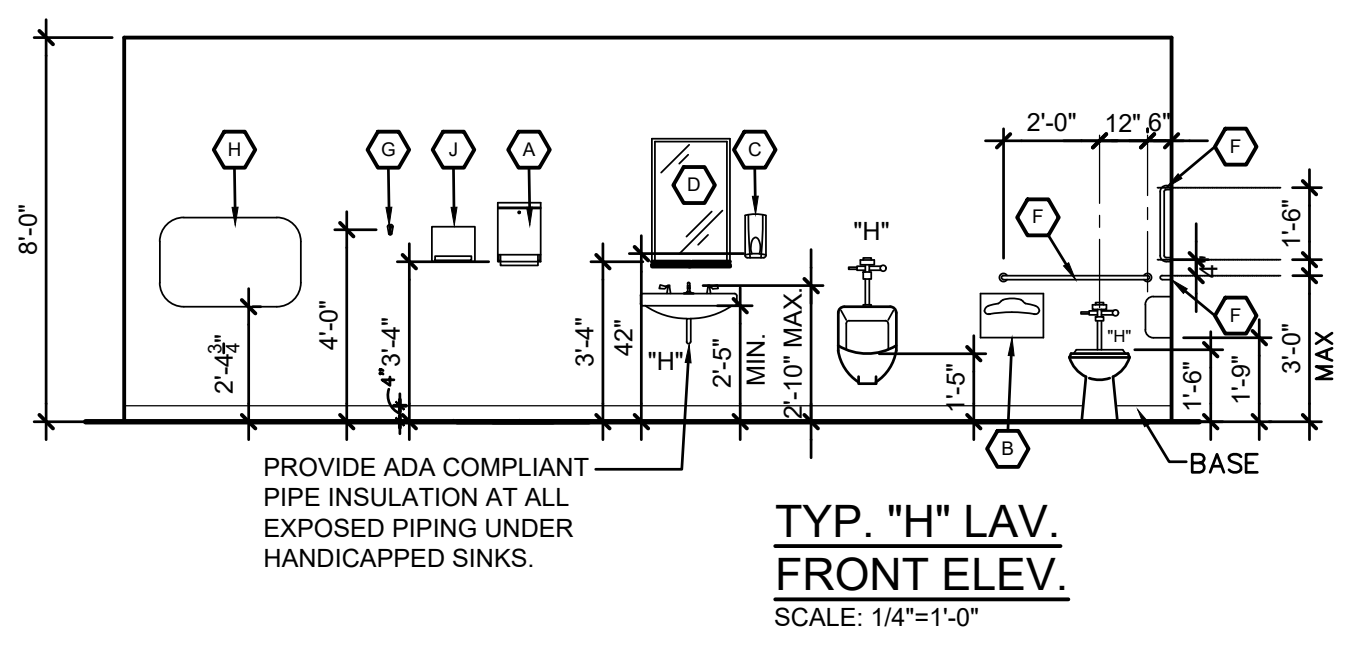
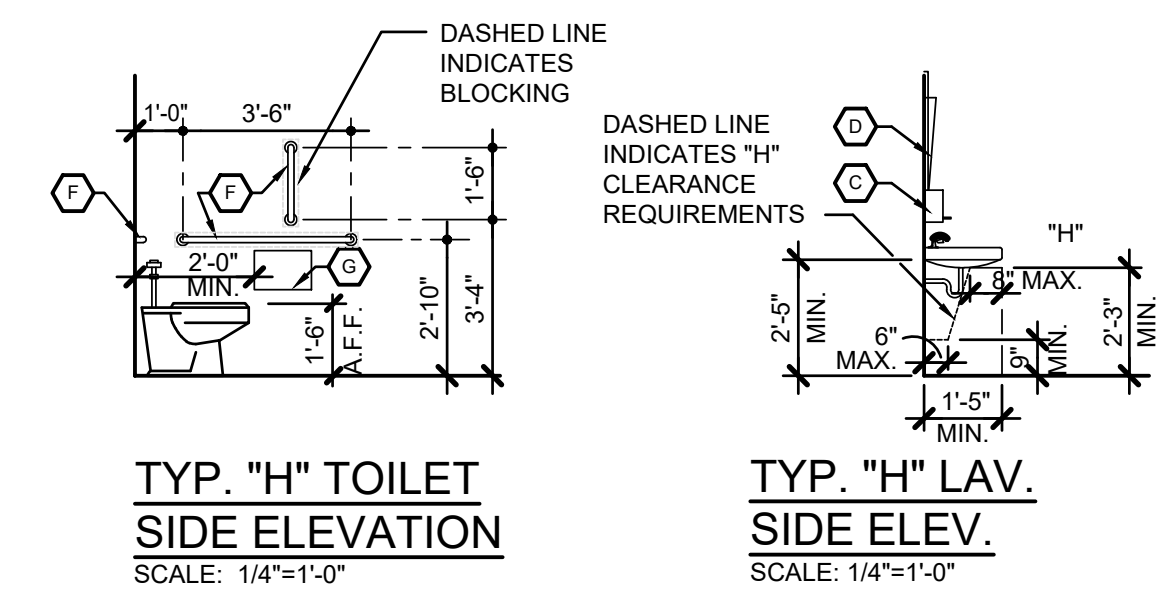
Seal

Designed by: DC/PM	Date: 03-01-2023	Rev.#
Drawn by: Cld by JCG	Project No.: 2020-117	
<small>UNLESS OTHERWISE NOTED BY THE DRAWING, ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE.</small>		Plot Scale: AS NOTED

Drawing Name:  
**ENLARGED TOILET ROOM PLANS**

Project Location:  
WINDSOR HIGHWAY DEPARTMENT  
174 CHAPEL STREET  
WINDSOR, NY 13665

Project Name:  
TOWN OF WINDSOR HIGHWAY DEPARTMENT MAINTENANCE GARAGE



**NOTE:**  
ELEVATIONS ARE TO SHOW MOUNTING HEIGHTS OF TOILET FIXTURES ONLY. FOR LOCATIONS OF ACCESSORIES SEE ENLARGED PLANS THIS SHEET

PROVIDE WOOD BLOCKING FOR ALL TOILET ACCESSORIES MOUNTED IN GYP. BD. PARTITIONS. MAINTAIN INTEGRITY OF FIRE RATING WHERE ACCESSORIES ARE IN RATED WALLS

COORDINATE SIZE AND LOCATION OF SOAP AND PAPER TOWEL DISPENSERS WITH OWNER PRIOR TO INSTALLATION

FLUSH HARDWARE SHALL BE ON OPEN SIDE OF TOILET TO ALLOW UNIMPENDED OPERATION. FLUSH HARDWARE SHALL NOT BE ADJACENT TO A SIDE WALL.

## GENERAL NOTES:

- BEFORE SUBMITTING HIS BID, THE CONTRACTOR SHALL VISIT THE JOB SITE TO EXAMINE AND FULLY ACQUAINT HIMSELF WITH THE EXISTING CONDITIONS RELATING TO THE SERVICES, SYSTEMS, SITE AND BUILDING; PAYING PARTICULAR ATTENTION TO THE LOCATION OF EXISTING STRUCTURE WATER MAINS, TRANSFORMERS, ETC.
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPORTS, HANGERS, DUCTWORK, PIPING, WIRING, PANELS, ETC. AS REQUIRED BY TRADE, AND SHALL PERFORM DEMOLITION AND MODIFICATION WORK, AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM WITHOUT ADDITIONAL COST TO THE OWNER.
- REQUIREMENTS OF THE ARCHITECTURAL "GENERAL CONDITIONS" SHALL APPLY TO ALL WORK UNDER THESE TRADES.
- CONTRACTOR SHALL ARRANGE AND PAY FOR ALL PERMITS, CERTIFICATES, INSPECTIONS, ETC. AND PAY FOR ALL FEES LEVIED BY STATE, LOCAL, AND MUNICIPAL AUTHORITIES HAVING JURISDICTION OVER WORK DONE UNDER THIS CONTRACT.
- WORK SHALL BE DONE IN COMPLIANCE WITH ALL APPLICABLE LAWS, ORDINANCES, CODES, ETC. OF ANY GOVERNING BODY HAVING JURISDICTION. ALL APPLICABLE ITEMS SHALL BEAR THE UNDERWRITERS LABORATORIES (UL) LABEL AND SHALL BE FACTORY MUTUAL APPROVED. ALL EQUIPMENT SHALL BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
- WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER, LEFT CLEAN AND FREE FROM DEFECTS, AND COMPLETELY OPERABLE. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AS SCHEDULED ON THE DRAWINGS. ALL MATERIAL SHALL BE NEW AND ALL WORK AND MATERIALS SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER. EXTENDED WARRANTIES FOR SPECIAL EQUIPMENT SHALL BE AS DESCRIBED WITHIN.
- WORK SHALL BE CAREFULLY COORDINATED WITH ALL TRADES INVOLVED, AND THE CONTRACTOR SHALL PROVIDE PROPER CONNECTIONS, FITTINGS, VALVES, PIPING, ETC. FOR ALL EQUIPMENT FURNISHED BY THE OWNER OR THE TRADES INVOLVED IN THIS CONTRACT.
- DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE THE ACTUAL LOCATION OR ROUTING OF EQUIPMENT, PIPING, OR DUCTWORK. DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS CONDITIONS ALLOW TO COMPLETE THE INTENT OF THE CONTRACT. CONTRACTOR SHALL MAKE ANY NECESSARY MINOR OFFSETS, ADJUSTMENTS, ELBOWS OR TRANSITION AS MAY BE NECESSARY DUE TO FIELD CONDITIONS. THE RIGHT IS RESERVED BY THE ENGINEER TO MAKE MINOR CHANGES IN LOCATIONS AND ARRANGEMENTS WHEN REQUIRED BY JOB DEVELOPMENT WITHOUT ADDITIONAL COMPENSATION TO THE CONTRACTOR.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL MANUFACTURED ITEMS REQUIRED ON THIS PROJECT. A MINIMUM OF 8 COPIES SHALL BE SUBMITTED. SHEET METAL SHOP DRAWINGS SHALL BE SUBMITTED AT A MINIMUM 1/4" SCALE. SHEET METAL SHOP DRAWINGS SHALL INCLUDE ONE TRANSPARENT COPY AND TWO PRINTS. THE ENGINEER'S APPROVAL OF SHOP OR SETTING DRAWINGS SHALL ONLY BE CONSTRUED TO APPLY TO GENERAL LAYOUT AND CONFORMANCE TO THE DESIGN CONCEPT OF THE PROJECT AND FOR COMPLIANCE WITH THE GENERAL REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE RESPONSIBILITY OF ANY DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS MUST REMAIN THE CONTRACTOR'S UNLESS HE HAS, IN WRITING, SPECIFICALLY CALLED TO THE ENGINEER'S ATTENTION SUCH DEVIATIONS AT THE TIME OF SUBMISSION AND HAS RECEIVED THE ENGINEER'S WRITTEN APPROVAL OF SUCH DEVIATIONS.
- PROVIDE REQUIRED TEMPORARY UTILITIES AND PAY ASSOCIATED FEES AND OPERATING COSTS.
- HVAC, ELECTRICAL, AND PLUMBING CONTRACTORS SHALL PERFORM ALL CUTTING AND PATCHING AS REQUIRED FOR THEIR RESPECTIVE WORK, EXCEPT THAT STRUCTURALLY FRAMED OPENINGS SHALL BE CUT & FRAMED BY GENERAL CONTRACTOR. ALL HOLES IN MASONRY FLOORS, AND WALLS SHALL BE CORE DRILLED. EDGES OF TRENCHES IN CONCRETE FLOORS SHALL BE SAW CUT. MAINTAIN FIRE RATING OF FLOORS AND WALLS.
- THE CONTRACTOR SHALL PREPARE A COMPLETE SET OF RECORD "AS-BUILT" DRAWINGS PRIOR TO FINAL PAYMENT. FINAL PAYMENT SHALL NOT BE MADE UNTIL THE RECORD DRAWINGS ARE DEEMED COMPLETE BY THE ENGINEER. THE DRAWINGS SHALL BE DRAFTED BY A PROFESSIONAL DRAFTSMAN ON COPIES OF THESE CONTRACT DOCUMENTS. THE DRAWINGS SHALL INCLUDE EXACT FIELD ROUTING OF ALL WIRING, PIPING, DUCTWORK, ETC.
- MANUFACTURER NAMES GIVEN FOR EQUIPMENT ARE USED AS BASIS FOR SELECTION AND TO ESTABLISH A LEVEL OF QUALITY, NOT WITH INTENT TO LIMIT COMPETITION. EQUIVALENT EQUIPMENT OF OTHER MANUFACTURERS WILL BE CONSIDERED FOR ACCEPTANCE AND INSTALLATION.
- LOCATE AND IDENTIFY ALL CONCEALED BUILDING SYSTEMS PRIOR TO EXECUTION OF THIS WORK INCLUDING CUTTING, EXCAVATING, OR REMOVING ANY PART OF THE BUILDING CONSTRUCTION OF SYSTEM COMPONENTS. CAREFULLY PERFORM ALL WORK TO PREVENT DAMAGE TO THE CONCEALED SYSTEMS OR STRUCTURE. ANY SUCH DAMAGE, BUILDING SYSTEM OUTAGES OR INJURIES RESULTING FROM PERFORMANCE OF THE WORK OF THIS CONTRACT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- MAINTAIN PROPER CLEARANCES AROUND HEAT GENERATING EQUIPMENT AND EQUIPMENT REQUIRING ACCESS MANDATED BY CODE OR FOR MAINTENANCE AND SAFETY.
- WORK SHALL BE PERFORMED BY EXPERIENCED MECHANICS, SPECIALIZING IN THEIR PARTICULAR TRADE, USING PROPER TOOLS AND TECHNIQUES. ALL WORK SHALL BE OF THE HIGHEST QUALITY, CONSISTENT WITH BEST INDUSTRY STANDARDS. WORK JUDGED TO BE SUB-STANDARD SHALL BE REMOVED AND REMADE AT CONTRACTOR'S EXPENSE.

## HVAC NOTES:

- GENERAL:
 

HEATING, VENTILATING AND AIR CONDITIONING SPECIFICATIONS:

  - MECHANICAL CONTRACTOR SHALL FURNISH LABOR, MATERIALS, TOOLS, TRANSPORTATION EQUIPMENT, SERVICES AND FACILITIES REQUIRED FOR THE COMPLETE, PROPER AND SUBSTANTIAL INSTALLATION OF ALL MECHANICAL WORK. ALL FIXTURES, DEVICES, AND EQUIPMENT SHOWN, NOTED, OR REQUIRED ON THE DRAWINGS, AND/OR CONTAINED HEREIN SHALL BE FURNISHED, INSTALLED, TESTED, AND MADE READY FOR SATISFACTORY OPERATION.
  - MECHANICAL CONTRACTOR IS TO COORDINATE WITH OTHER TRADES AND OWNER FOR EQUIPMENT LOCATIONS AND CLEARANCES REQUIRED FOR EQUIPMENT. CONTRACTOR TO COORDINATE AND MODIFY LAYOUT ACCORDINGLY.
  - CONTROL WIRING IS TO BE DONE BY THE MECHANICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL PROVIDE STARTERS, ETC. FOR ALL EQUIPMENT HE FURNISHES, UNLESS SPECIFICALLY INDICATED ON THE ELECTRICAL DRAWINGS.
- SUBMITTALS:
  - SUBMIT CONTROL WIRING DIAGRAMS FOR ALL EQUIPMENT INCLUDING INTERLOCKS WITH OTHER DEVICES AS DESCRIBED IN CONTROL SEQUENCES OR AS OTHERWISE INDICATED.
  - SUBMIT DRAWINGS OF ALL SLAB PENETRATIONS FOR ARCHITECT/ENGINEER REVIEW AND APPROVAL PRIOR TO PROCEEDING WITH THE PENETRATION INSTALLATION.
  - SUBMIT A LIST OF ANY PRODUCT SUBSTITUTIONS, SUBSTITUTED EQUIPMENT DATA, AND THE ASSOCIATED COST SAVINGS AT THE TIME OF BID SUBMISSION. SUBSTITUTIONS AFTER THE CONTRACT IS AWARDED WILL NOT BE ACCEPTED.
  - A MINIMUM OF TWO WEEKS TIME WILL BE REQUIRED FOR A REVIEW OF EACH SUBMITTAL BY THE ARCHITECT AND ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR ALLOCATING SUFFICIENT TIME IN THE CONSTRUCTION SCHEDULE TO OBTAIN FINAL APPROVAL OF SUBMITTALS, INCLUDING TIME FOR SUBSEQUENT REVIEWS OF SUBMITTALS NOT INITIALLY APPROVED. ANY CLAIMS FOR DELAYS RELATED TO SUBMITTAL REVIEW WILL NOT BE ACCEPTED.
- FLEXIBLE DUCT:
 

FLEXIBLE DUCT SHALL BE TYPE WICK BY WIREMOLD COMPANY, OR EQUAL, WITH FIRE RETARDANT FIBERGLASS INSULATION BLANKET, AND ALUMINIZED REINFORCED VAPOR BARRIER. FLEXIBLE DUCT SHALL CONFORM TO NFPA 90A & 90B AND UL STANDARD 723 FOR CLASS 1 AIR DUCT.

FLEXIBLE DUCT SHALL BE INSTALLED & SUPPORTED IN ACCORDANCE WITH LATEST SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

FLEXIBLE DUCT SHALL BE SUPPORTED AT INTERVALS NO GREATER THAN FOUR FEET. HANGER OR SADDLE MATERIAL IN CONTACT WITH THE FLEXIBLE DUCT SHALL BE A MINIMUM OF ONE INCH WIDE.

FLEXIBLE DUCT SHALL ONLY BE USED AS A BRANCH TAKE-OFF FROM MAIN TRUNK DUCT TO A SINGLE DIFFUSER. MAXIMUM LENGTH OF RUN SHALL BE 8 LINEAR FEET. VOLUME DAMPERS SHALL BE INSTALLED AT ALL BRANCH TAKE-OFFS FROM TRUNK DUCT.
- DUCTWORK:
 

ALL DUCTWORK SHALL BE GALVANIZED SHEET METAL UNLESS OTHERWISE NOTED. ALL DUCTWORK SHALL BE IN ACCORDANCE WITH THE LATEST PUBLICATION OF THE ASHRAE GUIDE, SMACNA AND PRESSURE CLASSES SPECIFIED BELOW.

DUCTWORK	PRESSURE CLASS ("W.G.") /SEAL CLASS
CONSTANT VOLUME SYSTEM	2.0/A
SUPPLY AIR DUCT	2.0/A
RETURN AIR / EXHAUST AIR	2.0/A

PROVIDE FLEXIBLE CONNECTIONS BETWEEN DUCTS AND FANS AND ALSO IN DUCTS CROSSING BUILDING EXPANSION JOINTS. FLEXIBLE CONNECTIONS SHALL BE OF 30 OZ. GLASS FABRIC VENTIFABRICS, INC. "VENTGLASS" OR APPROVED EQUAL.

PROVIDE VOLUME DAMPERS AT BRANCH DUCTWORK CONNECTIONS TO MAIN TRUNK DUCT AND DIFFUSER RUN OUTS.

SEAL AND/OR REPAIR ANY DUCTWORK WITH VISUAL OR AUDIBLE SIGNS OF AIR LEAKAGE.

DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. SOUND LINE ALL SUPPLY AND RETURN DUCTWORK WITH 1" 2-POUND DENSITY ACOUSTICAL DUCT LINER AS INDICATED ON DRAWINGS. CONSTRUCT DUCTWORK WITH 16 GAUGE GALVANIZED SHEET METAL WHERE SOUND LINING IS INDICATED ON UNITS DELIVERING MORE THAN 2000 CFM UNLESS OTHERWISE NOTED.

INSTALL DUCTWORK TIGHT TO THE UNDERSIDE OF THE BUILDING STRUCTURE. ADJUST THE DUCT ELEVATIONS AS REQUIRED TO MAINTAIN DUCT TIGHT TO BOTTOM OF STRUCTURE WHERE STRUCTURE ELEVATIONS CHANGE.

PROVIDE ALL NECESSARY TRANSITIONS IN DUCTWORK FOR CONNECTION TO EQUIPMENT AND ACCESSORIES. REDUCE DUCTWORK SIZES AS NEEDED AT THE POINT OF CONNECTION TO THE EQUIPMENT.

SUSPEND DUCTWORK FROM BUILDING STRUCTURE IN ACCORDANCE WITH THE SMACNA DUCT CONSTRUCTION STANDARDS. SECURELY ATTACH DUCTWORK SUPPORTS TO THE BUILDING STRUCTURE.

COORDINATE INSTALLATION OF DUCTWORK WITH BUILDING STRUCTURE AND WORK OF OTHER CONTRACTORS. ADJUST DUCTWORK SIZES, LOCATION AND CONFIGURATION, AS REQUIRED TO COORDINATE WITH WORK OF THIS AND OTHER TRADES. WHERE NECESSARY TO AVOID OBSTRUCTIONS, RE-SIZE, OFFSET, RAISE OR LOWER DUCTWORK. DO NOT EXCEED DESIGN VELOCITIES IN ANY DUCT SECTIONS REQUIRING SIZING REVISIONS. INDICATE COORDINATION ISSUES ON SHOP DRAWINGS.

PROVIDE TURNING VANES IN ALL 90 DEG. RECTANGULAR ELBOWS AND SPLITTER VANES IN ALL 90 DEG. RECTANGULAR RADIUS ELBOWS (UNLESS OTHERWISE NOTED).

ELBOWS CONSTRUCTED USING A SHARP 90 DEG. ANGLE ON INSIDE OF ELBOW AND A RADIUS BEND ON OUTSIDE OF ELBOW ("SLID-BOOT FITTING") WILL NOT BE ACCEPTED.

PROVIDE 1/2" WIRE MESH SCREENS ON OPEN END DUCTS.
- INSULATION:
  - GENERAL
 

INSULATION SHALL BE FIBER GLASS. ALL MATERIAL SHALL BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. EXTERNAL INSULATION SHALL BE APPLIED AFTER REQUIRED TESTS AND APPROVALS HAVE BEEN COMPLETED.
  - SURFACE BURNING CHARACTERISTICS:
 

ALL INSULATION AND ACOUSTICAL LINING SHALL HAVE SURFACE BURNING CHARACTERISTIC RATINGS AS TESTED BY ASTM E-84. UL 723, NFPA 255 NOT EXCEEDING.

FLAME SPREAD: 25  
SMOKE DEVELOPED: 50

COMPOSITE RATING SHALL INCLUDE INSULATION, JACKETING AND ADHESIVE USED TO SECURE JACKETING OR FACING. ALL ACCESSORY ITEMS SUCH AS JACKETING AND FITTINGS, ADHESIVE, MASTIC, CEMENT, TAPE AND CLOTH SHALL HAVE THE SAME RATING AS SPECIFIED ABOVE.
  - SUPPLY, RETURN AND OUTSIDE AIR DUCTWORK SHALL BE EXTERNALLY INSULATED. (AFTER 10'-0" FROM UNITS OR AS NEEDED)
    - APPLY 2" THICK DUCT WRAP .75 LB./CU.FT. WITH PSK. FACING SHALL HAVE A MAXIMUM VAPOR TRANSMISSION RATE OF .04 PERMS.
    - FOR RECTANGULAR DUCTS OVER 18" WIDE, DUCT WRAP SHALL BE ADDITIONALLY SECURED TO THE BOTTOM OF THE DUCTWORK WITH MECHANICAL FASTENERS AND WASHERS ON 18" CENTERS TO REDUCE SAGGING.
  - DUCT THERMAL/ACOUSTIC LINING. (UP TO 10'-0" FROM UNIT OR AS NEEDED/SPECIFIED)
    - MATERIAL SHALL BE A FLEXIBLE MAT-FACED INSULATION MADE FROM INORGANIC GLASS FIBERS BONDED BY A THERMOSETTING RESIN. SOUND ABSORPTION COEFFICIENT OF 0.65 ON THE 1/3 OCTAVE BAND CENTER FREQUENCY OF 500 CYCLES/SECOND, DETERMINED ON F-25 MOUNTING IN ACCORDANCE TO ASTM C-423-81g TEST PROCEDURES.
    - THICKNESS: PROVIDE MINIMUM 1" THICK x 2.0 LB./CU.FT., THERMAL CONDUCTANCE, C = 0.25 AT 75 DEG. F MEAN TEMPERATURE, ACOUSTIC LINING. DUCT SIZES GIVEN ARE THE CLEAR INTERNAL DIMENSIONS AND DO NOT ALLOW FOR DUCT LINING. ACTUAL DUCT SIZES SHALL BE INCREASED IN BOTH DIMENSIONS TO ACCOMMODATE LINING.
    - EXTERNAL DUCTWRAP NOT REQUIRED FOR DUCTS WHICH ARE INTERNALLY LINED.
    - PROVIDE METAL NOSING TO LEADING EDGE OF DUCT LINER.
    - PROVIDE MINIMUM 95% ADHESIVE COVERAGE FOR LINER ALL DUCTS WHICH EXCEED 15" IN ANY DIMENSION, SHALL HAVE MECHANICAL FASTENERS IN ADDITION TO CHEMICAL ADHESIVE.
  - PIPE INSULATION:
 

INSULATE PIPE WITH PRE-FORMED FIBERGLASS PIPE INSULATION WITH FACTORY APPLIED ALL SERVICE JACKET (ASJ) WITH CONDUCTIVITY OF 0.25 @ 75 DEG. F. MEAN TEMPERATURE. THE MINIMUM INSULATION THICKNESS FOR VARIOUS ITEMS SHALL BE:

    - CONDENSATE DRAIN PIPING: 1" THICK
    - REFRIGERANT LIQUID PIPING: 1" THICK

PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH HANGERS. PROVIDE GALVANIZED STEEL SHIELD AT POINT OF SUPPORT.
- PIPEWORK:
  - AIR CONDITIONING CONDENSATE DRAIN PIPING AND FITTINGS SHALL BE SCHEDULE 40 PVC. MINIMUM PITCH 1" IN 8 FT. LINES SHALL BE SUPPORTED MINIMUM 3 FT. ON CENTER WITHOUT "SAG".
  - REFRIGERANT LIQUID PIPING SHALL BE TYPE "L" HARD DRAWN "ACR" TYPE COPPER.
- CLEANING AIR SYSTEMS
 

ALL DUCT OPENINGS SHALL BE COVERED TEMPORARILY DURING CONSTRUCTION. BEFORE FINAL ADJUSTMENT AND BALANCING, CHEESE CLOTH SHALL BE PLACED OVER EACH DUCT OPENING FOR ENTRAINING PARTICLES DURING THE CLEANING OPERATION. OPERATE ALL SYSTEMS FOR A MINIMUM OF FOUR (4) HOURS. AFTER THIS PERIOD, REMOVE ALL FILTERS, CLEAN ALL SUPPLY DUCTS, GRILLES, AND REGISTERS, IN ALL UNITS, USING A VACUUM CLEANER AND BRUSH. REPLACE FILTERS.
- AUTOMATIC TEMPERATURE CONTROLS:
 

HVAC UNITS SHALL BE CONTROLLED BY ITS PROGRAMMABLE THERMOSTATS, AND CONTROLLERS CAPABLE OF PROVIDING ALL ITEMS OF "SEQUENCE OF OPERATIONS"
- HANGERS AND SUPPORTS:
  - PROVIDE HANGERS AND SUPPORTS AND STEEL FRAMEWORK REQUIRED FOR THE SUPPORT OF VARIOUS SYSTEMS. PIPING SHALL BE SUPPORTED FROM BUILDING STRUCTURE BY MEANS OF APPROVED HANGERS.
  - HANG HORIZONTAL PIPING WITH ADJUSTABLE WROUGHT IRON OR MALLEABLE IRON HANGERS, SPACED AS RECOMMENDED BY ASHRAE. BANDS OR RINGS SUPPORTING COPPER TUBING SHALL BE HEAVILY PLATED COPPER, OR INSULATED STEEL.
- VIBRATION ISOLATION:
 

INSTALL MOTOR DRIVEN EQUIPMENT WITH VIBRATION ISOLATORS. ISOLATORS, UNLESS OTHERWISE NOTED, SUSPENDED EQUIPMENT SHALL HAVE SPRING ISOLATOR HANGERS AND BASE MOUNTED EQUIPMENT SHALL HAVE DOUBLE DEFLECTION ISOLATORS. PIPING CONNECTED TO VIBRATING EQUIPMENT SHALL BE ISOLATED BY RESILIENT HANGERS OR FLEXIBLE CONNECTORS.
- BALANCING THE AIR SYSTEM:
 

OPERATE SYSTEMS AS LONG AS NECESSARY TO TEST AIR AT CONNECTIONS TO EQUIPMENT. ADJUST DAMPERS, FANS & SHEAVES UNTIL EVEN DISTRIBUTION AND REQUIRED DELIVERY OF AIR IS OBTAINED THROUGHOUT. SUBMIT FOR APPROVED, FOUR (4) TEST REPORTS SHOWING PERTINENT OPERATING DATA SUCH AS CFM, FPM AT EACH OUTLET. FAN RPM, MOTOR CURRENT, ETC., SHALL BE SUBMITTED FOR PERMANENT RECORD. MAKE NECESSARY SETTINGS AND ADJUSTMENTS OF TEMPERATURE REGULATING EQUIPMENT. TEST REPORTS SHALL BE CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER WHO SHALL BE A MEMBER OF THE BALANCING FIRM.

## SEQUENCE OF OPERATION:

- SPLIT SYSTEMS (AHU-1 & HP-1):
  - SPLIT SYSTEM SHALL BE CONTROLLED BY WALL MOUNTED PROGRAMMABLE THERMOSTAT.
    - WHEN INDEXED TO OCCUPIED MODE:
      - OUTSIDE AIR INTAKE DAMPER (MOTORIZED) SHALL OPEN AND SUPPLY FAN SHALL RUN CONTINUOUSLY.
      - WHEN ROOM TEMPERATURE RISES ABOVE COOLING SETPOINT (75°F, ADJ.), COMPRESSOR IN THE HEAT PUMP SHALL ENERGIZE AND RUN UNTIL THE SETPOINT IS SATISFIED.
      - WHEN ROOM TEMPERATURE FALLS BELOW HEATING SETPOINT (72°F, ADJ.), HEAT PUMP SHALL RUN IN REVERSE CYCLE UNTIL SETPOINT IS SATISFIED. WHEN TEMPERATURE CONTINUES TO DROP, THE HEATER SHALL ENERGIZE TO SATISFY THE SETPOINT.
    - WHEN INDEXED TO UNOCCUPIED MODE:
      - OUTSIDE AIR INTAKE DAMPER (MOTORIZED) SHALL GO TO FULL CLOSED POSITION AND SUPPLY FAN SHALL DE-ENERGIZE.
      - WHEN ROOM TEMPERATURE FALLS BELOW NIGHT SETBACK TEMPERATURE (55°F, ADJ.), SUPPLY FAN SHALL ENERGIZE, HEAT PUMP SHALL RUN IN REVERSE CYCLE UNTIL NIGHT SETBACK TEMPERATURE IS SATISFIED. IF THE TEMPERATURE CONTINUES TO DROP, THE HEATER SHALL ENERGIZE TO SATISFY THE SETPOINT. OUTSIDE AIR INTAKE DAMPER SHALL REMAIN CLOSED.
  - ECONOMIZER MODE:
 

ECONOMIZER CYCLE SHALL BE ACTIVATED WHEN OUTDOOR AIR ENTHALPY CONDITIONS ARE LOWER THAN RETURN AIR CONDITIONS. AIR HANDLING UNIT SHALL BE ABLE TO MODULATE PROPORTIONAL, OUTSIDE AIR AND RETURN AIR MOTORIZED DAMPERS TO MAINTAIN 55°F SUPPLY AIR DISCHARGE TEMPERATURE. RELIEF AIR DAMPER ON EACH SYSTEM SHALL MODULATE OPEN AND THE EXHAUST AIR FAN SHALL COME ON TO MAINTAIN 0.08 INCH WG INDOOR DIFFERENTIAL STATIC PRESSURE SENSOR SET POINT CONDITIONS.
  - MORNING WARM UP MODE:
 

PROGRAMMABLE TIME COCK SHALL INITIATE WARMUP CYCLE 1 HOUR PRIOR TO OCCUPIED MODE. THE AIR HANDLING UNIT AND HEAT PUMP SHALL ENERGIZE, SUPPLY FAN TO RUN CONTINUOUSLY, AND SHALL ENERGIZE THE HEATER IF REQUIRED IN ORDER TO MAINTAIN 68 F HEATING SET POINT. AFTER WARMUP MODE, SYSTEM SHALL OPERATE IN OCCUPIED MODE AS DESCRIBED.
- EXHAUST FANS:
  - RELIEF/EXHAUST FAN, RAF-1 SHALL BE INTERLOCKED WITH AHU-1, AND SHALL RUN ONLY IN ECONOMIZER MODE.
  - EXHAUST FANS, EF-1, EF-2, EF-3.
  - THRU EF-4, EF-5 SHALL BE CONTROLLED BY TIME CLOCK.
  - EXHAUST FAN, EF-6, EF-7 & EF-8 SHALL BE CONTROLLED BY SPACE THERMOSTAT.
  - EXHAUST FANS, VEF-1 SHALL BE CONTROLLED BY WALL SWITCH. REFER TO VEHICULAR EXHAUST SYSTEM DESIGN FOR INFORMATION.
  - EXHAUST FANS (PEF-1 & PEF-2): EXHAUST FANS SHALL BE INTERLOCKED WITH ITS MOTORIZED DAMPER, AND SHALL BE CONTROLLED BY SPACE THERMOSTATS AND WALL SWITCHES.
  - CIRCULATING FANS (CF-1 THRU CF-3) SHALL BE CONTROLLED BY WALL SWITCH.
- HEATERS:
  - ELECTRIC RADIANT HEATERS (RD-1 THRU RD-8): ELECTRIC RADIANT HEATERS SHALL BE CONTROLLED BY SPACE THERMOSTAT.
  - ELECTRIC WALL HEATERS (WH-1 THRU WH-5): ELECTRIC WALL HEATERS SHALL BE CONTROLLED BY BUILT-IN THERMOSTAT.

## SYMBOLS

SYMBOL	DESCRIPTION
	TEMPERATURE SENSOR
	SWITCH
	DUCT MOUNTED SMOKE DETECTOR
	S.A. CFM QUANTITY
	R.A. / E.A. CFM QUANTITY
	SUPPLY: DIFFUSER, CEILING REGISTER WALL REGISTER
	RETURN: GRILLE, CEILING REGISTER WALL REGISTER
	EXHAUST FAN
	FLEXIBLE DUCTWORK
	SINGLE LINE DUCTWORK
	SINGLE LINE DUCTWORK W/ BRANCH TAKE-OFF & VOLUME DAMPER
	SPIN-IN DUCT FITTING WITH INTEGRAL VOLUME DAMPER
	DUCTWORK
	MANUAL VOLUME DAMPER
	DUCTWORK WITH SOUND LINING
	ELBOW W/ TURNING VANES
	S.A. OR O.A. DUCT TURNING UP, DOWN
	R.A. OR E.A. DUCT TURNING UP, DOWN
	CONDENSATE DRAIN PIPING
	3/4" DOOR UNDERCUT
	PIPE UP, DOWN
	VOLUME DAMPER

NOTE: NOT ALL SYMBOLS MAY BE USED.

## ABBREVIATIONS

ABBREVIATION	DEFINITION
AFF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
BAS	BUILDING AUTOMATIC SYSTEMS
BHP	BRAKE HORSE POWER
BJ	BETWEEN JOISTS
BTUH	BRITISH THERMAL UNIT PER HOUR
CD	CONDENSATE DRAIN
CFM	CUBIC FOOT PER MINUTE
CU. FT.	CUBIC FEET
DB	DRY BULB
DEG.	DEGREE
DN	DOWN
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ESP	EXTERNAL STATIC PRESSURE
EXH.	EXHAUST
F	FAHRENHEIT
F.A.	FRESH AIR
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FPM	FEET PER MINUTE
FSK	FIBER SCRM KRAFT
HP	HORSE POWER
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LRA	LOCKED ROTOR AMPS
MBH	1000 BTU
N.I.C.	NOT IN CONTRACT
NC	NOISE CRITERIA
NTS	NOT TO SCALE
OA	OUTSIDE AIR
O.E.D.	OPEN END DUCT
PD	PRESSURE DROP
PH, Ø	PHASE
RA	RETURN AIR
RAF	RELIEF AIR FAN
RAG	RETURN AIR GRILLE
RL	RELATIVE HUMIDITY
RLA	RUNNING LOAD AMPS
RPM	REVOLUTION PER MINUTE
SA	SUPPLY AIR
SR	SUPPLY AIR REGISTER
SP	STATIC PRESSURE
TYP	TYPICAL
V	VOLT
VES	VEHICLE EXHAUST SYSTEM
VMC	VIRGINIA MECHANICAL CODE
VIF	VERIFY IN FIELD
W	WATTS
WB	WET BULB
W.G.	WATER GAUGE
WMS	WIRE MESH SCREEN



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Drawn by: CU  
Checked by: AK  
Date: 03-01-2023  
Project No.: 625-2023  
Professional Engineer for the State of New York  
No. 1700, Expiration 12/31/2026

**MECHANICAL COVER SHEET**

Project Location: WINDSOR HIGHWAY DEPARTMENT  
174 CHAPEL STREET  
WINDSOR, NY 13665  
Project Name: TOWN OF WINDSOR  
DEPARTMENT OF PUBLIC WORKS

Drawing Reference Number:  
**M001**  
OF



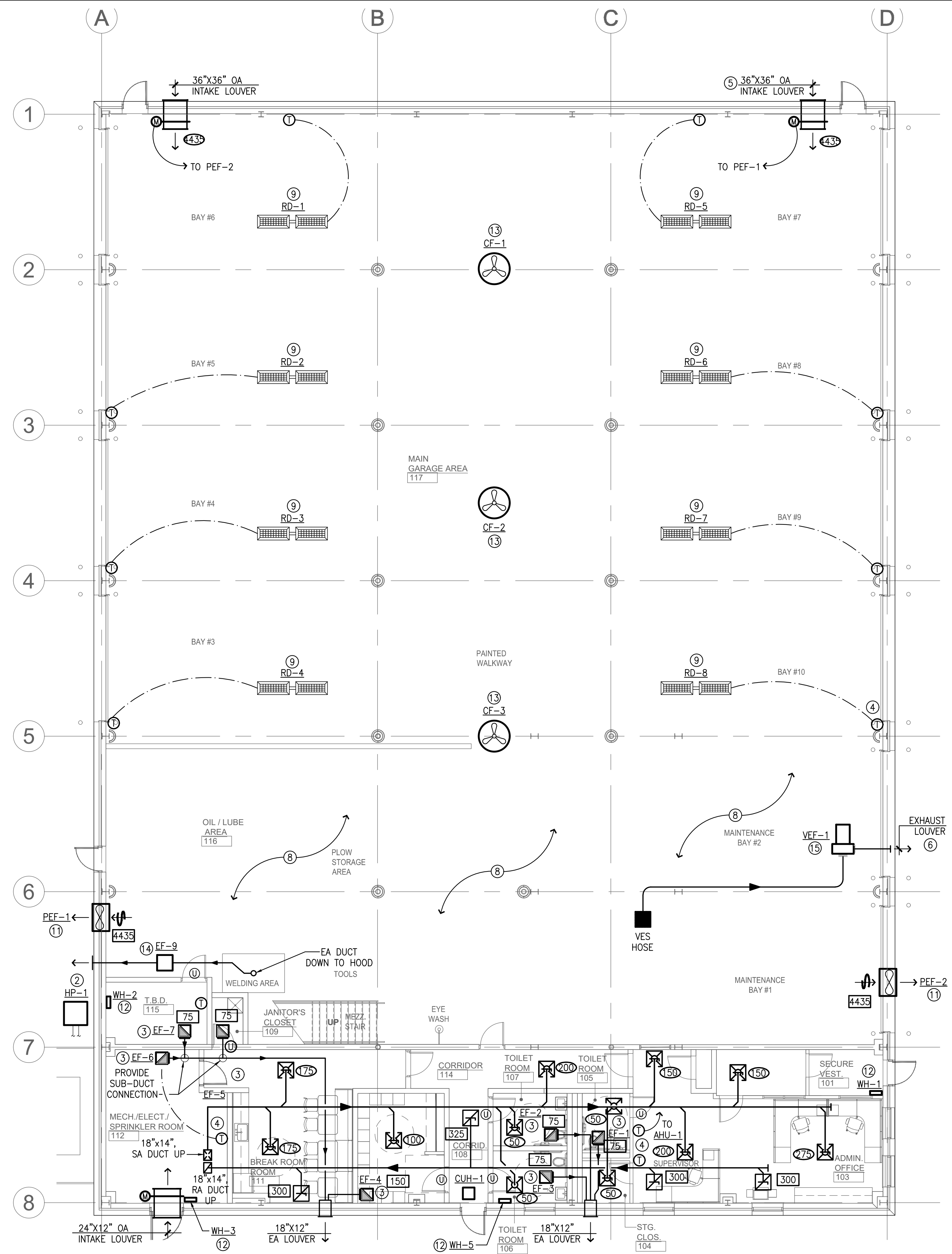
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 Checked by: **AK**  
 Date: 03-01-2023  
 Project No.: 625-2023  
 Plot Scale: **AS NOTED**

**MECHANICAL FLOOR PLANS**

Project Location: WINDSOR HIGHWAY DEPARTMENT  
 174 CHAPEL STREET  
 WINDSOR, NY 13665  
 Project Name: TOWN OF WINDSOR  
 DEPARTMENT OF PUBLIC WORKS

Drawing Reference Number: **M101**  
 OF



**1 MECHANICAL FIRST FLOOR PLAN**  
 M101 SCALE: 1/8" = 1'-0"

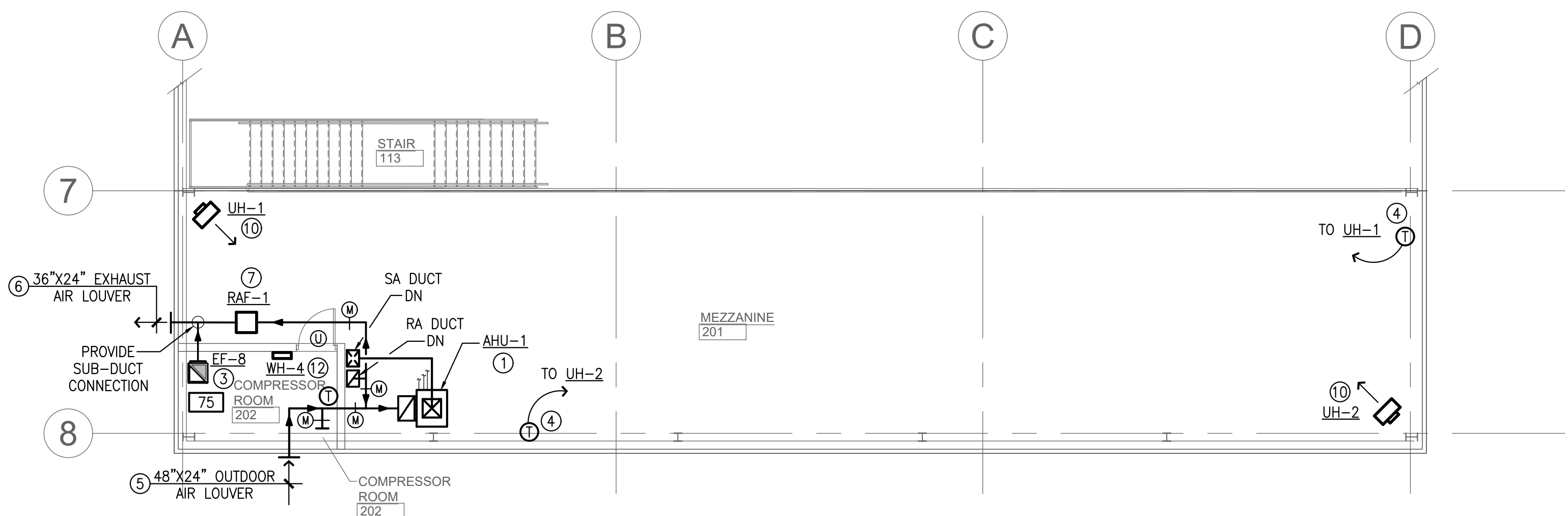
**GENERAL NOTES**

1. PROVIDE ENTIRE SYSTEMS IN COORDINATION WITH THE SITE CONDITIONS.
2. CONTRACTOR SHALL PROVIDE VOLUME DAMPERS FOR ALL THE BRANCH DUCTWORK, SUPPLY AIR REGISTERS AND RETURN AIR GRILLES. CONTRACTOR SHALL BALANCE ALL THE SUPPLY AIR REGISTERS, EXHAUST AIR GRILLES, ETC.

**KEYED NOTES**

- 1 AIR HANDLING UNIT, AHU-1, VERTICAL FLOOR MOUNTED UNIT. PROVIDE UNIT SUPPORT AS REQUIRED. INSTALL REFRIGERANTS AND CONDENSATE DRAIN PIPING. INSTALL THE UNIT IN FULL COMPLIANCE WITH MANUFACTURER RECOMMENDATIONS.
- 2 OUTDOOR HEAT PUMP UNIT, HP-1. PROVIDE REFRIGERANTS PIPING. INSTALL THE UNIT ON 4" HIGH CONCRETE PAD. INSTALL THE UNIT IN FULL COMPLIANCE WITH MANUFACTURER RECOMMENDATIONS (TYPICAL).
- 3 CEILING MOUNTED EXHAUST FAN. PROVIDE FAN SUPPORT AS REQUIRED. INSTALL THE FAN IN FULL COMPLIANCE WITH MANUFACTURER RECOMMENDATIONS (TYPICAL).
- 4 ROOM THERMOSTAT (TYPICAL).
- 5 OUTDOOR AIR LOUVER. PROVIDE WALL OPENING. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR INFORMATION (TYPICAL).
- 6 EXHAUST AIR LOUVER. PROVIDE NEW WALL OPENING. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR INFORMATION (TYPICAL).
- 7 INLINE-TYPE RELIEF AIR FAN. PROVIDE FAN SUPPORT AS REQUIRED. INSTALL THE FAN IN FULL COMPLIANCE WITH MANUFACTURER RECOMMENDATIONS (TYPICAL).
- 8 PROVIDE FLOOR RADIANT ELECTRIC HEATERS. PROVIDE CONTROLS. PROVIDE A COMPLETE AND FULLY FUNCTIONING ELECTRIC FLOOR RADIANT SYSTEMS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, COORDINATION DRAWINGS AND COORDINATE WITH OTHER TRADES (TYPICAL).
- 9 ELECTRIC CEILING MOUNTED RADIANT HEATERS. PROVIDE UNIT SUPPORTS. INSTALL THE HEATER IN FULL COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS (TYPICAL).
- 10 ELECTRIC UNIT HEATER. PROVIDE HEATER SUPPORTS. INSTALL THE HEATER IN FULL COMPLIANCE WITH MANUFACTURER'S RECOMMENDATION (TYPICAL).
- 11 WALL MOUNTED PROPELLER TYPE EXHAUST FAN. PROVIDE FAN SUPPORTS. INSTALL THE HEATER IN FULL COMPLIANCE WITH MANUFACTURER'S RECOMMENDATION (TYPICAL).
- 12 WALL MOUNTED ELECTRIC HEATER. PROVIDE HEATER SUPPORTS. INSTALL THE HEATER IN FULL COMPLIANCE WITH MANUFACTURER'S RECOMMENDATION (TYPICAL).
- 13 CEILING FAN. PROVIDE FAN SUPPORTS. INSTALL THE HEATER IN FULL COMPLIANCE WITH MANUFACTURER'S RECOMMENDATION (TYPICAL).
- 14 INLINE TYPE EXHAUST FAN, CEILING MOUNTED. PROVIDE FAN SUPPORTS. INSTALL THE FAN IN FULL COMPLIANCE WITH MANUFACTURER'S RECOMMENDATION.
- 15 VEHICLE EXHAUST FAN, UTILITY TYPE. PROVIDE FAN SUPPORTS. PROVIDE A COMPLETE AND FULLY FUNCTIONING VEHICLE EXHAUST SYSTEM ON DESIGN-BUILD BASIS BY AIR CLEANING SPECIALIST INC. (PHONE NUMBER: 636-344-4400). SYSTEM SHALL BE CAPABLE OF EXHAUSTING FUMES OWNER'S VEHICLES AND COORDINATE WITH OWNER FOR EXACT REQUIREMENTS BEFORE PROCUREMENT. SUBMIT COORDINATION DRAWINGS AND COORDINATE WITH OTHER TRADES.

- PROVIDE 8" Ø VENT THRU WALL.
- PROVIDE HIGH VELOCITY DUCT (LASER WELDED CLAMP-TOGETHER DUCTWORK).
- PROVIDE UTILITY TYPE FAN, PB-SERIES, CAST ALUMINUM PRESSURE BLOWER. PROVIDE UNI-STRUCTS & THREADED RODS FOR SUPPORT.
- PROVIDE ALL HOSES, FITTINGS, ROPE & PULLEY LIFTING SYSTEMS FOR ALL COATED-POLYESTER FABRIC HOSES, AND STAINLESS STEEL TAPERED CONE ADAPTERS, ETC.
- PROVIDE CONTROL BOX AND STARTER WITH NECESSARY CONTROLS. NEMA-4 ENCLOSURE WITH H-O-A SWITCH AND RESET BUTTON.



**2 MECHANICAL MEZZANINE FLOOR PLAN**  
 M101 SCALE: 1/8" = 1'-0"

DRAWING NAME: M101-2023, Use of Windsor Highway Department Mechanical Floor Plans  
 DATE: 03/01/2023, 11:00 AM, PLOTTED BY: ASES

AIR HANDLING UNIT SCHEDULE														
UNIT NO	SERVING AREA	ARRANGEMENT	SUPPLY AIR, (CFM)	OUTDOOR AIR, (CFM)	E.S.P. IN WC	HEATING DATA		ELECTRICAL DATA					WT. LBS	BASIS OF DESIGN
						KW	MOTOR HP	MCA	MOC	VOLTS	PHASE	HERTZ		
AHU-1	AS SHOWN	FLOOR MOUNTED, VERTICAL	1625	400	1.0	20	1	33.23	35	460	3	60	475	TRANE-MODEL # BCVE060

**GENERAL NOTES:**

- PROVIDE 7 DAY PROGRAMMABLE THERMOSTAT.
- EVAPORATOR COIL, REFRIGERANT PIPING KIT, DISPOSABLE FILTERS, DISCONNECT SWITCH.
- PROVIDE ELECTRIC HEATER.
- PROVIDE A EXTENDED STAINLESS STEEL DRAIN PAN.
- PROVIDE ECONOMIZER ACCESSORY.
- PROVIDE 1" THROW AWAY FILTER.
- PROVIDE SCR CONTROL FOR ELECTRIC HEATER STAGING.

FAN SCHEDULE									
UNIT NO	CFM	TOTAL SP (IN WG)	FAN TYPE	DRIVE	WT. LBS	ELECTRICAL DATA			BASIS OF DESIGN
						MOTOR WATTS/HP	AMPS	VOLTAGE (V/PH/HZ)	
RAF-1	1625	1.0	INLINE TYPE	DIRECT	185	1 HP	1.8	460/3/60	GREENHECK MODEL # SQ-12-VG
EF-1	75	0.75	CEILING MOUNTED	DIRECT	20	100 WATTS	1.10	115/1/60	GREENHECK MODEL # CSP-A190
EF-2	75	0.75	CEILING MOUNTED	DIRECT	20	100 WATTS	1.10	115/1/60	GREENHECK MODEL # CSP-A190
EF-3	75	0.75	CEILING MOUNTED	DIRECT	20	100 WATTS	1.10	115/1/60	GREENHECK MODEL # CSP-A190
EF-4	150	0.75	CEILING MOUNTED	DIRECT	20	--- WATTS	1.10	115/1/60	GREENHECK MODEL # CSP-A190
EF-5	75	0.75	CEILING MOUNTED	DIRECT	20	100 WATTS	1.10	115/1/60	GREENHECK MODEL # CSP-A190
EF-6	200	0.75	INLINE TYPE	DIRECT	75	1/2 HP	3.25	208/1/60	GREENHECK MODEL SQ-97-VG
EF-7	75	0.75	CEILING MOUNTED	DIRECT	20	100 WATTS	1.10	115/1/60	GREENHECK MODEL # CSP-A190
EF-8	75	0.75	CEILING MOUNTED	DIRECT	20	100 WATTS	1.10	115/1/60	GREENHECK MODEL # CSP-A190
EF-9	?	1.5	INLINE TYPE	-	150	1 HP	1.10	115/1/60	GREENHECK MODEL # WELDING HOOD EXHAUST FAN.
VEF-1	-	-	UTILITY TYPE	-	-	-	-	-	REFER TO VEHICLE EXHAUST FAN SYSTEM DOCUMENTS
PEF-1	4435	0.5	SIDE WALL EXHAUSTER/PROPELLER TYPE	BELT	250	1 HP	2.1	460/3/60	GREENHECK MODEL SBE-3H24-10
PEF-2	4435	0.5	SIDE WALL EXHAUSTER/PROPELLER TYPE	BELT	250	1 HP	2.1	460/3/60	GREENHECK MODEL SBE-3H24-10
CF-1	-	-	CEILING FAN	DIRECT	115	1/2 HP	0.95	460/3/60	HUMONGOUS MANUFACTURING COMPANY, 8"-0" FAN DIAMETER. PROVIDE MOUNTING FRAME/ACCESSORIES AND WALL MOUNTED VFD DRIVE WITH SAFETY DISCONNECT SWITCH.
CF-2	-	-	CEILING FAN	DIRECT	115	1/2 HP	0.95	460/3/60	HUMONGOUS MANUFACTURING COMPANY, 8"-0" FAN DIAMETER. PROVIDE MOUNTING FRAME/ACCESSORIES AND WALL MOUNTED VFD DRIVE WITH SAFETY DISCONNECT SWITCH.
CF-3	-	-	CEILING FAN	DIRECT	115	1/2 HP	0.95	460/3/60	HUMONGOUS MANUFACTURING COMPANY, 8"-0" FAN DIAMETER. PROVIDE MOUNTING FRAME/ACCESSORIES AND WALL MOUNTED VFD DRIVE WITH SAFETY DISCONNECT SWITCH.

**GENERAL NOTES:**

- PROVIDE COMPLETE WITH SPRING ISOLATOR, INSULATED HOUSING, BACKDRAFT DAMPER, STARTER AND UNIT MOUNTED DISCONNECT SWITCH.
- PROVIDE COMPLETE AND INSTALL ALL REQUIRED COMPONENTS AS PER MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE FAN GUARD, WALL HOUSING AND MOTORIZED DAMPER FOR PEF-1 & PEF-2 FANS.
- PROVIDE VARI-GREEN EC MOTOR.

OUTDOOR AIR CALCULATION	
<b>MAIN GARAGE AREA #117</b>	
FLOOR AREA	= 11815 SF
OA PER CODE (VMC 2021); 0.75 CFM/SQFT EXHAUST AIR	
CALCULATED EXHAUST AIR=11815 X 0.75=8862 CFM	
OUTDOOR AIR PROVIDED BY (2) OUTDOOR AIR LOUVER=4431 X 2=8862 CFM	
EXHAUST BY PEF-1 & PEF-2=4435 CFM EACH, (2) 4435 CFM=8870 CFM	
HENCE MEETS THE CODE	

HEAT PUMP UNIT (OUTDOOR UNIT) SCHEDULE												
UNIT NO	SERVING	NOMINAL CAPACITY (TONS)	TOTAL (MBH)	SENSIBLE (MBH)	WT. LBS	EAT		ELECTRICAL DATA			BASIS OF DESIGN	
						DB	WB	MCA	MOC	VOLTAGE		
HP-1	AHU-1	5.0	59.5	50.5	350	78.1	64.2	10	15	460/3/60	TRANE MODEL-4TWA7060A4	

**GENERAL NOTES:**

- PROVIDE THIS UNIT OR COMPARABLE UNIT WITH GREATER THAN 11 EER/13.8 IEER, AND COP=3.3
- PROVIDE UNIT WITH LOW AMBIENT TEMPERATURE CONTROLS.
- PROVIDE REFRIGERANT PIPING SIZED AS PER MANUFACTURER'S RECOMMENDATIONS, DETERMINED THROUGH MANUFACTURER'S COMPUTER PROGRAM FOR PROPERLY SIZING THE PIPING.
- INSTALL THE OUTDOOR UNIT ON 4" HIGH CONCRETE PAD.
- PROVIDE UNIT WITH DUAL STAGE COMPRESSOR..

RADIANT HEATER SCHEDULE						
UNIT NO	SERVING	TOTAL (NOS.)	CAPACITY (KW)	ELECTRICAL DATA		BASIS OF DESIGN
				VOLTAGE/PHASE/HZ		
RD-1 THRU RD-8	MAIN GARAGE AREA	10	(2) 9.5	480/3/60		FSS-95 (TANDEM)

**GENERAL NOTES:**

- PROVIDE UNIT SUPPORTS.
- PROVIDE REFLECTOR AS REQUIRED.
- PROVIDE CONTROLS.

EQUIPMENT LIST
<ol style="list-style-type: none"> <li>VES - OVERHEAD VEHICLE EXHAUST SYSTEM, BALANCER RETURN TYPE ELBOW, ELBOW, CLAMPS, MOTORIZED RELEASE SYSTEM WITH CHAIN AND SAFETY CABLE. HIGH TEMP 35'X6" SERIES 4000 FLEX HOSE, 600 CFM PER HOSE. MONOXIVENT MODEL 9366-W-TMTR. NOZZLE TO ATTACH TO UNIT EXHAUST PIPE WITH VISE GRIP-RUBBER COATED, TAIL PIPE ADAPTER UNDER CHASSIS. MONOXIVENT MODEL TCA-6-VG. VERTICAL STACK TAILPIPE ADAPTOR MODEL. TPA-RB-6. RIGID EXHAUST DUCT IS TO BE PROVIDED TO 10"WC NEGATIVE PRESSURE, GALVANIZED STEEL DUCT WITH LONG SWEEP ELLS. PROVIDE MOTOR CONTROL BOX WITH STARTERS, THERMAL OVERLOADS, ETC. 10 FT LIFTING POLE WITH HOOD MODEL LP-10-H.</li> </ol>

AIR DEVICE SCHEDULE							
DESIGNATION	TYPE	AIR FLOW (CFM) RANGE	FACE SIZE	NECK SIZE	P.D. IN. WC	NC	TITUS MODEL#
<input checked="" type="checkbox"/>	CEILING DIFFUSER	101-170	24x24	8"ø	0.049	16	TMS
<input checked="" type="checkbox"/>	CEILING DIFFUSER	171-270	24x24	10"ø	0.056	21	TMS
<input checked="" type="checkbox"/>	CEILING DIFFUSER	271-380	24x24	12"ø	0.052	21	TMS
<input checked="" type="checkbox"/>	CEILING DIFFUSER	381-550	24x24	14"ø	0.055	21	TMS
<input type="checkbox"/>	RETURN AIR GRILLE	0-80	24x24	6"ø	0.01	10	PAR
<input type="checkbox"/>	RETURN AIR GRILLE	81-140	24x24	8"ø	0.01	12	PAR
<input type="checkbox"/>	RETURN AIR GRILLE	141-220	24x24	10"ø	0.01	12	PAR
<input type="checkbox"/>	RETURN AIR GRILLE	221-315	24x24	12"ø	0.01	12	PAR
<input type="checkbox"/>	RETURN AIR GRILLE	316-425	24x24	14"ø	0.01	15	PAR
<input type="checkbox"/>	RETURN AIR GRILLE	426-560	24x24	16"ø	0.01	18	PAR
<input type="checkbox"/>	RETURN AIR GRILLE	561-900	24x24	18x18	0.01	18	PAR

**GENERAL NOTES:**

- FLEX DUCT TO DIFFUSERS SHALL BE SAME SIZE AS DIFFUSER NECK DIAMETER.
- ALL FINISH SELECTIONS SHALL BE BY ARCHITECT.
- PROVIDE BORDER/FRAME AS REQUIRED FOR INTENDED CEILING INSTALLATION.
- PROVIDE VOLUME DAMPER ON ALL AIR DEVICES

WALL HEATER SCHEDULE								
UNIT NO	SERVES	TYPE	KW	NO. OF STAGES	ELECT. DATA			BASIS OF DESIGN
					VOLT	PHASE	HZ	
WH-1, WH-2 & WH-4	AS SHOWN	WALL MOUNTED	1.5	1	120	1	60	MARKEL MODEL # E3323TD-RP
WH-3	AS SHOWN	WALL MOUNTED	2.0	1	240	1	60	MARKEL MODEL # HF3324TD-RP
WH-5	AS SHOWN	WALL MOUNTED	1.0	1	120	1	60	MARKEL MODEL # E3322TD-RP

**GENERAL NOTES:**

- UNIT SHALL HAVE AN INTEGRAL THERMOSTAT AND BUILT-IN POWER DISCONNECT.
- UNIT SHALL BE INSTALLED MORE THAN 12" ABOVE THE FINISHED FLOOR.
- UNIT SHALL BE RECESSED IN WALL OR WALL MOUNTED AS DIRECTED BY ARCHITECT.

CEILING ELECTRIC HEATER SCHEDULE								
UNIT NO	SERVES	TYPE	KW	NO. OF STAGES	ELECT. DATA			BASIS OF DESIGN
					VOLT	PHASE	HZ	
CEH-1	AS SHOWN	CEILING MOUNTED	2	1	240	1	60	MODEL#HF3384D-RP

**GENERAL NOTES:**

- UNIT SHALL HAVE AN INTEGRAL THERMOSTAT AND BUILT-IN POWER DISCONNECT.
- PROVIDE HEATER SUPPORTS.

UNIT HEATER SCHEDULE									
UNIT NO	SERVES	MOUNTED	KW	NO. OF STAGES	ELECT. DATA			BASIS OF DESIGN QMARK	REMARKS
					VOLT	PHASE	HZ		
UH-1 & UH-2	AS SHOWN	CEILING	5	1	208	1	60	MUH05-081	①②③

**NOTES:**

- PROVIDE UNIT HEATER SUPPORTS.
- PROVIDE SPACE THERMOSTAT.



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Designed by: M  
 Drawn by: COU  
 Date: 03-01-2023  
 Project No.: 625-2023  
 AS NOTED

**MECHANICAL SCHEDULES**

Project Location: WINDSOR HIGHWAY DEPARTMENT  
 174 CHAPEL STREET  
 WINDSOR, NY 13665  
 Project Name: TOWN OF WINDSOR  
 DEPARTMENT OF PUBLIC WORKS

Drawing Reference Number:  
**M102**  
 OF



## ELECTRICAL NOTES

- IT IS THE INTENT OF THESE DRAWINGS AND OTHER RELATED DOCUMENTS TO PRODUCE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TESTS, AND OTHER SERVICES AS MAY BE NECESSARY TO ACHIEVE THIS PRODUCT. THE CONTRACTOR SHALL ACKNOWLEDGE ACCEPTANCE OF THE PLANS AS AN ADEQUATE DEFINITION OF THE SCOPE OF WORK AND EXTRA COST CLAIMS BASED ON DISCREPANCIES ON THE PLANS WILL NOT BE CONSIDERED.
- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND ALL LOCAL CODES HAVING JURISDICTION. ALL EQUIPMENT, DEVICES, AND MATERIAL SHALL BE LISTED WITH UNDERWRITERS LABORATORIES FOR ITS APPLICATION AS INSTALLED AND SHALL BEAR THE UL LABEL.
- THE ELECTRICAL CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY SUCH FEES AS MAY BE NECESSARY FOR INSPECTIONS, TESTS, AND OTHER SERVICES WHICH ARE REQUIRED FOR THE COMPLETION OF HIS WORK.
- THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE CONDITIONS OF THE PREMISES AND THE CHARACTER AND EXTENT OF WORK REQUIRED PRIOR TO SUBMISSION OF BIDS. ANY DIFFICULTIES IN COMPLYING WITH THE DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT BEFORE BIDDING.
- ELECTRICAL PLANS ARE DIAGRAMMATIC. DO NOT SCALE DRAWINGS.
- CONSULT PLANS OF ALL OTHER TRADES FOR COORDINATION AND FOR RELATED AND ADJOINING WORK.
- CONSULT ARCHITECTURAL AND STRUCTURAL PLANS AND DETAILS FOR CONSTRUCTION HEADROOM, ROOM FINISHES, CEILING, ETC.
- SEE REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHT FIXTURES.
- CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTLY SPACING THE CIRCUITS IN THE PANEL AND BALANCE THE LOAD ON THE PHASES UNDER NORMAL OPERATING CONDITIONS.
- SHOP DRAWINGS FOR ALL ELECTRICAL EQUIPMENT, FIXTURES, DEVICES AND MATERIALS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL BEFORE DELIVERY TO THE JOB SITE. EQUIPMENT, FIXTURES, DEVICES, AND MATERIAL DELIVERED TO THE JOB SITE OR INSTALLED PRIOR TO APPROVAL OF THE SHOP DRAWINGS, AND FOR WHICH THE SHOP DRAWINGS ARE SUBSEQUENTLY REJECTED, SHALL BE REPLACED WITH AN APPROVED ITEM AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL VERIFY WIRE SIZES, C/B AND FUSE RATINGS FOR ALL HVAC EQUIPMENT, AND BRING TO THE ATTENTION OF THE ARCHITECT ANY DISCREPANCIES AFFECTING THE WORK PRIOR TO PROCEEDING.
- ALL WORK SHALL BE DONE AT SUCH TIMES AND IN SUCH A MANNER AS WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF ALL RELATED OR AFFECTED SYSTEMS. ALL POWER OUTAGES, FIRE ALARM SHUT DOWNS, ETC SHALL BE COORDINATED WITH OWNER.
- CONTRACTOR SHALL VERIFY THAT ALL DOOR SWINGS ARE CORRECT BEFORE INSTALLING LIGHT SWITCH OUTLETS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SIZING OF ALL MOTOR OVERLOAD DEVICES (HEATERS) IN STARTERS BASED ON ACTUAL NAMEPLATE RATINGS ON THE EQUIPMENT BEING INSTALLED.
- HORSEPOWER RATINGS INDICATED ON DRAWINGS MAY DIFFER FROM ACTUAL EQUIPMENT FURNISHED. IF FURNISHED EQUIPMENT DIFFERS FROM RATINGS ON DRAWINGS, CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER FOR APPROPRIATE ACTION TO BE TAKEN.
- CONTRACTOR SHALL NOTE U.L. LABELS ON PACKAGED TYPE MECHANICAL EQUIPMENT. IF U.L. LABEL ON MECHANICAL EQUIPMENT TO ACTUALLY BE INSTALLED CALLS FOR THE OVER CURRENT PROTECTIVE DEVICE TO BE FUSES, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A FUSED DISCONNECT SWITCH WITH PROPER SIZE FUSES AT THE SWITCH LOCATION INDICATED ON DRAWINGS AT NO ADDITIONAL CHARGE TO THE OWNER.
- THE ELECTRICAL CONTRACTOR SHALL VERIFY THE TYPE OF CEILING SYSTEM WITH THE GENERAL CONTRACTOR OR CEILING CONTRACTOR TO INSURE THAT ALL LIGHTING FIXTURES ARE COMPATIBLE WITH THE CEILING SYSTEM BEING INSTALLED. LIGHTING FIXTURES SHOULD NOT BE ORDERED UNTIL TYPE OF CEILING HAS BEEN VERIFIED.
- LIGHTING FIXTURES INSTALLED IN SUSPENDED CEILING SHALL BE SUPPORTED DIRECTLY FROM THE BUILDING STRUCTURE. AND SHALL COMPLY WITH NEC 410.30 AND 410.36.
- THE CORRECT NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS, ONLY THOSE WHERE CLARIFICATION IS NECESSARY. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL WIRES NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED ON THE DRAWINGS OR NOT.
- ALL EMPTY CONDUIT RUNS IN EXCESS OF 10 FT. SHALL BE PROVIDED WITH (2) PULL WIRE OF FISH TAPE/CORD.
- ALL CONDUCTORS, RACEWAYS AND CABLES SHALL BE CONCEALED IN CEILING OR WALL UNLESS INDICATED OTHERWISE.
- OPENINGS IN EXISTING BUILDING STRUCTURE FOR PASSAGE OF CONDUITS/CABLES SHALL NOT BE CUT UNTIL THE CONTRACTOR HAS ASKED FOR AND RECEIVED WRITTEN APPROVAL FROM THE ARCHITECT.
- THE LIGHTING FIXTURES SHALL BE FURNISHED AND INSTALLED COMPLETE WITH ALL ACCESSORIES (INCLUDING LAMPS) BY THE ELECTRICAL CONTRACTOR.
- SYMBOLS SHOWN ON THIS SHEET ARE STANDARD SYMBOLS AND MAY NOT NECESSARILY ALL BE APPLICABLE TO THIS PROJECT.
- THE CONTRACTOR SHALL GUARANTEE ALL HIS WORK AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY OWNER.
- ALL PENETRATIONS OF FLOOR AND WALLS SHALL BE FIRE STOPPED IN ACCORDANCE WITH IBC, NEC AND NFPA.
- CONDUCTORS SHALL BE INSTALLED CONTINUOUS BETWEEN DEVICES, WITH SPLICES LOCATED ONLY IN JUNCTION BOXES OR IN CABINETS. CONDUCTORS SHALL BE OF SUFFICIENT LENGTH TO REACH THE FARTHEST TERMINAL IN PANELS. A MINIMUM OF 6" LOOPS SHALL REMAIN WHERE CONNECTIONS OR TAPS ARE TO BE MADE IN BRANCH CIRCUIT WIRING.
- PROVIDE AN UPDATED TYPEWRITTEN PANEL DIRECTORY IN EACH PANEL AFTER COMPLETION OF WORK.
- ELECTRICAL CONTRACTOR SHALL PROVIDE AS BUILT DRAWINGS AND ALL MANUFACTURERS DATA AND WARRANTY LITERATURE AT THE COMPLETION OF THE CONTRACT.
- STARTERS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR, AND INSTALLED BY ELECTRICAL CONTRACTOR AS PER MANUFACTURER'S RECOMMENDATION. COORDINATE EXACT LOCATIONS AND REQUIREMENTS.
- PER NEC 210.4 (B), CIRCUIT BREAKERS FEEDING MULTIWIRE BRANCH CIRCUITS SHALL BE SIMULTANEOUSLY DISCONNECTED WITH IDENTIFIED HANDLE TIE. TYPICAL.
- UNIT EQUIPMENT SHALL COMPLY WITH NEC 700.12 (F).
- "(SHARED)" UNDER THIS CONTRACT IS DEFINED AS SPLIT CIRCUIT; CONTRACTOR SHALL SPLICE THE CIRCUIT AT THE SOURCE PANELBOARD AND RUN SEPARATE WIRING TO THE LOADS INDICATED.
- COORDINATION WITH POWER AND TELEPHONE COMPANIES:

A. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE EXACT REQUIREMENTS FOR INCOMING SERVICE OF LOCAL UTILITIES FOR POWER AND TELEPHONE, PAY ALL FEES, AND INSTALL A COMPLETE AND FUNCTIONAL SYSTEM.

## EQUIPMENT SPECIFICATIONS

- LIGHT FIXTURES:**
  - LIGHT FIXTURES SHALL BE AS SPECIFIED.
- RACEWAY:**
  - MINIMUM SIZE OF THE CONDUIT SHALL BE 3/4".
  - PROVIDE FLEXIBLE CONDUIT FOR MOTOR CONNECTIONS, AND FOR OTHER ELECTRICAL EQUIPMENT CONDITIONS, WHERE SUBJECT TO MOVEMENT AND VIBRATION. 18" MAXIMUM LENGTH.
  - PROVIDE LIQUID TIGHT FLEXIBLE CONDUIT FOR CONNECTION OF MOTOR AND FOR OTHER ELECTRICAL EQUIPMENT WHERE SUBJECT TO MOVEMENT AND VIBRATION, AND ALSO WHERE SUBJECT TO ONE OR MORE OF THE FOLLOWING CONDITIONS, UNLESS NOTED OTHERWISE:
    - MOIST AND HUMID ATMOSPHERE WHERE CONDENSATE CAN BE EXPECTED TO ACCUMULATE.
    - CORROSIVE ATMOSPHERE.
    - SUBJECT TO DRIPPING OIL, GREASE OR WATER.
  - ALL CONDUITS SHALL BE GROUNDED PER NEC. CONDUITS ENTERING THE OUTLET BOXES, PANEL CABINETS ETC. MUST BE FITTED WITH A DOUBLE LOCKOUT AND BUSHING.
  - PROVIDE RIGID STEEL, THREADED, THICK WALL CONDUIT, GALVANIZED OR EMT FOR ALL PANEL FEEDERS, AND ALL EXPOSED WIRING IN UNFINISHED AREAS.
  - ALL WIRE RACEWAYS IN OR PASSING THROUGH CONCRETE WALLS, SLABS, OR UNDERGROUND SHALL BE GALVANIZED RIGID STEEL THREADED CONDUIT.
  - ALL CONDUITS FITTING SHALL BE COMPRESSED TYPE (NO SCREW TYPE) WITH TURNS ACCOMPLISHED BY SWEEP BENDS, FACTORY 90 DEGREE BENDS OR PULL BOXES.
  - DO NOT USE CONDULETS.
- WIRES AND CABLES:**
  - ALL WIRE AND CABLE SHALL BE COPPER WITH THHN/THWN INSULATION AND ALL WIRE SIZES ARE BASED ON COPPER CONDUCTORS WITH 75°C INSULATION UNLESS INDICATED OTHERWISE. ALL CONNECTORS, LUGS, ETC. SHALL BE LISTED FOR 75°C.
  - PROVIDE WIRING NOT SMALLER THAN #12 AWG FOR THE POWER DISTRIBUTION, AND NOT SMALLER THAN #14 AWG FOR THE FIRE ALARM SYSTEM. ARMORED METAL CABLE OR METAL CLAD CABLE, WHERE CONCEALED, MAY BE USED IF ACCEPTABLE TO THE LOCAL AUTHORITY HAVING JURISDICTION AND IN COMPLIANCE WITH APPLICABLE CODES.
  - ALL CIRCUITS 120/208 VOLT OVER 100 FEET AND ALL 277/480 VOLT CIRCUITS OVER 200 FEET FROM PANEL TO FIRST OUTLET SHALL HAVE CONDUCTORS ONE SIZE LARGER THAN NORMALLY REQUIRED WHETHER INDICATED ON PANEL SCHEDULE OR NOT.
  - CONDUCTORS INSTALLED UNDERGROUND OR IN THE WET LOCATIONS SHALL BE U.L. LISTED PER NEC, AND SHALL BE SUITABLE FOR WET LOCATIONS.
  - REFER TO CABLE TRAY PLANS AND NOTES FOR ELECTRICAL WORK.
- ELECTRICAL BOXES AND FITTINGS:**
  - ALL BOXES AND FITTINGS SHALL BE OF CODE-GAUGE STEEL.
  - JUNCTION AND PULL BOXES: PROVIDE GALVANIZED CODE-GAUGE SHEET STEEL JUNCTION AND PULL BOXES WITH SCREW-ON COVER OF TYPES, SHAPES AND SIZES TO SUIT EACH RESPECTIVE LOCATION AND INSTALLATION, WITH WELDED SEAMS AND EQUIPPED WITH STAINLESS STEEL NUTS, SCREWS, AND WASHERS.
  - PROVIDE WEATHERPROOF OUTLETS FOR INTERIOR AND EXTERIOR LOCATIONS EXPOSED TO WEATHER OR MOISTURE.
  - ALL PULL BOXES SHALL BE FABRICATED FROM #12 OR HEAVIER GAUGE GALVANIZED STEEL AS REQUIRED BY THE NEC, AND SHALL BE EQUIPPED WITH SCREW FASTENED COVER.
  - PROVIDE "QUIET PUTTY" SOUND INSULATION FOR ALL ELECTRICAL AND DATA BOXES INSTALLED IN STC-RATED INTERIOR WALLS.
- WIRING DEVICES:**
  - PROVIDE DUPLEX, SPECIFICATION GRADE RECEPTACLES 2 POLE, 3 WIRE GROUNDING WITH GREEN HEXAGONAL EQUIPMENT GROUND SCREWS, GROUND TERMINALS AND POLES INTERNALLY CONNECTED TO MOUNTING YOKE, 20 AMPERES, 125 VOLTS, WITH METAL PLASTER EARS, SIDE WIRING, NEMA CONFIGURATION 5-20R. HUBBELL CAT. NO. HBL5362 OR EQUAL.
  - WEATHERPROOF RECEPTACLE, SHALL BE WEATHER RESISTANT PER NEC 406.9.
  - SWITCHES, 20 AMPS, 120/277 VOLTS, WITH MOUNTING YOKE INSULATED FROM MECHANISM, EQUIPPED WITH PLASTER EARS, SWITCH HANDLE, AND SIDE WIRED SCREW TERMINALS.
  - ALL SWITCHES AND RECEPTACLES SHALL BE OF WHITE COLOR WITH MATCHING COVER PLATES, OR AS SELECTED BY ARCHITECT.
  - ALL DEVICES INSTALLED IN THE LOCATION EXPOSED TO AMBIENT CONDITIONS SHALL BE WEATHERPROOF AND SHALL COMPLY WITH NEC 406.9.
- PANELBOARDS:**
  - PANELBOARD BUSBARS SHALL BE COPPER.
  - PANELBOARD ENCLOSURES: PROVIDE GALVANIZED SHEET STEEL CABINET, CODE-GAUGE, GUTTERS. PROVIDE FRONTS WITH ADJUSTABLE TRIM CLAMPS, AND DOORS WITH CONCEALED PIANO DOOR HINGES AND DOOR SWINGS AS INDICATED. EQUIPMENT WITH INTERIOR CIRCUIT-DIRECTORY FRAME AND CARD WITH CLEAR PLASTIC COVERING. PROVIDE BAKED GRAY ENAMEL FINISH OVER A RUST INHIBITOR COATING. DESIGN ENCLOSURES FOR RECESSED/SURFACE MOUNTING AS INDICATED. PROVIDE ENCLOSURES WHICH ARE FABRICATED BY SAME MANUFACTURERS AS PANELBOARDS WHICH MATE AND MATCH PROPERLY WITH PANELBOARD TO BE ENCLOSED.
  - CABINETS FOR DISTRIBUTION PANELS SHALL HAVE 6 INCHES OF GUTTER SPACE ON ALL SIDES. PANELBOARDS AND LIGHTING PANELS SHALL HAVE A MINIMUM OF 5" ON ALL SIDES.
  - ALL PANELBOARDS SHALL BE EQUIPPED WITH COMMON KEYED LOCKS. PROVIDE MINIMUM OF ONE KEY PER PANEL PLUS (6) SPARES.
  - PANELBOARDS SHALL BE AS INDICATED ON THE DRAWINGS. WITH BOLT-ON MOLDED CASE CIRCUIT BREAKERS AND COPPER BUS BARS. CIRCUIT BREAKERS AND INTERIORS SHALL BE OF THE SAME MANUFACTURER AND UL LISTED. THE PANELBOARDS SHALL COMPLY WITH ALL APPLICABLE STANDARDS.
- DISCONNECT SWITCHES:**
  - DISCONNECT SWITCHES SHALL BE TYPE HD, HEAVY DUTY, FUSIBLE OR NON-FUSIBLE, AS NOTED, SINGLE THROW, 600-V AC, 1200 A AND SMALLER: UL 98 AND NEMA KS 1, HORSEPOWER RATED, WITH CLIPS OR BOLT PADS TO ACCOMMODATE INDICATED FUSES, LOCKABLE HANDLE WITH CAPABILITY TO ACCEPT TWO PADLOCKS, AND INTERLOCKED WITH COVER IN CLOSED POSITION. NEMA TYPE 1 OR 3R, AS REQUIRED.

## FIRE ALARM NOTES

- PROVIDE A FIRE ALARM SYSTEM ON DESIGN-BUILD BASIS. PROVIDE ADDITIONAL DEVICES, IF REQUIRED, BY THE FIRE MARSHALL EITHER DURING SHOP DRAWINGS REVIEW PHASE, OR DURING CONSTRUCTION PHASE WITHOUT ANY ADDITIONAL COST TO THE OWNER.
- ALL DEVICES AND EQUIPMENT FOR THIS SYSTEM SHALL BE LISTED BY THE UNDERWRITER'S LABORATORIES, INC. (U.L.), BEAR THE U.L. LABEL AND SHALL CONFORM TO THE APPLICABLE SECTIONS OF NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 72 AND 90A.
- THE INSTALLATION SHALL BE IN ACCORDANCE WITH ALL REQUIREMENTS OF NFPA 72, THE NATIONAL ELECTRICAL CODE (NEC), ALL STATE AND LOCAL CODES AND ADA REQUIREMENTS.
- UPON COMPLETION, THE SYSTEM SHALL BE THOROUGHLY TESTED BY THE CONTRACTOR TO ASSURE PROPER INTERFACING OF ALL COMPONENTS.
- ALL WIRING FOR THE FIRE DETECTION AND ALARM SYSTEM SHALL BE RUN IN CONDUIT BY THE CONTRACTOR. ALL FIRE ALARM JUNCTION BOX COVERS SHALL BE PAINTED RED BY THE CONTRACTOR OR STENCILED FOR DISTINCT IDENTIFICATION. ALL CONDUIT, DEVICE MOUNTING BOXES, JUNCTION BOXES, AND PANELS SHALL BE SECURELY FASTENED BY THE CONTRACTOR WITH APPROPRIATE FITTINGS TO INSURE A POSITIVE GROUND THROUGHOUT THE ENTIRE SYSTEM.
- ALL CONNECTIONS TO PANELS, DEVICES, AND DETECTORS SHALL BE MADE WITH CRIMP TYPE SPADE TERMINAL CONNECTORS. SPLICES IN STATION CIRCUITS SHALL BE MADE ONLY IN JUNCTION BOXES AND SHALL BE CRIMP CONNECTED.
- ALL WIRING SHALL BE CHECKED AND TESTED BY THE CONTRACTOR TO INSURE THE SYSTEM IS FREE FROM GROUNDS, OPENS, AND SHORTS.
- THE INSTALLATION AND FINAL CONNECTIONS BY THE CONTRACTOR OF ALL COMPONENTS AND DEVICES SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE SYSTEM MANUFACTURER'S TECHNICAL STAFF.

## ELECTRICAL ABBREVIATIONS

A	AMP
AFF	ABOVE FINISHED FLOOR
AIC	AMPS INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CU	COPPER
DN	DOWN
EC	EMPTY CONDUIT
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FSS	FUSED SAFETY SWITCH
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
HP	HORSE POWER
HWRC	HOT WATER RECIRCULATING PUMP
IBC	INTERNATIONAL BUILDING CODE
IG	ISOLATED GROUND
KVA	KILOVOLT AMPS
KW	KILOWATTS
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NFSS	NON FUSED SAFETY SWITCH
P	POLE
UL	UNDERWRITERS LABORATORY
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VA	VOLT AMPS
W	WATTS
WP	WEATHERPROOF
XFMR	TRANSFORMER

## ELECTRICAL SYMBOLS

- NOTE: THESE SYMBOLS ARE STANDARD AND ALL MAY NOT BE APPLICABLE TO THIS JOB. ALL MOUNTING HEIGHTS ARE STANDARD UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- FLUORESCENT OR LED LIGHTING FIXTURE. SEE LIGHTING FIXTURE SCHEDULE.
  - LIGHTING FIXTURE ON EMERGENCY CIRCUIT OR WITH EMERGENCY BATTERY BACK-UP.
  - CEILING RECESSED MOUNTED LIGHTING FIXTURE.
  - WALL MOUNTED LIGHTING FIXTURE.
  - EXIT SIGN. CONNECT TO UNSWITCHED HOT-LEG OF CIRCUIT INDICATED.
  - BATTERY PACK. CONNECT TO UNSWITCHED HOT-LEG OF CIRCUIT INDICATED.
  - BRANCH CIRCUIT WIRING CONCEALED IN WALLS OR CEILING. NUMBER OF HASHES INDICATES NUMBER OF WIRES AND SHOWN ONLY WHERE REQUIRED FOR CLARITY.
  - BRANCH CIRCUIT WIRING RUN UNDER GROUND OR UNDER SLAB.
  - HOME RUN TO PANELBOARD. NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS IN HOME RUN.
  - FLUSH MOUNTED SWITCH, +48" AFF.
  - 3 WAY OR 4 WAY FLUSH MOUNTED SWITCH, +48" AFF.
  - FLUSH MOUNTED DIMMER SWITCH, +48" AFF. LUTRON Divo C.L. DIMMER OR EQUAL. SIZE AS REQUIRED.
  - MOTOR RATED SWITCH WITH THERMAL OVERLOAD PROTECTION.
  - FLUSH MOUNTED SWITCH WITH OCCUPANCY SENSOR, +48" AFF.
  - FLUSH MOUNTED SWITCH WITH PILOT LIGHT, +48" AFF.
  - JUNCTION BOX CEILING MOUNTED, SIZE AS REQUIRED.
  - JUNCTION BOX WALL MOUNTED, SIZE AS REQUIRED.
  - JUNCTION BOX FOR POWER CONNECTION TO SYSTEMS FURNITURE - # INDICATES NUMBER OF STATIONS SERVED.
  - JUNCTION BOX FOR TELEPHONE/DATA CONNECTION TO SYSTEM FURNITURE.
  - DUPLEX RECEPTACLE, NEMA 5-20R, +18" AFF, U.O.N. "T" DENOTES TAMPER RESISTANT.
  - DUPLEX RECEPTACLE - NEMA 5-20R - DESIGNATED TO COMPUTER COLOR IN GREY
  - DUPLEX RECEPTACLE, NEMA 5-20R, GROUND FAULT INTERRUPTER, (GFI) +44" AFF, U.O.N.
  - DUPLEX RECEPTACLE, NEMA 5-20R, WITH USB PORT, +18" AFF, U.O.N.
  - DOUBLE DUPLEX (QUAD) RECEPTACLE, TAMPER RESISTANT, NEMA 5-20R, +18" AFF.
  - CEILING MOUNTED DOUBLE DUPLEX (QUAD) RECEPTACLE.
  - DUPLEX RECEPTACLE, NEMA 5-20R, AND COMBINATION TELEPHONE/DATA OUTLETS FLOOR BOX SERVICE FITTING. SEE DRAWING FOR DESCRIPTION.
  - SPECIAL RECEPTACLE, NEMA CONFIGURATION. REFER TO FLOOR PLAN FOR INFORMATION.
  - SINGLE RECEPTACLE, NEMA CONFIGURATION AS NOTED, +18" AFF.
  - COMBINATION TV OUTLET AND DUPLEX RECEPTACLE, NEMA 5-20R, +18" (CONFERENCE ROOM), OTHER LOCATIONS IS 60" A.F.F. TV OUTLET WITH 1" EC TO ACCESSIBLE CEILING SPACE. CABLING BY TENANTS/OWNERS VENDOR. SEE DETAIL.
  - COMBINATIONS DATA/TELEPHONE OUTLET, +18" AFF, UON. PROVIDE 4" SQ JUNCTION BOX WITH 1" EMT OR BX GREENFIELD FROM TOP OF JUNCTION BOX TO THE TOP OF PARTITION, FOR THE DATA DROP PROVIDE RING AND PULL STRING TO CABLE TRAY OR IT ROOM. CABLING BY TENANTS/OWNERS VENDOR.
  - PHOTO-CELL, (DAY LIGHT SENSOR) CEILING MOUNTED .
  - 277/480 VOLT PANELBOARD.
  - 120/208 VOLT PANELBOARD.
  - MOTOR CONNECTION.
  - NONE-DISCONNECT SWITCH. 600V/240V. ##/# DENOTES AMPS, POLES, (M) DENOTES DISCONNECT SWITCH IS PROVIDED BY MANUFACTURER, CONNECTION BY THE ELECTRICAL CONTRACTOR, (/) DENOTES FUSE DISCONNECT SWITCH, FUSING TO MATCH CIRCUIT BREAKER.
  - MOTOR STARTER.
  - ENCLOSED CIRCUIT BREAKER.
  - GROUND PER NEC ARTICLE 250.
  - CARD READER - PROVIDE 4" SQUARE BOX AND STUB OUT 3/4" EC 6" INTO CEILING SPACE. PROVIDE MATCHING OUTLET FOR PUSH EXIT BUTTON AS REQUIRED.
  - FACTORY CONNECTION. DISCONNECT SWITCH IS FURNISHED BY THE EQUIPMENT MANUFACTURER. CONNECTION BY THE ELECTRICAL CONTRACTOR.
  - TRANSFORMER. REFER TO DRAWING FOR DESCRIPTION.



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Designed By: NO  
Drawn By: JMS  
Date: 03-01-2023  
Project No: 625-2023

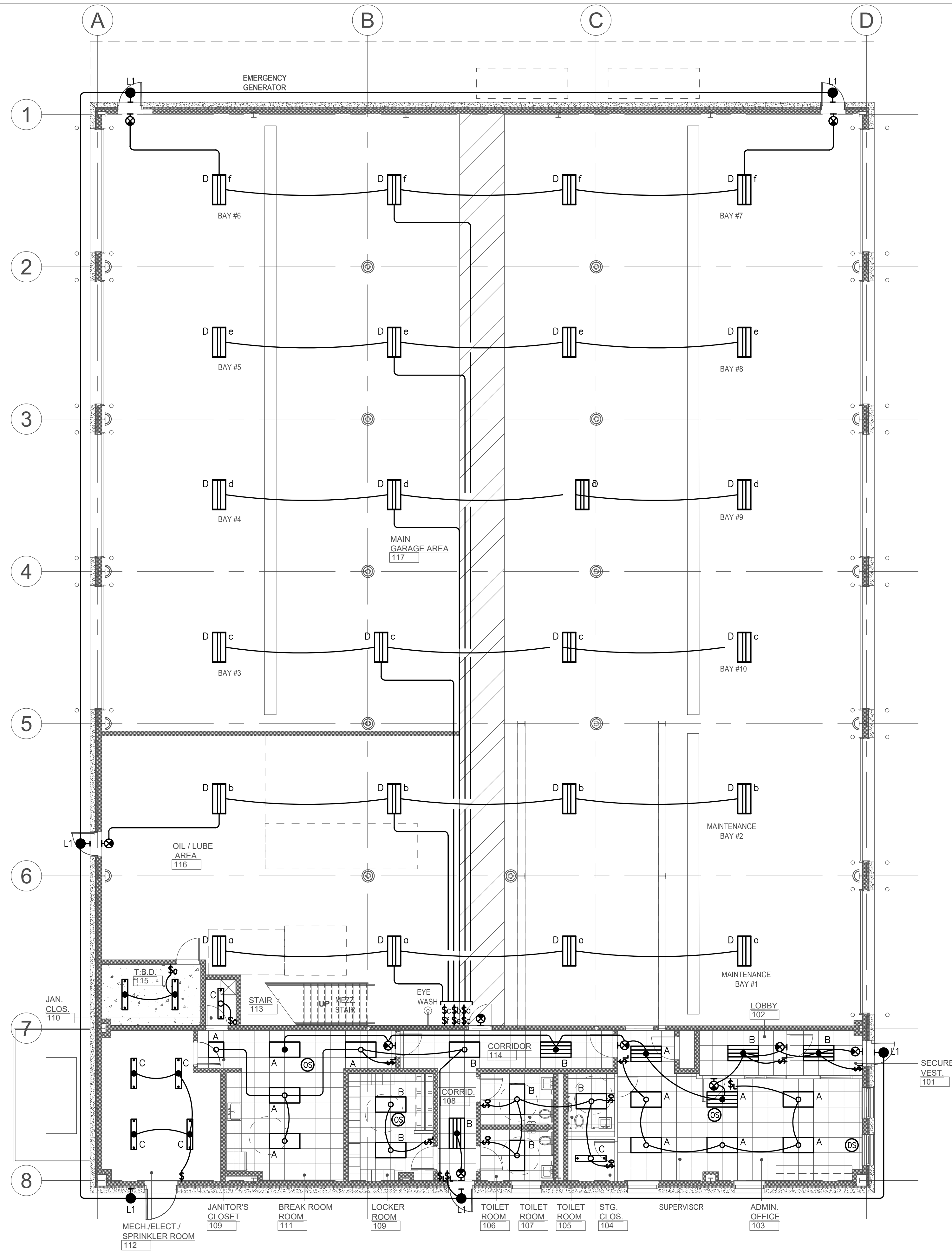
Checked By: JMS  
Date: 03-01-2023  
Project No: 625-2023

**ELECTRICAL COVER SHEET**

Project Location:  
WINDSOR HIGHWAY DEPARTMENT  
174 CHAPEL STREET  
WINDSOR, NY 13685

Project Name:  
TOWN OF WINDSOR  
DEPARTMENT OF PUBLIC WORKS

Drawing Reference Number:  
**E001**  
OF



**1**  
E101  
**ELECTRICAL FIRST FLOOR LIGHTING PLAN**  
SCALE: 1/8" = 1'-0"

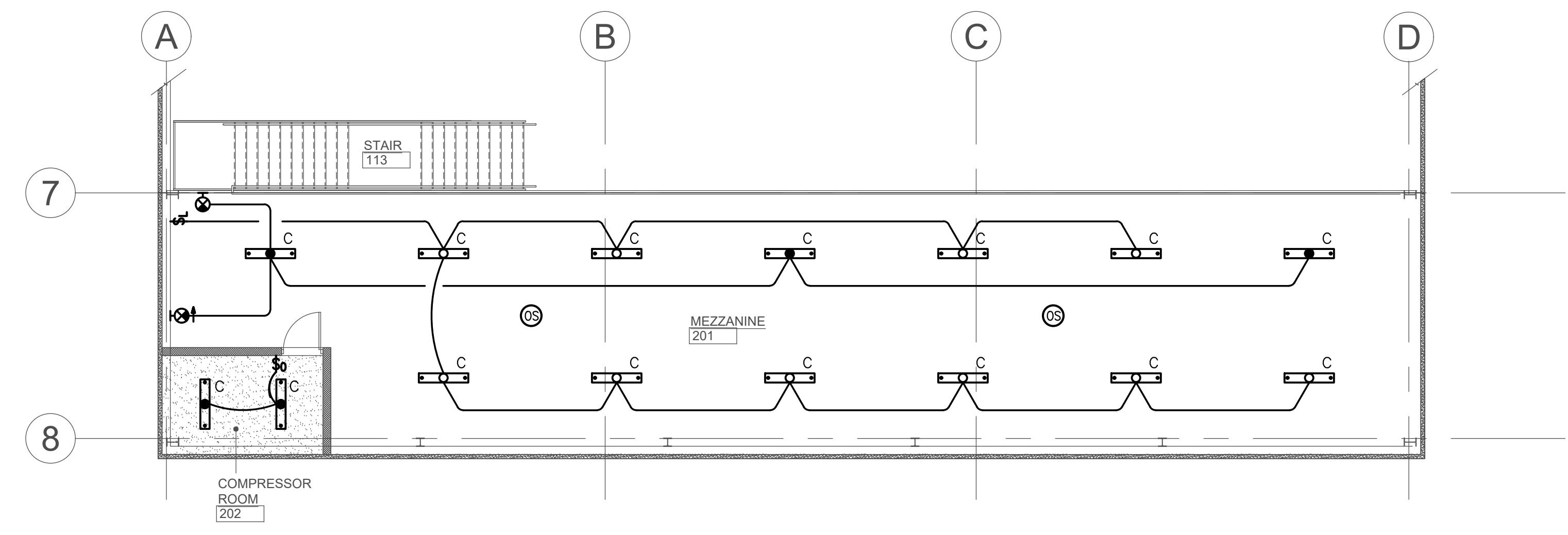
LIGHTING FIXTURE SCHEDULE									
TYPE	DESCRIPTION	MANUFACTURER	MODEL NUMBER & CATALOG #	LAMP			VOLTS	MOUNTING	NOTES
				QUANTITY	TYPE/WATTS	LUMENS			
A	2'x4' RECESSED LED	GE CURRENT	LVT24-B-0-48-MM-835-V1-LT-WHITE	SEE DWG.	LED/43W	4800	277	RECESSED	
B	2'x4' RECESSED LED	GE CURRENT	LVT24-B-0-30-MM-835-V1-LT-WHITE	SEE DWG.	LED/24.5W	3000	277	RECESSED	
C	4' LINEAR LED	GE CURRENT	ALV244T04T481DSQ	SEE DWG.	LED/26W	4000	277	SURFACE	
D	HIGH BAY LIGHT	GE CURRENT	ABV3-4-48-H-48-9Q-	SEE DWG.	LED/248W	48000	277	PENDANT	
F	2'x2' RECESSED LED	GE CURRENT	LVT22-B-0-48-MM-835-V1-LT-WHITE	SEE DWG.	LED/37W	4800	277	RECESSED	
L1	ARCHITECTURAL WALL PACK	H.E. WILLIAMS	WMPV-L30/740-TFT-CGL-PC-DIM	SEE DWG.	LED/70W	3000	277	WALL	
X1	EXIT & EMERGENCY LIGHT	H.E. WILLIAMS	EXIT/EM/LED-R-WHT-HL-SDT-D-WETRHL	SEE DWG.	LED/3.8W	-	120/277	SURFACE	
X2	EXIT SIGN DOUBLE FACE	H.E. WILLIAMS	EXIT/EL-DF-R-CP-AN-EM-D-SDT	SEE DWG.	LED/3.8W	-	120/277	SURFACE	
X3	EXIT SIGN	H.E. WILLIAMS	EXIT/EL-R-CP-AN-EM-D-SDT	SEE DWG.	LED/3.8W	-	120/277	WALL	

**GENERAL NOTES:**

- ALL FIXTURES SHALL BE UL LISTED.
- COORDINATE MOUNTING HEIGHT (PENDANT/SUSPENDED/WALL LUMINARIES) & LENGTH (LINEAR FLUORESCENT/LED LUMINARIES) WITH ARCHITECT.
- PROVIDE 0-10V STANDARD DIMMING BALLAST/DRIVER AS BASIC OF DESIGN AS REQUIRED.
- PROVIDE COMPATIBLE DIMMER SWITCH (OR SYSTEM) WITH LED DIMMING DRIVER AS REQUIRED.
- LIGHTING FIXTURE SCHEDULE SHALL ONLY PROVIDE DIMMING INFORMATION FOR DRIVER TYPE. REFER TO LIGHTING PLAN FOR EXACT FIXTURES TO BE CONTROLLED BY DIMMING SWITCHES/ROOM CONTROLLERS/POWER PACKS.

**KEYED NOTES:**

- PROVIDE QUANTITY OF FACES, DIRECTIONAL ARROWS, AND MOUNTING AS SHOWN ON DRAWINGS. PROVIDE PENDANT MOUNTING KIT AS REQUIRED. PROVIDE WITH 90 MINUTES BATTERY BACK-UP. PROVIDE WET LOCATION EXIT SIGN, MODEL (#EXIT/WET/CP-R-WHT-EM-SDT) IN SHOP 111
- REFER TO DRAWING FOR EXACT DIMENSION.
- PROVIDE WITH 90 MINUTES BATTERY BACK-UP FOR EMERGENCY LIGHTING FIXTURES TYPE.



**2**  
E101  
**ELECTRICAL MEZZANINE FLOOR LIGHTING PLAN**  
SCALE: 1/8" = 1'-0"



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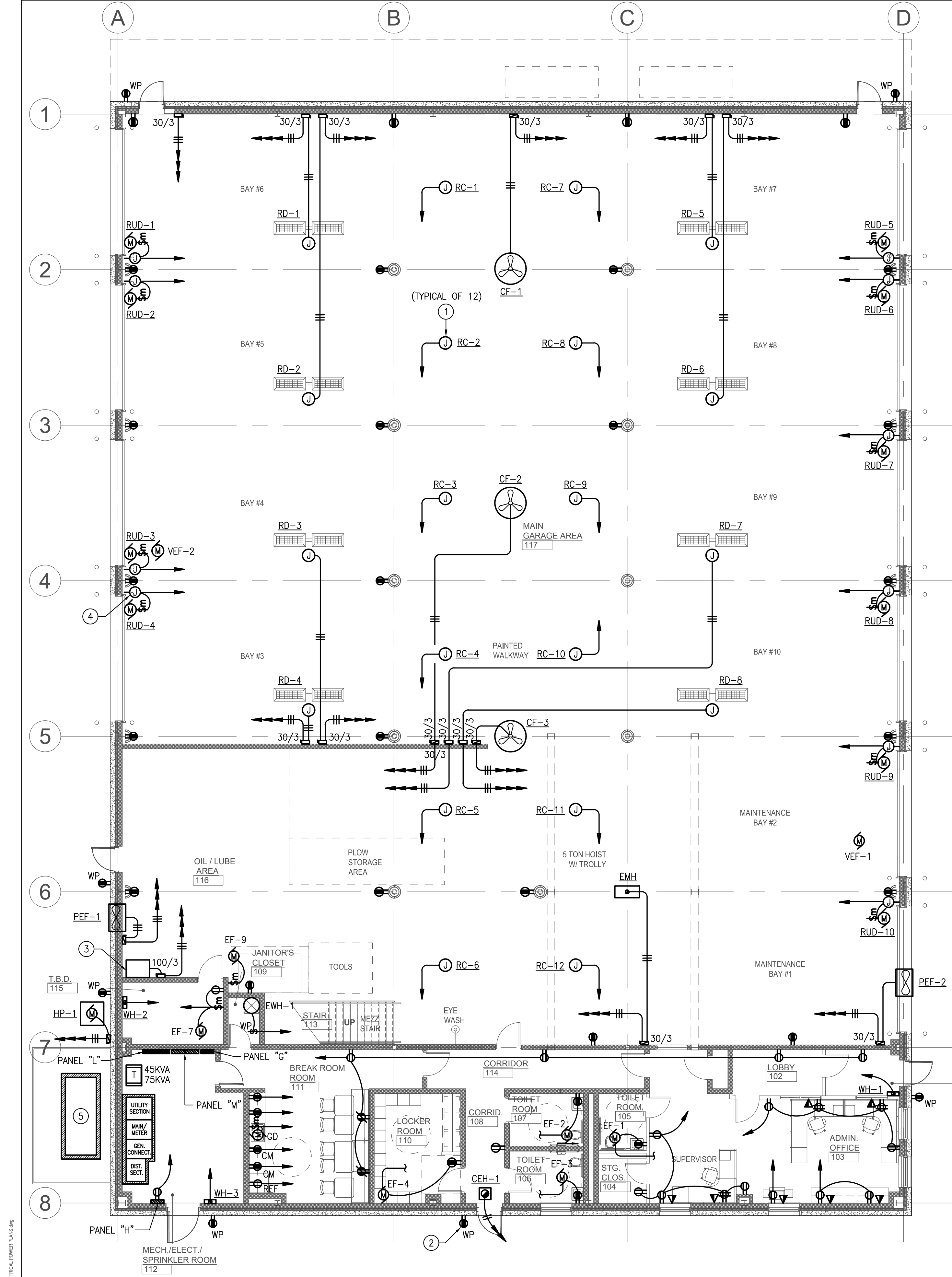
Designed by	IN	Checked by	IN
Date	03-01-2023	Project No.	625-2023
Plot Scale	AS NOTED		

**ELECTRICAL LIGHTING PLANS**

Project Location: WINDSOR HIGHWAY DEPARTMENT  
174 CHAPEL STREET  
WINDSOR, NY 13665  
Project Name: TOWN OF WINDSOR  
DEPARTMENT OF PUBLIC WORKS

Drawing Reference Number:  
**E101**  
OF



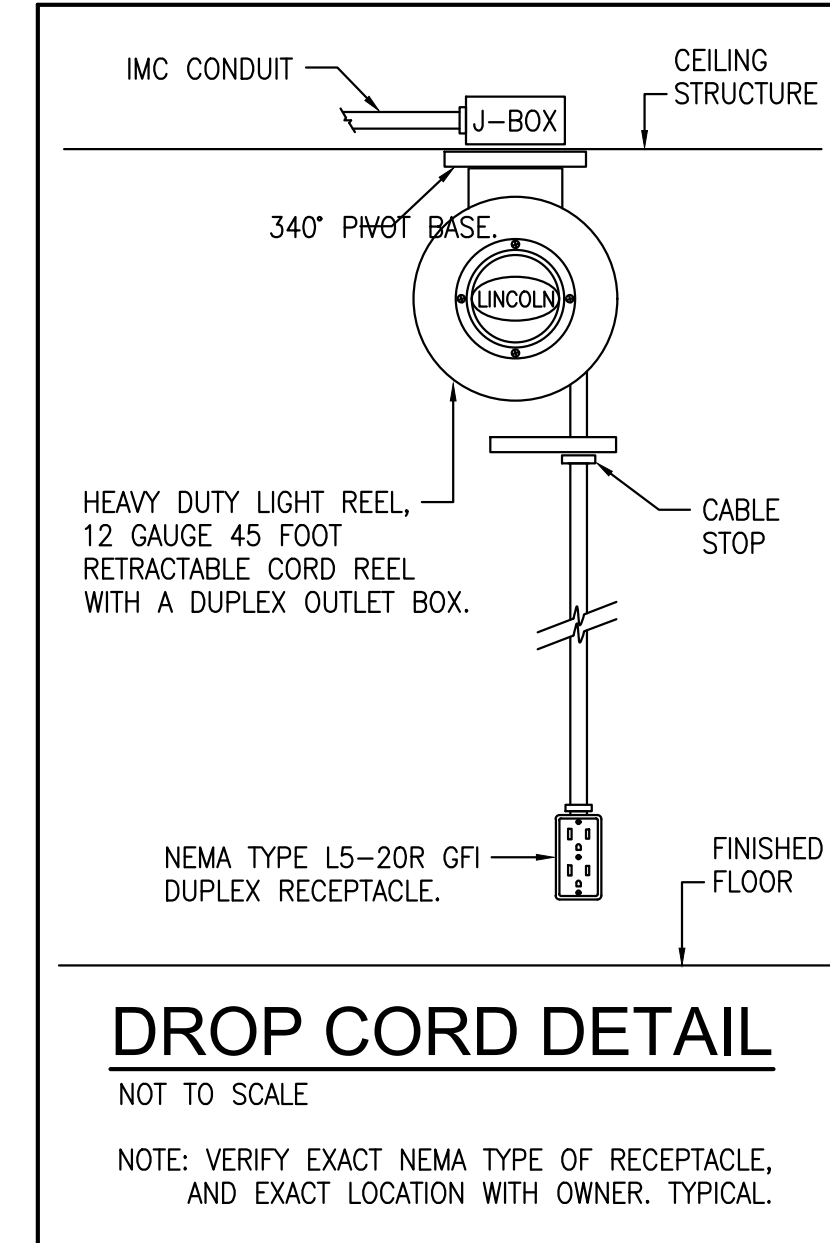


**1 ELECTRICAL FIRST FLOOR POWER PLAN**  
 SCALE: 1/8" = 1'-0"  
 E103

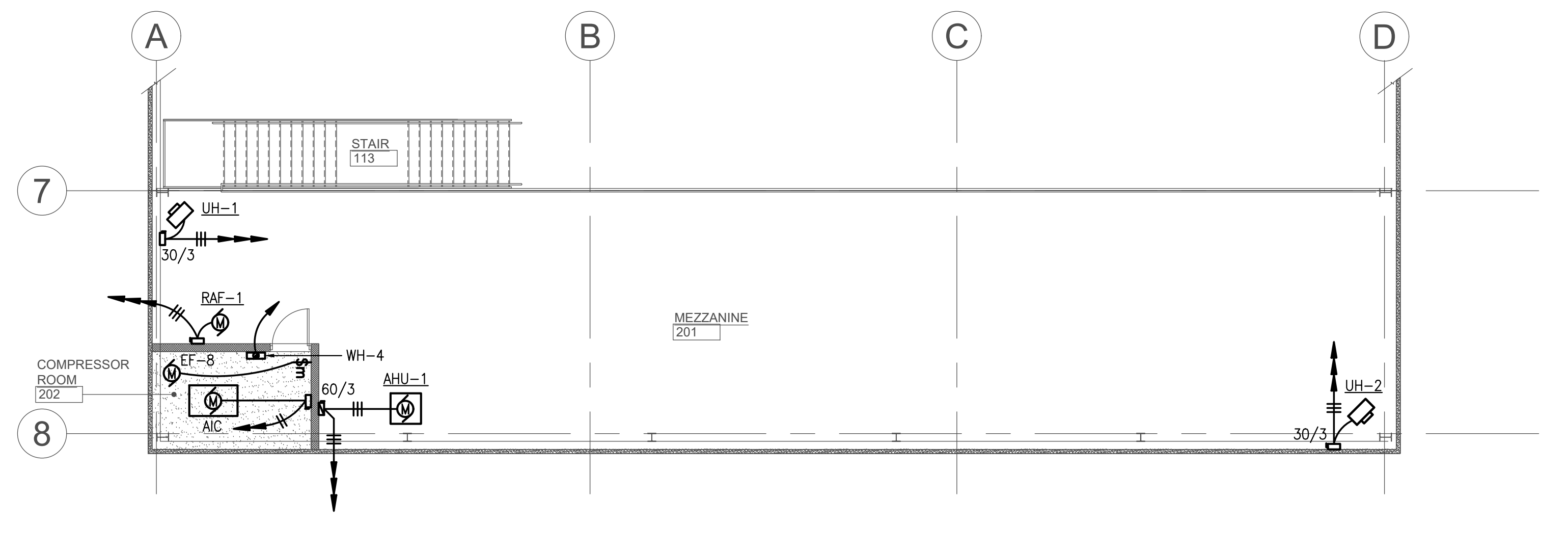
EQUIPMENT SCHEDULE				
LOAD TYPE	EQUIPMENT NAME	WATT/HP	VOLTAGE/PHASE	
COOLING LOADS	AHU-1	20KW/1 HP	460/3	
	HP-1	8.31KW	460/3	
	EF-1	100	115/1	
	EF-2	100	115/1	
	EF-3	100	115/1	
	EF-4	1/2 HP	277/1	
	EF-5	100	115/1	
	EF-6	1/2 HP	208/1	
	EF-7	100	115/1	
	EF-8	100	115/1	
	EF-9	100	115/1	
	FAN LOADS	PEF-1	1HP	460/3
PEF-2		1HP	460/3	
RAF-1		1HP	460/3	
CF-1		1/2HP	460/3	
CF-2		1/2HP	460/3	
CF-3		1/2HP	460/3	
AIR COMPRESSOR		AIC	10 HP	230/1
ELEC. WATER HEATER		EW-1	4 kW	277/1
PRESSURE WASHER		PW	72KW/8 HP	460/3
ELEC. MONORAIL HOIST		EMH	7-1/2 HP	460/3
RADIANT HEATERS		RD-1	19 kW	480/3
		RD-2	19 kW	480/3
	RD-3	19 kW	480/3	
	RD-4	19 kW	480/3	
	RD-5	19 kW	480/3	
	RD-6	19 kW	480/3	
	RD-7	19 kW	480/3	
	RD-8	19 kW	480/3	
WALL HEATERS (*)	WH-1	1.5 kW	120/1	
	WH-2	1.5 kW	120/1	
	WH-3	2 kW	240/1	
	WH-4	1.5 kW	120/1	
	WH-5	1 kW	120/1	
CEILING HEATER	CEH-1	2 kW	240/1	
UNIT HEATERS	UH-1	5 kW	120/1	
	UH-2	5 kW	120/1	
ROLL UP DOORS	RUD-1	3/4HP	120/1	
	RUD-2	3/4HP	120/1	
	RUD-3	3/4HP	120/1	
	RUD-4	3/4HP	120/1	
	RUD-5	3/4HP	120/1	
	RUD-6	3/4HP	120/1	
	RUD-7	3/4HP	120/1	
	RUD-8	3/4HP	120/1	
	RUD-9	3/4HP	120/1	
	RUD-10	3/4HP	120/1	
DROP CORDS	RC-1 THRU RC-12	360W	120/1	
	REFRIGERATOR	1.8 kW	120/1	
KITCHEN EQUIPMENT	MICROWAVE	1.2 kW	120/1	
	COFFE MAKER	1.4 kW	120/1	
	TOASTER	1.5 kW	120/1	
	GARBAGE DISPOSAL	1/2 HP	120/1	
OFFICE EQUIPMENT	COPY MACHINE	1.44 kW	120/1	
	PRINTER	0.6 kW	120/1	

EQUIPMENT ABBREVIATIONS	
WP	WEATHERPROOF
CP	CIRCULATING PUMP
RUD	ROLL-UP-DOOR
EF	EXHAUST FAN
ICP	INDUSTRIAL CONTROL PANEL
REF	REFRIGERATOR
MW	MICROWAVE
GD	GARBAGE DISPOSAL
CM	COFFEE MAKER
CO	COPY MACHINE
DW	DISHWASHER
EW	ELECTRIC WATER HEATER
GFPD	GROUND FAULT PROTECTION DEVICE
MD	MOTORIZED DAMPER
RH	RADIANT HEATER
PT	PRINTER
TS	TOASTER
WH	WALL HEATER

- ### GENERAL NOTES - POWER
- REFER TO THE ELECTRICAL COVER SHEET FOR SPECIFICATIONS, GENERAL NOTES, SYMBOLS & MOUNTING HEIGHT, AND ABBREVIATIONS.
  - FOR ALL RECEPTACLES THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT/TENANT FOR EXACT LOCATIONS, MOUNTING HEIGHTS, AND RULES GOVERNING THE ORIENTATION AND INSTALLATION, UON. REFER TO ARCHITECTURAL PLANS, DETAILS, ENLARGED PLANS, AND ELEVATIONS FOR ADDITIONAL INFORMATION.
  - REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS, MOUNTING HEIGHTS, AND RULES GOVERNING ORIENTATION AND INSTALLATION OF ALL DEVICES (AV, SECURITY, COMMUNICATION, CABLE TV, TELE/DATA, ETC.) UON. IF THERE ARE ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL AND ELECTRICAL DRAWINGS, THE ARCHITECTURAL DRAWINGS SHALL SUPERSEDE ELECTRICAL DRAWINGS.
  - ALL RECEPTACLE COVER PLATES SHALL BE FITTED WITH A LABEL INDICATING THE PANELBOARD AND CIRCUIT NUMBER SERVING THE ASSOCIATED RECEPTACLE. LABEL SHALL BE CLEAR, FIXED WITH ADHESIVE TAPE, AND SHALL USE BLACK LETTERING.
  - ALL CIRCUITRY RUNS INDICATED ARE DIAGRAMMATIC. THE CONTRACTOR SHALL DETERMINE THE MOST SUITABLE ROUTES TO MEET THE DESIGN INTENT SHOWN ON DRAWINGS IN THE FIELD.
  - GANG OUTLETS WITH SINGLE FACE PLATE WHERE MULTIPLE DEVICES APPEAR IN A SINGLE LOCATION ON THE DRAWINGS.
  - REFER TO DRAWING E201 FOR POWER RISER DIAGRAM.
  - REFER TO DRAWING E202 FOR PANEL SCHEDULES.
  - ALL RECEPTACLES IN BAY AREAS SHALL BE MOUNTED 24" ABOVE FINISHED FLOOR.
  - THE BAYS AREA ARE A MINOR REPAIR GARAGE, THERE ARE NO FLAMMABLE, COMBUSTIBLE LIQUIDS TO BE DISPENSED OR TRANSFERRED WITHIN THIS AREA.



- ### KEYED NOTES - POWER
- CEILING MOUNTED JUNCTION BOX FOR DROP CORD REEL MANUFACTURE BY LINCOLN MODEL #91032. PROVIDE ALL NECESSARY HARDWARE FOR A COMPLETE AND FUNCTIONAL INSTALLATION. COORDINATE MOUNTING HEIGHT AND LOCATION IN FIELD. SEE DETAIL ON THIS DRAWING (TYPICAL OF 12)
  - PROVIDE GFI RECEPTACLE L5-20R WHILE-IN-USE WITH WEATHERPROOF COVER FOR CHARGER. PROVIDE 2 #12 + 1 #12 GROUND IN 3/4" CONDUIT. INSTALL THE RECEPTACLE 24" ABOVE GROUND. COORDINATE LOCATION WITH OWNER PRIOR INSTALLATION.
  - MULTIPOINT COMMERCIAL HEAT-TRACING SYSTEM CONTROL PANEL, LED TOUCH SCREEN, TEMPERATURE MONITOR, 7 DAYS/WEEK CALENDAR, 15 INDIVIDUAL 30A CIRCUITS, 480V, 3 PHASE, 4 WIRE. WITH INTEGRATE GROUND-FAULT EQUIPMENT PROTECTION. COORDINATE WITH THE EQUIPMENT SUPPLIER FOR CONNECTION REQUIREMENT.
  - PROVIDE 3 BUTTONS CONTROL ROLL UP DOOR (RUD), UP/DOWN/STOP. PROVIDE ALL ACCESSORIES HARDWARE AS REQUIRED FOR A COMPLETE AND FUNCTIONAL OF THE SYSTEM.
  - PROVIDE 700KW/875KVA, 480/277V, .8PF, 3 PHASE, 4 WIRE DIESEL GENERATOR WITH SOUNDPROOF AND WEATHERPROOF ENCLOSURE.



**2 ELECTRICAL MEZZANINE FLOOR POWER PLAN**  
 SCALE: 1/8" = 1'-0"  
 E103

**GRIFFITHS ENGINEERING**  
 15 South Washington Street, Suite 1  
 Binghamton, New York 13905  
 Telephone (607) 724-2400  
 Fax (607) 724-2466

**ELECTRICAL POWER PLANS**

Project Location: WINDSOR HIGHWAY DEPARTMENT  
 174 CHAPEL STREET  
 WINDSOR, NY 13685

Project Name: TOWN OF WINDSOR DEPARTMENT OF PUBLIC WORKS

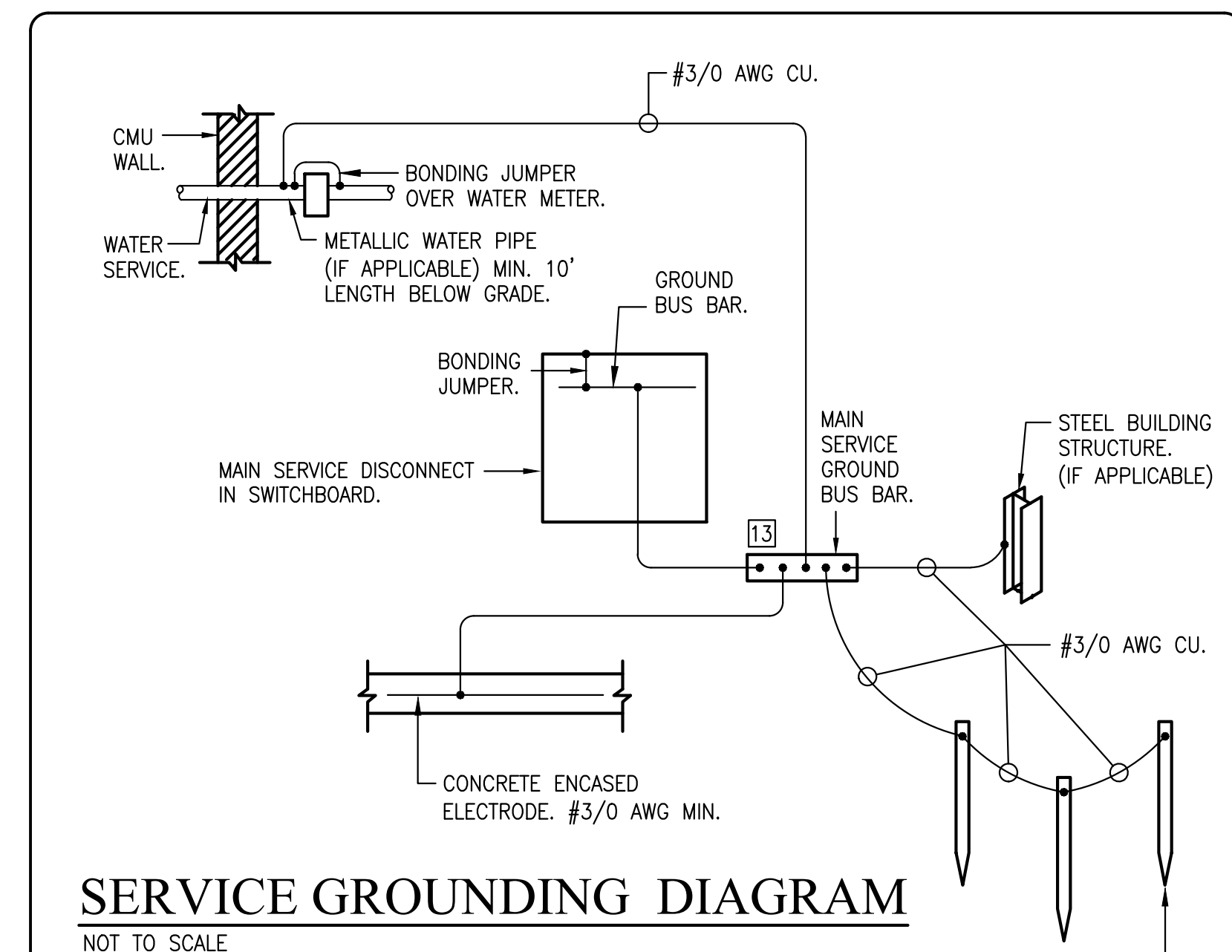
Drawing Reference Number: **E103**  
 OF

AS NOTED

50% PACKAGE 03/01/2023

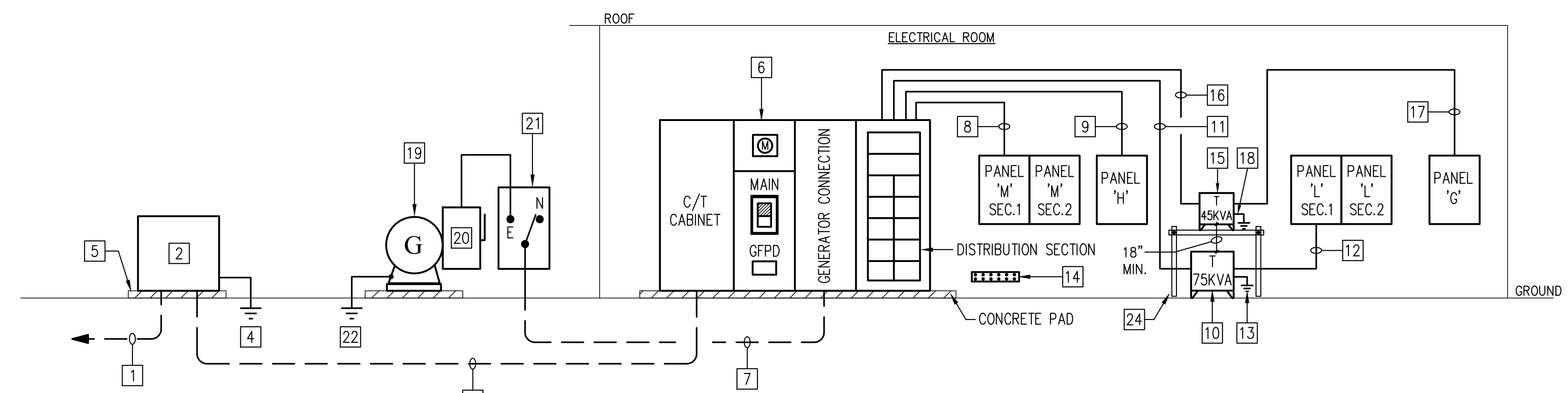


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**GROUNDING NOTE:**

GROUNDING OF SERVICE SHALL MEET ALL REQUIREMENTS OF NEC ARTICLE 250, AND AS A MINIMUM INCLUDE (3) 5/8" DIA X 8'-0" COPPER CLAD STEEL GROUND RODS (SPACED 10'0" MIN ON CENTER), BONDING TO BUILDING STEEL FRAMING, WATER MAIN AHEAD OF THE METER. BONDING SHALL BE MIN #3/0 AWG CU CONDUCTORS.

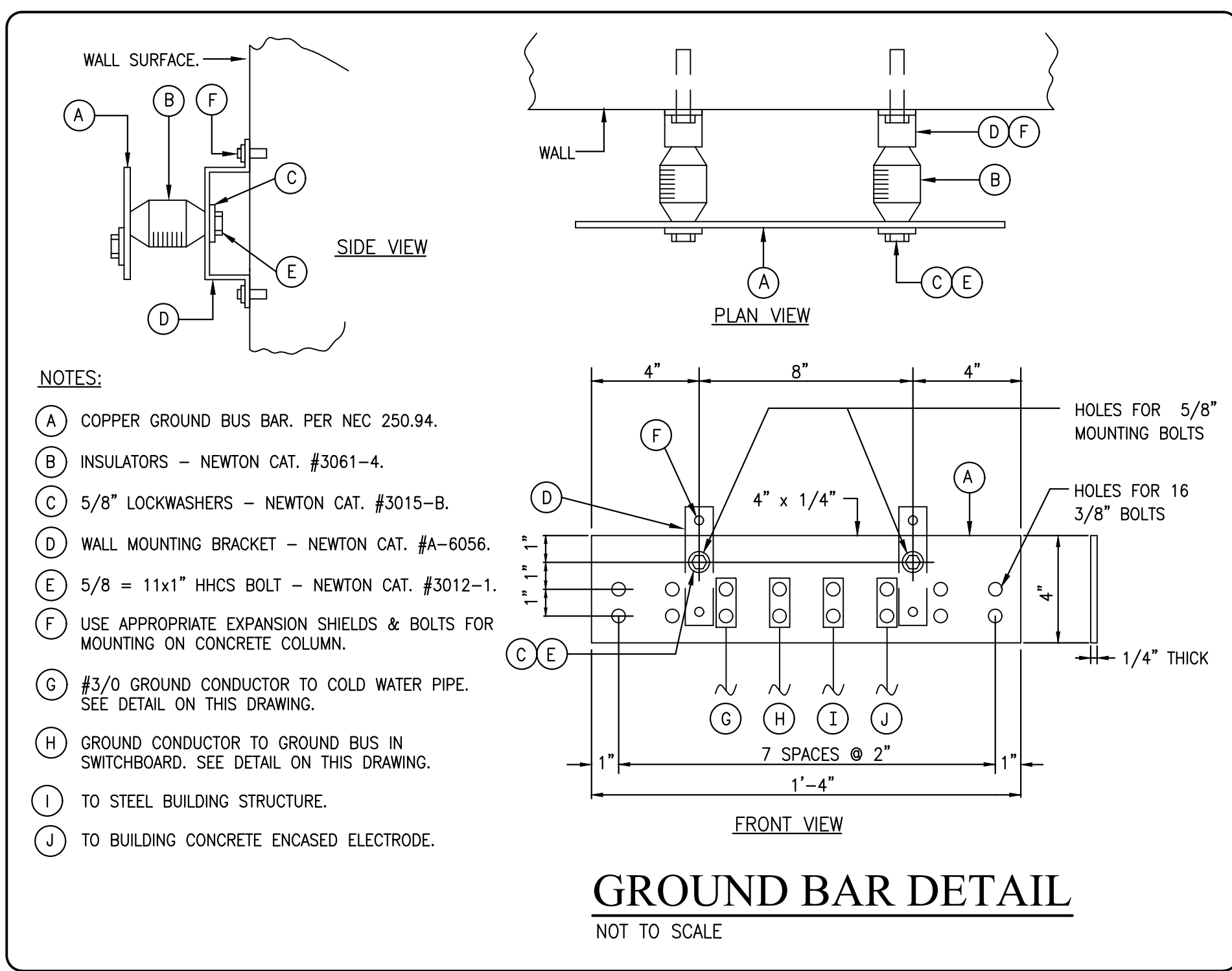


**ELECTRICAL POWER RISER DIAGRAM**

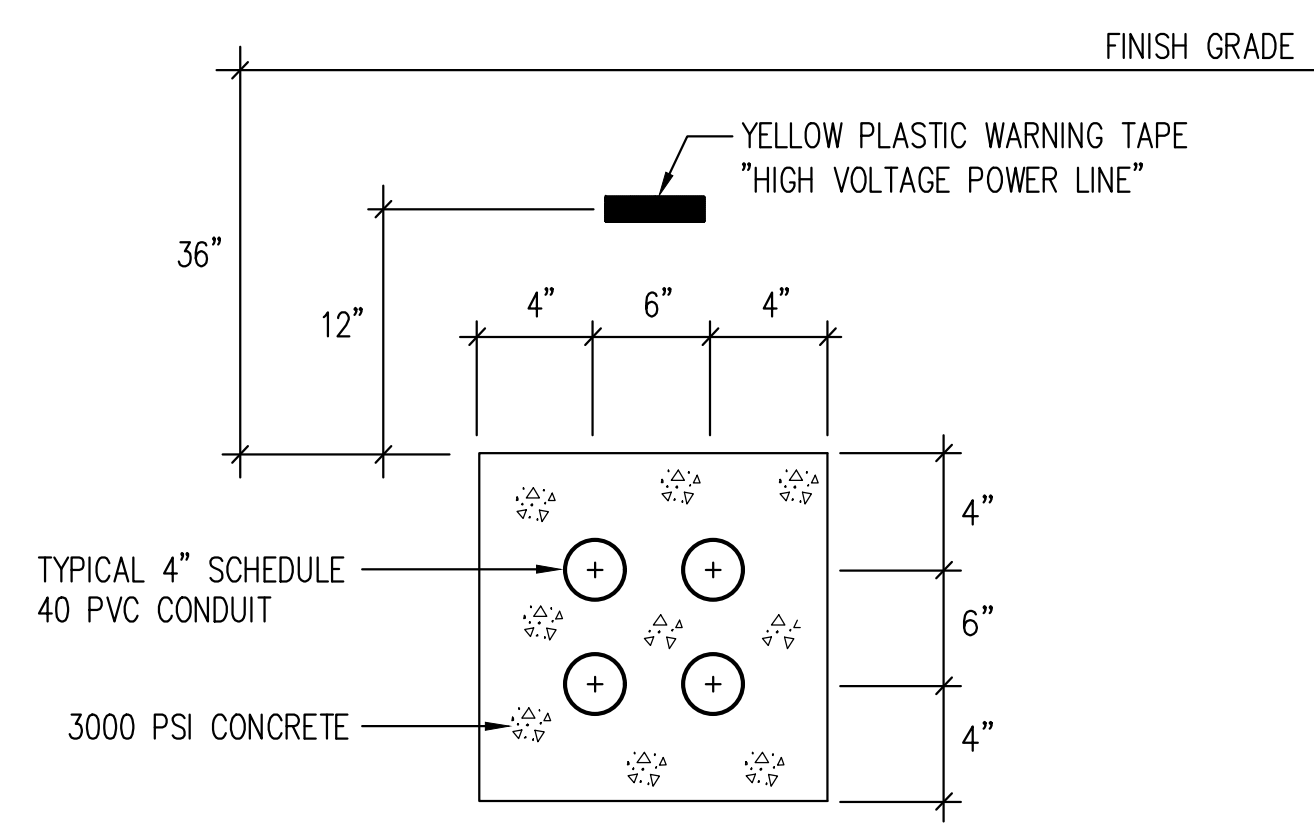
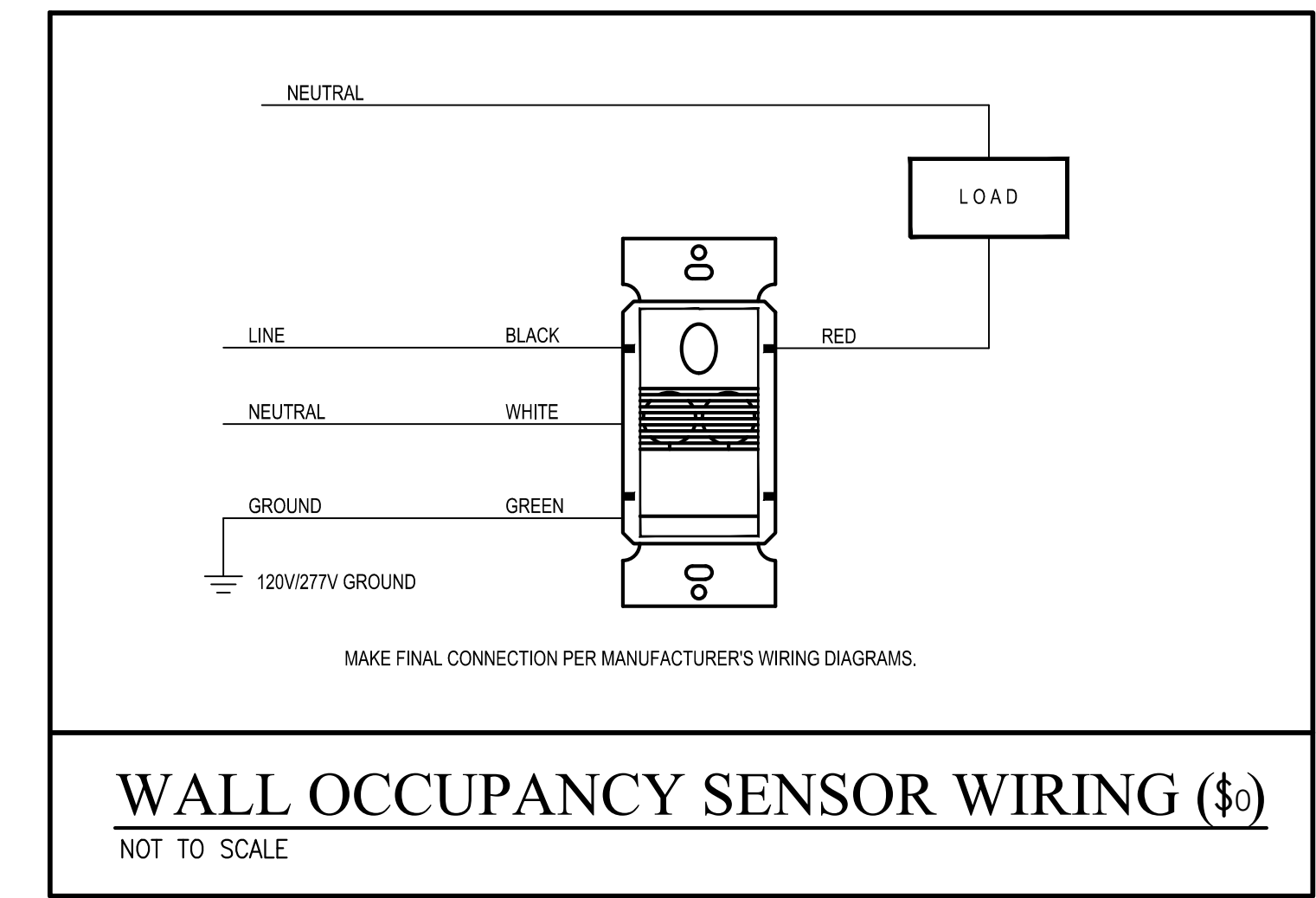
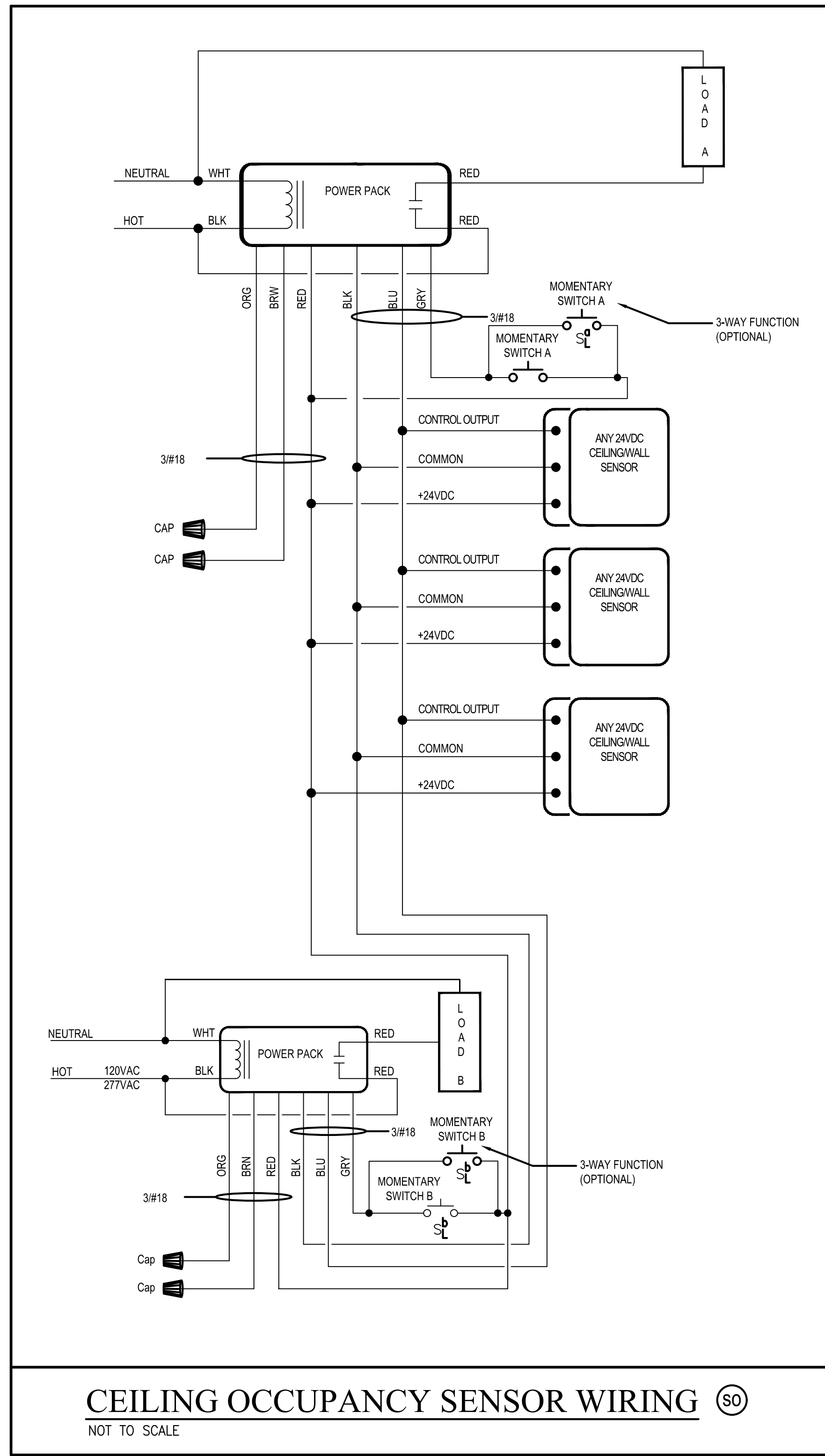
NOT TO SCALE

**POWER RISER KEYED NOTES: #**

1. INCOMING UNDERGROUND ELECTRIC PRIMARY SERVICE FROM UTILITY DEMARCATION POINT IN 4-4" ENCASED IN CONCRETE DUCT BANK. CONTRACTOR TO PROVIDE AND COORDINATE WITH NYSEG FOR LOCATION, DETAILS FOR FINAL INSTALLATION.
2. PROPOSED LOCATION OF 750KVA PAD MOUNTED TRANSFORMER XXXV PRIMARY, 480Y/277V, 3Ø, 4W SECONDARY. FURNISH AND INSTALL BY THE NYSEG UTILITY CO..
3. CONTRACTOR TO PROVIDE 3 SETS OF (4 #500KCMIL, 1 #500KCMIL NEUT./GND.) IN ENCASED CONCRETE DUCT BANK. SEE DETAIL BELOW. COORDINATE TERMINATION LOCATION AND DETAILS WITH NYSEG.
4. PROVIDE 1 #3/0 SERVICE GROUND, SEE SERVICE GROUNDING DETAIL THIS DRAWING.
5. PROVIDE CONCRETE PAD IN COMPLIANCE WITH NYSEG SPECIFICATIONS.
6. PROVIDE 1200A, 480Y/277V, 3Ø, 4W SWITCHBOARD WITH GROUND FAULT PROTECTION AND SURGE PROTECTIVE DEVICE, MOLDED CASE CIRCUIT BREAKERS WITH 100KAIC.
7. PROVIDE 3 SETS OF (4 #500KCMIL, 1 #500KCMIL NEUT./GND.) IN ENCASED CONCRETE DUCT BANK. SEE DETAIL BELOW.
8. PROVIDE 4 #500KCMIL + 1 #2 GROUND IN 4" CONDUIT.
9. PROVIDE 4 #4/0 AWG + 1 #4 GROUND IN 2-1/2" CONDUIT.
10. PROVIDE 75KVA 480V PRIMARY, 208Y/120V SECONDARY DRY TYPE TRANSFORMER.
11. PROVIDE 3 #2 AWG + 1 #8 GROUND IN 1-1/4" CONDUIT.
12. PROVIDE 4 #250 KCMIL + 1 #2 GROUND IN 2-1/2" CONDUIT.
13. PROVIDE #2 SERVICE GROUND, CONNECT TO BUILDING SERVICE GROUNDING SYSTEM.
14. PROVIDE MAIN SERVICE GROUND BAR. REFER TO DETAIL ON THIS DRAWING FOR CONNECTION.
15. PROVIDE 45KVA 480V PRIMARY, 208Y/120V SECONDARY DRY TYPE TRANSFORMER, SUSPENDED ON CONCRETE SLAB. REFER TO DETAIL ON DRAWING E.
16. PROVIDE 3 #4 AWG + 1 #8 GROUND IN 1-1/4" CONDUIT.
17. PROVIDE 4 #1/0 AWG + 1 #6 GROUND IN 2" CONDUIT.
18. PROVIDE #6 SERVICE GROUND, CONNECT TO BUILDING SERVICE GROUNDING SYSTEM.
19. PROVIDE 700KW/875KVA, 480/277V, .8PF, 3 PHASE 4 WIRE DIESEL GENERATOR, WITH SOUNDPROOF AND WEATHERPROOF ENCLOSURE. REFER TO DRAWING E202 FOR ADDITIONAL INFORMATION.
20. PROVIDE 1200A/3P + NEUTRAL, FUSIBLE SAFETY SWITCH, FUSED AT 1000A WITH 100KAIC RATING INSIDE THE GENERATOR ENCLOSURE.
21. PROVIDE 1200A/4P, 600A ATS.
22. PROVIDE 1 #3/0 GROUND, TIE TO GROUND ROD. SEE GROUNDING DETAIL ON THIS DRAWING FOR ADDITIONAL INFORMATION.
23. PROVIDE 3 SETS OF (4 #500KCMIL, 1 #500KCMIL NEUT./GND.) IN ENCASED CONCRETE DUCT BANK. SEE DETAIL BELOW.
24. PROVIDE HEAVY DUTY UNISTRUT RACK FOR TRANSFORMER TO BE SEATED ON AS SHOWN.



- NOTES:**
- (A) COPPER GROUND BUS BAR. PER NEC 250.94.
  - (B) INSULATORS - NEWTON CAT. #3061-4.
  - (C) 5/8" LOCKWASHERS - NEWTON CAT. #3015-B.
  - (D) WALL MOUNTING BRACKET - NEWTON CAT. #A-6056.
  - (E) 5/8" = 11x1" HHCS BOLT - NEWTON CAT. #3012-1.
  - (F) USE APPROPRIATE EXPANSION SHIELDS & BOLTS FOR MOUNTING ON CONCRETE COLUMN.
  - (G) #3/0 GROUND CONDUCTOR TO COLD WATER PIPE. SEE DETAIL ON THIS DRAWING.
  - (H) GROUND CONDUCTOR TO GROUND BUS IN SWITCHBOARD. SEE DETAIL ON THIS DRAWING.
  - (I) TO STEEL BUILDING STRUCTURE.
  - (J) TO BUILDING CONCRETE ENCASED ELECTRODE.



NOTE: PROVIDE NON-METALLIC SPACERS TO MAINTAIN CROSS-SECTIONAL SPACING.

Designed By: NO	Checked By: JAC	Drawn By: JAC	Plot Scale:
Date: 03-01-2023	Project No: 625-2023		

**ELECTRICAL RISER DIAGRAM & DETAILS**

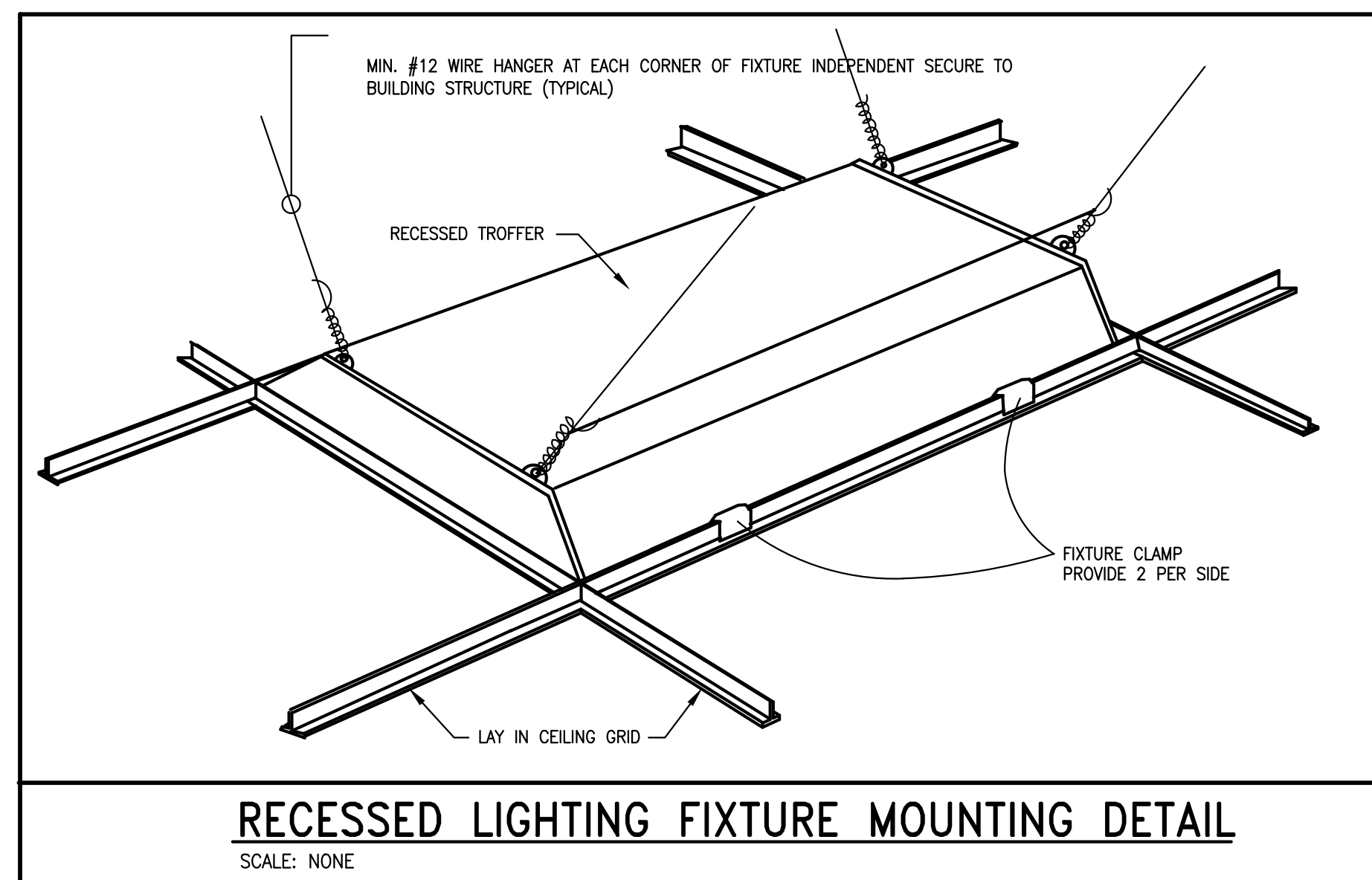
Project Location: WINDSOR HIGHWAY DEPARTMENT  
 174 CHAPEL STREET  
 WINDSOR, NY 13685

Project Name: TOWN OF WINDSOR  
 DEPARTMENT OF PUBLIC WORKS

Drawing Reference Number:  
**E201**  
 OF

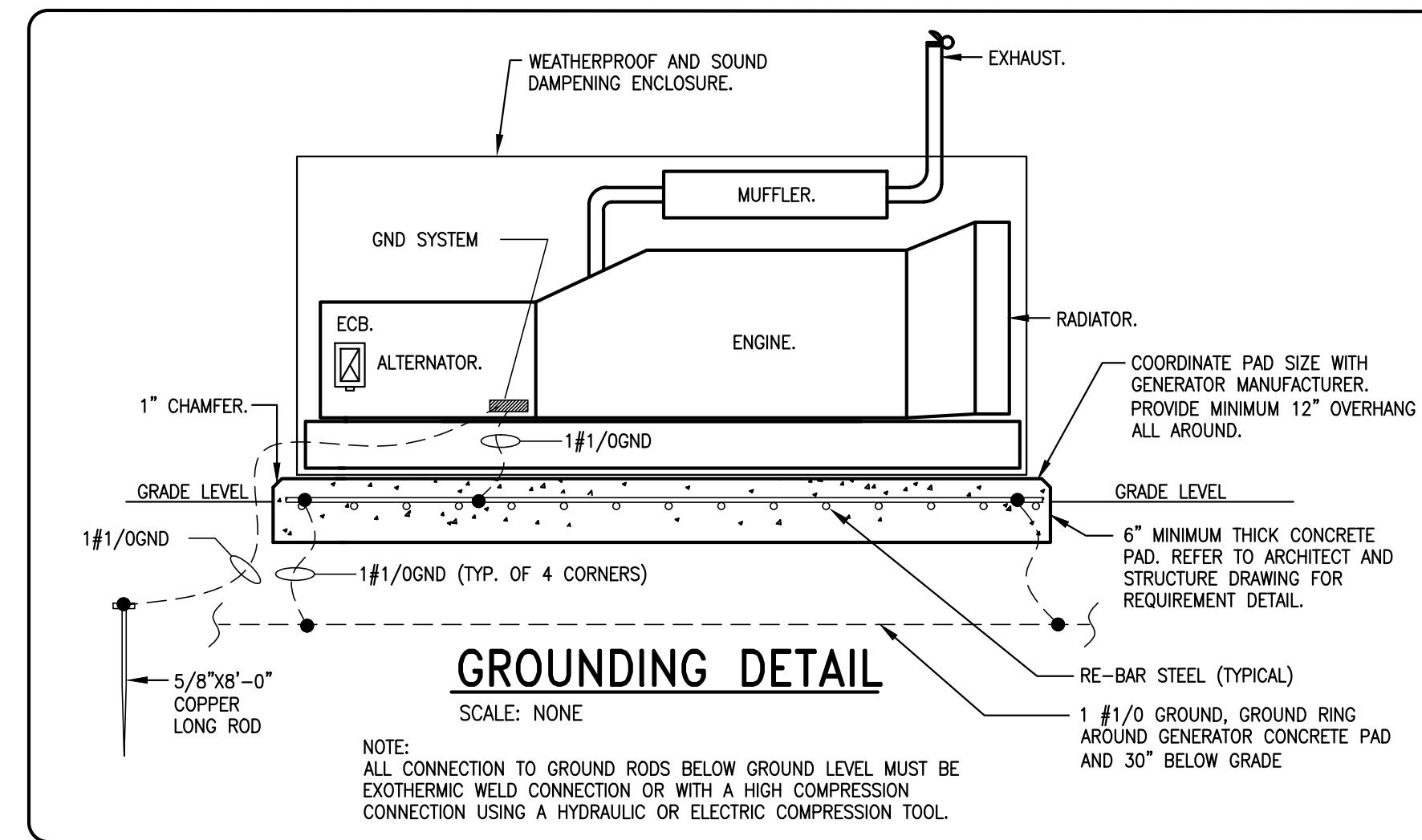
SWITCHBOARD (SWBD)																		
SWITCHBOARD DESIGNATION AND CHARACTERISTICS	MODULE NO.	LOAD DESCRIPTION	LOAD DATA			CIRCUIT BREAKER CHARACTERISTICS					CIRCUIT BREAKER SETTINGS					REMARKS		
			CONNECTED PHASE KVA			DEMAND KVA	FRAME RATING	SENSOR RATING (S)	PLUG RATING (X)	BREAKER KAIC	LONG TIME		SHORT TIME		INSTANTANEOUS PICK UP MULTIPLE OF (X)		SETTING MULTIPLE OF SENSOR	DELAY SECONDS
			A	B	C						CURRENT SETTING (C)	DELAY SECONDS	PICK UP MULTIPLE OF (C)	DELAY SECONDS				
SWBD #1  480Y/277V 3PH, 4W 2000 AMPERES 100kAIC FREE STANDING	1	INCOMING SERVICE				2000		2000										
	2	MAIN				1200		1200	100									
	3	GENERATOR - ATS				1200		1200	100									
	4	PANEL "M"				400		400	100									
	5	PANEL "L" VIA 75KVA TRANSFORMER				400		400	100									
	6	PANEL "H"				225		225	100									
	7	PANEL "G" VIA 45KVA TRANSFORMER				100		70	100									
	8	SERVICE BLDG #1 & #2 VIA 75KVA XFMR				100		90	100									
	9	SPARE																
	10	SPARE																
	11	SPARE																
	12	SPACE																
	13	SPACE																
	14	SPACE																
	15	SPACE																
	16	SPACE																
CONNECTED KVA PER PHASE/DEMAND KVA			0	0	0	0	SCHEDULE EXPLANATORY NOTES											
SUMMARY						(S) = CIRCUIT BREAKER SENSOR AMP RATING												
CONNECTED KVA - ALL PHASES			0 KVA			(X) = RATING PLUG AMPS												
CONNECTED AMPERES @ 480 VOLTS			0 AMPERES			(C) = PICKUP MULTIPLE OF RATING PLUG AMPS (X)												
DEMAND AMPERES			0 AMPERES			DELAY = TIME DELAY AT 600% OF CURRENT SETTING												
DEMAND AMPERES @ 125%			0 AMPERES			FT IN DELAY = TIME DELAY AT 600% OF CURRENT SETTING												
FEEDER SIZE			4W/### AMPERES			FT OUT DELAY = TIME DELAY AT LOWER LIMIT OF BAND												

Department of Public Works - Town of Windsor - Building Load Calculations				
<b>General lighting and receptacle load</b>				
1	Floor area (sf) :	16962		
2	Lighting Load:	16962	* 3	125% = 63607.5 (VA)
3	Receptacle Load:	16962	* 3	= 50886 (VA)
4	Miscellaneous	16962	* 1	= 16962 (VA)
<b>Applying demand load (per 220.44)</b>				
Receptacles Load: First 10KVA @ 100%, Remaining @50% = 30443 (VA)				
Sub total #1 = 111012.5 (VA)				
<b>Mechanical load (per table 220.82(B)(3) and (B)(4))</b>				
AHU-1	21745	* 100%		= 21745 (VA)
HP-1	8310	* 100%		= 8310 (VA)
Exhaust Fans (EF-1 thru EF-5, EF-7, EF-8, EF-9)	3525	* 100%		= 3525 (VA)
Vehicle Exhaust Fans (VEF-1, VEF-2)	3490	* 100%		= 3490 (VA)
Propeller Exhaust Fans (PEF-1, PEF-2)	12632	* 100%		= 12632 (VA)
Ceiling Fans (CF-1, CF2, CF-3)	2000	* 100%		= 2000 (VA)
Heaters (WH-1, Thru WH-5, CEH-1, UH-1, UH-2)	20500	* 100%		= 20500 (VA)
Radiant Heaters (RD-1 thru RD-8)	152000	* 100%		= 152000 (VA)
Floor Radiant Heaters	79776	* 100%		= 79776 (VA)
Sub total #2 = 303978 (VA)				
<b>Plumbing load</b>				
Water Heater (EWH-1)	4000	* 100%		= 4000 (VA)
Sub total #3 = 4000 (VA)				
<b>Equipment load</b>				
Power Wash	103875	* 100%		= 103875 (VA)
Air Compressor	16000	* 100%		= 16000 (VA)
Monorail Hoist	9141	* 100%		= 9141 (VA)
Roll-up Doors (RUD)	16560	* 100%		= 16560 (VA)
Sub total #4 = 145576 (VA)				
Total = Subtotal#1 + Subtotal#2 + Subtotal#3 + Subtotal#4 = 564566.5 (VA)				
<b>Building Service #1 &amp; #2</b>				
	48000	* 100%		= 48000 (VA)
Total connected Load = 612567 (VA)				
Total connected ampacity = 736.80 (A)				
125% Safety Factor (Future Used) = 921.0037 (A)				
The Electrical Service Shall be 1000A, 480Y/277V, 3 phase 4 wire				



PANEL "M" SECTION 1													
LOAD DESCRIPTION	LOAD KVA	BREAKER NOTE	TRIP	CKT #	PHASE KVA			CKT #	BREAKER TRIP	LOAD KVA	LOAD DESCRIPTION		
					A	B	C						
					POLES 42 MIN AIC NOTES VOLTS 480Y/277 VOLTS PHWIRE 3 PHASE4 WIRE (A, B, C, N, EG) MAIN 400 AMPS MLO - THROUGH-FEED LUGS NEUTRAL 100 %								
MOUNTING SURFACE LOCATION ELEC. ROOM FED FROM SEE RISER													
TOTAL CONNECTED KVA PER PHASE													
LOAD COMPUTATIONS AND MINIMUM FEEDER AMPACITY - INCLUDES LOADS IN SECTION 2													
CATEGORY	CONNECTED KVA	DEMAND FACTOR	DEMAND KVA	DEMAND AMPS	MULTIPLIER	MINIMUM AMPACITY							
LIGHTING		1.00			1.25								
RECEPTACLES		NEC TABLE 220.44			1.00								
KITCHEN EQUIPMENT		0.65			1.00								
ELECTRICAL HEATING EQUIP		1.00			1.25								
WATER HEATER		1.00			1.00								
OTHER LOADS		1.00			1.00								
TOTAL CONNECTED - KVA													
TOTAL DEMAND AMPS													
TOTAL MINIMUM FEEDER AMPACITY													
NOTES													

PANEL "L" SECTION 1													
LOAD DESCRIPTION	LOAD KVA	BREAKER NOTE	TRIP	CKT #	PHASE KVA			CKT #	BREAKER TRIP	LOAD KVA	LOAD DESCRIPTION		
					A	B	C						
					POLES 42 MIN AIC NOTES VOLTS 208Y/120 VOLTS PHWIRE 3 PHASE4 WIRE (A, B, C, N, EG) MAIN 400 AMPS MLO - THROUGH-FEED LUGS NEUTRAL 100 %								
MOUNTING SURFACE LOCATION ELEC. ROOM FED FROM SEE RISER													
TOTAL CONNECTED KVA PER PHASE													
LOAD COMPUTATIONS AND MINIMUM FEEDER AMPACITY - INCLUDES LOADS IN SECTION 2													
CATEGORY	CONNECTED KVA	DEMAND FACTOR	DEMAND KVA	DEMAND AMPS	MULTIPLIER	MINIMUM AMPACITY							
LIGHTING		1.00			1.25								
RECEPTACLES		NEC TABLE 220.44			1.00								
KITCHEN EQUIPMENT		0.65			1.00								
ELECTRICAL HEATING EQUIP		1.00			1.25								
WATER HEATER		1.00			1.25								
OTHER LOADS		1.00			1.00								
TOTAL CONNECTED - KVA													
TOTAL DEMAND AMPS													
TOTAL MINIMUM FEEDER AMPACITY													
NOTES													



PANEL "M" SECTION 2													
LOAD DESCRIPTION	LOAD KVA	BREAKER NOTE	TRIP	CKT #	PHASE KVA			CKT #	BREAKER TRIP	LOAD KVA	LOAD DESCRIPTION		
					A	B	C						
					POLES 42 MIN AIC NOTES VOLTS 480Y/277 VOLTS PHWIRE 3 PHASE4 WIRE (A, B, C, N, EG) MAIN 400 AMPS MLO NEUTRAL 100 %								
MOUNTING SURFACE LOCATION ELEC. ROOM FED FROM SEE RISER													
TOTAL CONNECTED KVA PER PHASE													
LOAD COMPUTATIONS AND MINIMUM FEEDER AMPACITY - SEE SECTION 1													
CATEGORY	CONNECTED KVA	DEMAND FACTOR	DEMAND KVA	DEMAND AMPS	MULTIPLIER	MINIMUM AMPACITY							
LIGHTING		1.00			1.25								
RECEPTACLES		NEC TABLE 220.44			1.00								
KITCHEN EQUIPMENT		0.65			1.00								
ELECTRICAL HEATING EQUIP		1.00			1.25								
WATER HEATER		1.00			1.00								
OTHER LOADS		1.00			1.00								
TOTAL CONNECTED - KVA													
TOTAL DEMAND AMPS													
TOTAL MINIMUM FEEDER AMPACITY													
NOTES													

PANEL "L" SECTION 2													
LOAD DESCRIPTION	LOAD KVA	BREAKER NOTE	TRIP	CKT #	PHASE KVA			CKT #	BREAKER TRIP	LOAD KVA	LOAD DESCRIPTION		
					A	B	C						
					POLES 42 MIN AIC NOTES VOLTS 208Y/120 VOLTS PHWIRE 3 PHASE4 WIRE (A, B, C, N, EG) MAIN 400 AMPS MLO NEUTRAL 100 %								
MOUNTING SURFACE LOCATION ELEC. ROOM FED FROM SEE RISER													
TOTAL CONNECTED KVA PER PHASE													
LOAD COMPUTATIONS AND MINIMUM FEEDER AMPACITY - SEE SECTION 1													
CATEGORY	CONNECTED KVA	DEMAND FACTOR	DEMAND KVA	DEMAND AMPS	MULTIPLIER	MINIMUM AMPACITY							
LIGHTING		1.00			1.25								
RECEPTACLES		NEC TABLE 220.44			1.00								
KITCHEN EQUIPMENT		0.65			1.00								
ELECTRICAL HEATING EQUIP		1.00			1.25								
WATER HEATER		1.00			1.25								
OTHER LOADS		1.00			1.00								
TOTAL CONNECTED - KVA													
TOTAL DEMAND AMPS													
TOTAL MINIMUM FEEDER AMPACITY													
NOTES													



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Designed By: [Blank]  
Drawn By: [Blank]  
Checked By: [Blank]  
Date: 03-01-2023  
Project No: 625-2023  
Plot Scale: [Blank]

**ELECTRICAL RISER DIAGRAMS & SCHEDULES**

Project Location: WINDSOR HIGHWAY DEPARTMENT  
174 CHAPEL STREET  
WINDSOR, NY 13685  
Project Name: TOWN OF WINDSOR DEPARTMENT OF PUBLIC WORKS

Drawing Reference Number: **E202**  
OF

## PLUMBING NOTES:

- THE INTENT OF THESE DRAWINGS IS TO PROVIDE COMPLETE AND PROPERLY FUNCTIONING PLUMBING SYSTEMS. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO ACHIEVE SUCH ENDS. CONTRACTOR IS OBLIGATED TO EXAMINE PLANS AND VISIT THE SITE BEFORE THE BID. ANY OBSERVED FAULTS OR AMBIGUITY IN THIS PLAN SET SHALL BE CALLED TO THE ENGINEER IMMEDIATELY, SO THAT THE MATTER MAY BE RESOLVED PRIOR TO THE SUBMISSION OF THE BUDGET PROPOSAL. BY SUBMISSION OF BID, THE CONTRACTOR SHALL ACKNOWLEDGE ACCEPTANCE OF THIS PLAN SET AS AN ADEQUATE DEFINITION OF THE SCOPE OF WORK, AND EXTRA COST CLAIMS BASED ON INADEQUACY OF PLANS WILL NOT BE CONSIDERED. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION OF DRAWINGS AND TO PROVIDE THE COMPLETE AND FUNCTIONING SYSTEM.
- ALL WORK ON THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS. ALL EQUIPMENT SHALL BE UL LISTED.
- THESE DRAWINGS ARE SCHEMATIC AND INTENDED TO DEPICT THE GENERAL LOCATION OF PLUMBING SYSTEM COMPONENTS. CONSULT ARCHITECTURAL PLANS FOR PROPER DIMENSIONS AND LOCATION OF EQUIPMENT.
- CONTRACTOR BY SHALL OBTAIN AND PAY FOR PERMITS AND ARRANGE FOR INSPECTIONS BY LOCAL AUTHORITIES HAVING JURISDICTION WITH THE EXCEPTION OF THE BUILDING PERMIT.
- THESE DRAWINGS ARE SCHEMATIC AND INTENDED TO DEPICT THE GENERAL LOCATION OF PLUMBING SYSTEM COMPONENTS. CONSULT ARCHITECTURAL PLANS FOR PROPER DIMENSIONS AND LOCATION OF EQUIPMENT.
- THE PLUMBING WORK SHALL BE PERFORMED IN A WORKMANLIKE FASHION. WORK SHALL BE REJECTED IF, IN OPINION OF THE OWNER'S REPRESENTATIVE, IT IS NOT INSTALLED IN A PROPER MANNER.
- COORDINATE ALL PLUMBING WORK THAT REQUIRES ELECTRICAL POWER WITH THE BUILDING POWER TYPE AND AVAILABILITY.
- VERIFY THE LOCATION, INVERT ELEVATION AND DIRECTION OF FLOW OF ALL PLUMBING PIPING BEFORE THE INSTALLATION OF NEW WORK.
- DOMESTIC WATER PIPING SHALL BE COPPER TUBING, TYPE-L HARD TEMPER, WITH WROUGHT COPPER SOLDER JOINT FITTINGS AND 95-5 SOLDER.
- SANITARY SEWER DRAINAGE PIPING SHALL BE PVC TYPE (SCHEDULE 40) DWV WITH SOLVENT CEMENTED, DWV SOCKET TYPE FITTINGS. PVC SHALL NOT BE USED IN PLENUM CEILINGS. INTERIOR SANITARY WASTE PIPING SHALL NOT SLOPE LESS THAN 1/4" PER FOOT, UNLESS AS NOTED ELSEWHERE. MINIMUM SANITARY LINE BELOW GRADE SHALL BE 2" IN DIAMETER.
- ALL SERVICE VALVES ON THIS PROJECT SHALL BE BALL TYPE.
- TEST AND DISINFECT DOMESTIC WATER SYSTEMS IN ACCORDANCE WITH APPLICABLE CODES.
- INSULATION:  
PIPE INSULATION SHALL BE MOLDED GLASS FIBER, APPROXIMATELY 3-1/2 POUND DENSITY, WITH A K FACTOR OF .023 AT 75° F EQUAL TO JOHN-MANVILLE "FLAME SAFE AP-T". WATER HEATER JACKET SHALL BE KRAFT BONDED TO ALUMINUM FOIL, REINFORCED WITH FIBERGLASS YARN AND HAVING A PRESSURE SENSITIVE FITTING & VALVES SHALL BE COVERED WITH FIBERGLASS INSERT & WITH FIBER PRE-MOLDED PVC COVERS SIMILAR TO JOHN-MANVILLE "ZEZTON".  
INSULATION SHALL BE APPLIED IN THE FOLLOWING THICKNESSES:  
DOMESTIC COLD WATER 1" THICK  
DOMESTIC HOT WATER 1" THICK  
HOT WATER RECIRCULATION 1" THICK
- IDENTIFY ALL THE PLUMBING PIPING.
- HANGERS AND SUPPORTS, SHALL BE PER MSS-58 FOR ACCEPTABLE TYPES, MSS-69 FOR INSTALLATION AND SPACING.
- PIPING PENETRATIONS: ALL MASONRY PENETRATIONS SHALL BE CORE-DRILLED, WET WHERE POSSIBLE. OBTAIN OWNER'S PERMISSION PRIOR TO DRILLING. X-RAY FLOOR SLAB PRIOR TO DRILLING FOR ALL CABLE TENSIONED SLABS. DO NOT CUT STRUCTURAL MEMBERS.
- PROVIDE PIPE SLEEVES FOR ALL FLOOR AND MASONRY WALL PENETRATIONS. PACK VOID SPACE WITH APPROVED FLEXIBLE FIREPROOF SEALANT.
- PROVIDE DIELECTRIC FITTING BETWEEN CONNECTION OF DISSIMILAR MATERIALS.
- VALVES:  
A. PIPING UP 2" SHALL BE BALL-TYPE SHUT-OFF VALVES, 2-PIECE.  
B. CHECK VALVE  
C. BACKFLOW PREVENTERS - ALL DEVICES WHICH CONTROL, UTILIZE OR OTHERWISE CONTACT THE POTABLE DOMESTIC WATER SUPPLY SHALL BE EQUIPPED WITH APPROPRIATE BACKFLOW PREVENTION, IN ACCORDANCE WITH LOCAL REQUIREMENTS.
- SUBMITTALS  
A. SUBMIT CONTROL WIRING DIAGRAMS FOR ALL EQUIPMENT INCLUDING INTERLOCKS WITH OTHER DEVICES AS DESCRIBED IN CONTROL SEQUENCES OR AS OTHERWISE INDICATED.  
B. SUBMIT DRAWINGS OF ALL SLAB PENETRATIONS FOR OWNER/ARCHITECT/ENGINEER REVIEW AND APPROVAL PRIOR TO PROCEEDING WITH THE PENETRATION INSTALLATION. ALL FLOOR PENETRATIONS SHALL BE CORE-DRILLED AND X-RAYED PRIOR TO WORK.  
C. SUBMIT A LIST OF ANY PRODUCT SUBSTITUTIONS, SUBSTITUTED EQUIPMENT DATA, AND THE ASSOCIATED COST SAVINGS AT THE TIME OF BID SUBMISSION. SUBSTITUTIONS AFTER THE CONTRACT IS AWARDED WILL NOT BE ACCEPTED  
D. IMMEDIATELY UPON PROJECT COMPLETION, PREPARE AND SUBMIT AS-BUILT DRAWINGS IN THE FORM OF MARKED-UP CONSTRUCTION DOCUMENTS DETAILING THE AS-BUILT CONDITIONS AND ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS. INCLUDE ALL EQUIPMENT SUBSTITUTIONS AND MODIFICATIONS REQUIRED TO ACCOMMODATE THE ACCOMMODATE THE SUBSTITUTIONS.  
E. A MINIMUM OF TWO WEEKS TIME WILL BE REQUIRED FOR A REVIEW OF EACH SUBMITTAL BY THE ARCHITECT AND ENGINEER. INVOLVED SUBMITTALS SUCH AS CONTROLS MAY REQUIRE ADDITIONAL TIME TO REVIEW. CONTRACTOR IS RESPONSIBLE FOR ALLOCATING SUFFICIENT TIME IN THE CONSTRUCTION SCHEDULE TO OBTAIN FINAL APPROVAL OF SUBMITTALS, INCLUDING TIME FOR SUBSEQUENT REVIEWS OF SUBMITTALS NOT INITIALLY APPROVED. ANY CLAIMS FOR DELAYS RELATED TO SUBMITTAL REVIEW WILL NOT BE ACCEPTED.
- PIPE INSTALLATION MUST NEVER PROJECT INTO THE AREA DEFINED BY THE FIRE RATED ASSEMBLY.
- ALL PIPING MUST BE RUN WITHIN THE INTERSTITIAL SPACES AND NOT PROJECT INTO THE FINISHED SPACE. HOWEVER, IF IT BECOMES NECESSARY TO HAVE A PIPE PROJECT INTO A FINISHED SPACE IT MUST BE CONCEALED WITH A CHASE BUILT OF SIMILAR MATERIALS TO THAT OF THE ADJACENT FINISHED MATERIALS. IF THIS APPEARS TO BECOME NECESSARY, IT SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER, BEFORE IMPLEMENTATION TO DETERMINE IF REROUTING IS POSSIBLE.
- PLUMBING CONTRACTOR SHALL THOROUGHLY CLEAN HIS WORK AREA DAILY OR AS REQUESTED BY THE GENERAL CONTRACTOR. PLUMBING CONTRACTOR SHALL ALSO REMOVE HIS TRASH AND DEBRIS AFTER THE COMPLETION OF THE WORK.
- PROJECT CLOSEOUT:  
A. FURNISH "AS-BUILT" DRAWINGS.  
B. PROVIDE DOMESTIC WATER STERILIZATION CERTIFICATES.  
C. PROVIDE OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT.  
D. PROVIDE WARRANTY CERTIFICATES FOR ALL EQUIPMENT.  
E. PROVIDE REQUIRED SPARE PARTS.  
F. PROVIDE SYSTEM DEMONSTRATION.  
G. PROVIDE INSTRUCTION TO OWNER AND DESIGNATED PERSONNEL, DEMONSTRATING TYPICAL MAINTENANCE AND REPAIR PROCEDURES.

## SPECIAL NOTES:

- DOMESTIC WATER SYSTEM SHALL INCLUDE PIPING, FITTINGS, PIPING ACCESSORIES, VALVES, VALVE BOXES, HANGERS, SUPPORTS, BACKFLOW PREVENTERS, VACUUM BREAKERS, WATER HEATER, ETC.
- SANITARY SYSTEM SHALL INCLUDE PIPING, FIXTURES, FITTINGS, PIPING ACCESSORIES, HANGERS, SUPPORTS, ETC.
- ALL EQUIPMENT & THE SYSTEMS SHALL BE PROVIDED IN CONFORMANCE WITH IBC, IPC, AGA, PDI, MANUFACTURER'S RECOMMENDATIONS, STATE, LOCAL CODES AND ORDINANCES.
- ALL EXPOSED PIPING SHALL BE CHROME-PLATED.
- FIXTURES INTENDED FOR USE BY HANDICAPPED SHALL BE IN COMPLIANCE WITH ADA REQUIREMENTS.
- PROVIDE BACK FLOW PREVENTION IN ACCORDANCE WITH LOCAL REQUIREMENTS.
- PROVIDE WATER CONNECTIONS TO ALL FLOOR DRAINS.
- PROVIDE COMPRESSED AIR SYSTEM SHALL INCLUDE PIPING, FITTINGS, PIPING ACCESSORIES, HANGERS, SUPPORTS & FINAL CONNECTIONS TO EQUIPMENT PROVIDED BY MECHANICAL CONTRACTOR. COMPRESSED AIR PIPING SHALL BE SCHEDULE 40 BLACK STEEL W/ SCREW PIPE JOINTS. TEST PIPING W/ COMPRESSED AIR AND INSTALLATION SHALL BE IN FULL COMPLIANCE WITH NFPA 54.

## PLUMBING EQUIPMENT:

- THERMOSTATIC MIXING VALVE (TMV): LAWLER SERIES 310-SC1, UNIT #72246; 1/2" STOP & CHECK VALVE INLETS, 3/4" OUTLET, 10 GPM @ 30 PSI DROP.
- TEMPERING VALVE (TV): LAWLER MODEL TMM-1070, UNIT #86800; POINT OF USE, INTEGRAL BACK FLOW CHECKS, 3/8" CONNECTIONS, 1.5 GPM @ 40 PSI DROP. SHALL BE COMPLY WITH ASSE 1070.
- CLEANOUTS: CLEANOUTS SHALL BE J.R. SMITH # 4020 FLUSH FLOOR CLEANOUTS WITH BRONZE TOP. PROVIDE SQUARE TOP FOR CERAMIC TILE FLOORS, CARPET CAP FOR CARPETED AREAS.
- ESCUTCHEONS: PROVIDE NICKLEBRASS OR CHROME PLATED ESCUTCHEONS ON ALL EXPOSED PIPING WHEN THEY PASS THROUGH WALLS.
- FLOOR CLEANOUTS: CLEANOUTS SHALL BE J.R. SMITH # 4020 FLUSH FLOOR CLEANOUTS WITH BRONZE TOP. PROVIDE SQUARE TOP FOR CERAMIC TILE FLOORS, CARPET CAP FOR CARPETED AREAS.
- TRAP PRIMER VALVE: WATTS SERIES #T20, WATER SAVING DESIGN, ACTUATED BY FLUCTUATING LINE PRESSURE, BUILT-IN AIR GAP, 1/2" CONNECTIONS.
- BACKFLOW PREVENTERS (BFP) SHALL BE OF ASSE STANDARD AND HAVE A WORKING PRESSURE OF 150 PSIG MINIMUM, EXCEPT WHERE INDICATED OTHERWISE. BFP OF SIZE 2" OR SMALLER SHALL BE MADE OF BRONZE BODY WITH THREADED ENDS; INTERIOR COMPONENTS SHALL BE CORROSION RESISTANT; EXTERIOR FINISH SHALL BE POLISHED CHROME PLATE WHEN USED IN CHROME PLATE PIPING SYSTEM; AND SHALL HAVE STRAINER WHERE INDICATED.
- AIR COMPRESSOR AND POWER WASHER: OWNER FURNISHED AND CONTRACTOR SHALL INSTALLED. FOLLOW THE MANUFACTURER'S INSTRUCTION FOR PROPER INSTALLATION AND SYSTEM OPERATION.
- COMPRESSED AIR HOSE REELS: ASSEMBLY, MANUFACTURER-LINCOLN MODEL # 85063, WALL MOUNTED.
- WATER HEATER (WH): ELECTRIC WATER HEATER AO DURA POWER MODEL DEL-10. 10 GALLON STORAGE CAPACITY, 4.0 KW, 16 GPH RECOVERY RATE AT 100°F RISE, 277V/1Ø/60HZ. 1 NSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.
- HOT WATER RECIRCULATION PUMP(HWC-1): GROUNDFOSS MODEL UPS 15-42, 1/25 HP, 115V, 1Ø, 60HZ, 2650 RPM, 1" FLANGE, 2 GPM @ 15 FEET HEAD.

## SPRINKLER SYSTEM SPECIFICATIONS:

- THIS PROJECT SHALL HAVE WET PIPE SPRINKLER SYSTEMS DESIGNED IN ACCORDANCE WITH NFPA 13, IBC'S REQUIREMENTS AND LOCAL CODES. PROVIDE NEW SYSTEM AND COORDINATE SPRINKLER HEADS SO THAT NO HEADS ARE LOCATED WITHIN THE WALLS AND FULL SPRINKLER COVERAGE IS MAINTAINED.
- SPRINKLER CONTRACTOR SHALL PREPARE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS FOR THE ARCHITECT'S AND GENERAL CONTRACTOR'S REVIEW. THE SPRINKLER CONTRACTOR SHALL OBTAIN CURRENT FLOW TEST INFORMATION. PROVIDE FIRE PUMP IF WATER PRESSURE IS NOT ADEQUATE. AFTER THE REVISION OF SPRINKLER DRAWINGS IN COMPLIANCE WITH ARCHITECT'S COMMENTS. SUBMIT AN APPROVED STAMPED COPY OF SPRINKLER PLAN BEARING THE APPROVAL OF THE FIRE MARSHAL.
- ALL MATERIALS AND INSTALLATIONS SHALL CONFIRM TO THE REQUIREMENTS OF NFPA, IBC AND REQUIREMENTS OF OTHER APPLICABLE LOCAL CODES.
- SPRINKLER PIPING SHALL BE CONCEALED IN BULKHEADS OR ABOVE THE CEILING. COORDINATE THE INSTALLATION OF THE SPRINKLER PIPING WITH THE ARCHITECT, GENERAL CONTRACTOR AND ALL OTHER TRADES. DO NOT PAINT SPRINKLER HEADS.
- A 24 HOUR PRESSURE TEST SHALL BE PERFORMED IN FULL COMPLIANCE WITH APPLICABLE CODES AND IN THE PRESENCE OF OWNER'S UNTIL PROVEN SOUND. USE OF STOP LEAK ADDITIVES STRICTLY PROHIBITED.
- SPRINKLER PIPING SHALL BE SCHEDULE 40 BLACK STEEL WITH GROOVED FITTINGS.
- PROVIDE AUTO-DIALING INTERLOCK WITH <sup>4</sup>/<sub>2</sub> SECURITY SYSTEM COMPANY TO INFORM FIRE DEPARTMENT WHEN SPRINKLER SYSTEM IS ACTIVATED.
- SPRINKLERS:  
A. IN AREA WITHOUT FINISHED CEILINGS, EXPOSED SPRINKLERS SHALL BE ROUGH BRONZE FINISH UPRIGHT TYPE, RELIABLE SPRINKLER CO. MODEL G UPRIGHT, OR APPROVED EQUAL.  
B. IN AREAS WITH FINISHED CEILINGS, SPRINKLERS SHALL BE THE RECESSED TYPE CHROME PLATED WITH 2-PIECE CHROME ESCUTCHEON, RELIABLE SPRINKLER CO. MODEL G PENDANT OR APPROVED EQUAL.
- PROVIDE APPROPRIATE SPARE SPRINKLERS AND WRENCHES IN STEEL STORAGE 9. CABINET IN COMPLIANCE WITH NFPA 13.

## PLUMBING FIXTURE SCHEDULE

NO.	DESCRIPTION	W	V	CW	HW	MANUFACTURER AND MODEL BASIS OF DESIGN	REMARKS
WC-1	ACCESSIBLE TANK TYPE WATER CLOSET	3	1.5	1/2	---	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	1
LAV-1	ACCESSIBLE WALL HUNG LAVATORY	1.5	1.5	1/2	1/2	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	1,2,3,4
SK-1	ACCESSIBLE SINGLE BOWL S/S SINK	1.5	1.5	1/2	1/2	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	1,3
DF	DRINKING FOUNTAIN	1.5	1.5	1/2	---	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	1,2
MOP-1	MOP BASIN	3	1.5	1/2	1/2	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	
HB	HOSE BIBS WITH VACUUM BREAKER	---	---	3/4	---	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	
NFHB	NON-FREEZE HOSE BIBS	---	---	3/4	---	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	
FCO	FLOOR CLEANOUT	X	---	---	---	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	6
COTG	CLEANOUT TO GRADE	4	---	---	---	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	5
FD	FLOOR DRAIN	2	1.5	---	---	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	6
TV	TEMPERING VALVE	---	---	1/2	1/2	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	4
MV	MIXING VALVE	---	---	1/2	1/2	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	
EEWS	EMERGENCY EYEWASH STATION	---	---	---	---	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	SELF-CONTAINED
RIM	REFRIGERATOR ICE MAKER BOX	---	---	3/8	---	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	2
TD-1	TRENCH DRAIN	4	---	---	---	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	
TD-2	TRENCH DRAIN	4	---	---	---	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	
TD-3	TRENCH DRAIN	4	---	---	---	REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATION	

### REMARKS:

- INSTALL FIXTURES IN ACCORDANCE WITH APPLICABLE CODE/STANDARDS.
- PROVIDE PROPER ACCESSORIES FOR WALL THICKNESS CONSTRUCTION
- PROVIDE PIPE INSULATION KIT, TRUEBRO MODEL 105W OR EQUAL.
- PROVIDE TEMPERING VALVE AT FIXTURES AS INDICATED ON PLAN OR RISERS.
- MOUNT IN IC ROUND CONCRETE RING FLUSH W/ PAVEMENT OR GRADE.
- SIZE TO MATCH SEWER SERVED.
- INDIRECT WASTE TO FLOOR DRAIN

### NOTES:

- PROVIDE POINT-OF-USE THERMOSTATIC MIXING VALVE, AND SET HOT WATER OUTLET TO 95°F.
- PROVIDE TEMPERING VALVE FOR ALL LAVATORY. THE SET POINT OF THE TEMPERING VALVE IS 105°F.

## LEGEND

----	SANITARY PIPE
----	VENT PIPE
----	DOMESTIC COLD WATER PIPE
----	DOMESTIC HOT WATER PIPE
---	EXISTING PIPING
ST	STORM PIPE
+	CLEAN OUT WATER HAMMER ARRESTOR (P.D.I.)
+	PIPE UP
+	PIPE DOWN
+	SHUT-OFF GATE VALVE, VALVE IN VERTICAL
+	GAS COCK
+	PIPE UNION
+	FLOOR DRAIN
+	COMPRESSED AIR PIPING
+	OIL PIPING
+	CHECK VALVE
+	BACK FLOW PREVENTOR
+	BALL OR GATE VALVE
+	CHECK VALVE
+	HOSE REEL/COMPRESSED AIR DROP
+	HYDRAULIC FLUID (AW-46)
+	HOSE BIB (INTERIOR)
+	OIL (15W-40)
+	WATER (1"Ø)

## ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
BFP	BACKFLOW PREVENTER
CA	COMPRESSED AIR
CAP	CAPACITY
CONN	CONNECTION
CO	CLEANOUT
CW	COLD WATER
DFU	DRAINAGE FIXTURE UNIT
DN	DOWN
DSB	DOWNSPOUT BOOT
E.C.O	EXTERIOR CLEAN OUT
EW	ELECTRIC WATER HEATER
FD	FLOOR DRAIN
F.C.O	FLOOR CLEAN OUT
FS	FLOOR SINK
GAL	GALLONS
G.C.O	GRADE CLEAN OUT
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HD	HUB DRAIN
HS	HAND SINK
HW	HOT WATER
IW	INLET WASTE
KS	KITCHEN SINK
LAV	LAVATORY
MS	MOP SINK
NFHB	NON-FREEZE HOSE BIBB
PSI	POUNDS PER SQUARE INCH
RD	ROOF DRAIN
SAN	SANITARY
SFU	SUPPLY FIXTURE UNIT
SK	SINK
SS	SERVICE SINK
TD	TRENCH DRAIN
TV	TEMPERING VALVE
TW	TEMPERED WATER
TWH	TANKLESS WATER HEATER
TYP	TYPICAL
V	VENT
VTR	VENT THRU ROOF
WH	WATER HEATER
WC	WATER CLOSET



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Designed by: CU  
Drawn by: CU  
Date: 03-01-2023  
Project No.: 625-2023

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

**PLUMBING COVER SHEET**

Project Location: WINDSOR HIGHWAY DEPARTMENT  
174 CHAPEL STREET  
WINDSOR, NY 13665  
Project Name: TOWN OF WINDSOR  
DEPARTMENT OF PUBLIC WORKS

Drawing Reference Number:  
**P001**  
OF



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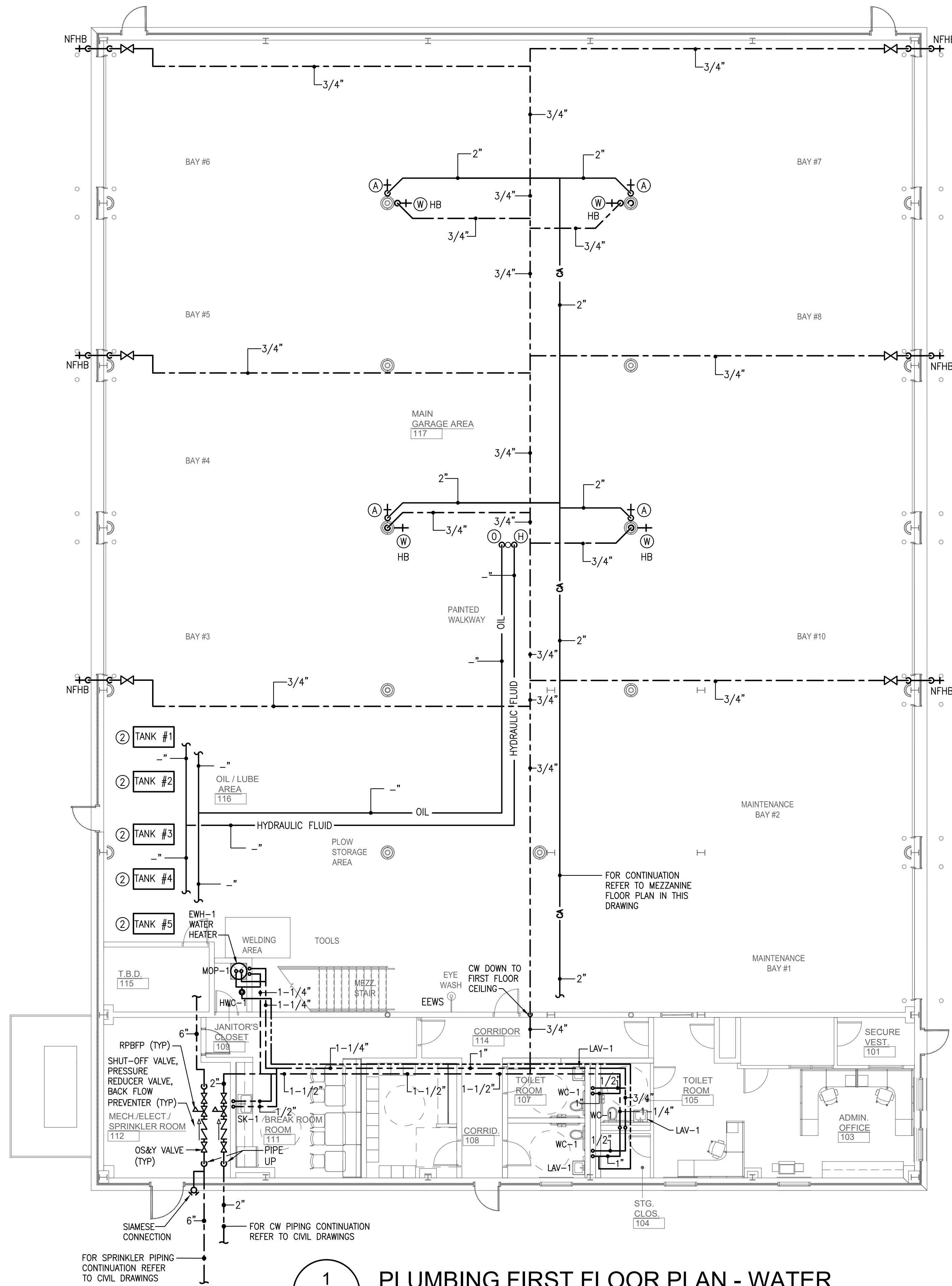
Designed by: **M**  
 Drawn by: **COU**  
 Checked by: **AK**  
 Date: 03-01-2023  
 Project No.: 625-2023  
 Plot Scale: **AS NOTED**

**PLUMBING FLOOR PLANS - WATER**

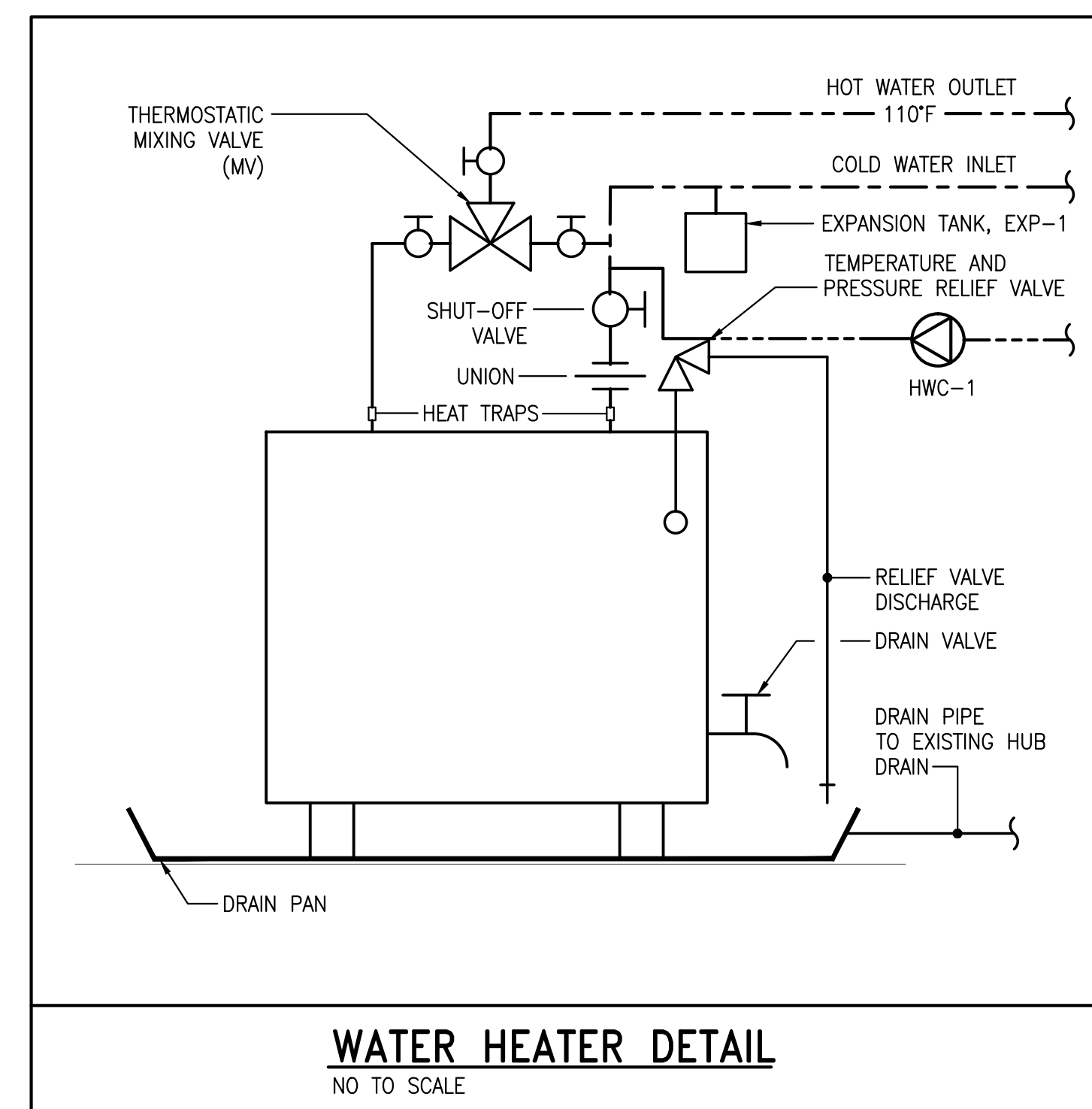
Project Location: WINDSOR HIGHWAY DEPARTMENT  
 174 CHAPEL STREET  
 WINDSOR, NY 13665  
 Project Name: TOWN OF WINDSOR  
 DEPARTMENT OF PUBLIC WORKS

Drawing Reference Number:  
**P101**  
 OF

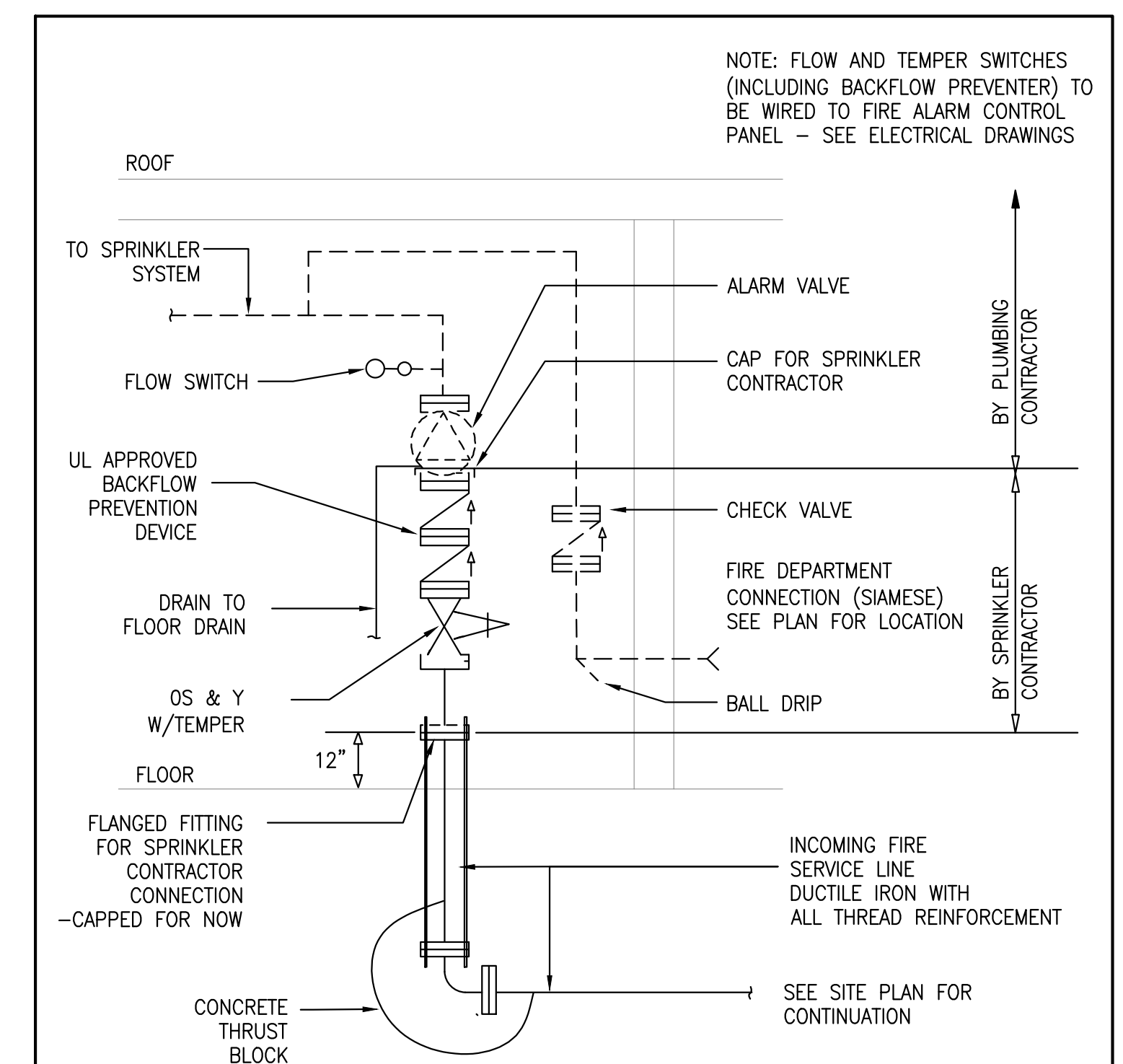
Drawing Reference Number:  
**P101**  
 OF



**1 PLUMBING FIRST FLOOR PLAN - WATER**  
 SCALE: 1/8" = 1'-0"  
**P101**

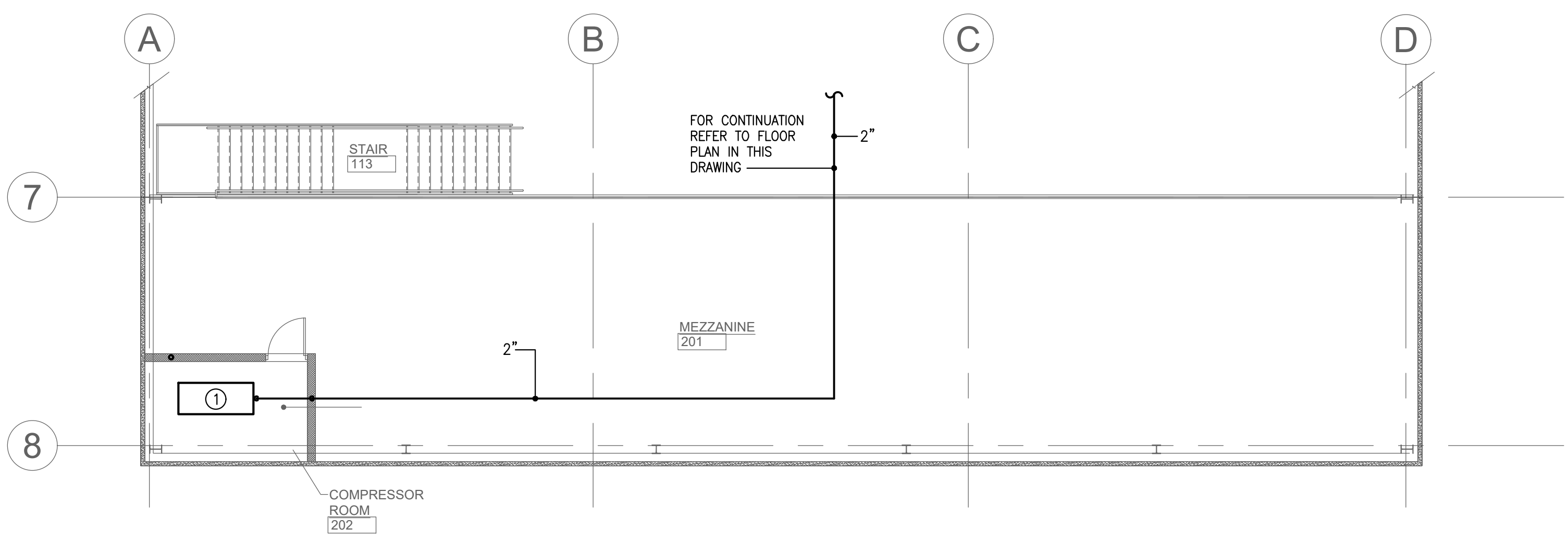


**WATER HEATER DETAIL**  
 NO TO SCALE



**SPRINKLER SERVICE RISER DIAGRAM**  
 NO TO SCALE

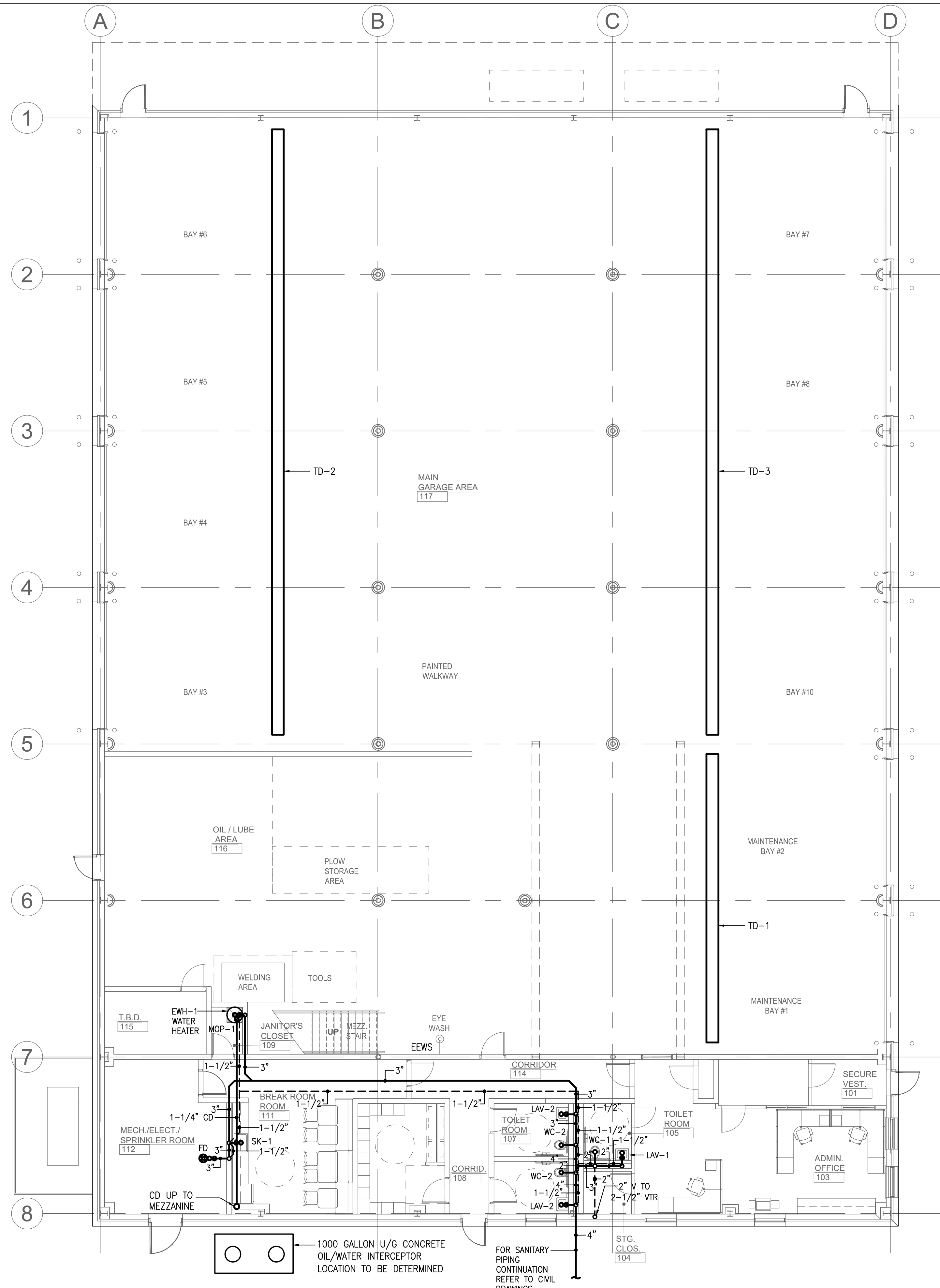
- KEYED NOTES**
- 1 PROVIDE AIR COMPRESSOR. INSTALL COMPRESSOR IN FULL COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE AIR-DRYER.
  - 2 PROVIDE ABOVE GROUND OIL-TANK. PROVIDE TANK SUPPORTS. SECURE THE TANK ON FLOOR. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATION. INSTALL THE TANK IN FULL COMPLIANCE WITH MANUFACTURER'S RECOMMENDATION. TANK SELECTION BY OWNER.(TYPICAL).



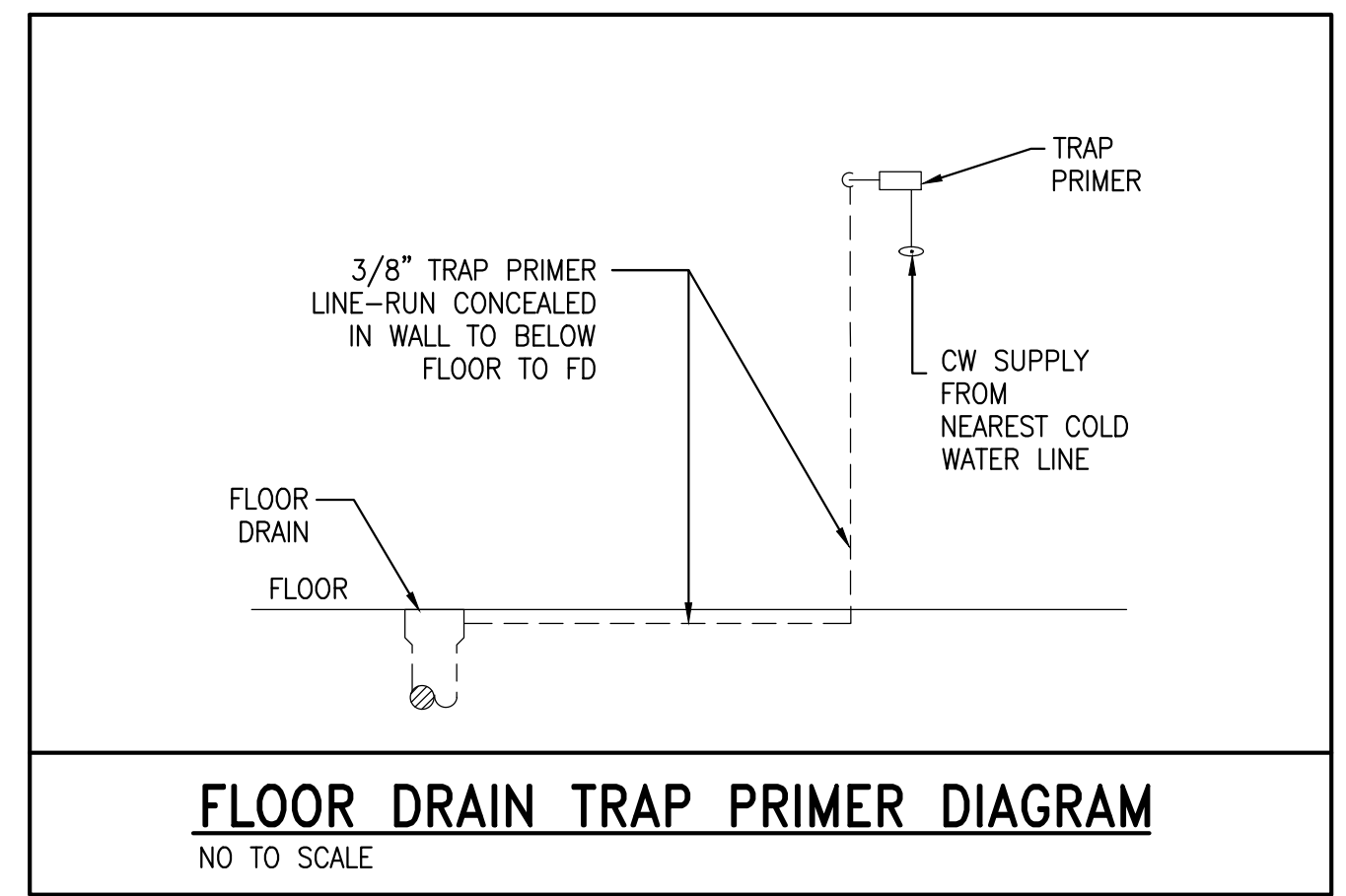
**2 PLUMBING MEZZANINE FLOOR PLAN - WATER**  
 SCALE: 1/8" = 1'-0"  
**P101**

DRAWING NAME: 14025-2023, Use of Water, Report/Engineering/PLUMBING NEW YORK PLANS - WATER.dwg  
 PLOT DATE: 03/01/2023 7:08am PLOTTED BY: ASES

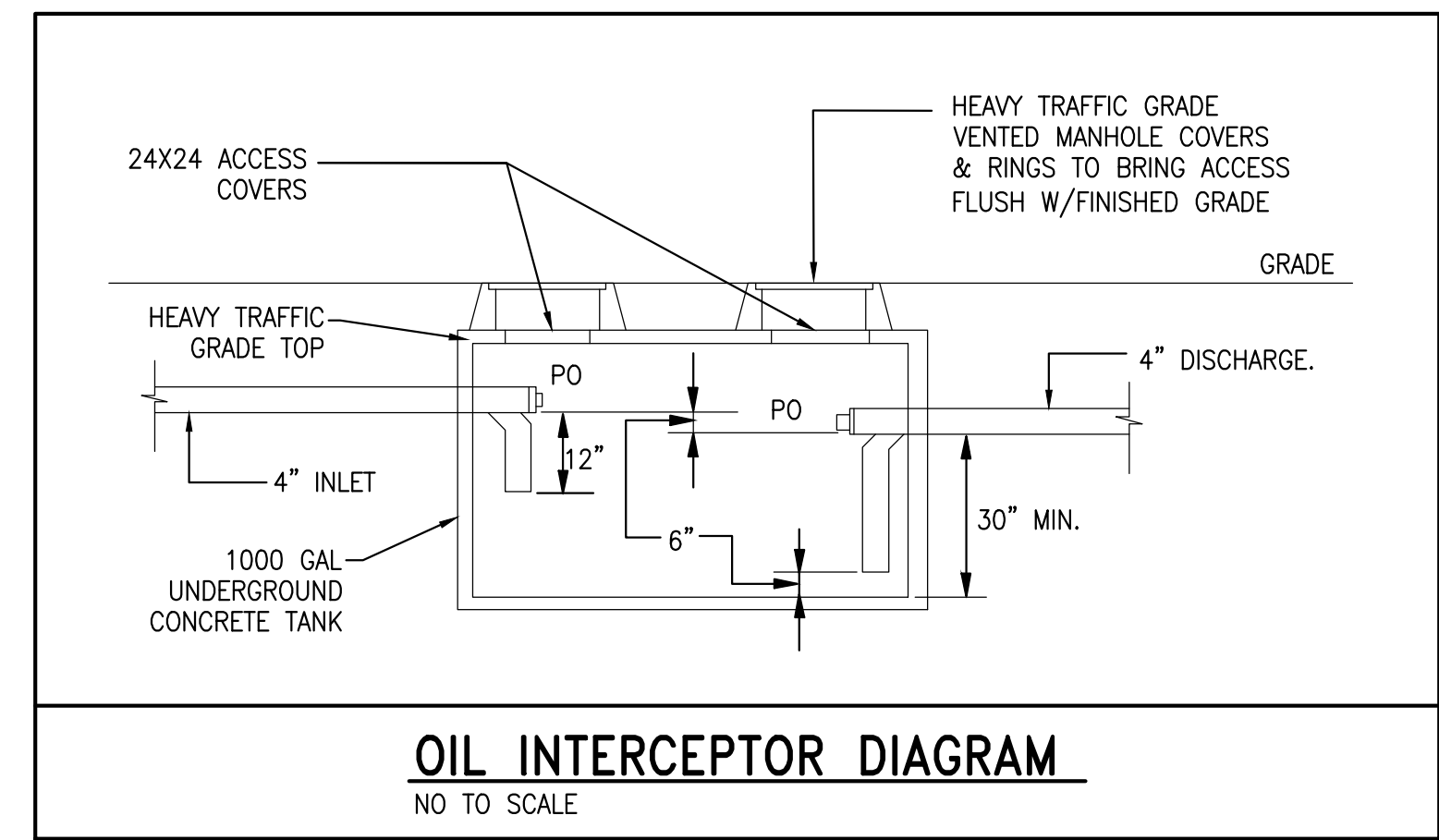




**1**  
P102  
**PLUMBING FIRST FLOOR PLAN - SANITARY & VENT**  
SCALE: 1/8" = 1'-0"

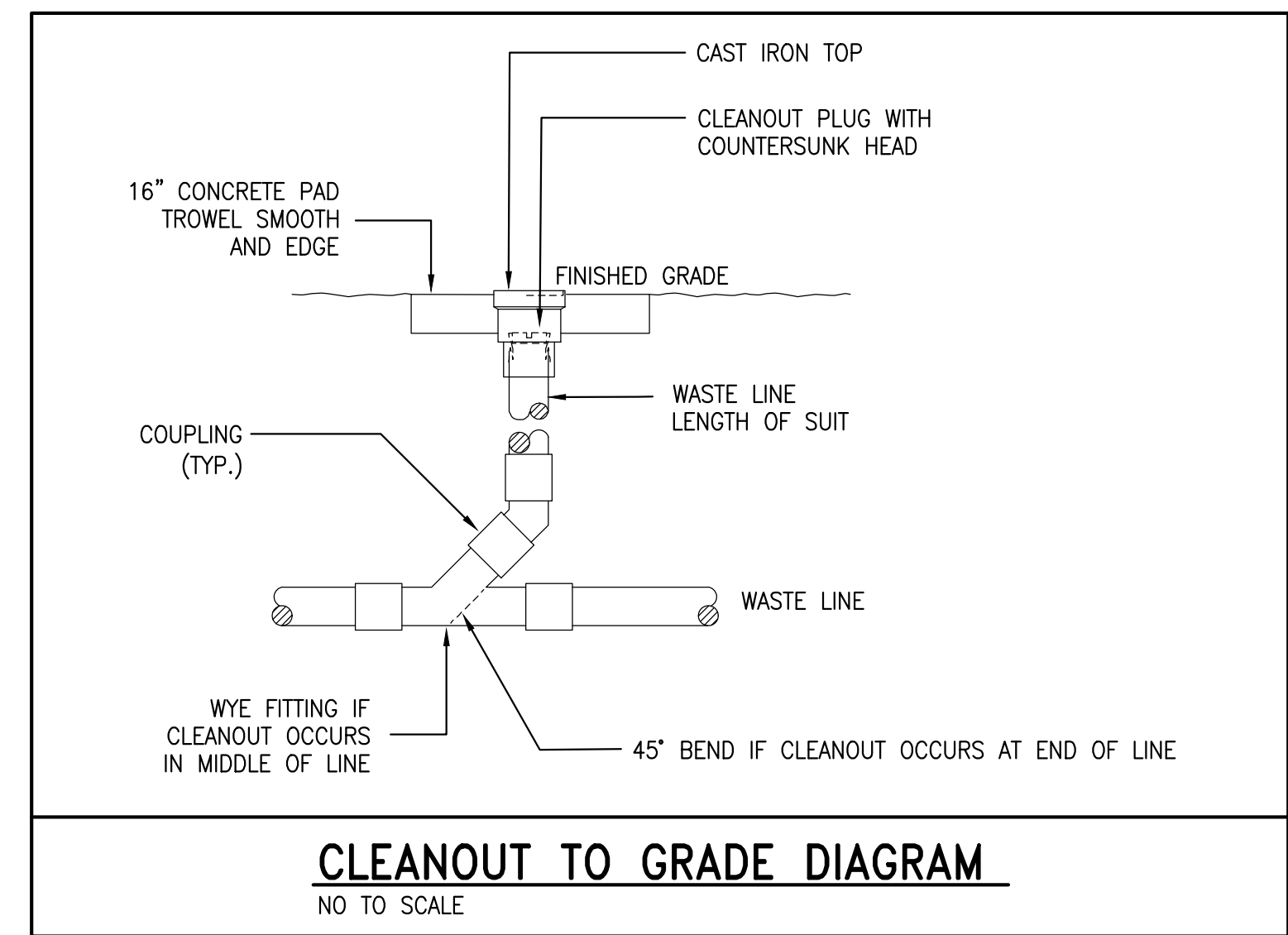


**FLOOR DRAIN TRAP PRIMER DIAGRAM**  
NO TO SCALE

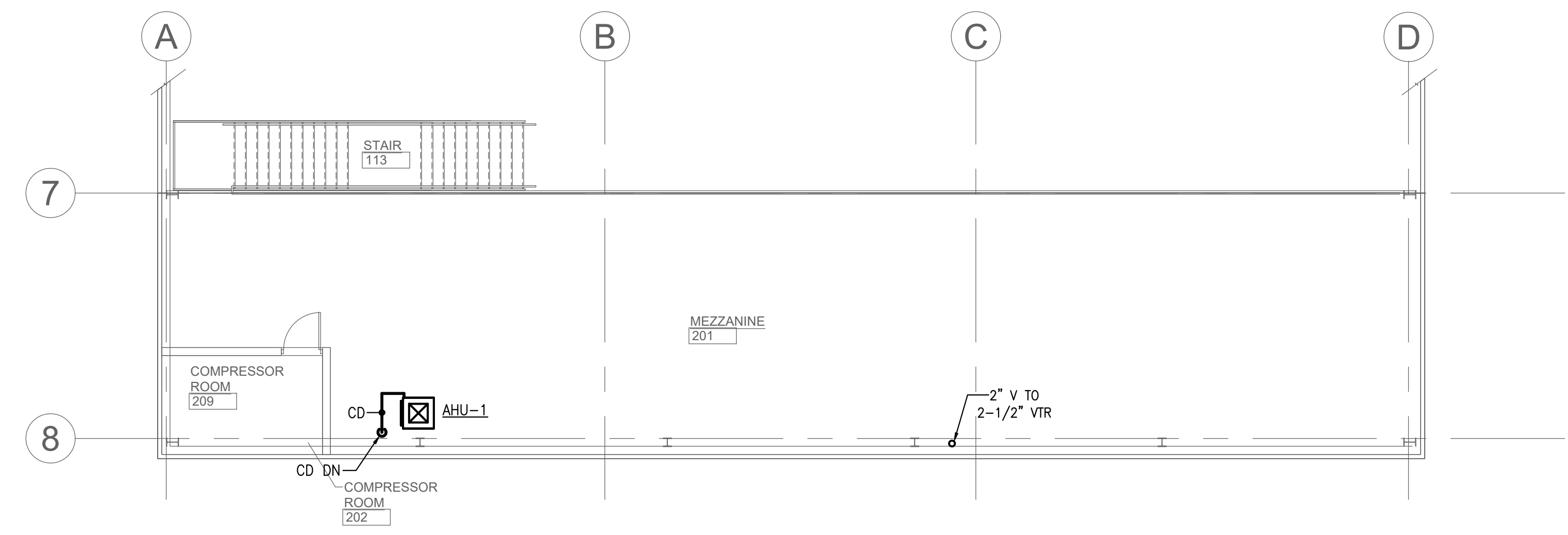


**OIL INTERCEPTOR DIAGRAM**  
NO TO SCALE

OIL/WATER INTERCEPTOR SIZE CALCULATION	
VIRGINIA PLUMBING CODE (SECTIONS 1003.4.2.1 AND 1003.4.2.2.), REQUIRES 6CUBIC FEET OF VOLUME FOR THE FIRST 100 SQUARE FEET OF INDOOR FLOOR AREA AND 1 CUBIC FOOT OF VOLUME FOR EACH 100 SQUIRE FEET OF FLOOR AREA THEREAFTER. IN THIS CASE, THE FOLLOWING FORMULA CAN BE USED:	
TOTAL AREA WHERE AUTOMOBILES ARE SERVICED, GREASED, REPAIRED OR WASHED OR WHERE GASOLINE IS DISPENSED (SQUARE FEET) : 15400	
TOTAL CAPACITY OF THE OIL-WATER SEPARATOR (CUBIC FEET) : = (6+(15400-100)/100) = 159 CUBIC FEET	
TOTAL CAPACITY OF THE OIL-WATER SEPARATOR (GALLONS) : = 127.5 x 7.48 GALLONS = 953.7 CUBIC FEET	
SELECTED OIL / WATER INTERCEPTOR OF CAPACITY : 1200 GALLONS	
*1 CUBIC FOOT = 7.48 GALLONS	



**CLEANOUT TO GRADE DIAGRAM**  
NO TO SCALE



**2**  
P102  
**PLUMBING MEZZANINE FLOOR PLAN - SANITARY & VENT**  
SCALE: 1/8" = 1'-0"



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Drawing Name:  
**PLUMBING FLOOR PLANS - SANITARY & VENT**

Designed by: **M**  
Drawn by: **CDU**  
Checked by: **AK**

Date: 03-01-2023  
Project No.: 625-2023

Plot Scale: **AS NOTED**

Project Location:  
WINDSOR HIGHWAY DEPARTMENT  
174 CHAPEL STREET  
WINDSOR, NY 13665

Project Name:  
TOWN OF WINDSOR  
DEPARTMENT OF PUBLIC WORKS

Drawing Reference Number:  
**P102**  
OF



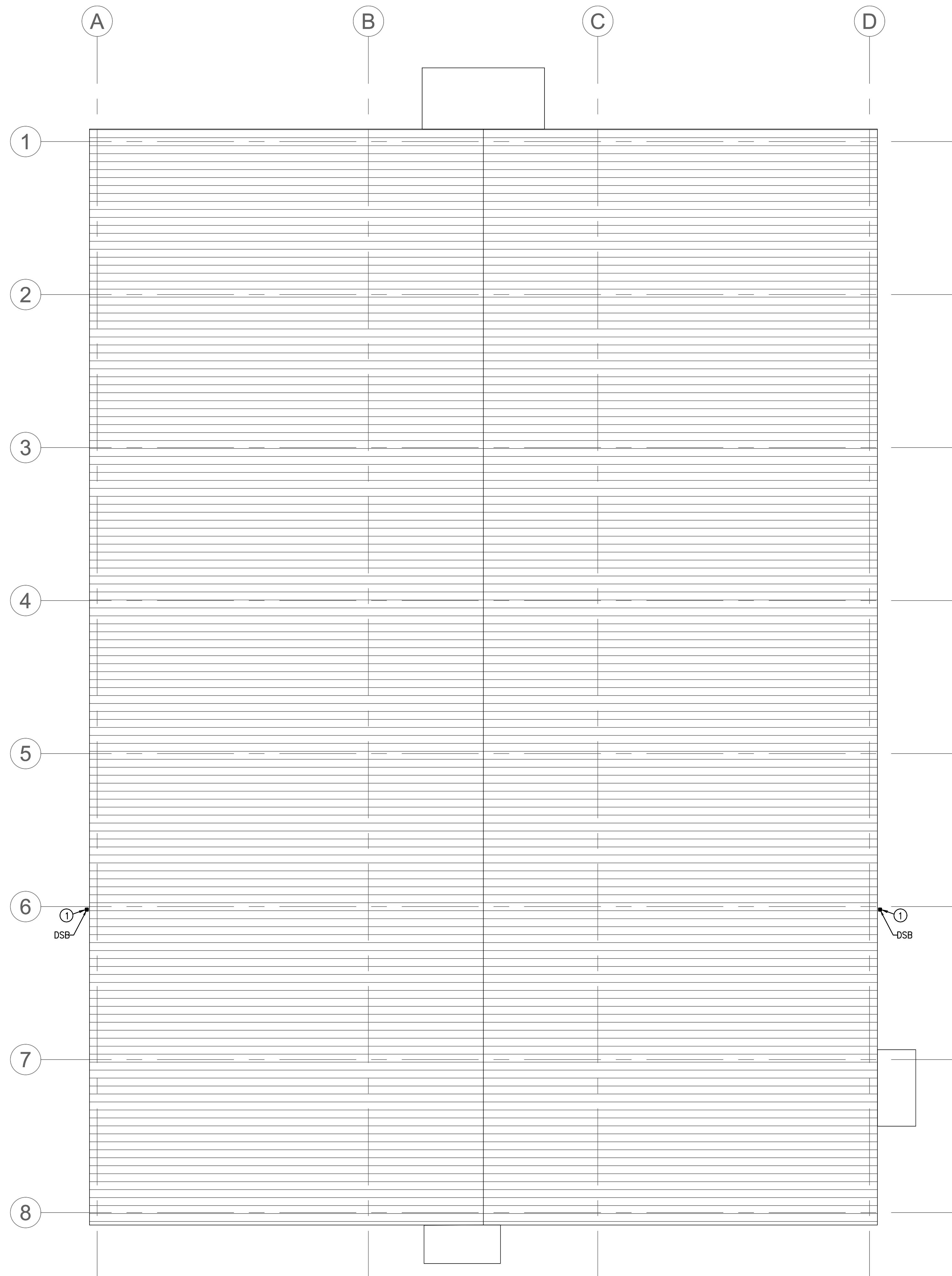
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 Fax (607) 724-2456

Designed by: **AM**  
 Drawn by: **AM**  
 Checked by: **AR**  
 Date: 03-01-2023  
 Project No.: 625-2023  
 Plot Scale: **AS NOTED**

Drawing Name:  
**PLUMBING FLOOR PLANS-STORM**

Project Location: WINDSOR HIGHWAY DEPARTMENT  
 174 CHAPEL STREET  
 WINDSOR, NY 13665  
 Project Name: TOWN OF WINDSOR  
 DEPARTMENT OF PUBLIC WORKS

Drawing Reference Number:  
**P103**  
 OF



**KEYED NOTES**

① DOWNSPOUT, SPILL ON GRADE REFER TO ARCHITECTURAL DRAWINGS FOR INFORMATION (TYPICAL).

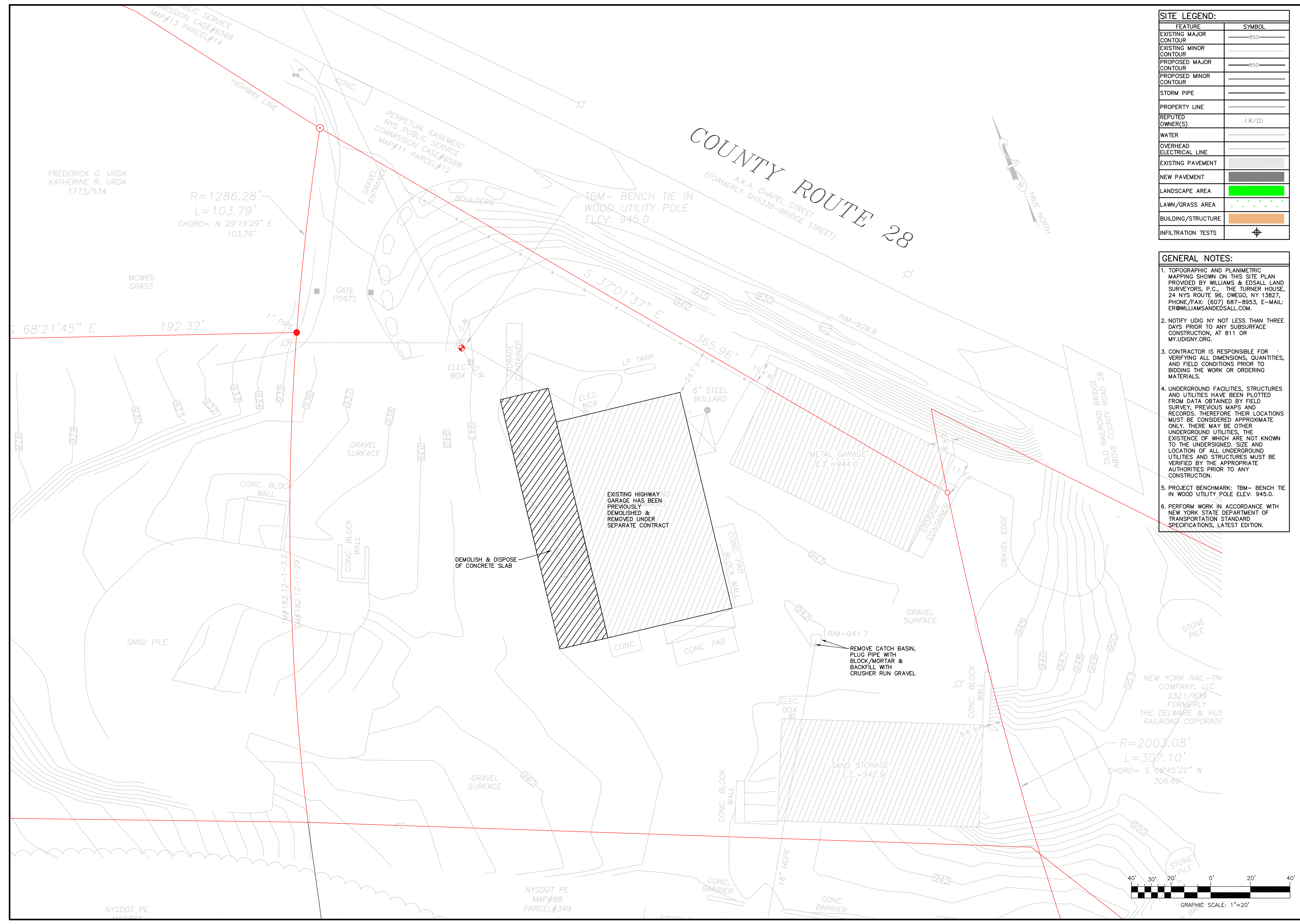
**STORM WATER CALCULATION**

2.3" PER 1-HOUR RAINFALL 100 YEAR PER FIGURE 1106.1:  
 PER TABLE 1106.2 (2) - MINIMUM DOWNSPOUT SHOULD BE 2 3/4" X 4 1/4" BASED ON MAXIMUM TRIBUTARY ROOF AREA AT 4" RAINFALL RATE.

GUTTERS - SLOPED AT 1% SHALL HAVE 8" DIAMETER BASED ON MAXIMUM TRIBUTARY ROOF AREA INDICATED ON 1106.6 FOR 4" RAINFALL RATE.

SIZE OF HORIZONTAL STORM DRAINAGE PIPING SLOPED AT 1% SHALL HAVE 4" DIAMETER BASED ON MAXIMUM TRIBUTARY ROOF AREA INDICATED ON 1106.3 FOR 4" RAINFALL RATE.

**1**  
**P103**  
**PLUMBING FIRST FLOOR PLAN - STORM**  
 SCALE: 1/8" = 1'-0"



SITE LEGEND:	
FEATURE	SYMBOL
EXISTING MAJOR CONTOUR	850
EXISTING MINOR CONTOUR	
PROPOSED MAJOR CONTOUR	850
PROPOSED MINOR CONTOUR	
STORM PIPE	
PROPERTY LINE	
REPUTED OWNER(S)	< R/O >
WATER	
OVERHEAD ELECTRICAL LINE	
EXISTING PAVEMENT	
NEW PAVEMENT	
LANDSCAPE AREA	
LAWN/GRASS AREA	
BUILDING/STRUCTURE	
INFILTRATION TESTS	

- GENERAL NOTES:**
- TOPOGRAPHIC AND PLANIMETRIC MAPPING SHOWN ON THIS SITE PLAN PROVIDED BY WILLIAMS & EDSELL LAND SURVEYORS, P.C., THE TURNER HOUSE, 24 NYS ROUTE 96, OWEGO, NY 13827. PHONE/FAX: (607) 687-8953, E-MAIL: ER@WILLIAMSANDEDSALL.COM.
  - NOTIFY UDIG NY NOT LESS THAN THREE DAYS PRIOR TO ANY SUBSURFACE CONSTRUCTION, AT 811 OR MY.UDIGNY.ORG.
  - CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, QUANTITIES, AND FIELD CONDITIONS PRIOR TO BIDDING THE WORK OR ORDERING MATERIALS.
  - UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM DATA OBTAINED BY FIELD SURVEY, PREVIOUS MAPS AND RECORDS. THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHER UNDERGROUND UTILITIES, THE EXISTENCE OF WHICH ARE NOT KNOWN TO THE UNDERSIGNED. SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION.
  - PROJECT BENCHMARK: TBM- BENCH TIE IN WOOD UTILITY POLE ELEV: 945.0.
  - PERFORM WORK IN ACCORDANCE WITH NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION.



CONSULTANT

SUB-CONSULTANT

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AS NOTED

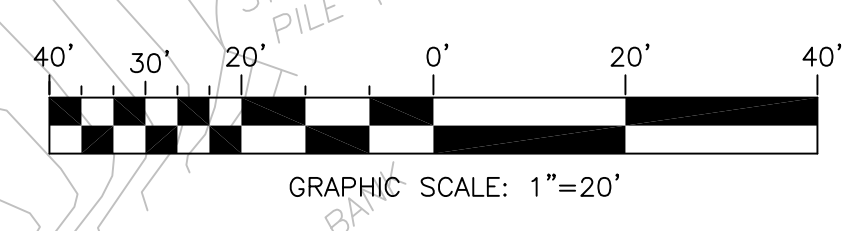
Designed by:	gpm	Date:	04/14/2022
Drawn by:	MD	Project No.:	2015-108-07
Checked by:	DC	Plot Scale:	AS NOTED

Drawing Name:  
**EXISTING CONDITIONS & DEMOLITION PLAN**

Project Location:  
 TOWN OF WINDSOR, HIGHWAY DEPARTMENT  
 174 CHAPEL STREET  
 WINDSOR, NY 13689

Project Name:  
**HIGHWAY GARAGE MAINTENANCE FACILITY**

Drawing Reference Number:  
**C-1**  
 X OF X



FREDERICK G. URDA  
 KATHERINE R. URDA  
 1773/534

$R=1286.28'$   
 $L=103.79'$   
 CHORD= N 29°19'29" E  
 103.76'

**COUNTY ROUTE 28**  
 (FORMERLY SH5338-BRIDGE STREET)  
 A.K.A. CHAPEL STREET

TBM- BENCH TIE IN WOOD UTILITY POLE  
 ELEV: 945.0

EXISTING HIGHWAY GARAGE HAS BEEN PREVIOUSLY DEMOLISHED & REMOVED UNDER SEPARATE CONTRACT

DEMOLISH & DISPOSE OF CONCRETE SLAB

REMOVE CATCH BASIN, PLUG PIPE WITH BLOCK/MORTAR & BACKFILL WITH CRUSHER RUN GRAVEL

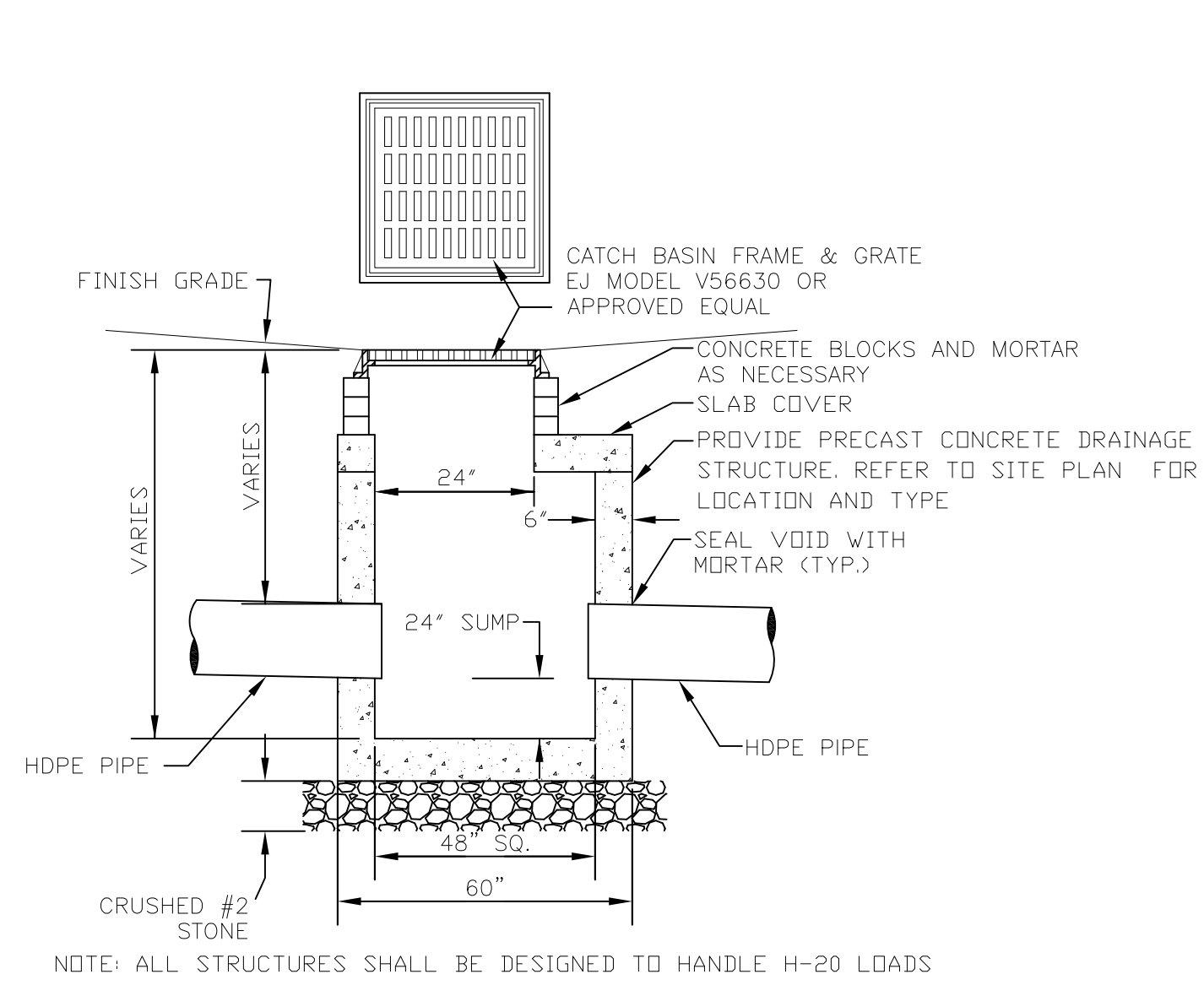
NEW YORK RAILROAD COMPANY, LLC  
 2321/639  
 FORMERLY THE DELWARE & HUS RAILROAD COPORATIC

$R=2003.08'$   
 $L=307.10'$   
 CHORD= S 06°45'22" W  
 306.88'

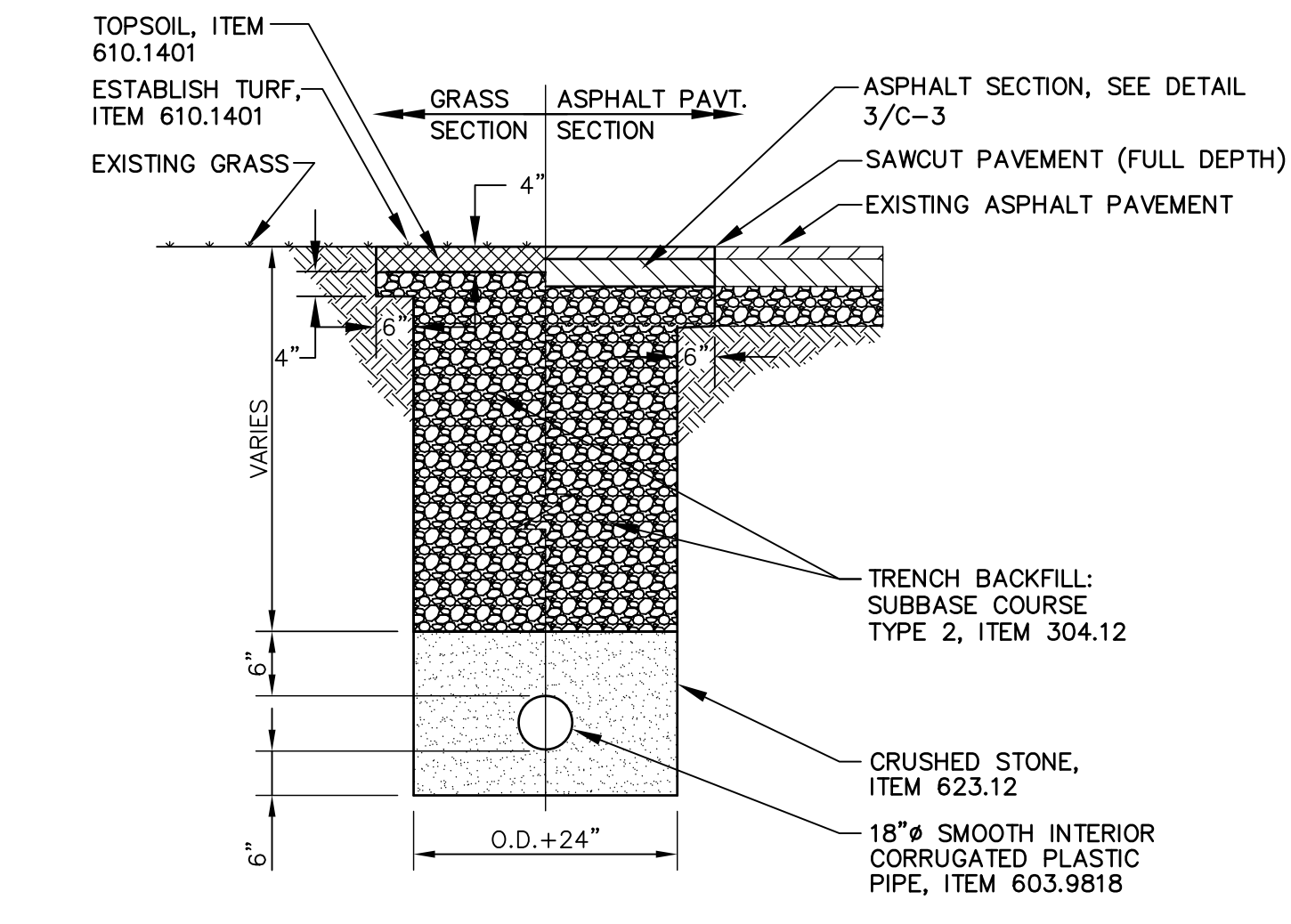
NYS DOT PE MAP#88

NYS DOT PE MAP#88  
 PARCEL#349

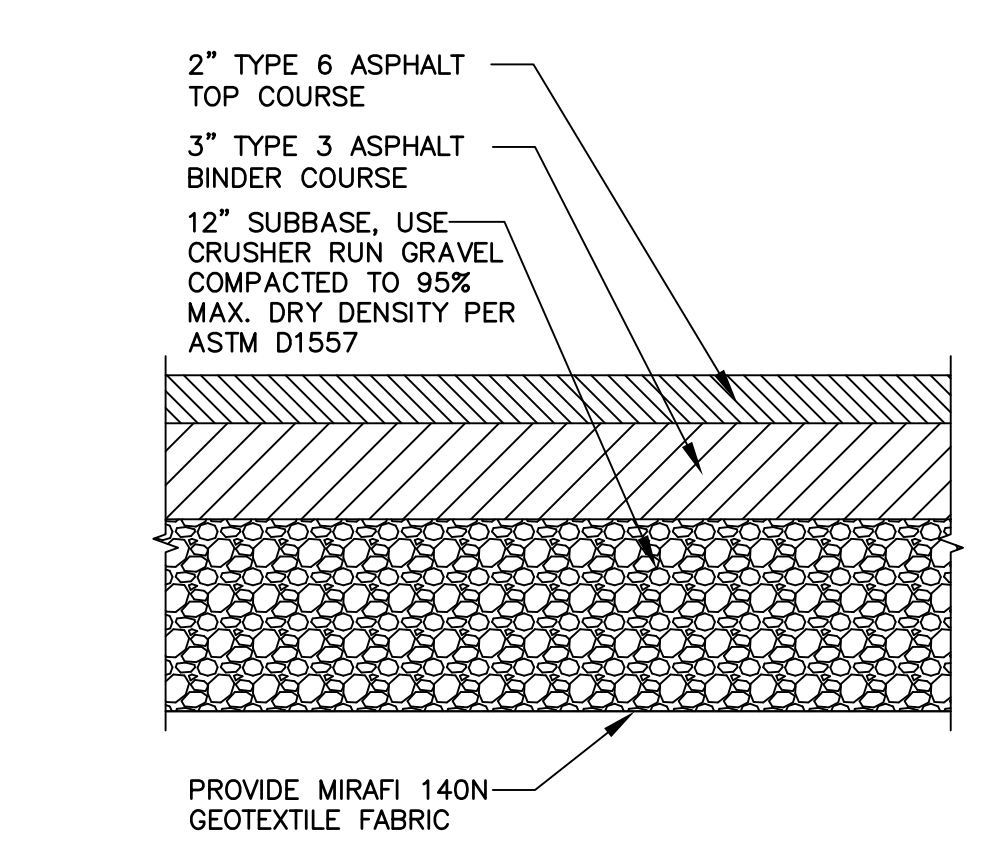




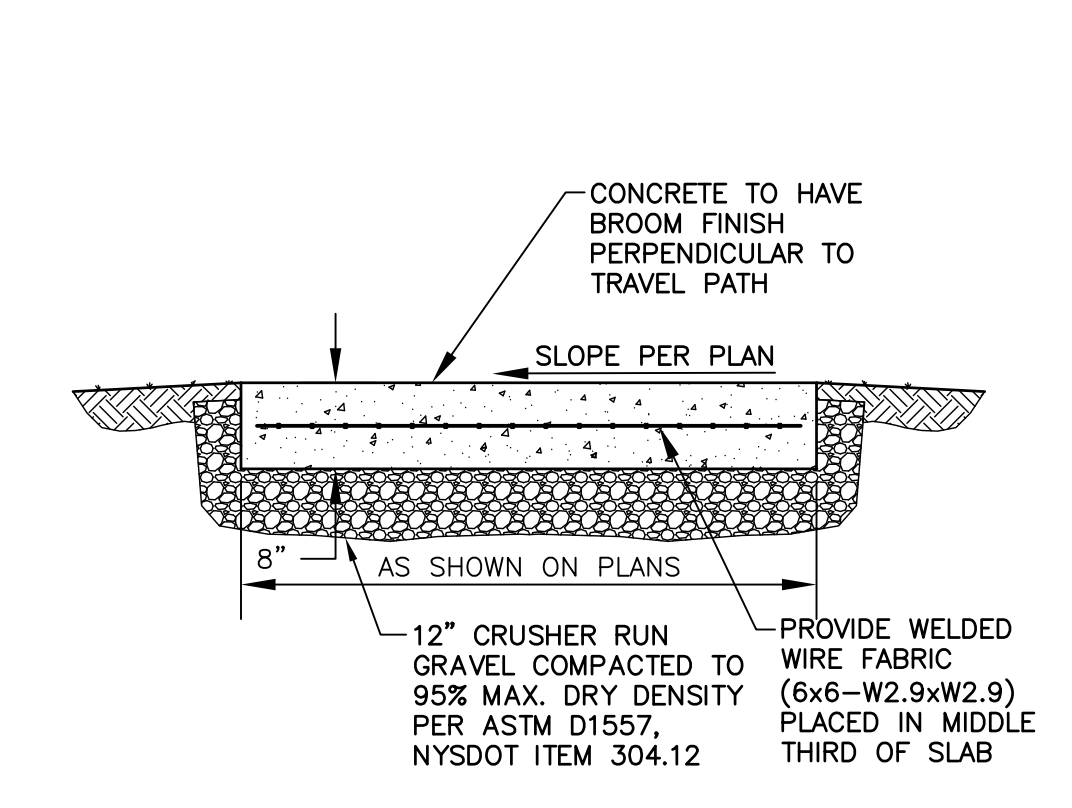
1 CATCH BASIN DETAIL  
C-3 NOT TO SCALE



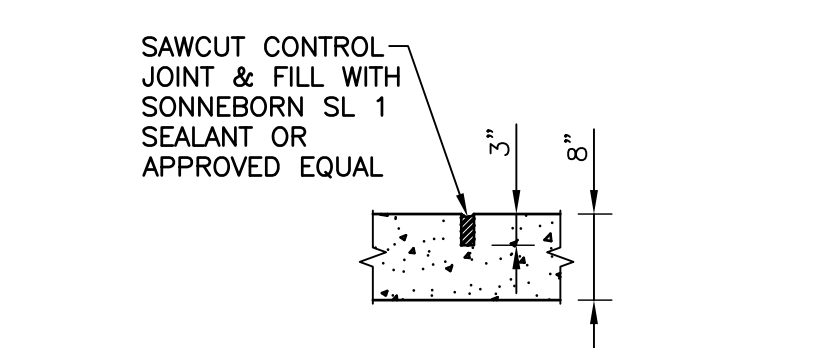
2 TRENCH EXCAVATION & BACKFILL DETAIL  
C-3 NOT TO SCALE



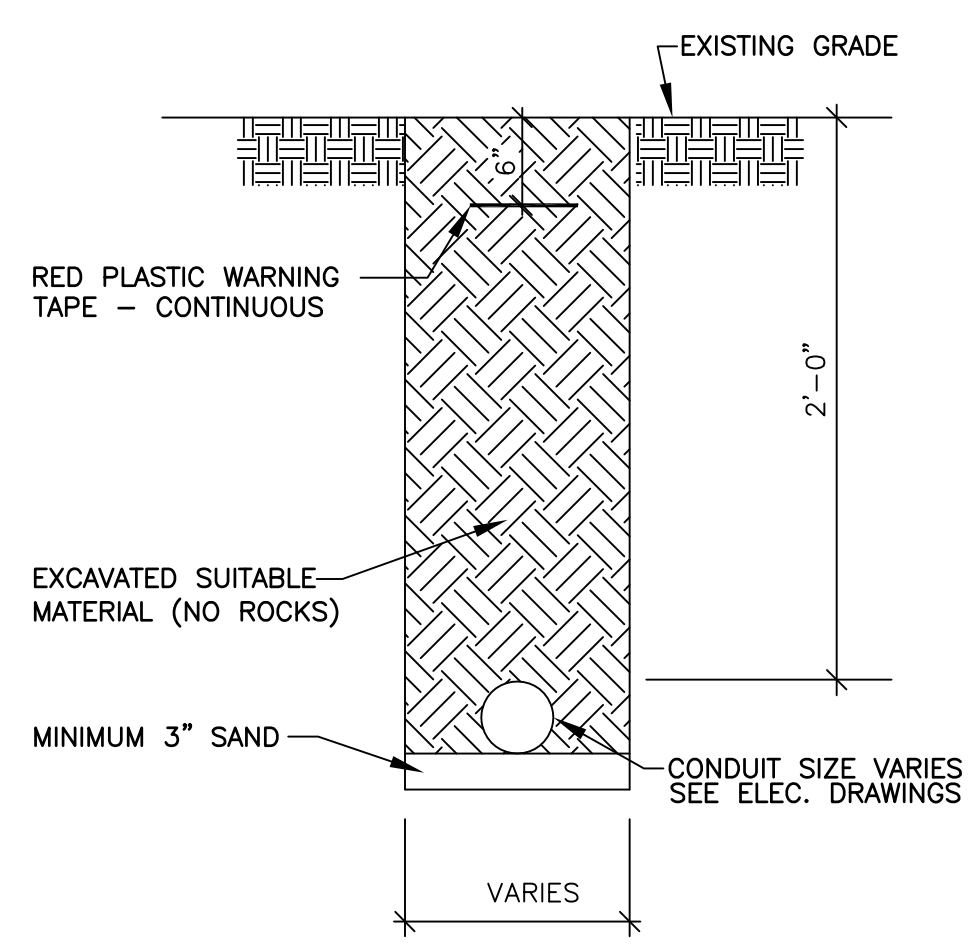
3 ASPHALT PAVEMENT SECTION  
C-3 NOT TO SCALE



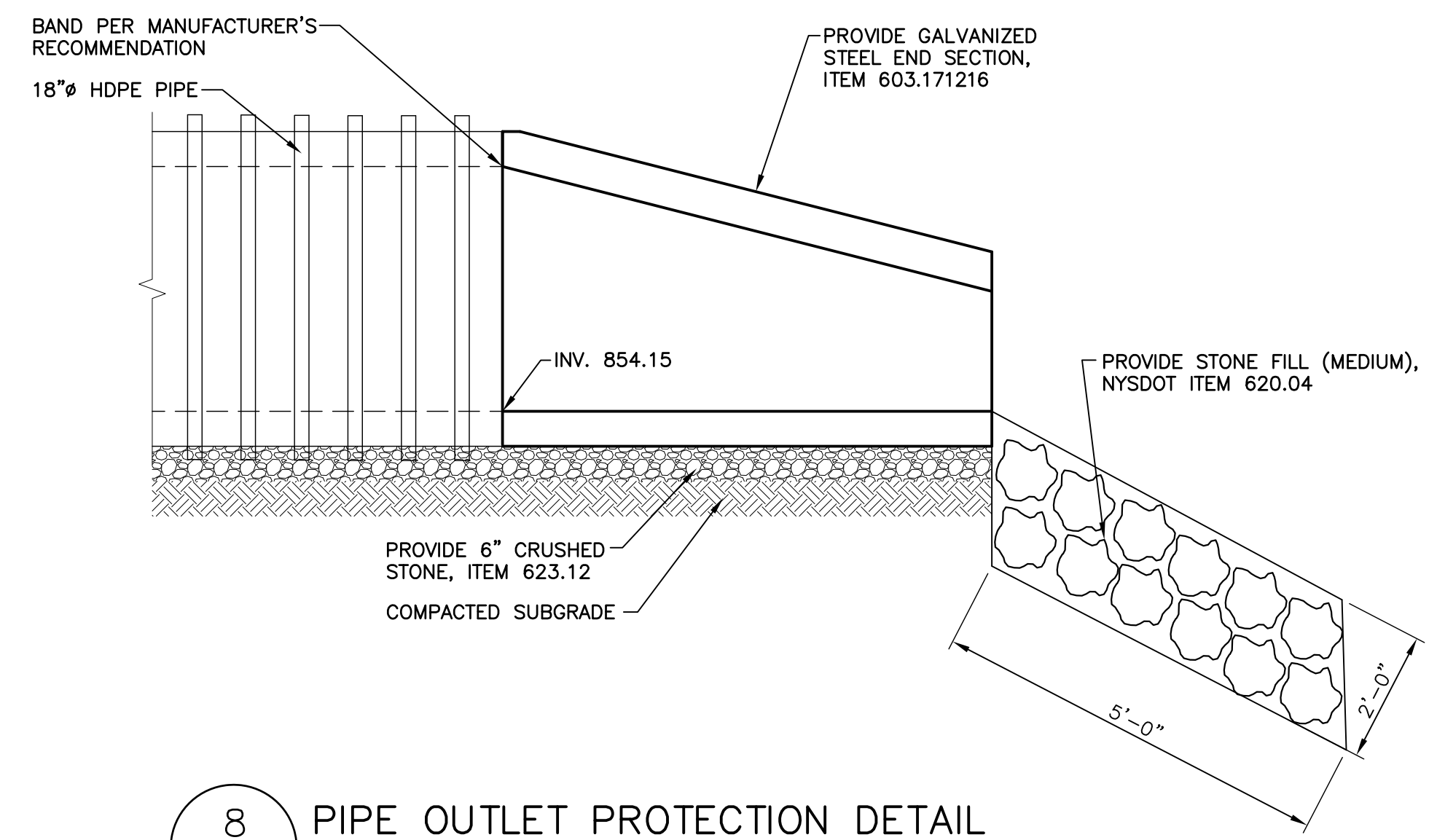
4 CONCRETE PAVEMENT SECTION  
C-3 NOT TO SCALE



5 CONTROL JOINT DETAIL  
C-3 N.T.S.



6 ELECTRICAL TRENCH DETAIL  
C-3 N.T.S.



8 PIPE OUTLET PROTECTION DETAIL  
C-3 N.T.S.



CONSULTANT  
SUB-CONSULTANT

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Site

Designed by:	SPM	Date:	04/14/2022
Drawn by:	MO	Project No.:	2015-108-017
Checked by:	DC	Plot Scale:	AS NOTED

Drawing Name: SITE DETAILS

Project Location: TOWN OF WINDSOR, HIGHWAY DEPARTMENT  
174 CHAPEL STREET  
WINDSOR, NY 13689  
Project Name: HIGHWAY GARAGE MAINTENANCE FACILITY

Drawing Reference Number:  
C-3  
X OF X



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 Fax: (607) 724-2466

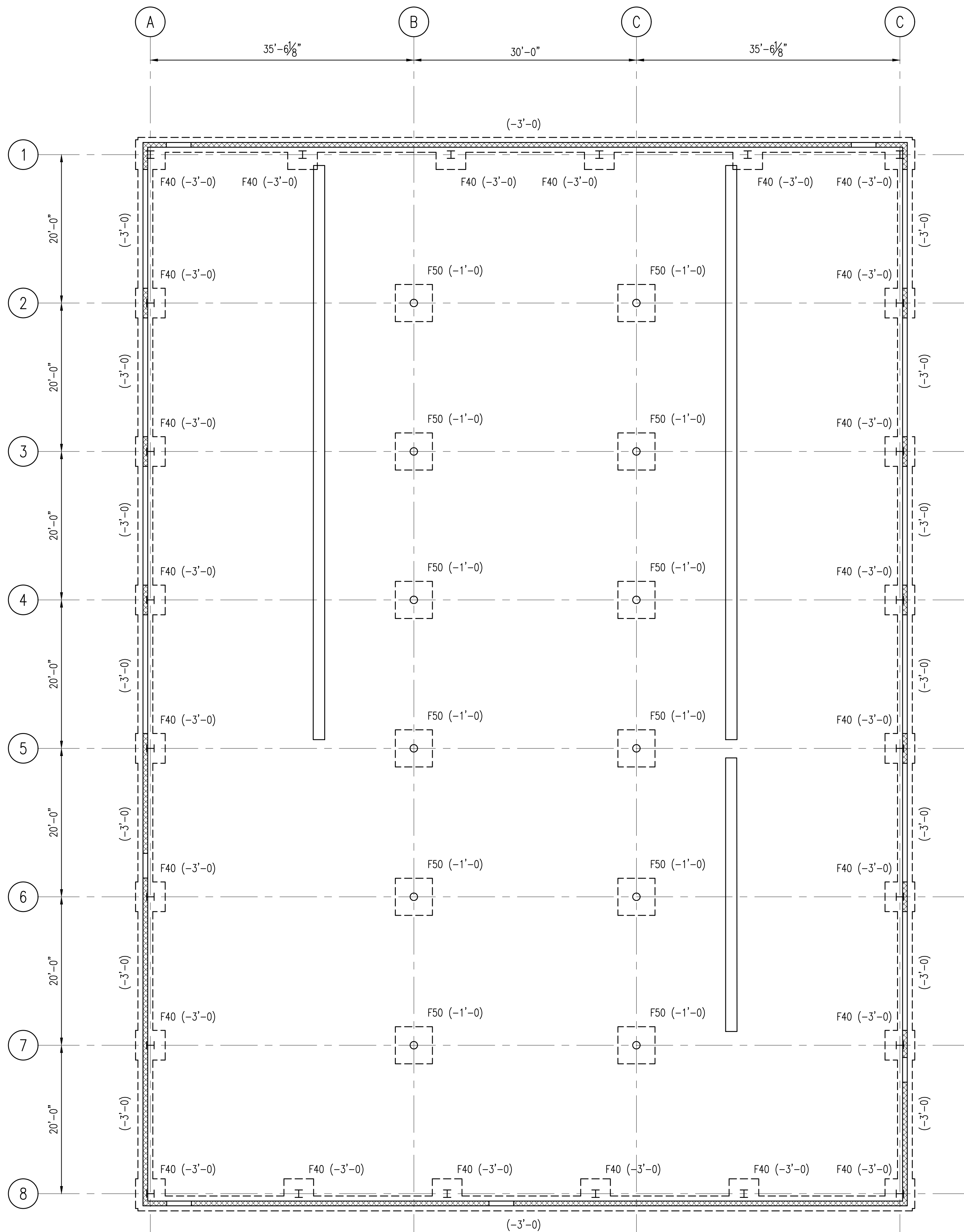
**FOUNDATION PLAN**

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

1. TOP OF SLAB ELEVATION 100'-0" (DATUM) UNLESS OTHERWISE NOTED.
2. ALL FOOTINGS ARE CENTERED ON COLUMN CENTERLINES UON.
3. ALL ELEVATIONS SHOWN THUS (0'-0") ARE TO TOP OF FOOTING FROM DATUM.
4. MINIMUM DEPTH REQUIRED FOR FROST PROTECTION TO BOTTOM OF FOOTING = (-4'-0") (APPLIES TO PERIMETER WALLS AND ISOLATED EXTERIOR FOOTINGS).
5. CONTROL SURFACE OR SUBSURFACE WATER DURING CONSTRUCTION TO ALLOW FOUNDATION WORK TO BE DONE IN DRY AND UNDISTURBED SOIL.
6. PIPE SLEEVES FOR UTILITIES ARE TO BE TWO PIPE SIZES LARGER THAN PIPE SHOWN. VERIFY WITH TRADE CONTRACTOR.
7. FLOOR CONSTRUCTION - 6" SLAB ON GRADE  $f'_c=4,000$  PSI AT 28 DAYS NORMAL WEIGHT CONCRETE (150 PCF) REINFORCED WITH 6x6-W2.9xW2.9 WWF ON 15 MIL VAPOR BARRIER, 2" RIGID INSULATION AND 6" POROUS FILL SUBBASE.
8. C.J. - INDICATES CONSTRUCTION JOINT / CONTROL JOINT. SEE TYPICAL DETAIL ON DRAWING S-3.0.
9. SEE DRAWINGS S-3.0 FOR SECTIONS, DETAILS, AND GENERAL NOTES.

FOOTING SCHEDULE		BEARING PRESSURE 4,000 PSF	
MARK	SIZE	DEPTH	REINFORCING @ BOTT. EACH WAY
F40	4'-0" X 4'-0"	12"	4-#5
F50	5'-0" X 5'-0"	14"	5-#6

FOOTING SIZES INDICATED MAY NOT APPEAR ON PROJECT



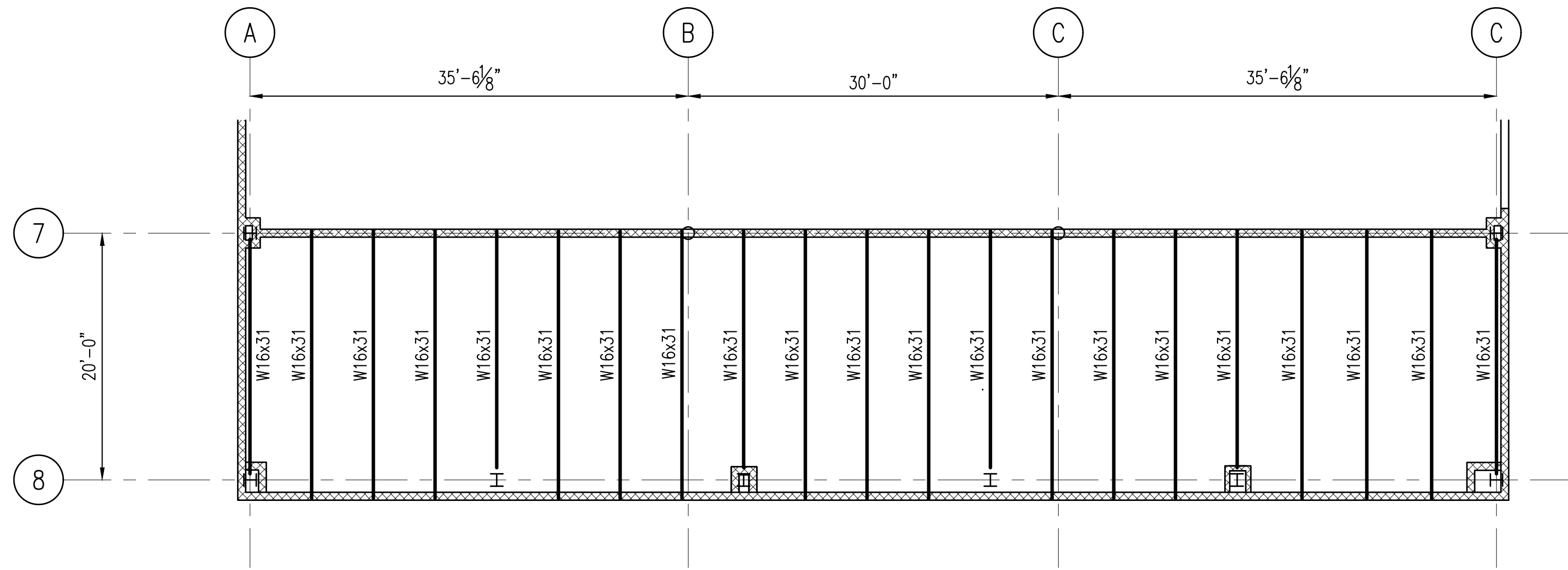
Drawing Name: **FOUNDATION PLAN**

Designed by: DW	Date: 03-01-2023	Rev.#
Drawn by: JJU	Checked by: DW	Project No.: 2020-117
<small>UNAUTHORIZED ALTERATION OF THIS DRAWING IS PROHIBITED BY THE PROFESSIONAL SEAL OF THE ENGINEER.</small>		Print Scale: AS NOTED

Project Location: **WINDSOR HIGHWAY DEPARTMENT**  
 CHARLES STREET  
 WINDSOR, NY 13685

Project Name: **TOWN OF WINDSOR HIGHWAY DEPARTMENT MAINTENANCE GARAGE**

Drawing Reference Number:  
**S-1.0**  
 OF



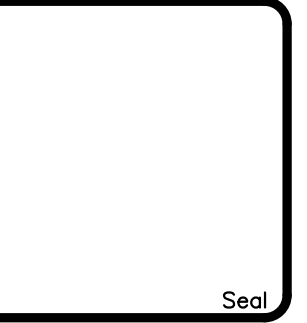
**MEZZANINE FRAMING PLAN**

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

1. TOP OF SLAB ELEVATION +XX'-XX" (DATUM). TOP OF STEEL (-XX") UNLESS OTHERWISE NOTED.
2. FILLER BEAMS OR JOISTS NOT DIMENSIONED ARE TO BE EQUALLY SPACED.
3. DIMENSIONS FROM BEAM CENTERLINE TO EDGE OF OPENING TO BE 6" UNLESS OTHERWISE NOTED.
4. FLOOR CONSTRUCTION - 3 1/2" LIGHT WEIGHT CONCRETE FILL (145 PCF) f'c=4,000 PSI AT 28 DAYS REINFORCED WITH 6x6-W1.4xW1.4 WWF ON 2" COMPOSITE METAL DECK. TOTAL SLAB THICKNESS 5 1/2".
6. FLOOR DECK SUPPLIER TO PROVIDE ANGLE CLOSURE AROUND PERIMETER AND AROUND FLOOR OPENINGS (UON) GAGE AS REQUIRED (#16 GAGE MINIMUM).
7. SEE DRAWINGS S-3.0 FOR SECTIONS, DETAILS, AND GENERAL NOTES.



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Designed by: DW	Date: 03-01-2023	Rev.#
Drawn by: JTu	Checked by: DW	Project No.: 2020-117
<small>UNAUTHORIZED ALTERATION OF THIS DRAWING IS PROHIBITED BY THE PROFESSIONAL SEAL OF THE ENGINEER. SECTION 7209, SUBSECTION 2.</small>		Print Scale: AS NOTED

Drawing Name:  
**MEZZANINE FRAMING PLAN**

Project Location:  
 WINDSOR HIGHWAY DEPARTMENT  
 CHARLES STREET  
 WINDSOR, NY 13685

Project Name:  
 TOWN OF WINDSOR HIGHWAY  
 DEPARTMENT MAINTENANCE GARAGE

Drawing Reference Number:  
**S-2.0**  
 OF

## GENERAL NOTES (SITE PREPARATION)

(UNLESS OTHERWISE NOTED OR SHOWN ON PLAN, THE FOLLOWING NOTES SHALL APPLY) SN990120

- THE SURFACE OF THE EXPOSED SUB-GRADE SHALL BE INSPECTED BY PROBING OR TESTING TO CHECK FOR POCKETS OF SOFT UNSUITABLE MATERIAL. EXCAVATE UNSUITABLE SOIL AS DIRECTED BY THE GEOTECHNICAL ENGINEER / TESTING AGENCY.
- FILL ALL EXCAVATED AREAS WITH APPROVED CONTROLLED FILL. PLACE IN 6 INCH LOOSE LIFTS AND COMPACT TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-698.
- ALL CONTROLLED FILL MATERIAL SHALL BE A SELECT GRANULAR MATERIAL FREE FROM ALL ORGANICS OR OTHERWISE DELETERIOUS MATERIAL WITH NOT MORE THAN 20% BY WEIGHT PASSING A NO. 200 SIEVE (CLASSIFIED AS SC, SM, SP OR BETTER IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM) AND WITH A PLASTICITY INDEX NOT EXCEEDING 6%.
- PROVIDE FIELD DENSITY TESTS FOR EACH 3,000 S.F. OF BUILDING AREA FOR EACH LIFT OF CONTROLLED FILL.
- FOUNDATION EXCAVATIONS SHALL BE INSPECTED BY SOILS ENGINEER PRIOR TO CONCRETE PLACEMENT.
- EXCAVATIONS SHALL BE KEPT DRY BY PUMPING UNTIL UNDERGROUND CONSTRUCTION IS COMPLETE.
- NO BACKFILLING WILL BE PERMITTED AGAINST BASEMENT RETAINING WALLS UNTIL THE UPPER AND LOWER LEVEL SLABS ARE IN PLACE AT LEAST SEVEN DAYS.
- BACKFILL SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF FOUNDATION WALLS AND GRADE BEAMS UNTIL THE FINAL ELEVATION IS ACHIEVED. VARIATIONS SHALL NOT EXCEED 2'-0" BETWEEN BACKFILL ELEVATIONS ON EITHER SIDE WITHOUT ENGINEER'S APPROVAL.

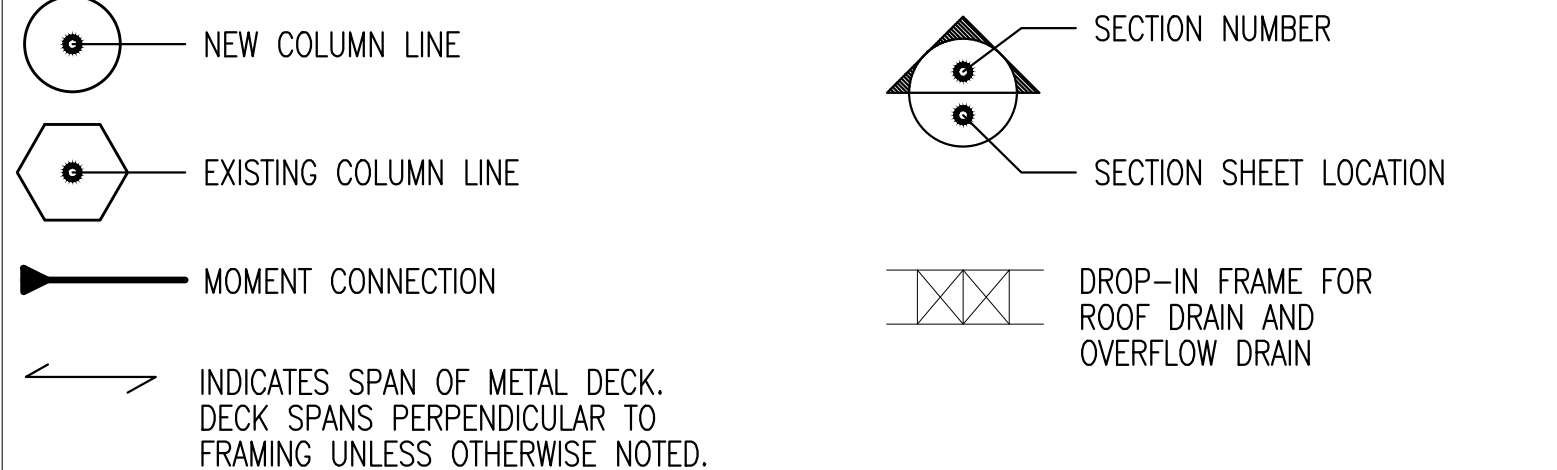
## GENERAL INFORMATION

(UNLESS OTHERWISE NOTED OR SHOWN ON PLAN, THE FOLLOWING SHALL APPLY) SN990116

- "LOADS" INDICATED ON THIS DRAWING ARE THOSE FOR THE DESIGN OF THE BUILDING SUPERSTRUCTURE.
- DESIGN LOADS AND CRITERIA USED IN THE DESIGN OF SPECIALTY STRUCTURAL SYSTEMS (I.E. CURTAIN-WALL, FIRESTAIRS, LIGHT GAGE STEEL STUDS, ARCHITECTURAL PRECAST CONCRETE, METAL PANELS, ETC.) TO BE DETERMINED BY A THIRD PARTY ENGINEER CONTRACTED BY THE SPECIALTY STRUCTURAL SYSTEM MANUFACTURER IN ACCORDANCE WITH CODE REQUIREMENTS OF GOVERNING JURISDICTION. SPECIALTY ENGINEER IS RESPONSIBLE FOR ALL CONNECTIONS OF THESE SYSTEMS TO THE SUPERSTRUCTURE, INCLUDING, BUT NOT LIMITED TO, ENGINEERING, DETAILING, AND INSTALLATION. IF ALTERATION TO THE SUPERSTRUCTURE ARE REQUIRED AS DETERMINED BY THE E.O.R. TO REINFORCE FOR HIGH CONCENTRATED FORCES APPLIED TO THE SPECIALTY SYSTEM CONNECTION, THE REINFORCEMENT AND COST SHALL BE BORNE BY THE SPECIALTY SUB-CONTRACTOR AND SHALL BE CONSIDERED A PART OF THE SPECIALTY CONNECTION.
- ALL DETAILS MARKED "TYPICAL" IN THE SET OF STRUCTURAL DRAWINGS SHALL BE APPLIED THROUGHOUT THE PROJECT AS REQUIRED TO SATISFY THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL COORDINATE REQUIREMENTS FOR QUANTITY AND LOCATION WHERE THE "TYPICAL" DETAILS APPLY.
- FAILURE ON THE PART OF THE CONTRACTOR TO REVIEW THE DRAWINGS OF OTHER DISCIPLINES (I.E. ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, ETC.) TOGETHER WITH THE FULL EXTENT OF THE PROJECT SPECIFICATIONS DOES NOT RELIEVE THEM OF THE RESPONSIBILITY TO FURNISH AND INSTALL ITEMS THAT ARE PART OF THEIR WORK AS INDICATED BY THE DRAWINGS AND SPECIFICATIONS OF OTHER TRADES. ALL STRUCTURAL TRADE CONTRACTORS AND SUB-CONTRACTORS ARE PROHIBITED FROM EXCLUDING STRUCTURAL WORK FROM THEIR CONTRACT NOT SHOWN IN THE STRUCTURAL DRAWINGS.

## SYMBOLS KEY/LEGEND

SN990119



## ABBREVIATIONS

SN990113

ADJ.	ADJUSTMENT	H.S.B.	HIGH STRENGTH BOLTS
ALT.	ALTERNATE	I.D.	INSIDE DIAMETER
A.B.	ANCHOR BOLT	I.E.	INVERT ELEVATION
ATTACH.	ATTACHMENT	IN.	INCHES
BOT.	BOTTOM	INSUL.	INSULATION
BLDG.	BUILDING	JT.	JOINT
BM.	BEAM	L.L.V.	LONG LEG VERTICAL
B.R.	BRIDGING	L.P.	LOW POINT
CANT.	CANTILEVER	LOC'NS	LOCATIONS
CL.	CENTERLINE	MAX.	MAXIMUM
CLR.	CLEARANCE/CLEAR	M.C.	MOMENT CONNECTION
C.A.	COLUMN ABOVE	MIN.	MIDDLE
C.B.	COLUMN BELOW	MIN.	MINIMUM
COL.	COLUMN	NO.#	NUMBER
CONC.	CONCRETE	N.T.S.	NOT TO SCALE
CONN.	CONNECTION	O.C.	ON CENTER
CONT.	CONTINUOUS/CONTINUATION	PL.	PLATE
DIA. Ø	DIAMETER	P.S.F.	POUNDS PER SQUARE FOOT
DWG.	DRAWING	P.S.I.	POUNDS PER SQUARE INCH
EA.	EACH	R.D.	ROOF DRAIN
E.F.	EACH FACE	REINF.	REINFORCING/REINFORCED
EL., ELEV.	ELEVATION	REQ'D.	REQUIRED
E.O.D.	EDGE OF DECK	SCHED.	SCHEDULE
E.O.S.	EDGE OF SLAB	S.C.	SLIP CONNECTION
EQ.	EQUALLY	SPL.	SPlice
E.W.	EACH WAY	SP.	SPACING
EXIST.	EXISTING	SQ.	SQUARE
EXP.	EXPANSION	SYM.	SYMMETRY
E.J.	EXPANSION JOINT	T & B	TOP AND BOTTOM
EXT.	EXTENSION	THK.	THICKNESS
FIN.	FINISHED	T.O.S.	TOP OF STEEL
FT.	FOOT/FEET	T.O.W.	TOP OF WALL
FTG.	FOOTING	TYP.	TYPICAL
H	HANGER	U.O.N.	UNLESS OTHERWISE NOTED
H.P.	HIGH POINT	VERT.	VERTICAL
HOR., HORIZ.	HORIZONTAL	W.W.F.	WELDED WIRE FABRIC

## GENERAL NOTES (CAST-IN-PLACE CONCRETE)

(UNLESS OTHERWISE NOTED OR SHOWN ON PLAN, THE FOLLOWING SHALL APPLY) SN330001

- CONCRETE WORK SHALL CONFORM WITH THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE ACI 318 (LATEST EDITION).
- UNLESS OTHERWISE INDICATED ON DRAWINGS CAST-IN-PLACE CONCRETE SHALL DEVELOP A STRENGTH OF 4,000 PSI AT 28 DAYS.
- REINFORCEMENT SHALL BE DEFORMED BARS ASTM DESIGNATION A-615, GRADE 60.
- CONCRETE PROTECTION FOR REINFORCEMENT SHALL CONFORM TO LATEST A.C.I. SPECIFICATION.
- TEMPERATURE REINFORCING SHALL BE SUFFICIENTLY EMBEDDED TO DEVELOP FULL STRENGTH IN CONCRETE WALLS AND SLABS.
- PROVIDE ADEQUATE TIES FOR REINFORCEMENT IN SLABS, BEAMS, PIERS AND WALLS. REINFORCEMENT TO BE HELD AT CORRECT DISTANCE FROM FORMS AND EARTH BY STEEL CHAIRS OR TIES.
- FOLLOW C.R.S.I. RULES FOR PLACING OF REINFORCING STEEL AND ACCESSORIES.
- NO CONCRETE SHALL BE CAST UNTIL THE PRELIMINARY TESTS REQUIRED HAVE BEEN MADE, REPORTS THEREOF FILED WITH THE ENGINEER, AND APPROVED. THE CONTROLLED CONCRETE TO BE USED SHALL CONFORM TO THE APPROVED DESIGN MIX OBTAINED AS A RESULT OF THE PRELIMINARY TESTS. THE USE OF ANY ADDITIVES NOT PRESENT IN THE PRELIMINARY TEST MIX IS PROHIBITED.
- REPRESENTATIVE TEST CYLINDERS WILL BE TAKEN FROM THE CONCRETE PLACED EACH DAY IN ACCORDANCE WITH CONCRETE SPECIFICATIONS.
- WELDED WIRE FABRIC SHALL HAVE A MINIMUM ULTIMATE STRENGTH OF 70,000 PSI AND SHALL CONFORM TO ASTM A-185 AND A-497.
- MESH SHALL BE SPLICED SO THAT THE OVERLAP BETWEEN OUTERMOST CROSS WIRES OF EACH SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRES PLUS TWO INCHES, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- THIS CONTRACTOR SHALL COOPERATE WITH OTHER TRADES AND WHERE REQUIRED INSTALL ALL BUILT-IN WORK, SLEEVES, INSERTS, ETC., AS REQUIRED FOR A COMPLETE JOB.
- STRUCTURAL MEMBERS SHALL BE POURED FOR THEIR FULL DEPTHS IN ONE OPERATION. CONSTRUCTION JOINTS SUCH AS A DAY'S POUR JOINTS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE SPAN, MAIN REINFORCING TO RUN THROUGH THE JOINT, KEY AND ROUGHEN JOINTS TO EXPOSE AGGREGATE FOR CHEMICAL BOND.
- NO HORIZONTAL JOINTS SHALL BE PLACED IN WALLS EXCEPT AS SHOWN ON THE DRAWINGS, WITHOUT THE APPROVAL OF THE ENGINEER.
- STRUCTURAL SLABS ON GRADE SHALL BE OF A THICKNESS AND REINFORCED AS INDICATED ON DRAWINGS.
- SLABS-ON-GRADE SHALL HAVE THICKENINGS, DEPRESSIONS, OPENINGS, ETC., AS REQUIRED OR AS SHOWN HEREIN OR ON ARCHITECTURAL DRAWINGS.
- LOCATION OF CUTOFF POINTS FOR CONCRETE BEAM REINFORCEMENT SHALL BE AS SHOWN ON TYPICAL DETAILS.
- PROVIDE 100% CONTINUITY OVER SUPPORTS FOR CONTINUOUS SLABS AND BEAMS.
- PROVIDE TWO #5 BARS AT REINTRANT CORNERS AND AROUND OPENINGS IN ANY CONCRETE WALL, BEAM, SLAB, GRADE BEAM OR MASONRY BEARING WALL.
- PROVIDE POCKETS IN WALLS FOR COLUMNS, BEAMS AND SLABS.
- MINIMUM BEARING ON WALL OR BEAMS 4" FOR SLABS, 8" FOR BEAMS (UON).
- TOP ELEVATION OF SLABS SHALL VARY ACCORDING TO FINISH FLOOR MATERIAL. SEE ARCHITECTURAL DRAWINGS.
- IN ANY APPROVED CONSTRUCTION JOINT, PROVIDE 2" x 4" KEY AND LAP REINFORCING PER ACI, EXCEPT FOR SLABS-ON-GRADE.
- SLAB-ON-GRADE SHALL BE POURED IN STRIPS. THE STRIP SHALL BE ONE COLUMN BAY WIDE AND THE CONTROL JOINTS IN SLABS ON GRADE SHALL HAVE MAXIMUM SPACING OF 36xSLAB THICKNESS (IN INCHES) IN EITHER DIRECTION.
- BACKFILL TO BE PLACED IN 6" LAYERS AND COMPACTED TO 95% OF MAXIMUM MODIFIED DENSITY.
- PROVIDE PRECAST LINTELS FOR OPENINGS OR RECESSES IN BLOCK WALLS WHERE NO SPECIFIC LINTEL IS NOTED. LINTELS SHALL HAVE 8" MINIMUM BEARING EACH END. WHERE STRUCTURAL MEMBERS INTERFERE WITH BEARING, PROVIDE CONNECTION TO MEMBER.
- SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF OPENINGS IN ROOF, FLOORS AND WALLS NOT SHOWN ON STRUCTURAL DRAWINGS.
- FOOTINGS ARE DESIGNED FOR A SOIL BEARING PRESSURE OF # TONS PER SQUARE FOOT (##### PSF).
- UNLESS OTHERWISE NOTED WALL FOOTINGS SHALL BE MINIMUM 12" THICK AND PROJECT 6" BEYOND ALL FACES OF WALLS AND AS A MINIMUM CONTAIN #5@12" O.C. BOTTOM BARS.
- MAXIMUM STEP OF FOOTINGS SHALL BE ONE VERTICALLY TO TWO HORIZONTALLY WHERE ELEVATIONS CHANGE.
- FOUNDATION EXCAVATIONS SHALL BE INSPECTED BY SOILS ENGINEER PRIOR TO CONCRETE PLACEMENT. SOFTENED OR OTHERWISE UNSUITABLE BEARING MATERIALS SHALL BE REMOVED AND REPLACED WITH LOAD-BEARING FILL OR WITH LEAN CONCRETE (2,000 PSI).
- FOUNDATION EXCAVATIONS SHALL BE CUT TO FINAL GRADE AND FOUNDATIONS CONSTRUCTED AS SOON AS POSSIBLE TO MINIMIZE POTENTIAL DAMAGE TO BEARING SOILS. IF THE EXCAVATION MUST REMAIN OPEN OVERNIGHT OR IF RAINFALL BECOMES IMMINENT WHILE THE BEARING SOILS ARE EXPOSED, A 3" MUD SLAB OF LEAN CONCRETE (2,000 PSI) SHALL BE PLACED FOR PROTECTION OF THE BEARING SOIL.
- EXCAVATIONS SHALL BE KEPT DRY BY PUMPING UNTIL UNDERGROUND CONSTRUCTION IS COMPLETE.
- LOOSENEED BEARING SOILS SHALL BE RECOMPACTED WITH A SMALL VIBRATORY PLATE COMPACTOR PRIOR TO PLACEMENT OF REINFORCING BARS.
- NO BACKFILLING WILL BE PERMITTED AGAINST BASEMENT RETAINING WALLS UNTIL THE UPPER AND LOWER LEVEL SLABS ARE IN PLACE AT LEAST SEVEN DAYS.
- BACKFILL SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF FOUNDATION WALLS UNTIL THE FINAL ELEVATION IS ACHIEVED. VARIATIONS SHALL NOT EXCEED 2'-0" BETWEEN BACKFILL ELEVATIONS ON EITHER SIDE WITHOUT ENGINEER'S APPROVAL.

## GENERAL NOTES (MASONRY)

(UNLESS OTHERWISE SHOWN OR NOTED ON PLANS, THE FOLLOWING SHALL APPLY) SN420001

- WALL DESIGN ALLOWABLE STRESSES ARE BASED ON "SPECIAL INSPECTION" REQUIREMENTS OF ACI 530.1 / ASCE 6 / TMS 602 LATEST EDITION. CONSTRUCTION OF WALLS MUST BE PERFORMED IN ACCORDANCE WITH REQUIREMENTS FOR LEVEL 2 QUALITY ASSURANCE GUIDELINES (SPECIAL INSPECTION) AS DEFINED BY ACI 530.
- CONCRETE MASONRY UNITS (CMU) SHALL BE TYPE II GRADE N-1 AND SHALL CONFORM TO A.S.T.M. C90 FOR LOAD BEARING UNITS. CMU SHALL BE NORMAL WEIGHT.
- CMU BLOCK SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,800 PSI ON THE NET AREA OF THE BLOCK.
- MINIMUM  $f'm$  SHALL BE 2,000 PSI.
- COMPRESSIVE STRENGTH OF THE GROUT SHALL BE A MINIMUM OF 2,000 PSI WITH A 9" TO 11" SLUMP AND COMPLY WITH REQUIREMENTS FOR FINE GROUT PER A.S.T.M. 476.
- MORTAR SHALL CONFORM TO A.S.T.M. C-270; COORDINATE WITH SPECIFICATION SECTION 042200 FOR REQUIRED MORTAR TYPES. UNLESS OTHERWISE NOTED TYPE S MORTAR SHALL BE PROVIDED FOR ALL REINFORCED MASONRY.
- GROUTING PROCEDURES SHALL BE IN STRICT COMPLIANCE WITH RECOMMENDATIONS AS OUTLINED BY NCMA AND ACI.
- CELLS RECEIVING REINFORCING SHALL BE FULLY GROUTED.
- MASONRY UNITS SHALL BE LAID IN A RUNNING BOND PATTERN WITH FULL FACE SHELL MORTAR BEDS.
- AREAS ADJACENT TO OPENINGS SHALL BE GROUT FILLED FOR THE FULL HEIGHT OF WALL FOR A DISTANCE OF AT LEAST 24 INCHES WIDE FROM THE FACE OF OPENING.
- STARTING JOINT FOR ALL MASONRY SHALL BE LAID WITH FULL BED MORTAR COVERAGE.
- MORTAR SHALL BE APPLIED TO CROSS WEBS OF CMU IN ADDITION TO HORIZONTAL AND VERTICAL EDGES OF AREAS OF BEAM BEARING AREAS.
- UNLESS OTHERWISE NOTED, REINFORCE MASONRY WALLS AS FOLLOWS:  
INTERIOR PARTITION WALLS:  
8" CMU - #5 @ 48" O.C. VERTICALS; BOND BEAMS w/ (2)-#5 @ 48" O.C. (15'-0" MAX. HEIGHT)  
6" CMU - #5 @ 32" O.C. VERTICALS; BOND BEAMS w/ (2)-#4 @ 48" O.C.  
EXTERIOR CMU BACKUP:  
8" CMU - #5 @ 24" O.C. VERTICALS; BOND BEAMS w/ (2)-#5 @ 48" O.C. (15'-0" MAX. HEIGHT)  
REFER TO TYPICAL DETAILS FOR ADDITIONAL REINFORCING REQUIREMENTS AT OPENINGS, CONTROL JOINTS, CORNERS, INTERSECTIONS, AND BEARING CONDITIONS FOR LINTELS, BEAMS, AND COLUMNS. PROVIDE A MINIMUM OF (1) #4 ADDITIONAL HORIZONTAL BAR AT BOTTOM AND TOP OF WALL.  
OPENINGS. BARS ARE TO EXTEND NOT LESS THAN 24 INCHES PAST THE OPENING.  
INSTALL STANDARD WEIGHT LADDER AND/OR TRUSS TYPE HORIZONTAL JOINT REINFORCING AT A MAXIMUM SPACING OF 16" ON-CENTER. WHERE TWO LONGITUDINAL WIRES ARE USED, THE SPACES BETWEEN THESE WIRES SHALL BE THE WIDEST THAT THE MORTAR JOINT WILL ACCOMMODATE.  
INSTALL JOINT REINFORCING CONTINUOUS IN ALL SUCH JOINTS. LAP ACCORDING TO MANUFACTURER SPECIFICATIONS. JOINT REINFORCING SHALL CONSIST OF AT LEAST (2) TWO LONGITUDINAL WIRES FOR WALLS GREATER THAN 4" IN WIDTH AND AT LEAST (1) ONE WIRE FOR WALLS NOT EXCEEDING 4 INCHES IN WIDTH.
- PROVIDE MECHANICAL ANCHORAGE BETWEEN ALL MASONRY ELEMENTS AND STRUCTURAL FRAMING BY APPROVED MATERIALS AND METHODS PER PROJECT SPECIFICATIONS. MECHANICAL ANCHORS ARE REQUIRED AT ALL LOCATIONS WHERE MASONRY ELEMENTS ARE ADJACENT TO STRUCTURAL FRAMING AND SYSTEMS. PROVIDE ANCHORS AT A SPACING NOT TO EXCEED 16 INCHES ON-CENTER (MAX.). INDIVIDUAL ANCHORS SHALL BE CAPABLE TO WITHSTAND A HORIZONTAL LOAD OF 500 POUNDS (WITHOUT AN ALLOWABLE STRESS INCREASE FOR WIND/SEISMIC). WALLS ARE TO BE ANCHORED AT THE TOP OF THE WALL, ALWAYS.
- CONSULT THE MASONRY AND/OR STEEL LINTEL SCHEDULE FOR ADDITIONAL WALL REINFORCING REQUIREMENTS AT WINDOW AND DOOR HEADS AND OTHER SUCH OPENINGS.
- UNLESS OTHERWISE INDICATED, CONSTRUCT TOPS OF 8" AND 12" WALLS WITH A CONTINUOUS BOND BEAM CONTAINING (2) #5 LONGITUDINAL BARS. PLACE BARS AT TOP OF BOND BEAM. PROVIDE THE MINIMUM COVER REQUIRED PER ACI 530. AT 6" WALLS PROVIDE CONTINUOUS BOND BEAM WITH (1) #5 LONGITUDINAL BAR.
- REINFORCING STEEL SHALL BE IN ACCORDANCE WITH A.S.T.M. A-615 GRADE 60. SHOP FABRICATE REINFORCING BARS WHICH ARE SHOWN TO BE HOOKED OR BENT. PROVIDE A MINIMUM LAP OF 48 x BAR DIAMETER AT ALL SPLICES, UNLESS OTHERWISE INDICATED.
- PROVIDE REBAR DOWELS FROM SUPPORTING ELEMENTS (EXTERIOR PERIMETER EDGES OF ALL SLABS, CONCRETE WALLS, ETC.) TO MATCH VERTICAL REINFORCING SIZE AND SPACING. DOWELS SHALL HAVE STANDARD 90 DEGREE HOOKS AND TENSION LAP WITH THE FIRST LIFT OF REINFORCING.
- PROVIDE HORIZONTAL BOND BEAMS WITH CONTINUOUS REINFORCING AS INDICATED. DISCONTINUE HORIZONTAL REINFORCING AT CONTROL JOINTS EXCEPT FOR THE BOND BEAMS AT BEARING ELEVATIONS.
- PROVIDE BOND BEAM LINTELS ABOVE WALL OPENINGS LESS THAN 4'-0" IN LENGTH/WIDTH AND FOR OPENINGS OVER 4'-0" IN LENGTH/WIDTH PROVIDE A STEEL LINTEL (W8x24 w/ 3/8" BOTTOM PLATE) PER THE TYPICAL DETAILS. SEE THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF DOOR AND WINDOW OPENINGS.
- PROVIDE STEEL JOIST AND BEAM BEARING PLATES AND OTHER ACCESSORIES AS INDICATED. PROVIDE 3 COURSES OF SOLIDLY GROUTED CMU BELOW ALL BEAM BEARINGS OVER A WIDTH OF 2'-8" CENTERED ON THE WALL. PER TYPICAL BEAM BEARING DETAIL.
- PROVIDE CMU CONTROL JOINTS AS INDICATED ON THE DRAWINGS, WITH ADDITIONAL JOINTS SUCH THAT THE SPACING BETWEEN JOINTS DOES NOT EXCEED A SPACING OF 3 x WALL HEIGHT (30 FEET MAX.). WHERE BEAMS OR LINTELS BEAR AT CMU CONTROL JOINTS, OFFSET & LAP THE VERTICAL REINFORCING AS INDICATED.
- PROVIDE ALL REQUIRED TEMPORARY BRACING DURING CONSTRUCTION.

## GENERAL NOTES (STEEL DECK)

(UNLESS OTHERWISE SHOWN OR NOTED ON PLANS, THE FOLLOWING SHALL APPLY) SN530001

- ROOF DECK SHALL BE NON-COMPOSITE TYPE B WIDE-RIB. SEE PLAN NOTES.
- METAL DECK UNITS AND ACCESSORY ITEMS SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO ASTM SPECIFICATION A611 WITH A MINIMUM YIELD STRENGTH OF 33,000 PSI. BEFORE FORMING, THE STEEL SHEET SHALL RECEIVE A PROTECTIVE METAL COATING OR ZINC CONFORMING TO ASTM SPECIFICATION A653.
- METAL DECK SHALL BE SHORED AS REQUIRED BY PLANS OR BY SPAN AND LOAD CONDITIONS TO SUPPORT WET WEIGHT OF CONCRETE AND CONSTRUCTION LOADS.
- METAL DECK SHALL BE COORDINATED WITH ARCHITECTURAL AND ELECTRICAL/MECHANICAL REQUIREMENTS.
- UNFRAMED DECK OPENINGS IN COMPOSITE DECK WITH CONCRETE SHALL BE REINFORCED AS FOLLOWS:
  - HOLES 6" - 10"/PARALLEL TO DECK SPAN, 12" MAX./PERPENDICULAR TO SPAN: 14 GAUGE FLAT SHEET EXTENDING 6" BEYOND HOLE ON ALL SIDES.
  - OPENING LARGER THAN THESE DIMENSIONS REQUIRE SUPPLEMENTAL FRAMING; COORDINATE WITH THE TYPICAL DROP-IN-FRAME DETAIL.
  - REINFORCEMENT SHALL BE WELDED TO THE TOP SIDE OF DECK.
- UNFRAMED OPENINGS IN ROOF DECK SHALL BE REINFORCED AS FOLLOWS:
  - HOLES LESS THAN 8": PROVIDE AN 18 GAUGE FLAT SHEET EXTENDING 8" MINIMUM BEYOND HOLE IN ALL DIRECTIONS.
  - HOLES 8" - 13": PROVIDE A 16 GAUGE FLAT SHEET EXTENDING 8" MIN. BEYOND HOLE IN ALL DIRECTIONS.
  - HOLES GREATER THAN 13" REQUIRE SUPPLEMENTAL FRAMING; COORDINATE WITH THE TYPICAL DROP-IN-FRAME DETAIL.
- THERE SHALL BE NO HANGING OF ANY ITEMS SUCH AS CEILINGS, CONDUIT, PIPING, DUCTWORK ETC. FROM THE STEEL FROM DECK.

## STRUCTURAL STEEL GENERAL NOTES:

(UNLESS OTHERWISE NOTED OR SHOWN ON PLAN, THE FOLLOWING NOTES SHALL APPLY) SN510001

- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE "STEEL CONSTRUCTION MANUAL" BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (A.I.S.C.).
- UNLESS OTHERWISE NOTED, ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:
 

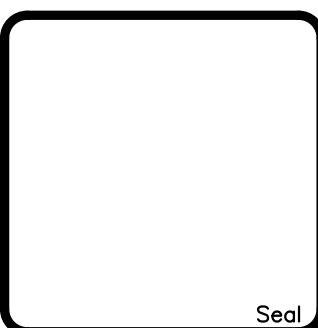
MEMBER	A.S.T.M.	MIN. STRENGTH
ROLLED SHAPES	A992	50 KSI
STRUCTURAL TUBING	A500 (GRADE B)	46 KSI
STEEL PIPE	A500 (GRADE B)	42 KSI
OTHER ROLLED PLATES	A36	36 KSI
CONNECTION BOLTS	A325	92 KSI
ANCHOR BOLTS	F1554	---
THREADED BOLTS	A36	36 KSI
NON-SHRINK GROUT	C1107	8,000 PSI
- CONNECTIONS SHALL BE SHEAR TYPE CONNECTIONS AND DESIGNED BY THE FABRICATOR FOR THE FACTORED SHEAR FORCES INDICATED ON PLAN IN ACCORDANCE WITH THE A.I.S.C. SPECIFICATIONS FOR LOAD RESISTANCE FACTOR DESIGN. MINIMUM BOLT DIAMETER SHALL BE 3/4" UNLESS OTHERWISE NOTED. BOLTS SHALL BE SHEAR/BEARING TYPE BOLTS AND BE "SNUG-TIGHT". STEEL BEAM CONNECTIONS SHALL BE DESIGNED TO SUPPORT A MINIMUM OF ONE HALF THE MAXIMUM TOTAL UNIFORM LOAD FOR PARTICULAR BEAM AND SPAN CONDITION AS DEFINED BY THE A.I.S.C. MANUAL OF STEEL CONSTRUCTION (FOR COMPOSITE BEAMS, MULTIPLY BY 1.33).
- METAL DECK SHALL BE ATTACHED ACCORDING TO METAL DECK MANUFACTURER AND STEEL DECK INSTITUTE STANDARDS.
- WELDING SHALL BE IN ACCORDANCE WITH A.W.S. D1:1 USING E70XX ELECTRODES. UNLESS OTHERWISE NOTED, PROVIDE CONTINUOUS MINIMUM SIZED FILLET WELDS PER A.I.S.C. REQUIREMENTS. FILLER MATERIAL SHALL HAVE A MINIMUM YIELD STRENGTH OF 58 K.S.I.
- WHERE "CONTINUOUS CHORD" ANGLES ARE INDICATED, PROVIDE A CONTINUOUS BUTT WELD OR FULL PENETRATION WELD AT THE SPLICE POINTS. THE STEEL FABRICATOR MAY SUBMIT AN ALTERNATE BOLTED CONNECTION DETAIL FOR APPROVAL.
- MOMENT CONNECTIONS DENOTED THUS ( ) ON PLAN. SEE TYPICAL DETAILS.
- WHERE STEEL BEAMS BEAR ACROSS BUILDING EXPANSION JOINTS OR AT WALL CONTROL JOINTS, PROVIDE A "SLIP" CONNECTION PER TYPICAL DETAILS.
- HOLES IN STEEL BEAMS SHALL BE DRILLED OR PUNCHED. ALL SLOTTED HOLES SHALL BE PROVIDED WITH SMOOTH EDGES. BURNING OF HOLES AND TORCH CUTTING AT THE SITE IS NOT PERMITTED.
- THE STRUCTURAL STEEL ERECTOR SHALL PROVIDE TEMPORARY GUYING AND BRACING AS REQUIRED. COLUMNS, ANCHOR BOLTS, BASE PLATES, ETC. HAVE BEEN DESIGNED FOR THE FINAL COMPLETE CONDITION, AND HAVE NOT BEEN INVESTIGATED FOR POTENTIAL LOADINGS ENCOUNTERED DURING STEEL ERECTION AND CONSTRUCTION. ANY INVESTIGATION OF THE COLUMNS, ANCHOR BOLTS, FRAMING, ETC. FOR ADEQUACY DURING THE STEEL ERECTION AND CONSTRUCTION PROCESS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- STEEL FABRICATORS SHALL BE AN A.I.S.C. CERTIFIED SHOP FOR CATEGORY I STEEL STRUCTURES AND MAINTAIN DETAILED QUALITY CONTROL PROCEDURES AS REQUIRED TO SATISFY THE SPECIAL INSPECTION REQUIREMENTS OF THE LATEST BUILDING CODE HAVING JURISDICTION.
- UNLESS OTHERWISE NOTED, STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER, INCLUDING ALL BRICK SHELF ANGLES, SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. PROTECTIVE COATING DAMAGED DURING THE TRANSPORT, ERECTING AND FIELD WELDING PROCESS SHALL BE REPAIRED IN THE FIELD TO MATCH THE SHOP APPLIED COATING.
- THE OWNER WILL HIRE AN INDEPENDENT TESTING AGENCY TO PROVIDE SPECIAL INSPECTIONS OF THE BOLTING, WELDING, AND OTHER ITEMS IN ACCORDANCE WITH THE LATEST BUILDING CODES HAVING JURISDICTION
- SPECIAL OR COMPLEX CONNECTIONS THAT ARE TO BE DESIGNED BY THE FABRICATOR ARE DENOTED AS SUCH ON PLAN. THE FABRICATOR SHALL DESIGN THESE CONNECTIONS FOR THE FORCES SHOWN AND SUBMIT CALCULATIONS AND SHOP DRAWINGS BEARING THE SIGNED AND DATED SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE WORK IS DONE.
- PROVIDE ANGLE FRAMES AT ALL ROOF OPENINGS AND MECHANICAL ROOFTOP UNITS PER TYPICAL DROP-IN FRAME DETAIL.
- REINFORCING SHALL BE PROVIDED AT CONNECTIONS WHERE CUTS HAVE REDUCED THE SHEAR OR MOMENT CAPACITY BELOW THAT REQUIRED TO SUSTAIN THE REACTION. FLANGES AND WEB ARE TO BE REINFORCED WHERE THE LOCAL CAPACITY TO SUSTAIN LOAD IS INADEQUATE.
- STEEL FABRICATOR TO SUPPLY 16 GAGE CLOSURE ANGLES AROUND ALL FLOOR OPENINGS AND PERIMETER OF BUILDING. FOR SLAB OVERHANG GREATER THAN 6" REFER TO TYPICAL SLAB EDGE DETAIL.
- INSTALL GIRTS WITH A SLIGHT DOWNWARD BOW AT MID-SPAN.
- SEE ARCHITECTURAL DETAILS ON ROOF DRAINS AND MISCELLANEOUS ROOF OPENINGS FOR CURBS AND MISCELLANEOUS ANGLE IRON.
- MISCELLANEOUS IRON CONTRACTOR TO PROVIDE MISCELLANEOUS STEEL SHOWN ON ARCHITECTURAL DRAWINGS THAT IS NOT SHOWN ON STRUCTURAL DRAWINGS.
- ALL STEEL USED IN THE FABRICATION OF EXPOSED STRUCTURAL STEEL, INCLUDING CONNECTIONS, SHALL BE CONSIDERED ARCHITECTURALLY EXPOSED STRUCTURAL STEEL AND WILL BE SUBJECT TO THE REQUIREMENTS OF SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR ALL STEEL BUILDINGS AND BRIDGES, MARCH 18, 2005.
- AT LOCATIONS ON THE ARCHITECTURAL DRAWINGS OR OTHER TRADES WHERE A STEEL ANGLE OR PLATE IS SHOWN DIAGRAMMATICALLY AND REFERENCE IS MADE TO THE STRUCTURAL DRAWINGS FOR SIZE, PROVIDE MINIMUM THICKNESS OF 3/8" MATERIAL AND PLATE WIDTH OR ANGLE SIZE AS SCALED FROM THE DRAWINGS. INSTALL THE PLATE OR ANGLE TO THE EXTENT REQUIRED TO ACCOMPLISH A COMPLETE JOB.
- WHEN NO MEMBER SIZE IS GIVEN IN PLAN AND/OR SECTION, AND THE SIZE CANNOT BE DETERMINED GRAPHICALLY, THE MINIMUM SIZE ASSUMED FOR BIDDING SHALL BE AS FOLLOWS:
 

CHANNELS	C12x35
W-SHAPES	W16x50
ANGLES	L6x6x1/2
TUBES	HSS6x6x1/2
PIPES	6"Ø X-STRONG
WT (TEE'S)	WT8x25

UNLESS OTHERWISE NOTED ALL MEMBERS INDICATED ON PLAN ARE W-SHAPES. FINAL SIZES SHALL BE CONFIRMED BY ENGINEER VIA A REQUEST FOR INFORMATION (RFI) DURING THE BID PERIOD OR DURING THE SHOP DRAWING PHASE. CONTRACTOR SHALL NOT BE ENTITLED TO COSTS FOR REVISIONS TO THE MEMBER SIZE IF AN RFI IS NOT SUBMITTED IN A TIMELY MANNER.



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Designed by:	DWU	Checked by:	DWU	Date:	03-01-2023	
Drawn by:	JTU	Checked by:	DWU	Project No.:	2020-117	
UNAUTHORIZED ALTERATION OF THIS DRAWING IS PROHIBITED BY THE STATE ENGINEERING LAW, SECTION 2206, SUBSECTION 2.					Print Scale:	AS NOTED

## GENERAL NOTES AND DETAILS

Project Location:	WINDSOR HIGHWAY DEPARTMENT 15 CHARLETTOWN STREET WINDSOR, NY 13986
Project Name:	TOWN OF WINDSOR HIGHWAY DEPARTMENT MAINTENANCE GARAGE

Drawing Reference Number:  
**S-3.0**  
OF