STRUCTURAL	NOTES

GOVERNING CODE

2024

4 OHIO BUILDING CODE (REFERENCES IBC 2021 & ASCE 7-16)	
IGN LOADS	
 ROOF LOAD: A. MINIMUM COMBINATION OF WIND LOAD, LIVE LOAD, RAI SNOW LOAD (P1 OR Pm) B. ROOF MEMBRANE & INSULATION C. METAL DECK D. STEEL JOIST FRAMING LOAD (WHERE APPLICABLE) E. STEEL JOIST GIRDER FRAMING LOAD (WHERE APPLICABLE) F. CEILING G. SPRINKLERS H. DUCTS, LIGHTS, MISC, MECHANICAL 	20 PSF* 3 PSF 2 PSF 3 PSF
I. TOTAL LOAD ON JOISTS (INCLUDING JOIST LOAD)	35 PSF MIN
 J. TOTAL LOAD ON JOIST GIRDERS (INCLUDING JOIST & JO LOAD) K. TOTAL LOAD ON STEEL BEAMS (NOT INCLUDING JOIST (37 PSF MIN
GIRDER LOAD) L. TOTAL LOAD ON STEEL BEAMS (INCLUDING JOIST LOAD INCLUDING JOIST GIRDER LOAD)	33 PSF MIN
*SNOW LOADS:	
A.GROUND SNOW, Pg= 20 PSFB.SNOW LOAD IMPORTANCE FACTOR, Is= 1.0C.SNOW EXPOSURE FACTOR, Ce= 1.0D.SNOW LOAD THERMAL FACTOR, Ct= 1.2 (UNHE/E.SNOW LOAD THERMAL FACTOR, Ct= 1.0 (ALL OTF.FLAT ROOF SNOW LOAD, Pf= 17 PSF (UNG.FLAT ROOF SNOW LOAD, Pf= 14 PSF (OTH.MINIMUM SNOW LOAD, Pm= 20 PSF	ATED & OPEN AIR STRUCTURES) IHER STRUCTURES) IHEATED & OPEN AIR STRUCTURES) IHER STRUCTURES)
SEE SNOW DRIFT PLAN FOR DRIFT LOADS (P_d). SPECIFIED DF WITH FLAT ROOF SNOW LOAD (P_i) OR SLOPED ROOF SNOW L AT DRIFT CONDITIONS	
SECONDARY ROOF DRAINAGE VIA SCUPPERS OR OVERFLOW ACCORDANCE WITH THE APPLICABLE PLUMBING CODE AND / DRAINAGE SHALL BE DESIGNED BY OTHERS TO LIMIT THE TO HEAD + HYDRAULIC HEAD OVER SECONDARY ROOF DRAINS) MEMBRANE AT THE PRIMARY ROOF DRAIN.	ASCE 7. SECONDARY ROOF TAL DEPTH OF WATER (STATIC
COORDINATE ROOF FRAMING WITH FINAL SELECTION OF ROO EQUIPMENT AND ASSOCIATED OPENINGS. ITEMS TO BE COO LOCATION, TOTAL WEIGHT, WEIGHT DISTRIBUTION, AND SUP	RDINATED INCLUDE SIZE,
WIND LOAD (PER ASCE 7):	
B. ALLOWABLE STRESS DESIGN WIND SPEED, VASD = 8 C. RISK CATEGORY = 11 D. WIND EXPOSURE = C	: (ALL WIND DIRECTIONS) 0.18, -0.18 CLADDING ITEMS NOT SPECIFICALLY
SEISMIC PARAMETERS (GENERAL): A. SEISMIC RISK CATEGORY	=
B. SEISMIC IMPORTANCE FACTOR, I. MAPPED SPECTRAL RESPONSE ACCELERATION FACTO	= 1.0
SHORT PERIOD, S_8 D. MAPPED SPECTRAL RESPONSE ACCELERATION FACTO	R AT 1
SECOND. S1 E. SITE CLASS F. DESIGN SPECTRAL RESPONSE ACCELERATION FACTOR	= 0.071 = D
SHORT PERIOD, Sos G. DESIGN SPECTRAL RESPONSE ACCELERATION FACTOR	= 0.154
SECOND PERIOD, Sp1 H. SEISMIC DESIGN CATEGORY	= 0.113 = B
N. ANALYSIS PROCEDURE USED	
SEISMIC FORCE RESISTING SYSTEM AND LOAD (BUS GARAGE A. BASIC SEISMIC FORCE RESISTING SYSTEM: STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEI RESISTANCE	
 B. RESPONSE MODIFICATION COEFFICIENT, R C. SEISMIC RESPONSE COEFFICIENT, Cs D. DESIGN BASE SHEAR 	= 3 = 0.051 = 95 KIPS
SEISMIC FORCE RESISTING SYSTEM AND LOAD (BUS WASH B A. BASIC SEISMIC FORCE RESISTING SYSTEM: ORDINARY REINFORCED MASONRY SHEAR WALLS	UILDING):
B. RESPONSE MODIFICATION COEFFICIENT, R C. SEISMIC RESPONSE COEFFICIENT, Cs	= 2 = 0.077
D. DESIGN BASE SHEAR	= 25 KIPS
SPECIAL LOADS:	
A. INTERIOR WALLS AND PARTITIONS THAT EXCEED 6 FEE LOAD.	T IN HEIGHT: 5 PSF HORIZONTAL LIVE
 B. HANDRAILS AND GUARDRAILS: I. TOP RAIL: 200 POUND CONCENTRATED LOAD AT A PLF UNIFORM LOAD APPLIED IN ANY DIRECTION. II. INTERMEDIATE RAILS, BALUSTERS, AND PANEL FIL 	

CONSTRUCTION AND SAFETY

4.

DOMESTIC STEEL USE REQUIREMENTS AS SPECIFIED IN SECTION 153.011 OF THE REVISED CODE APPLY TO THIS PROJECT. COPIES OF SECTION 153.011 OF THE REVISED CODE CAN BE OBTAINED FROM ANY OF THE OFFICES OF THE OHIO DEPARTMENT OF ADMINISTRATIVE SERVICES. THE FIRST SHEET OF STEEL SHOP DRAWINGS SHALL BEAR A SIGNED CERTIFICATION BY THE FABRICATOR INDICATING THAT NO FOREIGN STEEL IS BEING USED. THE FIRST SHEET OF STEEL SHOP DRAWINGS SHALL ALSO BEAR A SIGNED CERTIFICATION BY THE CONTRACTOR AND FABRICATOR INDICATING THAT NO FOREIGN STEEL IS BEING USED.

OPENINGS AND SPACE BETWEEN RAILS.

- CONTRACTOR SHALL BRACE ENTIRE STRUCTURE AS REQUIRED TO MAINTAIN STABILITY UNTIL COMPLETE AND FUNCTIONING AS THE DESIGNED UNIT.
- 3. ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY CONTRACTOR.
- 4. THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND IS NOT LIMITED TO NORMAL WORKING HOURS. WHEN ON SITE, THE ENGINEER IS RESPONSIBLE FOR HIS/HER OWN SAFETY BUT HAS NO RESPONSIBILITY FOR THE SAFETY OF OTHER PERSONNEL OR SAFETY CONDITIONS AT THE SITE.
- PRIOR TO COMMENCEMENT OF STEEL ERECTION, CONTRACTOR MUST PROVIDE THE STEEL ERECTOR WRITTEN NOTIFICATION THAT THE CONCRETE IN THE FOOTINGS, PIERS AND WALLS OR THE MORTAR IN THE MASONRY PIERS AND WALLS HAS ATTAINED EITHER 75 PERCENT OF THE INTENDED MINIMUM COMPRESSIVE DESIGN STRENGTH OR SUFFICIENT STRENGTH TO SUPPORT THE LOADS IMPOSED DURING STEEL ERECTION.
- ANCHOR RODS AND FOUNDATION DOWELS SHALL NOT BE REPAIRED. REPLACED OR FIELD-MODIFIED WITHOUT THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.

FUTURE EXPANSION

1. NO ALLOWANCE FOR FUTURE EXPANSION HAS BEEN MADE IN THE STRUCTURAL DESIGN.

LATERAL LOAD RESISTING SYSTEM

1. THE LATERAL LOAD RESISTING SYSTEM CONSISTS OF THE FOLLOWING ELEMENTS:

- A. BUS GARAGE BUILDING METAL DECK DIAPHRAGM AT ROOF i. STEEL BRACED FRAMES AS INDICATED ON PLAN
- II. MASONRY SHEAR WALLS AND STEEL MOMENT FRAMES AS INDICATED ON PLAN.

DEFLECTION AND DRIFT FOR NON-STRUCTURAL COMPONENTS

- 1. ALL NON-STRUCTURAL COMPONENTS (EXTERIOR WALL ELEMENTS, MEP SYSTEMS, ETC.) SHALL BE DESIGNED AND DETAILED TO ACCOM DEFLECTIONS OF STRUCTURAL FRAMING AND LATERAL DRIFTS OF
- MAXIMUM VERTICAL DEFLECTION OF PERIMETER ROOF FRAMING IS 0 DEFLECT IN AN UPWARD OR DOWNWARD DIRECTION.
- 3. LATERAL DRIFT OF THE BUILDING STRUCTURE AT EACH LEVEL IS LIST
- A. MAXIMUM DRIFT = HEIGHT IN INCHES (RELATIVE TO ELEVATION (

FOUNDATIONS

- 1. FOUNDATION DESIGN IS BASED UPON RECOMMENDATIONS DESCRIBE DOCUMENTS PROVIDED BY THE PROJECT GEOTECHNICAL ENGINEER DOCUMENTS ARE LOCATED IN THE APPENDIX OF THE PROJECT MANU
- A. GEOTECHNICAL EXPLORATION REPORT DATED JULY 21, 2021. B. GEOTECHNICAL ADDENDUM NO. 1 DATED OCTOBER 16, 2024.
- MIN 2. FOUNDATION SYSTEM:
 - A. FOUNDATION SYSTEM FOR COLUMNS AND EXTERIOR WALLS C GRADE BEAMS SUPPORTED ON AUGER CAST PILES. SEE AUGER ADDITIONAL INFORMATION.
- B. FOUNDATION SYSTEM FOR INTERIOR FLOOR SLABS CONSISTS (WITN STONE COLUMNS. SEE SPECIFICATIONS FOR ADDITIONAL 3. LATERAL SOIL PRESSURES: LATERAL EARTH PRESSURES INDICATED HYDROSTATIC OR COMPACTION PRESSURES DURING BACKFILL OPER
- HAVE ADEQUATE DRAINAGE TO PREVENT HYDROSTATIC PRESSURES OPERATED TAMPERS ONLY. A. CANTILEVERED RETAINING WALLS (ACTIVE PRESSURE): 47 PSF I PRESSURE (TRIANGULAR DISTRIBUTION) + 39 PSF SURCHARGE
- DISTRIBUTION). B. FOUNDATION WALLS WITH LATERAL RESTRAINT AT TOP (AT-RES EQUIVALENT FLUID PRESSURE (TRIANGULAR DISTRIBUTION) + 5 (RECTENGULAR DISTRIBUTION).
- C. PASSIVE PRESSURE: 307 PSF EQUIVALENT FLUID PRESSURE (TR
- 4. ALL AREAS WITHIN THE FOOTPRINT OF THE BUILDING, INCLUDING UTI FREE OF ANY WET AND/OR SOFT AREAS PRIOR TO PLACEMENT OF FI
- 5. CONTRACTOR SHALL CONTACT UTILITY COMPANIES FOR LOCATING L AND IS RESPONSIBLE FOR THEIR PROTECTION AND SUPPORT.
- 6. FROST DEPTH IS 30 INCHES BELOW GRADE. BOTTOM OF PILE CAPS. SLABS THAT ARE NOT PART OF AN INSULATED FROST PROTECTED F ARE NOT WITHIN CONDITIONED SPACE MUST BE BELOW SPECIFIED I MEASURED FROM EXTERIOR GRADE. MAINTAIN SPECIFIED TOP OF FO AND THICKEN FOUNDATIONS OR PLACE CLSM BELOW FOUNDATIONS.
- FOUNDATIONS MAY BE PLACED WITHOUT SIDE FORMS IF EXCAVATED APPROXIMATELY VERTICAL. 8. FILL MATERIALS: ALL FILL MATERIALS SHALL BE APPROVED BY THE PI
- ENGINEER, INCLUDING THE SUITABILITY OF ALL EXCAVATED ON-SITE MATERIAL SHALL NOT BE PLACED ON FROZEN GROUND. A. CONTROLLED LOW STRENGTH MATERIAL (CLSM): SELF LEVELIN
- CEMENTITIOUS MATERIAL WITH AN UNCONFINED COMPRESSIVE PSI AND 150 PSI. B. FILL MATERIALS: ON-SITE, NON-ORGANIC, CLAYEY SOILS, BEDRO
- MATERIAL. C. FREE-DRAINING GRANULAR FILL: NARROWLY GRADED MIXTURE ASTM D448 WITH COARSE AGGREGATE GRADING SIZE 67 WITH 1 INCH SIEVE AND NO MORE THAN 5 PERCENT PASSING A NO. 4 SI
- CRUSHED AGGREGATE. D. IMPERVIOUS FILL: LEAN CLAYEY GRAVEL AND SAND MIXTURE CA
- A DENSE STATE. 9. FILL COMPACTION REQUIREMENTS: COMPACT FILL AS DIRECTED BY GEOTECHNICAL ENGINEER. FILL SHALL BE PLACED IN SHALLOW LIFTS
- A. STRUCTURAL FILL: STRUCTURAL FILL IS DEFINED AS FILL LOCAT INFLUENCE OF STRUCTURES. A ZONE OF INFLUENCE OF A STRU THE FOOTPRINT OF THE STRUCTURE AND PROJECTING 2 HORIZ OUTWARD AND DOWNWARD FROM THE BEARING ELEVATION OF SHALL BE COMPACTED TO 98% STANDARD PROCTOR MAXIMUM ACCEPTABLE MOISTURE CONTENT RANGE OF COMPACTED FILL MOISTURE CONTENT DETERMINED FROM ASTM D698.
- B. NON-STRUCTURAL FILL; FILL SHALL BE COMPACTED TO 95% STA MAXIMUM DRY DENSITY. THE ACCEPTABLE MOISTURE CONTENT FILL IS -3% TO +3% OF OPTIMUM MOISTURE CONTENT DETERMIN
- C. FLOOR SLAB SUBGRADE: FILL SHALL BE COMPACTED TO 98% ST MAXIMUM DRY DENSITY. THE ACCEPTABLE MOISTURE CONTENT
- FILL IS 0% TO +3% OF OPTIMUM MOISTURE CONTENT DETERMIN D. FREE-DRAINING GRANULAR FILL: FILL SHALL BE COMPACTED TO
- ASTM D4253 AND ASTM D4254. 10. BACKFILL AGAINST WALLS:

LOOSE THICKNESS).

- A. INTERIOR AND EXTERIOR SIDES OF SHALLOW FOUNDATIONS W
- I. CLSM OR COMPACTED NON-STRUCTURAL FILL MATERIALS B. RETAINED SIDE OF CANTILEVERED RETAINING WALLS: MINIMUM 18 INCH WIDE ZONE OF COMPACTED FREE-DRAIL WITHIN 24 INCHES OF FINISHED GRADE. THE TOP 24 INCHE COMPACTED CLAYEY MATERIAL, A 12 INCH THICK BY 12 INC GRAVEL ZONE WRAPPED WITH A NON-WOVEN DRAINAGE PLACED AT THE BASE OF THE FREE-DRAINING GRANULAR RIGID PEFORATED PIPE SHALL BE LOCATED AT THE BASE (WRAPPED WITHIN THE GEOTEXTILE. THE PLASTIC PIPE SH
- 11. FILL BELOW MAT SLABS NOT SUPPORTED BY AUGER CAST PILES.
- A. CLSM OR COMPACTED STRUCTURAL FILL MATERIALS.
- 12. FILL BELOW FLOOR SLABS:
- A. SUBGRADE: COMPACT SUBGRADE AS DIRECTED BY THE PROJECT ENGINEER PRIOR TO PLACEMENT OF BASE COURSE.
- B. BASE COURSE: PROVIDE COMPACTED AGGREGATE BASE COUR PROJECT GEOTECHNICAL ENGINEER.
- 13. FILL AT UTILITY TRENCHES BELOW FOUNDATIONS, EXCAVATED PRIOF CONSTRUCTION.
- A. BACKFILL TRENCHES UNDER FOUNDATIONS AND WITHIN 18 INCH FOUNDATIONS WITH CLSM TO THE BOTTOM OF FOUNDATION EL
- B. BACKFILL TRENCHES EXCAVATED UNDER FOUNDATIONS AND M BELOW BOTTOM OF FOUNDATIONS WITH CLSM OR OTHER FILL N THE PROJECT GEOTECHNICAL ENGINEER.
- 14. FILL AT UTILITY TRENCHES BELOW FOUNDATIONS, EXCAVATED AFTER CONSTRUCTION.
- A. BACKFILL TRENCHES EXCAVATED UNDER EXISTING FOOTINGS V OF FOUNDATION ELEVATION.
- 15. SEAL UTILITY TRENCH AT THE EXTERIOR FOUNDATION WALL BY USIN AND PREVENT ENTRY OF WATER.
- 16. FINISHED GRADE SHALL SLOPE AWAY FROM THE PERIMETER FOUND/
- A. EXCAVATIONS IN THE VICINITY OF EXISTING FOUNDATIONS SHA ANY SPECIAL MEASURES AS LONG AS THE BOTTOM NEAR EDGE
- 17. EXCAVATIONS:

- B. BUS WASH BUILDING METAL DECK DIAPHRAGM AT ROOF

	ABOVE A LINE WITH SLOPE OF 2 HORIZONTAL TO 1 VERTICAL EXTENDING OUTWARD AND DOWNWARD FROM THE NEAREST BOTTOM CORNER OF THE EXISTING FOUNDATION.	4. MORTAR PROPORTIONS MUST BE ACCURATELY MEASURED PRIOR TO MIXING. ADD CEMENT TO
ON-STRUCTURAL COMPONENTS (EXTERIOR WALL ELEMENTS, VENEER, MEP EQUIPMENT, YSTEMS, ETC.) SHALL BE DESIGNED AND DETAILED TO ACCOMODATE VERTICAL CTIONS OF STRUCTURAL FRAMING AND LATERAL DRIFTS OF THE BUILDING STRUCTURE.	B. EXCAVATIONS IN THE VICINITY OF EXISTING FOUNDATIONS WITH THE BOTTOM NEAR EDGE OF THE EXCAVATION BELOW A LINE WITH SLOPE OF 2 HORIZONTAL TO 1 VERTICAL	MIX IN FULL BAG QUANTITIES. MEASURE SAND IN BOX WITH VOLUME OF ONE CUBIC FOOT AS OFTEN AS NECESSARY TO MAINTAIN CONSISTENT PROPORTIONS AND AT LEAST ONCE DAILY AND EVERY 4 HOURS OF MIXING.
IUM VERTICAL DEFLECTION OF PERIMETER ROOF FRAMING IS 0.75 INCHES. FRAMING CAN CT IN AN UPWARD OR DOWNWARD DIRECTION.	EXTENDING OUTWARD AND DOWNWARD FROM THE NEAREST BOTTOM CORNER OF THE EXISTING FOUNDATION SHALL BE MADE ONLY WITH THE APPROVAL OF THE STRUCTURAL ENGINEER AND THE PROJECT GEOTECHNICAL ENGINEER. SUCH EXCAVATIONS MAY	5. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND SPECIFICATIONS OF FIRE RATED MASONRY.
AL DRIFT OF THE BUILDING STRUCTURE AT EACH LEVEL IS LISTED BELOW.	REQUIRE SPECIAL TEMPORARY EXCAVATION BRACING OR UNDERPINNING OF EXISTING FOUNDATIONS, WHICH IS THE RESPONSIBILITY OF THE CONTRACTOR AS PART OF ITS SELECTED MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, CONTRACTOR	6. PROVIDE PREFABRICATED "L" AND "T" SHAPED HORIZONTAL JOINT REINFORCING AT WALL
AXIMUM DRIFT = HEIGHT IN INCHES (RELATIVE TO ELEVATION 0'-0") DIVIDED BY 400.	SHALL SUBMIT TEMPORARY EXCAVATION BRACING AND UNDERPINNING DETAILS PRIOR TO EXCAVATION. CONTRACTOR SHALL PERFORM THESE EXCAVATIONS WITH CAUTION SO AS	INTERSECTIONS. 7. KEEP AIR SPACE BEHIND VENEER FREE OF MORTAR DROPPINGS.
NS .	NOT TO UNDERMINE ANY EXISTING STRUCTURE FOUNDATIONS, AND EXCAVATIONS SHALL BE MADE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.	8. RUNNING BOND PATTERN SHALL BE USED FOR ALL MASONRY WORK UNLESS OTHERWISE
THE DATION DESIGN IS BASED UPON RECOMMENDATIONS DESCRIBED IN THE FOLLOWING MENTS PROVIDED BY THE PROJECT GEOTECHNICAL ENGINEER (GEOTECHNILOGY). THE MENTS ARE LOCATED IN THE APPENDIX OF THE PROJECT MANUAL.	18. UTILITY TRENCHES PARALLEL TO FOOTINGS AND WITH PIPES BELOW THE BOTTOM OF FOOTING ELEVATION MUST BE LOCATED SO THAT THE SLOPE BETWEEN THE PIPE INVERT ELEVATION AND THE NEAREST BOTTOM CORNER OF THE FOOTING IS A MINIMUM OF 2 HORIZONTAL TO 1	NOTED. 9. PROVIDE MOVEMENT (CONTROL AND EXPANSION) JOINTS IN WALLS WHERE INDICATED ON ARCHITECTURAL DRAWINGS. BOND BEAMS SHALL BE DISCONTINUOUS ACROSS MOVEMENT
GEOTECHNICAL EXPLORATION REPORT DATED JULY 21, 2021.	VERTICAL.	JOINTS UNLESS NOTED OTHERWISE:
GEOTECHNICAL ADDENDUM NO. 1 DATED OCTOBER 16, 2024.	AUGER CAST PILES	 A. MOVEMENT JOINTS IN CONCRETE BLOCK: SASH BLOCK UNIT WITH PREFORMED SHEAR KEY. CAULK BOTH FACES. ALTERNATE DETAILS FOR CONTROL JOINTS MAY BE ACCEPTABLE SUBMIT DETAILS FOR APPROVAL.
DATION SYSTEM:	1. INSTALL AUGER CAST PILES IN ACCORDANCE WITH IBC 1810.4.	B. PROVIDE BUILDING PAPER BOND BREAK BELOW LINTEL BEARING ADJACENT TO CONTROL JOINTS.
OUNDATION SYSTEM FOR COLUMNS AND EXTERIOR WALLS CONSISTS OF PILE CAPS AND BRADE BEAMS SUPPORTED ON AUGER CAST PILES. SEE AUGER CAST PILE NOTES FOR ADDITIONAL INFORMATION.	2. AUGER PILES SHALL HAVE A MINIMUM DIAMETER OF 16 INCHES AND BE GROUTED WITH A VOLUME NOT LESS THAN 115% OF THE VOLUME OF THE AUGERED HOLE. PLACE PILES BY BORING A HOLLOW SHAFT AUGER INTO GROUND TO A PREDETERMINED DEPTH. PUMP GROUT THROUGH THE AUGER'S SHAFT WITH SUFFICIENT PRESSURE TO PREVENT COLLAPSE OF THE HOLE AS THE AUGER IS WITHDRAWN AND ENSURE LATERAL PENETRATION OF SOFT ZONES AND	10. UNLESS NOTED OTHERWISE ON PLANS, UNDER LINTELS, BEARING PLATES, BEAMS, ETC.; FILL CELLS WITH GROUT, 3 COURSES MINIMUM BELOW BEARING.
OUNDATION SYSTEM FOR INTERIOR FLOOR SLABS CONSISTS OF GROUND IMPROVEMENT VITN STONE COLUMNS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.	VOIDS IN SURROUNDING SOIL.	11. ALL REINFORCING STEEL SHALL BE SUPPORTED AND FASTENED TO APPROVED POSITIONERS LOCATED AT 192 BAR DIAMETERS MAXIMUM SPACING AND WITH A MINIMUM OF TWO
AL SOIL PRESSURES: LATERAL EARTH PRESSURES INDICATED BELOW DO NOT INCLUDE DSTATIC OR COMPACTION PRESSURES DURING BACKFILL OPERATIONS. WALLS SHALL	 PILE DESIGN LOADS (ALLOWABLE STRESS DESIGN): A. DOWNWARD = 90 KIPS 	POSITIONERS PER GROUT POUR (ONE NEAR THE BOTTOM AND ONE NEAR THE TOP) TO PREVENT DISPLACEMENT DURING THE PLACEMENT OF GROUT.
ADEQUATE DRAINAGE TO PREVENT HYDROSTATIC PRESSURES. COMPACT USING HAND- ATED TAMPERS ONLY.	B. UPWARD = 45 KIPS	12. GROUT ALL CELLS BELOW GRADE SOLID.
CANTILEVERED RETAINING WALLS (ACTIVE PRESSURE): 47 PSF EQUIVALENT FLUID PRESSURE (TRIANGULAR DISTRIBUTION) + 39 PSF SURCHARGE (RECTENGULAR DISTRIBUTION).	4. CONCRETE GROUT STRENGTH: 4000 PSI AT 28 DAYS.	STRUCTURAL STEEL
OUNDATION WALLS WITH LATERAL RESTRAINT AT TOP (AT-REST PRESSURE): 67 PSF	5. THE AUGERCAST PILE CONTRACTOR SHALL HAVE AT LEAST 5 YEARS EXPERIENCE IN THE INSTALLATION OF AUGERCAST PILES.	1. MATERIALS (UNLESS NOTED OTHERWISE):
OUIVALENT FLUID PRESSURE (TRIANGULAR DISTRIBUTION) + 56 PSF SURCHARGE RECTENGULAR DISTRIBUTION).	6. DO NOT INSTALL PILES UNTIL EXCAVATION IN PILE AREA IS COMPLETE TO A LEVEL 6 TO 12 INCHES ABOVE PILE CAP BOTTOM, FINAL EXCAVATION FOR PILE CAPS WILL BE DONE AFTER PILE	A. W AND WT SHAPES: ASTM A992, Fy = 50 KSI B. C AND MC SHAPES (DEPTH \ge 8 INCHES): ASTM A992, Fy = 50 KSI
ASSIVE PRESSURE: 307 PSF EQUIVALENT FLUID PRESSURE (TRIANGULAR DISTRIBUTION).	INSTALLATION IS COMPLETE.	 C AND MC SHAPES (DEPTH 2 8 INCHES): ASTM A992, Fy = 30 KSI C AND MC SHAPES (DEPTH < 8 INCHES): ASTM A36, Fy = 36 KSI
REAS WITHIN THE FOOTPRINT OF THE BUILDING, INCLUDING UTILITY TRENCHES, MUST BE OF ANY WET AND/OR SOFT AREAS PRIOR TO PLACEMENT OF FILL MATERIAL OR SLAB.	 A METAL SHELL SHALL BE INSTALLED AROUND THE PERIMETER OF EACH PILE FROM THE TOP OF PILE ELEVATION TO AN ELEVATION 24 INCHES BELOW GRADE. 	D. L SHAPES: ASTM A572, GRADE 50, Fy = 50 KSI
RACTOR SHALL CONTACT UTILITY COMPANIES FOR LOCATING UNDERGROUND SERVICES	8. THE INSTALLATION OF ALL AUGERCAST PILES SHOULD BE OBSERVED BY A GEOTECHNICAL ENGINEER.	E. PLATES AND BARS (THICKNESS ≤ 4 INCHES): ASTM A572, GRADE 50, Fy = 50 KSI
DEPTH IS 30 INCHES BELOW GRADE. BOTTOM OF PILE CAPS. GRADE BEAMS, AND MAT		F. HSS SHAPES: ASTM A500, GRADE C, Fy = 50 KSI
THAT ARE NOT PART OF AN INSULATED FROST PROTECTED FOUNDATION SYSTEM AND OT WITHIN CONDITIONED SPACE MUST BE BELOW SPECIFIED MINIMUM FROST DEPTH AS JRED FROM EXTERIOR GRADE. MAINTAIN SPECIFIED TOP OF FOUNDATION ELEVATIONS	GROUND IMPROVEMENT WITH STONE COLUMNS 1. DESIGN AND INSTALL AGGREGATE PIERS BELOW THE SLAB ON GRADE IN A TURN-KEY FASHION	G. BOLTS: ASTM F3125, GRADE A325-N, 3/4" DIAMETER (UNLESS NOTED OTHERWISE)
HICKEN FOUNDATIONS OR PLACE CLSM BELOW FOUNDATIONS AS REQUIRED.	TO MEET THE FOLLOWING DESIGN CRITERIA.	H. ANCHOR RODS (TYPICAL): ASTM F1554, GRADE 36
DATIONS MAY BE PLACED WITHOUT SIDE FORMS IF EXCAVATED WALLS STAND DXIMATELY VERTICAL.	A. UNIFORM ALLOWABLE BEARING CAPACITY SHALL BE GREATER THAN OR EQUAL TO 250 PSF.	 I. THREADED RODS: ASTM A36 J. WELDS: AWS E70XX, LOW HYDROGEN ELECTRODES.
ATERIALS: ALL FILL MATERIALS SHALL BE APPROVED BY THE PROJECT GEOTECHNICAL EER, INCLUDING THE SUITABILITY OF ALL EXCAVATED ON-SITE SOILS FOR RE-USE. RIAL SHALL NOT BE PLACED ON FROZEN GROUND.	B. MAXIMUM LONG-TERM OVERALL SETTLEMENTS SHALL NOT EXCEED 0.5 INCHES, AND MAXIMUM LONG-TERM MAXIMUM DIFFERENTIAL SETTLEMENTS SHALL NOT EXCEED 0.25 INCHES OVER ANY 25 FOOT LENGTH.	 K. NON-SHRINK NON-METALLIC GROUT: CRD-C-621 AND ASTM C1107 FOR INTERIOR AND EXTERIOR APPLICATIONS, FLUID TYPE. I. LIMIT GYPSUM CONTENT TO 1.5% MAXIMUM AT EXTERIOR APPLICATIONS.
CONTROLLED LOW STRENGTH MATERIAL (CLSM): SELF LEVELING AND SELF COMPACTING	CAST-IN-PLACE CONCRETE (03-30-00)	2. CONNECTIONS:
'SI AND 150 PSI. 'ILL MATERIALS: ON-SITE, NON-ORGANIC, CLAYEY SOILS, BEDROCK, OR BORROW	1. CONCRETE MIXTURES: REFER TO CONCRETE MIXTURE REQUIREMENTS TABLE FOR CONCRETE MIX INFORMATION.	A. CONNECTIONS SHALL BE DESIGNED BY A LICENSED ENGINEER WORKING FOR THE FABRICATOR (AISC 303-22, OPTION 3), UNLESS NOTED OTHERWISE, CONNECTIONS SHALL
	2. DETAILING REQUIREMENTS	BE DESIGNED FOR THE LOADS AND FORCES PROVIDED IN THE STRUCTURAL DRAWINGS. CONNECTIONS LOADS AND FORCES PROVIDED IN THE DRAWINGS WERE DETERMINED USING LRFD LOAD COMBINATIONS.
REE-DRAINING GRANULAR FILL: NARROWLY GRADED MIXTURE OF CRUSHED STONE PER INSTM D448 WITH COARSE AGGREGATE GRADING SIZE 67 WITH 100 PERCENT PASSING A 1 NCH SIEVE AND NO MORE THAN 5 PERCENT PASSING A NO. 4 SIEVE OR AASHTO NO 57 –	A. CONTRACTION JOINTS IN SLABS ON GROUND SHALL NOT EXCEED A LENGTH TO WIDTH RATIO OF 1.5:1. SEE PLAN FOR MAXIMUM JOINT SPACING.	B. BOLTED CONNECTIONS ARE TO BE INSTALLED SNUG TIGHT OR PRETENSIONED UNLESS
RUSHED AGGREGATE. MPERVIOUS FILL: LEAN CLAYEY GRAVEL AND SAND MIXTURE CAPABLE OF COMPACTING TO A DENSE STATE.	B. CONSTRUCTION JOINTS IN SLABS ON GROUND MAY BE LOCATED AT ANY CONTRACTION JOINT LOCATION. SEE DRAWINGS FOR TYPICAL DETAILS.	OTHERWISE NOTED. I. PRETENSIONED BOLTS SHALL USE DIRECT-TENSION INDICATING WASHERS (ASTM F959) OR TENSION-CONTROL, HIGH-STRENGTH BOLT-NUT-WASHER ASSEMBLIES (ASTM F 1852).
OMPACTION REQUIREMENTS: COMPACT FILL AS DIRECTED BY THE PROJECT ECHNICAL ENGINEER. FILL SHALL BE PLACED IN SHALLOW LIFTS (6 TO 8 INCH LIFTS IN E THICKNESS).	C. PROVIDE 3/4" CHAMFER AT CORNERS OF EXPOSED CONCRETE.	C. FIELD CONNECTIONS SHALL BE BOLTED EXCEPT WHERE WELDED CONNECTIONS ARE INDICATED ON THE STRUCTURAL DRAWINGS.
STRUCTURAL FILL: STRUCTURAL FILL IS DEFINED AS FILL LOCATED WITHIN ZONES OF	UNLESS EFFECTIVELY COATED TO PREVENT ALUMINUM-CONCRETE REACTION OR ELECTROLYTIC ACTION BETWEEN ALUMINUM AND STEEL.	3. A VERTICAL STABILIZER PLATE MUST BE PROVIDED ON EACH COLUMN FOR STEEL JOISTS AND JOIST GIRDERS. THE STABILIZER PLATE SHALL BE A MINIMUM OF 6 INCHES BY 6 INCHES, SHALL
NFLUENCE OF STRUCTURES. A ZONE OF INFLUENCE OF A STRUCTURE IS THE AREA BELOW THE FOOTPRINT OF THE STRUCTURE AND PROJECTING 2 HORIZONTAL TO 1 VERTICAL DUTWARD AND DOWNWARD FROM THE BEARING ELEVATION OF THE STRUCTURE. FILL SHALL BE COMPACTED TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY. THE	E. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR VAPOR BARRIER REQUIREMENTS. VAPOR BARRIER, WHERE REQUIRED, SHALL BE PLACED OVER GRANULAR BASE.	EXTEND A MINIMUM OF 3 INCHES BELOW THE BOTTOM OF THE BOTTOM CHORD, AND SHALL EXTEND A MINIMUM OF 1 INCH ABOVE THE TOP OF THE BOTTOM CHORD. THE PLATE IS REQUIRED TO HAVE A 13/16 INCH DIAMETER HOLE TO PROVIDE AN ATTACHING POINT FOR GUYING CABLES.
ACCEPTABLE MOISTURE CONTENT RANGE OF COMPACTED FILL IS -2% TO +3% OF OPTIMUM MOISTURE CONTENT DETERMINED FROM ASTM D698.	3. CONCRETE PLACEMENT	4. AT COLUMNS, BEAMS FRAMING INTO THE OPPOSITE SIDES OF THE SAME GIRDER OR COLUMN WEB SHALL HAVE EITHER ERECTION SEAT ANGLES OR SHALL HAVE SHEAR CONNECTIONS THAT ALLOW ERECTION OF EACH BEAM INDEPENDENTLY WITH AT LEAST ONE NON-COMMON BOLT.
ION-STRUCTURAL FILL; FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY. THE ACCEPTABLE MOISTURE CONTENT RANGE OF COMPACTED FILL IS -3% TO +3% OF OPTIMUM MOISTURE CONTENT DETERMINED FROM ASTM D698.	 A. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL CONCRETE STRENGTH HAS REACHED 0.75 fc AND A MINIMUM OF 7 DAYS. B. ROUGHENED SURFACES, WHERE INDICATED, SHALL BE ROUGHENED TO A FULL AMPLITUDE 	5. WHERE JOISTS AND JOIST GIRDERS BEAR ON STEEL BEARING PLATES AND COLUMN CAP PLATES, FABRICATOR SHALL VERIFY THAT SUPPORTING ELEMENTS ARE WIDER THAN THE JOIST OR JOIST GIRDER SEAT SUCH THAT SPECIFIED FILLET WELDS CAN BE INSTALLED. WHERE
LOOR SLAB SUBGRADE: FILL SHALL BE COMPACTED TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY. THE ACCEPTABLE MOISTURE CONTENT RANGE OF COMPACTED ILL IS 0% TO +3% OF OPTIMUM MOISTURE CONTENT DETERMINED FROM ASTM D698.	OF APPROXIMATELY 1/4 INCH AND BE CLEAN AND FREE OF LAITANCE.	 FABRICATOR FINDS SUPPORTING ELEMENTS ARE NOT WIDER THAN JOIST OR JOIST GIRDER SEAT, FABRICATOR SHALL CONTACT ENGINEER FOR DIRECTION. 6. ALL FRAMING COPES SHALL HAVE A MINIMUM RADIUS OF 1/2".
REE-DRAINING GRANULAR FILL: FILL SHALL BE COMPACTED TO 75% RELATIVE DENSITY PR ASTM D4253 AND ASTM D4254.	1. MATERIALS	B. ALL FRAMING COFES SHALL HAVE A WINNING WIRADIUS OF 172 .
TLL AGAINST WALLS:	A. DEFORMED BARS: ASTM A615, GRADE 60.	STEEL JOISTS
NTERIOR AND EXTERIOR SIDES OF SHALLOW FOUNDATIONS WALLS: CLSM OR COMPACTED NON-STRUCTURAL FILL MATERIALS.	B. WELDED WIRE REINFORCEMENT: ASTM A1064, FLAT SHEETS ONLY.	1. THE DESIGN, FABRICATION, AND ERECTION OF STEEL JOISTS AND JOIST GIRDERS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE SPECIFICATIONS ADOPTED BY THE STEEL JOIST INSTITUTE.
RETAINED SIDE OF CANTILEVERED RETAINING WALLS: MINIMUM 18 INCH WIDE ZONE OF COMPACTED FREE-DRAINING GRANULAR FILL UP TO	2. REINFORCING DEVELOPMENT AND LAP SPLICES (UNLESS NOTED OTHERWISE).	2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW BY ENGINEER. FABRICATION SHALL NOT BEGIN PRIOR TO SHOP DRAWING APPROVAL BY ENGINEER.
WITHIN 24 INCHES OF FINISHED GRADE. THE TOP 24 INCHES OF BACKFILL SHALL BE COMPACTED CLAYEY MATERIAL. A 12 INCH THICK BY 12 INCH WIDE FREE-DRAINING GRAVEL ZONE WRAPPED WITH A NON-WOVEN DRAINAGE GEOTEXTILE SHALL BE	A. WELDED WIRE REINFORCEMENT: LAP WELDED WIRE REINFORCEMENT MINIMUM 1 FULL SPACE PLUS 2 INCHES.	3. JOIST MANUFACTURER SHALL DESIGN JOISTS AND JOIST GIRDERS AT THE BUS GARAGE
PLACED AT THE BASE OF THE FREE-DRAINING GRANULAR FILL. A 4-INCH DIAMETER RIGID PEFORATED PIPE SHALL BE LOCATED AT THE BASE OF THE GRAVEL ZONE AND	B. SEE REINFORCING BAR DEVELOPMENT TABLES FOR REQUIRED DEVELOPMENT AND LAP SPLICE LENGTHS.	 BUILDING FOR THE NET UPLIFT LOADS IDENTIFIED ON SHEET S004. JOIST MANUFACTURER SHALL DESIGN JOISTS AT THE BUS WASH BUILDING FOR A NET UPLIFT
WRAPPED WITHIN THE GEOTEXTILE. THE PLASTIC PIPE SHALL BE CONNECTED TO A SUITABLE GRAVITY OUTLET (E.G., THE PRTOPOSED STORM SEWER SYSTEM).	MASONRY	LOAD OF 36 PSF. NET UPLIF LOAD WAS DETERMINED USING LRFD LOAD COMBINATIONS.
ELOW MAT SLABS NOT SUPPORTED BY AUGER CAST PILES.	A MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF	5. JOIST MANUFACTURER SHALL PROVIDE ADDITIONAL BRIDGING AS REQUIRED TO BRACE JOISTS AND JOIST GIRDERS SUBJECT TO NET UPLIFT.
ELOW FLOOR SLABS:	"SPECIFICATIONS FOR MASONRY STRUCTURES" (TMS 602-2016) EXCEPT AS MODIFIED BY THE REQUIREMENTS OF THESE CONTRACT DOCUMENTS.	6. CONNECTIONS:
SUBGRADE: COMPACT SUBGRADE AS DIRECTED BY THE PROJECT GEOTECHNICAL	2. COMPRESSIVE STRENGTH SHALL BE DETERMINED FOR EACH TYPE OF MASONRY BY THE UNIT STRENGTH METHOD.	A. K-SERIES JOISTS: WELD EACH SIDE OF JOIST SEAT TO SUPPORTING STEEL WITH 2 1/2 INCHES OF 1/8 INCH FILLET WELD.
INGINEER PRIOR TO PLACEMENT OF BASE COURSE.	A. CONCRETE MASONRY: fm = 2000 PSI AT 28 DAYS.	 B. LH SERIES JOISTS (LH02-06): WELD EACH SIDE JOIST SEAT TO SUPPORTING STEEL WITH 2 1/2 INCHES OF 3/16 INCH WELD.
PROJECT GEOTECHNICAL ENGINEER.	3. MATERIALS	C. LH SERIES JOISTS (LH07-17), AND JOIST GIRDERS WITH A SELF WEIGHT LESS THAN OR EQUAL TO 50PLF: WELD EACH SIDE JOIST SEAT TO SUPPORTING STEEL WITH 2 1/2 INCHES
T UTILITY TRENCHES BELOW FOUNDATIONS, EXCAVATED PRIOR TO FOUNDATION IRUCTION.	 A. CONCRETE MASONRY UNITS: ASTM C90 TYPE I. I. BELOW GRADE: NORMAL WEIGHT AGGREGATE PER ASTM C33. II. ABOVE GRADE: LIGHTWEIGHT AGGREGATE PER ASTM C331 OR NORMAL WEIGHT. 	OF 1/4 INCH WELD.
BACKFILL TRENCHES UNDER FOUNDATIONS AND WITHIN 18 INCHES OF BOTTOM OF OUNDATIONS WITH CLSM TO THE BOTTOM OF FOUNDATION ELEVATION. BACKFILL TRENCHES EXCAVATED UNDER FOUNDATIONS AND MORE THAN 18 INCHES	B. MORTAR: ASTM C270 I. ALL MASONRY UNLESS NOTED OTHERWISE: TYPE S	 D. K-JOISTS AT COLUMNS AND K-JOISTS IN BAYS OF 40 FEET AND LONGER TO HAVE (2) 1/2 INCH DIAMETER A307 ERECTION BOLTS. LH JOISTS AT COLUMNS AND LH JOISTS IN BAYS OF 40 FEET AND LONGER TO HAVE (2) 3/4 INCH DIAMETER A325 ERECTION BOLTS. EXCEPT AT COLUMNS. ERECTION BOLTS ARE NOT REQUIRED WHERE JOISTS AND BRIDGING HAVE
ACKFILL TRENCHES EXCAVATED UNDER FOUNDATIONS AND MORE THAN 18 INCHES BELOW BOTTOM OF FOUNDATIONS WITH CLSM OR OTHER FILL MATERIAL APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.	C. PORTLAND CEMENT-LIME MORTAR: i. PORTLAND CEMENT: TYPE I.	BEEN PRE-ASSEMBLED INTO PANELS. 7. JOISTS SHALL HAVE MINIMUM BRIDGING AS REQUIRED BY THE SJI AND AS OTHERWISE NOTED
T UTILITY TRENCHES BELOW FOUNDATIONS, EXCAVATED AFTER FOUNDATION	ii. HYDRATED LIME: TYPE S. D. MASONRY CEMENT MORTAR IS PERMITTED.	ON THE STRUCTURAL DRAWINGS. ALL BRIDGING RUNS AND DETAILS SHALL BE SHOWN ON JOIST SHOP DRAWINGS. FOR JOIST SPANS EXCEEDING OSHA TABLES A AND B FROM SUBPART R- STEEL ERECTION 1926.757. INSTALL A LINE OF BOLTED X-BRIDGING NEAR MID-SPAN PRIOR TO
BACKFILL TRENCHES EXCAVATED UNDER EXISTING FOOTINGS WITH CLSM TO THE BOTTOM	E. GROUT: ASTM C476. SLUMP 8" TO 11". MINIMUM COMPRESSIVE STRENGTH = 2000 PSI AT 28	STEEL ERECTION 1920.757, INSTALL & LINE OF BOLTED X-BRIDGING NEAR MID-SPAN PRIOR TO SLACKING HOIST LINES. FOR JOISTS BETWEEN 60 FEET AND 100 FEET, TWO LINES OF BOLTED X- BRIDGING SHALL BE INSTALLED NEAR THE THIRD POINTS OF THE JOIST PRIOR TO SLACKING HOIST LINES.
JTILITY TRENCH AT THE EXTERIOR FOUNDATION WALL BY USING CLSM TO CREATE A DAM	DAYS. F. REINFORCING STEEL: ASTM A615, ASTM A706, OR ASTM A996, 60 KSI YIELD.	8. PLACE ADDITIONAL X-BRIDGING AT THE END OF EACH HORIZONTAL BRIDGING RUN IN LAST
REVENT ENTRY OF WATER.	G. HORIZONTAL JOINT REINFORCING FOR SINGLE WYTHE CONCRETE MASONRY: ASTM A951 9 GAGE LADDER TYPE. HOT DIPPED GALVANIZED PER ASTM A153 CLASS B. PLACE HORIZONTAL JOINT REINFORCING AT 16" CENTERS VERTICALLY FOR CONCRETE MASONRY.	SPACE BETWEEN JOISTS, EXCEPT WHERE HORIZONTAL BRIDGING RUNS TERMINATE AT MASONRY WALLS. WHERE BRIDGING RUNS TERMINATE AT MASONRY WALLS, HORIZONTAL BRIDGING SHALL BE ANCHORED TO WALL.
ATIONS:	LAP HORIZONTAL JOINT REINFORCING 6" MINIMUM, HORIZONTAL JOINT REINFORCING	9. NO MODIFICATION THAT AFFECTS THE STRENGTH OF A JOIST OR JOIST GIRDER SHALL BE MADE WITHOUT THE APPROVAL OF THE PROJECT STRUCTURAL ENGINEER OF RECORD.
EXCAVATIONS IN THE VICINITY OF EXISTING FOUNDATIONS SHALL BE PERMITTED WITHOUT		

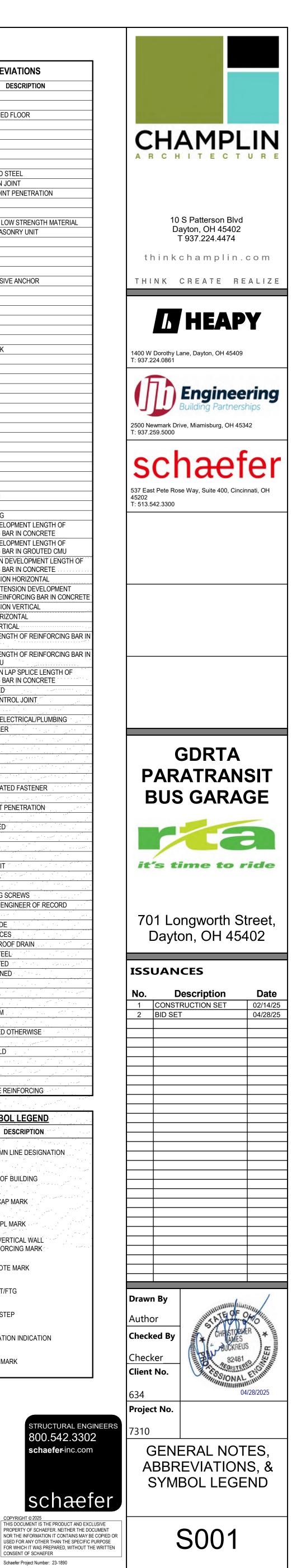
MIXING. ADD CEMENT TO DF ONE CUBIC FOOT AS AT LEAST ONCE DAILY	10. WHERE JOISTS DO NOT CONNECT DIRECTLY TO THE COLUMN CAP PLATE, AT THE JOIST CLOSEST TO EACH COLUMN, PROVIDE DIAGONAL L2X2X3/16. ANGLE SHALL BE WELDED TO TOP OF COLUMN OR TO BOTTOM FLANGE OF BEAM AND TO THE FIRST TOP CHORD PANEL POINT OF JOIST WITH 2 INCH OF 1/8 INCH FILLET EACH END. ANGLE SHALL BE SUPPLIED BY THE STRUCTURAL STEEL FABRICATOR.	
IS OF FIRE RATED	11. EXTEND BOTTOM CHORD OF ALL JOIST GIRDERS AND ALL JOISTS AT OR NEAREST COLUMN LOCATIONS TO LAP WITH STABILIZER PLATE.	
NFORCING AT WALL	12. WHERE STEEL JOISTS AT OR NEAR COLUMNS SPAN MORE THAN 60 FEET, THE JOISTS SHALL BE SET IN TANDEM WITH ALL BRIDGING INSTALLED.	
	13. UNLESS NOTED OTHERWISE, K-SERIES JOISTS SHALL HAVE 2 1/2 INCH DEEP SEATS, AND LH- SERIES JOISTS SHALL HAVE 5' DEEP SEATS. PROVIDE MATCHING HEIGHT SEATS ON SHORT SPAN JOISTS WHICH HAVE COMMON BEARING WITH LONG SPAN AND DEEP LONG SPAN JOISTS.	
INLESS OTHERWISE	14. PROVIDE SLOPING JOIST AND JOIST GIRDER SEATS WHERE THE SLOPE EXCEEDS 1/4" PER FOOT	
HERE INDICATED ON S ACROSS MOVEMENT	15. JOIST GIRDERS SHALL HAVE 7 1/2" DEEP SEATS.	
TH PREFORMED SHEAR IOINTS MAY BE	 JOIST MANUFACTURER SHALL DESIGN JOIST SEATS FOR LATERAL ROLLOVER FORCE OF 500 LBS ROLLOVER FORCE WAS DETERMINED USING LRFD LOAD COMBINATIONS THAT INCLUDE WIND AND SEISMIC LOADS. 	i.
ADJACENT TO CONTROL	17. JOIST MANUFACTURER SHALL DESIGN JOIST AND JOIST GIRDER TOP AND BOTTOM CHORDS FOR ADDITIONAL BENDING STRESSES RESULTING FROM A 250 LB CONCENTRATED BEND CHECK DEAL LOAD APPLIED AT ANY LOCATION ALONG JOIST OR JOIST GIRDER SPANS.	
TES, BEAMS, ETC.; FILL	STEEL DECKING (05-31-00)	
PPROVED POSITIONERS IMUM OF TWO EAR THE TOP) TO PREVENT	1. THE DESIGN, FABRICATION, AND ERECTION OF ALL STEEL DECK SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE SPECIFICATIONS OF THE STEEL DECK INSTITUTE.	
	2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW BY ENGINEER. FABRICATION SHALL NOT BEGIN PRIOR TO SHOP DRAWING APPROVAL BY ENGINEER.	
	3. MATERIALS:	
	 SEE PLAN AND METAL DECK SCHEDULE FOR SIZE, GAGE, MIN Fy, AND REQUIRED SUPPORT FASTENERS AND SIDELAP FASTENERS. 	
	B. SELF DRILLING SCREWS (SDS): HEX WASHER HEAD SELF-DRILLING TAPPING SCREWS (ASTM C1513) MANUFACTURED FROM CARBON STEEL (ASTM A510, MIN GRADE 1018). ZINC PLATING SHALL MEET MINIMUM CORROSION RESISTANCE REQUIREMENTS OF ASTM F1941.	
	 METAL DECK SHALL BE PROVIDED TO RUN CONTINUOUS OVER AT LEAST 3 SPANS EXCEPT AS NOTED OTHERWISE. 	
50, Fy = 50 KSI	5. CONNECT METAL DECK TO STRUCTURAL MEMBERS, INCLUDING PERIMETER ANGLES.	
50, FY - 50 KSF	 MINIMUM METAL DECK END BEARING ON SUPPORTS = 1 1/2". LAP ENDS OF METAL DECK 4" MINIMUM. 	
ED OTHERWISE)	 7. LAP ENDS OF METAL DECK 4" MINIMUM. 8. WELDING OF METAL DECK SHALL BE IN ACCORDANCE WITH AWS D1.3-08. 	
	SUPPORT OF MEP SYSTEMS 1. THE FOLLOWING NOTES APPLY TO MEP SYSTEMS ATTACHED TO THE UNDERSIDE OF THE ROOF	
7 FOR INTERIOR AND	STRUCTURE.	
PPLICATIONS.	2. REACTIONS IDENTIFIED IN THE NOTES INCLUDE MEP COMPONENT WEIGHTS PLUS WEIGHTS OF HANGERS, RACKS, AND SUPPLEMENTAL SUPPORT FRAMING. REACTIONS DO NOT INCLUDE SEISMIC FORCES. REFER TO MEP SPECIFICATION SECTIONS FOR SESIMIC DESIGN REQUIREMENTS (IF APPLICABLE).	
ORKING FOR THE E. CONNECTIONS SHALL TRUCTURAL DRAWINGS,	3. INSTALLATION OF ANCHORS OR FASTENERSUSED TO ATTACH MEP SYSTEMS TO THE ROOF STRUCTURE SHALL SATISFY ALL REQUIREMENTS PROVIDED BY THE ANCHOR OR FASTENER SUPPLIERS.	
S WERE DETERMINED	4. MEP SYSTEMS SHALL NOT BE SUPPORTED BY METAL DECK.	
RETENSIONED UNLESS	5. MEP SYSTEMS SUPORTED BY FORMED CONCRETE SLABS:	
TING WASHERS (ASTM	A. THE MAXIMUM REACTION AT ANY SINGLE HANGER SHALL NOT EXCEED 300 LBS. THE SUM OF ALL HANGER REACTIONS WITHIN ANY 3'-0" RADIUS SHALL NOT EXCEED 300 LBS.	
CONNECTIONS ARE	6. MEP SYSTEMS SUPPORTED BY STEEL BEAMS:	
FOR STEEL JOISTS AND	A. THE MAXIMUM REACTION AT ANY SINGLE HANGER SHALL NOT EXCEED 500 LBS. THE SUM OF ALL HANGER REACTIONS WITHIN ANY 3'-0" LENGTH SHALL NOT EXCEED 500 LBS.	
CHES BY 6 INCHES, SHALL CHES BY 6 INCHES, SHALL M CHORD, AND SHALL ID. THE PLATE IS REQUIRED DINT FOR GUYING CABLES.	B. HANGERS SHALL BE CENTERED BELOW BEAMS OR SUPPORTED BY SUPPLEMENTAL FRAMING THAT SPANS BETWEEN COLUMNS OR PRIMARY ROOF FRAMING. HANGER CONFIGURATIONS THAT INDUCE TORSION ON BEAMS ARE NOT PERMITTED.	
ME GIRDER OR COLUMN	7. MEP SYSTEMS SUPPORTED BY STEEL JOISTS OR JOIST GIRDERS:	
IEAR CONNECTIONS THAT IE NON-COMMON BOLT.	A. THE MAXIMUM REACTION AT ANY SINGLE HANGER SHALL NOT EXCEED 250 LBS. THE SUM OF ALL HANGER REACTIONS WITHIN ANY 3'-0" LENGTH SHALL NOT EXCEED 250 LBS.	
AND COLUMN CAP RE WIDER THAN THE JOIST INSTALLED, WHERE DIST OR JOIST GIRDER	B. HANGERS SHALL BE CENTERED BELOW JOISTS OR SUPPORTED BY SUPPLEMENTAL FRAMING THAT SPANS BETWEEN COLUMNS OR PRIMARY ROOF FRAMING. HANGER CONFIGURATIONS THAT INDUCE TORSION ON JOISTS ARE NOT PERMITTED.	an an ann an ann an ann ann ann ann ann
	8. SUPPLEMENTAL FRAMING FOR SUPPORT OF MEP SYSTEMS	
	A. SUPPLEMENTAL FRAMING SHALL CONSIST OF STEEL OR UNISTRUT MEMBERS ATTACHED TO COLUMNS OR PRIMARY ROOF FRAMING.	
a se anna an an an an an an an an anna an an	B. DESIGN OF SUPPLEMENTAL FRAMING IS DELEGATED TO A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. A DELEGATED	a da serie de la construcción de la La construcción de la construcción d La construcción de la construcción d
ST GIRDERS SHALL PECIFICATIONS ADOPTED	DESIGN SUBMITTAL IS REQUIRED FOR SUPPLMENTAL FRAMING. THE SUBMITTAL SHALL BE SIGNED AND SEALED BY THE DESIGN ENGINEER AND INCLUDE ANALYSIS DATA AND SHOP DRAWINGS.	
IEER. FABRICATION SHALL	C. SUPPLEMENTAL FRAMING SHALL SPAN BETWEEN COLUMNS OR PRIMARY ROOF FRAMING. CANTILEVERED SUPPLEMENTAL FRAMING CONFIGURATIONS THAT INDUCE TORSION ON PRIMARY ROOF FRAMING MEMBERS ARE NOT PERMITTED.	
THE BUS GARAGE		
DING FOR A NET UPLIFT		
QUIRED TO BRACE JOISTS		· · · · · · · · · · · · · · · · · · ·
NG STEEL WITH 2 1/2		
IPPORTING STEEL WITH 2		· · · · · · · · · · · · · · · · · · ·

	ABBREVIATIONS
	DESCRIPTION
DL = H =	ADDITIONAL ADHESIVE
F = CH =	ABOVE FINISHED FLOOR ARCHITECT
= DG =	BOTTOM OF BUILDING
T =	BOTTOM
G = S =	BEARING COLD-FORMED STEEL
= P =	CONTRACTION JOINT COMPLETE JOINT PENETRATION
= R =	CENTER LINE CLEAR
SM = IU =	CONTROLLED LOW STRENGTH MATERIAL
L =	COLUMN
NC = NN =	CONCRETE CONNECTION
NT = A	CONTINUOUS DRILL & ADHESIVE ANCHOR
G or ° =	DEGREE
\ or ø = =	EACH
=	EACH FACE ELEVATION
B = D =	EMBEDMENT EDGE OF DECK
=	EQUAL EACH SIDE
/ =	EACH WAY
IST = P =	EXISTING EXPANSION
T = =	EXTERIOR FACE OF
N = =	FOUNDATION FAR SIDE
G =	FOOTING
_= LV =	GAGE GALVANIZED
= RIZ =	GRADE BEAM HORIZONTAL
:0 = =	INFORMATION
Г BRG =	JOIST BEARING
=	TENSION DEVELOPMENT LENGTH OF REINFORCING BAR IN CONCRETE
CMU =	TENSION DEVELOPMENT LENGTH OF REINFORCING BAR IN GROUTED CMU
;=	COMPRESSION DEVELOPMENT LENGTH OF REINFORCING BAR IN CONCRETE
H =	LONG DIMENSION HORIZONTAL HOOKED BAR TENSION DEVELOPMENT
V =	LENGTH OF REINFORCING BAR IN CONCRETE
1=	LONG LEG HORIZONTAL
/ = =	LONG LEG VERTICAL LAP SPLICE LENGTH OF REINFORCING BAR IN
CMU =	CONCRETE LAP SPLICE LENGTH OF REINFORCING BAR IN
· ·	GROUTED CMU COMPRESSION LAP SPLICE LENGTH OF
_ = _	REINFORCING BAR IN CONCRETE
J = CH =	MASONRY CONTROL JOINT MECHANICAL
P =	MECHANICAL/ELECTRICAL/PLUMBING MANUFACTURER
R =	NEAR SIDE
= NG =	ON CENTER OPENING
P = S =	OPPOSITE OVERSIZED
F =	POWER-ACTUATED FASTENER PILE CAP
- P =	PARTIAL JOINT PENETRATION
= =	PLATE PRETENSIONED
= INF =	ROOF DRAIN REINFORCING
Q'D = U =	REQUIRED ROOF TOP UNIT
=	SLIP-CRITICAL
HED = S =	SCHEDULE SELF DRILLING SCREWS
OR =	STRUCTURAL ENGINEER OF RECORD
G =	SLAB ON GRADE SPACE or SPACES
A = D =	SECONDARY ROOF DRAIN
= L =	STAINLESS STEEL SHORT-SLOTTED
= D=	SNUG-TIGHTENED STANDARD
IFF = L =	STIFFENER STEEL
B =	TOP & BOTTOM
= O =	TOP OF UNLESS NOTED OTHERWISE
RT = =	VERTICAL VERIFY IN FIELD
= . · · · · ·	WITH WITHOUT
) =	WORK POINT
VR =	WELDED WIRE REINFORCING
<u> </u>	SYMBOL LEGEND
SYMBO	
n	COLUMN LINE DESIGNATION
< <u>n</u>	FACE OF BUILDING
Pn	PILE CAP MARK

SYMBOL	DESCRIPTION
n	COLUMN LINE DESIGNATION
n	FACE OF BUILDING
Pn	PILE CAP MARK
BPn	BASE PL MARK
Wn	CMU VERTICAL WALL REINFORCING MARK
Kn	KEYNOTE MARK
	STEP T/FTG
 	SLAB STEP
•	ELEVATION INDICATION
Dn	DECK MARK

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CONSENT OF SCHAEFER Schaefer Project Number: 23-1890



SPECIAL INSPECTIONS

1. SPECIAL INSPECTIONS ARE REQUIRED BY SECTION 1704 OF THE REFERENCED BUILDING CODE. THE INTENT OF SPECIAL INSPECTIONS IS TO VERIFY THE COMPLIANCE OF MATERIALS, INSTALLATION, FABRICATION, ERECTION AND/OR PLACEMENT OF COMPONENTS WITH THE COMPLETED SET OF CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. COMPLETED SET OF CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. IT IS THE RESPONSIBILITY OF ALL PARTIES INVOLVED TO BECOME FAMILIAR WITH THE SPECIAL INSPECTION REQUIREMENTS SET FORTH IN CHAPTER 17 OF THE REFERENCED BUILDING CODE. SPECIAL INSPECTIONS SHALL BE PROVIDED BY THE OWNER OR THE OWNER'S AGENT AND SHALL NOT BE CONSIDERED IN THE SCOPE OF WORK OF THE CONTRACTOR.

A. THE FOLLOWING SCHEDULE OF SPECIAL INSPECTIONS FOR STRUCTURAL WORK HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 106.1 AND 1704 OF THE REFERENCED BUILDING CODE. SEE OTHERS FOR SPECIAL INSPECTION REQUIREMENTS FOR NON-STRUCTURAL WORK. THE SPECIAL INSPECTOR(S) SHALL COORDINATE WITH THE OWNER, CONTRACTORS, AND DESIGN PROFESSIONALS AND SCHEDULE ALL INSPECTIONS ACCORDINGLY.

00112	EDULE OF SPECIAL INSPECTION	UN SEF		<u>s - 170</u>		JIUKAL SIEEL
Item	Sub Item / Scope	Observe	Extent Perform	N/A	Agency Qualifications	Comments
n-Plant Special nspections	Fabrication and implementation procedures: In addition to special inspections provided on site, provide special inspections indicated below on the premises of fabricator's shop. Verify that the fabricator maintains detailed fabrication and quality control procedures.		K	X	As Noted Below	Special inspections on the premises of the fabricators shop are not required provided the fabricator is an <i>Approved</i> <i>Fabricator</i> in accordance with section 1704.2. Fabricator is required to submit documentation/certification that they are an <i>Approved Fabricator</i> .
 Fabricator and prector documents 	Verify reports and certificates as listed in AISC 360, chapter N, paragraph 3.2 for compliance with construction documents		X		Schaefer Submittal Review	
2. Material verification of structural steel	Verify material in shop and field inspection		Х		Testing Agency	
3. Embedments	Verify diameter, grade, type, length, embedment. See Table 1705.3 for anchors Verify member locations, braces, stiffeners, and		Х		Testing Agency	
with construction documents	application of joint details at each connection comply with construction documents		Х		Testing Agency	
5.4-1. Visual Welding Inspection - nspection Tasks Before Welding:	 Welder qualifications records and continuity records. Welding procedure specifications (WPS) available 		X X			
Soloro Wolding.	 Manufacturer certifications for welding consumables available. Material Identification (type/grade) Welder identification system (The fabricator or erector, as applicable, shall maintain a system by which a welder who has welded a joint or member 	X	X			
	 which a welder who has welded a joint or member can be identified. Stamps, if used, shall be the low- stress type.) 6. Fit up of Groove Welds (Including Joint Geometry): Inspection shall include Joint preparation, Dimensions (alignment, root opening, roof face, and bevel), Cleanliness (condition of steel surface). Tacking (took weld guality and logition) 	X			Testing Agency AWS - Certified	
	surfaces), Tacking (tack weld quality and location), Backing type and fit (if applicable) 7. Fit up of CJP Groove Welds of HSS T-, K-, Y-, and K-joints (Including Joint Geometry): Inspection shall include Joint preparation, Dimensions (alignment, root opening, roof face, and bevel); Cleanliness (condition of steel surfaces), Tacking				Welding Inspector	
	 (tack weld quality and location), Backing type and fit (if applicable) 8. Configuration and finish of access holes 9. Fit-up of Fillet Welds: Inspection shall include: Dimensions (alignment, root opening, roof face, and bevel), Cleanliness (condition of steel surfaces), Tacking (tack weld quality and location) 	X X				
5.4-2. Visual Welding Inspection - nspection Tasks During Welding:	 Check welding equipment. Control and Handling of Welding Consumables: Packaging and Exposure control) No welding over cracked tack welds. Environmental Conditions: Wind speed within 	X X X X				
	 limits, and Precipitation and temperature. 4. WPS Followed: Observe Settings on welding equipment, Travel speed, Selected welding materials; Shielding gas type/flow rate, Preheat applied, Interpass temperature maintained (min and max), and Proper position (F,V,F,OH) 5. Welding Techniques: Interpass and final cleaning, 	× ×			Testing Agency AWS - Certified Welding Inspector	
5.4-3. Visual Velding Inspection -	Each pass within profile limitations, Each pass meets quality requirements. 6. Placement and installation of steel headed stud anchors. 1. Welds Cleaned:	X	X			
After Welding	 Size, Length, and Location of Welds: Welds meet visual acceptance criteria: Crack prohibition, Weld/base-metal fusion, Crater cross section, Weld profiles, Weld size, Undercut, Porosity. Arc strikes: 		X			
	5. k-area		X X		Testing Agency AWS - Certified	
	6. Weld access holes in rolled heavy shapes and built-up heavy shapes7. Backing Removed and weld tabs removal (if		X		Welding Inspector	
	required): 8. Repair Activities: Document acceptance or rejection of welded joint or		Х			
	member No prohibited welds have been added without the	X	X			
5.5 Non-destructive Festing of Welds	approval of the EOR b. CJP Groove Welds: Ultrasonic testing shall be performed on 100 percent of CJP groove welds subject to transversely applied tension loading in butt, T- and corner joints, in materials 5/16 in thick or greater. Ultrasonic testing in materials less than 5/16 in thick is not required. Reduction of Rate of Ultrasonic Testing is permitted if the conditions of		x		Testing Agency AWS - Certified Welding Inspector	Perform NDT for both in field and sho welds.
5.6-1. Inspection of Bolting: Inspection Tasks Prior to Bolting	AISC 360-16 Appendix N.5.e are met.1. Manufacturer's certifications available for fastener materials.2. Fasteners marked in accordance with ASTM requirements	X	X		Testing Agency Testing Agency	
	 Broper fasteners selected for the joint detail (grade, type, and bolt length if threads are excluded from shear plane). Proper bolting procedure selected for joint detail. Connecting elements: Verify elements are 	X X			Testing Agency Testing Agency	
	 fabricated properly, including the appropriate faying surface condition and hole preparation, if specified, meets the applicable requirements 6. Pre-installation verification testing conducted for fastener assemblies and methods used 7. Proper storage provided for bolts, nuts, washers, 	X X V			Testing Agency Testing Agency	
5.6-2. Inspection of Bolting: Inspection Fasks During Bolting	and other fastener components 1. Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are properly	X X X			Testing Agency Testing Agency Testing Agency	
	 Fastener component not turned by the wrench prevented from rotating Bolts are pretensioned in accordance with the RCSC specification, progressing systematically from most rigid point toward free edges 	X X			Testing Agency Testing Agency	
5.6-3. Inspection of Bolting: Inspection	1. Document accepted and rejected connections:		Х		Testing Agency	

Itom	Cub Itom / Coore		Extent		Agency	0
Item	Sub Item / Scope	Observe	Perform	N/A	Qualifications	Comments
Inspection Tasks ior to Deck acement	a. Verify compliance of materials (deck and all deck accessories) with construction documents, including profiles, material, properties, and base metal thickness		Х		Testing Agency	
	b. Document acceptance or rejection of deck and deck accessories		Х			
Inspection Tasks ter Deck	a. Verify compliance of deck and all deck accessories installation with construction documents		Х		Testing Agency	
acement	b. Verify deck materials are represented by the mill certifications that comply with the construction documents		Х			
	c. Document acceptance or rejection of installation of deck and deck accessories		Х			
Inspection Prior to elding	a. Welding procedure specifications (WPS) available	X				
eiding	b. Manufacturer certifications for welding consumables available	Х			Testing Agency AWS Certified	
	c. Material Identification (type/grade)	X			Welding Inspector	
	d. Check Welding Equipment	Х				
Inspection Tasks	a. Use of qualified welders.	Х				
ring Welding	b. Control and handling of welding consumables.	Х			Testing Agency	
	c. Environmental conditions	Х			AWS Certified Welding Inspector	
	d. WPS followed	Х				
Inspection Tasks ter Welding	a. Verify size and location of welds, including support, sidelap, and perimeter welds.		Х			
	b. Weld meets visual inspection criteria.		Х		AWS Certified	
	c. Verify repair activities.		Х		Welding Inspector	
	d. Document acceptance or rejection of welds		Х			
Inspection Tasks ior to Mechanical	a. Manufacturer installation instructions are available for mechanical fasteners.	Х				
stening	b. Proper tools are available for fastener installation	X			Testing Agency	
	c. Proper storage for mechanical fasteners	X				
Inspection Tasks Iring Mechanical	a. Fasteners are positioned as required	X				
stening	b. Fasteners are installed in accordance with manufacturer's instructions	Х			Testing Agency	
Inspection Tasks	a. Check spacing, type, and installation of support fasteners		Х			
er Mechanical stening	b. Check spacing, type, and installation of sidelap fasteners		Х			
	c. Check spacing, type, and installation of perimeter fasteners		Х		Testing Agency	
	d. Verify repair activities		X			
	e. Document acceptance or rejection of mechanical fasteners		X		1	

	SCHEDULE OF SPECIAL IN OPEN WEB STEEL J			-		
			Extent	Extent Age		Osmmanta
Item	Sub Item / Scope	Cont.	Cont. Periodic N/A		Qualifications	Comments
	a. End Connections - Welding or Bolting. Reference SJI Specifications listed in IBC 2207.1		X		Testing Agency AWS Certified Welding Inspector	
	 b. Bridging - horizontal or diagonal b.1. Standard bridging. Reference SJI Specifications listed in IBC 2207.1 b.2. Bridging that differs from the SJI specifications listed in Section 2207.1 		X X		Testing Agency	

	ULE OF SPECIAL INSPECTION SER		5 - 170	<u>5.3 (</u>		
Itom	Cub Itom / Coope	Extent			Agency	Commente
ltem	Sub Item / Scope	Cont.	Periodic	N/A	Qualifications	Comments
Inspections (Precast Concrete)	Fabrication and implementation procedures: In addition to special inspections provided on site, provide special inspections indicated below on the premises of fabricator's shop. Verify that the fabricator maintains detailed fabrication and quality control procedures.			x	As Noted Below	Special inspections on the premises of the fabricator's shop are not required provided the fabricator is an <i>Approved Fabricator</i> in accordance with section 1704.2.5.1. Fabricator required to submit documentation/certification that they are an <i>Approved Fabricator</i> .
steel	Mild Reinforcing Steel: Inspect size, spacing, cover, positioning and grade of reinforcing steel: Verify that reinforcing bars are free of form oil or other deleterious materials. Inspect bar laps and mechanical splices. Verify that bars are adequately tied and supported on chairs or bolsters. Verify welded wire fabric is supported per construction documents. Reference ACI 318: 20, 25.2, 25.3, 26.6-1-26.6-3, and IBC 1908.4.		x		Testing Agency	
	a, Verify weldability of reinforcing bars other than ASTM A706. Reference ACI 318: 26.6.4 and AWS D1.4		Х		Testing Agency	
	b. Inspect single pass fillet welds, maximum 5/16"		X		Testing Agency AWS - Certified Welding Inspector	
	c. Inspect all other welds	Х			Testing Agency AWS - Certified Welding Inspector	
Anchor Rods	Inspect size, position and embedment of cast in place bolts and anchor rods. Inspect concrete placement and consolidation around anchors. Reference ACI 318: 17.8.2		Х		Testing Agency	
4. Post Installed Anchors (Anchors installed in Hardened	a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads. Inspect type and size of anchor, concrete type and compressive strength, hole cleaning procedures, anchor embedment, anchor spacing and edge distances, and tightening torque (where applicable). Reference ACI 318: 17.8.2.4	Х			Testing Agency	Reference evaluation report (identifie in project general notes) for addition inspection scope required by manufacturer.
	b. Mechanical anchors and adhesive anchors not defined in 4.a. Inspect type and size of anchor, concrete type and compressive strength, hole cleaning procedures, anchor embedment, anchor spacing and edge distances, and tightening torque (where applicable). Reference ACI 318: 17.8.2		x		Testing Agency	
5. Mix Design	Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.		X		Testing Agency	
6. Sampling and Testing of Concrete	At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests as required by construction documents, and determine the temperature of concrete. Reference ASTM C 172, ASTM C31, ACI 318, 26.4.3, 26.4.4	Х			Testing Agency	
7. Concrete Placement	Inspect concrete placement for proper application techniques. Reference ACI 318: 26.5 and IBC 1908.6, 1908.7, and 1908.8. Verify that concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.	Х			Testing Agency	
Protection	Inspect for maintenance of specified curing temperature and techniques. Inspect cold weather and hot weather protection procedures as applicable. Reference ACI 318: 26.5.3-26.5.5		X		Testing Agency	
9. Formwork	Inspect formwork for shape, location and dimensions of the		Х		Testing Agency	1

	SCHEDULE OF SPECIAL	INSPE	ECTION	SER	/ICES - 1705.6 SO	ILS
ltom	Sub Hom / Seene	Extent			Agency	Commonto
ltem	Sub Item / Scope	Cont.	Periodic	N/A	Qualifications	Comments
Bearing Materials	Verify materials below shallow foundations are adequate to achieve the design bearing capacity.		X		Testing Agency Under supervision of Licensed Geotechnical Engineer	
Excavations	Verify excavations are extended to proper depth and have reached proper material		X		Testing Agency Under supervision of Licensed Geotechnical Engineer	
Fill Classification	Perform classification and testing of compacted fill materials		X		Testing Agency Under supervision of Licensed Geotechnical Engineer	
Placement and Fill ompaction	During fill placement, verify use of proper materials and procedure in accordance with the provisions of the approved geotechnical report. Verify densities and lift thicknesses during placement and compaction of compacted fill	Х			Testing Agency Under supervision of Licensed Geotechnical Engineer	
Subgrade	Prior to placement of compacted fill, inspect subgrade and verify that the site has been prepared properly		X		Testing Agency Under supervision of Licensed Geotechnical Engineer	

lite ar-			Extent		Agency	
Item	Sub Item / Scope	Cont.	Periodic	N/A	Qualifications	Comments
nimum rification	a. Prior to construction, verification of compliance of submittals (TMS 602 Art.1.5)				Schaefer Submittal Review	Required
quirements	b. Prior to construction, verification of f'm, except where specifically exempted by the code (TMS 602 Art.1.4b)				Schaefer Submittal Review	Required
	c. During Construction, verification of slump flow and Visual Stability Index (VIS) when self-consolidating grout is delivered to the project site. (TMS 602: Art 1.5 &1.6.3)				Testing Agency	Not Required
	d. During construction, verification of f'm for every 5,000 sq. ft. (TMS 602 Art.1.4b)				Testing Agency	Not Required
	e. During construction, verification of proportions of materials as delivered to the project site for premixed or preblended mortar, prestressing grout, and grout other than self-consolidating grout. (TMS 602 Art.1.4b)				Testing Agency	Not Required
• •	a. Proportions of Site-Prepared Mortar (TMS 602 Art. 2.1, 2.6A & 2.6C)		Х		Testing Agency	
ify that the owing are in	b. Placement of reinforcement, connectors and anchor bolts. (TMS 602 Art.3.4 & 3.6A)		Х		Testing Agency	
mpliance:	c. Sample panel construction (TMS 602 Art.1.6D)		X		Testing Agency	
ify that the	a. Grout Space: Verify grout space is clean. (TMS 602: Art 3.2D and 3.2F)		X		Testing Agency	
owing are in mpliance:	b. Placement of reinforcement, connectors and anchor bolts. (TMS 602 Art. 3.2E & 3.4)		X		Testing Agency	
	c. Proportions of site-prepared grout. (TMS 602 Art. 2.6B)		X		Testing Agency	
h the following	a. Materials and procedures with the approved submittals (TMS 602 Art. 1.5)		X		Testing Agency	
ing construction:	b. Placement of masonry units and mortar joint construction (TMS 602 Art. 3.3B)		X		Testing Agency	
	c Size and Location of structural members (TMS 602 Art. 3.3F)		X		Testing Agency	
	d. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction (TMS 402 Sec. 1.2.1€, 6.2.1 & 6.3.1)		X		Testing Agency	
	e. Welding of reinforcement (TMS 402 Sec 6.1.6.1.2)			Х	Testing Agency	
	f. Preparation, construction, and protection of masonry during cold weather (temperature below 40F) or hot weather (temperature above 90F). (TMS 602 Art. 1.8C & 1.8D)		X		Testing Agency	
	g. Placement of grout is in compliance (TMS 602 Art. 3.5)	Х			Testing Agency	
	Observe preparation of grout specimens, mortar specimens, and/or prisms. (TMS 602: Art 1.4)			Х	Testing Agency (compliance with ASTM C1093)	

SCHEDULE OF SPECIAL INSPECTION SERVICES - 1705.8 CAST-IN-PLACE DEEP FOUNDATIONS

Item	Out them (October		Extent		Agency	O		
	Sub Item / Scope	Cont. Periodic N/A		N/A	Qualifications	Comments		
1. Drilling	Inspect drilling operations and maintain complete and accurate records for each element	Х			Testing Agency Under supervision of Licensed Geotechnical Engineer			
2. Placement and Plumbness	Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes.	x			Testing Agency Under supervision of Licensed Geotechnical Engineer			
3. Concrete Elements	For concrete elements: perform tests and additional special inspections in accordance with Section 1705.3 Concrete Construction.	See Section 1705.3		5.3	-	-		

	SCHEDULE OF SPECIAL INSPECTION SERVICES - 1705.1.1 SPECIAL CASES									
ltom	Sub Itom / Scone		Extent		Agency	Commonto				
Item	Sub Item / Scope	Cont.	Periodic	N/A	Qualifications	Comments				
1. Rammed Aggregate Piers (RAP) - Geopier	Review of the RAP designer's use of soil parameters as presented in the project-specific soils report. During construction verification of aggregate properties, type and number of lifts of aggregate, pier size and depths and top elevations of constructed RAP elements, and applied rammer energy. Results of qualitative tests on production RAP elements, outlined in the Geopier Foundation and Soil Reinforcement Manual, dated September 1998 and the RAP specification, such as modulus load testing, uplift pull-out testing, bottom or crowd stabilization tests and dynamic cone penetration tests, must be reviewed to verify compliance with the design specifications. Testing must be conducted by an approved testing laboratory and the results must be approved by the code official.	X			Testing Agency Under supervision of Licensed Geotechnical Engineer	Special inspections are required for Geopier RAP elements. Refer to ICC ESR-1685.				

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Schaefer Project Number: 23-1890



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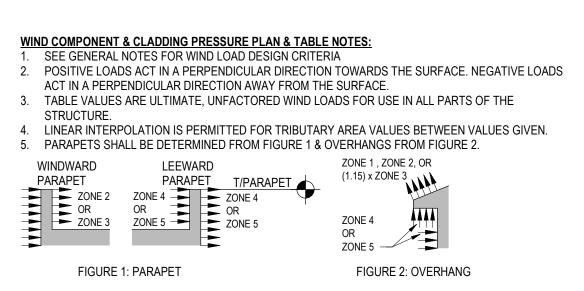
	ROOF SURFACE PRESSURE (psf)										
AREA	10 sf	20 sf	50 sf	100 sf	200 sf	350 sf	500 sf	1000 sf			
NEGATIVE ZONE 1	-43.2	-40.4	-36.6	-33.7	-30.9	-28.6	-27.1	-27.1			
NEGATVIE ZONE 1'	-24.8	-24.8	-24.8	-24.8	-21.4	-18.6	-16.8	-16.0			
NEGATIVE ZONE 2	-57.0	-53.3	-48.5	-44.8	-41.2	-38.2	-36.3	-36.3			
NEGATIVE ZONE 3	-77.7	-70.3	-60.7	-53.3	-46.0	-40.1	-36.3	-36.3			
POSITIVE ZONE 1 & 1'	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0			
POSITIVE ZONE 2 & 3	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0			
OVERHANG ZONE 1 & 1'	-39.1	-38.4	-37.5	-36.8	-30.8	-26.0	-23.0	-23.0			
OVERHANG ZONE 2	-52.9	-48.0	-41.5	-36.6	-31.7	-27.8	-25.3	-25.3			
OVERHANG ZONE 3	-73.5	-65.0	-53.7	-45.1	-36.6	-29.7	-25.3	-25.3			

OVER

WALL SURFACE PRESSURE @ h (psf)

AREA	10 sf	100 sf	200 sf	500 sf
NEGATIVE ZONE 4	-26.9	-23.2	-22.1	-20.7
NEGATIVE ZONE 5	-33.1	-25.8	-23.6	-20.7
POSITIVE ZONE 4 & 5	24.8	21.2	20.1	18.6

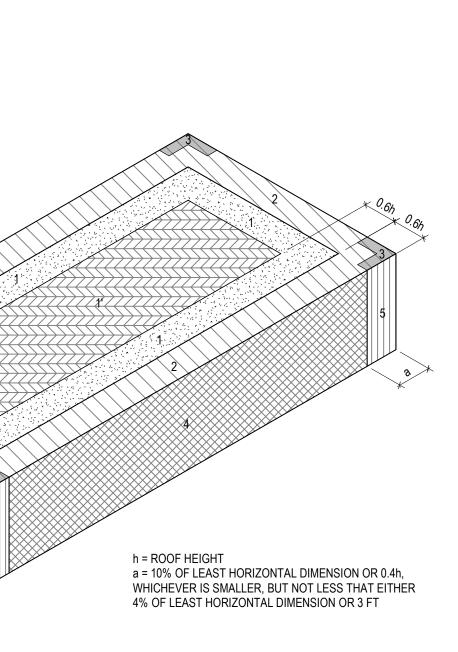
	PARAPET SURFACE PRESSURE (psf)										
AREA	10 sf	20 sf	50 sf	100 sf	200 sf	500 s					
CASE A: ZONE 2	79.2	74.1	67.3	62.2	57.1	50.3					
ZONE 3	101.5	92.4	80.4	71.4	62.3	50.3					
CASE A: ZONE 2	-46.8	-44.4	-41.3	-38.9	-36.6	-33.4					
ZONE 3	-53.5	-49.9	-45.2	-41.7	-38.1	-33.4					



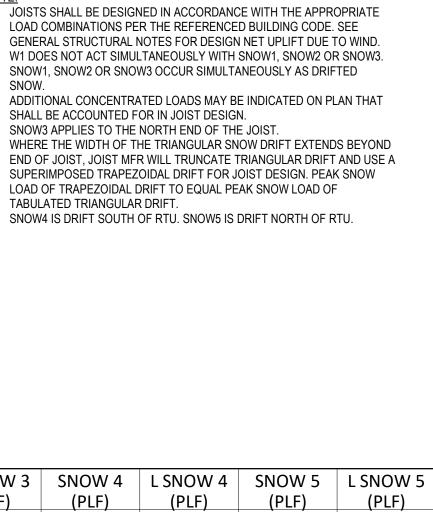
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COMPONENTS AND CLADDING WIND LOAD PRESSURE TABLES

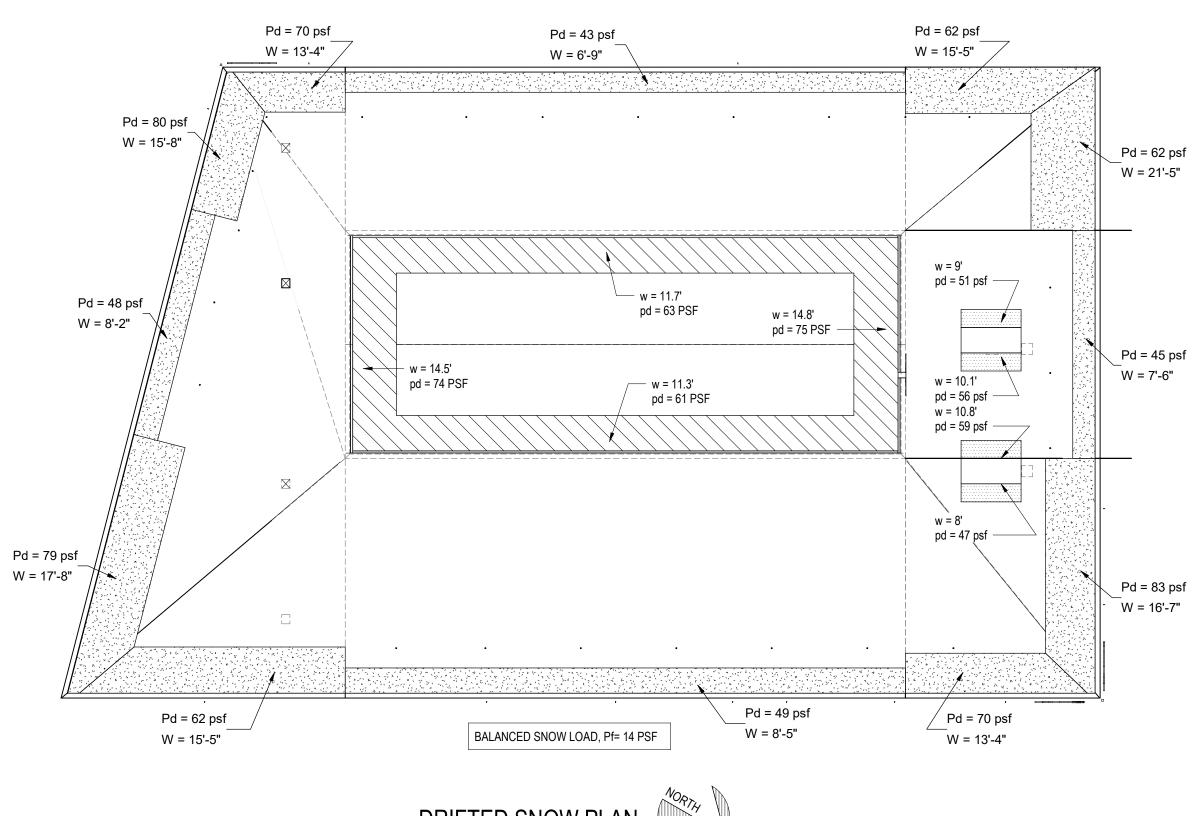
SPECIAL JOIST LOADING SCHEDULE NOTE: LSNOW5 JLSNOW3 L SNOW2 V ∠L SNOW4 1. JOISTS SHALL BE DESIGNED IN ACCORDANCE WITH THE APPROPRIATE LOAD COMBINATIONS PER THE REFERENCED BUILDING CODE. SEE GENERAL STRUCTURAL NOTES FOR DESIGN NET UPLIFT DUE TO WIND. 2. W1 DOES NOT ACT SIMULTANEOUSLY WITH SNOW1, SNOW2 OR SNOW3. SNOW1, SNOW2 OR SNOW3 OCCUR SIMULTANEOUSLY AS DRIFTED SNOW. 3. ADDITIONAL CONCENTRATED LOADS MAY BE INDICATED ON PLAN THAT SHALL BE ACCOUNTED FOR IN JOIST DESIGN. SNOW3 APPLIES TO THE NORTH END OF THE JOIST. SUPERIMPOSED TRAPEZOIDAL DRIFT FOR JOIST DESIGN. PEAK SNOW - MAX OF ROOF LIVE, LOAD OF TRAPEZOIDAL DRIFT TO EQUAL PEAK SNOW LOAD OF RAIN-ON-SNOW, TABULATED TRIANGULAR DRIFT. MIN SNOW 6. SNOW4 IS DRIFT SOUTH OF RTU. SNOW5 IS DRIFT NORTH OF RTU. - DEAD LOAD CENTER LINE OF BEAM OR INSIDE FACE OF CMU WALL (TYP) SEE PLAN - JOIST EXTENSION AS SHOWN ON PLAN SNOW 2 | L SNOW 2 | SNOW 3 | L SNOW 3 | SNOW 4 | L SNOW 4 | SNOW 5 | L SNOW 5 JOIST SNOW 1 DL LL (PLF) 128 128 (PLF) 13'-5" (PLF) (PLF) MARK (PLF) (PLF) (PLF) (PLF) (PLF) 32LHSP1 89 446 96 ------32LHSP2 89 274 6'-11' 96 ------15'-6" 32LHSP3 128 89 395 ------32LHSP4 128 373 73 12'-0" 96 ------11'-4" 11'-9" 40LHSP1 128 89 300 311 --40LHSP2 5'-0" 128 335 7'-0" 96 41 47 --44LHSP1 15'-6" 113 79 351 85 ------44LHSP2 128 8'-6" 96 89 312 ------44LHSP3 107 13'-5" 373 80 75 ------107 373 13'-5" 44LHSP4 80 75 ------272 9'-(44LHSP5 107 10'-9" 80 315 75 ----



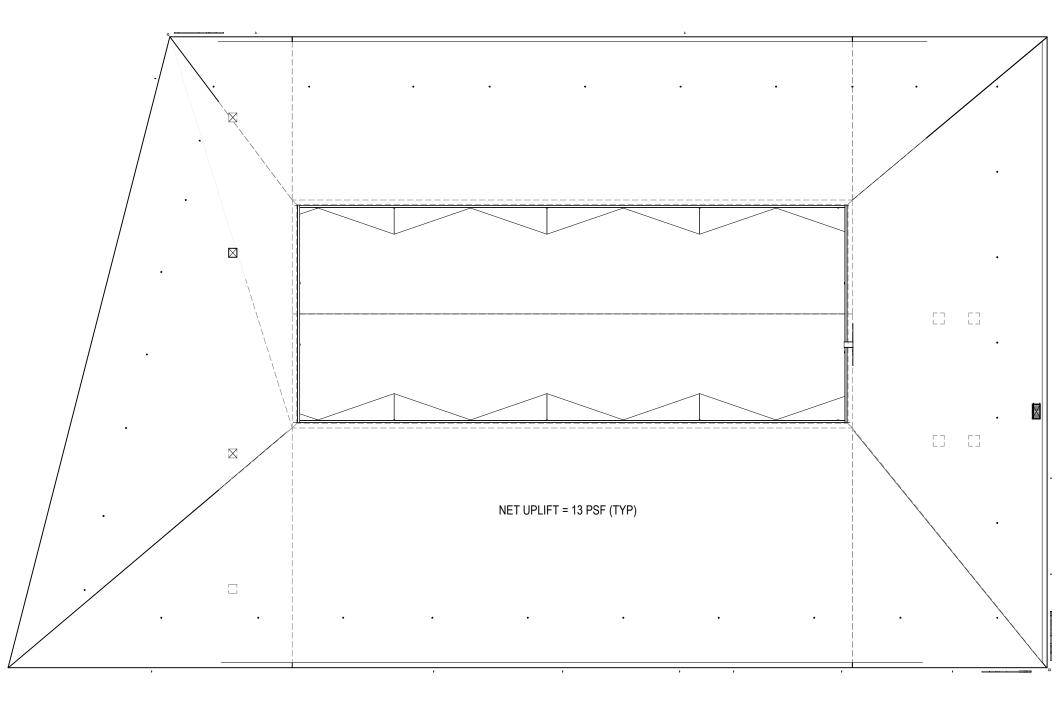
COMPONENTS AND CLADDING WIND ZONE ISOMETRIC



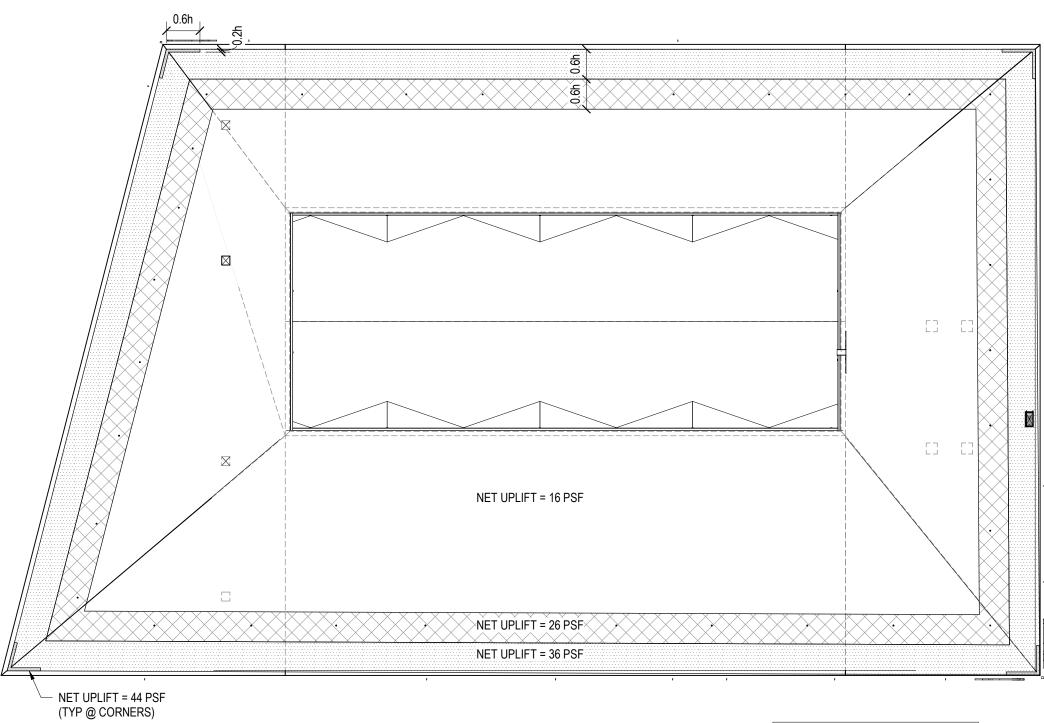
r)		(PLF)
	251	8'-0"
)"	299	10'-2"



DRIFTED SNOW PLAN 1/32" = 1'-0"



JOIST GIRDER NET UPLIFT PLAN



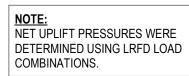
BAR JOIST NET UPLIFT PLAN 1/32" = 1'-0"

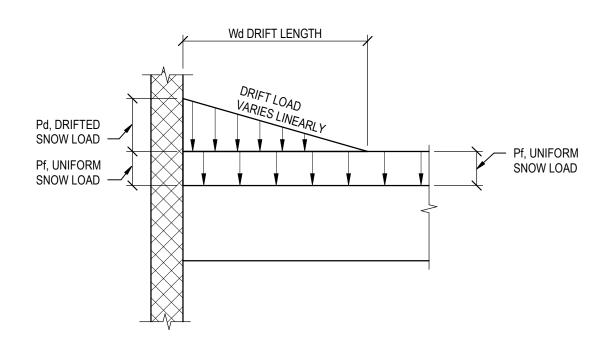


1/32" = 1'-0"

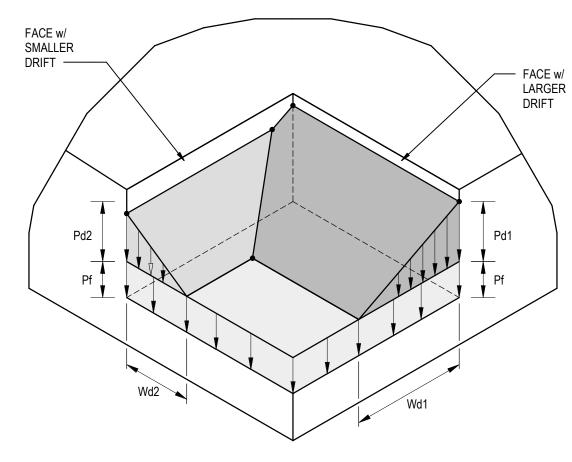
NOTE: NET UPLIFT PRESSURES WERE DETERMINED USING LRFD LOAD COMBINATIONS.







DRIFTED SNOW LOAD LEGEND NTS

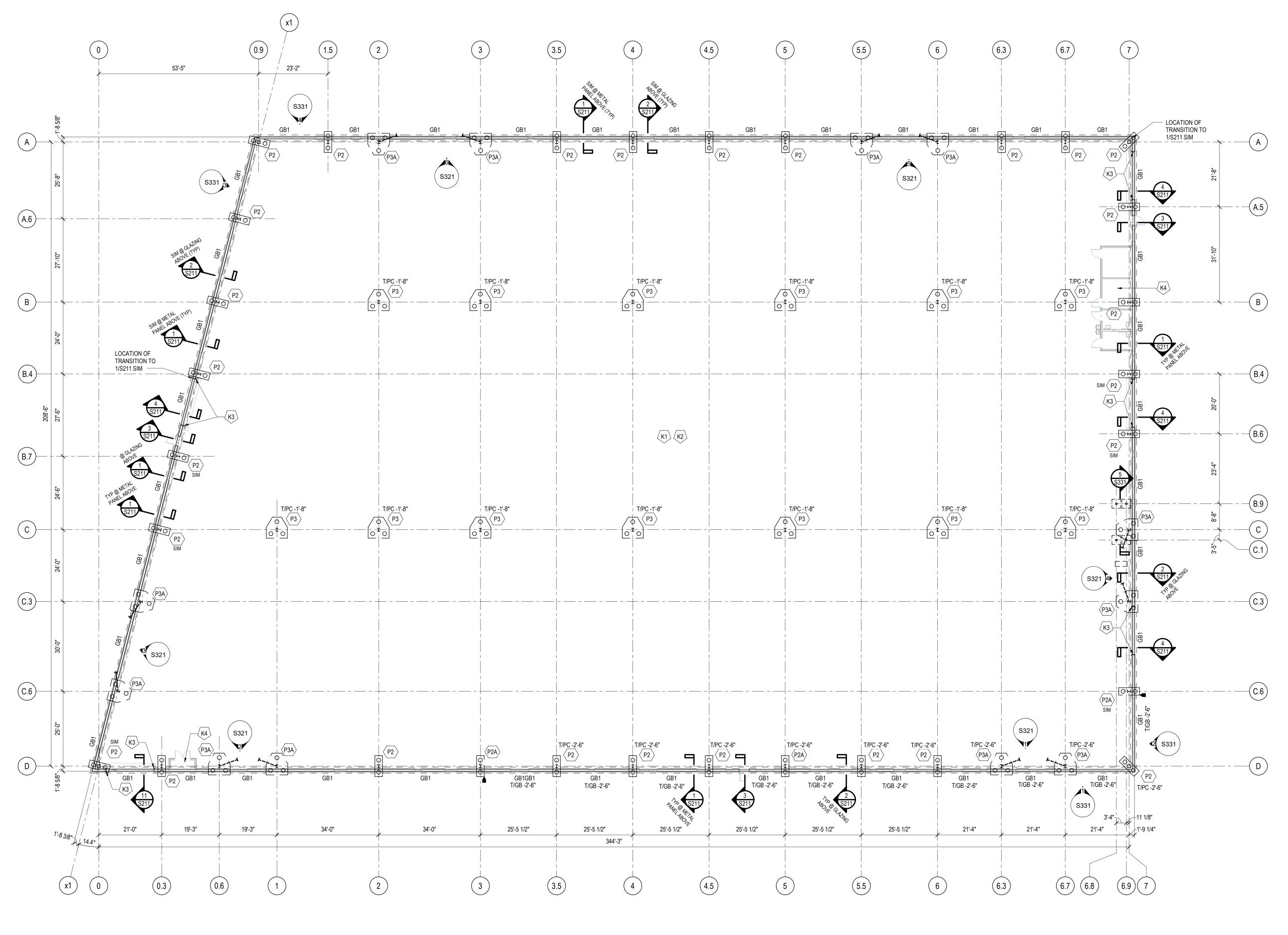


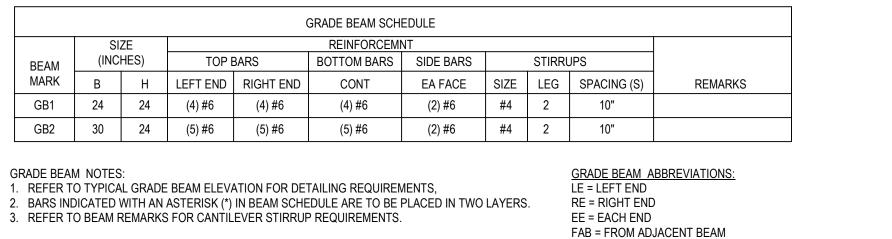
TYPICAL ADJACENT DRIFTS AT CORNER DETAIL NTS

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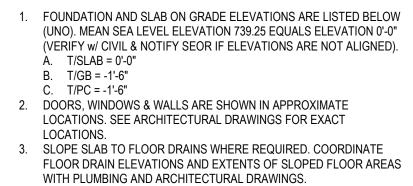




BAL = BALACNCE SITRRUPS OVER REMAINING BEAM LENGTH



PLAN NOTES:



STRUCTURAL SHEET INDEX:

S001	GENERAL NOTES, ABBREVIATIONS, & SYMBOL LEGEND
S002	SPECIAL INSPECTION SCHEDULES

- S003 LOADING INFORMATION S101 BUS GARAGE BUILDING FOUNDATION PLAN
- S102 BUS GARAGE BUILDING ROOF FRAMING PLAN S111 **BUS WASH BUILDING FOUNDATION & FRAMING PLANS**
- S201 & S202 CONCRETE SCHEDULES & TYPICAL FOUNDATION DETAILS S211 & S212 FOUNDATION SECTIONS & DETAILS S251 MASONRY SCHEDULES & TYPICAL DETAILS
- S301 FRAMING SCHEDULES & TYPICAL DETAILS S311 & S312 FRAMING SECTIONS & DETAILS
- BRACED FRAME ELEVATIONS & TYPICAL DETAILS FRAMING ELEVATIONS & STAIR VIEWS S321 S331 S341 COLUMN SCHEDULE & TYPICAL COLUMN BASE DETAILS

	FOUNDATION PLAN KEYNOTES										
NO.	DESCRIPTION										
K1	6" THICK CONCRETE SLAB ON GRADE OVER COMPACTED GRANULAR BASE & VAPOR BARRIER. REINFORCE SLAB w/ #3 @ 12"oc EACH WAY. LOCATE REINFORCEMENT 2" CLEAR BELOW TOP OF SLAB. PROVIDE CONTRACTION JOINTS @ 14'-0"oc (MAX).										
K2	DELEGATED DESIGN NOTE: GROUND IMPROVEMENT WITH STONE COLUMNS IS REQUIRED UNDER ALL INTERIOR AREAS w/ SLABS ON GRADE.										
K3	REFER TO 10/S211 FOR PLAN DETAIL AT BASE OF VERTICAL STEEL CHANNEL AT COILING DOOR JAMB.										
K4	NOTE TO CFS DESIGNER: VERTICAL DESIGN LOADS FOR CFS FRAMING ABOVE ENCLOSED ROOMS ARE LISTED BELOW:										
	DEAD LOAD = 15 PSF LIVE LOAD (UNIFORM) = 40 PSF LIVE LOAD (CONCENTRATED) = 300 LBS										
	DESIGN FRAMING FOR UNIFORM LIVE LOAD OR CONCENTRATED LIVE LOAD, WHICHEVER PRODUCES THE GREATER LOAD EFFECTS. THE CONCENTRATED LIVE LOAD SHALL BE LOCATED SO AS TO PRODUCE THE MAXIMUM LOAD EFFECTS ON FRAMING MEMBERS.										
K5	AUTOMATIC WASH BAY TRENCH. COORDINATE TENCH LOCATION AND PLAN EXTENTS w/ SUPPLIER OF WASH EQUIPMENT.										
K6	CHASSIS WASH TRENCH. COORDINATE TENCH LOCATION AND PLAN EXTENTS w/ SUPPLIER OF WASH EQUIPMENT.										
K7	EQUIPMENT ROOM PITS. COORDIANTE PIT LOCATIONS AND PLAN EXTENTS w/ SUPPLIER OF WASH EQUIPMENT.										
K8	8" THICK CONCRETE SLAB ON GRADE OVER COMPACTED GRANULAR BASE & VAPOR BARRIER. REINFORCE SLAB w/ #4 @ 12"oc EACH WAY. LOCATE REINFORCEMENT 2" CLEAR BELOW TOP OF SLAB. PROVIDE CONTRACTION JOINTS										

K9 12" THICK CONCRETE SLAB ON GRADE OVER COMPACTED GRANULAR BASE. REINFORCE SLAB w/ #4 @ 12"oc TOP & BOTTOM EACH WAY. VERIFY T/SLAB ELEVATION w/ ARCH. SLOPE SLAB TO DRAINS. SLAB THICKNESS SHALL BE CONSTANT WHERE SLAB SLOPES.

@ 18'-0"oc (MAX). SLOPE SLAB TO TRENCHES.

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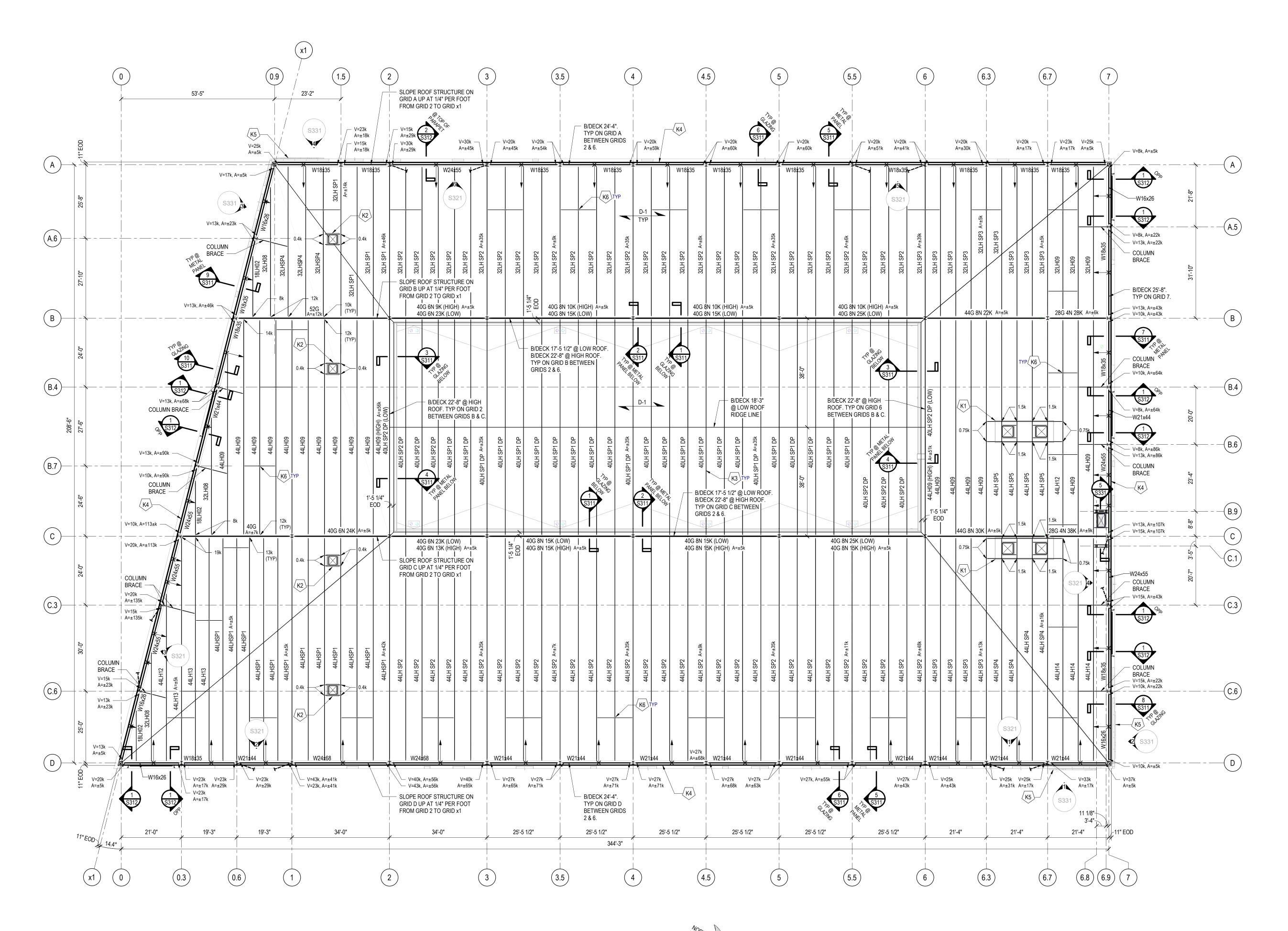
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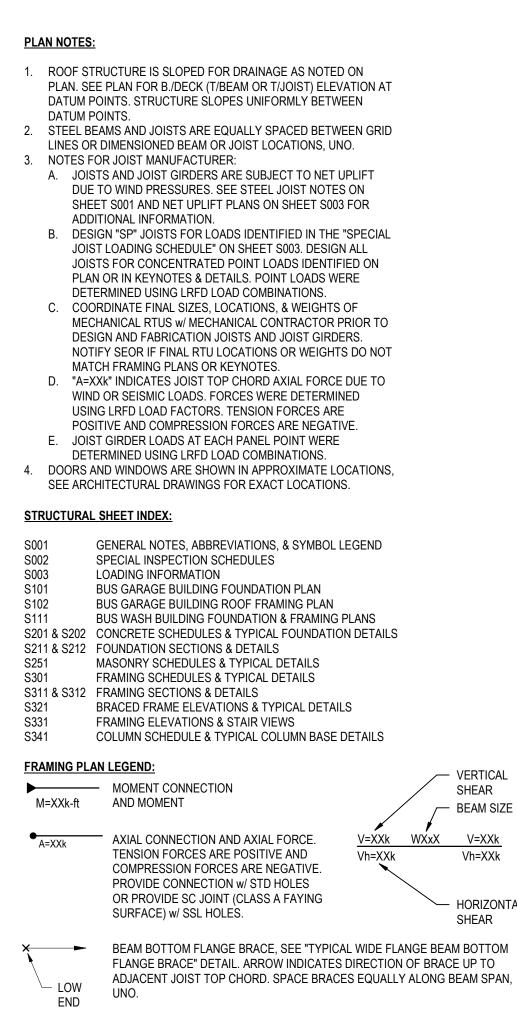


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ROOF FRAMING PLAN 1/16" = 1'-0"

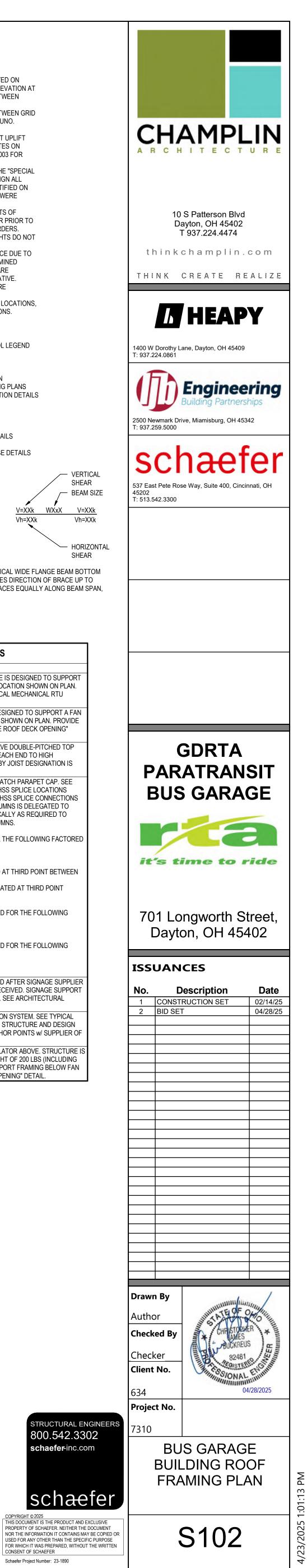


	FRAMING PLAN KEYNOTES
NO. K1	DESCRIPTION OUTLINE OF AIR RECOVERY UNIT ABOVE. STRUCTURE IS DESIGNED TO SUPPORT A UNIT WEIGHT OF 6,000 LBS (INCLUDING CURB) AT LOCATION SHOWN ON PLAN. PROVIDE SUPPORT FRAMING BELOW UNIT PER "TYPICAL MECHANICAL RTU SUPPORT" DETAIL.
K2	OUTLINE OF EXHAUST FAN ABOVE. STRUCTURE IS DESIGNED TO SUPPORT A FAN WEIGHT OF 500 LBS (INCLUDING CURB) AT LOCATION SHOWN ON PLAN. PROVIDE SUPPORT FRAMING BELOW FAN PER "TYPICAL LARGE ROOF DECK OPENING" DETAIL.
K3	NOTE TO JOIST MFR: JOISTS AT LOW ROOF SHALL HAVE DOUBLE-PITCHED TOP CHORD THAT SLOPES UP FROM LOW ELEVATION AT EACH END TO HIGH ELEVATION AT RIDGE LINE. JOIST DEPTH INDICATED BY JOIST DESIGNATION IS DEPTH AT ENDS OF JOIST.
K4	CONTINUOUS HORIZONTAL HSS6x6x1/2 SLOPED TO MATCH PARAPET CAP. SEE ARCHITECTURAL DRAWINGS FOR HSS ELEVATIONS. HSS SPLICE LOCATIONS SHALL BE DETERMINED BY FABRICATOR. DESIGN OF HSS SPLICE CONNECTIONS AND HSS CONNECTIONS TO EXTERIOR FACE OF COLUMNS IS DELEGATED TO FABRICATOR'S ENGINEER. EXTEND COLUMNS VERTICALLY AS REQUIRED TO ALLOW FOR CONNECTIONS BETWEEN HSS AND COLUMNS.
	HSS SPLICE CONNECTIONS SHALL BE DESIGNED FOR THE FOLLOWING FACTORED (LRFD) FORCES: VERTICAL SHEAR = 1k HORIZONTAL SHEAR = 6k VERTICAL MOMENT = 5k-ft (2k-ft IF SPLICE IS LOCATED AT THIRD POINT BETWEEN
	COLUMNS) HORIZONTAL MOMENT = 26k-ft (16k-ft IF SPLICE IS LOCATED AT THIRD POINT BETWEEN COLUMNS)
	HSS CONNECTIONS TO COLUMNS SHALL BE DESIGNED FOR THE FOLLOWING FACTORED (LRFD) REACTIONS: VERTICAL SHEAR = 2k HORIZONTAL SHEAR = 12k
	HORIZONTAL SHEAR – 12K HSS CONNECTIONS TO COLUMNS SHALL BE DESIGNED FOR THE FOLLOWING FACTORED (LRFD) REACTIONS: VERTICAL SHEAR = 2k HORIZONTAL SHEAR = 12k
K5	SUPPORT OF EXTERIOR SIGNAGE WILL BE EVALUATED AFTER SIGNAGE SUPPLIER IS SELECTED AND SIGNAGE SHOP DRAWINGS ARE RECEIVED. SIGNAGE SUPPORT FRAMING IS ASSUMED TO CONSIST OF CFS FRAMING. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
K6	ALTERNATE 01 - ANCHOR POINT FOR FALL PROTECTION SYSTEM. SEE TYPICAL DETAILS FOR ANCHOR POINT ATTACHMENT TO ROOF STRUCTURE AND DESIGN LOADS FOR JOISTS. COORDINATE LOCATION OF ANCHOR POINTS w/ SUPPLIER OF FALL PROTECTION SYSTEM.
K7	OUTLINE OF EXHAUST FAN OR GRAVITY ROOF VENTILATOR ABOVE. STRUCTURE IS DESIGNED TO SUPPORT A FAN OR VENTILATOR WEIGHT OF 200 LBS (INCLUDING CURB) AT LOCATION SHOWN ON PLAN. PROVIDE SUPPORT FRAMING BELOW FAN OR VENTILATOR PER "TYPICAL LARGE ROOF DECK OPENING" DETAIL.

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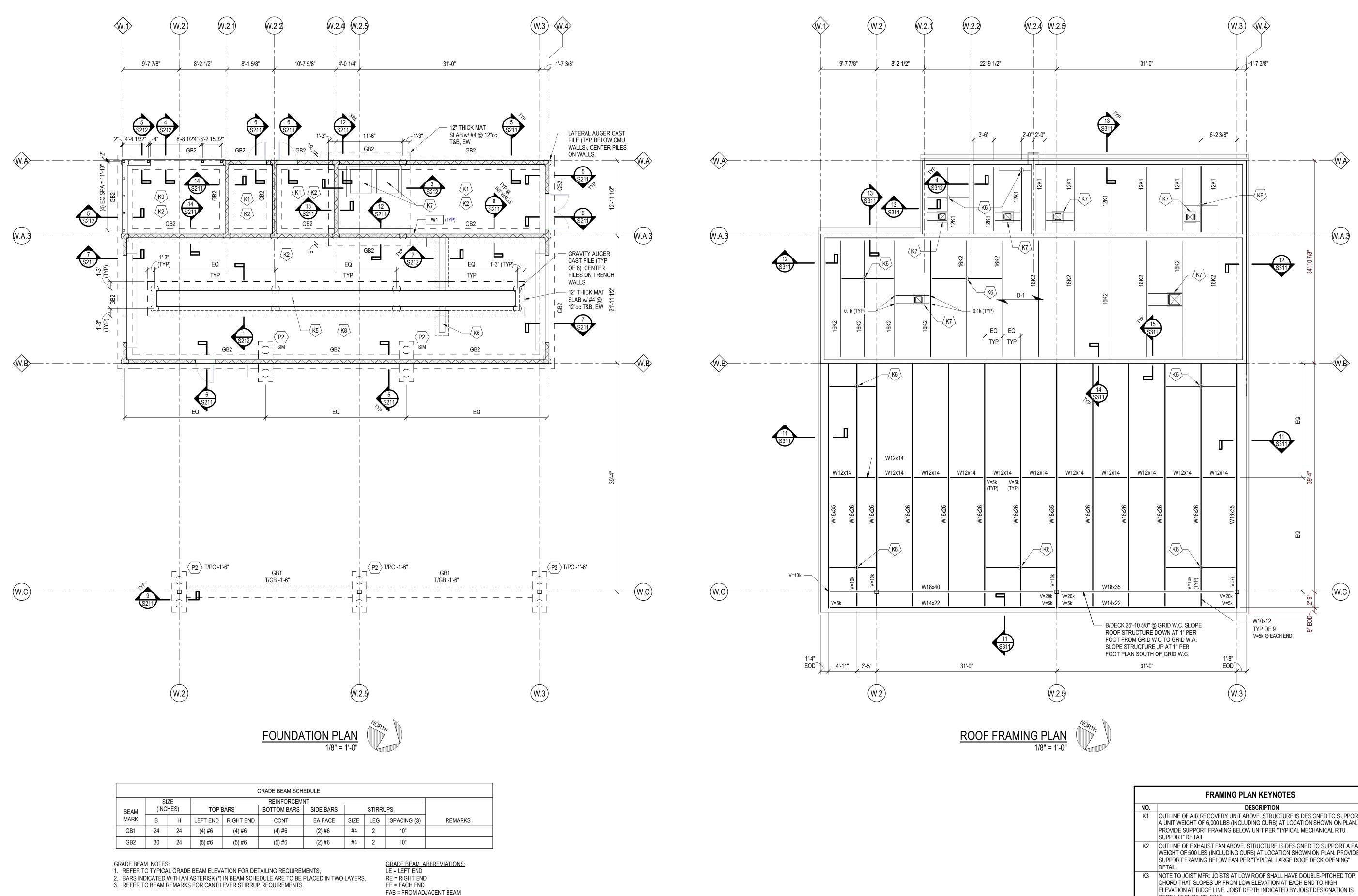
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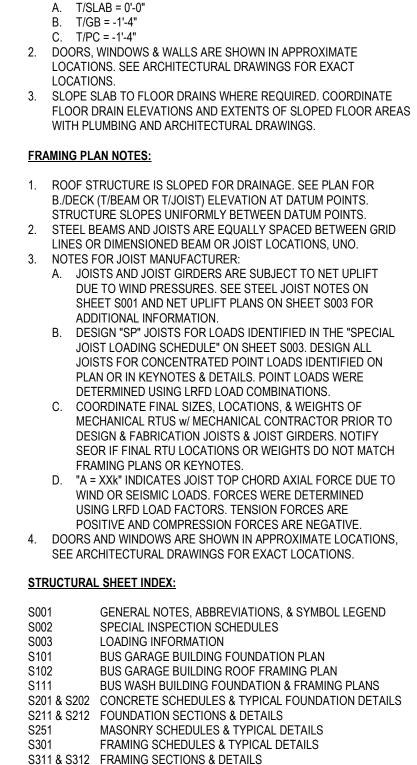
✓ VERTICAL SHEAR / BEAM SIZE Vh=XXk

> HORIZONTAL SHEAR





BAL = BALACNCE SITRRUPS OVER REMAINING BEAM LENGTH



BRACED FRAME ELEVATIONS & TYPICAL DETAILS

COLUMN SCHEDULE & TYPICAL COLUMN BASE DETAILS

FRAMING ELEVATIONS & STAIR VIEWS

AXIAL CONNECTION AND AXIAL FORCE.

SURFACE) w/ SSL HOLES.

TENSION FORCES ARE POSITIVE AND

PROVIDE CONNECTION w/ STD HOLES

COMPRESSION FORCES ARE NEGATIVE.

OR PROVIDE SC JOINT (CLASS A FAYING

1. FOUNDATION AND SLAB ON GRADE ELEVATIONS ARE LISTED BELOW (UNO). MEAN SEA LEVEL ELEVATION 739.60 EQUALS ELEVATION 0'-0" (VERIFY w/ CIVIL & NOTIFY SEOR IF ELEVATIONS ARE NOT ALIGNED).

FOUNDATION PLAN NOTES:

S321

S331

S341

A=XXk

— LOW END

FRAMING PLAN LEGEND:

MOMENT CONNECTION

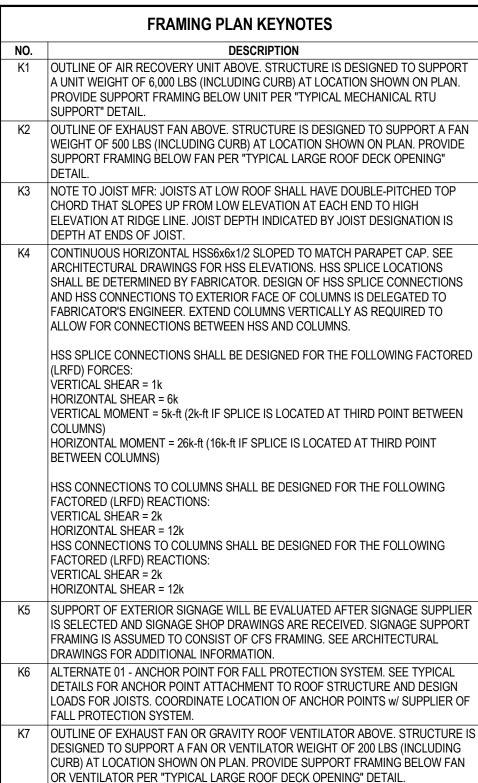
M=XXk-ft AND MOMENT

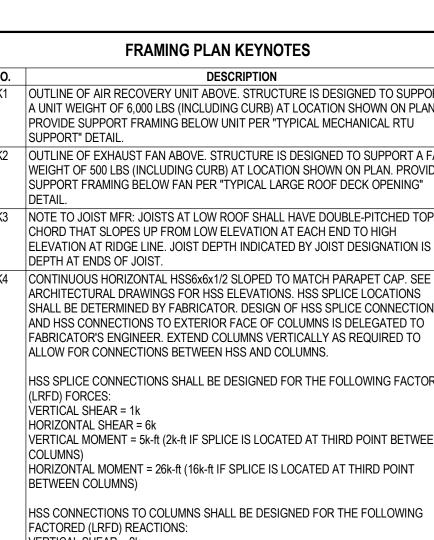
	FOUNDATION PLAN KEYNOTES
NO.	DESCRIPTION
K1	6" THICK CONCRETE SLAB ON GRADE OVER COMPACTED GRANULAR BASE & VAPOR BARRIER. REINFORCE SLAB w/ #3 @ 12"oc EACH WAY. LOCATE REINFORCEMENT 2" CLEAR BELOW TOP OF SLAB. PROVIDE CONTRACTION JOINTS @ 14'-0"oc (MAX).
K2	DELEGATED DESIGN NOTE: GROUND IMPROVEMENT WITH STONE COLUMNS IS REQUIRED UNDER ALL INTERIOR AREAS w/ SLABS ON GRADE.
K3	REFER TO 10/S211 FOR PLAN DETAIL AT BASE OF VERTICAL STEEL CHANNEL AT COILING DOOR JAMB.
K4	NOTE TO CFS DESIGNER: VERTICAL DESIGN LOADS FOR CFS FRAMING ABOVE ENCLOSED ROOMS ARE LISTED BELOW:
	DEAD LOAD = 15 PSF
	LIVE LOAD (UNIFORM) = 40 PSF LIVE LOAD (CONCENTRATED) = 300 LBS
	DESIGN FRAMING FOR UNIFORM LIVE LOAD OR CONCENTRATED LIVE LOAD, WHICHEVER PRODUCES THE GREATER LOAD EFFECTS. THE CONCENTRATED LIVE LOAD SHALL BE LOCATED SO AS TO PRODUCE THE MAXIMUM LOAD EFFECTS ON FRAMING MEMBERS.
K5	AUTOMATIC WASH BAY TRENCH. COORDINATE TENCH LOCATION AND PLAN EXTENTS w/ SUPPLIER OF WASH EQUIPMENT.
K6	CHASSIS WASH TRENCH. COORDINATE TENCH LOCATION AND PLAN EXTENTS w/ SUPPLIER OF WASH EQUIPMENT.
K7	EQUIPMENT ROOM PITS. COORDIANTE PIT LOCATIONS AND PLAN EXTENTS w/ SUPPLIER OF WASH EQUIPMENT.
K8	8" THICK CONCRETE SLAB ON GRADE OVER COMPACTED GRANULAR BASE & VAPOR BARRIER. REINFORCE SLAB w/ #4 @ 12"oc EACH WAY. LOCATE REINFORCEMENT 2" CLEAR BELOW TOP OF SLAB. PROVIDE CONTRACTION JOINTS @ 18'-0"oc (MAX). SLOPE SLAB TO TRENCHES.
K9	12" THICK CONCRETE SLAB ON GRADE OVER COMPACTED GRANULAR BASE.

K9 12" THICK CONCRETE SLAB ON GRADE OVER COMPACTED GRANULAR BASE. REINFORCE SLAB w/ #4 @ 12"oc TOP & BOTTOM EACH WAY. VERIFY T/SLAB ELEVATION w/ ARCH. SLOPE SLAB TO DRAINS. SLAB THICKNESS SHALL BE CONSTANT WHERE SLAB SLOPES.



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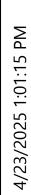


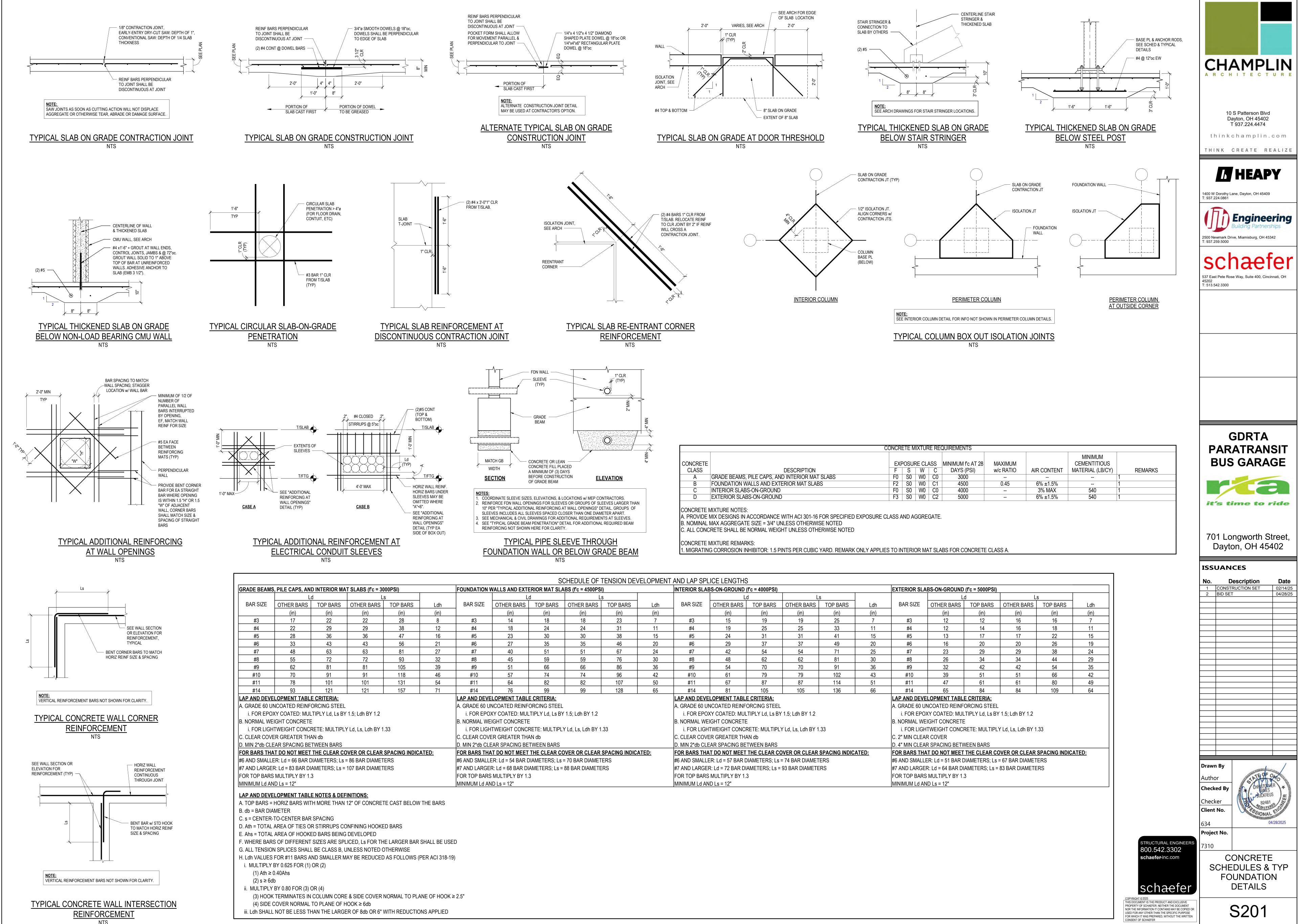


VERTICAL SHEAR BEAM SIZE V=XXk WXxX V=XXk Vh=XXk

Vh=XXk

HORIZONTAL SHEAR ★ BEAM BOTTOM FLANGE BRACE, SEE "TYPICAL WIDE FLANGE BEAM BOTTOM FLANGE BRACE" DETAIL. ARROW INDICATES DIRECTION OF BRACE UP TO ADJACENT JOIST TOP CHORD. SPACE BRACES EQUALLY ALONG BEAM SPAN,

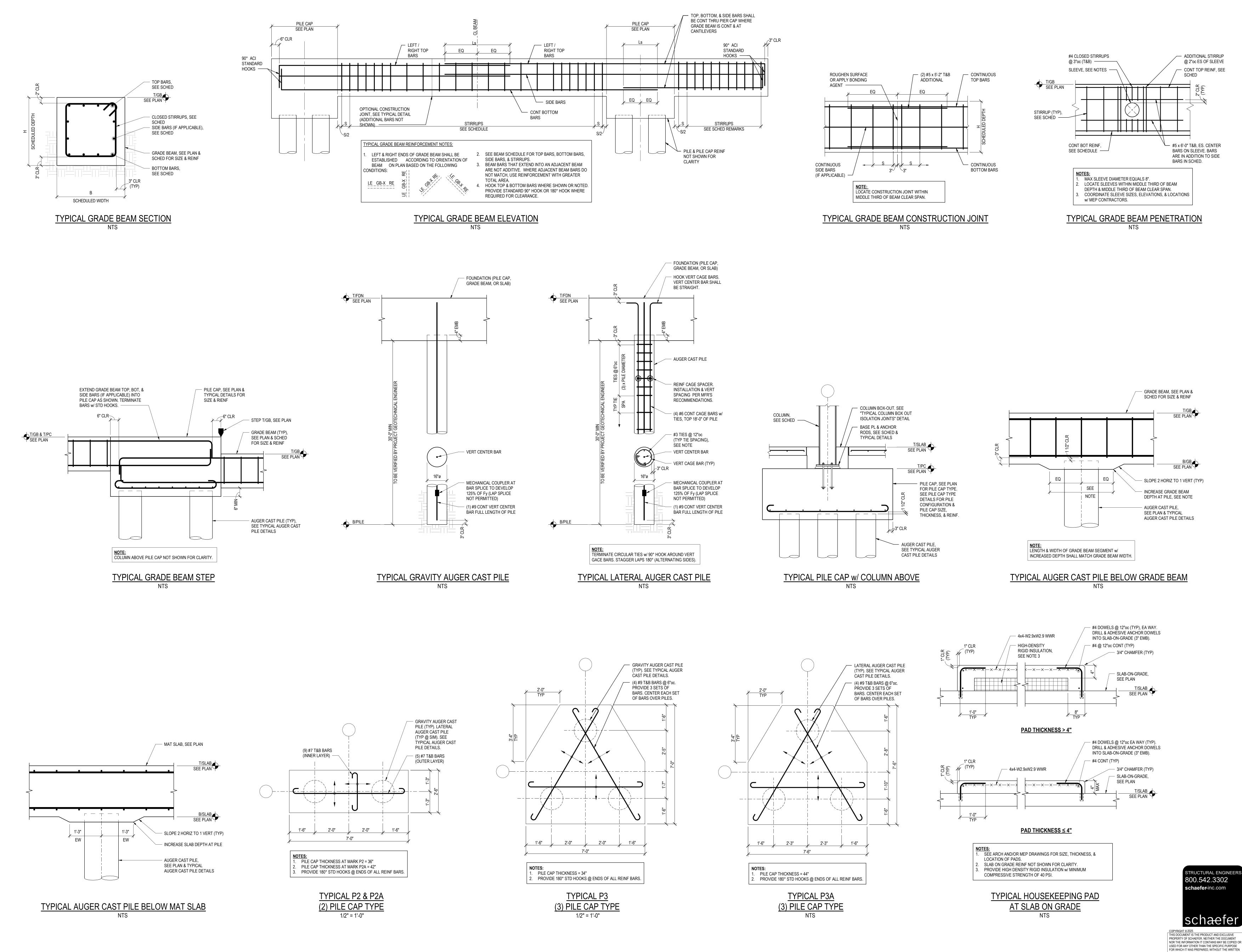




BS (f'c = 30	DOPSI)	FOUNDATION WALLS AND EXTERIOR MAT SLABS (f'c = 4500PSI)							INTERIOR SLABS-ON-GROUND (f'c = 4000PSI)							EXTERIOR SLABS-ON-GROUND (f'c = 5000PSI)					
Ls		Ld		Ls				Ld		L	6			L	d	Ls					
ER BARS	TOP BARS	Ldh	BAR SIZE	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	Ldh	BAR SIZE	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	Ldh	BAR SIZE	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	Ldh	
(in)	(in)	(in)		(in)	(in)	(in)	(in)	(in)		(in)	(in)	(in)	(in)	(in)		(in)	(in)	(in)	(in)	(in)	
22	28	8	#3	14	18	18	23	7	#3	15	19	19	25	7	#3	12	12	16	16	7	
29	38	12	#4	18	24	24	31	11	#4	19	25	25	33	11	#4	12	14	16	18	11	
36	47	16	#5	23	30	30	38	15	#5	24	31	31	41	15	#5	13	17	17	22	15	
43	56	21	#6	27	35	35	46	20	#6	29	37	37	49	20	#6	16	20	20	26	19	
63	81	27	#7	40	51	51	67	24	#7	42	54	54	71	25	#7	23	29	29	38	24	
72	93	32	#8	45	59	59	76	30	#8	48	62	62	81	30	#8	26	34	34	44	29	
81	105	39	#9	51	66	66	86	36	#9	54	70	70	91	36	#9	32	42	42	54	35	
91	118	46	#10	57	74	74	96	42	#10	61	79	79	102	43	#10	39	51	51	66	42	
01	131	54	#11	64	82	82	107	50	#11	67	87	87	114	51	#11	47	61	61	80	49	
21	157	71	#14	76	99	99	128	65	#14	81	105	105	136	66	#14	65	84	84	109	64	
h BY 1.2			A. GRADE 60 UN	LOPMENT TABLE NCOATED REINF((Y COATED: MUL)	ORCING STEEL	1 5 I dh BV 1 2			LAP AND DEVELOPMENT TABLE CRITERIA: A. GRADE 60 UNCOATED REINFORCING STEEL i. FOR EPOXY COATED: MULTIPLY Ld, Ls BY 1.5; Ldh BY 1.2						LAP AND DEVELOPMENT TABLE CRITERIA: A. GRADE 60 UNCOATED REINFORCING STEEL i. FOR EPOXY COATED: MULTIPLY Ld, Ls BY 1.5; Ldh BY 1.2						
Ldh BY 1.	33		B. NORMAL WE	IGHT CONCRETE		Y Ld. Ls. Ldh BY 1.3	33		B. NORMAL WEIGHT CONCRETE i. FOR LIGHTWEIGHT CONCRETE: MULTIPLY Ld. Ls. Ldh BY 1.33						B. NORMAL WEIGHT CONCRETE i. FOR LIGHTWEIGHT CONCRETE: MULTIPLY Ld. Ls. Ldh BY 1.33						
			C. CLEAR COVE	R GREATER THA	N db	,,,			C. CLEAR COVER GREATER THAN db D. MIN 2*db CLEAR SPACING BETWEEN BARS						C. 2" MIN CLEAR COVER D. 4" MIN CLEAR SPACING BETWEEN BARS						
	SPACING INDIC	ATED:	FOR BARS THA	T DO NOT MEET	THE CLEAR CO	OVER OR CLEAR S	SPACING INDICA	TED:	FOR BARS TH	AT DO NOT MEET [.]	THE CLEAR CO	VER OR CLEAR	SPACING INDICA	TED:	FOR BARS THAT DO NOT MEET THE CLEAR COVER OR CLEAR SPACING INDICATED:						
	ERS		#6 AND SMALLE	R: Ld = 54 BAR D	IAMETERS; Ls =	= 70 BAR DIAMETE	ERS		#6 AND SMALL	.ER: Ld = 57 BAR D	AMETERS; Ls :	= 74 BAR DIAMET	ERS		#6 AND SMALLER: Ld = 51 BAR DIAMETERS; Ls = 67 BAR DIAMETERS						
DIAMETE	ERS		#7 AND LARGEF	R: Ld = 68 BAR DIA	AMETERS; Ls =	88 BAR DIAMETER	२ऽ		#7 AND LARGE	R: Ld = 72 BAR DIA	93 BAR DIAMETE	RS		#7 AND LARGER: Ld = 64 BAR DIAMETERS; Ls = 83 BAR DIAMETERS							
			FOR TOP BARS	MULTIPLY BY 1.3	3				FOR TOP BAR	S MULTIPLY BY 1.3					FOR TOP BARS	MULTIPLY BY 1.3	3				
			MINIMUM Ld AN	D Ls = 12"					MINIMUM Ld AND Ls = 12"						MINIMUM Ld AND Ls = 12"						

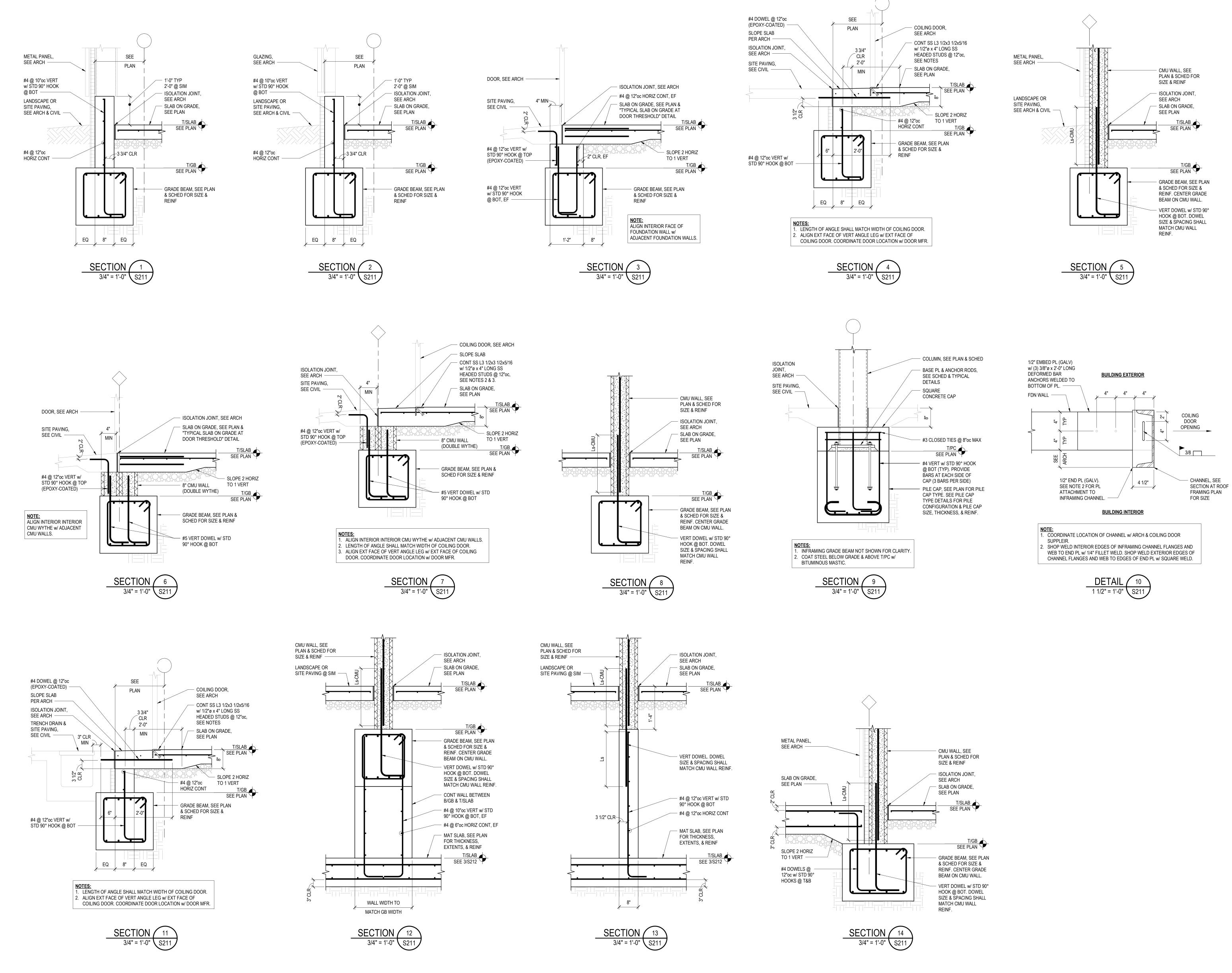
CONCRETE MIXTURE REQUIREMENTS											
	EXF	POSUF	RE CLA	ASS	MINIMUM f'c AT 28	MAXIMUM		MINIMUM CEMENTITIOUS			
DESCRIPTION	F S W C		DAYS (PSI)	w/c RATIO	AIR CONTENT	MATERIAL (LB/CY)		REMARKS			
APS, AND INTERIOR MAT SLABS	F0	S0	W0	C0	3000				1		1
ND EXTERIOR MAT SLABS	F2	S0	W0	C1	4500	0.45	6% ±1.5%		1		
GROUND	F0	S0	W0	C0	4000		3% MAX	540	1		
GROUND	F3	S0	W0	C2	5000		6% ±1.5%	540	1		

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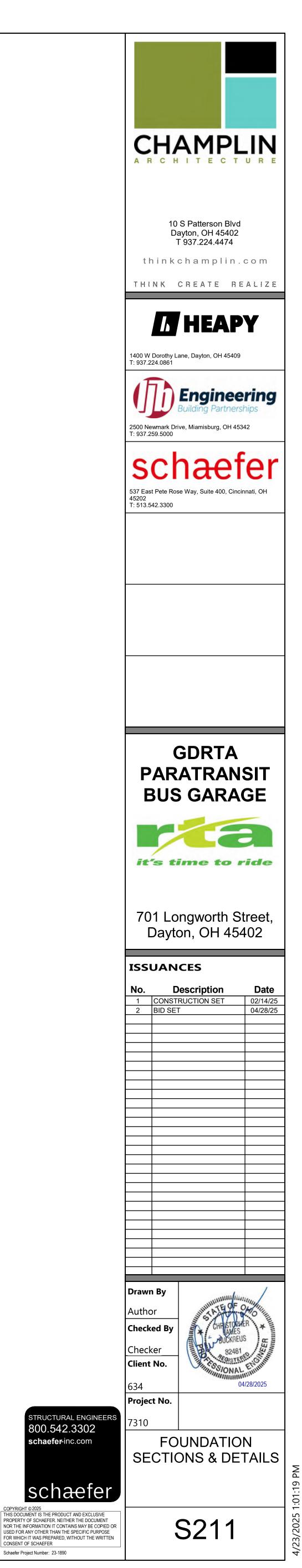


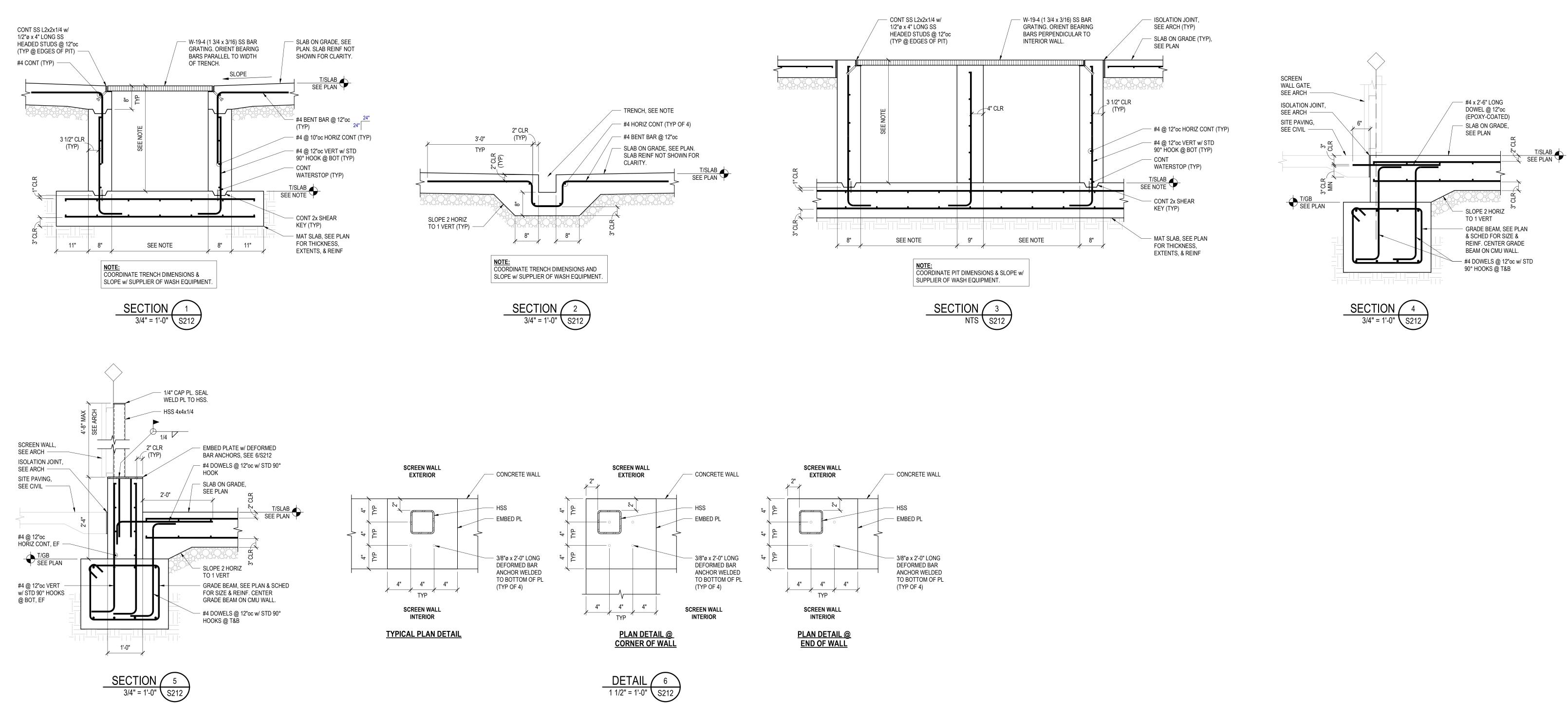


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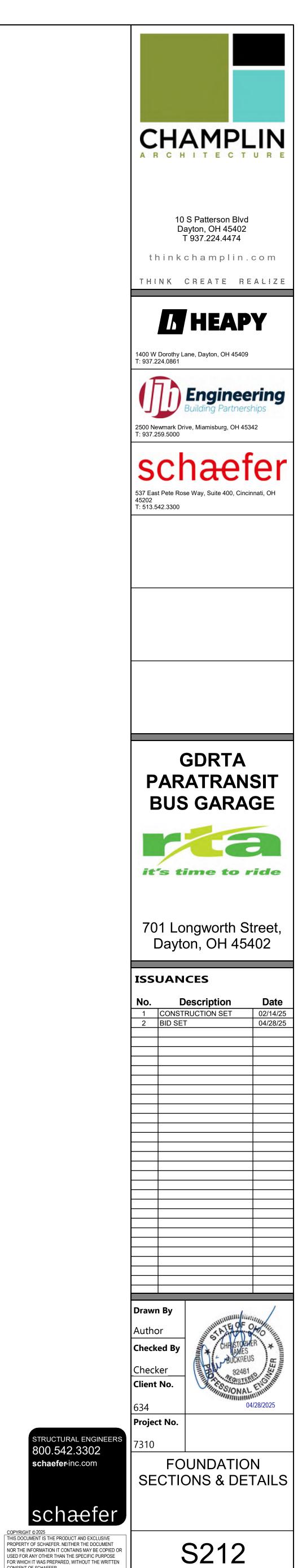


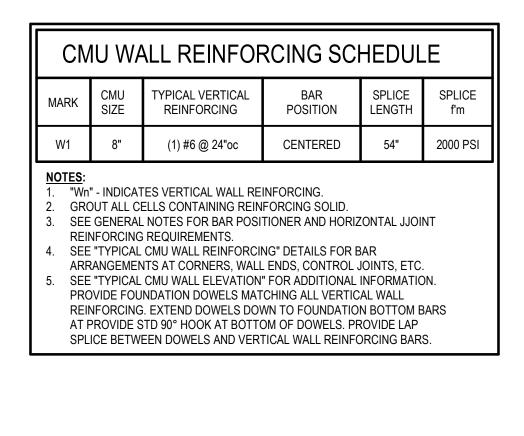


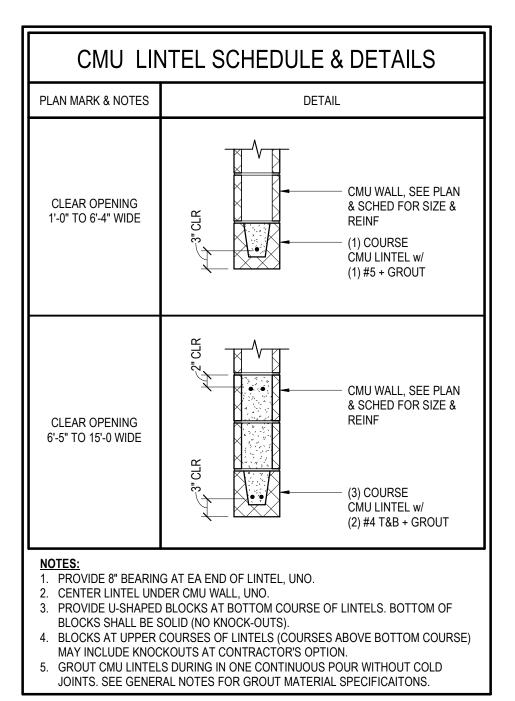


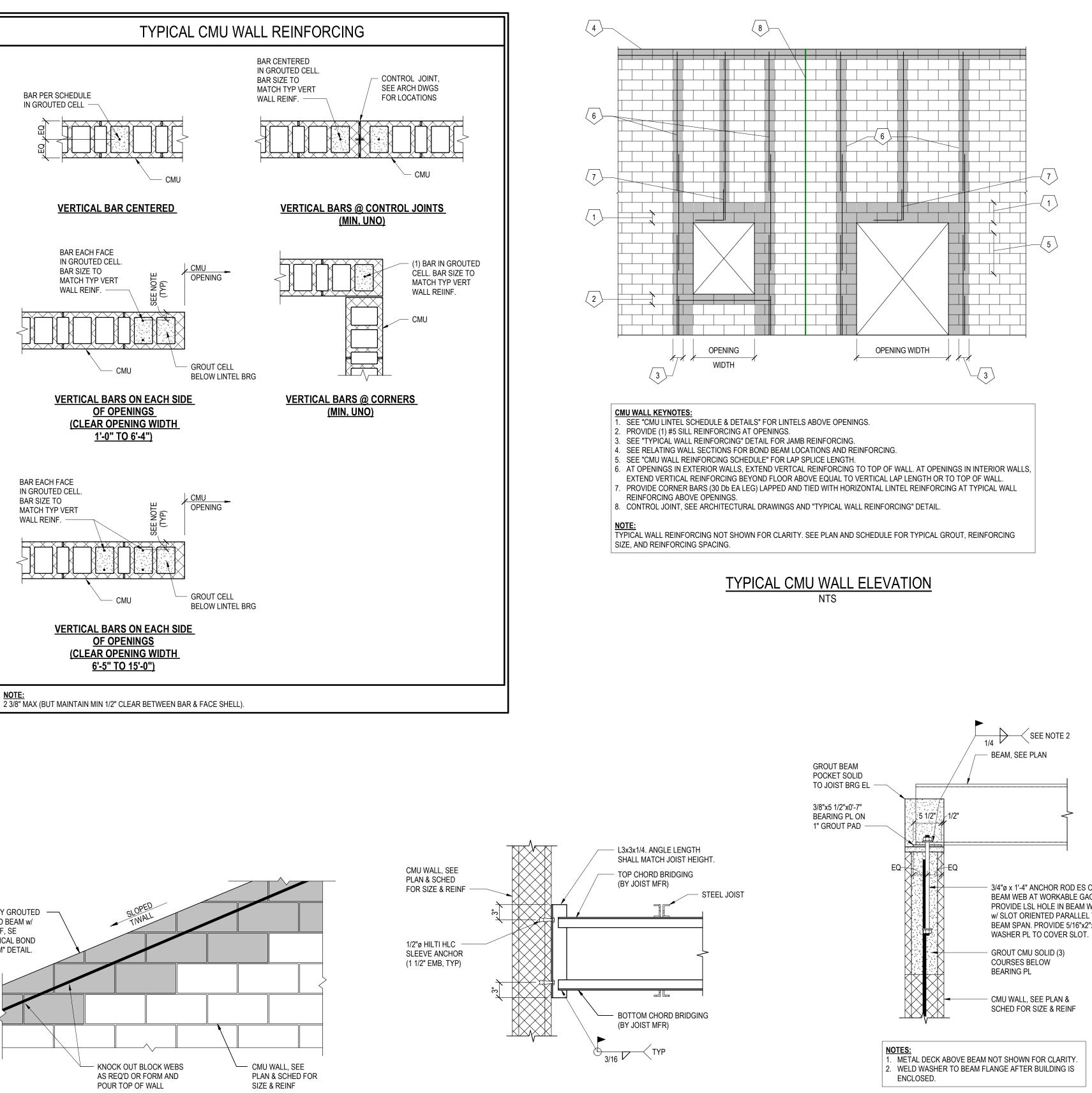
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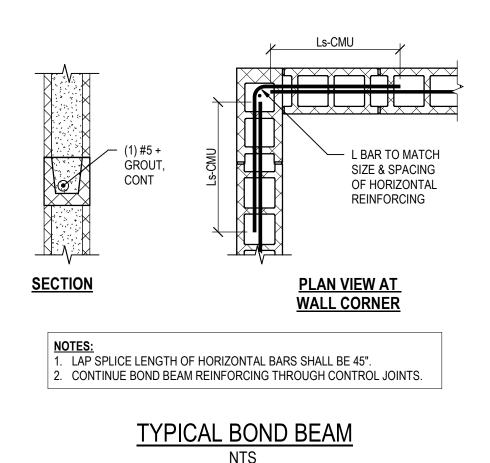
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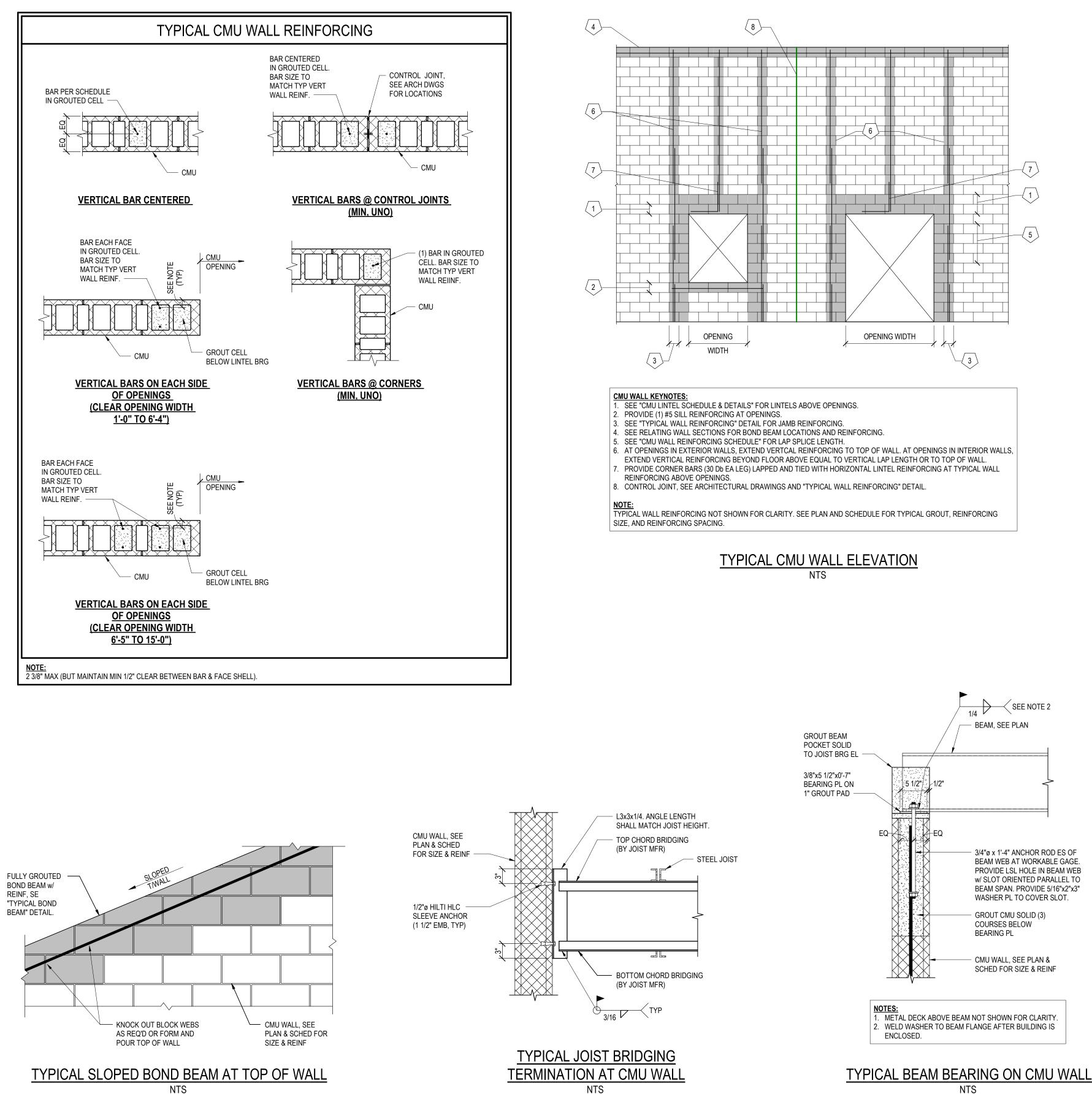




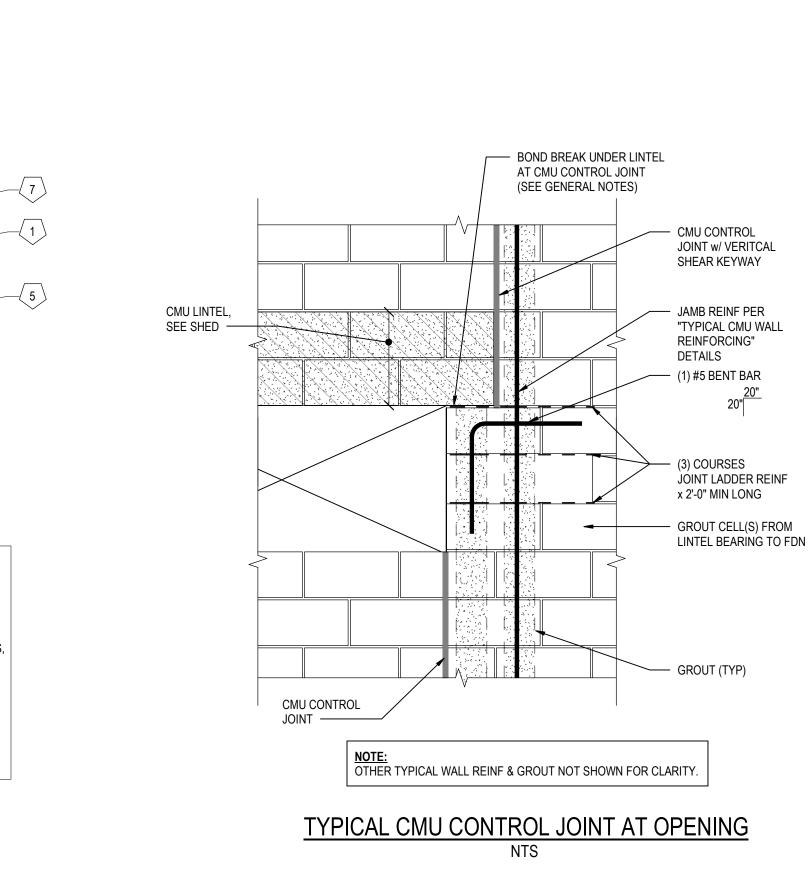


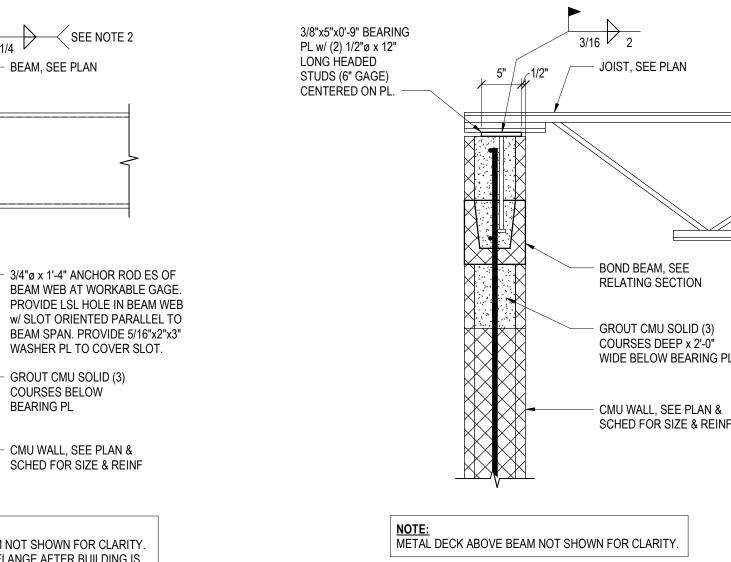






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WIDE BELOW BEARING PL SCHED FOR SIZE & REINF

TYPICAL JOIST BEARING ON CMU WALL NTS

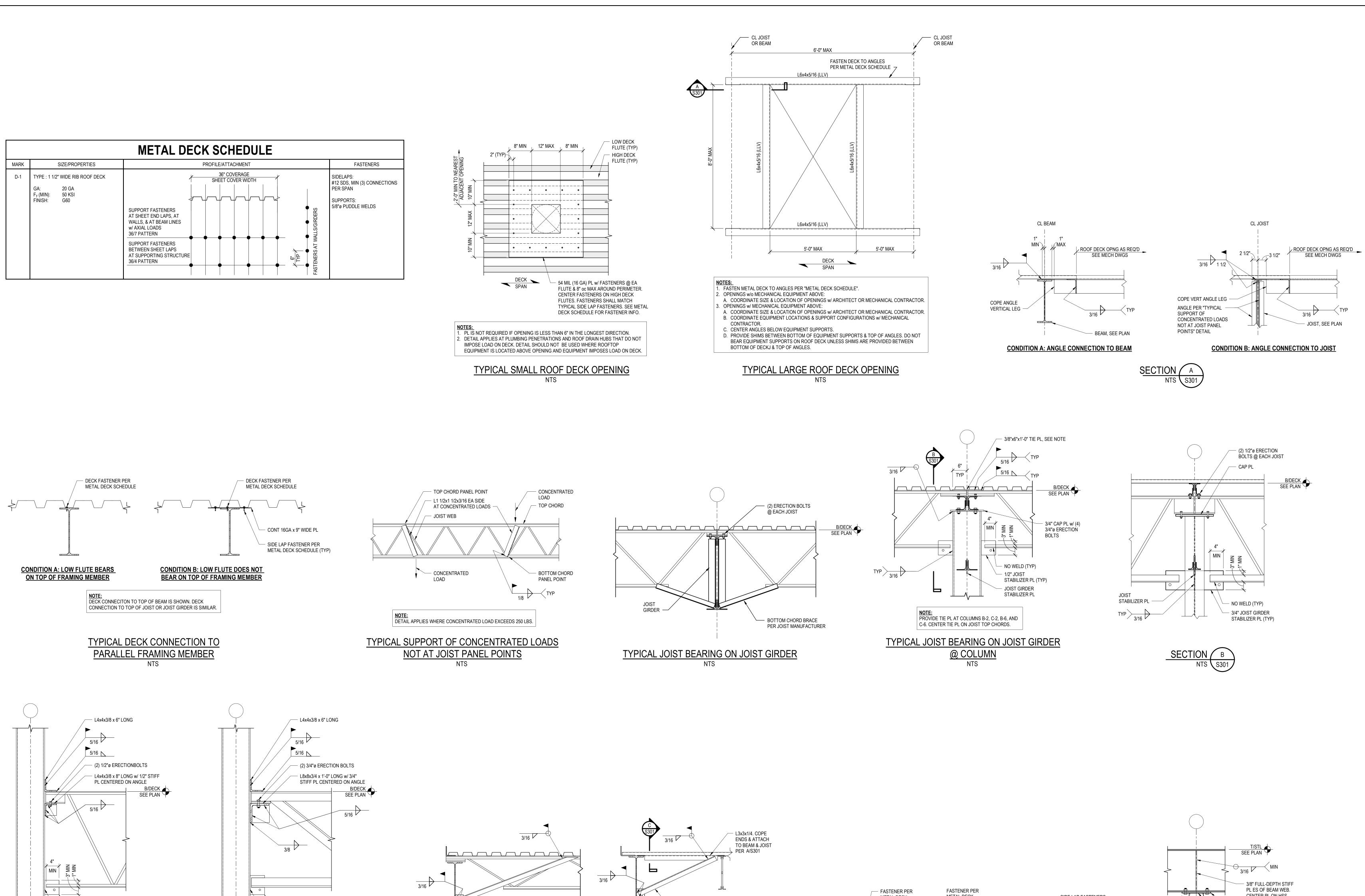
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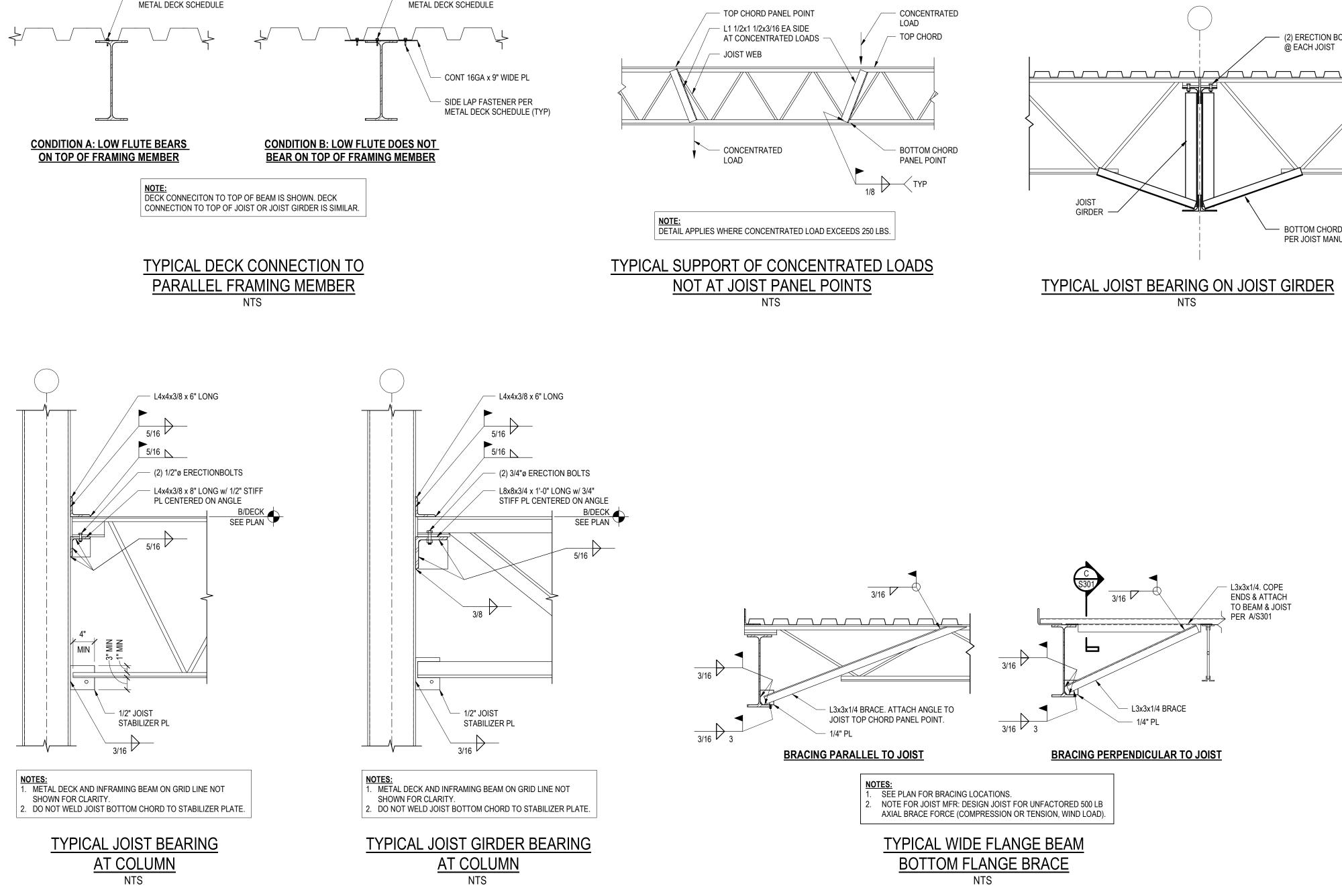
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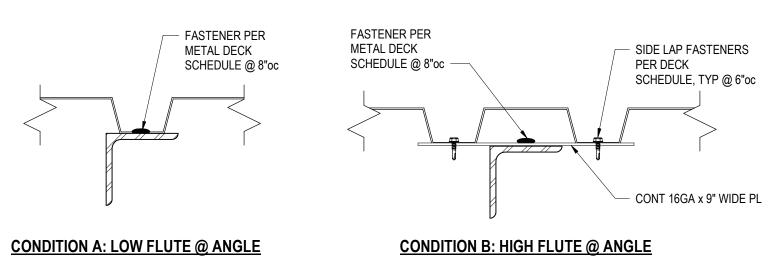


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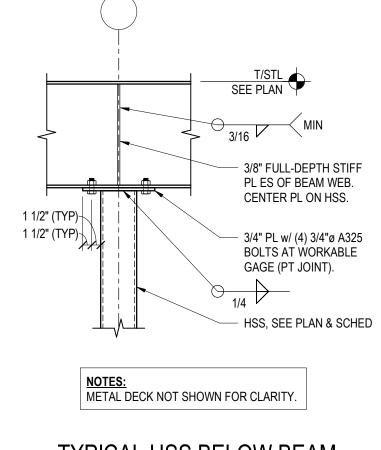






SECTION /

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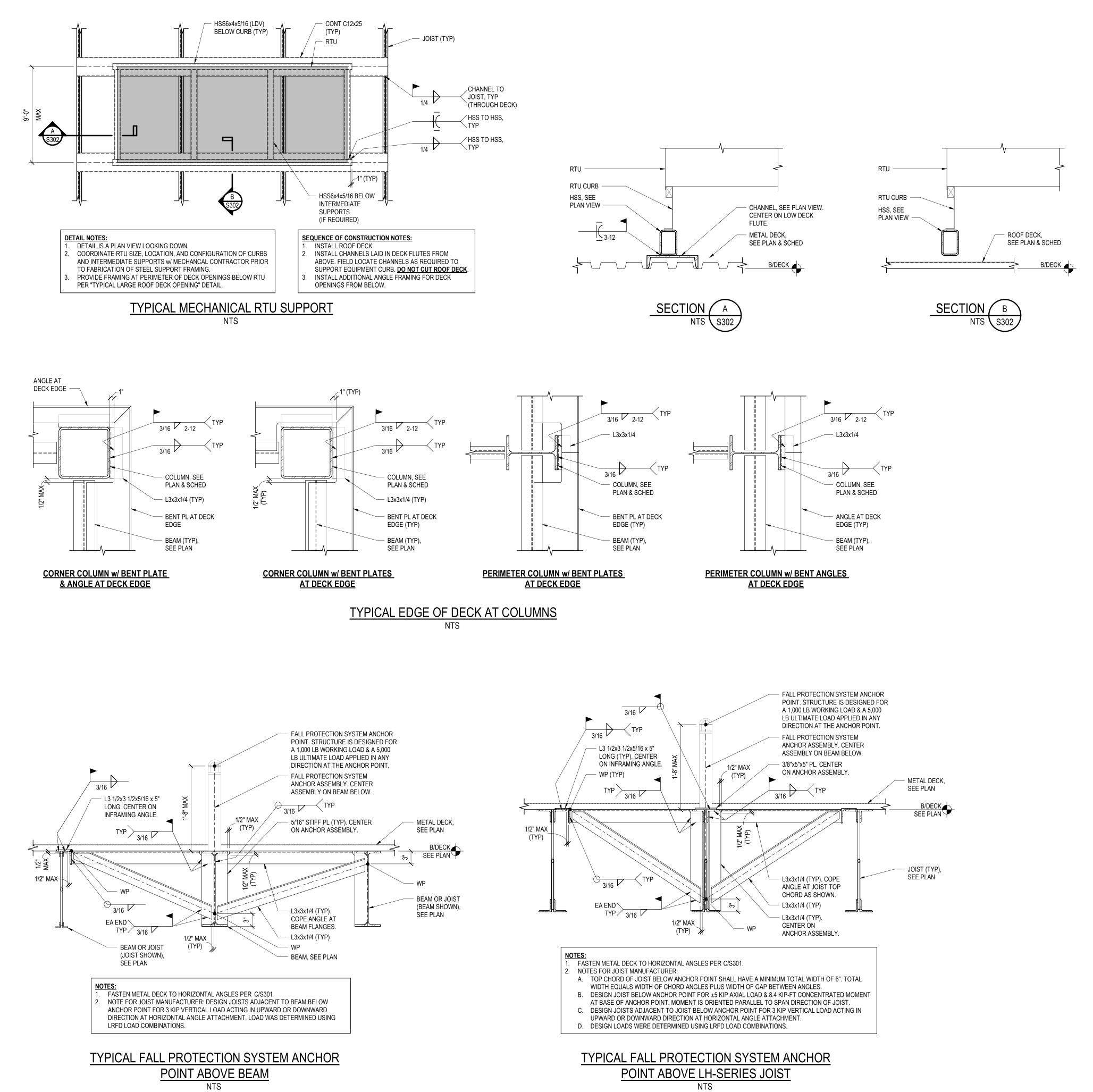
TYPICAL HSS BELOW BEAM NTS

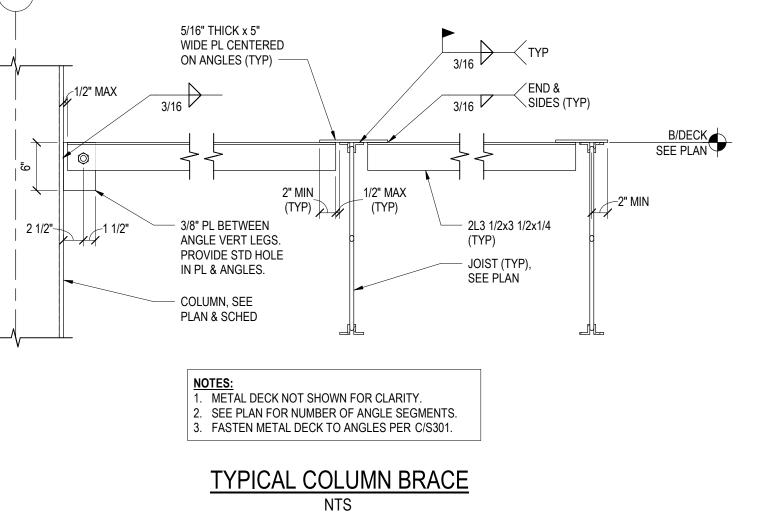


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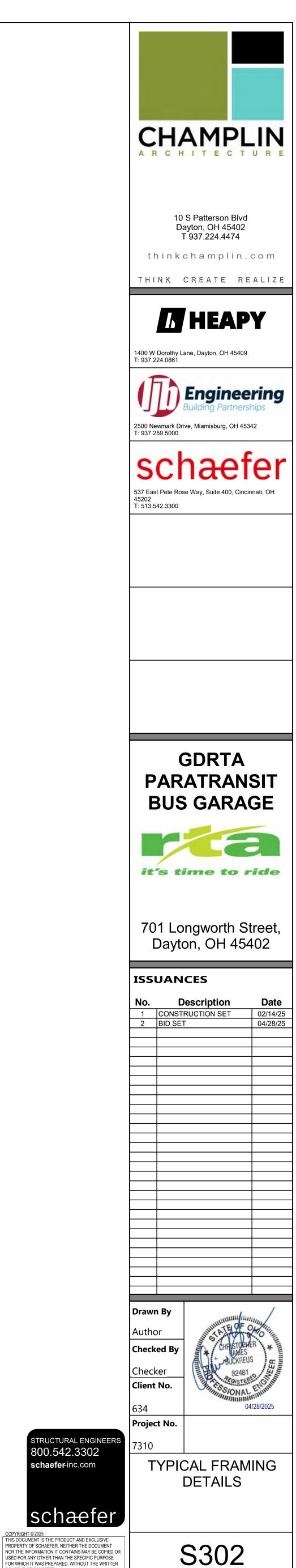


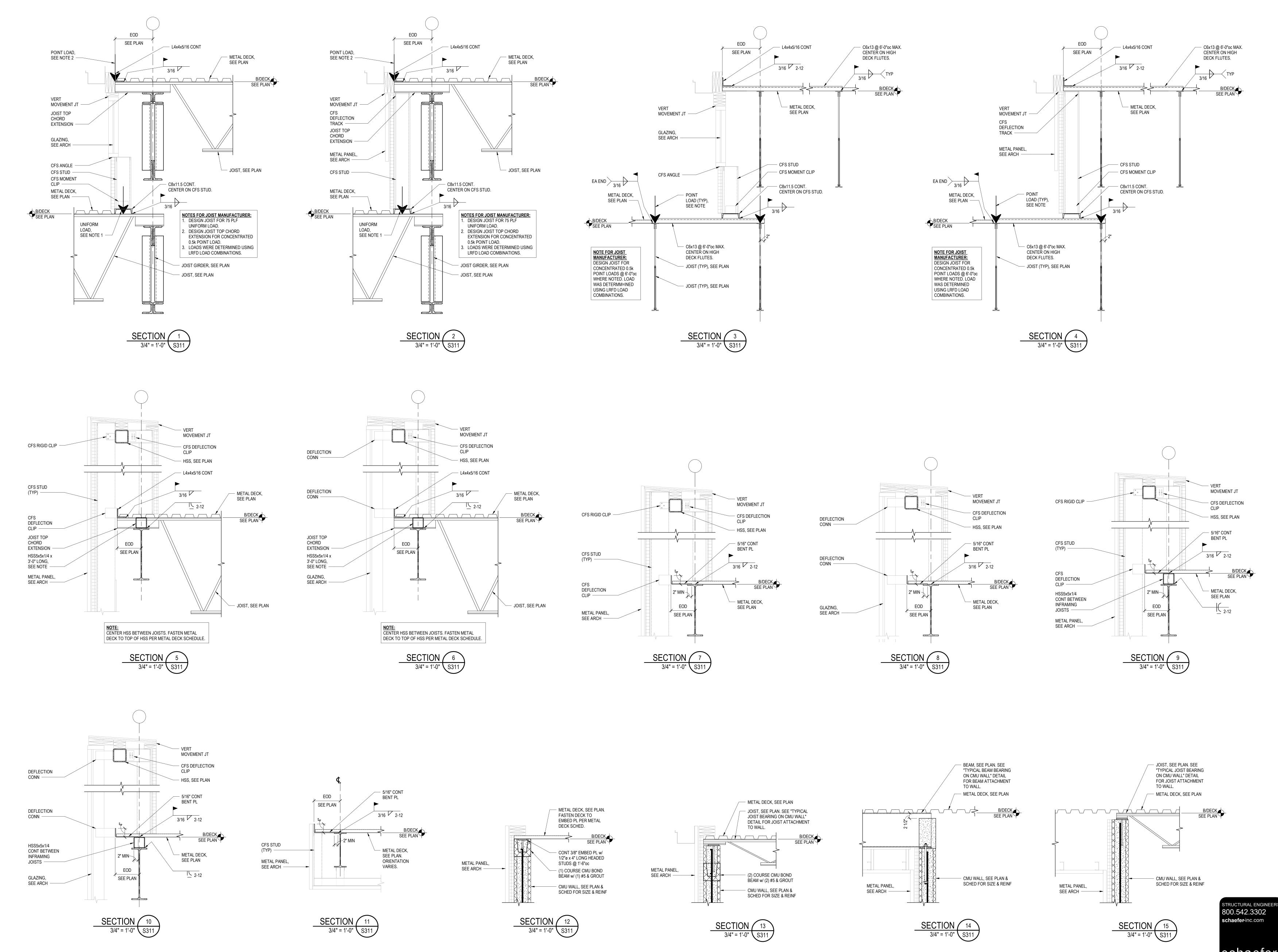


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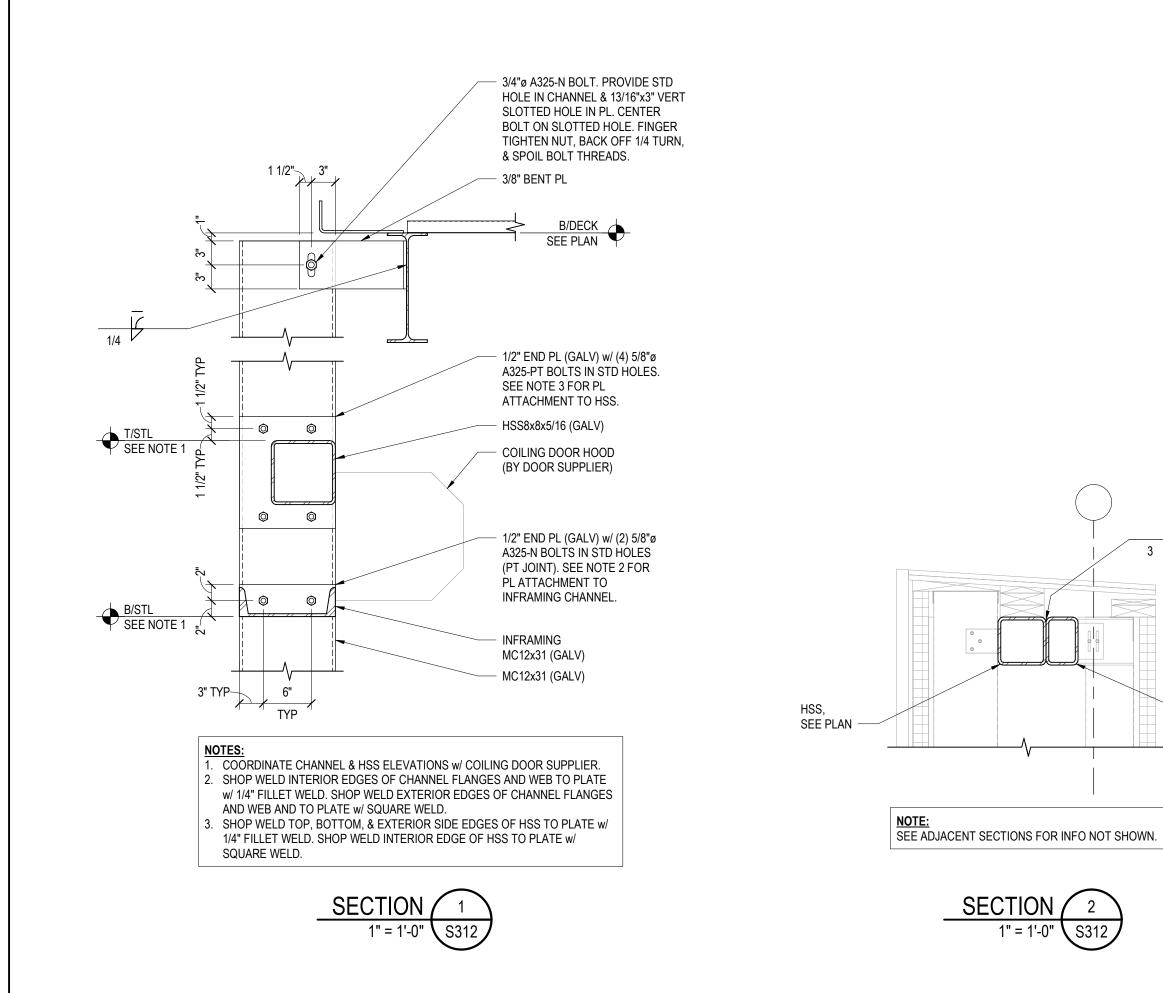


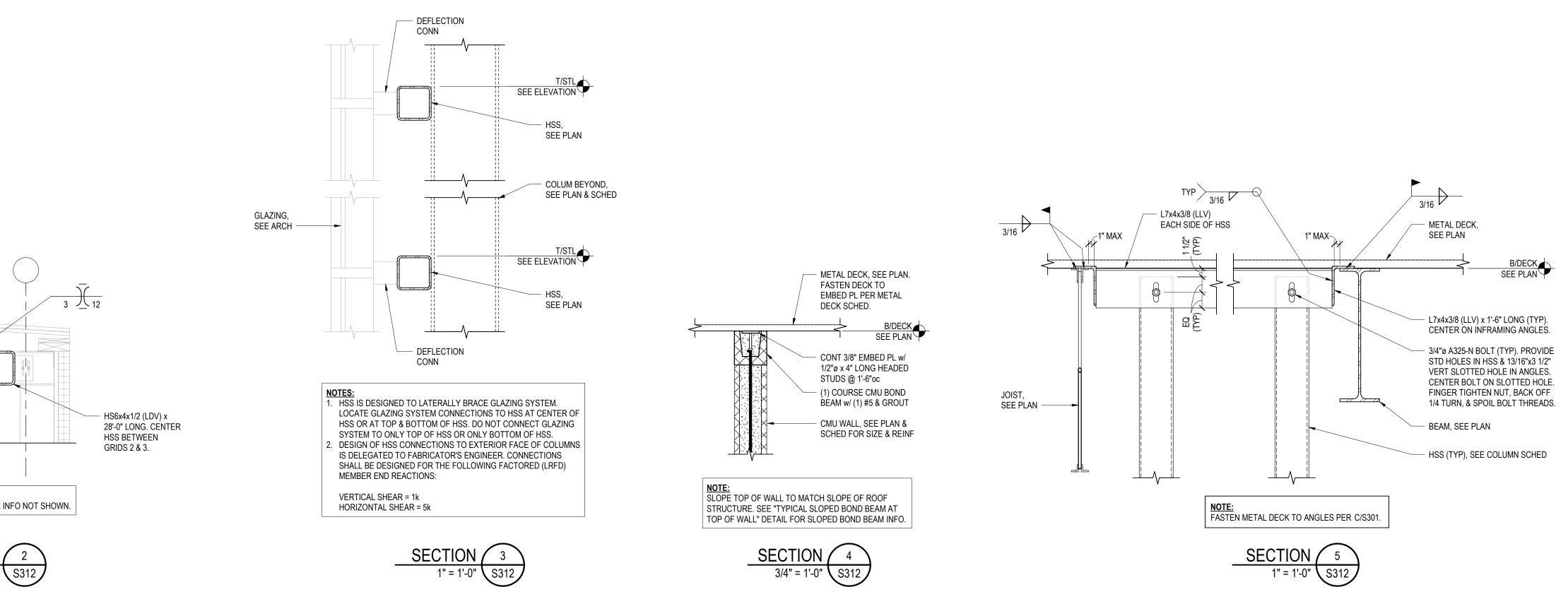
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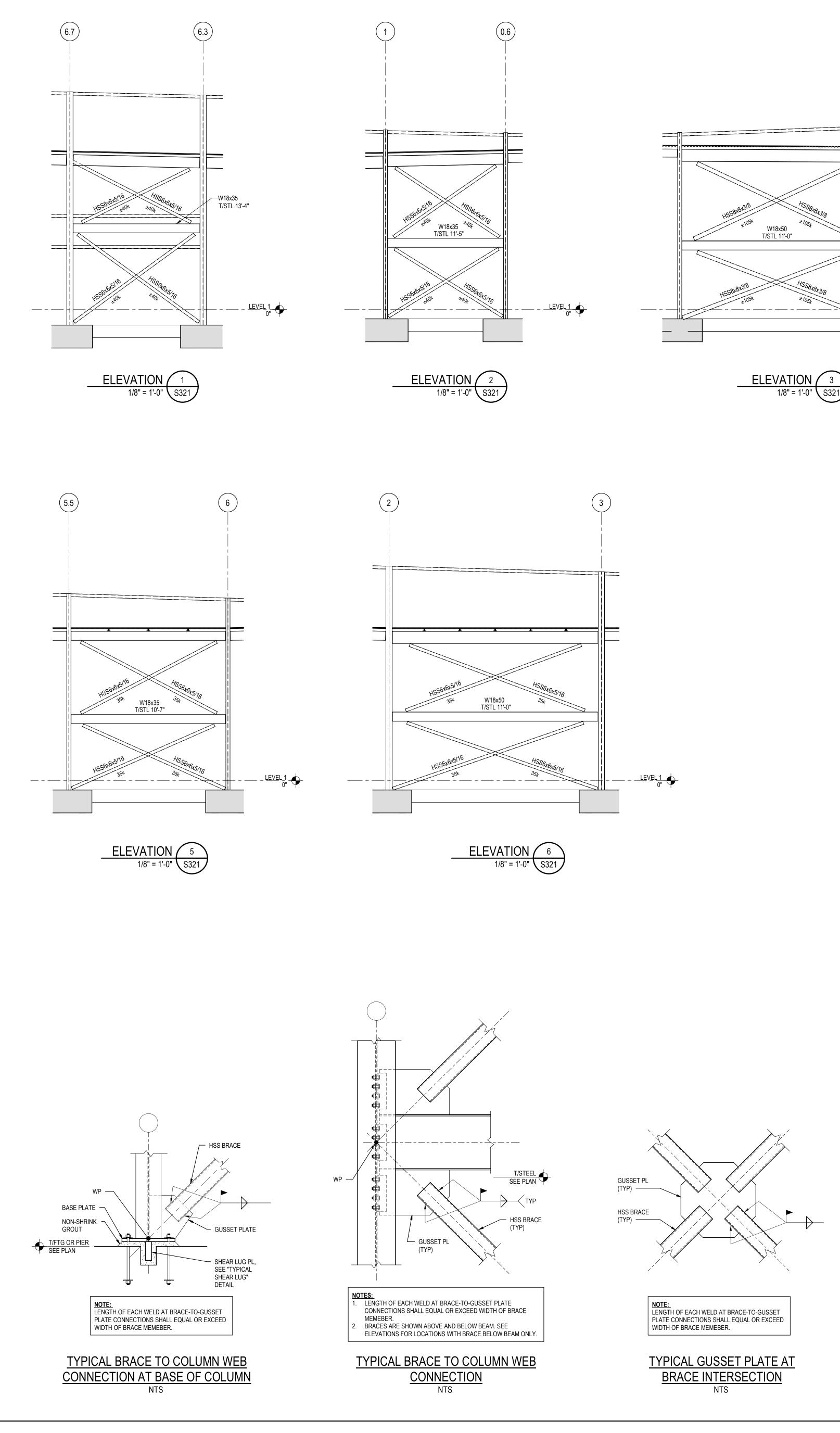


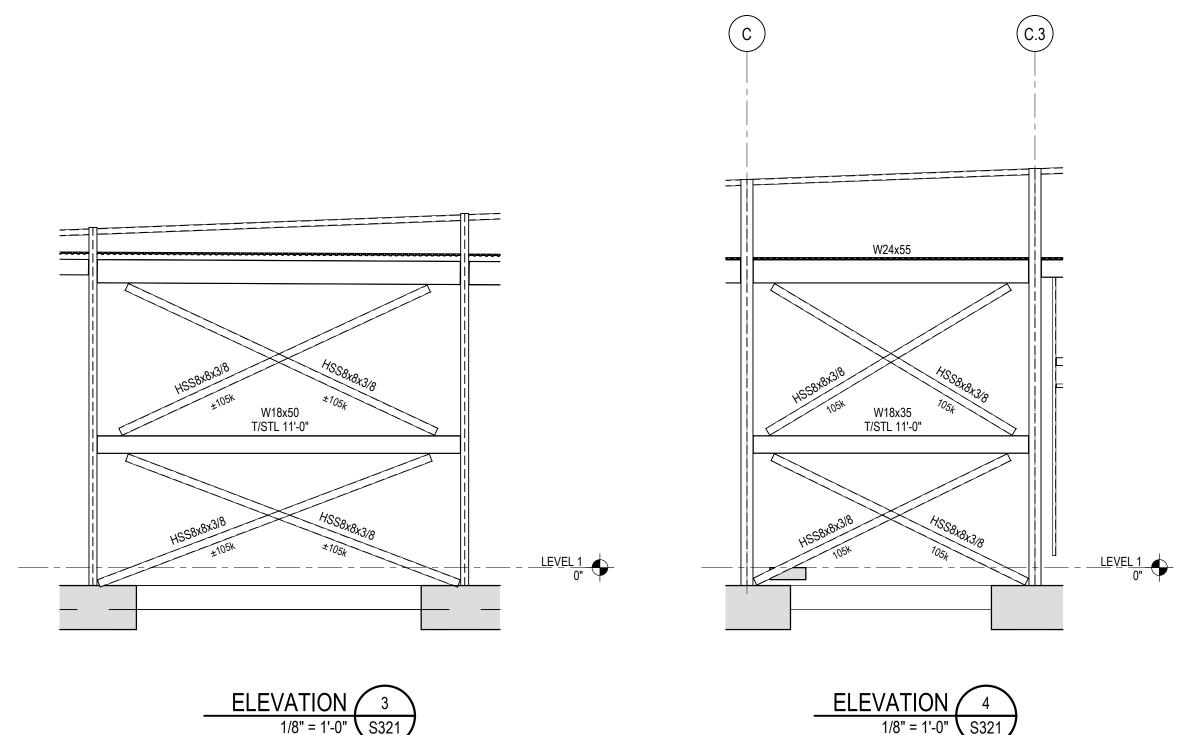


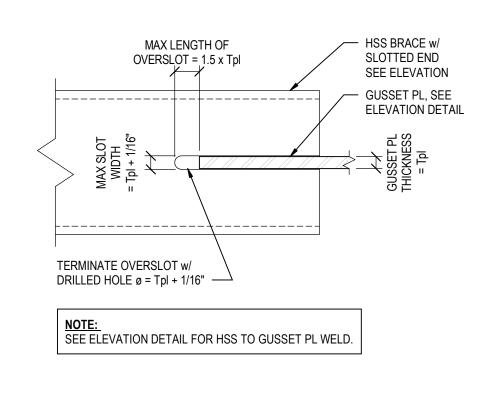
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TYPICAL SLOTTED END OF BRACE NTS

BRACED FRAME ELEVATION NOTES:

SEE FRAMIG PLAN FOR B/DECK (T/STL) ELEVATIONS, UNO. ELEVATIONS REPRESENT COLUMN, BEAM, & BRACE CENTERLINES.

BRACE FORCES INDICATED ON ELEVATIONS ARE AXIAL FORCES. TENSION FORCES ARE POSITIVE AND COMPRESSION FORCES ARE NEGATIVE. DESIGN OF BRACE CONNECTIONS TO GUSSET PLATES AND GUSSET PLATE CONNECTIONS TO BEAM, COLUMNS, AND BASE PLATES IS DELEGATED TO FABRICATOR'S ENGINEER.

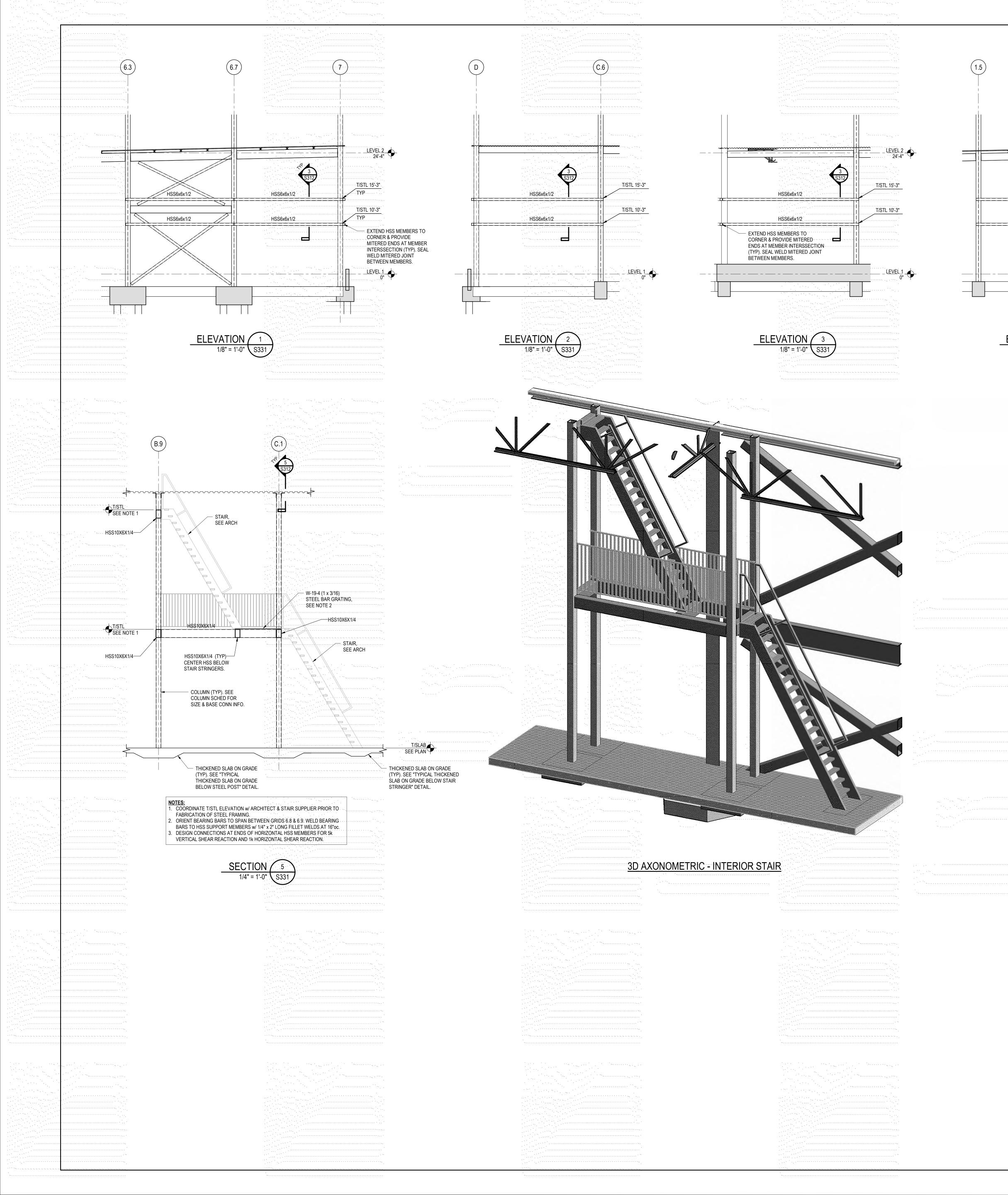
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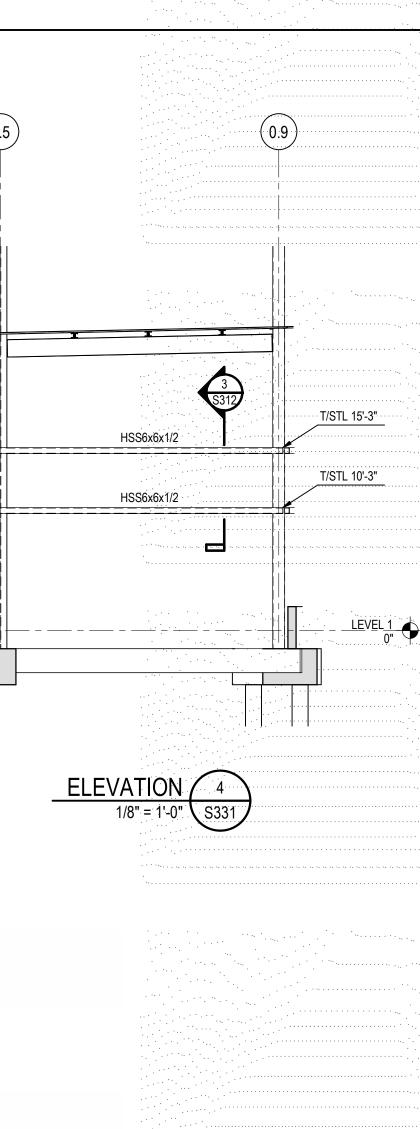
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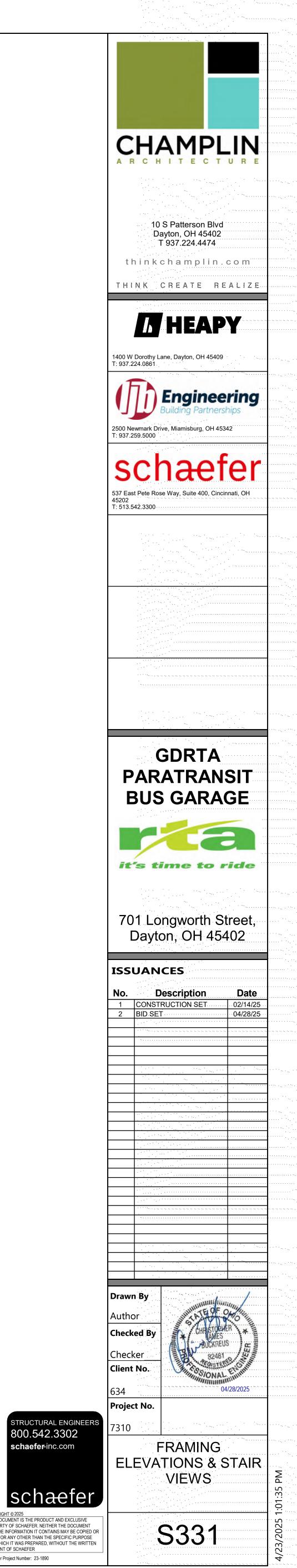
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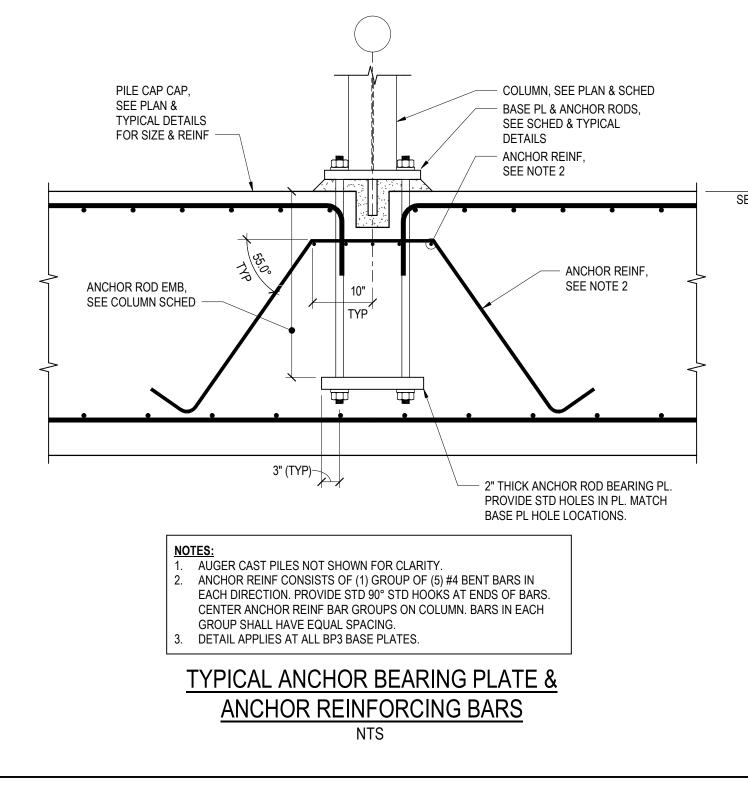
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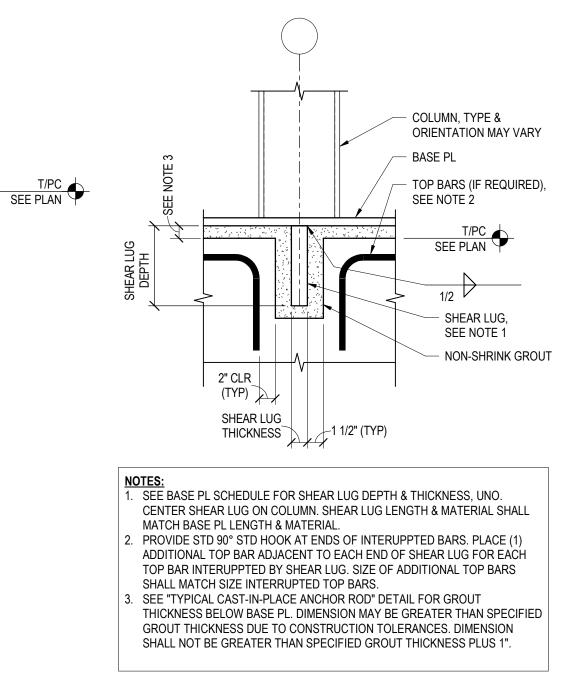


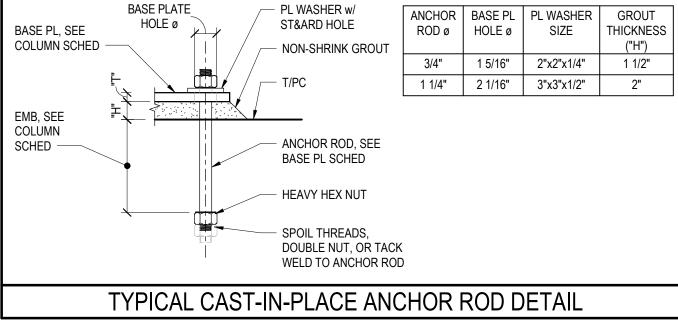
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																STEEL COLUN	IN SCHEDULE																
LEVEL 3 35'-0"																																	LEVEL 3 35'-0"
LEVEL 2 24'-4"	HSS12x12x5/16	W12x65	W12x87	W12x87	W12x53	W12x53	W12x40	W12x40	W12x40	W12x40	W12x40	W12x40	HSS12x12x5/16	W12x40	W12x53	W12x53	W12x53	W12x53	W12x53	W12x53	W12x65	W12x53	W12x53	HSS6x6x5/16	HSS6x6x5/16	W12x53	W12x53	W12x53	W12x53	W12x53	W12x53	W12x65	LEVEL 2 24'-4"
LEVEL 1 0"																																	LEVEL 1 0"
Column Locations	A-0.9	A-1.5	A-2	A-3	A-3.5	A-4	A-4.5	A-5	A-5.5	A-6	A-6.3	A-6.7	A-7	A.5-7	B-2	B-3	B-4	B-5	B-6	B-6.7	B-7	B.4-7	B.6-7	B.9-6.8	B.9-6.9	C-1	C-2	C-3	C-4	C-5	C-6	C-6.7	
BP TYPE	BP2	BP1	BP3	BP3	BP1	BP1	BP1	BP1	BP3	BP3	BP1	BP1	BP2	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP2	BP2	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP TYPE
BP SIZE (LxBxT)	18"x18"x3/4"	14"x14"x3/4"	23"x16"x1 1/2"	23"x16"x1 1/2"	14"x12"x3/4"	14"x12"x3/4"	14"x10"x3/4"	14"x10"x3/4"	23"x16"x1 1/2"	23"x16"x1 1/2"	14"x10"x3/4"	14"x10"x3/4"	18"x18"x3/4"	14"x10"x3/4"	14"x12"x3/4"	14"x12"x3/4"	14"x12"x3/4"	14"x12"x3/4"	14"x12"x3/4"	14"x12"x3/4"	14"x14"x3/4"	14"x12"x3/4"	14"x12"x3/4"	12"x12"x1/2"	12"x12"x1/2"	14"x12"x3/4"	14"x12"x3/4"	14"x12"x3/4"	14"x12"x3/4"	14"x12"x3/4"	14"x12"x3/4"	14"x14"x3/4"	
ANCHOR BOLT DIAMETER	3/4"ø	3/4"ø	1 1/4"ø	1 1/4"ø	3/4"ø	3/4"ø	3/4"ø	3/4"ø	1 1/4"ø	1 1/4"ø	3/4"ø	3/4"ø	3/4"ø	3/4"ø	3/4"ø	3/4"ø	3/4"ø	3/4"ø	3/4"ø	3/4"ø	3/4"ø	3/4"ø	3/4"ø	3/4"ø	3/4"ø	ANCHOR BC DIAMETER							
ANCHOR BOLT EMBEDMENT	12"	12"	33"	33"	12"	12"	12"	12"	33"	33"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	7"	7"	12"	12"	12"	12"	12"	12"	12"	ANCHOR BC EMBEDMEN
LEVEL 3 35'-0"																															LEVEL 3 35'-0"		
LEVEL 2 24'-4"																				0											LEVEL 2 24'-4"	_	
	W12x65	HSS6x6x5/16	HSS6x6x5/16	W12x87	W12x87	HSS12x12x5/16	W12x40	W12x40	W12x40	W12x65	W12x65	W12x40	W12x40	W12x53	W12x53	W12x53	W12x65	W12x65	W12x65	HSS12x5/	W12x87	W12x65	W12x53	W12x40	W12x65	W12x40	W12x40	HSS8x8x5/16	HSS8x8x5/16	HSS8x8x5/16			
LEVEL 1 0"																															LEVEL 1 0"		
Column Locations	C-7	C.1-6.8	C.1-6.9	C.3-7	C.6-7	D-0	D-0.3	D-0.6	D-1	D-2	D-3	D-3.5	D-4	D-4.5	D-5	D-5.5	D-6	D-6.3	D-6.7	D-7	A.6-x1	B-x1	B.4-x1	B.7-x1	C-x1	C.3-x1	C.6-x1	W.2-W.C	W.2.5-W.C	W.3-W.C			
BP TYPE	BP3	BP2	BP2	BP3	BP1	BP2	BP1	BP3	BP3	BP1	BP3	BP3	BP2	BP1	BP1	BP1	BP1	BP1	BP3	BP3	BP2	BP2	BP2	BP TYPE									
							1								1			1			-	1	1	1	1								
(LABAT)	23"x16"x1 1/2"			23"x16"x1 1/2"									14"x12"x3/4"		14"x12"x3/4"					18"x18"x3/4"								14"x14"x3/4"				_	
	23"x16"x1 1/2" 1 1/4"ø 33"	12"x12"x1/2" 3/4"ø 7"	12"x12"x1/2" 3/4"ø 7"	23"x16"x1 1/2" 1 1/4"ø 33"	15"x15"x3/4" 3/4"ø 12"	18"x18"x3/4" 3/4"ø 12"	14"x10"x3/4" 3/4"ø 12"	23"x16"x1 1/2" 1 1/4"ø 33"	23"x16"x1 1/2" 1 1/4"ø 33"	14"x14"x3/4" 3/4"ø 12"	14"x14"x3/4" 3/4"ø 12"	14"x12"x3/4" 3/4"ø 12"	14"x12"x3/4" 3/4"ø 12"	14"x12"x3/4" 3/4"ø 12"	14"x12"x3/4" 3/4"ø 12"	14"x12"x3/4" 3/4"ø 12"	14"x14"x3/4" 3/4"ø 12"	23"x16"x1 1/2" 1 1/4"ø 33"	23"x16"x1 1/2" 1 1/4"ø 33"	18"x18"x3/4" 3/4"ø 12"	15"x15"x3/4" 3/4"ø 12"	14"x14"x3/4" 3/4"ø 12"	14"x12"x3/4" 3/4"ø 12"	14"x10"x3/4" 3/4"ø 12"	14"x14"x3/4" 3/4"ø 12"	23"x16"x1 1/2" 1 1/4"ø 33"	23"x16"x1 1/2" 1 1/4"ø 33"	14"x14"x3/4" 3/4"ø 12"	14"x14"x3/4" 3/4"ø 12"	3/4"ø	BP SIZE (LxBxT) ANCHOR BOLT DIAMETER ANCHOR BOLT EMBEDMENT	_	

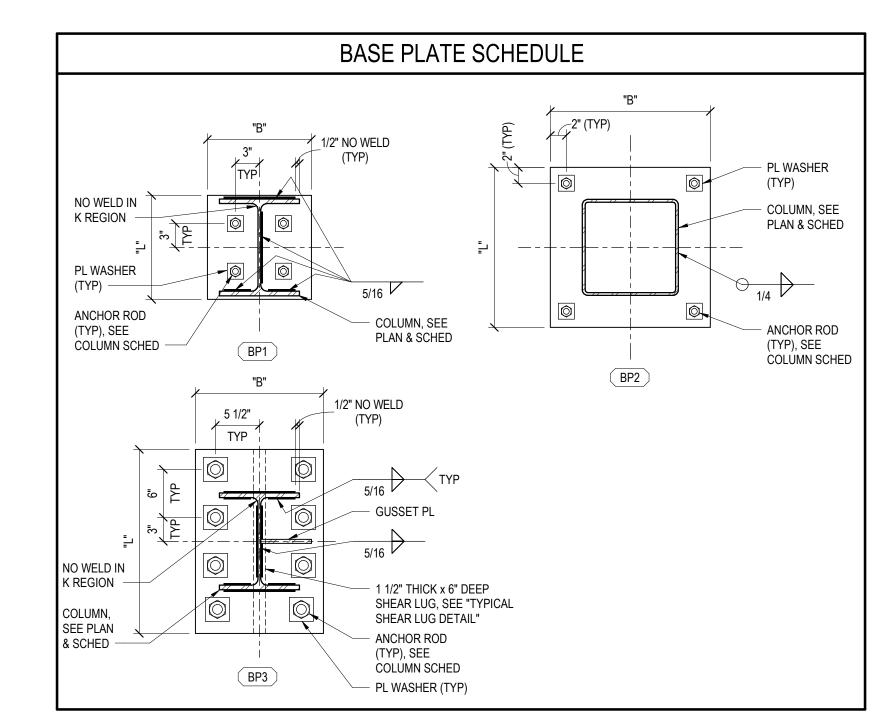


STEEL	COLUMN SCHEDU	LE





TYPICAL SHEAR LUG NTS



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PIPING SYMBOLS

DOUBLE LINE	SINGLE LINE		VALVES ANI		
<u> </u>		BOTTOM CONNECTION (45°)	DOUBLE LINE	SINGLE LINE	
		BOTTOM CONNECTION (90°)			CHECK VALVE
		BRANCH TEE CONNECTION (NOTE: BULL HEAD TEE'S ARE NOT PERMITTED.)	BALL VALVE GATE VALVE		SHUTOFF VALVE (REFER TO SPECIFICATIONS FOR REQUIRED TYPE BASED ON APPLICATIONS)
				P	PRESSURE GAUGE
	 	DROP ELBOW DOWN			TEMPERATURE GAUGE OR THERMOMETER
	e	ELBOW UP			UNION
C========		EXISTING PIPE TO BE REMOVED			CLEANOUT
		EXISTING PIPE TO REMAIN			STRAINER
	>	FLOW DIRECTION DESIGNATION			STRAINER WITH A BLOW DOWN VALVE AND HOSE
	O	PIPE RISER			CONNECTION DRAIN VALVE WITH HOSE END CONNECTION
	\bigcirc	PUMP			AUTOMATIC FLOW CONTROLLER WITH P/T PLUG IN AND OUT
	R	RISE			EXPANSION JOINT
		TOP CONNECTION (45°)			PRESSURE REGULATING VALVE
		TOP CONNECTION (90°)			TRAP PRIMER
0	0			V	VACUUM GAUGE WITH STOP
					CLEANOUT TO GRADE OR FINISHED FLOOR
					END CAP
				——————————————————————————————————————	SHUTOFF VALVE AND BOX
				—	SHUTOFF VALVE ON RISER
					SOLENOID VALVE
					WATER METER

PLUMB	ING	AND	FIRE	S
PIPING	DES	SIGN/		15

	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RETURN
	EXISTING PIPE TO REMAIN
	EXISTING PIPE TO BE REMOVED
CWS	COMBINATION FIRE SUPPRESSION AND DOMESTIC WATER SERVICE
DS	SPRINKLER PIPE (DRY)
F	FIRE SUPPRESSION (STANDPIPE / SPRINKLER MAIN)
G	NATURAL GAS PIPE
GS	GAS SERVICE
NLG	GASOLINE PIPE (NON-LEAD)
	NON-POTABLE
OD	(OVERFLOW) SECONDARY STORM DRAINAGE PIPE
PD	PUMP DISCHARGE PIPE
S	SPRINKLER PIPE (WET)
	SANITARY DRAINAGE PIPE
sd	SPRINKLER DRAIN PIPE
STM	STORM DRAINAGE PIPE
TP	TRAP PRIMER DISCHARGE PIPE
	SANITARY SEWER VENT
WS	WATER SERVICE

SUPPRESSION

GENERAL FLOOR PLAN NOTES

10" 10" ELEV: 8' - 0" ELEV: 8' - 0"	APPROXIMATE DIMENSION ABOVE FINISHED FLOOR TO CENTERLINE OF PIPE, UNLESS NOTED OTHERWISE
TOE: 3' - 0" BOE: 0' - 6"	APPROXIMATE DIMENSION ABOVE FINISHED FLOOR TO TOP OR BOTTOM OF EQUIPMENT, UNLESS NOTED OTHERWISE
	RISER OR STACK NUMBER
B P2	DETAIL: B = DETAIL DESIGNATION P2 = SHEET WHERE DETAIL IS LOCATED
1 P2	SECTION: 1 = SECTION DESIGNATION P2 = SHEET WHERE DETAIL IS LOCATED
OH 1	FIRE SUPPRESSION HAZARD CLASSIFICATION AND HAZARD CLASSIFICATION GROUP
P1 OR P1	EQUIPMENT REFERENCE. LETTER DESIGNATION VARIES. REFER TO SCHEDULES.
A1	EQUIPMENT, DEVICE, OR PLUMBING FIXTURE MARK. LETTER DESIGNATIONS REFER TO SCHEDULES.
$\mathbf{\Theta}$	CONNECT TO EXISTING
3	PLAN NOTE. APPLIES ONLY TO THE SHEET WHICH IT IS SHOWN UNLESS NOTED OTHERWISE.
3	DETAIL NOTE. APPLIES ONLY TO THE ASSOCIATED DETAIL.
(A1)	"UP TO" SYMBOL (ITEM ON FLOOR ABOVE)

FIRE SUPPRESSION SYMBOLS DOUBLELINE SINGLELINE

DOUBLE LINE	SINGLE LINE	
	©	CONCEALED PENDENT SPRINKLER
	——————————————————————————————————————	FIRE DEPARTMENT VALVE
	——-ఢ	FIRE HYDRANT
	FS	FLOW SWITCH
	Ā	GATE VALVE OS&Y
		INSTITUTIONAL PENDENT SPRINKLER
		PENDENT SPRINKLER
		POST INDICATOR VALVE
	@	RECESSED PENDENT SPRINKLER
	>	SIDE WALL SPRINKLER
		SUPERVISED VALVE
	O	UPRIGHT SPRINKLER

ABBREVIATIONS

AFG AP	- ABOVE FINISHED FLOOR - ABOVE FINISHED GRADE - ACCESS PANEL - ARCHITECT OR ARCHITECTURAL
BOB BOF BOP BT BTU BTUH	- BOTTOM OF FOOTING - BOTTOM OF PIPE - BATHTUB
CFM CO	- COMPRESSED AIR - CUBIC FEET PER MINUTE - CLEAN OUT - COMBINATION WATER SERVICE
DN DS	 DRINKING FOUNTAIN OR WATER COOLER DRAINAGE FIXTURE UNIT DIAMETER DOWN DOWN SPOUT OR SPRINKLER (DRY) PERFORATED DRAIN TILE
	- EACH - ELECTRICAL CONTRACTOR (DIVISION 26) - EXISTING TO REMAIN
	- FIRE DEPARTMENT CONNECTION - FIRE DEPARTMENT VALVE
G	- GAS OR NATURAL GAS
HB HD	- HOSE BIBB - HUB DRAIN
INV	- INVERT ELEVATION
LV	- LAVATORY
MB	- MOP BASIN
NPW NTS	- NON-POTABLE WATER - NOT TO SCALE
OD PD	- OVERFLOW DRAIN - PUMP DISCHARGE
RD	- ROOF DRAIN
SH SK	 SPRINKLER (WET) SANITARY OR SANITARY DRAIN SPRINKLER DRAIN SHOWER SINK SUPPLY RISER SANITARY STACK (SOIL OR WASTE) STORM OR STORM DRAINAGE
TD TOF TOP TP TYP	- TRENCH DRAIN - TOP OF FOOTING - TOP OF PIPE - TRAP PRIMER OR TRAP PRIMER DISCHARGE - TYPICAL
UR	- URINAL
V VS VTR VR	- VENT OR SANITARY SEWER VENT - VENT STACK - VENT THROUGH ROOF - VENT RISER
WCO WH WS	- WALL CLEANOUT - WALL HYDRANT OR WATER HEATER - WATER SERVICE

GENERAL NOTES

- A ALL PIPING IS ABOVE THE CEILING (AT THE UNDERSIDE OF STRUCTURE IN EXPOSED STRUCTURE AREAS), UNLESS OTHERWISE NOTED.
- B REFER TO SCHEDULES, DETAILS AND DIAGRAMS FOR PIPING, PIPE SIZES AND PIPELINE DEVICES NOT INDICATED ON THE FLOOR PLAN. C LOCATIONS AND SIZES OF EXISTING PIPING HAVE BEEN DETERMINED FROM A REVIEW
- OF EXISTING DRAWINGS AND/OR SITE INSPECTION, WHERE POSSIBLE. FIELD VERIFICATION OF EXACT LOCATIONS, ELEVATIONS, INVERTS, SIZES, DIRECTION OF FLOW, ETC. SHALL BE REQUIRED PRIOR TO BEGINNING NEW WORK.
- D PROVIDE FLASHING AT ALL VENT PENETRATIONS, ROOF DRAINS, ETC. TO PROVIDE WATER TIGHT SEAL. COORDINATE REQUIREMENTS CLOSELY WITH ROOFING INSTALLER. E MANUAL AIR VENTS SHALL BE LOCATED WHERE INDICATED ON THE PLANS AND AT ALL HIGH POINTS OF THE UPPER MOST LEVEL OF DOMESTIC COLD, DOMESTIC HOT, AND DOMESTIC HOT RETURN SYSTEMS. DISCHARGE SHALL BE TO CLOSEST WASTE RECEPTOR ON FLOOR LEVEL SHOWN ON DRAWINGS.
- F ANNULAR SPACE OF PIPE, CONDUIT AND OTHER SIMILAR PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE FIRESTOPPED. IN ADDITION, PENETRATIONS THRU 0-HOUR RATED FLOORS SHALL ALSO BE FIRESTOPPED TO RETARD PASSAGE OF FIRE AND SMOKE. REFER TO SPECIFICATION SECTIONS 21 05 05 AND 22 05 05. FIRESTOPPING. REFER TO ARCHITECTURAL DRAWING(S) FOR CONSTRUCTION. LAYOUT AND FIRE

RATINGS OF FLOORS, WALLS, PARTITIONS, AND OTHER BUILDING ELEMENTS.

	SHEET LIST
SHEET NUMBER	SHEET NAME
P001	LEGEND AND NOTES
P002	SCHEDULES AND DETAILS
P003	GASOLINE DETAILS
P004	SITE UTILITY PLAN
P100	NEW WORK PLANS
P100F	FOUNDATION NEW WORK PLANS
P200	ENLARGED FLOOR PLANS
P201	ENLARGED FLOOR PLANS
P300	SANITARY DIAGRAMS

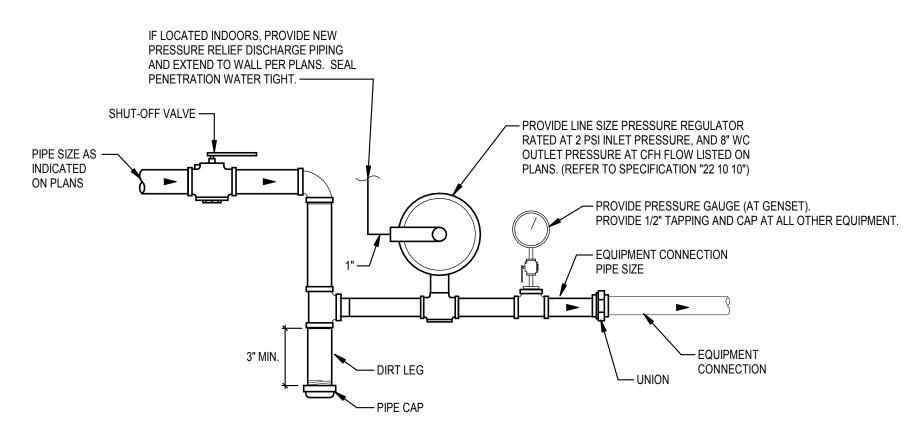


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		I	MIS	CE	QU	IPN	IEN	IT															
a. Pro B. Inst C. Pro	AL NOTES: VIDE ROUGH-IN. ALL ALL "LOOSE" COMPONENTS. VIDE ALL NECESSARY SUPPLIES, STOPS, TRAPS, DRAINS, CONTINUOUS WASTE, & ALL INDIRECT WASTE.	D. MAKE ALL FII EQUIPMENT. BY THE EQUI E. SUPPLIES SH EQUIPMENT	FINAL PMEN	L CONN	ECTIO	NS TO	NEW	EQUIPM	ENTS	SHALL		F. RE DETAI		D BUS	WASH	I EQU	IPMEN	TSUP	PLIER	DRAW	/INGS F	OR FU	JRTHI
O MOU	ALL PUMP AT 12-18" ABOVE THE BOTTOM OF SUMP PIT. PROVIDE MEA INT SUMP PUMP VIA POST OR SLIDE RAIL, BRACKETRY, AND OTHER ARE TO FACILTIATE INSTALLATION. COORDINATE REQUIREMENTS W /ENDOR.																				WAS		
							SUP								N	/ASTE	& VEN	JT			SY	S.	4
MARK	DESCRIPTION		DCW	MPW	LPW	DETERGENT	PUMPED DISCH.	RO WATER SUPPLY	SCW	RECLAIM INLET	NATURAL GAS	COMPRESSED AIR	FIX. OUTLET	TRAP	FIX. DRAIN	WASTE-MIN.	VENT-MIN.	INDIRECT	AIRGAP	AIRBREAK	SANITARY	LAB WASTE	SEE NOTE
M1	2 BRUSH HYBRID WASHER			(2) 1.5"	1"																		
M2	BUFFER TANK			1.5																	+		-
	RO WATER SYSTEM							0.5" 0) 5"														<u> </u>
	WATER SOFTENER		0.75"						.75"												<u> </u>		<u> </u>
	RECLAIM PUMP SYSTEM (2"PD FROM M12; 1.5" RECLAIM TO M20)									(2) 1.5"													
M12	RECLAIM SUMP PUMP (2"PD TO M10)						2"																1
	WASH WATER PUMP			1.5"						1.5"													
M16	DETERGENT MIXING AND PUMP STATION					0.5"		C).5"														
M19	DIVERTER VALVES											(2) 0.5"											
M20	RECLAIM BUFFER TANK									1.5"		0.5"											
M22	PRE-SOAK ARCH					0.5"																	
M24	CHASIS AND WHEEL WASH			1.5"																			
M25	RINSE ARCH			(2) 1.5"	1"																		
1.100	SPOT FREE RINSE					0.5"																	í –

OVERFLOW -STORM PIPE WITH INSULATION



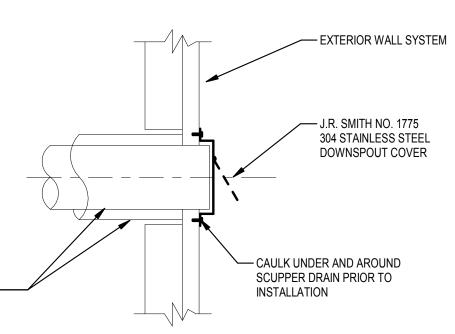


B TYPICAL GAS CONNECTION AT EQUIPMENT

CATAL	OG NUMBERS INDICATED ARE THOSE OF THE FIRST	NAMED MAN	UFACT	URER	IN
<u>A. KOH</u>	ILER (AMERICAN STD., TOTO, ZURN)		E. CHI	CAGO	(T(
<u>B. SLO</u>	AN (DELANY, ZURN)		<u>F. GU</u>	GRA	<u>Y ((</u>
C. BEN	IIS (BENEKE, KOHLER, AMERICAN STD.)		G. McC	GUIRE	(El
<u>D. SMI</u>	TH (WADE, ZURN, JOSAM, WATTS)		<u>H. FIA</u>	<u>T (STE</u>	RN
ADA H BO E BPW E DB I FS F FV F GN C HS H FIXTUR 1. REFI	LE ABBREVIATIONS: IANDICAP ACCESSIBLE QD QUICK DISCONNECT ACK OUTLET SB SINGLE BOWL IED PAN WASHER SST STAINLESS STEEL DOUBLE BOWL UCM UNDER COUNTER ME IEOOR SET VB VACUUM BREAKER ILUSH TANK VR VANDAL RESISTANT FLUSH VALVE WB WRIST BLADE GOOSENECK WH WALL HUNG IAND SHOWER IE SCHEDULE NOTES: ER TO ARCHITECTURAL ELEVATIONS FOR INSTALL REMENTS.	OUNT	PIPE SHA SHA 4. PRC	PLY P SIZES SIZE LL BE LL BE LL BE	IPE LI LA LIN PF
2. PRO 3. COO	VIDE CHROME PLATED ESCUTCHEONS AND NIPPL RDINATE LOCATIONS OF MOUNTED ACCESSORIES AL TRADES CONTRACTOR.	ES TO WALL. S WITH	5. PRC GUIDE	VIDE I	FLU
MARK	DESCRIPTION	MOUNTING HEIGHT	GPM	GPF	
A1	WATER CLOSET, FLOOR SET, MANUAL FV, ADA	17"		1.28	
B1	LAVATORY, WH, SL FAUCET, ADA, ASSE 1070 VALVE	34"	0.5		
D1	MOP BASIN, 24" SQUARE, MOLDED STONE,	36" TO			
	BAST BRASS FUACET WITH VB	FAUCET			

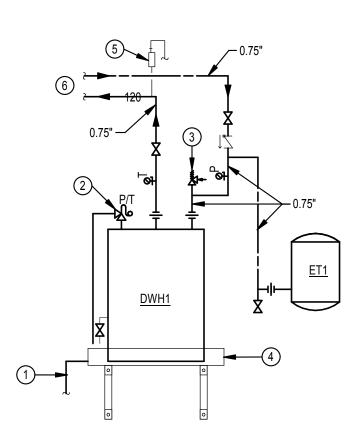
FILLER, ADA

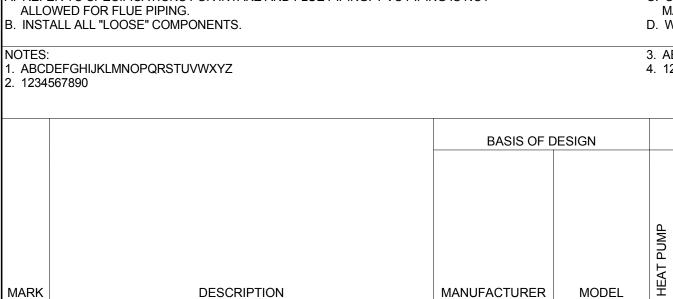
															DF	RAI	NS																				
1. ALL E NOTE	AL NOTES: DRAINS ARE MANUFACTURED B' ED OTHERWISE. ER TO SPECIFICATIONS FOR ADI						RS.		3					ABLE N WATT					ZUR	N,																	
BASE BI	SE DRAINS SHALL BE PROVIDED ID DESIGN IS "TD1" PRELSOPED ICATIONS FOR FURTHER DETAIL	BASI						03".	V 3	VITH F	ROOFI DVIDE	NG INS	STALL SLOPE	ED TRE										CON	STRU	JCTIC		AVY	-DUT	Y). Pl	ROVIE					ON AN STORM	
			TYPE	=			BOD	Y		C	UTLE	Т			STRAI	INER	/ GRA	TE				Т	OP F	INISH	1					ADD	ITION	AL F	EATU	JRES			
MARK	CATALOG NOS.	FLOOR	ROOF	AREAWAY	CAST IRON	BRASS	ACID RESIST.	STAINLESS STEEL	PLASTIC	JZE 4"	BOTTOM	SIDE	SIZE 12"	LENGTH III AD.II ISTARI F			RECESSED	FUNNEL	HINGED	STAINLESS STEEL	NICKLE-BRONZE	CAST IRON	ACID RESIST.	STAINLESS STEEL	PLASTIC	DUCTILE IRON	ANCHOR FLANGE	FLASHING CLAMP	DBL DRAINAGE	SED. BUCKET	TRAP PRIMER CON.	AUX. STRAINER	VARIABLE EXTENSION	SUMP RECEIVER	U'DECK CLAMP	INTERIOR WATER DAM	EXTERIOR WATER DAM
	2005 SERIES	•		•	•					4 3"	•		5"	•							•	•						•	•		•			┝─┤	<u> </u>		
	2142	•			•					3"	•		12"		•						-	•						•	•					$\left \right $		+	<u> </u>
FD3	2633 SERIES	•			•					4"	•			12"	•							•										•				+ +	
FD4	2110	•			•					3"	•		9"		•							•						•	•							1	
																															,			,			
	1074 SERIES		•		•					6"	•		15"			•	_					•						•	•					∣	•	<u> </u>	<u> </u>
	1074 SERIES		•		•					8"	•		15"			•						•						•	•					\mid	•	ļ!	<u> </u>
	1015 SERIES 1015 SERIES		•		•					6" 8"	•		15" 15"			•						•						•	•					┝──┤	•	<u> </u> !	
RDZ	IOIS SERIES		•		•					0	•		15			•						•						•	•								1
TD1	9810			•					•	4"	•				•							•										•				,	
	REFER TO SITE CIVIL DWGS.	+	+	•	+	1		1	•	4"	1	•			•		-	+								•					+			<u>⊢</u>	<u> </u>	+	<u> </u>



NOTE: COORDINATE EXACT ELEVATION OF NOZZLE ARCHITECTUAL ELEVATIONS AND PANEL SEAMS.

C SECONDARY ROOF DRAIN COVER





	MARK	DESCRIPTION	MANUFACTURE
	DWH1	COMMERCIAL LIGHT DUTY ELECTRIC STORAGE WATER HEATER	A. O. SMITH
·			

A. REFER TO SPECIFICATIONS FOR INTAKE AND FLUE PIPING. PVC PIPING IS NOT

5. AUTOMATIC AIR VENT

BASIN WATER SUPPLIES.

- 3. VACUUM RELIEF VALVE.

- ASSEMBLY MINIMUM 7'-0" AFF.

- THREADED ROD HUNG FROM BUILDING AND WALL. INSTALL ENTIRE

- 4. PROVIDE GALVANIZED STEEL DRAIN PAN (24" SQ x 3" HIGH, SOLDERED

6. EXTEND 0.5" BRANCH CONNECTIONS TO ADJACENT LAVATORY AND MOP

- SEAMS, HEMMED TOP EDGE). PROVIDE SHELF, BRACKETS, AND/OR

- GAP ABOVE FLOOD RIM. 2. COMBINATION TEMPERATURE-PRESSURE RELIEF VALVE.
- 1. EXTEND PAN DRAIN PIPE TO NEARST FLOOR DRAIN OR MOP BASIN AND AIR

GENERAL NOTES:

DEL-30

PLUMBING FIXTURES

ED MANUFACTURER IN EACH CATEGORY LISTED BELOW - ADDITIONAL MANUFACTURERS ARE LISTED IN PARENTHESIS

E. CHICAGO (TOTO, T&S BRASS, ZURN)

F. GUY GRAY (OATEY, PLASTIC ODDITIES)

G. McGUIRE (EBC, DEARBORN BRASS, ZURN)

- H. FIAT (STERN WILLIAMS, CREATIVE IND., MUSTEE, ZURN)
- J. ELKAY (JUST WITH LUG AND SCREW)
- K. HALSEY TAYLOR (ACORN, ELKAY, HAWS, OASIS) L. LEONARD (POWERS, SYMMONS)

N. IN-SINK ERATOR (OR APPROVED EQUAL) O. GUARDIAN (BRADLEY, SPEAKMAN, HAWS)

- P. SPEAKMAN (CHICAGO)
- Q. TRUEBRO (ZURN, PLUMBEREX)

GENERAL NOTE: 1. SUPPLY PIPE SIZES IN THIS SCHEDULE ARE FIXTURE OR SUPPLY STOP CONNECTION SIZES. DOMESTIC COLD AND HOT WATER SUPPLY PIPE SIZES SERVING FIXTURES SHALL BE, AT A MINIMUM, THE SIZES LISTED UNLESS NOTED OTHERWISE OR LABELED ON THE FLOOR PLANS. DOMESTIC COLD WATER SUPPLY PIPE SIZES SERVING FLUSH VALVES SHALL BE AT MINIMUM ONE PIPE SIZE LARGER THAN THE INDICATED CONNECTION SIZE, OR SIZED AS SHOWN ON THE FLOOR PLANS. PIPING AT THE FLUSH VALVE CONNECTION OF A SIZE EQUAL TO THE CONNECTION SIZE SHALL BE LIMITED TO A MAXIMUM 2 FEET IN DEVELOPED LENGTH AND INCLUDE A MAXIMUM OF ONE 90 DEGREE ELBOW FITTING. FULL SIZE MANIFOLDS, WHERE INDICATED ON THE FLOOR PLANS, SHALL BE PROVIDED FULL SIZE FOR THE LENGTH OF THE PIPING CHASE AND TERMINATED WITH A FULL SIZE CAP.

M. AQUARIUS (AQUA-BATH, KOHLER, COMFORT DESIGNS)

4. PROVIDE ASSE 1070 LISTED THERMOSTATIC MIXING VALVE BELOW 6. PROVIDE CHECK VALVES IN WATER SUPPLIES TO PREVENT CROSS N HEIGHFIXTURE AND SET DELIVERY TEMPERATURE FLOW.

TO 105°F. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS. 7. PROVIDE TRAP WRAP AND SUPPLY COVER (TRUE-BRO OR EQUAL). O WALL. 5. PROVIDE FLUSH VALVE ON WIDE SIDE OF ROOM PER ADA

	FLC	WC		CON	ITROL		SU	PPLY				WAS	TE &	VEN	Т				FIXTURE	SI	JPPLY TRIM	SU	IPPLY / STOP	W	ASTE TRIM	TR	AP / FIX. DR.		MISC
MOUNTING HEIGHT	GPM	GPF	MANUAL		ELECTRIC BATTEDV	TER	HOT WATER	TEMPERED	NAT. GAS	FIX. OUTLET	TRAP	FIX. DRAIN	WASTE-MIN.	VENT-MIN.	INDIRECT	AIR GAP	AIR BREAK	MFR.	CAT. NO.	MFR.	CAT. NO.	MFR.	CAT. NO.	MFR.	CAT. NO.	MFR.	CAT. NO.	MFR.	CAT.
						<v <br="">RIE S></v>																							
17"		1.28	•			1"				3"	3"	3"	3"	2"				А	K-96057	В	ROYAL 111	В	INTEGRAL	А	INTEGRAL	Α	INTEGRAL	С	9588
34"	0.5		•			0.5	' 0.5'	1		1.25"	1.25"	1.5"	1.5"	1.5"				A	K-2054-N	E	K-97283-4	G	LFBV2165	G	155A	G	8902C		
" TO UCET			•			0.5	' 0.5'	1		3"	3"	3"	3"	1.5"				Η	MSB-2424	E	897-CP	E	INTEGRAL	-	ROUGH	-	ROUGH		
						0.5	'			1.25"	1.5"	1.5"	1.5"	1.5"				K	LZSTL8WSS K	К	INTEGRAL	G	LFBV2165	K	INTEGRAL	G	8902		

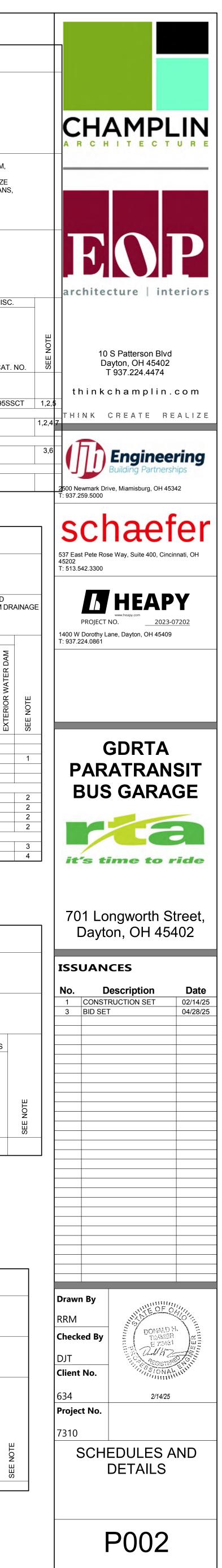
WATER HEATERS

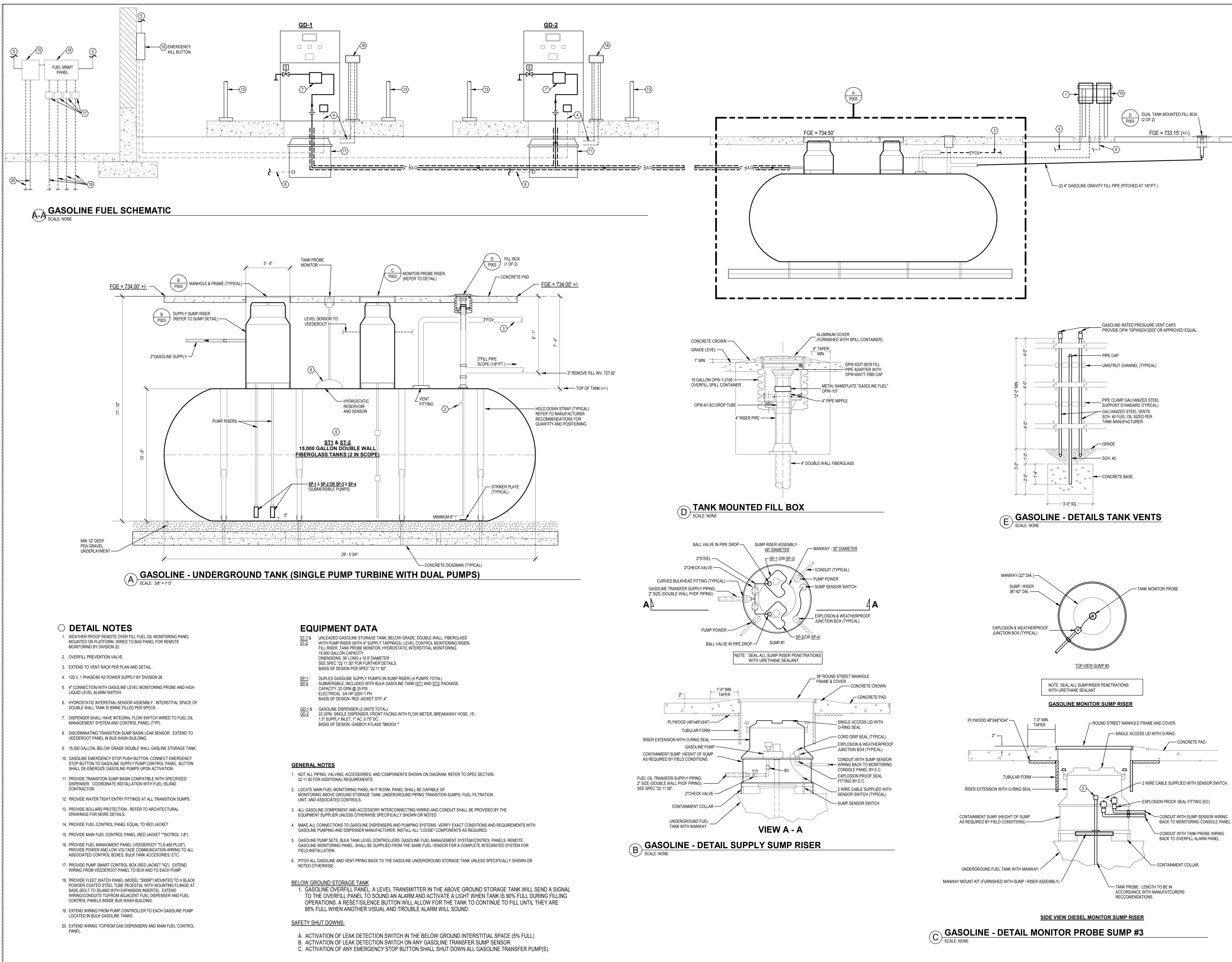
C. CONNECTION SIZES SHALL BE AS LISTED. TERMINAL OUTLETS AND INLETS ON EQUIPMENT MAY BE SMALLER AND INCREASER / REDUCER FITTINGS REQUIRED. D. WHEN APPLICABLE, REFER TO SPECIFICATIONS FOR SEISMIC RESTRAINT REQUIREMENTS. 3. ABCDEFGHIJKLMNOPQRSTUVWXYZ4. 1234567890

E. INSTALL EQUIPMENT SO ADEQUATE ACCESS TO CONTROLS AND VALVES ARE PROVIDED. F. PROVIDE NEC WORKING SPACE CLEARANCES FOR ELECTRICAL / CONTROL PANELS.

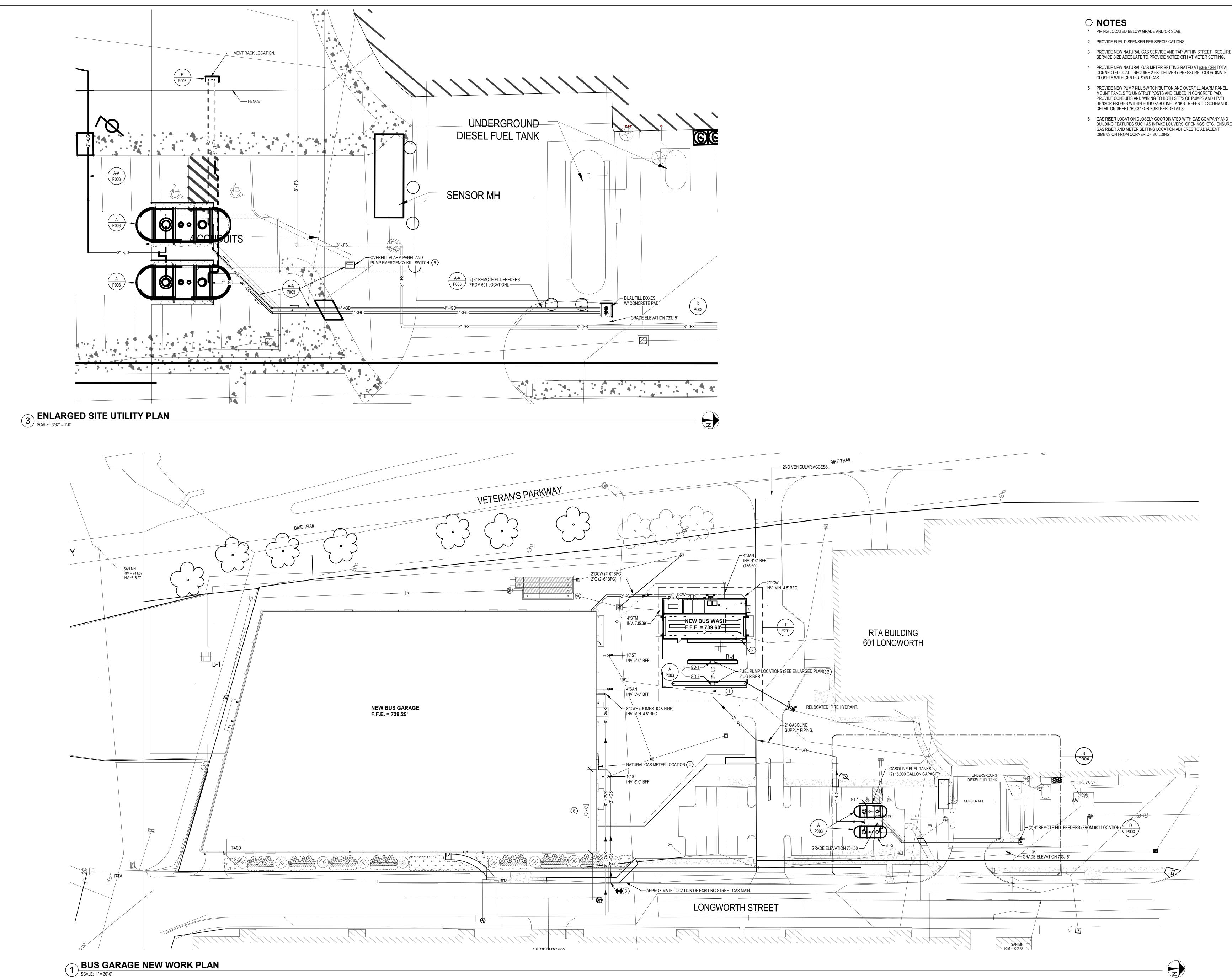
SEISMIC RESTRAINTS APPROX. TYPE CONNECTIONS DIMENSIONS ENERGY SOURCE INPUT - - • • - • - - - 20 90 130 30 208-3 0.75" 0.75" 22.25" 4.5 21.75"

		EXPAN	SION T	ANK	(S											
A. PRO	AL NOTES: VIDE ROUGH-IN. ALL ALL "LOOSE" COMPONENTS.	C. CONNECTION SIZES SHA OUTLETS AND INLETS ON AND INCREASER / REDUC	I EQUIPMENT N	MAY BE	E SMALI		D				ILE, REF				ATIONS FC)R
SHAL	JSTMENT OF THERMAL EXPANSION TANK AIR PRESSUR LL MATCH SYSTEM STATIC WATER PRESSURE PRIOR TO ODUCING WATER TO THE TANK.		PER MANUFA		R'S	UME					APPRO				EISMIC	
MARK	DESCRIPTION	MANUFACTURER	MODEL	ASME RATED	TOTAL	ACCEPTANCE	BLADDER	DIAPHRAGM	FLOW THROUGH			HEIGHT	CONCRETE PAD		IMPORTANCE FACTOR	-
		AMTROL	-		2.0		+			-		_		+	-	+
ET1	THERMAL EXPANSION TANK	AMTROL	ST-5	-	2.0	.9	-	•	- 0.7	′5" 8'	·	13"	-	- !		•



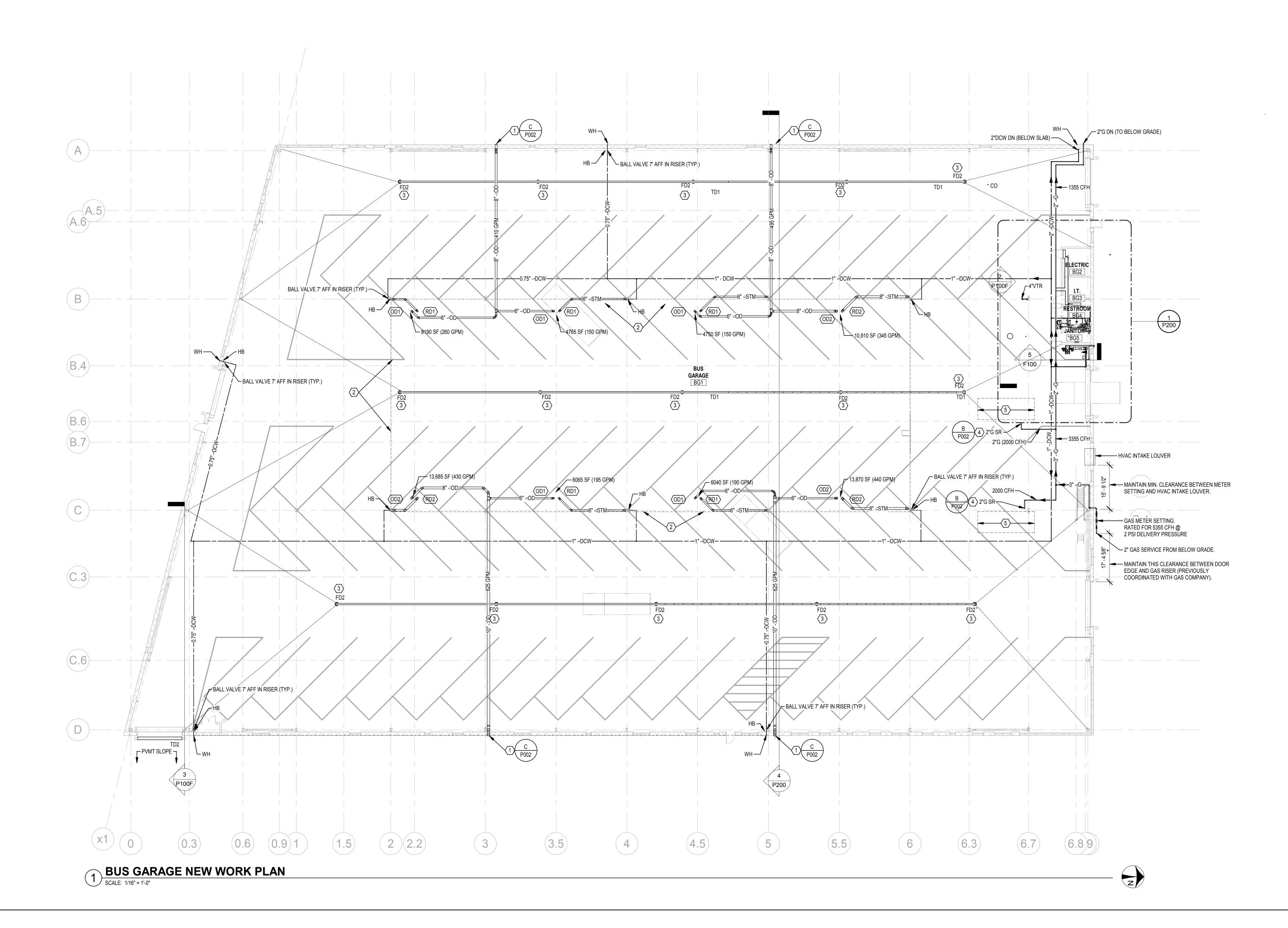






- 3 PROVIDE NEW NATURAL GAS SERVICE AND TAP WITHIN STREET. REQUIRE
- MOUNT PANELS TO UNISTRUT POSTS AND EMBED IN CONCRETE PAD. PROVIDE CONDUITS AND WIRING TO BOTH SET'S OF PUMPS AND LEVEL SENSOR PROBES WITHIN BULK GASOLINE TANKS. REFER TO SCHEMATIC
- 6 GAS RISER LOCATION CLOSELY COORDINATED WITH GAS COMPANY AND BUILDING FEATURES SUCH AS INTAKE LOUVERS, OPENINGS, ETC. ENSURE GAS RISER AND METER SETTING LOCATION ADHERES TO ADJACENT



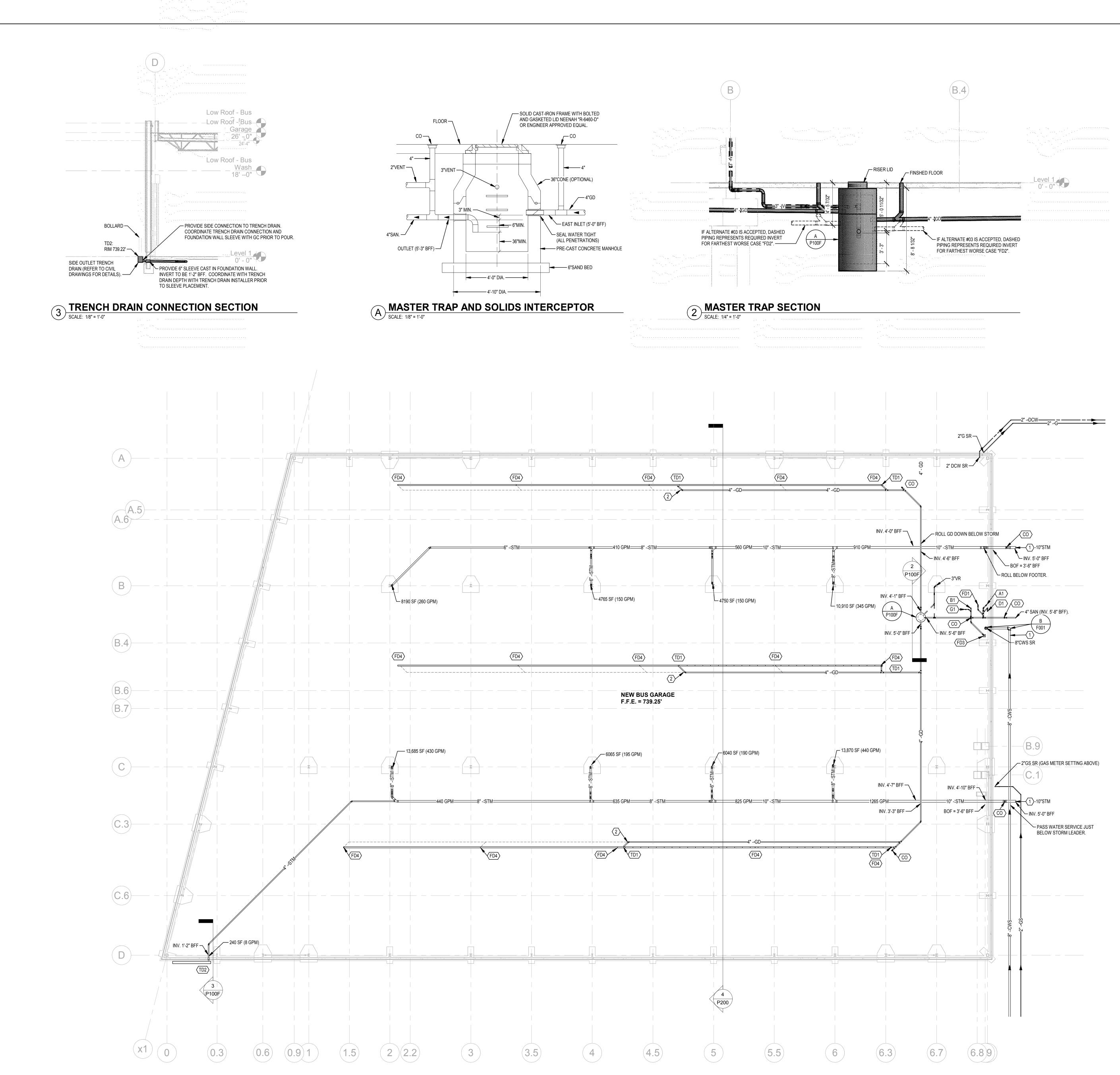


\bigcirc PLAN NOTES

1 TERMINATE DOWNSPOUT NOZZLE 12" ABOVE TOP OF CONCRETE CURB, MEASURED TO CENTER OF PIPE

- 2 DASHED LINE INDICATES AREA OF DEPRESSED CLERESTORY AREA WELL.
- 3 "FD2" DRAIN AND ASSOCIATED PIPING SHALL ONLY BE PROVIDED UNDER
- DEDUCT ALTERNATE #03: REPLACE TD1 WITH FD2. 4 EXTEND GAS RISER ABOVE ROOF, PROVIDE GAS TRAIN, AND CONNECT TO
- ROOF TOP HVAC UNIT.
- 5 DASHED LINE INDICATED FOOT PRINT OF HVAC RTU ABOVE.



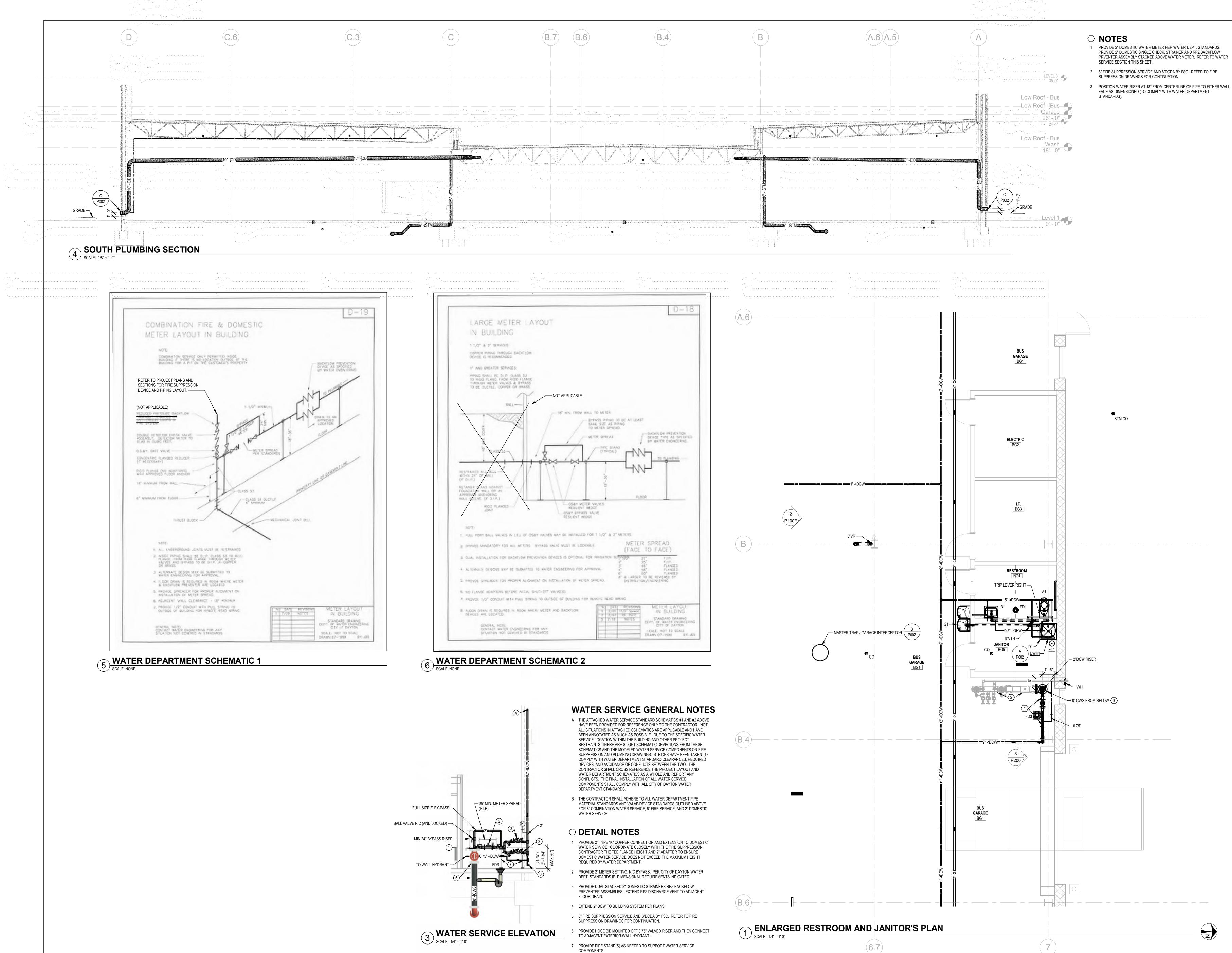


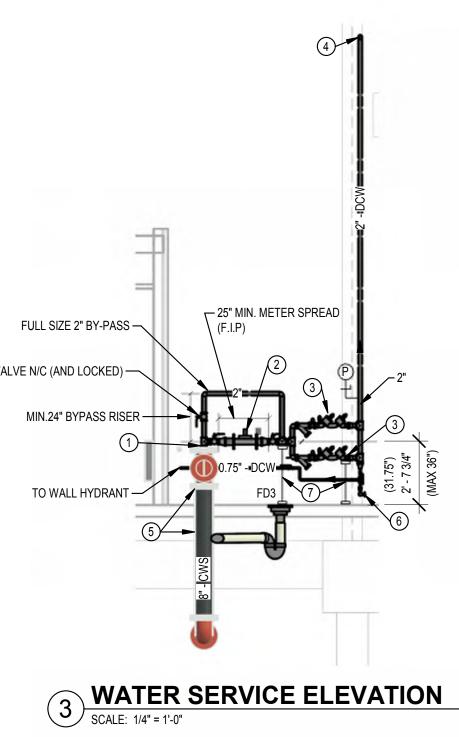
BUS GARAGE NEW WORK PLAN SCALE: 1/16" = 1'-0"

1 PIPING CONTINUED ON SITE/CIVIL DRAWINGS.

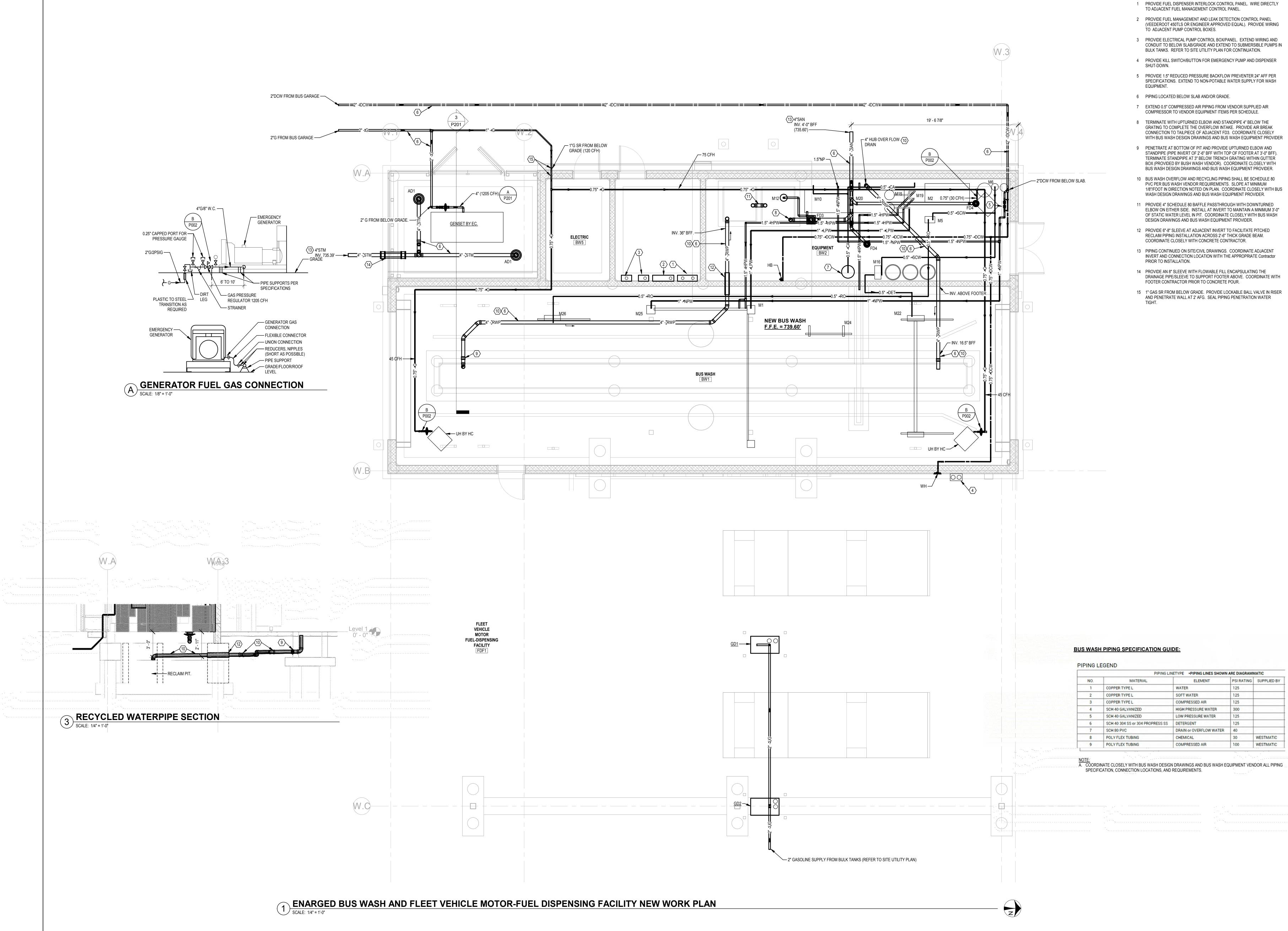
2 DASHED LINES INDICATE ALL SANITARY (GARAGE) DRAINAGE PIPING FROM THIS POINT AND UPSTREAM TO BE PROVIDED IN CONJUNCTION WITH "FD2" AREA DRAINS UNDER DEDUCT ALTERNATE #03 IN LIEU OF BASE BID PRE-SLOPED TRENCH DRAINS.



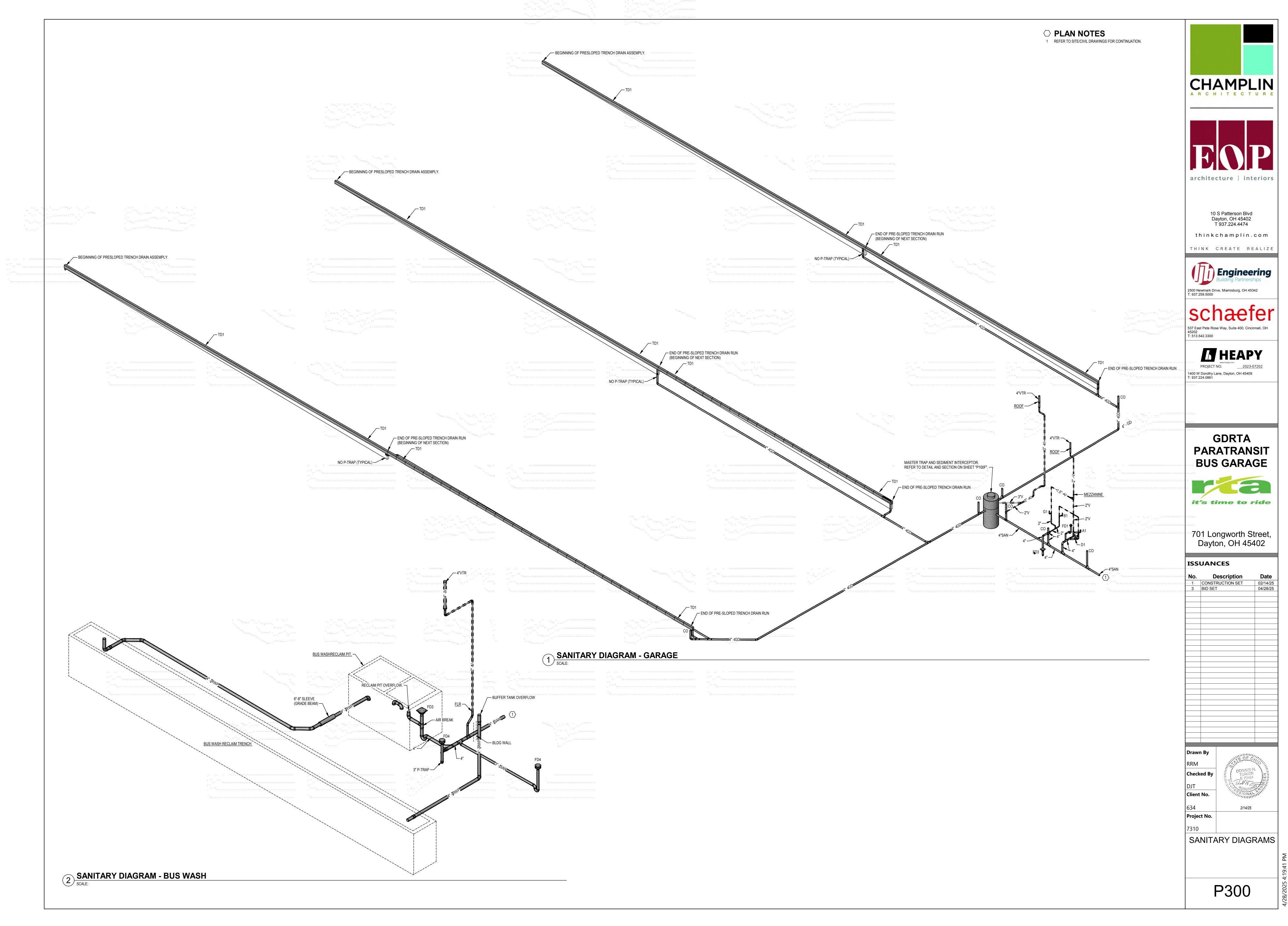












DUCTWORK SYMBOLS RECTANGULAR ROUND / OVAL

ROUND BRANCH DUCTWORK FITTING RECTANGULAR BRANCH DUCTWORK FITTING SQUARE TEE WITH TURNING VANES NOTE: ALL SQUARE ELBOWS IN RECTANGULAR AND ROUND / OVAL DUCTWORK SHALL BE PROVIDED WITH TURNING VANES. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS. RADIUS'D TEE RADIUS'D BRANCH UNLESS NOTED OTHERWISE ON DRAWINGS 15° MAX FOR DIVERGING, 30° MAX FOR CONVERGING TRANSITION EXISTING DUCTWORK TO REMAIN EXISTING DUCTWORK TO REMOVED RETURN AIR, RELIEF AIR, OR TRANSFER AIR DUCTWORK. (UP AND DOWN) RADIUSED OR SQUARE WITH TURNING VANES. SUPPLY AIR OR OUTDOOR AIR DUCTWORK. UP AND DOWN) RADIUSED OR SQUARE <u>ITH TURNING VANES.</u> EXHAUST AIR DUCTWORK. (UP AND DOWN) RADIUSED OR SQUARE WITH TURNING RECTANGULAR AND ROUND / OVAL (x)Ĭ× DUCTWORK RISE / DROP WITH 90° RADIUSED OR SQUARE ELBOWS AND TURNING VANES. RADIUS ELBOW 90° SQUARE ELBOW (WITH TURNING VANES) NOTE: ALL SQUARE ELBOWS IN RECTANGULAR AND ROUND DUCTWORK SHALL BE PROVIDED WITH TURNING VANES SQUARE THROAT / RADIUS HEEL FITTINGS NOT ACCEPTABLE ACCESS DOOR OR PANEL < / AD AD – R R 🗕 DUCTWORK RISE IN DIRECTION OF AIR FLOW D ------DUCTWORK DROP IN DIRECTION OF AIR FLOW FLEXIBLE DUCTWORK DUCTWORK WITH ACOUSTICAL LINER. LISTED DUCT SIZES ARE INSIDE CLEAR DIMENSIONS. FLEXIBLE CONNECTION DUCTWORK CONSTRUCTED OF SPECIAL MATERIAL AS NOTED DIRECTION OF PITCH RECTANGULAR DUCTWORK DIMENSIONS 26x20 (W x H) ROUND DUCTWORK DIMENSIONS (DIA) 26ø OVAL DUCTWORK DIMENSIONS (W x H) 26x20 OV

DUCTWORK DEVICE SYMBOLS

A3 10ø 300	AIR DEVICE. A3 = DESIGNATION (REFER TO FLOOR PLANS AND AIR DEVICE SCHEDULE FOR VARIOUS DESIGNATIONS). 10ø = NECK SIZE (IN INCHES). 300 = REQUIRED CFM. ALL AIR DEVICE DISCHARGE 4-WAY UNLESS NOTED WITH FLOW ARROWS. AIR DEVICE SHOWN IS 2-WAY SIDE THROW. METHOD OF IDENTIFICATION ALSO APPLIES TO OTHER CEILING MOUNTED AIR DEVICES.
SG1 20x12 300 BOG: 9'-0"	WALL OR DUCTWORK MOUNTED AIR DEVICE. SG1 = DESIGNATION (REFER TO AIR DEVICE SCHEDULE). 20x12 = DUCT CONNECTION SIZE (IN INCHES). 300 = REQUIRED CFM. 9'-0" = MOUNTING HEIGHT FROM FLOOR TO BOTTOM OF GRILLE.
	MANUAL BALANCING DAMPER WITH LOCKING DEVICE
	BDD = BACK DRAFT DAMPER CBD = COUNTER-BALANCED BACK DRAFT DAMPER
A-D	FIRE DAMPER A = TYPE (REFER TO FLOOR PLANS FOR VARIOUS TYPES) D OR S = DYNAMIC OR STATIC
	SD = SMOKE DAMPER FS = COMBINATION FIRE - SMOKE DAMPER MDD = MOTORIZED DAMPER AFMS = AIR FLOW MEASURING STATION
SD	DUCT MOUNTED SMOKE DETECTOR. COORDINATE LOCATION.
H H	HUMIDITY SENSOR - DUCT MOUNTED
SP	STATIC PRESSURE SENSOR - DUCT MOUNTED
©	CARBON DIOXIDE SENSOR - DUCT MOUNTED
S	TEMPERATURE SENSOR - DUCT MOUNTED

VALVES AND FITTINGS

	CHECK VALVE
	SHUTOFF VALVE (REFER TO SPECIFICATIONS FOR REQUIRED TYPE BASED ON APPLICATIONS)
	COMBINATION SHUTOFF AND BALANCING VALVE (REFER TO SPECIFICATIONS FOR REQUIRED TYPE BASED ON APPLICATIONS)
	CONCENTRIC PIPE REDUCER
FOT	
FOB P	PRESSURE GAUGE
	TEMPERATURE GAUGE OR THERMOMETER
	UNION
	STRAINER
	STRAINER WITH A BLOW DOWN VALVE AND HOSE CONNECTION
₩ ₩	DRAIN VALVE WITH HOSE END CONNECTION
<u><u></u></u>	
	AUTOMATIC FLOW CONTROLLER WITH P/T PLUG IN AND OUT
	EXPANSION JOINT MANUAL AIR VENT
<u></u> А	
	MODULATING 2 PORT AUTOMATIC CONTROL VALVE
	2 PORT AUTOMATIC CONTROL VALVE, 2-POSITION UNLESS SPECIFIED OTHERWISE
	MODULATING 3 PORT AUTOMATIC CONTROL VALVE
	3 PORT AUTOMATIC CONTROL VALVE, 2-POSITION UNLESS SPECIFIED OTHERWISE
	AUTOMATIC PRESSURE INDEPENDENT CONTROL VALVE
	QUICK OPENING MANUAL VALVE
- often	SAFETY RELIEF VALVE. FOR HYDRONIC SYSTEMS PIPE DISCHARGE AIR GAPPED TO FLOOR DRAIN UNLESS NOTED OTHERWISE. FOR STEAM SYSTEMS PIPE DISCHARGE TO OUTDOORS.
	VACUUM BREAKER
	NEEDLE VALVE
	PRESSURE AND TEMPERATURE TEST PLUG
∨	VACUUM GAUGE WITH STOP
	END CAP
	GLOBE VALVE
	SHUTOFF VALVE AND BOX
	SOLENOID VALVE
	WATER METER
	FLOW METER
	BI-METALIC STEAM TRAP AND DRIP ASSEMBLY
	THERMODYNAMIC STEAM TRAP AND DRIP ASSEMBLY
	INVERTED BUCKET STEAM TRAP AND DRIP ASSEMBLY
	FLOAT AND THERMOSTATIC STEAM TRAP AND DRIP ASSEMBLY
	THERMOSTATIC STEAM TRAP AND DRIP ASSEMBLY
	PRESSURE GAUGE WITH COCK AND SIPHON LOOP
MISC SY	MBOLS
©	CARBON DIOXIDE SENSOR. WHEN WALL MOUNTED, MOUNTING HEIGHT 46" TO MEET ADA REQUIREMENTS. WHEN MOUNTED NEXT TO WALL SWITCH COORDINATE WITH ARCHITECT.
	CARBON MONOXIDE SENSOR. WHEN WALL MOUNTED, MOUNTING HEIGHT 46" TO MEET ADA REQUIREMENTS. WHEN MOUNTED NEXT TO WALL SWITCH COORDINATE WITH
	ARCHITECT. DIFFERENTIAL PRESSURE SENSOR. WHEN WALL MOUNTED, MOUNTING HEIGHT 46" TO
	MEET ADA REQUIREMENTS. WHEN MOUNTED NEXT TO WALL SWITCH COORDINATE WITH ARCHITECT.
H	HUMIDITY SENSOR. WHEN WALL MOUNTED, MOUNTING HEIGHT 46" TO MEET ADA REQUIREMENTS. WHEN MOUNTED NEXT TO WALL SWITCH COORDINATE WITH ARCHITECT.

MISC SY	MBO
Ô	CARBON D REQUIREM
\bigcirc	CARBON M ADA REQU ARCHITEC
OP	DIFFEREN MEET ADA ARCHITEC
H	HUMIDITY REQUIREN
S	TEMPERA REQUIREN ARCHITEC
\$	TEMPERA
SP	STATIC PR
T	SPACE TE HEIGHT 46 COORDINA
Ê	EMERGEN

ATURE SENSOR. WHEN WALL MOUNTED, MOUNTING HEIGHT 46" TO MEET ADA MENTS. WHEN MOUNTED NEXT TO WALL SWITCH COORDINATE WITH ATURE SENSOR MOUNTED IN CEILING PLENUM.

RESSURE SENSOR.

EMPERATURE SENSOR / THERMOSTAT. WHEN WALL MOUNTED, MOUNTING 6" TO MEET ADA REQUIREMENTS. WHEN MOUNTED NEXT TO WALL SWITCH ATE WITH ARCHITECT. NCY SHUTOFF STATION. 46" MOUNTING HEIGHT UNLESS NOTED OTHERWISE.

GENERAL FLOOR PLAN NOTES

3	\rangle	PLAN NOTE. APPLIES ONLY TO THE SHEET WHICH IT IS SHOWN UNLESS NOTED OTHERWISE.
(3		DETAIL NOTE. APPLIES ONLY TO THE ASSOCIATED DETAIL.
A	1	EQUIPMENT, DEVICE, OR PLUMBING FIXTURE MARK. LETTER DESIGNATIONS REFER TO SCHEDULES.
)r <u>H1</u>	EQUIPMENT REFERENCE. LETTER DESIGNATION VARIES. REFER TO SCHEDULES.
(2		RISER OR STACK NUMBER
B H2		DETAIL: B = DETAIL DESIGNATION H2 = SHEET WHERE DETAIL IS LOCATED
		SECTION: 1 = SECTION DESIGNATION H2 = SHEET WHERE DETAIL IS LOCATED
A	1	"UP TO" SYMBOL (ITEM ON FLOOR ABOVE)
	TOE: 3' - 0" BOE: 0' - 6"	APPROXIMATE DIMENSION ABOVE FINISHED FLOOR TO TOP OR BOTTOM OF EQUIPMENT, UNLESS NOTED OTHERWISE
10" ELEV: 8' - 0"		APPROXIMATE DIMENSION ABOVE FINISHED FLOOR TO CENTERLINE OF PIPE, UNLESS NOTED OTHERWISE
20x20 20x20	TOD: 8' - 10" BOD: 7' - 2"	APPROXIMATE DIMENSION ABOVE FINISHED FLOOR TO TOP OR BOTTOM OF DUCTWORK, UNLESS NOTED OTHERWISE
#-	_UC-X	DOOR UNDERCUT. X = HEIGHT OF UNDERCUT IN INCHES; 0.75 INCH UNDERCUT IF NO HEIGHT IS NOTED. COORDINATE WITH GC.
#	→ ^{DL-1}	DOOR LOUVER. 1 = SQUARE FEET OF LOUVER.
	•	CONNECT TO EXISTING
		DEMOLISH TO POINT INDICATED

PIPING SYMBOLS DOUBLE LINE SINGLE LINE

DOUBLE LINE	SINGLE LINE	
		BOTTOM CONNECTION (45°)
		BOTTOM CONNECTION (90°)
		BRANCH TEE CONNECTION (NOTE: BULLHEAD TEE'S ARE NOT PERMITTED)
		DIRECTION OF PITCH
	D	DROP
9	———Э	ELBOW DOWN
D	•	ELBOW UP
[]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]		EXISTING PIPE TO BE REMOVED
		EXISTING PIPE TO REMAIN
		FLOW DIRECTION DESIGNATION
	O	PIPE RISER
	\bigcirc	PUMP
← R	R	RISE
		TOP CONNECTION (45°)
		TOP CONNECTION (90°)

HVAC PIPING DESIGNATIONS

— CHS CHILLED WATER SUPPLY PIPE — CHR CHILLED WATER RETURN PIPE — CWS CONDENSER WATER SUPPLY PIPE — CWR CONDENSER WATER RETURN PIPE	
CWS—CWS—CWS—CONDENSER WATER SUPPLY PIPE	
CONDENSER WATER RETURN PIPE	
DRAIN LINE. PITCH IN DIRECTION INDICATED	
HEATING HOT WATER RETURN PIPE	
HEATING HOT WATER SUPPLY PIPE	
MU	
— — — V— — — — VENT PIPE	
ET-ET-EXPANSION TANK PIPE	
HG	
HIGH PRESSURE CONDENSATE RETURN PIPE	
HIGH PRESSURE STEAM SUPPLY PIPE	
LOW PRESSURE CONDENSATE RETURN PIPE	
LOW PRESSURE STEAM SUPPLY PIPE	
MPC MEDIUM PRESSURE CONDENSATE RETURN PIPE	
MPS MEDIUM PRESSURE STEAM SUPPLY PIPE	
PUMPED CONDENSATE RETURN PIPE	

ABBREVIATIONS

NOTE:
ALL SY
SUBJE
DRAWI
ALL SY
NOT N
PROJE

AC ACCU AD ADJ	- AIR COMPRESSOR OR AIR CONDITIONER - AIR COOLED CONDENSING UNIT - ACCESS DOOR OR AREA DRAIN - ADJUSTABLE	ID INV IN	- INSIDE DIAMETER - INVERT ELEVATION - INCHES
AFF AFG	- ABOVE FINISHED FLOOR - ABOVE FINISHED GRADE	KEC	- KITCHEN EQUIPMENT CONTRACTOR
AFMS	- AIR FLOW MEASURING STATION	L	- LENGTH
ALT AP	- ALTERNATE - ACCESS PANEL	LAT LAV	- LEAVING AIR TEMPERATURE - LAVATORY
APPROX ARCH	- APPROXIMATE - ARCHITECT OR ARCHITECTURAL	LBS LPC	- POUNDS - LOW PRESSURE CONDENSATE RETURN
ASSY	- ASSEMBLY	LPS	- LOW PRESSURE STEAM SUPPLY
ATC	- AUTOMATIC TEMPERATURE CONTROL (SYNONYMOUS WITH BAS)	LWT	- LEAVING WATER TEMPERATURE
BAS	- BUILDING AUTOMATION SYSTEM	MAX MDD	- MAXIMUM - MOTORIZED DAMPER
BDD BFP	- BACK DRAFT DAMPER - BACKFLOW PREVENTER	MEZZ MFR	- MEZZANINE - MANUFACTURER
BLDG	- BUILDING	MH	- MANHOLE
BOB BOD	- BOTTOM OF BEAM - BOTTOM OF DUCT	MIN MISC	- MINIMUM OR MINUTE - MISCELLANEOUS
BOE BOF	- BOTTOM OF EQUIPMENT - BOTTOM OF FOOTING	MTD MTG	- MOUNTED - MOUNTING
BOG	- BOTTOM OF GRILLE	MPC	- MEDIUM PRESSURE CONDENSATE
BOP BOT	- BOTTOM OF PIPE - BOTTOM	MPS	RETURN - MEDIUM PRESSURE STEAM SUPPLY
BTU BTUH	- BRITISH THERMAL UNIT - BRITISH THERMAL UNIT PER HOUR	MU	- WATER MAKE-UP
CBD	- COUNTER BALANCED BACKDRAFT DAMPER	N/C NIC	- NORMALLY CLOSED - NOT IN CONTRACT
CFCI	- CONTRACTOR FURNISHED CONTRACTOR	N/O	- NORMALLY OPEN
CFM	INSTALLED - CUBIC FEET PER MINUTE	NOM NPT	- NOMINAL - NATIONAL PIPE THREAD
CHS CHR	- CHILLED WATER SUPPLY - CHILLED WATER RETURN	NTS	- NOT TO SCALE
CHGR	- CHILLED WATER GLYCOL SOLUTION RETURN	OA	
CHGS CLG	- CHILLED WATER GLYCOL SOLUTION SUPPLY - CEILING	OBD OD	- OPPOSED BLADE DAMPER - OUTSIDE DIAMETER
CMU CO	- CONCRETE MASONRY UNIT - CLEAN OUT	OFCI	- OWNER FURNISHED CONTRACTOR INSTALLED
CO2 CONN	- CARBON DIOXIDE - CONNECT OR CONNECTION	OFOI	- OWNER FURNISHED OWNER INSTALLED
CONTR CTR	- CONTRACTOR - CENTER	P PC	- PROPANE GAS - PLUMBING CONTRACTOR (DIVISION 22)
CU CW	- COPPER	PLBG	OR PUMPED CONDENSATE RETURN - PLUMBING
CWR	- CONDENSER WATER RETURN	PRESS	- PRESSURE
CWS	- CONDENSER WATER SUPPLY	PRV PSF PSI	- PRESSURE REGULATING VALVE - POUNDS PER SQUARE FOOT
D DB	- DRAIN LINE - DRY BULB	PSI PSIG	- POUNDS PER SQUARE INCH - POUNDS PER SQUARE INCH GAUGE
DDC DI	- DIRECT DIGITAL CONTROLS - DEIONIZED WATER	RA	- RETURN AIR
DIA DIM	- DIAMETER - DIMENSION	RAD RCP	- RADIUS - REFLECTED CEILING PLAN
DN	- DOWN	RD	- ROOF DRAIN
DWG		REC REQD	- RECESSED - REQUIRED
EA EAT EC	- EACH OR EXHAUST AIR - ENTERING AIR TEMPERATURE	RI RL	- ROUGH IN - REFRIGERANT LIQUID
EC EF	- ELECTRICAL CONTRACTOR (DIVISION 26) - EXHAUST FAN	ROS ROR	- REVERSE OSMOSIS WATER SUPPLY - REVERSE OSMOSIS WATER RETURN
EJ ELEC	- EXPANSION JOINT	RPM RS	- REVOLUTIONS PER MINUTE - REFRIGERANT SUCTION
ELEV EQUIP	- ELEVATOR - EQUIPMENT	S	- SPRINKLER (WET)
ET	- EXPANSION TANK	SA	- SUPPLY AIR
ETR EQS	- EXISTING TO REMAIN - EQUIPMENT SUPPLIER	SAN SCH	- SANITARY OR SANITARY DRAIN - SCHEDULE
EWT EXH	- ENTERING WATER TEMPERATURE - EXHAUST	SCW SHT	- SOFT COLD WATER - SHEET
EXP	- EXPANSION - EXTERIOR	SPEC SQ	- SPECIFICATIONS - SQUARE
EXI	- EXISTING	SR	- SUPPLY RISER
FD	- FLOOR DRAIN	SRV SS	- SAFETY RELIEF VALVE - STAINLESS STEEL
FF FLR	- FINISHED FLOOR ELEVATION - FLOOR	STD STM	- STANDARD - STORM OR STORM DRAINAGE
FOB FOF	- FLAT ON BOTTOM - FUEL OIL FLOW	STRUC SUC	- STRUCTURAL OR STRUCTURE - SITE UTILITY CONTRACTOR
FOG FOR	- FUEL OIL GAUGE - FUEL OIL RETURN	TA	
FOS	- FUEL OIL SUPPLY	TEMP	- TEMPERATURE
FOT FPM	- FLAT ON TOP - FEET PER MINUTE	TOB TOD	- TOP OF BEAM - TOP OF DUCT
FSC FT	- FIRE SUPPRESSION CONTRACTOR (DIVISION 21) - FEET	TOF	- TOP OF EQUIPMENT - TOP OF FOOTING
FTG	- FOOTING	TOJ TOP	- TOP OF JOIST - TOP OF PIPE
G GA	- GAS OR NATURAL GAS - GAUGE	TOS TYP	- TOP OF SLAB OR TOP OF STEEL - TYPICAL
GAL	- GAUGE - GALLON - GALVANIZED	UH	
GALV GC	- GENERAL TRADES CONTRACTOR	UNO	- UNIT HEATER - UNLESS NOTED OTHERWISE
GPM	- GALLONS PER MINUTE	V	- VENT
HB HC	- HOSE BIBB - HVAC CONTRACTOR (DIVISION 23)	VAC VAV	- VACUUM - VARIABLE AIR VOLUME
HD HG	- HUB DRAIN - REFRIGERANT HOT GAS	VEL VFD	- VELOCITY - VARIABLE FREQUENCY DRIVE
HP HPC	- HORSEPOWER - HIGH PRESSURE CONDENSATE RETURN		(ADJUSTABLE FREQUENCY MOTOR CONTROLLER)
HPS	- HIGH PRESSURE STEAM SUPPLY	VIB	- VALVE IN BOX
HR HT	- HOUR - HEAT TRACE	VOL VTR	- VOLUME - VENT THROUGH ROOF
HTR HVAC	- HEATER - HEATING, VENTILATING, AND AIR CONDITIONING	VR	- VENT RISER
HW HWR	- HOT WATER - HEATING HOT WATER RETURN	W/ W/O	- WITH - WITHOUT
HWS	- HEATING HOT WATER SUPPLY	WB WCO	- WET BULB - WALL CLEANOUT

GENERAL NOTES

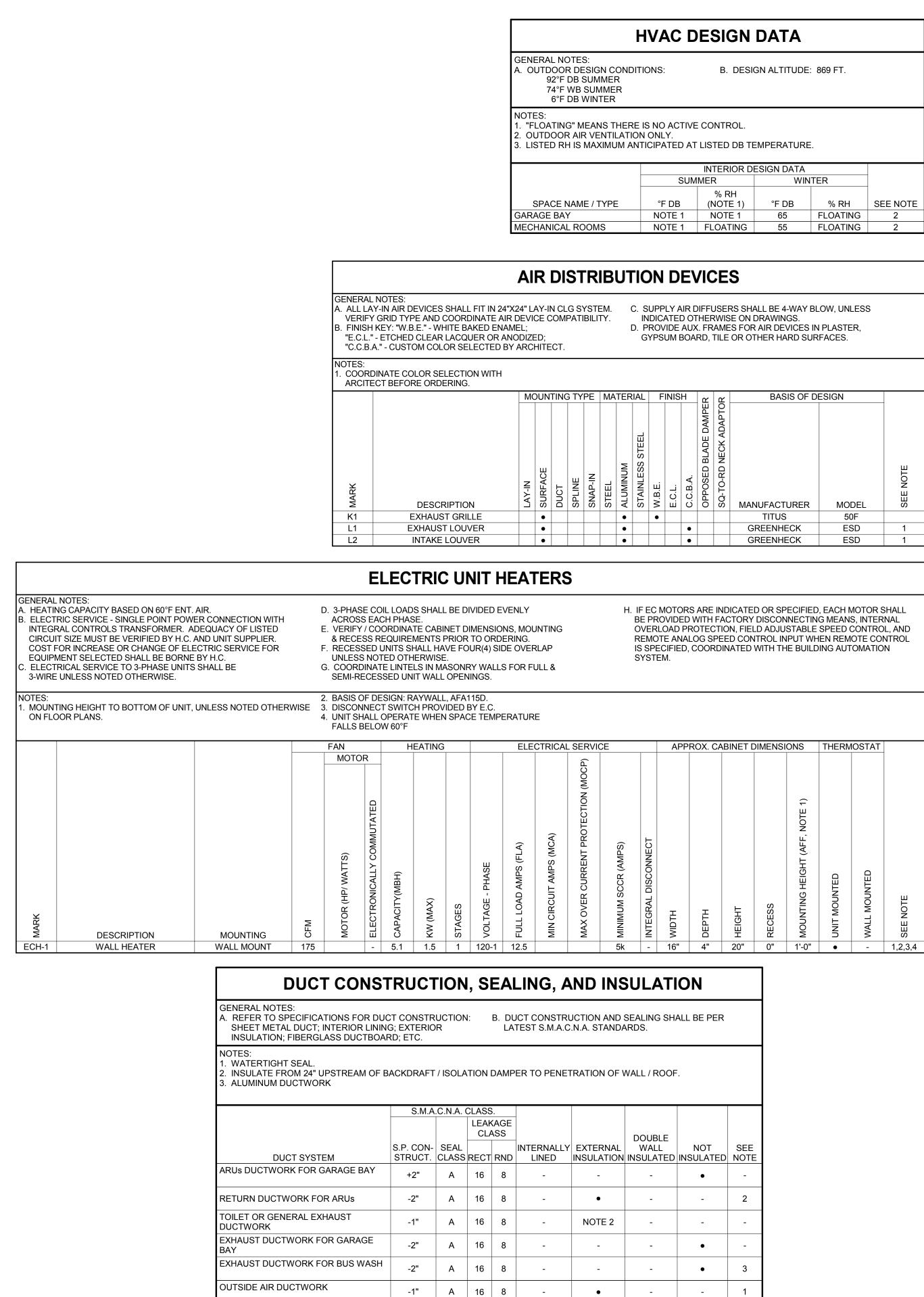
- A. COORDINATE THE LOCATION OF ALL DEVICES LOCATED IN THE CEILING WITH THE ARCHITECT'S REFLECTED CEILING PLAN AND OTHER TRADES DURING CONSTRUCTION. ALL CEILING AIR DEVICES SMALLER THAN THE GRID DIMENSIONS SHALL BE MOUNTED CENTERED WITHIN THE CEILING GRID TILE.
- B. ALL EQUIPMENT ABOVE THE CEILING REQUIRING MAINTENANCE ACCESS SHALL BE MOUNTED A MAXIMUM OF 18" ABOVE CEILING TO ALLOW FOR ACCESS.
- C. ANNULAR SPACE AROUND DUCTWORK, PIPING, CONDUIT, AND OTHER SIMILAR PENETRATIONS OR COMBINATIONS OF PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE FIRESTOPPED TO RETARD THE PASSAGE OF FIRE AND SMOKE, REFER TO SPECIFICATION SECTION 23 05 05 FIRESTOPPING.
- D. H.C. TO COORDINATE LOCATIONS OF ALL EQUIPMENT, DUCTWORK, PIPING, AND AIR DEVICES WITH STRUCTURAL MEMBERS AND THE WORK OF OTHER TRADES PRIOR TO FINAL INSTALLATION OFFSET PIPING AND DUCTWORK AS REQUIRED TO MAINTAIN ALL MANUFACTURER'S RECOMMENDED CLEARANCES.
- E. COORDINATE ALL WALL AND ROOF OPENINGS WITH GENERAL TRADES CONTRACTOR.
- F. IN GENERAL, KEEP DUCT AND PIPING MAINS HIGH IN CEILING CAVITY, TIGHT TO STRUCTURE, WHERE POSSIBLE. ALL DUCTS AND PIPES SHALL BE RUN ABOVE CEILING UNLESS NOTED OTHERWISE. WHERE NO CEILINGS ARE INSTALLED HOLD AS HIGH AS POSSIBLE TO STRUCTURE UNLESS NOTED OTHERWISE.
- G. HVAC CONTRACTOR SHALL CLEAN AND PREPARE FOR PAINTING ALL HVAC PIPING, DUCTWORK, AND HVAC TEMPERATURE CONTROL CONDUIT LOCATED IN FINISHED ROOMS WHICH DO NOT HAVE A CEILING. THESE ITEMS ARE EXPOSED DUE TO THE LACK OF A CEILING AND WILL BE PAINTED BY THE GENERAL CONTRACTOR. CONTRACTOR SHALL COVER NAME PLATE DATA BEFORE PAINTING TO PREVENT DATA FROM BEING COVERED.
- H. RUN-OUTS TO SUPPLY DIFFUSERS, RETURN GRILLES, AND EXHAUST GRILLES SHALL INCLUDE MANUAL DAMPERS PER DETAILS (NOT SHOWN ON PLANS FOR CLARITY). PROVIDE ADDITIONAL DAMPERS AS SHOWN ON FLOOR PLANS OR WHERE REQUIRED FOR SYSTEM BALANCING REGARDLESS OF BEING SHOWN OR NOT.
- . ALL SQUARE CORNER DUCT FITTINGS SHALL BE EQUIPPED WITH TURNING VANES AS SPECIFIED IN 23 31 13.
- J. DUCT RUN-OUT SIZE TO CEILING DIFFUSERS TO BE SAME SIZE AS THE DIFFUSER NECK UNLESS OTHERWISE NOTED.
- K. EXACT LOCATION OF ALL WALL MOUNTED ITEMS (STATS, SENSORS, SWITCHES, CONTROL PANELS) SHALL BE SUBMITTED FOR REVIEW AND APPROVED BY THE OWNER/ARCHITECT. SUBMITTAL SHALL BE MADE IN A TIMELY FASHION SO REVIEW MAY BE CONDUCTED PRIOR TO INSTALLATION OF FINISHED WALL SURFACES.
- L. HVAC CONTRACTOR SHALL COORDINATE CLOSELY WITH OTHER TRADES IN LOCATING THE INSTALLING ALL SYSTEMS.
- M. CONTRACTOR SHALL COORDIATE ALL NOTED DIMENSIONS WITH ARCHITECT AND OTHER TRADES FOR FINAL LOCATIONS.

YMBOLS AND ABBREVIATIONS ARE ECT TO MODIFICATIONS ON OTHER INGS.

YMBOLS OR ABBREVIATIONS MIGHT **IECESSARILY BE USED ON THIS** ECT.

	SHEET LIST
SHEET NUMBER	SHEET NAME
M001	LEGEND AND GENERAL NOTES
M002	SCHEDULES
M003	SCHEDULES & DETAILS
M100	NEW WORK PLANS
M101	NEW WORK PLANS ROOF





GENERAL NOTES:

OPERATION.

A. NATURAL GAS DELIVERY PRESSURE TO UNIT IS 7" W.C.

PROVIDE SECONDARY REGULATOR IF REQ'D FOR UNIT

					รเ	JPPLY F	AN	S	PEE	D					3 SE
UNIT NUMBER	NOMINAL TONS	UNIT CONFIGURATION		CFM (TOTAL)	EXTERNAL / TOTAL STATIC PRESSURE (IN. W.C.)	FAN QTY / WHEEL TYPE	MOTOR (HP EACH)	ELECTRONICALLY COMMUTATED MOTORS		VARIABLE FREQUENCY DRIVE (QTY)	INTEGRAL PIEZO RING AIRFLOW STATION (EACH)	HEATING CAPACITY (MBH OUTPUT)	ENTERING AIR TEMPERATURE DB (°F)	LEAVING AIR TEMPERATURE DB (°F) (NOTE E)	GAS INPUT MIN./MAX. (CFH)
⊃ ARU-1 ARU-2	Z -	⊃ HDT HDT	AREA SERVED GARAGE GARAGE	25,500 25,500	.25 / 1.4 .25 / 1.4	止 1	≥ 20 20	-	>	>	≤	エ 1,840.0 1,840.0	40.0	106.8 106.8	20 20

																									SEIG		1		
	SUPPLY FAN	SPEED		HEA	ATING SE			FIN	AL FILT	ERS	DIM	IENSIO	NS		MISCEL	LANE	ous			ELECT	RICAL	SERVIO	E		SEIS RESTR	SMIC AINTS	BASIS OF I	DESIGN	
CFM (TOTAL) CFM (TOTAL) CFM (TOTAL) CFM (TOTAL) CFM (TOTAL) CFM (TOTAL) CFM (TOTAL) CFM (TOTAL) CFM (TOTAL)	 FAN QTY / WHEEL TYPE MOTOR (HP EACH) 		HEATING CAPACITY (MBH OUTPUT)	00 01 01 01 02	C REAVING AIR TEMPER	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	FULL MODULATION FULL MODULATION P10 210 210	THICKNESS / MERV			245" 245"	C C MAX UNIT WIDTH (INCHES)	P P MAX UNIT HEIGHT (INCHES) (NOTE G)	0 0 APPROXIMATE UNIT WEIGHT INCLUDING CURB (LBS)	ENERGY RECOV. SECTION (REFER TO SEP. SCHED.) INTEGRAL 100% BAROMETRIC RELIEF	T GAS F			480-3 480-3		9.46 9.46 9.46	8 8 MAX OVER CURRENT PROTECTION (MOCP)	10k Jakes (AMPS)	EUSED DISCONNECT	REQUIRED	INPORTANCE FACTOR	MANUFACTURER GREENHECK GREENHECK	MODEL DGX DGX	SEE NOTE
													FA	NS															
AND SHALL B. SONES VAL C. MOTOR HO	TES: SHALL BE A.M.C.A. 2 BEAR THE A.M.C.A. LUES BASED ON A.M RSEPOWERS LISTE ALL OPENINGS ARE	LABEL. 1.C.A. 301 MEASUI D SHALL BE CON	RED AT : ISIDEREI	5 FT. D MINIMU	M.			FOR I F. WHEI TYPE G. VFD	ECK SU APPLIC AND S SHALL	PPORT, CABLE, F EISMIC F BE CON	AND WAREFER T RESTRA	ALL LINT O SPEC INT REC TED AND	JND ROO Tels fof Cificatio Quireme D Labele Coord	R WALL INS FOR INTS. ED FOR	OPENIN VIBRA ⁻ REQUIR	GS. TON IS ED SC	OLATC			BI O R	E PRO\ VERLO EMOTE	/IDED W AD PRC ANALC	ITH FAC TECTIO G SPEE	TORY N, FIEL D CON	DISCON _D ADJUS ITROL IN	NECTIN STABLE PUT WH	D, EACH MOTOR SHAI IG MEANS, INTERNAL SPEED CONTROL, A HEN REMOTE CONTR IG AUTOMATION SYS	- ND ROL IS	
	OR SHALL COORDIN R WITH ARCITECT BI							3. FAN (LLED BY			RAWING																
Карана Каран	POWER	DESCRIPTION ROOF VENTILAT INLINE FAN ROOF VENTILAT ROOF VENTILAT CEILING FAN	TOR		RESTRO BL BL	JS WASH JS WASH	XHAUST ITOR EXH EXHAUST		WED NE 12700 160 1500 430 1000	Z 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	UNDETER 42.25 8.2 16.75 16.75 9	SENOS WOMEXW 11.7 4.5 6.8 2.8 2.5	(dH) 2 1/30 1/4 1/4 37W	BARANCE BARANC	ELECTRONICALLY COMMUTATED	POTO 4.00 4.00 4.00 4.00 4.00 4.00	51 ECM MOCP (AMPS, TOTAL)	VARIABLE FREQUENCY DRIVE	5k 5k 5k 5k	48.5x48 NA 18.5x18 14.5x14 NA	.5	28 29 64 9 64 9	L VIBRATION ISOLATOR TYPE		SEISMIC STRAINT STRAINT IMPORTANCE FACTOR	MA 0 0	BASIS OF DE ANUFACTURER GREENHECK GREENHECK GREENHECK GREENHECK GREENHECK AIRIUS A-2	MODEL GB-420-VG SQ-70 GB-106 GB-100 25-SP-STD-120-X	E D N E E E E E E E E E E E E E E E E E
											Ū								UK				01						(2,0
PRESSURE IS 7" W.C /ICE - SINGLE POINT .ISTED CIRCUIT SIZE T FOR INCREASE OF .ECTED SHALL BE B(^T POWER SERVICE C E MUST BE VERIFIED R CHANGE OF ELEC	BY H.C. AND UN	IT			WIT FIE INP	EC MOTOR TH FACTOR LD ADJUS UT WHEN TOMATION	S ARE IN RY DISCO FABLE SI REMOTE	DICATE NNECT PEED CO CONTR	D OR SP NG MEA NTROL,	PECIFIED NS, INTI), EACH ERNAL (EMOTE /	OVERLOA ANALOG	SHALL E AD PRO SPEED	BE PRO' TECTIOI CONTRI	N, DL				VHEN AP YPES AN							VIBRATION ISOLATO	R	
		LOCATIO	N	T	ΥPE			FA	N		ELEC	TRICAL		Έ		1	E	DIMENS	IONS	1		THERM	OSTAT		SEIS RESTR	MIC AINTS	BASIS OF I	DESIGN	
	MOUNTING	ROOM NAME	ROOM NUMBER	HORIZONTAL DISCH	SEALED COMBUSTION POWER VENTED	GRAVITY VENTED GAS INPUT (CFH)		CFM	HIGH EXT. STATIC BLOWER	ELECTRONICALLY COMMUTATED MOTORS VOLTAGE - PHASE	FULL LOAD	MIN CIRCUIT AMPS (MCA)	MAX OVER CURRENT PROTECTION (MOCP)	MINIMUM SCCR (AMPS)	GAS CONNECTION SIZE	VENT OUTLET SIZE	COMB. AIR INLET SIZE	MIDTH	HEIGHT	DEPTH		UNIT MOUNTED WALL MOUNTED	LINE VOLTAGE 24 VOLT	VIBRATION ISOLATOR TYPE	REQUIRED	IMPORTANCE FACTOR	MANUFACTURER	MODEL	SEE NOTE
RED UNIT HEATER RED UNIT HEATER RED UNIT HEATER	SUSPENDED SUSPENDED SUSPENDED	EQUIPMENT BUS WASH BUS WASH	BW2 BW1 BW1	• - • - • -		 30 45 45 	36.9 5	500 1/* 500 1/* 500 1/* 500 1/*	5 -	- 208- - 208- - 208-	-1 2			5k 5k 5k	0.5" 0.5" 0.5"	4" 4" 4"	4" 4" 4"	27" 27" 27"	13.25" 13.25" 13.25"	22" 22" 22"	72	• - - • - •	• - • - • -		- - -		MODINE MODINE MODINE	HD 30 HD 45 HD 45	

		SUPPLY		SPEED		H				F	INAL FIL	TERS	DIN	IENSION	IS		MISCEL	LANEC	ous		E	ELECTR	ICAL S	ERVIC	E	R	SEISMI		OF DESIGN	
AREA SERVED GARAGE GARAGE		G G <th></th> <th>IRUNICALLY COMMULATED ABLE FREQUENCY DRIVE BLE FREQUENCY DRIVE (Q⁻ BRAL PIEZO RING AIRFLOW (</th> <th>1,840.0 1,840.0 1,840.0</th> <th></th> <th></th> <th>JT MIN //MAX. (CFH)</th> <th></th> <th>MINIMUM OUTSIDE AIR (CFM)</th> <th>MAXIMUM FA</th> <th>13 MAX CLEAN AIR PRESSURI</th> <th>24 245" WAX UNIT LENGTH (INCHES)</th> <th>2 2 MAX UNIT WIDTH (INCHES)</th> <th>Participation Part (INCHES) (NOTE G)</th> <th>0 00 0 00 00 00 00 00 00 00 00 00 00 00</th> <th>ENERGY RECOV. SECTION (REFER TO SEP. SCHED.) INTEGRAL 100% BAROMETRIC RELIEF</th> <th></th> <th>SERVICE</th> <th></th> <th></th> <th></th> <th>.6</th> <th>8 8 MAX OVER CURRENT PROTECTION (MOCP)</th> <th>10 k WINIMUM SCCR (AMPS)</th> <th>FUSED DISCONNECT</th> <th>- IMPORTANCE FACTOR</th> <th>MANUFACTUE GREENHEC GREENHEC</th> <th>K DGX</th> <th>SEE NOTE</th>		IRUNICALLY COMMULATED ABLE FREQUENCY DRIVE BLE FREQUENCY DRIVE (Q ⁻ BRAL PIEZO RING AIRFLOW (1,840.0 1,840.0 1,840.0			JT MIN //MAX. (CFH)		MINIMUM OUTSIDE AIR (CFM)	MAXIMUM FA	13 MAX CLEAN AIR PRESSURI	24 245" WAX UNIT LENGTH (INCHES)	2 2 MAX UNIT WIDTH (INCHES)	Participation Part (INCHES) (NOTE G)	0 00 0 00 00 00 00 00 00 00 00 00 00 00	ENERGY RECOV. SECTION (REFER TO SEP. SCHED.) INTEGRAL 100% BAROMETRIC RELIEF		SERVICE				.6	8 8 MAX OVER CURRENT PROTECTION (MOCP)	10 k WINIMUM SCCR (AMPS)	FUSED DISCONNECT	- IMPORTANCE FACTOR	MANUFACTUE GREENHEC GREENHEC	K DGX	SEE NOTE
															FA	NS														
	AND SH B. SONES C. MOTOF	NS SHALL BE IALL BEAR TH VALUES BAS NHORSEPOW	IE A.M.C.A. SED ON A.M /ERS LISTE	11 AND 311 PE LABEL. 1.C.A. 301 MEA D SHALL BE C APPROX. VEF	SURED A	AT 5 FT. RED MININ	MUM.			FOR F. WHI TYP G. VFE	EDECK S EN APPL ES AND D'S SHAL	TE STEEL F SUPPORT, / LICABLE, RI SEISMIC R LL BE CONS CUIT CURF	AND W. EFER T RESTRA STRUC	ALL LINT O SPEC INT REC TED AND	ELS FOI	R WALL ONS FOF ENTS. ED FOR	OPENIN R VIBRAT REQUIRI	GS. ION IS ED SC(OLATOR CR			BE OVE REM	PROVII ERLOA <i>I</i> IOTE <i>I</i>	DED W D PRO NALO	ITH FAC TECTIO G SPEE	TORY DIS N, FIELD A D CONTR	SCONNE ADJUSTA OL INPU ⁻	IFIED, EACH MOTOR CTING MEANS, INTE ABLE SPEED CONTRO T WHEN REMOTE CO LDING AUTOMATION	RNAL DL, AND INTROL IS	
				NATE FAN FINIS EFORE ORDEF						3. FAN		FLOOR AND COLLED BY DEG F.																		
	УДУ Ч ЕF-1 ЕF-2 ЕF-3 ЕF-4 F-1	LAPE (REFER TO SPECS) C TYPE (REFER TO SPECS) C T D	POWER POWER POWER	DESCRIPTION ROOF VENTI INLINE FAN ROOF VENTI ROOF VENTI CEILING FAN	LATOR LATOR LATOR		RESTR E	GARAG OOM & BUS WAS BUS WAS	ERVICE E EXHAUS JANITOR E SH EXHAU SH EXHAU FICATION	XHAUST ST ST	WED NVE 12700 160 1500 430 1000	.25 .25 .25	42.25 8.2 16.75 9		(dH) 2 1/30 1/4 1/4 37W	BAREAU STATES ST	ELECTRONICALLY COMMUTATED	POTOR P.C. ECM MCA (AMPS, TOTAL)	AL)		k 44 k 14 k 14 k 14	9.5x48.5 NA 3.5x18.5 1.5x14.5 NA		6 9 67 82 82 94 PPROX. WEIGHT (LBS.)	L VIBRATION ISOLATOR TYPE		IMIC RAINTS PINCE FACTOR - - - - -	MANUFACTURER GREENHECK GREENHECK GREENHECK GREENHECK AIRIUS	F DESIGN MODEL GB-420-VG SQ-70 GB-106 GB-100 A-25-SP-STD-120	ШО Ш Ш С Ц Ц Ц С С Ц Ц С С Ц С С Ц С С Ц С С Ц С С Ц С С Ц С С Ц С С Ц С
											GA	S-FIR	ED	UNI	Г НЕ	ATE	ERS													
B. ELECTRIC SEP ADEQUACY OF SUPPLIER. CC	S: RVICE - SINGLE IS 7" RVICE - SINGLE PC F LISTED CIRCUIT OST FOR INCREAS ELECTED SHALL B	DINT POWER SIZE MUST B E OR CHANG	E VERIFIED E OF ELEC	BY H.C. AND	UNIT				WITH FAC ⁻ FIELD ADJ	FORY DISC USTABLE S EN REMOT	CONNEC SPEED (E CONT	TED OR SPE TING MEAN CONTROL, A TROL IS SPI	NS, INT AND RE	ÉRNAL C EMOTE A	VERLO	AD PRO SPEED		l, DL								SPECIFIC/ FREQUIRI		FOR VIBRATION ISOL	ATOR	
	DESCRIPTION		NTING	LOCAT ROOM NAM	ROOM NUMBER	HORIZONTAL DISCHARGE VERTICAL DISCHARGE	ED COMBUST ER VENTED	GRAVIT GAS INF	HEATING OUT	CFM	MOTOR HP / W W W HIGH EXT. STATIC BLOWER	ELECTRONICALLY COMMUTATED MOTORS	FULL LOAD AMPS (FLA)	MIN CIRCUIT AMPS (MCA)	MAX OVER CURRENT PROTECTION (MOCP)	MINIMUM SCCR (AMPS)	GAS CONNECTION SIZE	- VENT OUTLET SIZE	COMB. AIR INLET SIZE	HTCIM 1	HEIGHT	DEPTH	APPROX. OPERATING WEIGHT (LBS)	WALL MOUNTED	DSTAT			MANUFACTUF		SEE NOTE
	FIRED UNIT HEATE		ENDED		T BW2	2 • -	- -	• 30	24.9	500 1	/15 -	- 208-	1 2			5k	0.5"	4"				22" 22"	67 •	-	• -	-	· -	MODINE MODINE	HD 30	_

SPLIT STSTEM HEAT PUMP UNITS

GENERAL NOTES: A. UNLESS NOTED OTHERWISE, CAPACITIES SHALL BE BASED ON INTERIOR DESIGN CONDITIONS OF 78 DB / 65 WB COOLING; 70 DB HEATING. B. HEAT PUMP COOLING CAPACITY SHALL BE BASED ON 95°F AMBIENT CONDITIONS. C. HEAT PUMP HEATING CAPACITY SHALL BE BASED ON 20°F AMBIENT CONDITIONS. . CONDENSING UNITS SHALL INCLUDE LOW AMBIENT COOLING & HEATING CONTROLS AND ACCESSORIES, OPERATIONAL TO 20°F. . REFRIGERANT PIPING - SIZES LISTED ARE APPROX. CIRCUITING, SIZING, NUMBER

OF PIPES AND CIRCUITS, ARRANGEMENT, ETC. SHALL BE IN ACCORDANCE WITH

MANUFACTURER'S RECOMMENDATIONS.

POWER SERVICE CONNECTIONS TO EACH UNIT. UNLESS NOTED OTHERWISE, ADEQUACY OF LISTED CIRCUIT SIZES MUST BE VERIFIED BY H.C. AND UNIT SUPPLIER. COST FOR INCREASE OR CHANGE OF ELECTRIC SERVICE FOR EQUIPMENT SELECTED SHALL BE BORNE BY H.C.

NOTES: 1. POW	: /ER FOR INDOOR UNIT IS TO	BE FED THRU	THE OUTDOOR	UNIT PC	WER SL	JPPLY.															4		OUTD	OOR HEAT	PUMP C	ONDENS		Г - AIR CC	OLED			
		· · · · · · · · · · · · · · · · · · ·						IN	DOOR UNIT												_				ELEC	CTRICAL	SERVICE		BASIS OF D	ESIGN		
		TYPE	LOCATIO	N		FAN	1		COIL CAPA			ELECTE	RICAL SE	RVICE	APPRC	X. DIME	NSIONS		BASIS OF D	ESIGN												
								CO	OLING	HEA	TING																					
MARK	DESCRIPTION	WALL-MOUNTED CEILING-MOUNTED CEILING RECESSED		ROOM NUMBER	CFM	EXTERNAL STATIC PRESSURE (IN. W.C.)	MOTOR (HP) ELECTRONICALLY COMMUTATED MOTOR	ENT. AIR TEMP DB/WB	TOTAL / SENSIBLE CAPACITY (MBH)	ENTERING AIR TEMP. DB	CAPACITY (MBH)	SERVED THRU OUTDOOR UNIT (NOTE 1) VOLTAGE - PHASE	MIN CIRCUIT AMPS (MCA)	MINIMUM SCCR (AMPS)	LENGTH	WIDTH	НЕІСНТ	COOLING COIL CONDENSATE DRAIN PUMP (NO	MANUFACTURER	MODEL	MARK	DESCRIPTION	NOMINAL TONS (SIZED TO MATCH COIL)	VARIABLE SPEED COMPRESSOR(S) VOLTAGE - PHASE	FULL LOAD AMPS (FLA)	MIN CIRCUIT AMPS (MCA)	MAX OVER CURRENT PROTECTION (MOCP)	MINIMUM SCCR (AMPS)	MANUFACTURER	MODEL	HOT GAS BYPASS	SEE NOTE
SHP-1	WALL MOUNT HEAT PUMP	•	I.T.	BG3	450	NA	30W -	80/67	18 / 13.1	70	13.9	• 208-1	1		36"	10"	12"	•	MITSUBISHI	PKA	HPCU-1	OUTDOOR UNIT	1.5	• 208-	1	11	30	5k	MITSUBISHI	PUZ	-	1
SHP-2	WALL MOUNT HEAT PUMP	•	ELECTRIC	BG2	450	NA	30W -	80/67	18 / 13.1	70	13.9	• 208-1	1		36"	10"	12"	•	MITSUBISHI	PKA	HPCU-2		1.5	• 208-		11	30	5k	MITSUBISHI	PUZ	-	1
	WALL MOUNT HEAT PUMP		I.T.	BW4		NA	30W -	80/67	18 / 13.1	70		• 208-1	1		36"	10"	12"	•	MITSUBISHI	PKA	HPCU-3			• 208-		11	30	5k	MITSUBISHI	PUZ		1

ROOFTOP HEATING-ONLY MAKE-UP AIR UNITS - GAS-FIRED

C. UNIT CONFIGURATIONS (SUPPLY FAN POSITION RELATIVE TO D. HEATING L.A.T. IS BASED ON FULL UNIT CFM AT LISTED E.A.T. F. THE LISTED MAX UNIT HEIGHT INCLUDES THE INTEGRAL UNIT AND MBH OUTPUT. BURNER - "HDT" - HORIZONTAL DRAW THRU; "VDT" -VERTICAL DRAW THRU; "HBT" - HORIZONTAL BLOW THRU; E. IF EC MOTORS ARE INDICATED OR SPECIFIED, EACH MOTOR "VBT" - VERTICAL BLOW THRU. REFER TO DRAWINGS FOR SHALL BE PROVIDED WITH FACTORY DISCONNECTING MEANS, INTERNAL OVERLOAD PROTECTION, FIELD ADJUSTABLE SPEED ACCOMMODATE CONDENSATE TRAP HEIGHT, THEN THE

CONTROL, AND REMOTE ANALOG SPEED CONTROL INPUT WHEN REMOTE CONTROL IS SPECIFIED, SAME AMOUNT. COORDINATED WITH THE BUILDING AUTOMATION SYSTEM.

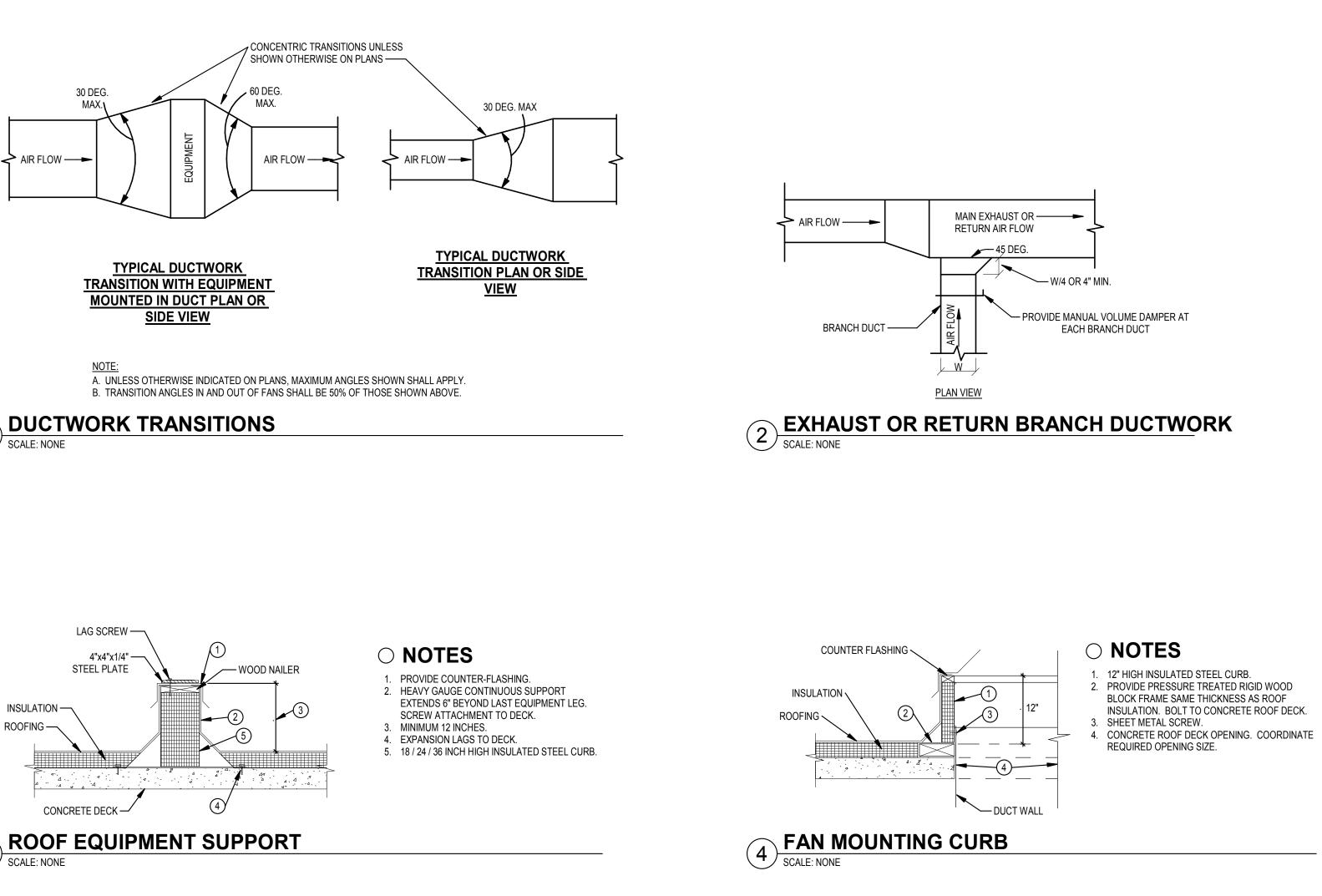
BASE RAIL BUT DOES NOT INCLUDE THE SPECIFIED CURB (HEIGHT). IF THE HEIGHT OF THE SPECIFIED CURB IS REQUIRED TO BE INCREASED, SUCH AS TO LISTED MAX UNIT HEIGHT SHALL BE DECREASED BY THAT

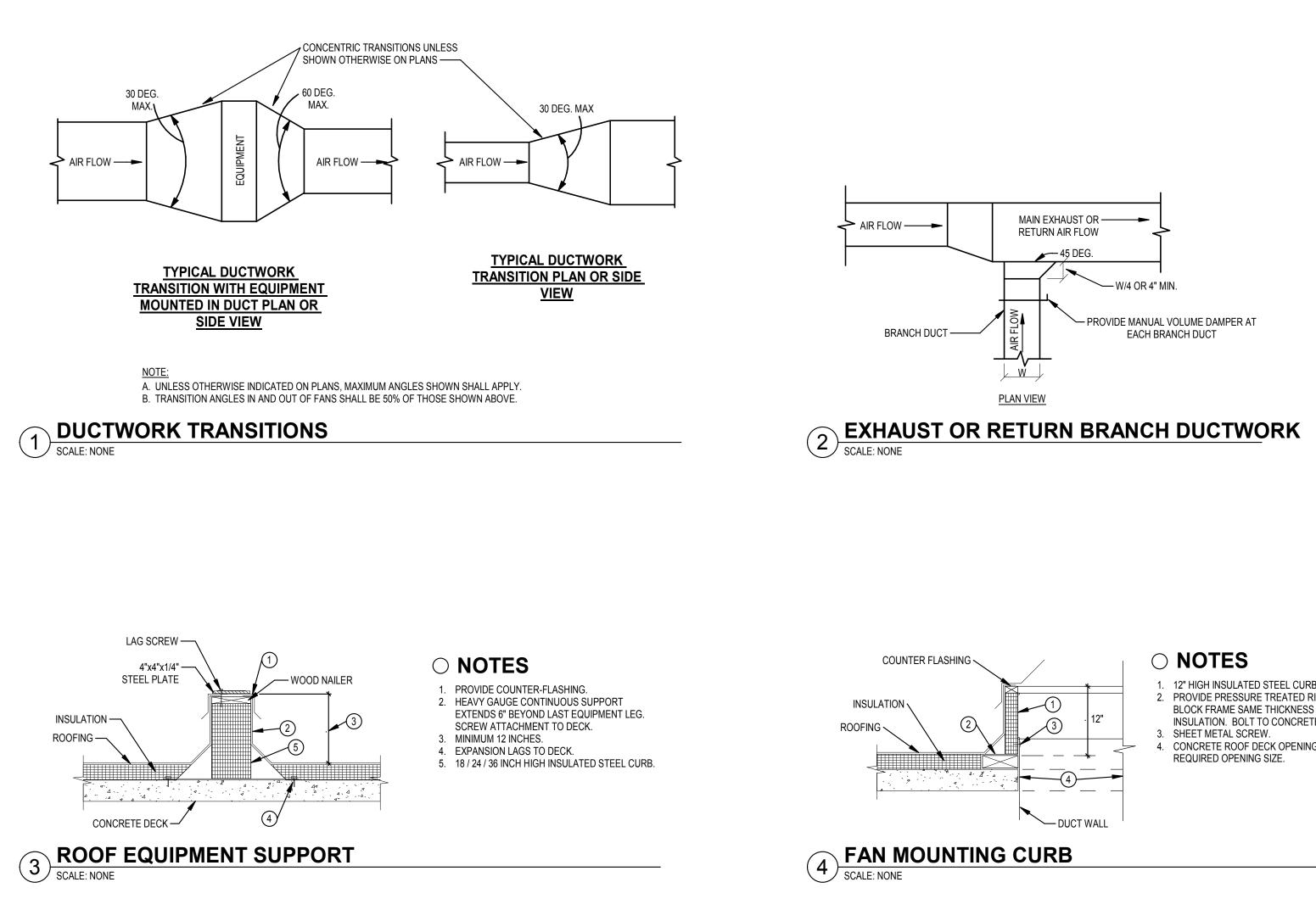
G. ELECTRIC SERVICES FOR OUTDOOR UNIT AND INDOOR UNIT - SINGLE POINT H. IF EC MOTORS ARE INDICATED OR SPECIFIED, EACH MOTOR SHALL BE PROVIDED WITH FACTORY DISCONNECTING MEANS, INTERNAL OVERLOAD PROTECTION, FIELD ADJUSTABLE SPEED CONTROL, AND REMOTE ANALOG SPEED CONTROL INPUT WHEN REMOTE CONTROL IS SPECIFIED, COORDINATED WITH THE BUILDING AUTOMATION SYSTEM.

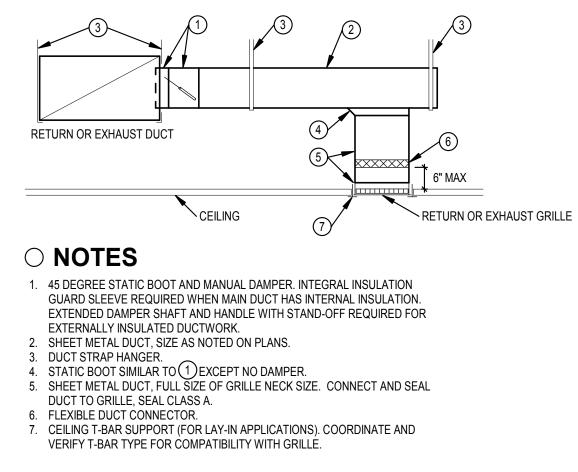
I. COOLING COIL CONDENSATE PUMPS SHALL BE FACTORY-FURNISHED, COMPATIBLE WITH INDOOR FAN COIL UNIT VOLTAGE AND POWERED FROM THE INDOOR FAN COIL UNIT SINGLE POINT POWER CONNECTION.



					Gl	RAV	ITY F	ROO	F VE	NTI	ATORS	5							
	. NOTES: OPENING SIZES ARE APPROXIMATE. VERIFY S OORDINATE.	SIZE						/ING ARC		DOF OPE	ENING,						TO SPECIFICATIONS FOR	OR	
	RACTOR SHALL COORDINATE GRV FINISH DLOR WITH ARCITECT BEFORE ORDERING.	I	1				1						- DA OK			0.440			
				W.C.)	NECK	SIZE	APPR	рх. ноо	D SIZE		ш		BACK DAM	DRAFT IPER		SMIC RAINTS	BASIS OF DI	ESIGN	
MARK	DESCRIPTION	SERVICE	CFM	MAX. STATIC PRESSURE (IN.	LENGTH	WIDTH	LENGTH	WIDTH / DIAMETER	HEIGHT	CURB HEIGHT	APPROX. ROOF OPENING SIZE	APPROX. WEIGHT (LBS.)	MOTORIZED	GRAVITY	REQUIRED	IMPORTANCE FACTOR	MANUFACTURER	MODEL	SEE NOTE
GRV-1	LOUVERED GRAVITY VENTILATOR	INTAKE	1500	.08	18"	18"	24"	24"	28"	10"	18x18	52	-	•	-	-	GREENHECK	WIH	1
GRV-2	SPUN ALUMINUM GRAVIITY VENTILATOR	INTAKE	430	.1	8"	8"	21"	21"	20"	12"	10.5x10.5	20	-	•	-	-	GREENHECK	GRSI	1
GRV-3	SPUN ALUMINUM GRAVIITY VENTILATOR	INTAKE	430	.1	8"	8"	21"	21"	20"	12"	10.5x10.5	20	-	•	-	-	GREENHECK	GRSI	1

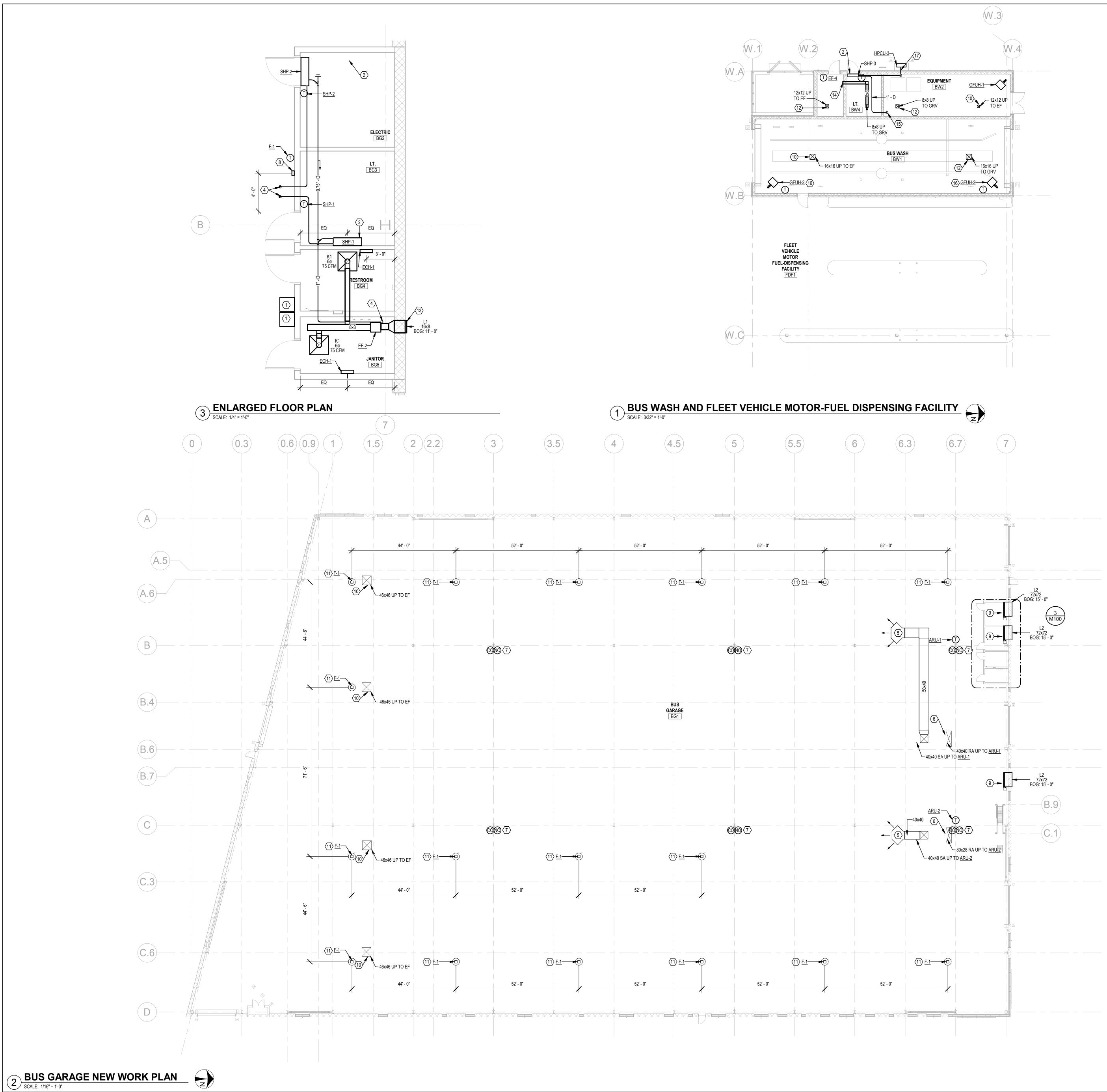


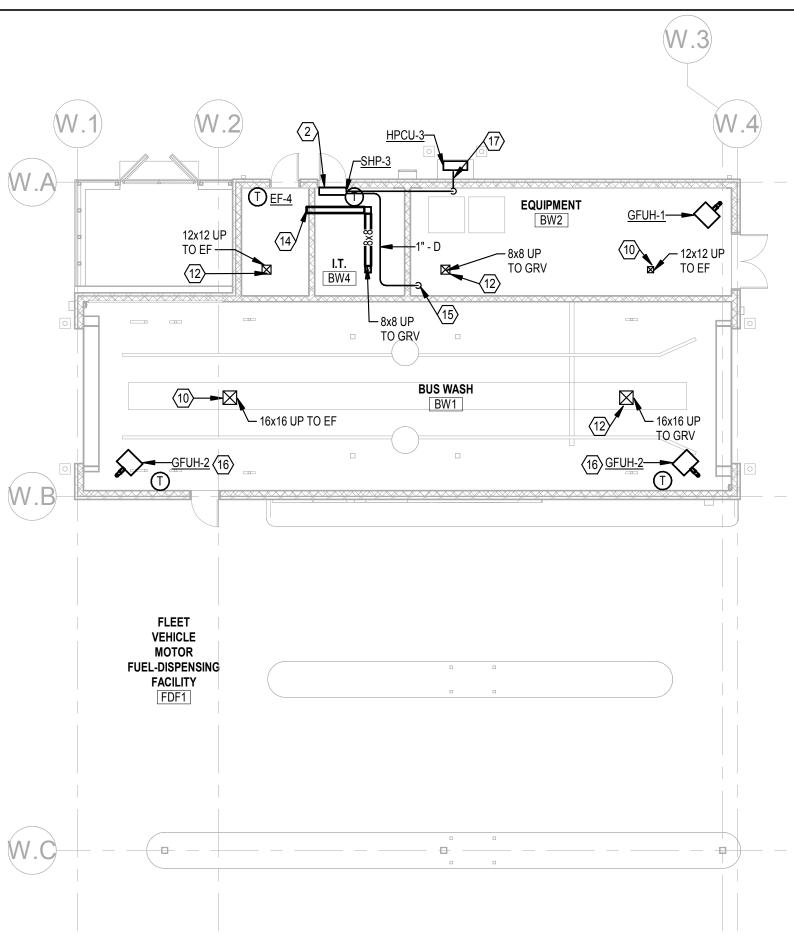




5 RETURN/EXHAUST GRILLE DUCT CONNECTION SCALE: NONE







\bigcirc GENERAL NOTES

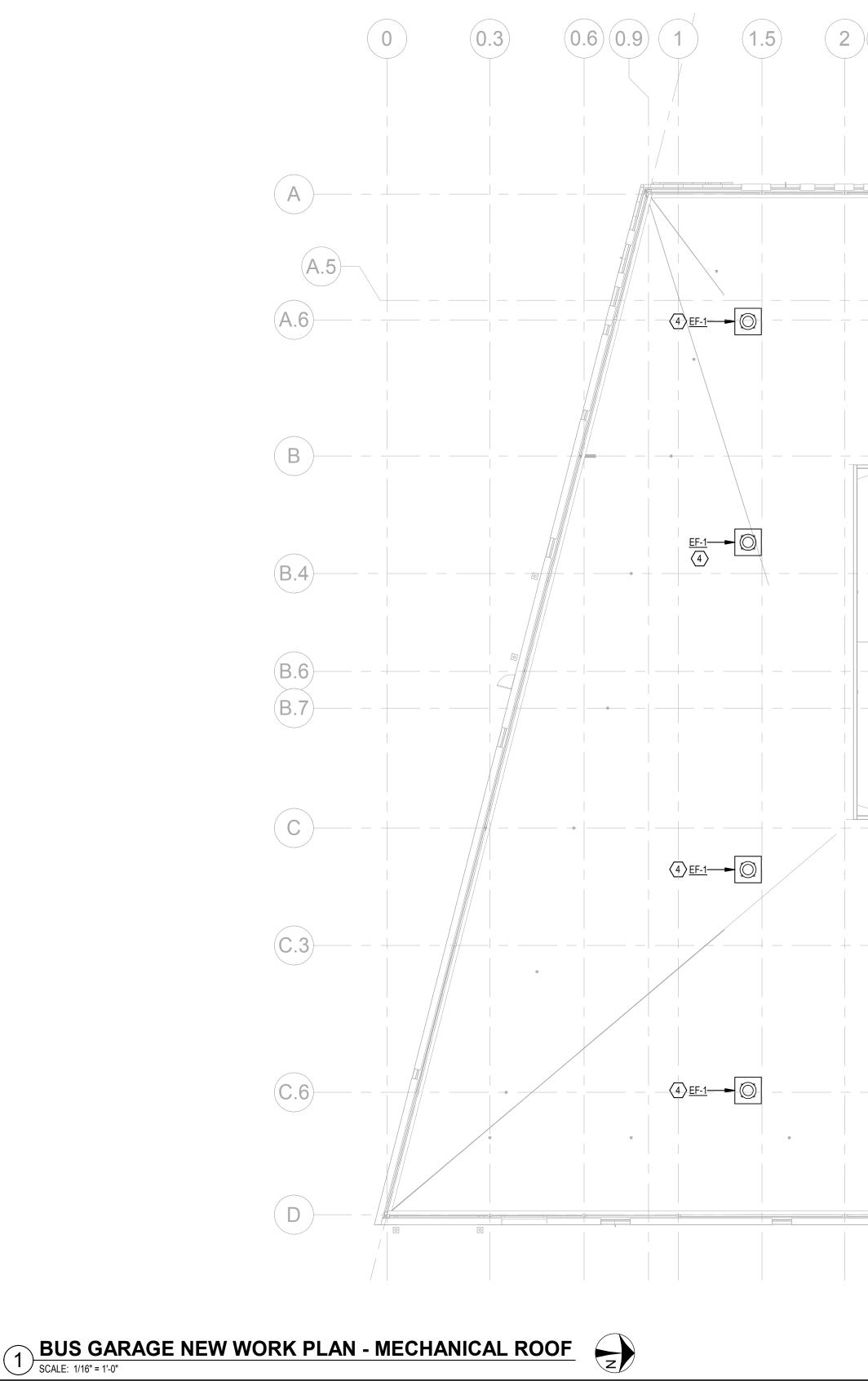
A. CONTRACTOR SHALL COORDINATE ALL FINAL DIMENSIONS WITH ARCHITECT.

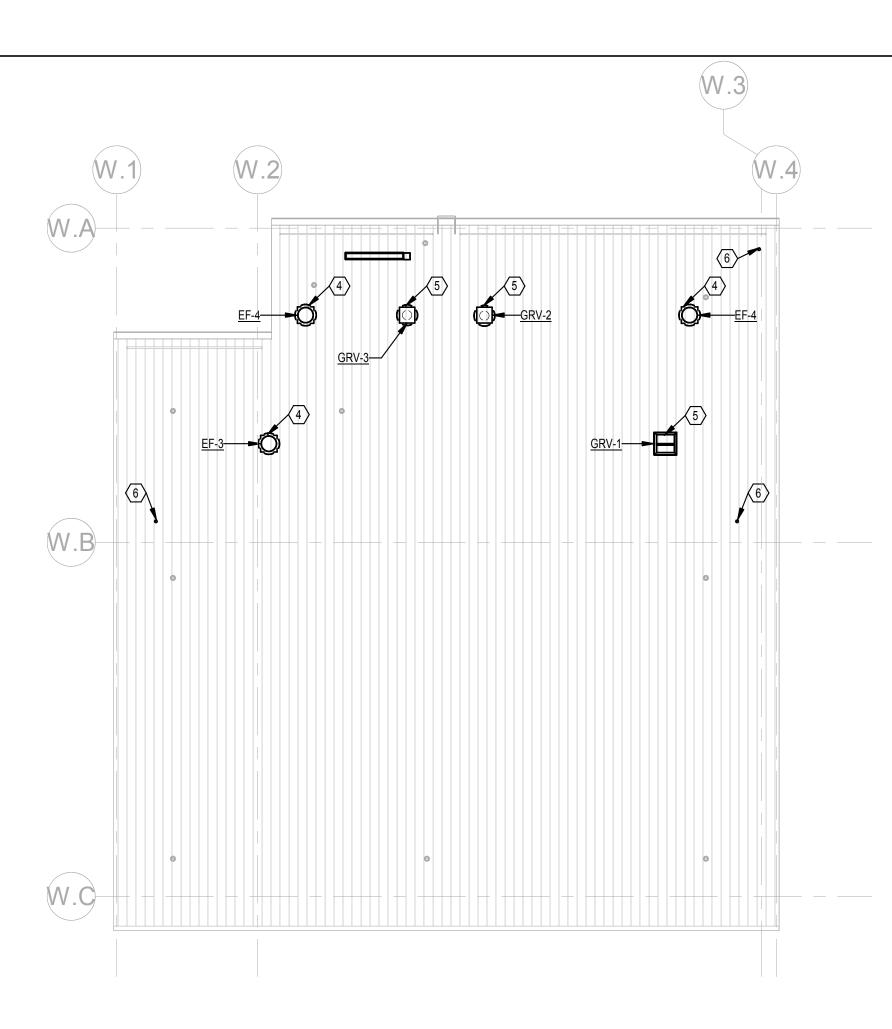
- 1. DRINKING FOUNTAIN SHOWN FOR REFRENCE ONLY. REFER TO PLUMBING DRAWINGS.
- 2. MOUNT SHP-1 TO WALL. PROVIDE DRAINPAN WITH FLOAT SWITCH WIRED TO SHUTDONW UNIT.
- 3. REFRIGERANT LINES UP TO ROOF. PROVIDE PIPING, SIZING, AND ACCESSORIES PER MANUFACTURERS RECOMMENDATIONS.
- 4. ROUTE CONDENSATE TO MOP SINK. TERMINATE 2 INCH ABOVE RIM. 5. PROVIDE 3-WAY DIFFUSER EQUIVALENT TO TO GREENHECK H38, MOUNT BOD
- AT 14'-6".
- 6. PROVIDE RETURN AIR DUCT UPTO ARU. COVER OPENING WITH 0.5" WIRE MESH.
- 7. PROVIDE COMBINATION CO & NO2 SENSOR AND WIRE TO CONTROLLER AND MOUNT AT 46" A.F.F. EQUAL TO BRASCH GENERATION 2.
- 8. MOUNT GAS DETECTION CONTROLLER ON WALL EQUAL TO BRASCH GDCP TOUCH. COORDINATE WITH E.C. FOR CONTROL POWER WIRING.
- 9. PROVIDE INTAKE LOUVER WITH MOTORIZED 2-POSITION DAMPER AND INTERLOCK OPERATION WITH GARAGE EXHAUST FAN SYSTEM. COORDINATE LOUVER COLOR SELECTION WITH ARCHITECT BEFORE ORDERING. 10. PROVIDE DUCTWORK OPEN TO SPACE TO MATCH EXHAUST FAN SIZE. COVER
- OPENING WITH 0.5" WIRE MESH. 11. SUSPEND CIRCULATING FAN FROM STRUCTURE.

SEAL WEATHERTIGHT.

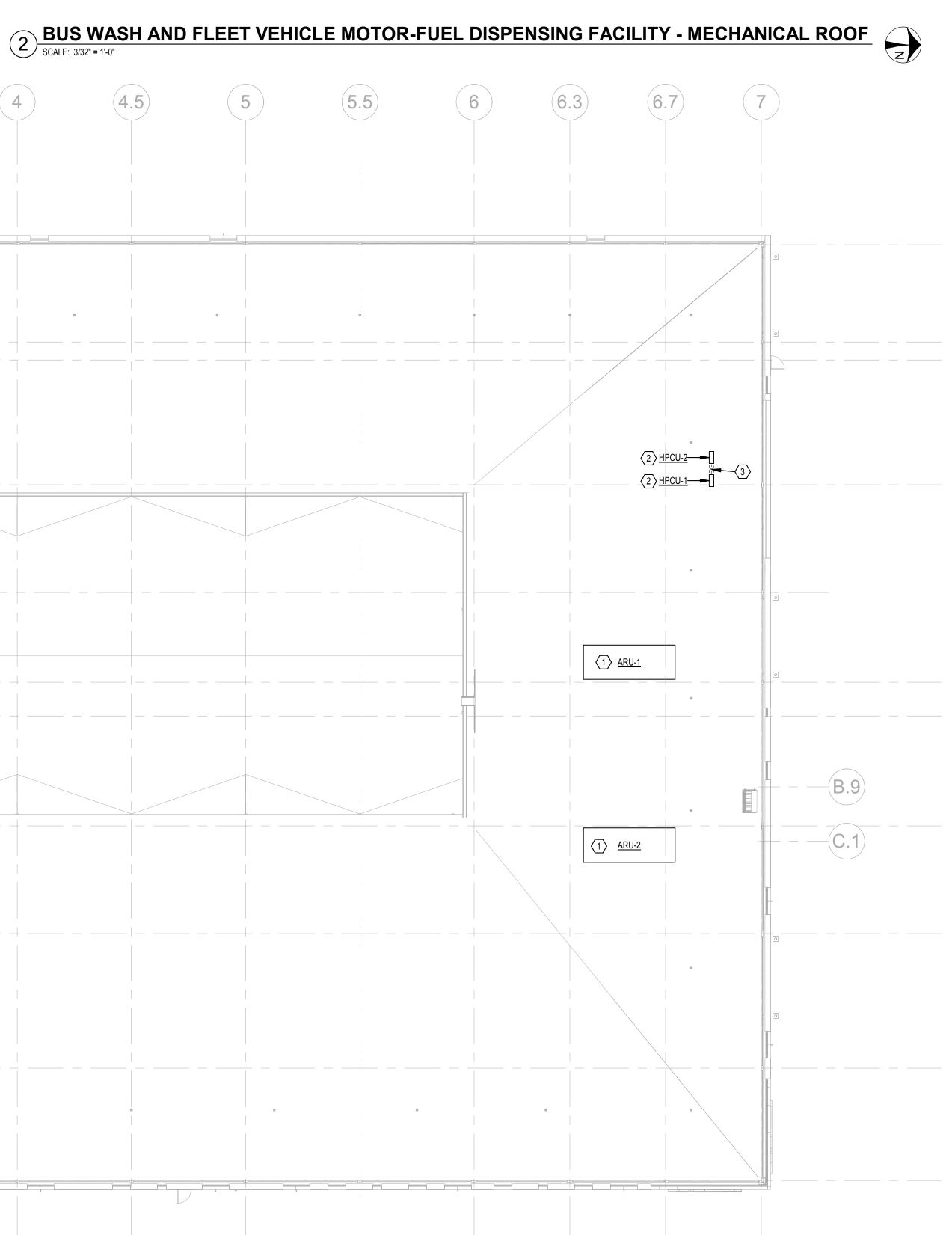
- 12. PROVIDE DUCTWORK OPEN TO SPACE TO MATCH GRV SIZE. COVER OPENING
- WITH 0.5" WIRE MESH. 13. COORDINATE EXHAUST GRILLE COLOR SELECTION WITH ARCHITECT BEFORE
- ORDERING.
- 14. PROVIDE DUCTWORK OPEN TO SPACE TO MATCH DUCT SIZE. COVER OPENING WITH 0.5" WIRE MESH.
- 15. ROUTE CONDENSATE TO NEAREST FLOOR DRAIN. TERMINATE WITH AIR GAP.
- 16. COORDINATE FINAL LOCATION OF UNIT HEATER WITH WASH BAY EQUIPMENT. 17. REFRIGERANT LINES THRU WALL TO OUTDOOR UNIT ON GRADE. PROVIDE PIPING, SIZING, AND ACCESSORIES PER MANUFACTURERS RECOMMENDATIONS. PROVIDE PIPE SLEEVE AT WALL PENETRATION AND







			SCALE	: 3/32" = 1'-0"			
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\bigcirc NOTES

- REQUIREMENTS AND PER MANUFACTURERS RECOMMENDATIONS. 2. INSTALL CONDENSING UNIT ON ROOF ABOVE AND ON ROOF MOUNTED EQUIPMENT RAILS AND SECURE TO WITHSTAND WIND LOAD REQUIREMENTS, AND PER MANUFACTURERS RECOMMENDATIONS.
- 3. REFRIGERANT LINES ON ROOF. PROVIDE PIPING, SIZING, AND ACCESSORIES PER MANUFACTURERS RECOMMENDATIONS. PROVIDE PROTECTIVE JACKETING ON PIPING EXPOSED TO OUTDOORS. ROUTE PIPING TO INDOOR EQUIPMENT. PROVIDE PIPE PENTRATION CURB FOR WATER TIGHT INSTALLATION ON ROOF.
- 4. INSTALL ROOF MOUNTED FAN ON ROOF CURB. SECURE TO WITHSTAND WINDLOAD REQUIREMENTS, AND PER MANUFACTURERS RECOMMENDATIONS. COORDINATE COLOR AND FINISH WITH ARCHITECT AND MANUFACTURER. COORDINATE WITH G.C. TO PROTECT NAME PLATE DATA WHEN PAINTING.
- 5. INSTALL ROOF MOUNTED GRV ON ROOF CURB. SECURE TO WITHSTAND WINDLOAD REQUIREMENTS, AND PER MANUFACTURERS RECOMMENDATIONS. COORDINATE COLOR AND FINISH WITH ARCHITECT AND MANUFACTURER. COORDINATE WITH G.C. TO PROTECT NAME PLATE DATA WHEN PAINTING.
- 6. PROVIDE EXHAUST FLUE TO MATCH UNIT HEATER SIZE AND PROVIDE RAIN CAP. COORDINATE PAINT COLOR AND FINISH WITH G.C., ARCHITECT, AND MANUFACTURER.

1. INSTALL ARU ON ROOF MOUNTED CURB. SECURE TO WITHSTAND WINDLOAD



GENERAL NOTES: (APPLIES TO ALL DIVISION 26 SHEETS)

A. ALL CONDUCTORS WILL BE COPPER OR ALUMINUM IN CONDUIT.

- B. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NEC FOR A COMPLETE AND OPERATIONAL INSTALLATION.
- C. PROVIDE A SEPARATE NEUTRAL CONDUCTOR WITH EACH 20A., 120V. POWER CIRCUIT GROUND TOTAL SYSTEM PER NEC
- D. ALL 20 AMP, 120 VOLT POWER CIRCUITS SHALL CONSIST OF #12 AWG CONDUCTORS UNLESS INDICATED OTHERWISE.
- E. ALL EMPTY CONDUITS SHALL BE INSTALLED WITH PULLWIRE PER SPECIFICATIONS.
- F. ALL SURFACE PATCHING AND FINISHING WILL BE BY THE ELECTRICAL CONTRACTOR OR TO POINT CONSISTENT WITH G.C. RESPONSIBILITIES.
- G. ALL WIRING AND CONDUIT SHALL BE INSTALLED CONCEALED ABOVE ALL LAY-IN CEILING SYSTEMS. WHERE WIRING IS REQUIRED TO BE RUN EXPOSED ALONG WALLS AND CEILINGS. IT SHALL BE RUN IN METAL SURFACE RACEWAY (WIREMOLD UNLESS INDICATED OTHERWISE) MOUNTED TIGHT TO SURFACE MATCHING CONTOUR OF BUILDING LINES AND PAINTED. COORDINATE ALL LOCATIONS AND ROUTES WITH ENGINEER PRIOR TO ROUGH-IN.
- H. ALL EXPOSED CONDUIT ABOVE GRADE WILL BE RIGID GALVANIZED METALLIC WITH ALL STEEL FITTINGS, PAINTED. I. ALL EXTERIOR MOUNTED CONDUIT SHALL BE SEALED WATER AND MOISTURE TIGHT AND BE PAINTED. ALL EXTERIOR
- MOUNTED DEVICES SHALL BE WEATHERPROOF NEMA 3R, UNLESS OTHERWISE NOTED. J. E.C. IS RESPONSIBLE TO PROVIDE CONCRETE PADS FOR ALL ELECTRIC EQUIPMENT ASSOCIATED WITH HIS WORK, NOT ALL CONCRETE PADS ARE NECESSARILY INDICATED OR SPECIFIED ON THE DRAWINGS AND SPECIFICATIONS, REFER TO SPEC SECTION 03300. COORDINATE EXACT SIZE, REINFORCING AND OTHER SPECIFIC REQUIREMENTS WITH THE APPROPRIATE EQS AND PROVIDE ACCORDINGLY.
- K. CONTRACTOR SHALL RESPECT THE OWNERS PROPERTY AND PROTECT FROM DUST AND DEBRIS THOUGH-OUT THE COMPLETE PROJECT. PROVIDE DROP CLOTHS, VISQUEEN, ETC... TO ELIMINATE ANY AND ALL MESSES. WORK AREA(S) SHALL BE CLEANED UP PRIOR TO EACH WORK DAYS COMPLETION.
- L. ALL UNDERGROUND CONDUITS/DUCTBANKS SHALL BE SCHEDULE 40 PVC PER DETAIL(S) ON SHEET E003. ALL STUBS AND 90 DEGREE ELBOWS SHALL BE FIBERGLASS OR RIGID GALVANIZED STEEL LOCATE AND DIMENSION ALL ROUTES ON "AS-BUILTS" DRAWINGS ACCORDINGLY. METALLIC CONDUITS ARE TO BE UTILIZED ON RISERS, ALL EMPTY CONDUITS SHALL HAVE PULLWIRES. ALL CONDUITS TO BE DIRECT BURIED AT 36" BELOW GRADE UNLESS INDICATED OTHERWISE. PROVIDE CONCRETE ENCASEMENT WHERE INDICATED ON PLAN.
- M. PROVIDE ACOUSTICAL OUTLET BACKER PUTTY PAD ON DEVICE JUNCTION BOXES MOUNTED IN 1-HOUR RATED WALLS. SEALANT TO BE MANUFACTURED BY KINETICS (ISO BACKER), ACOUSTICAL SOLUTIONS(QUIET PUTTY) OR SOUND PROOFING COMPANY(PUTTY PADS). 1-HOUR RATED WALLS DENOTED ON ARCHITECTURAL DRAWINGS.
- N. THIS CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES, MISCELLANEOUS CONDUITS AND PIPING
- PRIOR TO ANY DIGGING. ANY DAMAGE TO ABOVE MENTIONED ITEMS SHALL BE HIS RESPONSIBILITY TO REPAIR. O. COORDINATE EXACT ROUTE OF ALL UNDERGROUND CONDUITS WITH CIVIL ENGINEER AT SITE PRIOR TO EXCAVATION

UTILIZE LONG SWEEPING BENDS ON ALL UNDERGROUND CONDUITS.

- P. ALL OCCUPANCY SENSORS REQUIRING A POWER PACK AND POWER SHALL TAP THEIR POWER FEED AHEAD OF ANY/ALL SWITCHING. IN CORRIDORS AND PUBLIC SPACES CONTROLLED BY THE LIGHTING AUTOMATION SYSTEM THE POWER PANEL SHALL BE FED FROM THE NEAREST EMERGENCY EXIT LIGHT CIRCUIT (NON-SWITCHED).
- Q. FIRESTOPPING ASSEMBLIES SHALL BE PROVIDED AT PENETRATIONS OF CONDUITS, BUS DUCTS, CABLES, CABLE TRAYS AND OTHER ELECTRICAL ITEMS THRU FIRE RATED FLOORS, FIRE RATED FLOOR-CEILING AND ROOF CEILING ASSEMBLIES, FIRE RATED WALLS AND PARTITIONS AND FIRE RATED SHAFT WALLS AND PARTITIONS. IN ADDITION, FIRESTOPPING ASSEMBLIES SHALL BE PROVIDED AT PENETRATIONS THRU 0-HOUR RATED FLOORS. REFER TO SPECIFICATION SECTION 07 84 13 PENETRATION FIRESTOPPING FOR COMPLETE REQUIREMENTS.
- R. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL LIGHTING FIXTURES, WHERE REFLECTED CEILING PLANS INDICATE A LARGER QUANTITY OF LIGHTING FIXTURES THAN THAT SHOWN ON THE ELECTRICAL DRAWINGS FOR A PARTICULAR SPACE, THE REFLECTED CEILING PLANS SHALL BE FOLLOWED FOR THAT SPACE.
- S. VERIFY EXACT LOCATION OF ALL LIGHTING FIXTURES WITH REFLECTED CEILING PLAN AND /OR ARCHITECT PRIOR TO ROUGH-IN. COORDINATE LOCATIONS OF LIGHTING FIXTURES WITH MECHANICAL DUCTS AND SPRINKLE PIPES AND HEADS BEFORE ROUGH-IN TO PREVENT CONFLICTS.
- T. STAGGER RECEPTACLES AND OTHER RECESSED OUTLETS WHEN LOCATED ON OPPOSITE SITES OF PARTITION TO ELIMINATE SOUND TRANSMISSION FROM ONE SPACE TO THE OTHER. CENTER DEVICES WHERE APPLICABLE IN EACH WALL SECTION. 1. WHERE DUPLEX AND ISOLATED GROUND DUPLEX RECEPTACLES ARE LOCATED NEXT TO EACH OTHER ON PLAN, THEY SHALL BE INSTALLED IN COMMON 2 GANG OUTLET BOX/COVERPLATE ASSEMBLY. EXISTING OUTLETS LOCATED IN WALLS TO BE EURRED OUT SHALL BE EXTENDED TO NEW WALL SURFACE 3. NEW OUTLETS INSTALLED IN FURRED OUT WALLS SHALL BE SHALLOW TYPE TO AVOID MASONRY WORK.
- U. EXACT LOCATION OF ALL DEVICES SERVING EQUIPMENT TO BE VERIFIED AT SITE WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
- V. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF ALL NEW ELECTRICAL DEVICES WITH THE ARCHITECT PRIOR TO ROUGH-IN. DEVICES SHALL INCLUDE ALL NEW WORK INDICATED ON THE DRAWINGS: INCLUDING BUT NOT LIMITED TO POWER RECEPTACLES. TV OUTLET, LIGHTING CONTROLS AND SWITCHES, MOTOR CONTROLLERS, FA COMPONENTS, INTERCOM/PAGING COMPONENTS AND SECURITY/CCTV EQUIPMENT.
- W. DRAWINGS SHOW GENERAL LOCATIONS AND APPROXIMATE MOUNTING HEIGHTS FOR VOICE/DATA/VIDEO AND AV OUTLETS AND EQUIPMENT. E.C. SHALL COORDINATE EXACT LOCATIONS IN FIELD WITH CASEWORK AND WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH-INS. CEILING PROJECTOR OUTLET LOCATIONS SHALL BE COORDINATED WITH TECHNOLOGY CONTRACTOR TO ENSURE PROPER PLACEMENT OF PROJECTORS AND CLEARANCE FROM LIGHTING FIXTURES AND OCCUPANCY SENSORS. WALL FLAT PANEL OUTLETS SHALL BE COORDINATED WITH TECH CONTRACTOR TO AVOID CONFLICTS WITH MOUNT.
- X. ALL RECEPTACLE AND DATA OUTLETS TO BE MOUNTED AT 18"M.H. UNLESS OTHERWISE NOTED. DATA OUTLETS LOCATED ADJACENT TO DUPLEX AND DOUBLE DUPLEX RECEPTACLES SHALL BE MOUNTED AT THE SAME M.H. WITH THE RESPECTIVE RECEPTACLE.
- Y. BRANCH CIRCUIT WIRE SIZING CHART TO BE UTILIZED AS GUIDELINE FOR VOLTAGE DROP COMPENSATION, INCREASE CONDUIT SIZING PER WIRE SIZE. A) 20A-120V CIRCUITS B) 20A-277V CIRCUITS 1) #12 WIRE - 60' LENGTH MAX. 1) #12 WIRE - 138' LENGTH MAX
- 2) #10 WIRE 94' LENGTH MAX. 2) #10 WIRE 219' LENGTH MAX 3) # 8 WIRE - 137' LENGTH MAX. 3) # 8 WIRE - 318' LENGTH MAX 4) # 6 WIRE - 218' LENGTH MAX. 4) # 6 WIRE - 504' LENGTH MAX
- Z. ALL ELECTRICAL SPLICES FOR WIRE SIZES 6 AWG AND LARGER SHALL BE HYDRAULIC CRIMP TYPE.
- AA. E.C. SHALL PROVIDE SINGLE POLE SWITCHING FOR MANUAL CONTROL OF LIGHTING FOR EACH SPACE THROUGH THE BUILDING UNLESS INDICATED OTHERWISE. INTENT IS FOR NEW LIGHTING TO BE CONTROLLED WITH OCCUPANCY SENSORS WITH MANUAL OVERRIDE.
- BB. E.C. IS RESPONSIBLE TO WARRANTY WORK FOR A ONE YEAR PERIOD STARTING ON THE DATE OF SUBSTANTIAL COMPLETION. E.C. SHALL SCHEDULE A ONE YEAR WARRANTY WALK-THROUGH WITH THE OWNER AND ENGINEER 9 MONTHS FROM THE SUBSTANTIAL COMPLETION DATE (3 MONTHS PRIOR TO END OF THE ONE YEAR WARRANTY PERIOD). E.C. IS RESPONSIBLE AT THAT TIME TO REPLACE/REPAIR ANY NON-WORKING EQUIPMENT OR DEVICES COVERED UNDER THE WARRANTY AS DESCRIBED IN THE CONTRACT SPECIFICATIONS.
- CC. WORK DEEMED NOISY OR DISRUPTIVE (AS DETERMINED BY THE DISCRETION OF THE OWNER) SHALL BE PERFORMED OUTSIDE OF NORMAL WORKING HOURS. E.C. SHALL COORDINATE SCHEDULE FOR THIS TYPE OF WORK (AND TIMING) WITH THE OWNER.
- DD. DRAWINGS INDICATE EQUIPMENT AND DEVICES BUT MINIMAL WIRING; E.C. IS RESPONSIBLE TO PROVIDE WIRING, BRANCH CIRCUITRY CABLING, ETC... TO EVERY ELECTRICAL DEVICE INDICATED ON THESE PLANS. EE. ALL WIRING AND CABLING MOUNTED ABOVE CEILINGS SHALL BE PLENUM RATED.
- FF. THE NOTES AND SYMBOLS SET DOWN ON THESE DRAWINGS ARE FOR THE GUIDANCE OF ALL TRADES INVOLVED IN THE PROJECT AND MUST BE FOLLOWED TO EXECUTE THE WORK AS INTENDED.
- GG. E.C. IS RESPONSIBLE TO PROVIDE ALL LOW VOLTAGE WIRING TO ALL EXTERIOR MOUNTED FIXTURES AND INTERIOR MOUNTED FIXTURES THAT ARE INDICATED TO BE RUN THROUGH THE LIGHTING CONTROL SYSTEM OR INDICATED TO BE DIMMED. COORDINATE EXACT WIRING REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.
- HH. ALL RECEPTACLE COVERPLATES, JUNCTION BOXES AND MISC. ELECTRICAL BOXES SHALL BE LABELED WITH PANEL DESIGNATION AND CIRCUIT NUMBER.
- II. THE CONTRACTOR SHALL REFER TO ALL SPECIFICATIONS SECTIONS, AND ELECTRICAL DRAWINGS FOR DETAILS OF BUILDING CONSTRUCTION TO ENSURE SPACE AND SATISFACTORY ARRANGEMENT FOR THEIR WORK. THE VARIOUS DRAWINGS COMPRISING THE SET ARE INTERDEPENDENT AND MUST BE USED JOINTLY AT ALL TIMES. EACH CONTRACTOR SHOULD REFER TO THE GENERAL REQUIREMENTS OF THE CONTRACT. THESE NOTES AND SYMBOLS SET DOWN ON THE DRAWINGS ARE FOR THE GUIDANCE OF ALL TRADES INVOLVED IN THE CLARIFICATION BEFORE PROCEEDING.
- JJ. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. SEE SPECIFICATIONS FOR MORE SPECIFIC DETAILS ON RESPONSIBILITIES .
- KK. FIELD VERIFY DIMENSIONAL INFORMATION PRIOR TO ORDERING EQUIPMENT. DO NOT SCALE DRAWINGS.
- LL. DIMENSIONS ARE TYPICALLY INDICATED TO THE FINISHED FACE OF WALLS OR PARTITIONS AND CENTER LINES OF COLUMNS UNLESS OTHERWISE INDICATED.
- MM. TITLES, CAPTIONS, HEADINGS, ETC. ARE INTENDED FOR GENERAL REFERENCE AND ARE NOT INTENDED TO LIMIT THE WORK REQUIRED IN ANY WAY. NN. EACH CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF OTHERS. HE SHALL KEEP HIMSELF INFORMED OF THE PROGRESS AND DETAIL DEVELOPMENT OF THE WORK OF OTHERS AND SHALL BE RESPONSIBLE FOR
- COORDINATING AND EXPEDITING HIS WORK WITH OTHERS SO THAT THE PROGRESS OF THE TOTAL WORK SHALL BE KEPT ON SCHEDULE. OO. ALL WORK SHALL BE PERFORMED IN COMPLETE COMPLIANCE WITH ALL GOVERNING CODES AND STANDARDS.
- PP. EACH CONTRACTOR AND/OR TRADE FITTING OR PLACING HIS WORK INTO OR ON THE WORK OF OTHERS DOES SO WITH THE UNDERSTANDING THAT THE INSTALLATION OF HIS WORK CONSTITUTES HIS ACCEPTANCE OF THE SUITABILITY OF THE WORK IN PLACE. IF THE WORK OF OTHERS IS NOT ACCEPTABLE, HE SHALL NOTIFY THE CM AND SUCH WORK SHALL BE CORRECTED. ANY NEW WORK INSTALLED IN UNSUITABLE EXISTING WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR OR TRADE INSTALLING THE NEW WORK. NO CLAIMS FOR ADDITIONAL COMPENSATION FOR CORRECTING WORK INSTALLED IN UNSUITABLE EXISTING CONDITIONS WILL BE CONSIDERED.
- QQ. ANY STRUCTURAL, MECHANICAL, ELECTRICAL, FIRE PROTECTIONS, OR PLUMBING INFORMATION INDICATED ON THE ARCHITECTURAL DRAWINGS IS FOR REFERENCE PURPOSES ONLY, UNLESS OTHERWISE INDICATED.

FLECTRICAL SYMBOLS

FIRE ALARM SYMBOLS

ELEC	TRICAL SYMBOLS
₽ ³	DASH SYMBOL INDICATES PARTICULAR OUTLET OR DEVICE TO BE REMOVED AND CIRCUITRY MADE CONTINUOUS WHERE
$\bigcirc 3$ $\$$	REQUIRED. EXISTING OUTLET OR DEVICE TO REMAIN. MAINTAIN EXISTING CIRCUITING.
•	ELECTRICAL CONNECTION.
0	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R (18" MH UNLESS NOTED OTHERWISE). WHEN U SHOWN, RECEPTACLE TO HAVE
Φ	20A-125V SINGLE RECEPTACLE, NEMA 5-20R (18" MH UNLESS NOTED OTHERWISE).
Ŷ	SPECIAL PURPOSE RECEPTACLE. REFER TO NOTE ON PLAN.
Ţ ₽	20A-125V DOUBLE DUPLEX RECEPTACLE. NEMA 5-20R, (18" MH UNLESS NOTED OTHERWISE) TWO GANG ASSEMBLY.
$\mathbf{\Phi}$	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R WITH BOTTOM OUTLET CONTROLLED BY WALL SWITCH. (18" MH UNLESS
-	
	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R (46" MH UNLESS NOTED OTHERWISE).
● ●	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R WITH 2 INTEGRAL USB CHARGERS (18" MH UNLESS NOTED OTHERWISE). 20A-125V DUPLEX RECEPTACLE, NEMA 5-20R, WITH GROUND FAULT CIRCUIT INTERRUPTER (18" MH UNLESS NOTED
● ^{GF}	OTHERWISE). 20A-125V WEATHERPROOF DUPLEX RECEPTACLE, NEMA 5-20R (HORIZONTAL 18" MH UNLESS NOTED OTHERWISE) WITH
	TAYMAC #MM420G EXTRA DUTY GRAY COVER, VERTICAL MOUNT. 20A-125V WEATHERPROOF DUPLEX RECEPTACLE, NEMA 5-20R WITH GROUND FAULT CIRCUIT INTERRUPTER (18" MH
₩ P ^{WP/GF}	UNLESS NOTED OTHERWISE), WITH TAYMAC #MM420G EXTRA DUTY GRAY COVER, VERTICAL MOUNT.
φ ^{EM}	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R, ON EMERGENCY POWER (18" MH UNLESS NOTED OTHERWISE).
φ	20A-125V POWERLOCK GROUNDING TYPE RECEPTACLE, HOSPITAL USE (66" MH UNLESS NOTED OTHERWISE).
	20A-125V DUPLEX PEDESTAL TYPE FLOOR RECEPTACLE, NEMA 5-20R, IN HUBBELL BA-2527 FLOOR BOX WITH SA-2525 COVERPLATE AND SC-3091 HOUSING. PROVIDE CARPET FLANGE WHERE REQUIRED.
#	FLOOR BOX, # INDICATES TYPE, REFER TO FLOOR BOX (FB) SCHEDULE. IF NO #, PROVIDE HUBBELL BA-2527 FLUSH FLOOR BOX WITH ROUND SA-3925 COVERPLATE AND ONE 20A-125V DUPLEX RECEPTACLE. PROVIDE CARPET FLANGE WHERE REQD.
()	FIRE RATED POKE-THRU, # INDICATES TYPE, REFER TO POKE-THRU (PT) SCHEDULE. IF NO #, PROVIDE HUBBELL 6 INCH RECESSED ACCESS POKE-THRU WITH TWO 20A-125V DUPLEX RECEPTACLES. PROVIDE CARPET FLANGE WHERE REQD.
Φ^{IG}	20-125V DUPLEX RECEPTACLE, NEMA 5-20R, WITH ISOLATED GROUND (18" MH UNLESS NOTED OTHERWISE).
Φ^{20A}	20A-125/250V-1PH-4W SINGLE RECEPTACLE, NEMA 14-20R (18" MH UNLESS NOTED OTHERWISE).
φ ^{30A}	30A-125/250V-1PH-4W SINGLE RECEPTACLE, NEMA 14-30R (18" MH UNLESS NOTED OTHERWISE).
φ Φ ^{50A}	50A-125/250V-1PH-4W SINGLE RECEPTACLE, NEMA 14-50R (18" MH UNLESS NOTED OTHERWISE).
ϕ^{20A}	20A-250V-3PH-4W SINGLE RECEPTACLE, NEMA 15-20R (18" MH UNLESS NOTED OTHERWISE).
φ ^{30A}	30A-250V-3PH-4W SINGLE RECEPTACLE, NEMA 15-30R (18" MH UNLESS NOTED OTHERWISE).
φ ^{50A}	50A-250V-3PH-4W SINGLE RECEPTACLE, NEMA 15-50R (18" MH UNLESS NOTED OTHERWISE).
Ψ ①	JUNCTION BOX.
	MULTI-OUTLET RECEPTACLES ASSEMBLY, NEMA 5-15R (SINGLE OUTLETS ON 18" CENTERS) (46" MH UNLESS NOTED
	WIREMOLD RACEWAY, AS NOTED ON PLANS.
HC)	CLOCK HANGER OUTLET, SINGLE NEMA 5-15R RECESSED IN COVER PLATE (84" MH UNLESS NOTED OTHERWISE).
\$	SINGLE POLE SWITCH (46" MH UNLESS NOTED OTHERWISE).
2 \$ #	TWO POLE WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
# \$ P	MULTI-WAY WALL SWITCH, # INDICATES NUMBER OF WAYS (46" MH UNLESS NOTED OTHERWISE).
\$ Ķ	SWITCH WITH NEON PILOT LIGHT. ONE-GANG ASSEMBLY (46" MH UNLESS NOTED OTHERWISE).
\$	KEY OPERATED WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
L \$ DM	LOW-VOLTAGE MOMENTARY WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
\$	LIGHTING DIMMER SWITCH (46" MH UNLESS NOTED OTHERWISE) 1000 WATTS UNLESS OTHERWISE INDICATED. SWITCH WITH RECEPTACLE (46" MH UNLESS NOTED OTHERWISE) STANDARD TWO-GANG ASSEMBLY OF SWITCH AND
R \$	RECEPTACLE. FLUSH FRACTIONAL HORSEPOWER MOTOR STARTER WITH NEON PILOT LIGHT. ONE-GANG ASSEMBLY (46" MH UNLESS
M \$	NOTED OTHERWISE).
н \$	HP RATED WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
	ELECTRICAL PANEL OR SWITCHBOARD PER DRAWINGS.
P/B	PULL BOX.
	DISCONNECT SWITCH.
	MOTOR STARTER.
	COMBINATION MOTOR STARTER AND DISCONNECT SWITCH.
N/	ELECTRIC MOTOR.
CR	CORD REEL.
PP	POWER POLE.
●	PUSHBUTTON (46" MH UNLESS NOTED OTHERWISE) EDWARDS 852 (120 VOLT).
PC	PHOTOELECTRIC SENSOR.

FACP	FIRE ALARM CONTROL PANEL.
RAP	REMOTE ANNUNCIATOR PANEL.
NAC	NOTIFICATION APPLIANCE CIRCUIT EXTENDER PANEL.
ASSD	AIR SAMPLING SMOKE DETECTOR BASE UNIT.
15 E A	FIRE ALARM SPEAKER & SIGNAL LIGHT (88" AFF). # WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.
E X	FIRE ALARM BELL & SIGNAL LIGHT (88" AFF). # WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.
15 F	FIRE ALARM CHIME & SIGNAL LIGHT (88" AFF). # WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.
EAO	FIRE ALARM HORN & SIGNAL LIGHT (88" AFF). # WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.
Εþ	FIRE ALARM BELL (88" AFF UNLESS NOTED OTHERWISE). SUBSCRIPT "W" INDICATES EXTERIOR WEATHERPROOF UNIT.
$-\dot{\Phi}_{F}^{15}$	FIRE ALARM SIGNAL LIGHT (88" AFF). # WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.
S 15 F	CEILING MOUNTED FIRE ALARM SPEAKER & SIGNAL LIGHT. # WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.
(15 F	CEILING MOUNTED FIRE ALARM HORN & SIGNAL LIGHT. # WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.
X ¹⁵ F	CEILING MOUNTED FIRE ALARM SIGNAL LIGHT. # WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 15 CANDELA IN CORRIDORS AND 30 CANDELA FOR ALL OTHER LOCATIONS.
S _F	CEILING MOUNTED FIRE ALARM SPEAKER.
S⊠	SURFACE MOUNTED FIRE ALARM SPEAKER (88" AFF). SUBSCRIPT "R" INDICATES RECESSED MOUNTING.
Ēκ	FIRE ALARM MANUAL STATION (46" MH UNLESS NOTED OTHERWISE). SUBSCRIPT "K" INDICATES KEY OPERATED.
S	CEILING MOUNTED SMOKE DETECTOR.
Œ	CEILING MOUNTED HEAT DETECTOR.
S S/R	DUCT MOUNTED SMOKE DETECTOR. SUBSCRIPT "S" INDICATES SUPPLY. SUBSCRIPT "R" INDICATES RETURN.
H S/R	DUCT MOUNTED HEAT DETECTOR. SUBSCRIPT "S" INDICATES SUPPLY. SUBSCRIPT "R" INDICATES RETURN.
B T/R	BEAM DETECTOR. SUBSCRIPT "T" INDICATES TRANSMITTER FUNCTION. SUBSCRIPT "R" INDICATES RECEIVER FUNCTION.
С	ELECTRIC RELEASE DOOR CLOSER.
D	ELECTRO-MAGNETIC DOOR HOLDER.
FS	WATER FLOW SWITCH.
\vee	VALVE SUPERVISORY SWITCH.
W R	CEILING MOUNTED REMOTE TEST STATION AND ALARM INDICATOR LIGHT FOR DUCT DETECTOR. SUBSCRIPT "W" INDICATES WALL MOUNTED.
SD	SMOKE DAMPER.
FT	FIRE FIGHTER'S TELEPHONE (60" MH UNLESS NOTED OTHERWISE).
PS	PRESSURE SWITCH.
AM C/I	ADDRESSABLE MODULE. SUBSCRIPT "I" INDICATES INPUT. SUBSCRIPT "C" INDICATES CONTROL.
PIV	POST INDICATOR VALVE.
K	KNOX BOX (46" MH UNLESS NOTED OTHERWISE). SUBSCRIPT "S" INDICATES SUPERVISED UNIT.
Â	AIR SAMPLING SMOKE DETECTOR SAMPLING PORT.

LUMINAIRE SYMBOLS

$Q \cap $	LIGHTING FIXTURE. CAPITAL LETTER DENOTES FIXTURE TYPE, LOWER CASE LETTER DENOTES SWITCHING ARRANGEMENT.
Ŷ ◇ \	LIGHTING FIXTURE TO BE PROVIDED WITH EMERGENCY BATTERY PACK.
B≱ H⊗ir	EXIT LIGHTING FIXTURE, ARROWS AS INDICATED.

SHEET LIST										
SHEET NUMBER	SHEET NAME									
E001	LEGEND AND GENERAL NOTES									
E002	LIGHTING SCHEDULES AND DETAILS									
E003	POWER SCHEDULES AND DETAILS									
E004	GASOLINE DETAILS									
E005	ELECTRICAL SITE PLAN									
E006	EXTERIOR PHOTOMETRICS									
E100	LIGHTING NEW WORK PLANS									
E200	POWER NEW WORK PLANS									
E201	ROOF NEW WORK PLANS									
E300	FIRE ALARM NEW WORK PLANS									
E500	ELECTRICAL SINGLE LINE									
E600	PANEL SCHEDULES									
Total Count: 12	•									

ABE	BREVIATIONS
AAP	- AREA ALARM PANEL - MEDICAL GAS

EQ	- EQUAL - EQUIPMENT SUPPLIER	SCH	- SCHEDULE
ELEV EM	- ELEVATION OR ELEVATOR - EMERGENCY - EQUAL	S SC SCH	- SURFACE MOUNTED - SECURITY CONTRACTOR
EA EC EJ ELEC	- EACH - ELECTRICAL CONTRACTOR (DIVISION 26) - EXPANSION JOINT - ELECTRICAL	REC REQD RI	- RECESSED - REQUIRED - ROUGH-IN
DIV DN DWG	- DIVISION - DOWN - DRAWING	PC PLBG RAD	- PLUMBING CONTRACTOR (DIVISION 22) - PLUMBING - RADIUS
DET DIA DIM DIV	- DETAIL - DIAMETER - DIMENSION - DIVISION	OFCI OFOI PC	- OWNER FURNISHED CONTRACTOR INSTALLED - OWNER FURNISHED OWNER INSTALLED
CTR D	- CENTER - DEPTH	NTS OD	- NOT TO SCALE - OUTSIDE DIAMETER
CONN CONTR CORR CTR	- CONNECT OR CONNECTION - CONTRACTOR - CORRIDOR - CENTER	NIC NL NOM NTS	- NOT IN CONTRACT - NIGHT LIGHT - NOMINAL - NOT TO SCALE
CFCI CKT CLG CMU	- CONTRACTOR FURNISHED CONTRACTOR INSTALLED - CIRCUIT - CEILING - CONCRETE MASONRY UNIT	MIN MISC MTD MTG	- MINIMUM OR MINUTE - MISCELLANEOUS - MOUNTED - MOUNTING
BLDG BOE BOT BTWN	- BUILDING - BOTTOM OF EQUIPMENT - BOTTOM - BETWEEN	MAX MEZZ MFR MH	- MAXIMUM - MEZZANINE - MANUFACTURER - MANHOLE OR MOUNTING HEIGHT TO CENTER LINE OF ITEM MINIMUM OR MINIUTE
AP APPROX ARCH ASSY ATS	- ACCESS PANEL - APPROXIMATE - ARCHITECT OR ARCHITECTURAL - ASSEMBLY - AUTOMATIC TRANSFER SWITCH	L LBS MAP	- LENGTH - POUNDS - MASTER ALARM PANEL (MEDICAL GAS)
AF AFCI AFF AFG ALT	- ARC FAULT CIRCUIT INTERRUPTER - ARC FAULT CIRCUIT INTERRUPTER - ABOVE FINISHED FLOOR TO BOTTOM OF ITEM - ABOVE FINISHED GRADE TO BOTTOM OF ITEM - ALTERNATE	id In Kec	- INSIDE DIAMETER - INCHES - KITCHEN EQUIPMENT CONTRACTOR
ACC ADJ	- AREA ALARM PANEL - MEDICAL GAS - ACCESS - ADJUSTABLE	HC HP HVAC	- HVAC CONTRACTOR (DIVISION 23) - HORSE POWER OR HIGH POINT - HEATING, VENTILATING, AND AIR CONDITIONING

B E2	DETAIL: B = DETAIL DESIGNATION E2 = SHEET WHERE DETAIL IS LOCATED
	SECTION: 1 = SECTION DESIGNATION

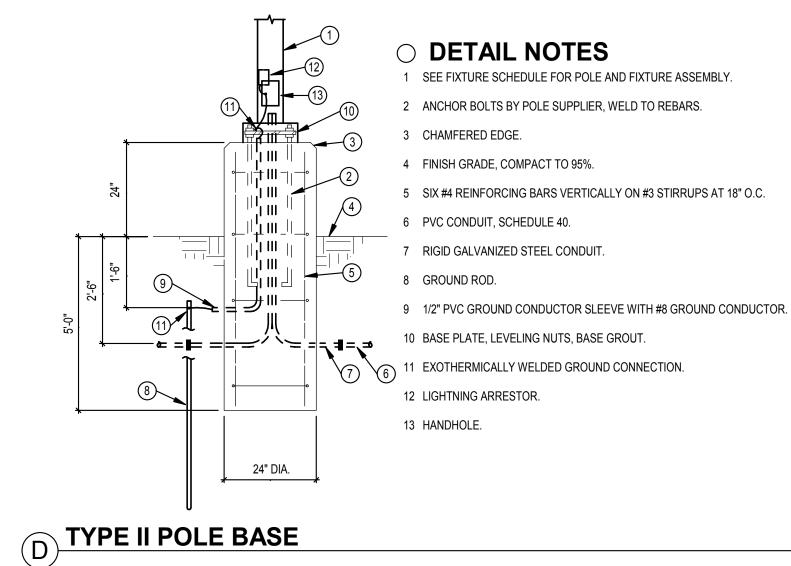
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	SECTION: 1 = SECTION DESIGNATION E2 = SHEET WHERE SECTION IS LOCATED
T2 1	ELEVATION: 1 = ELEVATION DESIGNATION T2 = SHEET WHERE ELEVATION IS LOCATED
3	PLAN NOTE. APPLIES ONLY TO THE SHEET WHICH IT IS SHOWN.
3	DETAIL NOTE. APPLIES ONLY TO THE ASSOCIATED DETAIL.
3	LIGHTING CONTROL DETAIL NOTE. APPLIES TO THE LIGHTING CONTROL SEQUENCE OF OPERATIONS SCHEDULE FOR ROOM CONTROL ON SHEET E002.
3	DEVICE QUANTITY - POWER NOTE. REFER TO DEVICE QUANTITIES - POWER SCHEDULE.
	LADDER TRAY, 12" x 4" DEEP UNLESS NOTED OTHERWISE.
	CABLE TRAY, 12" x 4" DEEP UNLESS NOTED OTHERWISE.
4"	WIRE & CONDUIT IN WALL OR ABOVE CEILING.
	WIRE & CONDUIT IN OR BELOW SLAB OR GRADE.
C====4"======	CONDUIT TO BE REMOVED.
EX	EXISTING WIRE & CONDUIT TO REMAIN.
DAT DAT	CONDUIT FOR DATA CIRCUITRY.
EM	WIRE & CONDUIT FOR EMERGENCY CIRCUITRY.
FA	WIRE & CONDUIT FOR FIRE ALARM CIRCUITRY.
	WIRE & CONDUIT FOR INTERCOM SYSTEM CIRCUITRY.
NC NC	WIRE & CONDUIT FOR NURSE CALL CIRCUITRY.
NL NL	WIRE & CONDUIT FOR NIGHT LIGHT CIRCUITRY.
Ш РНО ШШ	CONDUIT FOR PHONE CIRCUITRY.
s	WIRE & CONDUIT FOR SOUND SYSTEM CIRCUITRY.
SEC	WIRE & CONDUIT FOR SECURITY SYSTEM CIRCUITRY.
	WIRE & CONDUIT FOR TELEVISION SYSTEM CIRCUITRY.
W	WIRE RUN IN SURFACE WIREWAY.
СМ	CABLE MANAGEMENT SYSTEM PATHWAY.
X - 1,2	EACH ARROWHEAD REPRESENTS ONE COMPLETE CIRCUIT; "X" DENOTES PANEL NAME; NUMBER(S) DENOTES CIRCUIT(S).

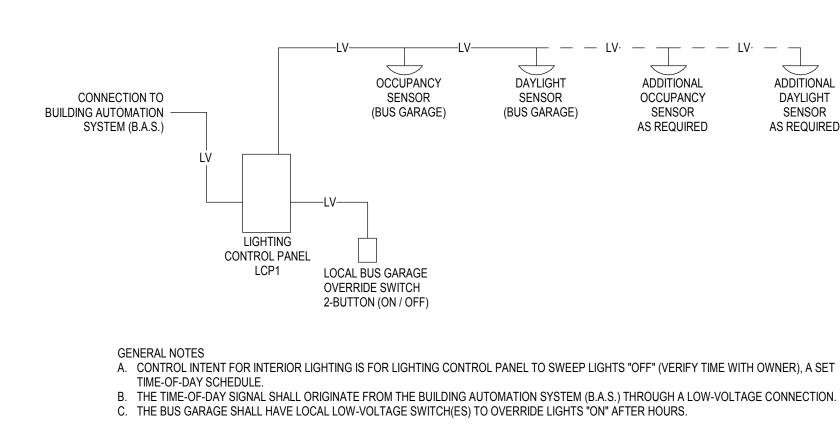
<u>NOTE</u>: ALL SYMBOLS AND ABBREVIATIONS ARE SUBJECT TO **MODIFICATIONS ON OTHER DRAWINGS.** ALL SYMBOLS OR ABBREVIATIONS MIGHT NOT NECESSARILY BE USED ON THIS PROJECT.



							LUMINAI	RES											
	BE MOUN	TED 18'-0" A	FF, UNL	ESS N	NOTED OTHERWISE. OTED OTHERWISE.														
	LAMPS	Ş									TRIM	I COL	OR	MOUNTING		SI	ZE		
WAK VA / LINEAR FOOT	DELIVERED LUMENS	COLOR	LOAD (VA)	FIXTURE VOLTAGE	MANUFACTURER	CATALOG NO.	DESCRIPTION	OTHER ACCEPTABLE MANUFACTURERS	DIFFUSING MEDIA	WHITE	BLACK	BRONZE	STANDARD SEE NOTE	S-SURFACE R-RECESSED SM-STEM MTD WM-WALL MTD C-CHAIN MTD UC-UNDER CAB CS-CEIL SURFACE	DIAMETER	WIDTH	LENGTH	DEPTH	SEE NOTE
B1	4818	3500K	37	277	LITHONIA	CPX-2X4-4000LM-80CR I-35K-SWL-MIN10-X-MV OLT	2x4 LED RECESSED PANEL	COLUMBIA, METALUX	SATIN LENS	•				R		24"	48"	2.25"	
C1	4732	3500K	36	277	LITHONIA	CSS-L48-ALO3-MVOLT- 35K-80CRI	LED 4' LINEAR STRIP LIGHT	COLUMBIA, METALUX	DIFFUSE ACRYLIC LENS	•				С		2.621"	48"	2.219"	
C2	4751	3500K	40	277	LITHONIA		LED ENCLOSED AND GASKETED LINEAR STRIP LIGHT, WET RATED	COLUMBIA, METALUX	FROSTED ACRYLIC LENS	•				С		5.879"	24"	3.738"	
D1	9699	4000K	59	277	LITHONIA	PCNY-LED-ALO2-SWW 2-FPCL-MVOLT-DBLXD	LED CANOPY FIXTURE, WET RATED, PETROLEUM RATED	LSI	POLYCARBONATE CLEAR LENS		•			R		15.5"	15.5"	3"	1
F1	1471	3500K	15	277	GOTHAM	EV06-35/15-WR-LSS-M WD-MVOLT-GZ10	LED RECESSED DOWNLIGHT	PRESCOLITE, PORTFOLIO		•				R	7"			8.75"	
H1	10928	3500K	94	277	LUXIFY	LGV-BLED12-120-35K- BLK-P-SDM	LED HIGH BAY FIXTURE	METEOR	CLEAR LENS		•		•	SM	12"				
W1	8235	4000K	64	277	MCGRAW-EDISON	I IST-PA1-D-740-U-T3-BZ	LED EXTERIOR WALL PACK, CARBON BRONZE COLOR, TRAPEZOID SHAPE	BEACON, LITHONIA				•		S/WM		12"	17.12 5"	6"	2
W2	4508	4000K	34	277	MCGRAW-EDISON	I IST-SA1-C-740-U-T3-BZ	LED EXTERIOR WALL PACK, CARBON BRONZE COLOR, TRAPEZOID SHAPE	BEACON, LITHONIA				•		S/WM		12"	17.12 5"	6"	3
X1		RED	3		EXIT LIGHT CO.	LEDJR-R-B	LED SINGLE-FACE EXIT SIGN	,	RED LETTERS		•			S/WM		9"		2.375"	
X2		RED	3	_	EXIT LIGHT CO.		LED DOUBLE-FACE EXIT SIGN		RED LETTERS		•			SM		9"		2.375"	L
X3		RED	3	277	EXIT LIGHT CO.	WLT-R-W-S-AC-CW	LED SINGLE-FACE EXIT SIGN	COMPASS. ISOLITE	RED LETTERS	•				S/WM		9"	13"	2.375"	1

							LIGH	ITING	CONT	ROL	SEQI	JENG	CE O	F OF	PER	ATIO	NS									
NOTES: 1. VERIFY	Y SCHEDULED ON AND OFF TIME (OF LIGHTS	S WITH RT	A / OWN	IER.																					
		OC	CUPANCY	SENSO	DR		TI	IME CLOCK	ζ			WAL	L SWITC	H		DAY	LIGHT S	SENSOR			INTEGRATI	ON POINTS	1	_		
CONTRO NUMBER 1	LINE-VOLTAGE SWITCHING	⇒	OCCUPANCY MODE (AUTO ON)	SENSOR TIME OUT PERIOD (IN MINUTES)	HIGH / LOW OPERATION: OCCUPIED: 100% / VACANT: 30%	SCHEDULED ON AT	SCHEDULED OFF AT	OCCUPIED TIME START	UNOCCUPIED TIME START	AFTER HOURS OVERRIDE SWITCH (2 HOURS)	ON / OFF ONLY	DIMMER SWITCH	KEY SWITCH	SCENE SWITCH	GRAPHICAL WALL STATION	INDOOR - ON / OFF ONLY	JOR - DIMMING		EXTERIOR PHOTOCELL - ON / OFF	OCCUPANCY STATUS (BINARY INPUT - READ ONLY - OCCUPIED / UNOCCUPIED)	DIMMING OUTPUT LEVEL (ANALOG VALUE - READ / WRITE - 0-100%)	RELAY STATUS (BINARY VALUE - READ / WRITE - ON / OFF)	MEASURED LIGHT LEVEL (ANALOG INPUT - 0-212FC)	SEE NOTE	DETAIL NUMBER N/A	 C DETAIL NOTES SEE FIXTURE SCHEDULE FOR POLE AND FIXTURE ASSEMBLY. ANCHOR BOLTS BY POLE SUPPLIER, WELD TO REBARS. CHAMFERED EDGE. CHAMFERED EDGE. SIX #4 REINFORCING BARS VERTICALLY ON #3 STIRRUPS AT 18' OC. PVC CONDUIT, SCHEDULE 40. RIGID GALVANIZED STEEL CONDUIT. GROUND ROD. 12' PVC GROUND CONDUCTOR SLEEVE WITH #8 GROUND CONDUCTOR. BASE PLATE, LEVELING NUTS, BASE GROUT. EXOTHERMICALLY WELDED GROUND CONNECTION. LIGHTNING ARRESTOR. HANDHOLE.
2	VACANCY SENSING - SINGLE	•		30							•														A	
	ZONE																									
3	BUS GARAGE		•	30		סוופע				•	•						•								B,C,F	
4	EXTERIOR LIGHTING					DUSK	DAWN												•						N/A	



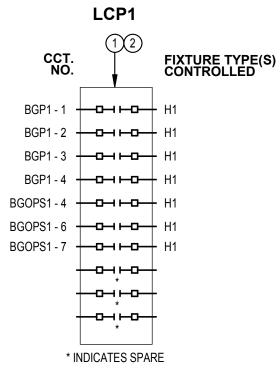


(F) RELAY PANEL ONE-LINE DIAGRAM

AUTOMATIC LIGHTING CONTROLS

- 2. BASIS OF DESIGN IS NLIGHT, EQUAL BY HUBBELL, LEVITON, SQUARE-D, CRESTRON, LC&D OR APPROVED EQUAL.
- LIGHTING CONTROL RELAYS IN A NEMA 1 ENCLOSURE BY E.C. ELECTRONIC LIGHTING CONTROLLER FOR CONTROL OF LIGHTING CIRCUITS AS INDICATED. PROVIDE QUANTITY OF RELAYS AS INDICATED.
- **ODETAIL NOTES**

- * INDICATES SPARE



SHALL BE PROVIDED FOR A SPECIFIC SPACE. THE LOCAL SWITCH SHALL CONTROL ONLY THE SPACE CALLED OUT ON PLANS. REFER TO FLOOR PLANS AND DETAILS FOR ADDITIONAL INFORMATION. F. DEVICES SHALL BE CONNECTED AND WIRED PER MANUFACTURERS RECOMMENDATIONS AND WIRING INSTRUCTIONS. PROVIDE ALL RELAYS, POWER PACKS, SENSORS, AND MISCELLANEUOS DEVICES FOR A

COMPLETE AND OPERABLE SYSTEM.

- THE AREA, SPACE, OR CORRIDOR SECTION. IT IS NOT INTENDED TO OVERRIDE ALL COMMON SPACE LIGHTING IN BUILDING WITH ACTIVATION IN ONE AREA. E. WHERE SHOWN IN DETAILS AND PLANS MANUAL OVERRIDE SWITCH(ES)
- DETAILS AND SEQUENCE OF OPERATION SCHEDULE FOR ADDITIONAL OPERATION INFORMATION. D. CORRIDOR LIGHTING TO BE AUTOMATICALLY CONTROLLED BY TIME-OF-DAY SCHEDULE ON AND OFF THROUGH LIGHTING CONTROLS SYSTEM AS INDICATED ON PLANS. OCCUPANCY SENSORS SHALL BE PROVIDED THROUGHOUT THE COMMON SPACES AND CORRIDORS FOR CONTROL OF LIGHTING AFTER HOURS. THE OCCUPANCY SENSORS SHALL PROVIDE AUTOMATIC OVERRIDE OF LIGHTING FOR 2-HOURS UPON SENSING OF MOTION. THE SENSORS SHALL ONLY CONTROL FIXTURES IN
- C. EXTERIOR LIGHTING TO BE AUTOMATICALLY CONTROLLED BY TIME-OF-DAY SCHEDULE AND PHOTOCELL. REFER TO LIGHTING CONTROL
- B. LEAVE SLACK IN ALL CONDUCTORS SUCH THAT THEY MAY BE MOVED FROM ONE RELAY TO ANOTHER AS REQUIRED.
- **GENERAL NOTES** A. RELAY PANELS SHALL HAVE BARRIERS AS REQUIRED FOR DIFFERENT VOLTAGES OR EMERGENCY AND NORMAL CIRCUIT(S).

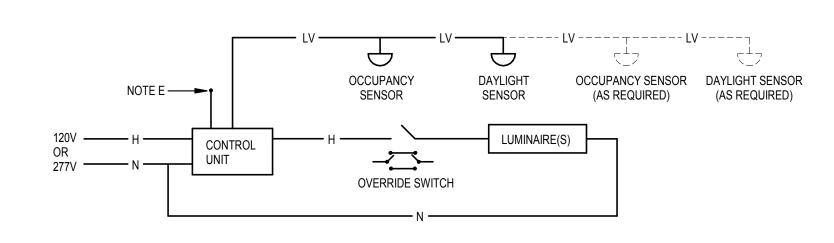
- LV _ _ _ _ _ - IV- — — $\overline{}$ $\overline{}$ ADDITIONAL ADDITIONAL SENSOR OCCUPANCY DAYLIGHT SENSOR SENSOR AS REQUIRED AS REQUIRED

(B) OCCUPANCY SENSOR WITH OVERRIDE CONTROL

- D DETAIL IS SCHEMATIC IN NATURE. REFER TO MANUFACTURER'S WIRING DIAGRAMS FOR EXACT WIRING INFORMATION. E PROVIDE ISOLATED FORM C CONTACT OUTPUT INDICATING SPACE OCCUPIED FOR BAS CONTROL, WHERE NOTED.
- C CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR EXACT QUANTITY OF OCCUPANCY SENSORS (FOR COMPLETE ROOM COVERAGE) AND PROVIDE ANY ADDITIONAL COMPONENTS FOR A COMPLETE AND OPERABLE SYSTEM. COORDINATE COMPONENT MOUNTING LOCATIONS FOR PROPER CLEARANCE AND ACCESSIBILITY PRIOR TO ROUGH-IN. COORDINATE PROGRAMMING OF ZONES AND WALL STATION CONFIGURATIONS, AS SHOWN ON DRAWINGS, WITH MANUFACTURER.
- SWITCHES. REFER TO PLANS FOR QUANTITY OF LIGHTING ZONES. B CONTROL UNIT SHALL BE MOUNTED IN AN ENCLOSURE PER MANUFACTURER'S DIRECTION. MOUNT CONTROL UNIT ABOVE ACCESSIBLE CEILING AT ROOM ENTRY.
- GENERAL NOTES A OPERATION INTENT IS FOR OCCUPANCY SENSING ON/OFF WITH MANUAL OVERRIDE AND MULTIPLE ZONES OPERATION OF ALLLIGHTS. CONTROL UNIT SHALL PROVIDEAN ON/OFF FOR ALL ZONES. WALL STATION(S) TO PROVIDE ON/OFF AND

N - NEUTRAL WIRE LINE VOLTAGE

LV - LOW VOLTAGE CONTROL CABLE AS REQUIRED BY MANUFACTURER H - HOT WIRE LINE VOLTAGE



(A) VACANCY SENSING SINGLE ZONE

- D DETAIL IS SCHEMATIC IN NATURE. REFER TO MANUFACTURER'S WIRING DIAGRAMS FOR EXACT WIRING INFORMATION. E PROVIDE ISOLATED FORM C CONTACT OUTPUT INDICATING SPACE OCCUPIED FOR BAS CONTROL, WHERE NOTED.
- COORDINATE COMPONENT MOUNTING LOCATIONS FOR PROPER CLEARANCE AND ACCESSIBILITY PRIOR TO ROUGH-IN. COORDINATE PROGRAMMING OF ZONES AND WALL STATION CONFIGURATIONS, AS SHOWN ON DRAWINGS, WITH MANUFACTURER.
- ABOVE ACCESSIBLE CEILING AT ROOM ENTRY. C CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR EXACT QUANTITY OF OCCUPANCY SENSORS (FOR COMPLETE ROOM COVERAGE) AND PROVIDE ANY ADDITIONAL COMPONENTS FOR A COMPLETE AND OPERABLE SYSTEM.
- B CONTROL UNIT SHALL BE MOUNTED IN AN ENCLOSURE PER MANUFACTURER'S DIRECTION. MOUNT CONTROL UNIT
- GENERAL NOTES A OPERATION INTENT IS FOR MANUAL ON/OFF AND AUTO-OFF OPERATION OF ALL LIGHTS (VACANCY SIGNAL). CONTROL UNIT SHALL PROVIDE AN ON/OFF FOR ALL LIGHTS. WALL STATION(S) TO PROVIDE ON/OFF SWITCHES.

LV LOW VOLTAGE CABLE AS REQUIRED BY MANUFACTURER H HOT WIRE LINE VOLTAGE N NEUTRAL WIRE LINE VOLTAGE

6 PVC CONDUIT, SCHEDULE 40.

5 SIX #4 REINFORCING BARS VERTICALLY ON #3 STIRRUPS AT 18" O.C.

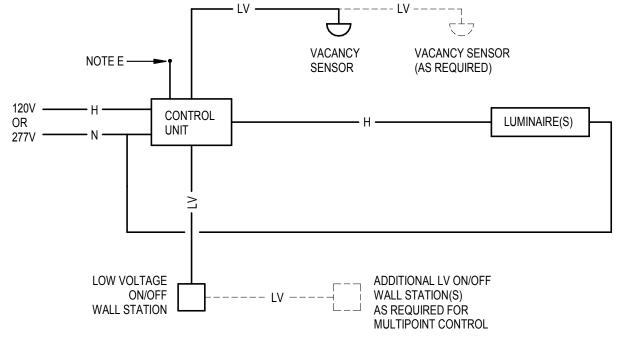
4 FINISH GRADE, COMPACT TO 95%.

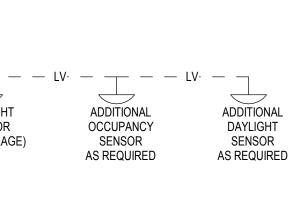
2 ANCHOR BOLTS BY POLE SUPPLIER, WELD TO REBARS.

1 SEE FIXTURE SCHEDULE FOR POLE AND FIXTURE ASSEMBLY

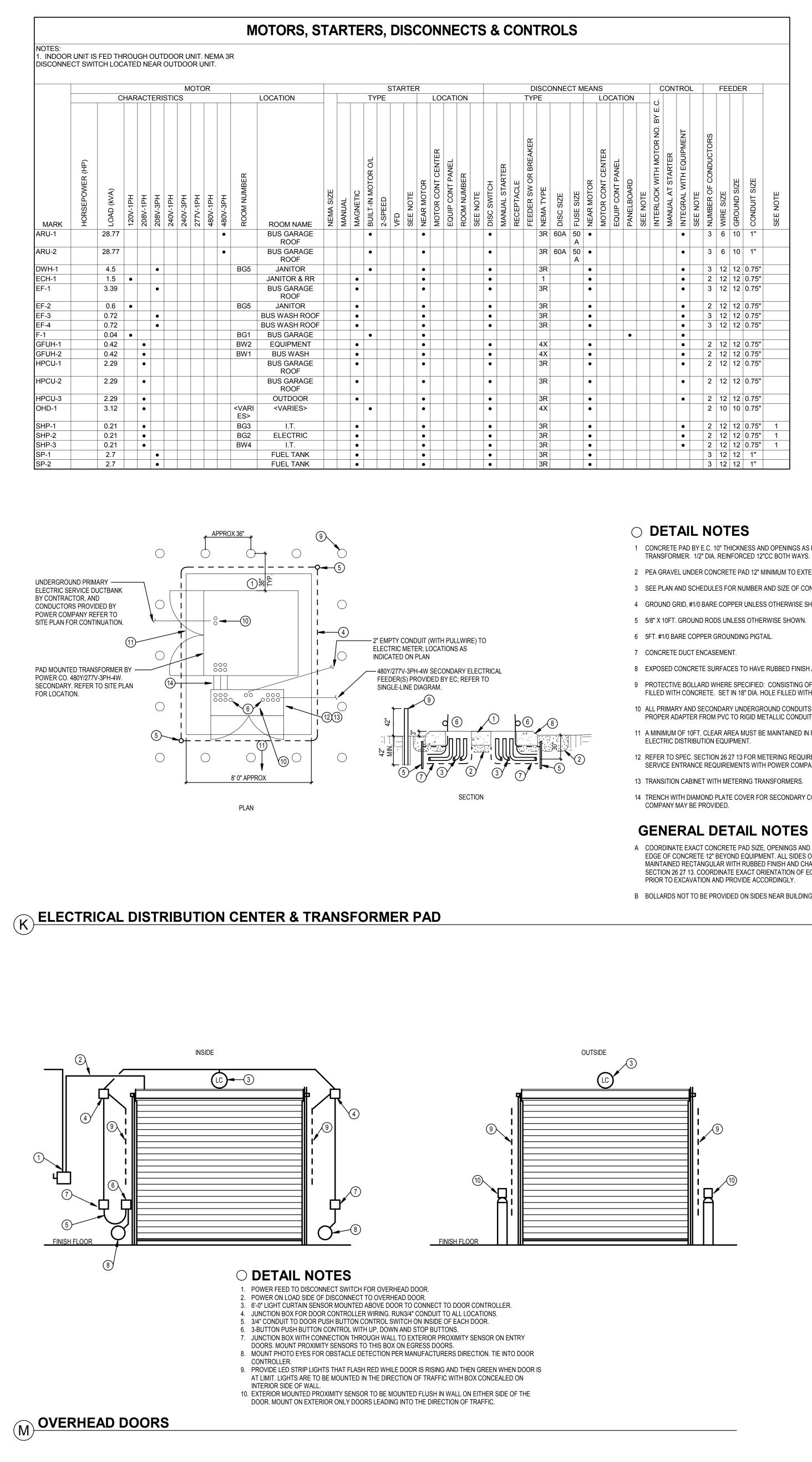
O DETAIL NOTES

OR









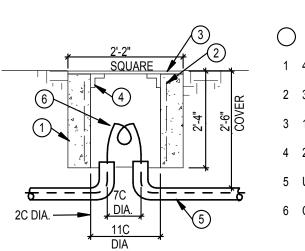
)														
Μ	EAN					C	ON	TRO	L		FE	EDE	R	
		LOC	CATI	ON		ن ن								
	NEAR MOTOR	MOTOR CONT CENTER	EQUIP CONT PANEL	PANELBOARD	SEE NOTE	INTERLOCK WITH MOTOR NO. BY E.C.	MANUAL AT STARTER	INTEGRAL WITH EQUIPMENT	SEE NOTE	∞ NUMBER OF CONDUCTORS	WIRE SIZE	GROUND SIZE	CONDUIT SIZE	SEE NOTE
L 0	•	2	ш	<u>с</u>	S	=	2	•	S	∠ 3	> 6	10	1"	S
A 0	-									3	6	10	1"	
0 4	•							•		3	0	10	1	
	•							٠		3	12	12	0.75"	
	•							•		2	12	12	0.75"	
	•							•		3	12	12	0.75"	
	•							•		2	12	12	0.75"	
	•							•		3 3	12	12	0.75"	
	•							•		3	12	12	0.75"	
				٠				•						
	•							•		2	12	12	0.75"	
	•							•		2	12	12	0.75"	
	•							•		2	12	12	0.75"	
	•							•		2	12	12	0.75"	
	•							•		2	12	12	0.75"	
	•									2	10	10	0.75"	
	•							•		2	12	12	0.75"	1
	•							•		2	12	12	0.75"	1
	•							•		2	12	12	0.75"	1
	•									3	12	12	1"	
	•									3	12	12	1"	



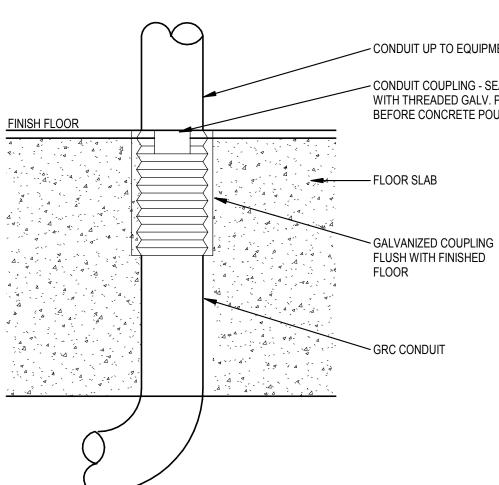
- 1 CONCRETE PAD BY E.C. 10" THICKNESS AND OPENINGS AS RECOMMENDED BY SUPPLIER OF
- 2 PEA GRAVEL UNDER CONCRETE PAD 12" MINIMUM TO EXTEND 2FT.BEYOND EDGE OF PAD (12" DEEP).
- 3 SEE PLAN AND SCHEDULES FOR NUMBER AND SIZE OF CONDUIT
- 4 GROUND GRID, #1/0 BARE COPPER UNLESS OTHERWISE SHOWN.
- 5 5/8" X 10FT. GROUND RODS UNLESS OTHERWISE SHOWN.
- 6 5FT. #1/0 BARE COPPER GROUNDING PIGTAIL.
- 8 EXPOSED CONCRETE SURFACES TO HAVE RUBBED FINISH AND 3/4" CHAMFERED CORNERS.
- 9 PROTECTIVE BOLLARD WHERE SPECIFIED: CONSISTING OF 4" DIA. RIGID GALVANIZED STEEL PIPES FILLED WITH CONCRETE. SET IN 18" DIA. HOLE FILLED WITH TAMPED CONCRETE.
- 10 ALL PRIMARY AND SECONDARY UNDERGROUND CONDUITS TO HAVE LONG SWEEPING BENDS, PROPER ADAPTER FROM PVC TO RIGID METALLIC CONDUIT AND STUB 3" ABOVE CONCRETE PAD.
- 11 A MINIMUM OF 10FT. CLEAR AREA MUST BE MAINTAINED IN FRONT OF TRANSFORMER AND OTHER ELECTRIC DISTRIBUTION EQUIPMENT.
- 12 REFER TO SPEC. SECTION 26 27 13 FOR METERING REQUIREMENTS. COORDINATE METERING AND SERVICE ENTRANCE REQUIREMENTS WITH POWER COMPANY.
- 14 TRENCH WITH DIAMOND PLATE COVER FOR SECONDARY CONDUCTOR IF PERMITED BY POWER

GENERAL DETAIL NOTES

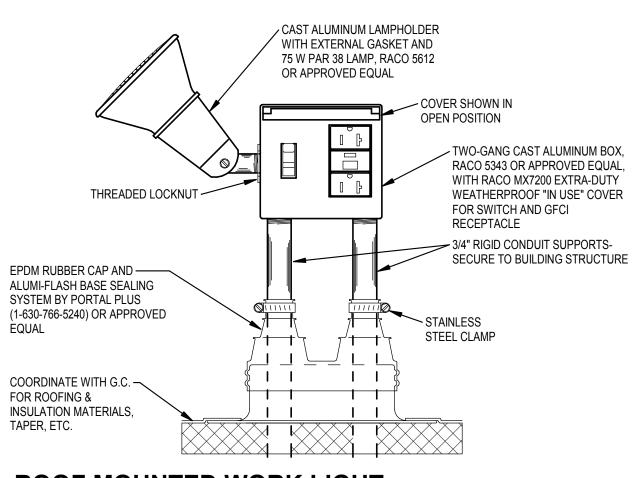
- A COORDINATE EXACT CONCRETE PAD SIZE, OPENINGS AND OTHER REQUIREMENTS TO EXTEND EDGE OF CONCRETE 12" BEYOND EQUIPMENT. ALL SIDES OF EQUIPMENT PAD SHALL BE MAINTAINED RECTANGULAR WITH RUBBED FINISH AND CHAMFERED EDGE. REFER TO SPEC SECTION 26 27 13. COORDINATE EXACT ORIENTATION OF EQUIPMENT WITH POWER COMPANY PRIOR TO EXCAVATION AND PROVIDE ACCORDINGLY.
- B BOLLARDS NOT TO BE PROVIDED ON SIDES NEAR BUILDING.



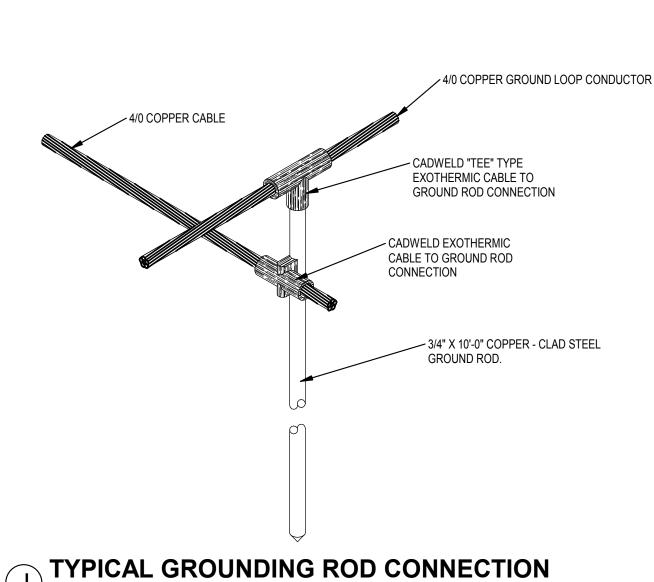
SMALL GROUND PULLBOX



(H) CONDUIT STUB-UP - RMC / IMC



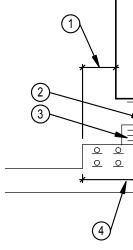
ROOF MOUNTED WORK LIGHT



O DETAIL NOTES

- 1 BASE SHALL EXTEND 6" PAST SIDES AND ENDS OF GEN. SET.
- 2 STEEL BASE.
- 3 BOLT TO BASE (TYP.).
- 4 MIN. OF 12" (TYP.).
- 5 MIN. CLEAR SPACE FOR OIL CHANGING.
- 6 VIBRATION ISOLATORS (TYP.) MIN. OF 6 -ADD ADDITIONAL IN GENERATOR SET
- EXCEEDS WEIGHT LIMIT OF 6.





GENERATOR BASE

O DETAIL NOTES

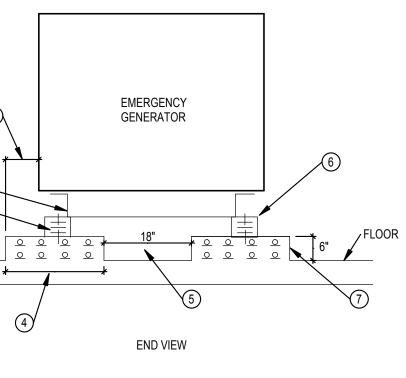
4" CONCRETE WALLS-FOUR SIDES 2 3/8" DIA. REINFORCED STEEL 10" CC BOTH WAYS.

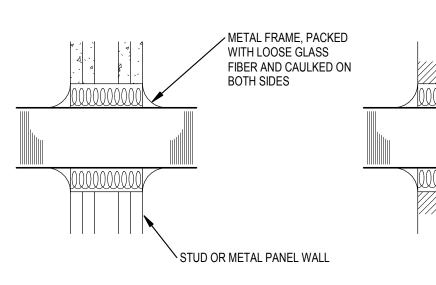
3 1/4" CHECKERED STEEL PLATE.

4 2" L WELDED TO PLATE TWO SIDES ONLY - 1/4" CLEARANCE FIT. 5 UNDERGROUND DUCT OR DIRECT BURIAL CABLE AS INDICATED 6 CONDUCTORS-LOOP/PULL OR SPLICE.

- CONDUIT UP TO EQUIPMENT - CONDUIT COUPLING - SEAL WITH THREADED GALV. PLUG BEFORE CONCRETE POUR





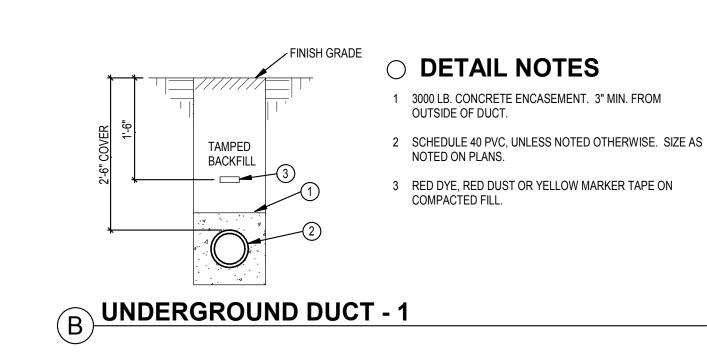


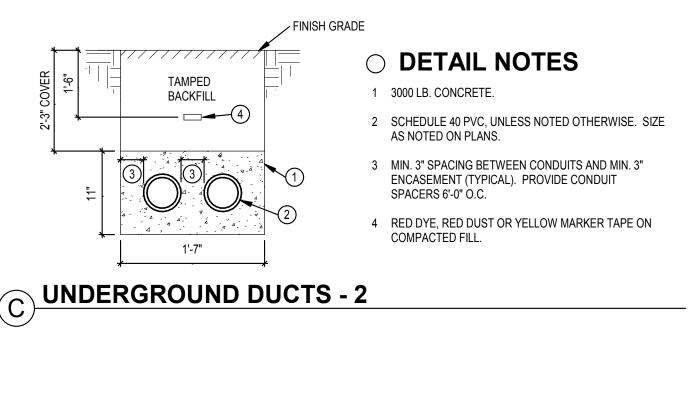


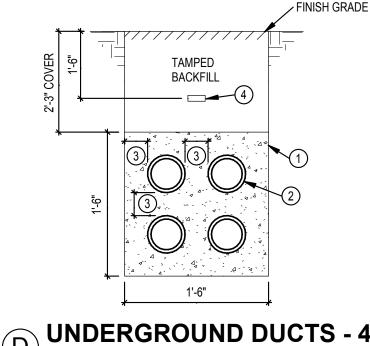
A ALL PENETRATIONS FROM MECHANICAL SPACE SHALL BE SEALED IN THIS MANNER

- B ALL PENETRATIONS THRU AUDITORIUM, STUDIO AND EDIT ROOMS WALLS SHALL BE SEALED IN THIS MANNER.
- C WHEN WALL IS FIRE RATED; DETAIL SHALL BE SIMILAR BUT FOLLOW MATERIAL INSTALLATION REQUIREMENTS PER MANUFACTURER AND FIRE PROOFING SPECIFICATIONS.

TYPICAL CONDUIT AND WALL PENETRATIONS







DETAIL NOTES

COMPACTED FILL.

- FINISH GRADE

1 3000 LB. CONCRETE. 2 SCHEDULE 40 PVC, UNLESS NOTED OTHERWISE. SIZE

- AS NOTED ON PLANS. 3 MIN. 3" SPACING BETWEEN CONDUITS AND MIN. 3" ENCASEMENT (TYPICAL). PROVIDE CONDUIT
- SPACERS 6'-0" O.C. 4 RED DYE, RED DUST OR YELLOW MARKER TAPE ON

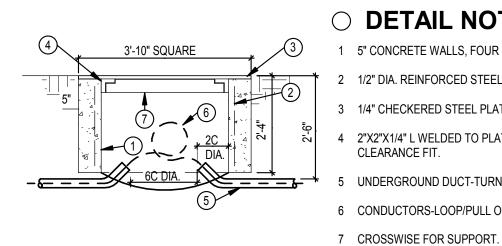
. 4-`-{` 2'-3"

UNDERGROUND DUCTS - 6

TAMPED

BACKFILL ____(4)

- **DETAIL NOTES** 1 3000 LB. CONCRETE.
- 2 SCHEDULE 40 PVC, UNLESS NOTED OTHERWISE. SIZE AS NOTED ON PLANS.
- MIN. 3" SPACING BETWEEN CONDUITS AND MIN. 3" ENCASEMENT (TYPICAL). PROVIDE CONDUIT SPACERS 6'-0" O.C.
- 4 RED DYE, RED DUST OR YELLOW MARKER TAPE ON COMPACTED FILL.



O DETAIL NOTES

- 1 5" CONCRETE WALLS, FOUR SIDES.
- 1/2" DIA. REINFORCED STEEL-10"CC BOTH WAYS.
- 3 1/4" CHECKERED STEEL PLATE COVER.
- 4 2"X2"X1/4" L WELDED TO PLATE. TWO SIDES ONLY 1/4" CLEARANCE FIT.
- 5 UNDERGROUND DUCT-TURN UP @ 45 DEG.
- 6 CONDUCTORS-LOOP/PULL OR SPLICE.

LARGE GROUND PULLBOX

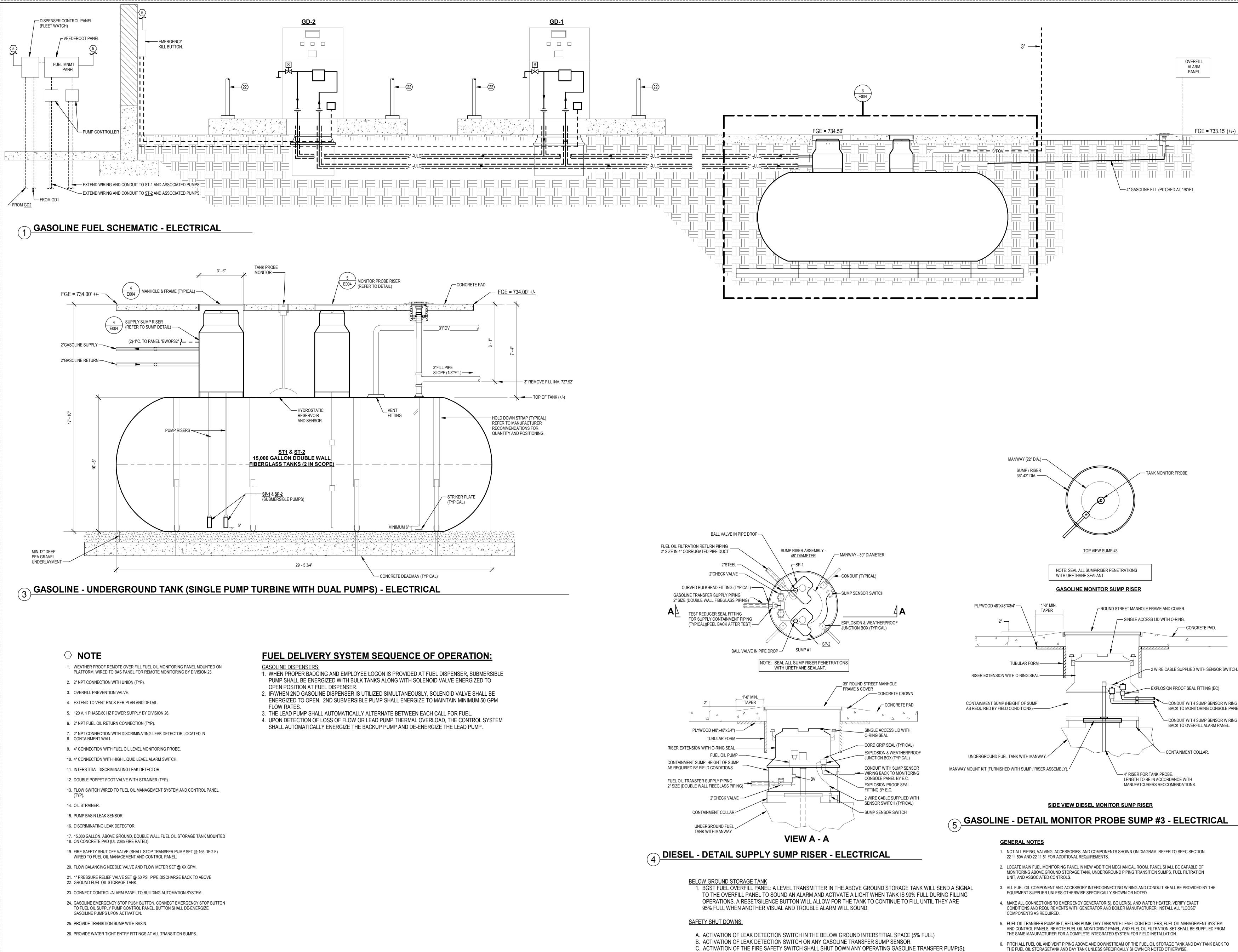
✓ METAL SLEEVE WITH ANNULAR JOINT, PACKED WITH LOOSE GLASS FIBER AND CAULKED ON

BOTH SIDES

MASONRY OR CONCRETE WALL



Ö



- SHALL SIGNAL A VISUAL AND AUDIBLE COMMON ALARM AND SEND A TROUBLE ALARM SIGNAL TO THE BUILDING AUTOMATION SYSTEM. D. ACTIVATION OF ANY EMERGENCY STOP BUTTON SHALL SHUT DOWN ALL GASOLINE TRANSFER PUMP(S).

- - 6. PITCH ALL FUEL OIL AND VENT PIPING ABOVE AND DOWNSTREAM OF THE FUEL OIL STORAGE TANK AND DAY TANK BACK TO

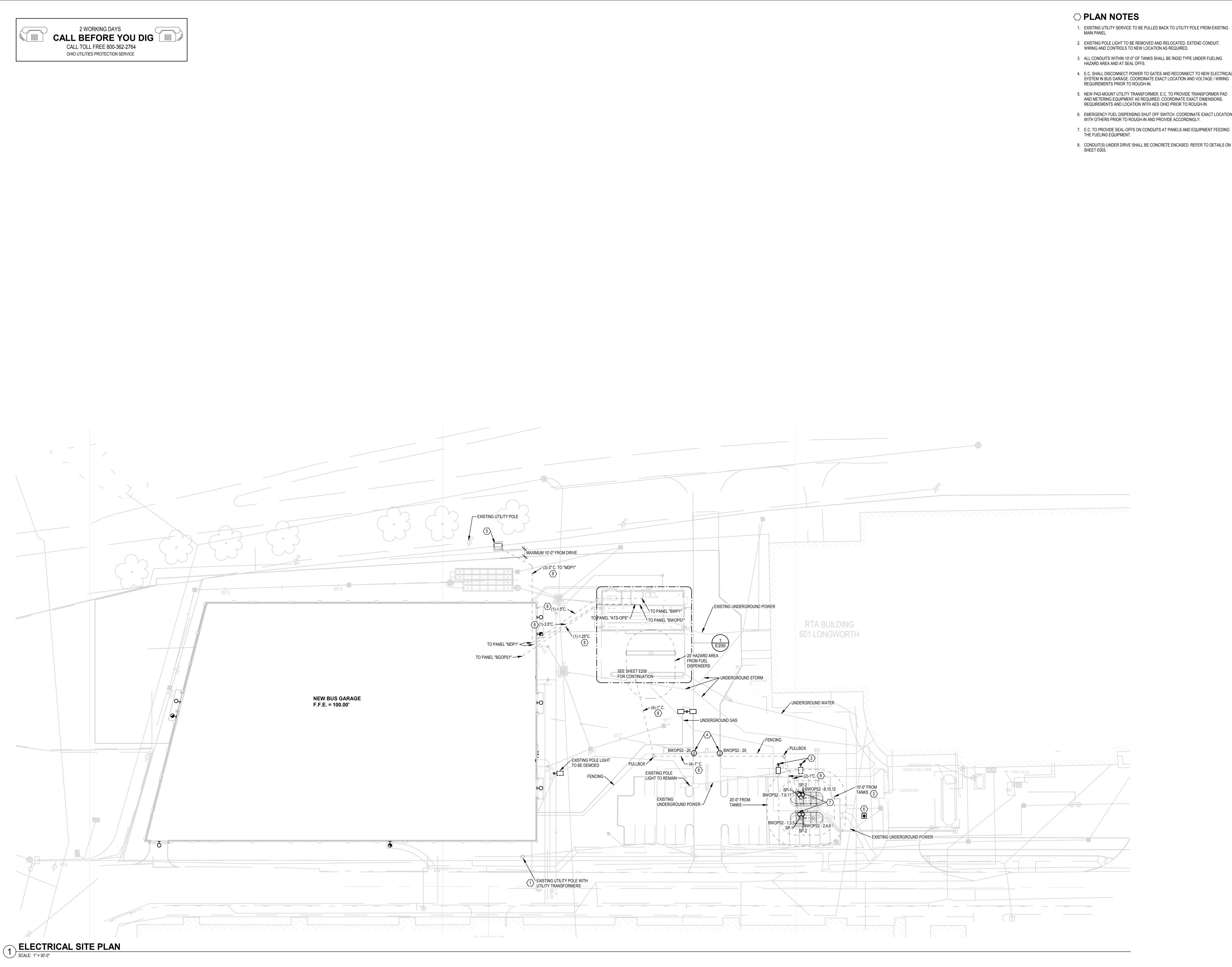
 - 7. THE BOILER PIPING SUCTION AND RETURN LINES SHALL ENTER THE BOILER PUMP FROM THE SAME HEIGHT. REFER TO BOILER

 - MANUFACTURER'S WRITTEN INSTRUCTIONS AND INSTALL FUEL OIL PIPING PER INSTALLATION REQUIREMENTS.

SASOLINE - DETAIL MONITOR PROBE SUMP #3 - ELECTRICAL

- CONCRETE PAD. - 2 WIRE CABLE SUPPLIED WITH SENSOR SWITCH. - EXPLOSION PROOF SEAL FITTING (EC) - CONDUIT WITH SUMP SENSOR WIRING BACK TO MONITORING CONSOLE PANEL. - CONDUIT WITH SUMP SENSOR WIRING BACK TO OVERFILL ALARM PANEL.

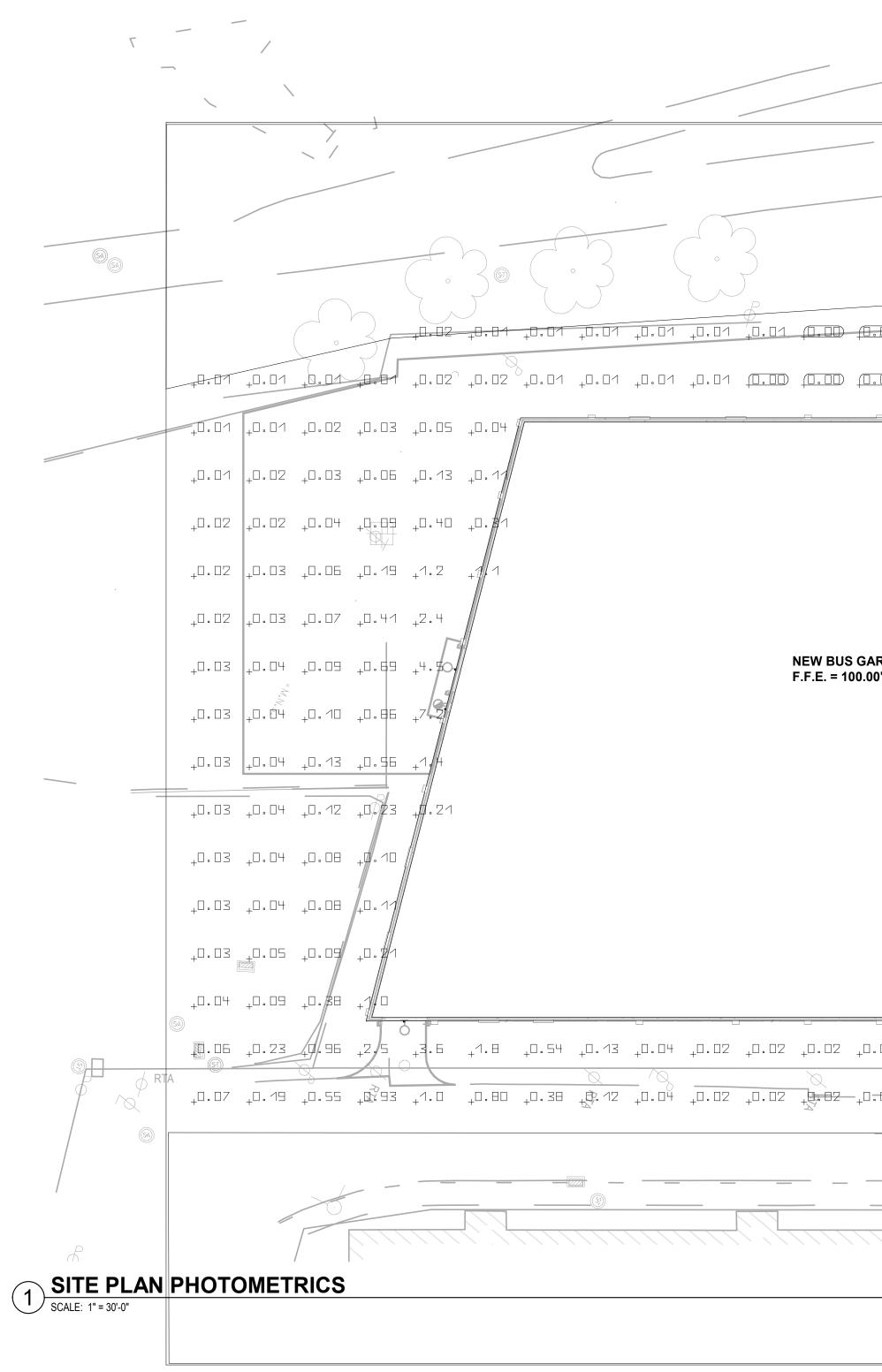




- 2. EXISTING POLE LIGHT TO BE REMOVED AND RELOCATED. EXTEND CONDUIT,
- WIRING AND CONTROLS TO NEW LOCATION AS REQUIRED.
- ALL CONDUITS WITHIN 10'-0" OF TANKS SHALL BE RIGID TYPE UNDER FUELING HAZARD AREA AND AT SEAL OFFS.
- 4. E.C. SHALL DISCONNECT POWER TO GATES AND RECONNECT TO NEW ELECTRICAL SYSTEM IN BUS GARAGE. COORDINATE EXACT LOCATION AND VOLTAGE / WIRING REQUIREMENTS PRIOR TO ROUGH-IN.
- 5. NEW PAD-MOUNT UTILITY TRANSFORMER. E.C. TO PROVIDE TRANSFORMER PAD AND METERING EQUIPMENT AS REQUIRED. COORDINATE EXACT DIMENSIONS, REQUIREMENTS AND LOCATION WITH AES OHIO PRIOR TO ROUGH-IN.
- EMERGENCY FUEL DISPENSING SHUT OFF SWITCH. COORDINATE EXACT LOCATION WITH OTHERS PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.
- E.C. TO PROVIDE SEAL-OFFS ON CONDUITS AT PANELS AND EQUIPMENT FEEDING THE FUELING EQUIPMENT.
- CONDUIT(S) UNDER DRIVE SHALL BE CONCRETE ENCASED. REFER TO DETAILS ON SHEET E003.





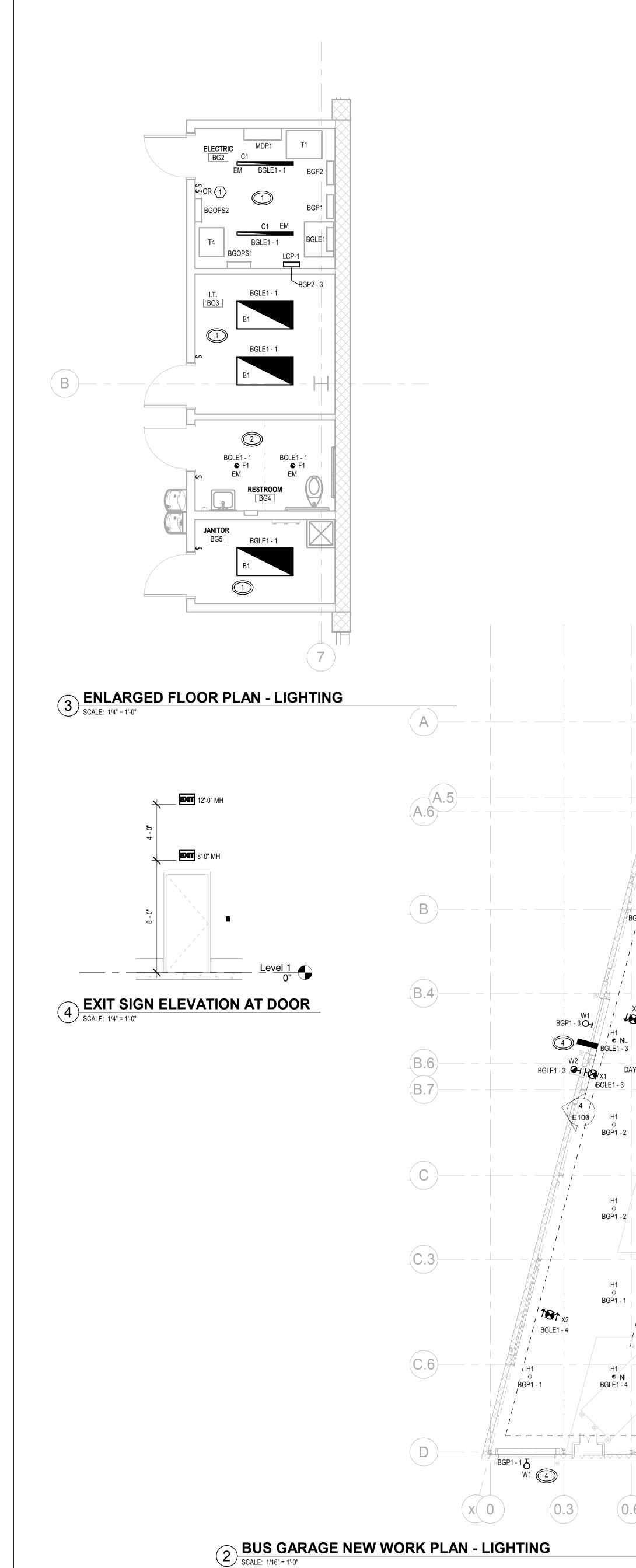


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	•0 +13 +2.6	+2.9 +2.9 +2.9 +2.1 +2.5 +1.8 +0.57		+0.16 +0.08 +0.18 +0.10 #0.22 +0.10	
		+0.97 +0.49 +0.29 +0.53 +0.56 +0.26 +0.26 +0.79			
GARAGE 0.00'	+2.7 ₊ 1.9	+0.42 +0.20 +0.26 +1.1 +0.37 +0.18 +0.27 +1.1	+3.7 <u>-</u> 5.0 ₊ 2.4	+0.58 +0.24 +0.19	+0.08 +0.05 +0.03 +0.12 +0.06 +0.04
	+2.0 ₊ 1.7	+0.34 +0.18 +0.25 +1.1 +0.34 +0.17 +0.25 +1.0	+2.8 2.7 +2.2		
		+0.32 +0.14 +0.23 +0.98 +0.28 +0.12 +0.20 +0.85	+2.9 4.0 +2.3		
		+0.21 +0.10 +0.16 +0.58 +0.16 +0.08 +0.11 +0.31		+0.42 +0.26 +0.23 +0.22 +0.11 +0.00	
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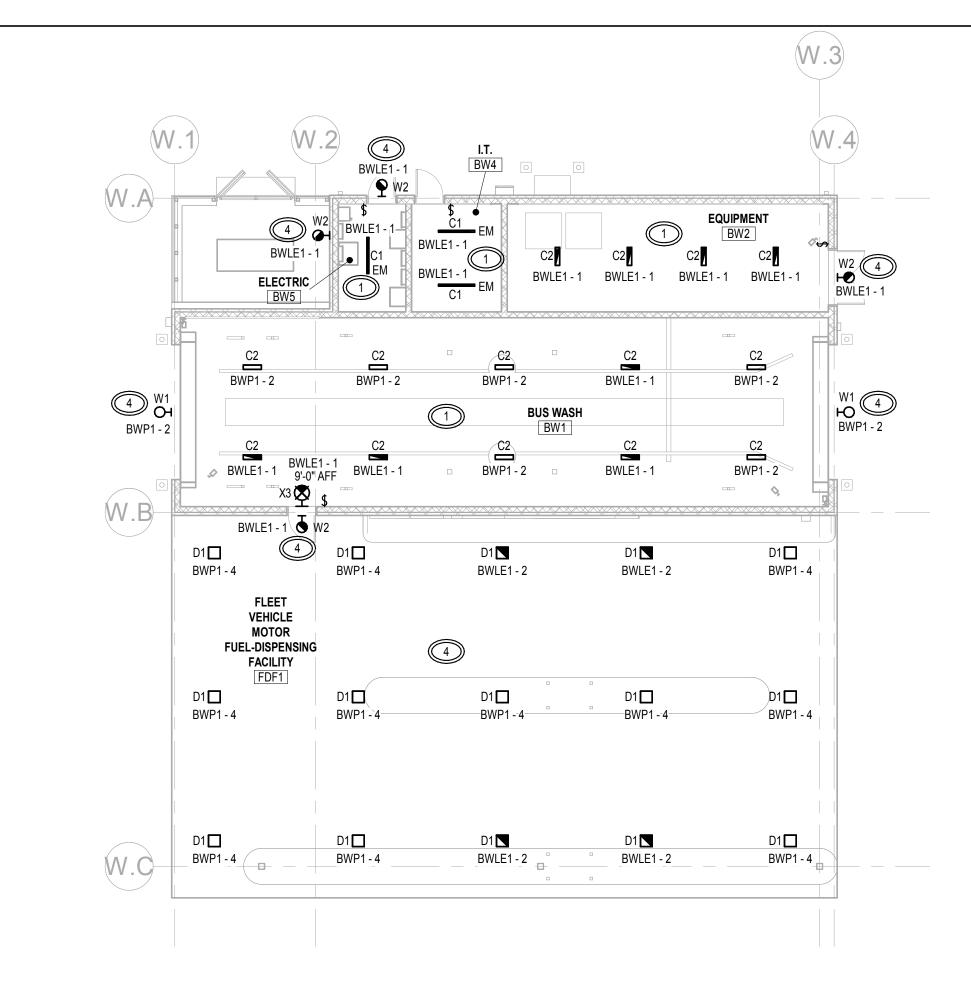
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	X2 / X2 / BGLE1 - 2							
	/ H1 / O BGP1-4	H1 0 BGP1-4	H1 • NL BGLE1 - 2	H1 o BGP1 - 4	H1 0 BGP1 - 4	3 BGP1 - 4	H1 o BGP1-4	H1 o BGP1 - 4
				+-/			IG ZONE 1	
	H1 O BGP1-4	/ / H1 / / O / / BGP1-4	H1 o BGP1-4	H1 O BGP1-4	H1 ØGP1 - 4	H1 O BGP1-4	H1 O BGP1 - 4	H1 o BGP1-4
/ GP3 /	H1 / / BGP1-3 / I	H1 H1 BGLE1 - 2	H1 o BGP1-3	H1 0 BGP1 - 3	H1 O BGP1 - 3	H1	H1 0 BGP1 - 3	H1 o BGP1-3
X2 M BGLE1 - 1	+ - / / 3 /	DAYLIGHTING ZONE 1 H1 O BGP1 - 3	H1 0 BGP1 - 3	H1 0 BGP1 - 3	H1 o BGP1 - 3		BUS GARAGE BG1 X2 H1 O BGP1 - 3	H1 o BGP1 - 3
lighting z						3 3		
	/ / / / / / / / / / / / / / //////////	H1 I o BGP1-2 I I	H1 • NL BGLE1 - 3	H1 o BGP1 - 2	H1 o BGP1-2	H1 o BGP1-2	H1 o BGP1-2	H1 0 BGP1 - 2
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	H1 o BGP1 - 1	H1 ● NL BGLE1 - 4	H1 o BGP1-1	H1 O BGP1-1	H1 O BGP1 - 1	H1 o BGP1 - 1	H1 Ø NL BGLE1 - 4	H1 o BGP1 - 1
 			//	BGLE1 - 4 			3)	/
	H1 O BGP1-1	H1 o BGP1 - 1	H1 o BGP1 - 1	H1 o BGP1 - 1	H1 © NL BGLE1 - 4	H1 O BGP1 - 1 DAYLIGHTING	H1 o BGP1 - 1 ZONE 2	H1 o BGP1 - 1
							BGLE1-4 BGLE1-4 BGLE1-4	
6) (0	0.9)1) (1.5) (2	2.2	3	(3.5)	4	BGLE1-4	

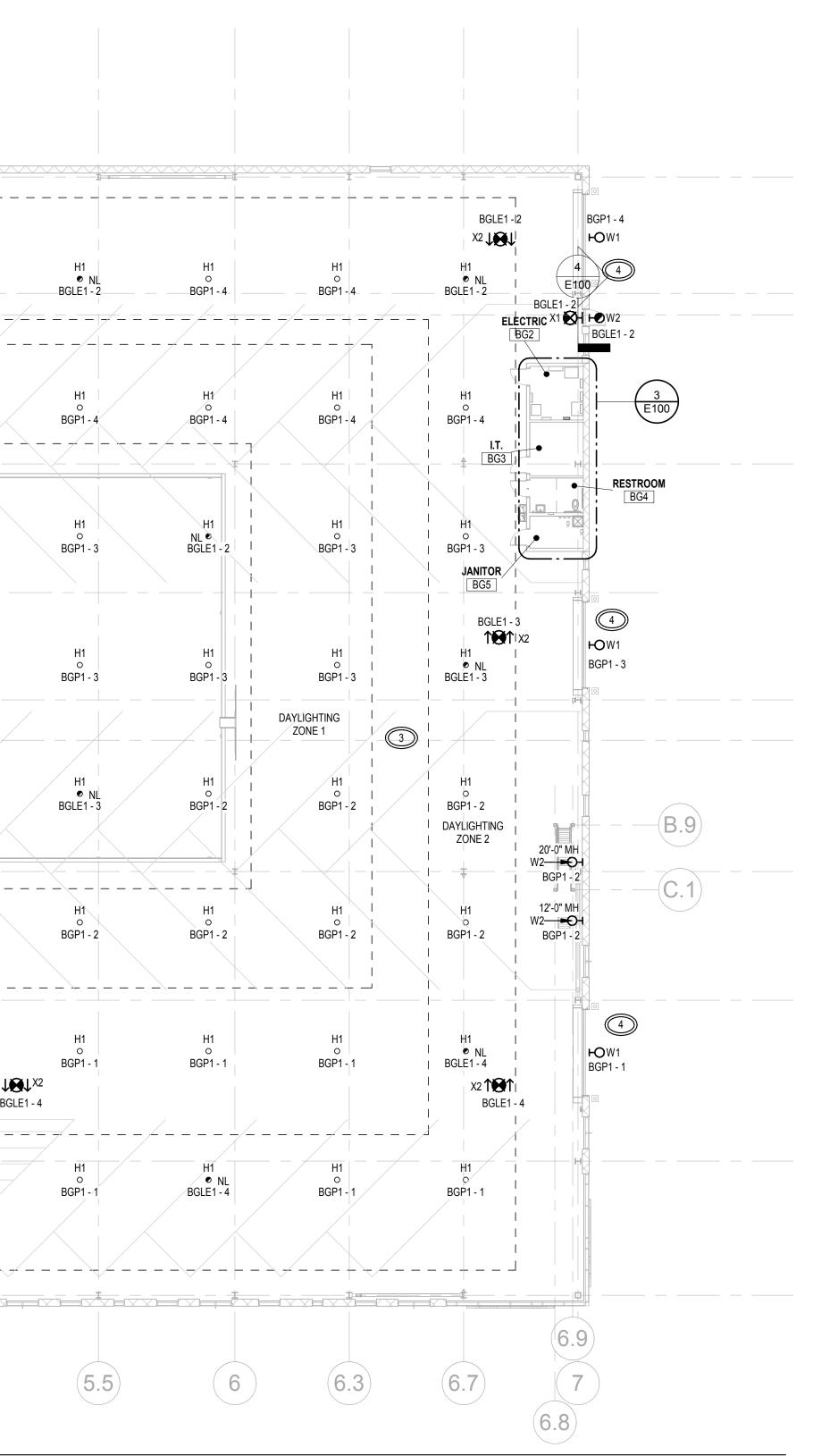
1 BUS WASH AND FLEET VEHICLE MOTOR-FUEL DISPENSING FACILITY NEW WORK PLAN" - LIGHTING SCALE: 3/32" = 1'-0"



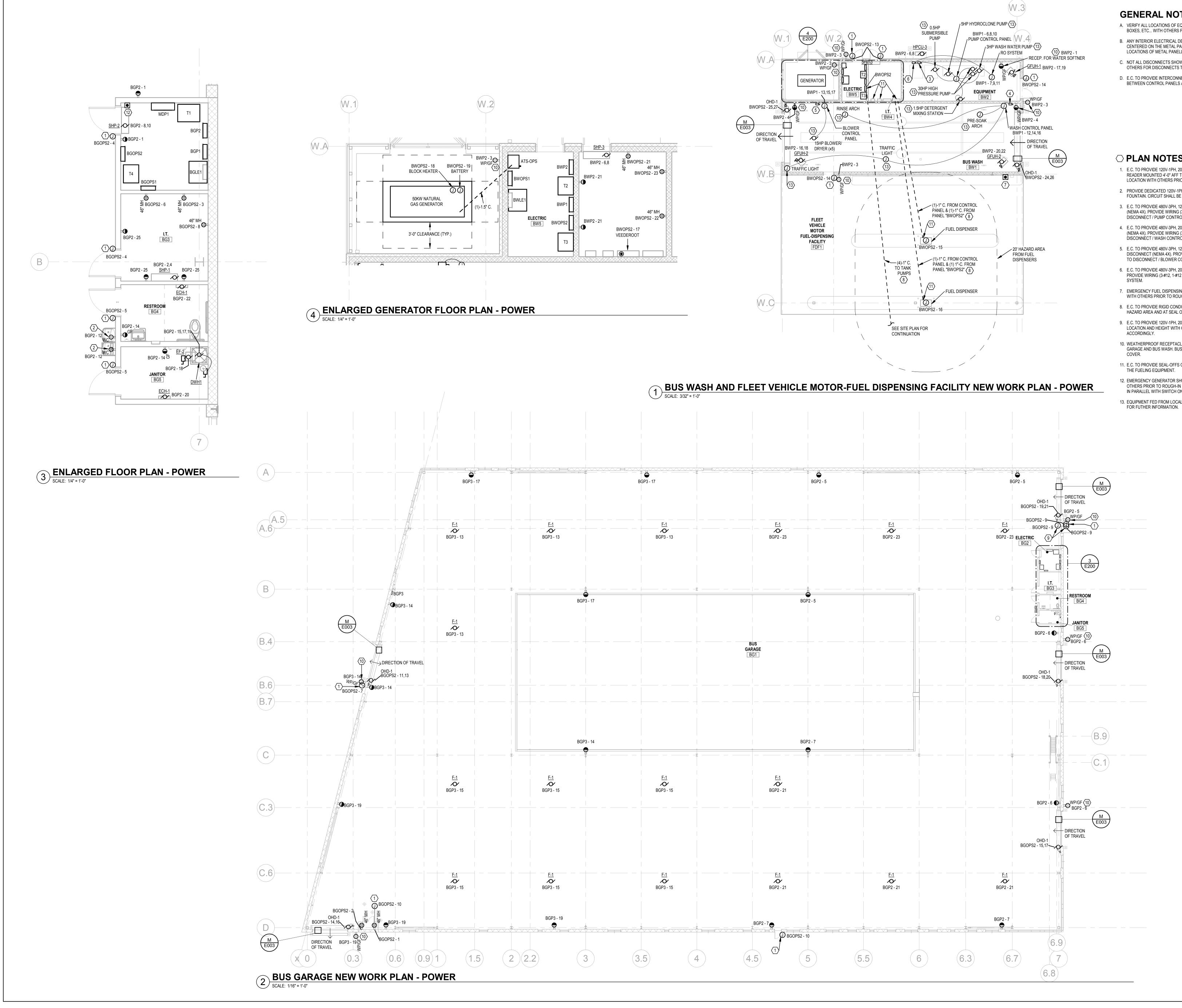
GENERAL NOTES

- A. EXIT SIGNS SHALL BE WIRED AHEAD OF ANY / ALL LOCAL SWITCHING.
- B. ALL EXIT SIGNS SHALL BE MOUNTED 12'-0" AFF, UNLESS NOTED OTHERWISE.
- C. VERIFY ALL LOCATIONS OF EQUIPMENT, MOTORS, JUNCTION BOXES, ELECTRICAL BOXES, ETC... WITH OTHERS PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY. D. ANY INTERIOR ELECTRICAL OUTLET LOCATED ON METAL PANELLING WALL SHALL BE CENTERED ON THE METAL PANEL. REFER TO ARCHITETURAL DRAWINGS FOR EXACT LOCATIONS OF METAL PANELLING.

1. OVERRIDE SWITCH TO CONTROL BUS GARAGE LIGHTS.





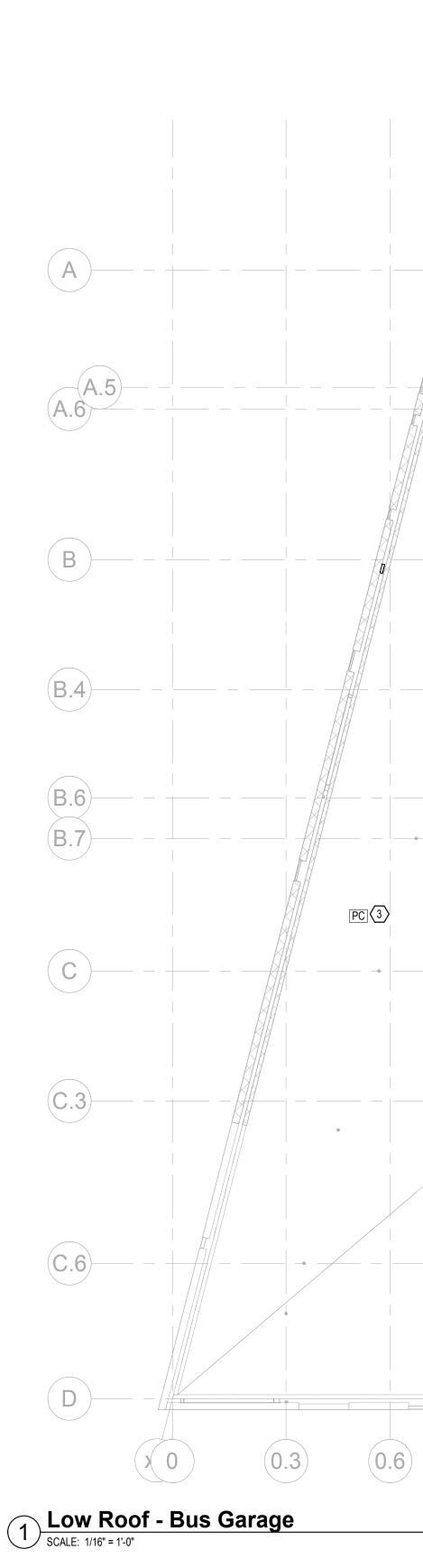


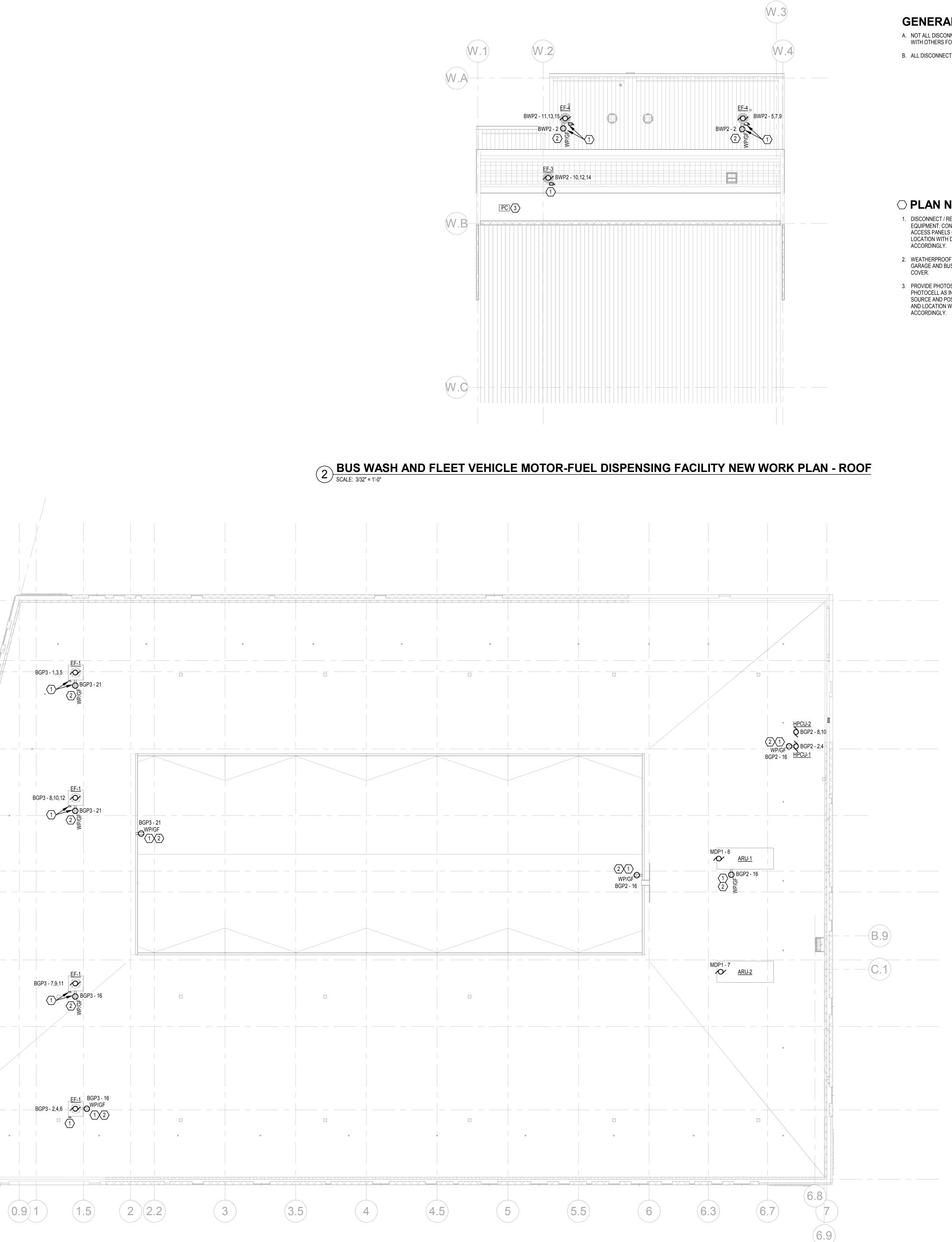
GENERAL NOTES

- A. VERIFY ALL LOCATIONS OF EQUIPMENT, MOTORS, JUNCTION BOXES, ELECTRICAL BOXES, ETC... WITH OTHERS PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.
- B. ANY INTERIOR ELECTRICAL DEVICES LOCATED ON METAL PANELLING WALL SHALL BE CENTERED ON THE METAL PANEL. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF METAL PANELLING.
- C. NOT ALL DISCONNECTS SHOWN ARE TO BE PROVIDED BY THE E.C. COORDINATE WITH OTHERS FOR DISCONNECTS TO BE PROVIDED BY E.C.
- D. E.C. TO PROVIDE INTERCONNECTING CONDUIT, WIRING, AND JUNCTION BOXES BETWEEN CONTROL PANELS AND EQUIPMENT FOR BUS WASH EQUIPMENT.

- 1. E.C. TO PROVIDE 120V-1PH, 20A WITH WIRING ROUTED TO FRAME MOUNTED CARD READER MOUNTED 4'-0" AFF TO CENTER OF READER. COORDINATE EXACT LOCATION WITH OTHERS PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.
- 2. PROVIDE DEDICATED 120V-1PH, 20A CIRCUIT TO BOTTLE FILLER / DRINKING FOUNTAIN. CIRCUIT SHALL BE FED FROM GFCI BREAKER IN PANELBOARD.
- 3. E.C. TO PROVIDE 480V-3PH, 125A CIRCUIT TO PUMP CONTROL PANEL DISCONNECT (NEMA 4X). PROVIDE WIRING (3-#1/0, 1-#6 GND IN 2"C.) FROM BREAKER TO DISCONNECT / PUMP CONTROL PANEL.
- 4. E.C. TO PROVIDE 480V-3PH, 20A CIRCUIT TO WASH CONTROL PANEL DISCONNECT (NEMA 4X). PROVIDE WIRING (3-#12, 1-#12 GND IN 0.75"C.) FROM BREAKER TO DISCONNECT / WASH CONTROL PANEL.
- 5. E.C. TO PROVIDE 480V-3PH, 125A CIRCUIT TO BLOWER CONTROL PANEL DISCONNECT (NEMA 4X). PROVIDE WIRING (3-#1/0, 1-#6 GND IN 2"C.) FROM BREAKER TO DISCONNECT / BLOWER CONTROL PANEL.
- 6. E.C. TO PROVIDE 480V-3PH, 20A CIRCUIT TO RO SYSTEM DISCONNECT (NEMA 4X). PROVIDE WIRING (3-#12, 1-#12 GND IN 0.75"C.) FROM BREAKER TO DISCONNECT / RO
- 7. EMERGENCY FUEL DISPENSING SHUT OFF SWITCH. COORDINATE EXACT LOCATION WITH OTHERS PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.
- 8. E.C. TO PROVIDE RIGID CONDUIT FROM LOCAL ELECTRICAL PANEL UNDER FUELING HAZARD AREA AND AT SEAL OFFS.
- 9. E.C. TO PROVIDE 120V-1PH, 20A TO ADA DOOR ACTUATOR. COORDINATE EXACT LOCATION AND HEIGHT WITH OTHERS PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.
- 10. WEATHERPROOF RECEPTACLE TO HAVE BELL 5103-2 (BRONZE) COVER FOR BUS GARAGE AND BUS WASH. BUS GARAGE CLERESTORY TO HAVE BELL 5103-0 (GRAY)
- 11. E.C. TO PROVIDE SEAL-OFFS ON CONDUITS AT PANELS AND EQUIPMENT FEEDING THE FUELING EQUIPMENT. 12. EMERGENCY GENERATOR SHUT OFF SWITCH. COORDINATE EXACT LOCATION WITH
- OTHERS PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY. SWITCH SHALL BE RUN IN PARALLEL WITH SWITCH ON GENERATOR. 13. EQUIPMENT FED FROM LOCAL CONTROL PANEL. REFER TO WESTMATIC DRAWINGS





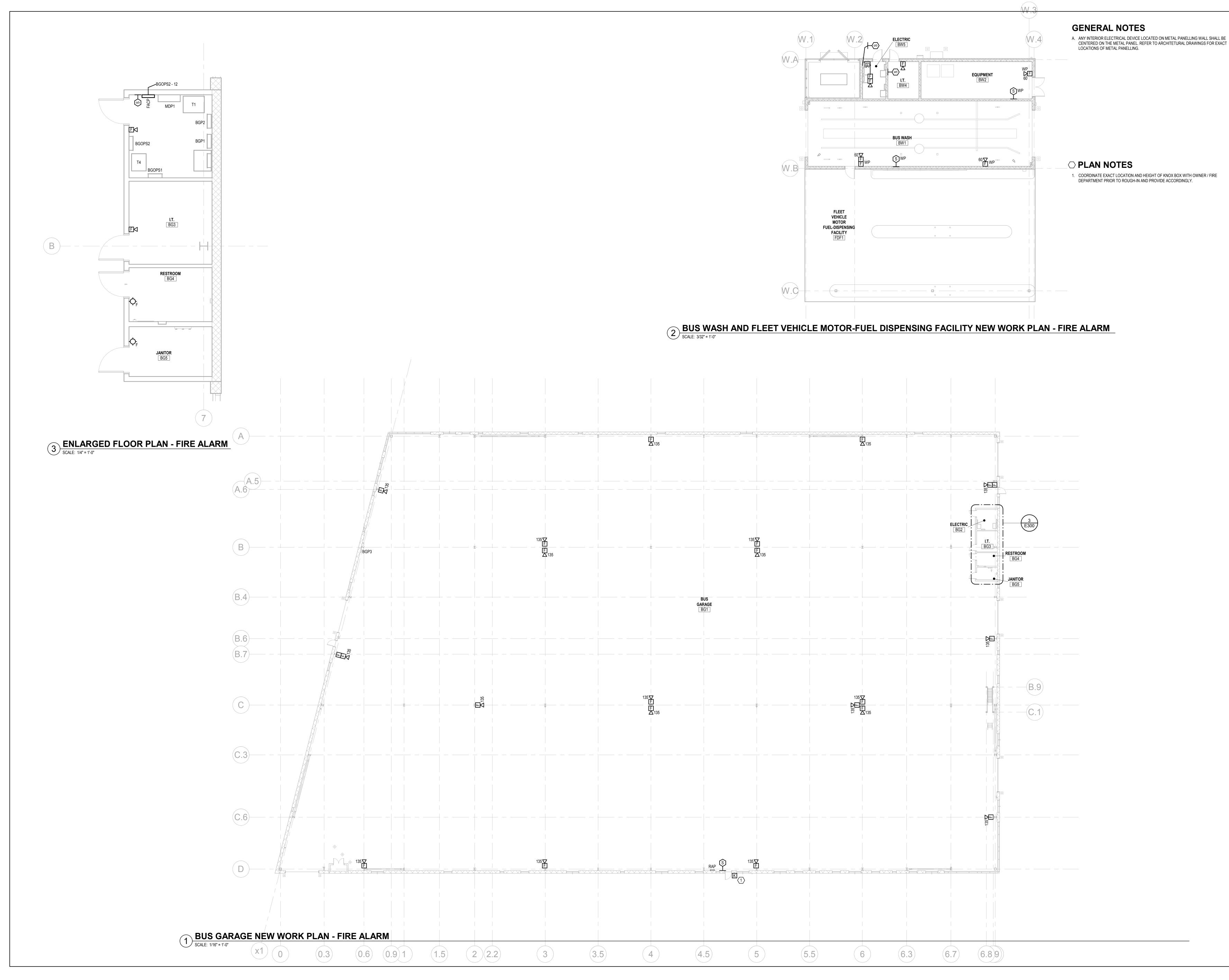


GENERAL NOTES

- A. NOT ALL DISCONNECTS SHOWN ARE TO BE PROVIDED BY THE E.C. COORDINATE WITH OTHERS FOR DISCONNECTS TO BE PROVIDED BY E.C.
- B. ALL DISCONNECTS ON ROOF SHALL BE NEMA TYPE 3R.

- 1. DISCONNECT / RECEPTACLE TO BE MOUNTED ON UNISTRUT NEXT TO MECHANICAL EQUIPMENT. CONDUIT AND UNISTRUT SHALL BE LOCATED SO ANY EQUIPMENT ACCESS PANELS CAN BE FULLY OPENED AND REMOVED. COORDINATE EXACT LOCATION WITH DIVISION 23 AND OWNER PRIOR TO ROUGH-IN AND PROVIDE
- WEATHERPROOF RECEPTACLE TO HAVE BELL 5103-2 (BRONZE) COVER FOR BUS GARAGE AND BUS WASH. BUS GARAGE CLERESTORY TO HAVE BELL 5103-0 (GRAY) COVER.
- 3. PROVIDE PHOTOSENSOR ON ROOF FOR EXTERIOR LIGHTING CONTROL. MOUNT PHOTOCELL AS INCONSPICUOUSLY AS POSSIBLE AND AWAY FROM EXISTING LIGHT SOURCE AND POSSIBLE SHADOWING FROM EQUIPMENT. VERIFY MOUNTING HEIGHT AND LOCATION WITH ARCHITECT / OWNER PRIOR TO ROUGH-IN AND PROVIDE



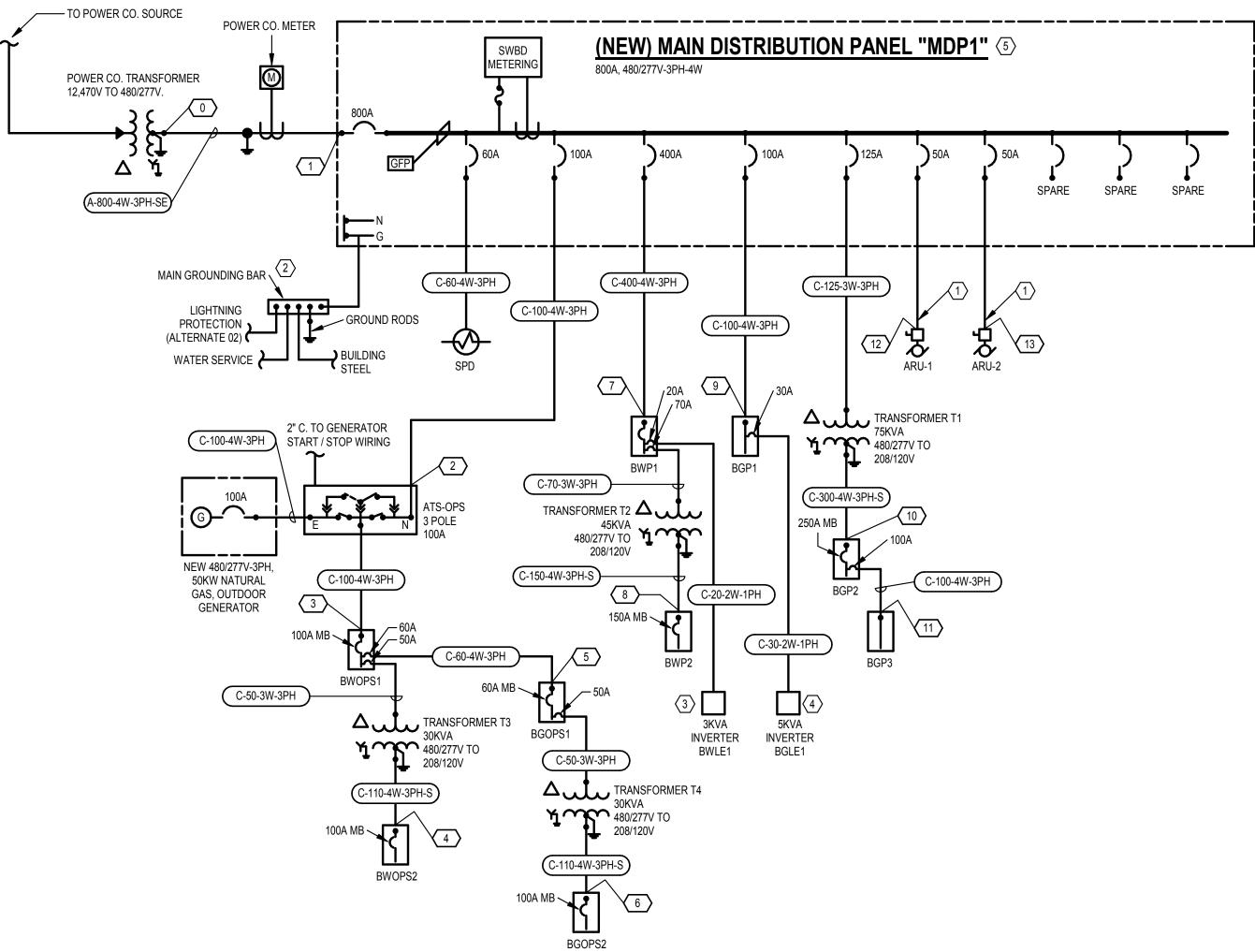


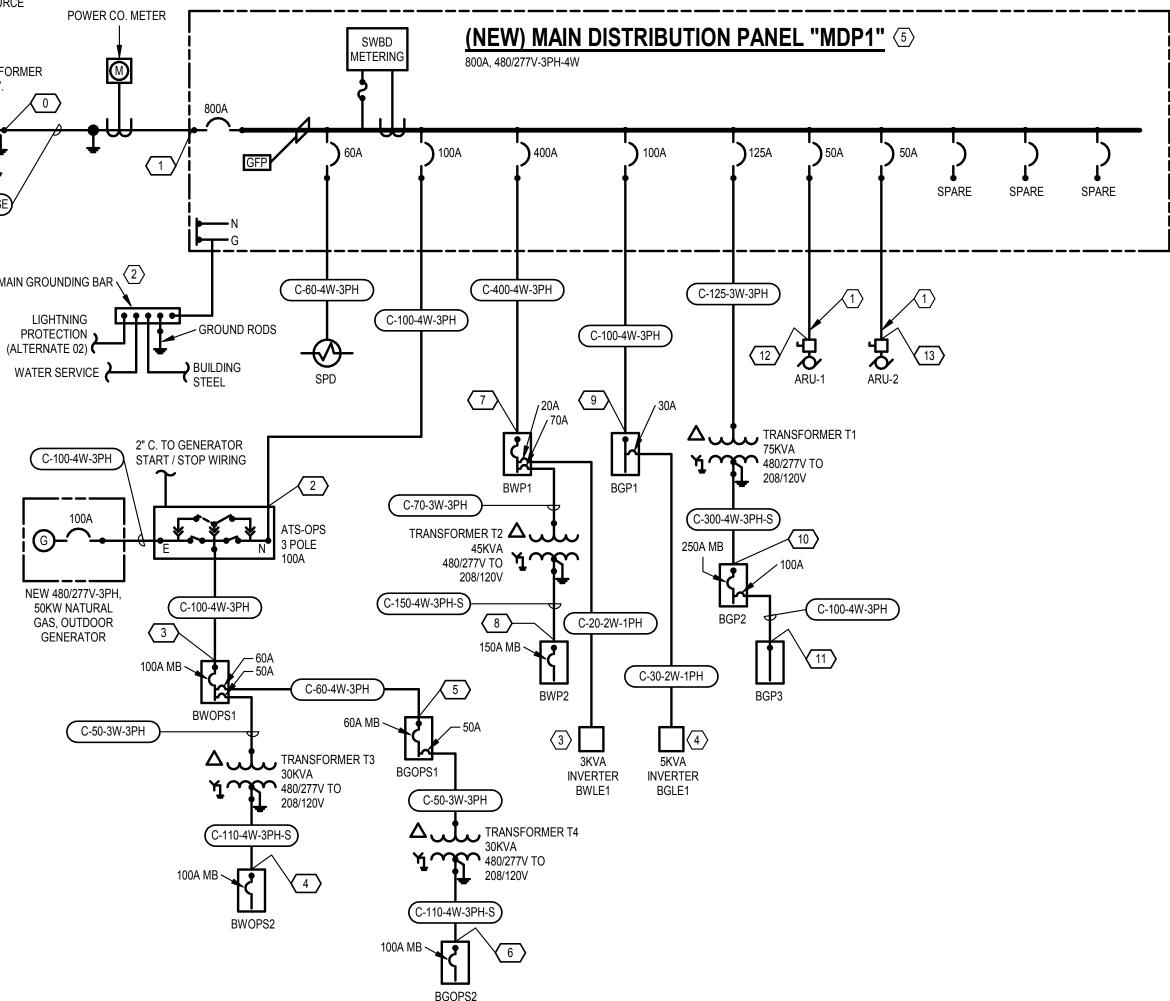


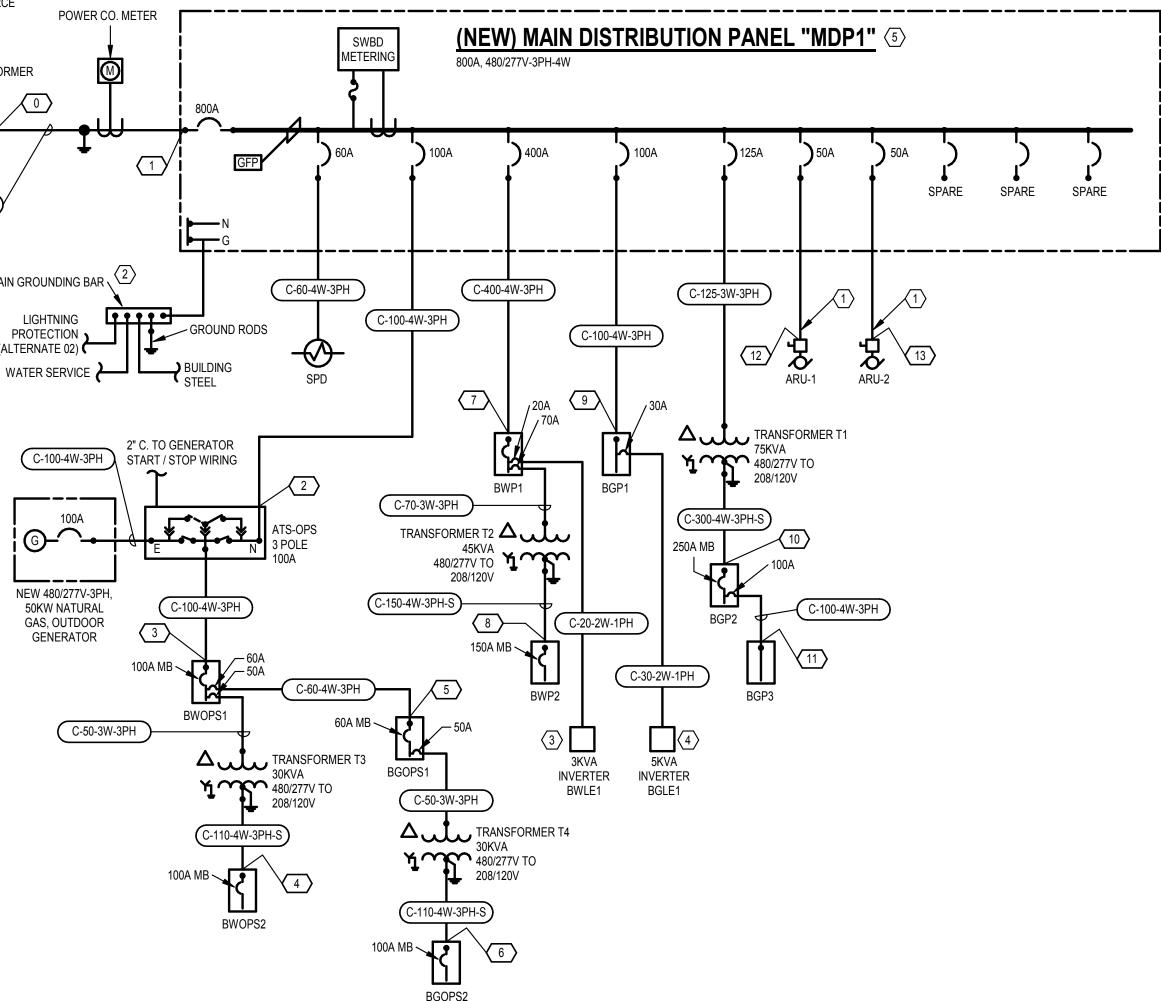


ELECTRICAL SINGLE-LINE LEGEND

	CONDUIT & WIRE
	CONDUIT & WIRE TO BE REMOVED EXISTING CONDUIT & WIRE TO REMAIN
	INTEGRATED EQUIPMENT ENCLOSURE
	SWITCHBOARD ENCLOSURE
	BUSSING
#	FAULT CURRENT REFERENCE POINT
(W- PH-)	FEEDER WIRE SIZE SYMBOL
	S=SECONDARY, SE=SERVICE ENTRANCE, V=VOLTAGE DROP — # OF PHASES
	— # OF CONDUCTORS — FEEDER AMPERAGE
	— PEEDER AMPERAGE — MATERIAL, A=ALUMINUM, C=COPPER
	AUTOMATIC TRANSFER SWITCH
V V	
	AUTOMATIC TRANSFER SWITCH - BYPASS
	BUS DUCT
	BUS LINK
BUS LINK	
⊷ ≪− <u></u>]→>•	CIRCUIT BREAKER - MEDIUM VOLTAGE DRAWOUT
	DELTA SYMBOL
D	DISCONNECT
~~ ↔	DRAWOUT CONNECTION
	ELECTRIC METER
	EQUIPMENT AMMETER
નહ	EQUIPMENT CAPACITOR
-ll-	EQUIPMENT CONTACTOR
m	EQUIPMENT CURRENT TRANSFORMER
<u> </u>	
+	EQUIPMENT GROUND
•	EQUIPMENT LIGHTNING ARRESTOR
M	EQUIPMENT MULTIMETER
	EQUIPMENT POTENTIAL TRANSFORMER
SWBD METERING	
	EQUIPMENT SWITCHBOARD METER
I	
O	EQUIPMENT VOLTMETER
ŭ	EQUIPMENT WYE SIDE OF TRANSFORMER WITH GROUND
<i>..</i>	FUSED CUTOUT
	FUSED SWITCH - PRIMARY
	FUSED SWITCH - FRIMART
-~~·	FUSED SWITCH - SECONDARY
6	GENERATOR
GFP GFP	GROUND FAULT PROTECTOR
К	KEYED INTERLOCK
<i>\lambda</i>	MOTOR
	MOTOR STARTER
	MOTOR STARTER AND DISCONNECT
	PANELBOARD - MAIN LUG ONLY
	PANELBOARD - DOUBLE SET OF LUGS
িয	PANELBOARD - MAIN BREAKER
~	PANELBOARD BREAKER
× t	SHORT CIRCUIT FAULT LOCATION
7	SINGLE POLE SWITCH
	SURGE PROTECTIVE DEVICE
[]	TAP SWITCH WITH GROUND POSITION
	TRANSFORMER
ן ^{יי} יַזָּ`	
⊡	
	UNINTERRUPTIBLE POWER SYSTEM
k^	
	VARIABLE FREQUENCY DRIVE
	VOLTAGE TERMINATION - PRIMARY
● OR ●	VOLTAGE TERMINATION - SECONDARY







ELECTRICAL SINGLE LINE

	FEEDER WIRE SIZES											
	FEE	DER	TAG		# OF SETS	# OF CONDUCTORS	CONDUCTOR SIZE	GROUND SIZE	CONDUIT SIZE			
А	800	4W	3PH	SE	3	4	400	NONE	3"			
С	20	2W	1PH		1	2	12	12	0.75"			
С	30	2W	1PH		1	2	10	10	0.75"			
С	50	3W	3PH		1	4	6	10	1"			
С	60	4W	3PH		1	4	4	10	1.25"			
С	70	3W	3PH		1	3	4	8	1.25"			
С	100	4W	3PH		1	4	2	8	1.5"			
С	110	4W	3PH	S	1	4	1	6	2"			
С	125	3W	3PH		1	3	1	6	1.5"			
С	150	4W	3PH	S	1	4	1/0	6	2"			
С	300	4W	3PH	S	1	4	350	2	3"			
С	400	4W	3PH		1	4	500	3	3.5"			

	FAULT CUR	RENT SCH	IEDULE
REF. POINT	DESCRIPTION	EQUIP. RATING	AVAILABLE SHORT CIRCUIT AMPS
0	UTILITY TRANSFORMER SECONDARY	-	20,943
1	MDP1	65,000	18,660
2	ATS-OPS	-	8,307
3	BWOPS1	14,000	8,106
4	BWOPS2	10,000	5,489
5	BGOPS1	14,000	4,067
6	BGOPS2	10,000	2,736
7	BWP1	35,000	14,330
8	BWP2	22,000	8,568
9	BGP1	35,000	17,700
10	BGP2	22,000	13,426
11	BGP3	10,000	1,892
12	ARU-1	-	4,461
13	ARU-2	-	3,528

\bigcirc SINGLE LINE NOTES

- 1. REFER TO MOTOR SCHEDULE, ON SHEET E003, FOR CONDUIT AND WIRE SIZES.
- 2. PROVIDE ALL GROUNDING ELECTRODE CONNECTIONS PER NEC.
- BASIS OF DESIGN: MYERS ILLUMINATOR IE SERIES. 3KW INVERTER WITH 277V-1PH INPUT, 277V-1PH OUTPUT, 90 MINUTE RUNTIME.
- 4. BASIS OF DESIGN: MYERS ILLUMINATOR IE SERIES. 5KW INVERTER WITH 277V-1PH INPUT, 277V-1PH OUTPUT, 90 MINUTE RUNTIME.
- 5. BASIS OF DESIGN: SQUARE-D, I-LINE PANEL.



	.ocation: ELECT bly From: UTILITY Voltage: 480Y/2 der Size: SEE SI	RIC BG2 TRANSFORMEF 77V-3PH-4W		~AN	N	MDF Nounting: nclosure:	FLOOR			M	Mains Ty	ing: SEE S ype: MB ing: 800 A if.#:	INGLE LINE	Ξ	L Supp	ocation: ELECTRIC by From: MDP1 Voltage: 480Y/277
скт	CIRCUIT DESCRIPTION	APPROX. CONNECTE LOAD	D FRA		DLES S	TRIP SETTING	BREAKE TYPE		IBER OF		WIRE SIZE	GROUND SIZE	CONDUIT SIZE	SEE NOTE	скт	Circuit Descriptio
1	SPD	0.00 kVA	60	A	3	60 A									3	GARAGE - L
2	ATS-OPS	42.80 kVA	100	D A	3	100 A									5	BGLE1
3	BWP1	201.04 kVA	400	D A	3	400 A									7	Spare
4	BGP1	10.80 kVA	100	D A	3	100 A									9	Spare
5	T1, BGP2	35.73 kVA	200	D A	3	125 A									11	Space
6	ARU-1	28.77 kVA	100	D A	3	100 A										opuoo
7	ARU-2	28.77 kVA	100	D A	3	100 A									Load	Classification
8															Lightir	
9															Other	-
10			_													
11																
12			_													
13																
14																
15																
16															Notes	
17																
18																
19																TOTAL ACTIV
20																
oad	Classification		C	Connect	ed	Demand	Factor	Estimate	ed			Panel Tot	als			10.8 kV/
ightir	ng			9506 V	/A	125.0	0%	11882 \	/A							
Motor				123352	VA	105.8	3%	130544	VA	Tot	al Conn	. Load: 347	'.89 kVA			
Other				5116 V	/A	100.0	0%	5116 V	A	Tota	l Est. De	emand: 257	'.5 kVA			
Recep	otacle			209920	VA	52.38	3%	109960	VA		Total	Conn.: 418	8 A			
										Tota	l Est. De	emand: 310	A			
NOTE																
NOTE	TOTAL CO 347.89			_					_			FIMATED D 7.5 kVA (31				
Pa	TOTAL CO 347.89 Anel: BW ocation: ELECT by From: MDP1	9 kVA P1 RIC BW5					ing: Surfa ure: Type				25 A.I.C. R Mains	7.5 kVA (31 ating: SEE Type: MB	0 A) SINGLE LI		L Supp	anel: BWP .ocation: ELECTRIC by From: T2 Voltage: 208Y/120V
L Supp	TOTAL CO 347.89 Anel: BW ocation: ELECT by From: MDP1 Voltage: 480Y/2	9 kVA /P1 RIC BW5 77V-3PH-4W	Polos			Enclos					A.I.C. R Mains Mains R	7.5 kVA (31 Rating: SEE Type: MB Rating: 400	0 A) SINGLE LI A		L Supp	ocation: ELECTRIC Ily From: T2 Voltage: 208Y/120V
Ра _L Supp	TOTAL CO 347.89 Anel: BW ocation: ELECT by From: MDP1 Voltage: 480Y/2 Circuit Descrip	P KVA P1 RIC BW5 77V-3PH-4W ption Trip	Poles			Enclos	ure: Type	: 1		Pole	A.I.C. R Mains Mains R	ating: SEE Type: MB ating: 400	0 A) SINGLE LI A escription	скт	L Supp CKT	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio
Ра Б Бирр Скт	TOTAL CO 347.89 Anel: BW ocation: ELECT by From: MDP1 Voltage: 480Y/2 Circuit Descrip T2	9 kVA P1 RIC BW5 77V-3PH-4W ption Trip 70 A	3	2925	A 368 V	Enclos	ure: Type	: 1		Pole:	A.I.C. R Mains Mains R s Trip 20 A	ating: SEE Type: MB ating: 400	O A) SINGLE LI A escription /ASH - L	СКТ 2	L Supp CKT 1	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER
Ра L Supp СКТ 1 3	TOTAL CO 347.89 Anel: BW ocation: ELECT by From: MDP1 Voltage: 480Y/2 Circuit Descrip T2 	9 kVA P1 RIC BW5 77V-3PH-4W otion Trip 70 A 	3 			Enclos	иге: Туре В 649 VA	• 1 C		Pole 1 1	A.I.C. R Mains Mains R s Trip 20 A 20 A	ating: SEE Type: MB ating: 400 Circuit D BUS W CANC	O A) SINGLE LI A escription (ASH - L DPY - L	СКТ 2 4	L Supp CKT 1 3	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECE
Ра Бирр Скт 1 3 5	TOTAL CO 347.89 Anel: BW ocation: ELECT by From: MDP1 Voltage: 480Y/2 Circuit Descrip T2 	9 kVA /P1 RIC BW5 77V-3PH-4W otion Trip 70 A 	3 	2925	368 V	Enclos A 2577	иге: Туре В 649 VA	• 1 C	2853	Pole 1 1 3	A.I.C. R Mains Mains R 20 A 20 A 125 A	ating: SEE Type: MB ating: 400 Circuit D BUS W CANC PUMP C	O A) SINGLE LI A escription (ASH - L DPY - L ONT PNL	CKT 2 4 6	L Supp CKT 1 3 5	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEP EF-4 (EQUIP. RM
Ра Бирр СКТ 1 3 5 7	TOTAL CO 347.89 Anel: BW ocation: ELECT by From: MDP1 Voltage: 480Y/2 Circuit Descrip T2 RO SYSTEI	9 kVA P1 RIC BW5 77V-3PH-4W ption 70 A M 15 A	3 3			Enclos A 2577	B 649 VA	• 1 C		Pole: 1 1 3 	A.I.C. R Mains Mains R 20 A 20 A 125 A 	2.5 kVA (31 7.5 kVA (31 Type: SEE Type: MB ating: 400 Circuit D BUS W CANC PUMP C	O A) SINGLE LI A A A A SH - L DPY - L ONT PNL 	CKT 2 4 6 8	L Supp CKT 1 3 5 7	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEP EF-4 (EQUIP. RM
Ра L Supp СКТ 1 3 5 7 9	TOTAL CO 347.89 Anel: BW ocation: ELECT by From: MDP1 Voltage: 480Y/2 Circuit Descrip T2 RO SYSTEI 	9 kVA /P1 RIC BW5 77V-3PH-4W otion 70 A M 15 A 	3 3 	2925	368 V	Enclos A 2577	иге: Туре В 649 VA	2385	2853	Pole 1 1 3 	25 A.I.C. R Mains Mains R 20 A 20 A 20 A 125 A 	ating: SEE Type: MB ating: 400 Circuit D BUS W CANC PUMP C	O A) SINGLE LI A escription (ASH - L DPY - L ONT PNL 	CKT 2 4 6 8 10	L Supp CKT 1 3 5 7 9	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEP EF-4 (EQUIP. RM
Pa Supp CKT 1 3 5 7 9 11	TOTAL CO 347.89 Anel: BW ocation: ELECT by From: MDP1 Voltage: 480Y/2 Circuit Descrip T2 RO SYSTEI RO SYSTEI 	9 kVA /P1 RIC BW5 77V-3PH-4W btion 70 A M 15 A M 	3 3 	2925 1108	368 V 2853.	Enclos (A 2577 1108	B 649 VA	2385		Pole: 1 1 3 3	A.I.C. R Mains Mains R 20 A 20 A 125 A 20 A	Ating: SEE Type: MB tating: 400 Circuit D BUS W CANC PUMP C WASH C	O A) SINGLE LI A escription (ASH - L OPY - L ONT PNL :- :ONT PNL	CKT 2 4 6 8 10 12	L Supp CKT 1 3 5 7 9 11	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEF EF-4 (EQUIP. RM EF-4 (IT RM)
Ра Бирр СКТ 1 3 5 7 9 11 13	TOTAL CO 347.89 Anel: BW ocation: ELECT by From: MDP1 Voltage: 480Y/2 Circuit Descrip T2 RO SYSTEI BLOWER CONT	9 кVA PH RIC BW5 77V-3PH-4W otion Trip 70 A М 15 A Г PNL 125 A	3 3 3	2925	368 V	Enclos	 B 649 VA 2853 	2385	2853	Pole: 1 1 3 3 	257 A.I.C. R Mains Mains R 20 A 20 A 125 A 20 A 20 A	ating: SEE Type: MB ating: 400 Circuit D BUS W CANC PUMP C WASH C	O A) SINGLE LI A escription /ASH - L DPY - L ONT PNL CONT PNL	CKT 2 4 6 8 10 12 14	L Supp CKT 1 3 5 7 9 11 13	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECE EF-4 (EQUIP. RM EF-4 (IT RM)
Pa L Supp CKT 1 3 5 7 9 11 13 15	TOTAL CO 347.89 Anel: BW ocation: ELECT by From: MDP1 Voltage: 480Y/2 Circuit Descrip T2 RO SYSTEI BLOWER CONT	9 kVA /P1 RIC BW5 77V-3PH-4W btion 70 A M 15 A M 	3 3 3 3 	2925 1108	368 V 2853.	Enclos (A 2577 1108	 ure: Type B 649 VA 2853 2853 4432 	2385 [1108]	2853 4432	Pole: 1 1 3 3 3 	257 A.I.C. R Mains Mains R 20 A 20 A 20 A 125 A 20 A 20 A 	Ating: SEE Type: MB ating: 400 Circuit D BUS W CANC PUMP C WASH C	O A) SINGLE LI A escription (ASH - L OPY - L ONT PNL :- :ONT PNL 	CKT 2 4 6 8 10 12 14 14	L Supp CKT 1 3 5 7 9 11 13 15	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECE EF-4 (EQUIP. RM EF-4 (IT RM) EF-4 (IT RM)
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Pa Supp CKT 1 3 5 7 9 11 13 15 17 19	TOTAL CO 347.89 Anel: BW ocation: ELECT by From: MDP1 Voltage: 480Y/2 Circuit Descrip T2 RO SYSTEI BLOWER CONT BLOWER CONT BLOWER CONT	9 kVA /P1 RIC BW5 77V-3PH-4W otion Trip 70 A M 15 A F PNL 125 A 20 A	3 3 3 1	2925 1108	368 V 2853.	Enclos	 a 649 VA b 649 VA c 2853 c 4432 	2385 [1108]	2853 4432	Pole: 1 1 3 3 3 	257 A.I.C. R Mains Mains R 20 A 20 A 20 A 125 A 20 A 20 A 	Ating: SEE Type: MB ating: 400 Circuit D BUS W CANC PUMP C WASH C	O A) SINGLE LI A escription (ASH - L OPY - L ONT PNL :- :ONT PNL 	CKT 2 4 6 8 10 12 14 16 18 20	L Supp CKT 1 3 5 7 9 11 13 15 17 19	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEF EF-4 (EQUIP. RM EF-4 (IT RM) EF-4 (IT RM) GFUH-1
Pa Supp CKT 1 3 5 7 9 11 13 15 17 19 21	TOTAL CO 347.89 Anel: BW ocation: ELECT by From: MDP1 Voltage: 480Y/2 Circuit Descrip T2 RO SYSTEI BLOWER CONT BLOWER CONT BWLE1 Spare	9 kVA PH RIC BW5 77V-3PH-4W otion Trip 70 A 70 A 15 A 15 A 7 PNL 125 A 20 A 20 A	3 3 3 1 1	2925 1108 2963	368 V 2853. 4432.	Enclos (A 2577 1108 2963	 ure: Type B 649 VA 2853 2853 4432 	2385 1108 2963 	2853 4432 0 VA	Pole: 1 1 3 3 3 3 	257 A.I.C. R Mains Mains R 20 A 20 A 20 A 125 A 20 A 20 A 20 A 20 A 20 A 	2.5 kVA (31 Type: SEE Type: MB tating: 400 Circuit D BUS W CANC PUMP C WASH C	O A) SINGLE LI A escription /ASH - L OPY - L ONT PNL CONT PNL cont PNL cont PNL 	CKT 2 4 6 8 10 12 14 16 18 20 22	L Supp CKT 1 3 5 7 9 11 13 15 17 19 21	Ocation: ELECTRIC Jy From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEF EF-4 (EQUIP. RM EF-4 (IT RM) GFUH-1 IT RECEP.
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Pa Supp XKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31	TOTAL CO 347.89 ATTENDED ANDEL: BW Docation: ELECT Dy From: MDP1 Voltage: 480Y/2 Circuit Descrip T2 CICUIT DESCRIP T2 BLOWER CONT BLOWER CONT BLOWER CONT BWLE1 Spare Spare Spare Space Space Space	9 kVA P1 RIC BW5 77V-3PH-4W otion Trip 70 A 70 A 70 A 15 A 15 A 70 A 20 A 20 A 20 A 20 A 20 A 20 A	3 3 3 1 1 1 1 1 1 1 1 1	2925 1108 2963 1006 0 VA	368 V 2853. 4432. 0 VA 0 VA	Enclos	 ure: Type B 649 VA 2853 2853 4432 0 VA 0 VA 	1 C 2385 1108 2963 0 VA 0 VA	2853 4432 0 VA 0 VA	Pole: 1 1 3 3 3 1 1 1 1 1	A.I.C. R Mains Mains R 20 A 20 A 20 A 125 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A 	Zating: SEE Type: MB Lating: 400 Circuit D BUS W CANC PUMP C WASH C WASH C Sp Sp Sp Sp Sp	SINGLE LI A escription (ASH - L OPY - L ONT PNL CONT PNL coare pare pare pare ace ace ace	CKT 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32	L Supp CKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECE EF-4 (EQUIP. RM EF-4 (EQUIP. RM) EF-4 (IT RM) IT RECEP. Spare Spare Spare Spare Spare
Pa Supp Ext 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33	TOTAL CO 347.89	9 kVA P1 RIC BW5 77V-3PH-4W otion Trip 70 A 70 A M 15 A M 15 A 7 PNL 125 A 20 A 20 A 20 A 20 A 20 A 20 A	3 3 3 1 1 1 1 1 1 1 1 1 1 1	2925 1108 2963 1006 0 VA	368 V 2853. 4432. 0 VA 0 VA	Enclos A 2577 2577 1108 2963 2963 0 0 VA 0 VA 0 0 VA 0 0 VA	 ure: Type B 649 VA 2853 2853 4432 0 VA 0 VA <!--</td--><td>1 C 2385 1108 2963 0 VA 0 VA</td><td>2853 4432 0 VA 0 VA</td><td>Pole 1 1 3 3 3 1 1 1 1 1 1 1</td><td>A.I.C. R Mains Mains R 20 A 20 A 20 A 20 A 125 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A</td><td>Ating: SEE Type: MB tating: 400 Circuit D BUS W CANC PUMP C WASH C WASH C Sp Sp Sp Sp Sp</td><td>SINGLE LI A escription (ASH - L OPY - L ONT PNL CONT PNL cont PNL cont ent pare </td><td>CKT 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34</td><td>L Supp CKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33</td><td>ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEF EF-4 (EQUIP. RM EF-4 (IT RM) EF-4 (IT RM) IT RECEP. Spare Spare Spare Spare Spare Spare</td>	1 C 2385 1108 2963 0 VA 0 VA	2853 4432 0 VA 0 VA	Pole 1 1 3 3 3 1 1 1 1 1 1 1	A.I.C. R Mains Mains R 20 A 20 A 20 A 20 A 125 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	Ating: SEE Type: MB tating: 400 Circuit D BUS W CANC PUMP C WASH C WASH C Sp Sp Sp Sp Sp	SINGLE LI A escription (ASH - L OPY - L ONT PNL CONT PNL cont PNL cont ent pare 	CKT 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34	L Supp CKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEF EF-4 (EQUIP. RM EF-4 (IT RM) EF-4 (IT RM) IT RECEP. Spare Spare Spare Spare Spare Spare
Pa Supp CKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35	TOTAL CO 347.89	9 kVA P1 RIC BW5 77V-3PH-4W otion Trip 70 A 70 A 70 A 15 A 15 A 70 A 20 A 20 A 20 A 20 A 20 A 20 A </td <td>3 3 3 1 1 1 1 1 1 1 1 1 1 1</td> <td>2925 1108 2963 1006 0 VA</td> <td>368 V 2853. 4432. 0 VA 0 VA 0 VA</td> <td>Enclos A 2577 2577 1108 2963 2963 0 0 VA 0 VA 0 0 VA 0 0 VA</td> <td> ure: Type B 649 VA 2853 2853 4432 0 VA 0 VA <!--</td--><td>1 C C C C C C C C C C C C C C C C C C C</td><td>2853 4432 0 VA 0 VA</td><td>Pole: 1 1 3 3 3 1 1 1 1 1 1 1</td><td>257 A.I.C. R Mains Mains R 20 A 20 A 20 A 125 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A</td><td>Zating: SEE Type: MB tating: 400 Circuit D BUS W CANC PUMP C WASH C WASH C Sp Sp Sp Sp Sp Sp</td><td>SINGLE LI A escription (ASH - L DPY - L ONT PNL CONT PNL cont cont cont cont cont cont cont cont</td><td>CKT 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36</td><td>L Supp CKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35</td><td>ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEF EF-4 (EQUIP. RM EF-4 (IT RM) EF-4 (IT RM) IT RECEP. Spare Spare Spare Spare Spare Space Space</td></td>	3 3 3 1 1 1 1 1 1 1 1 1 1 1	2925 1108 2963 1006 0 VA	368 V 2853. 4432. 0 VA 0 VA 0 VA	Enclos A 2577 2577 1108 2963 2963 0 0 VA 0 VA 0 0 VA 0 0 VA	 ure: Type B 649 VA 2853 2853 4432 0 VA 0 VA <!--</td--><td>1 C C C C C C C C C C C C C C C C C C C</td><td>2853 4432 0 VA 0 VA</td><td>Pole: 1 1 3 3 3 1 1 1 1 1 1 1</td><td>257 A.I.C. R Mains Mains R 20 A 20 A 20 A 125 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A</td><td>Zating: SEE Type: MB tating: 400 Circuit D BUS W CANC PUMP C WASH C WASH C Sp Sp Sp Sp Sp Sp</td><td>SINGLE LI A escription (ASH - L DPY - L ONT PNL CONT PNL cont cont cont cont cont cont cont cont</td><td>CKT 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36</td><td>L Supp CKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35</td><td>ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEF EF-4 (EQUIP. RM EF-4 (IT RM) EF-4 (IT RM) IT RECEP. Spare Spare Spare Spare Spare Space Space</td>	1 C C C C C C C C C C C C C C C C C C C	2853 4432 0 VA 0 VA	Pole: 1 1 3 3 3 1 1 1 1 1 1 1	257 A.I.C. R Mains Mains R 20 A 20 A 20 A 125 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A 20 A	Zating: SEE Type: MB tating: 400 Circuit D BUS W CANC PUMP C WASH C WASH C Sp Sp Sp Sp Sp Sp	SINGLE LI A escription (ASH - L DPY - L ONT PNL CONT PNL cont cont cont cont cont cont cont cont	CKT 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36	L Supp CKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEF EF-4 (EQUIP. RM EF-4 (IT RM) EF-4 (IT RM) IT RECEP. Spare Spare Spare Spare Spare Space Space
Pa Supp CKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37	TOTAL CO 347.89 ATTENDESCIP Corcuit Descrip Voltage: 480Y/2 Circuit Descrip T2 RO SYSTEI BLOWER CONT BLOWER CONT BWLE1 Spare Spare Spare Spare Spare Space Space Space Space Space	9 kVA P1 RIC BW5 77V-3PH-4W otion Trip 70 A 20 A 20 A 20 A 20 A 20 A 20 A <tr tr=""></tr>	3 3 3 1 1 1 1 1 1 1 1 1 1 1	2925 1108 2963 1006 0 VA	368 V 2853. 4432. 0 VA 0 VA	Enclos A 2577 2577 1108 2963 2963 0 VA 0 VA 0 VA 10	 ure: Type B 649 VA 2853 2853 2853 4432 0 VA 0 VA <	1 C C C C C C C C C C C C C C C C C C C	2853 4432 0 VA 0 VA	Pole: 1 1 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1	257 A.I.C. R Mains Mains R 20 A 20 A 20 A 125 A 20 A	Ating: SEE Type: MB Lating: 400 Circuit D BUS W CANC PUMP C WASH C WASH C Sp Sp Sp Sp Sp Sp	SINGLE LI A escription (ASH - L DPY - L ONT PNL 	CKT 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38	L Supp CKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECE EF-4 (EQUIP. RM EF-4 (EQUIP. RM) EF-4 (IT RM) TRECEP. Spare Spare Spare Spare Spare Spare Spare Space Space Space
Pa Supp CKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35	TOTAL CO 347.89	9 kVA P1 RIC BW5 77V-3PH-4W otion Trip 70 A 70 A 70 A 15 A 15 A 70 A 20 A 20 A 20 A 20 A 20 A 20 A </td <td>3 3 3 1 1 1 1 1 1 1 1 1 1 1</td> <td>2925 1108 2963 1006 0 VA</td> <td>368 V 2853. 4432. 0 VA 0 VA 0 VA</td> <td>Enclos A 2577 2577 1108 2963 2963 0 0 VA 0 VA 0 0 VA 0 0 VA</td> <td> ure: Type B 649 VA 2853 2853 4432 0 VA 0 VA <!--</td--><td>1 C C C C C C C C C C C C C C C C C C C</td><td>2853 4432 0 VA 0 VA</td><td>Pole: 1 1 3 3 3 1 1 1 1 1 1 1</td><td>257 A.I.C. R Mains Mains R 20 A 20 A 20 A 125 A 20 A</td><td>Ating: SEE Type: MB Lating: 400 Circuit D BUS W CANC PUMP C WASH C WASH C Sp Sp Sp Sp Sp Sp Sp</td><td>SINGLE LI A escription (ASH - L DPY - L ONT PNL CONT PNL cont PNL CONT CONT CONT CONT CONT CONT CONT CONT </td><td>CKT 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36</td><td>L Supp CKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35</td><td>ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEF EF-4 (EQUIP. RM EF-4 (IT RM) EF-4 (IT RM) IT RECEP. Spare Spare Spare Spare Spare Space Space</td></td>	3 3 3 1 1 1 1 1 1 1 1 1 1 1	2925 1108 2963 1006 0 VA	368 V 2853. 4432. 0 VA 0 VA 0 VA	Enclos A 2577 2577 1108 2963 2963 0 0 VA 0 VA 0 0 VA 0 0 VA	 ure: Type B 649 VA 2853 2853 4432 0 VA 0 VA <!--</td--><td>1 C C C C C C C C C C C C C C C C C C C</td><td>2853 4432 0 VA 0 VA</td><td>Pole: 1 1 3 3 3 1 1 1 1 1 1 1</td><td>257 A.I.C. R Mains Mains R 20 A 20 A 20 A 125 A 20 A</td><td>Ating: SEE Type: MB Lating: 400 Circuit D BUS W CANC PUMP C WASH C WASH C Sp Sp Sp Sp Sp Sp Sp</td><td>SINGLE LI A escription (ASH - L DPY - L ONT PNL CONT PNL cont PNL CONT CONT CONT CONT CONT CONT CONT CONT </td><td>CKT 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36</td><td>L Supp CKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35</td><td>ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEF EF-4 (EQUIP. RM EF-4 (IT RM) EF-4 (IT RM) IT RECEP. Spare Spare Spare Spare Spare Space Space</td>	1 C C C C C C C C C C C C C C C C C C C	2853 4432 0 VA 0 VA	Pole: 1 1 3 3 3 1 1 1 1 1 1 1	257 A.I.C. R Mains Mains R 20 A 20 A 20 A 125 A 20 A	Ating: SEE Type: MB Lating: 400 Circuit D BUS W CANC PUMP C WASH C WASH C Sp Sp Sp Sp Sp Sp Sp	SINGLE LI A escription (ASH - L DPY - L ONT PNL CONT PNL cont PNL CONT CONT CONT CONT CONT CONT CONT CONT 	CKT 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36	L Supp CKT 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35	ocation: ELECTRIC ly From: T2 Voltage: 208Y/120V Circuit Descriptio WTR SOFTNER EXTERIOR RECEF EF-4 (EQUIP. RM EF-4 (IT RM) EF-4 (IT RM) IT RECEP. Spare Spare Spare Spare Spare Space Space

Supp	Voltage: 208Y/120
скт	Circuit Descript
1	WTR SOFTNEF
3	EXTERIOR REC
5	EF-4 (EQUIP. R
7	
9	
11	EF-4 (IT RM)
13	
15	
17	GFUH-1
19	
21	IT RECEP.
23	Spare
25	
27	Spare
29	Spare
31	Spare
33	Space
35	Space
37	Space
39	Space
41	Space
Load	Classification
Motor	•
Rece	ptacle
Notes	5:

TOTAL	CC
7	.89

СКТ	Circuit Descri
1	IT RECEP
3	IT RECEP
5	DOOR CONTR
7	DOOR CONTR
9	DOOR CONTR
11	OHD-1 (S
13	
15	OHD-1 (N
17	
19	OHD-1 (N
21	
23	Spare
25	Spare
27	Spare
29	Spare
31	Spare
33	Spare
35	Space
37	Space
39	Space
41	Space
Load	Classification
Motor	
Other	
Rece	ptacle

	TOTAL CONNEC			ESTIMATED DEMAND										
	201.04 kVA										110	.31 kVA	(133 A)	
L Supp	ocation: ELECTRIC BC	52				Mounti Enclosu					Mains	Type:		IE
	Voltage: 480Y/277V-3P	H-4W	1							N	lains R	Rating:	60 A	
кт	Circuit Description	Trip	Poles		4	E	B C			Poles	Trip	Circu	it Description	скт
1	T4	30 A	3	7500	0 VA	\				1	20 A		Spare	2
3						6300	0 VA			1	20 A		Spare	4
5								6400	0 VA	1	20 A		Spare	6
7	Space		1							1			Space	8
9	Space		1							1			Space	10
11	Space		1							1			Space	12
		Total	Load:	7.50	kVA		kVA	6.40	kVA					
oad	Classification		(Connecte	ed	Demand F	actor	Estimat	ed			Panel	Totals	
otor				15600 V	/A	105.00	%	16380	VA					
ther				1000 V	A	100.00	%	1000 \	/A		-		20.2 kVA	
ecep	otacle			3600 V	A	100.00	%	3600 \	3600 VA Tot				20.98 kVA	
												Conn.:		
												emand:		

193110 VA 52.59% 101555 VA

5906 VA

1017 VA 125.00% 1271 VA

109.69%

DIS	STRIBL
Location:	ELECTRIC E
upply From:	UTILITY TRANS
Voltage:	480Y/277V-3
eeder Size	SEE SINGLE

D

Total Conn. Load: 201.04 kVA

Total Conn.: 242 A

Total Est. Demand: 133 A

TOTAL CONNECTED

20.2 kVA

Lighting

Receptacle

Motor Other

> ESTIMATED DEMAND 20.98 kVA (25 A)

6478 VA

1006 VA 100.00% 1006 VA **Total Est. Demand:** 110.31 kVA

TAL CONNEL 10.8 kVA

Panel: BGOPS2

Motor
Other
Receptacle
Notes:

AL CONNECTED 20.2 kVA

BGP1 ELECTRIC BO MDP1 480Y/277V-3F						ng: Suri Jre: Typ			A.I.C. Rating: SEE SINGLE LINE Mains Type: MLO Mains Rating: 100 A									
Description	Trip	Poles		A		вС		C	Poles	Trip	Circı	uit Description	скт					
AGE - L	20 A	1	2106	2329					1	20 A	G	ARAGE - L	2 4					
AGE - L	20 A	1			2012	2042			1	20 A	G	ARAGE - L						
GLE1	40 A	1					2310	0 VA	1	20 A		Spare	6					
pare	20 A	1	0 VA	0 VA					1	20 A		Spare	8					
pare	20 A	1			0 VA	0 VA			1	20 A		Spare	10					
pace		1							1			Space	12					
	Total	Load:	4.44	kVA	4.05	i kVA	2.31	kVA										
tion		0	Connect	ed D	emand F	actor	Estimat	ed			Panel	Totals						
			8489 V	'A	125.00)%	10611	VA										
			2310 V	'A	100.00)%	2310 \	VA	Tota	I Conr	n. Load:	10.8 kVA						
									Total	Est. D	emand: 12.92 kVA							
										Total	Conn.:	13 A						
									Total	Est. D	emand:	16 A						
AL CONNEC	TED									ES	TIMATE	D DEMAND						
10.8 kVA										12	.92 kVA	(16 A)	12.92 kVA (16 A)					

L Supp	anel: BGP2 .ocation: ELECTRIC BO by From: T1 Voltage: 208Y/120V-3F		Mounting: Surface A.I.C. Rating: SEE SINGLE Enclosure: Type 1 Mains Type: MB Mains Rating: 225 A							MB	IE			
скт	Circuit Description	Trip	Poles		A	E	3		C	Poles	Trip	Circu	it Description	скт
1	ELEC/GEN RECEP.	20 A	1	360 VA	1248					2	30 A		CU-1,SHP-1	2
3	LCP	20 A	1			800 VA	1248							4
5	RECEPTACLE	20 A	1					720 VA	720 VA	1	20 A	RE	CEPTACLE	6
7	RECEPTACLE	20 A	1	540 VA	1248					2	30 A	HP	CU-2,SHP-2	8
9	BGP3	100 A	3			6103	1248							10
11								5637	1000	1	20 A	WAT	ER COOLERS	12
13				5055	360 VA					1	20 A	RR/	JAN RECEP.	14
15	DWH-1	20 A	3			1500	540 VA			1	20 A	RC	OF RECEP.	16
17								1500	600 VA	1	15 A		EF-2	18
19				1500	1500					1	20 A	E	CH-1 (JAN)	20
21	EAST FANS	20 A	1			148 VA	1500			1	20 A	E	CH-1 (RR)	22
23	WEST FANS	20 A	1					111 VA	0 VA	1	20 A		Spare	24
25	IT RECEP.	20 A	1	540 VA	0 VA					1	20 A		Spare	26
27	Spare	20 A	1			0 VA	0 VA			1	20 A		Spare	28
29	Spare	20 A	1					0 VA	0 VA	1	20 A		Spare	30
31	Space		1							1			Space	32
33	Space		1							1			Space	34
35	Space		1							1			Space	36
37	Space		1							1			Space	38
39	Space		1							1			Space	40
41	Space		1							1			Space	42
		Total	Load:	12.35	5 kVA	13.09	kVA	10.29	kVA					
Load	Classification		0	Connecte	ed D	emand F	actor	Estimat	ed			Panel	Totals	
Motor				27267 \	'A	104.13	%	28392	VA					
Other				800 VA	A	100.00	%	800 V	'A	Tota	l Conn	. Load:	35.73 kVA	
Recep	otacle			7660 V	A	100.00	%	7660	/A	Total Est. Demand: 36.8			36.85 kVA	
										Total Conn.: 99			99 A	
										Total	Est. Do	emand:	102 A	
Notes	:													

TOTAL CONNECTED 35.73 kVA

скт	Circuit Description	Trin	Poles		A		В		с	Poles	Trip	Circu	it Description	СК
1	T3	50 A	3	8943	7500					3	60 A		BGOPS1	2
3				0040	7300	. 6883	6300							4
5						0000	0000	6773	6400					6
7	Spare	20 A	1	0 VA	0 VA			0770	0.000	1	20 A		Spare	8
9	Spare	20 A	1	0.77	• • •	0 VA	0 VA			1	20 A		Spare	10
11	Spare	20 A	1					0 VA	0 VA	1	20 A		Spare	12
13	Space		1							1			Space	14
15	Space		1							1			Space	1
17	Space		1							1			Space	1
19	Space		1							1			Space	20
21	Space		1							1			Space	22
23	Space		1							1			Space	24
		Total	Load:	16.44	4 kVA	13.18	8 kVA	13.1	7 kVA		<u> </u>		-	
Load	Classification		C	onnecte	əd [Demand F	actor	Estimat	ed			Panel	Totals	
Motor				32648 \	/A	102.39)%	33428	VA					
Other				1000 V	A	100.00)%	1000 \	VA	Tota	l Conn	. Load:	42.8 kVA	
Recep	otacle			9150 V	A	100.00)%	9150	VA	Total	Est. De	emand:	43.58 kVA	
											Total	Conn.:	51 A	
										Total	Est. De	emand:	52 A	
Notes														

42.8 kVA

P2 RIC BW 0V-3P					Mounti Enclosu	ng: Surf Ire: Type				Mains	Rating: S Type: 1 Rating: 2		E
tion	Trip	Poles	4	4	E	3)	Poles	Trip	Circu	it Description	скт
२	20 A	1	180 VA	360 VA					1	20 A	RO	OF RECEP.	2
EP.	20 A	1			720 VA	360 VA			1	20 A	B	W RECEP.	4
RM)	20 A	3					240 VA	1248	2	30 A	HP	CU-3,SHP-3	6
			240 VA	1248									8
					240 VA	240 VA			3	20 A		EF-3	10
)	20 A	3					240 VA	240 VA					12
			240 VA	240 VA									14
					240 VA	208 VA			2	20 A	G	FUH-2 (S)	16
	20 A	2					208 VA	208 VA					18
			208 VA	208 VA					2	20 A	G	FUH-2 (N)	20
	20 A	1			360 VA	208 VA							22
	20 A	2					0 VA	0 VA	1	20 A		Spare	24
			0 VA	0 VA					1	20 A		Spare	26
	20 A	1			0 VA	0 VA			1	20 A		Spare	28
	20 A	1					0 VA	0 VA	1	20 A		Spare	30
	20 A	1	0 VA	0 VA					1	20 A		Spare	32
		1							1			Space	34
		1							1			Space	36
		1							1			Space	38
		1							1			Space	40
		1							1			Space	42
	Total	Load:	2.92	kVA	2.58	kVA	2.38	kVA					
		C	Connecte		emand F		Estimat				Panel	Totals	
			5906 V		109.69		6478 \						
			1980 V	4	100.00	%	1980 \	/A				7.89 kVA	
									Total			8.46 kVA	
											Conn.:		
									Total	Est. D	emand:	23 A	

ONNECTED 9 kVA

ESTIMATED DEMAND 8.46 kVA (23 A)

20.98 kVA (58 A)

OP	52												
RIC BO	G2				Mounti	ng: Surf	ace		4	4.I.C. F	Rating: S	SEE SINGLE LIN	E
					Enclosu	ire: Type	e 1				Type: I		
20V-3F	PH-4W								N	lains F	Rating:	100 A	
ption	Trip	Poles		4	E	В		C	Poles	Trip	Circu	it Description	скт
<u>, </u>	20 A	1	360 VA	360 V	4				1	20 A		T RECEP.	2
	20 A	1				360 VA			1	20 A		R CONTROLS	4
ROLS	20 A	1					360 VA	360 VA	1	20 A	ľ	T RECEP.	6
ROLS	20 A	1	180 VA	360 V/	4				1	20 A		T RECEP.	8
ROLS	20 A	1			540 VA	360 VA			1	20 A	DOO	R CONTROLS	10
)	20 A	2					1560	1000	1	20 A		FACP	12
			1560	1560					2	20 A	(OHD-1 (E)	14
)	20 A	2			1560	1560							16
							1560	1560	2	20 A	(OHD-1 (N)	18
)	20 A	2	1560	1560									20
					1560	0 VA			2	20 A		Spare	22
	20 A	1					0 VA	0 VA					24
	20 A	1	0 VA	0 VA					1	20 A		Spare	26
	20 A	1			0 VA	0 VA			1	20 A		Spare	28
	20 A	1					0 VA	0 VA	1	20 A		Spare	30
	20 A	1	0 VA	0 VA					1	20 A		Spare	32
	20 A	1			0 VA	0 VA			1	20 A		Spare	34
		1							1			Space	36
		1							1			Space	38
		1							1			Space	40
		1							1			Space	42
	Total	Load:		kVA		kVA		kVA					
		C	Connecte		Demand F	actor	Estimat	ed			Panel	Totals	
			15600 \		105.00		16380						
			1000 V		100.00		1000 \					20.2 kVA	
			3600 V	A	100.00	%	3600 \	/A	Total			20.98 kVA	
											Conn.:		
									Total	Est. D	emand:	58 A	
DNNEC	TED									ES	TIMATE	D DEMAND	
1 1 / 4										~~~	0011/4		

Supp	ocation: BUS GARAGI ly From: BGP2 Voltage: 208Y/120V-3F					Mounti Enclosu	ng: Surl I re: Typ				Mains	Type: N	ЛВ	A.I.C. Rating: SEE SINGLE LINE Mains Type: MB Mains Rating: 100 A				
скт	Circuit Description	Trip	Poles		4		3	C	;	Poles	Trip	Circu	it Description	скт				
1	EF-1	15 A	3	1129	1129					3	15 A		EF-1	2				
3						1129	1129							4				
5								1129	1129					6				
7	EF-1	15 A	3	1129	1129	-				3	15 A		EF-1	8				
9						1129	1129							10				
11								1129	1129					12				
13	WEST FANS	20 A	1	148 VA	720 V	4				1	20 A	RE	CEPTACLE	14				
15	EAST FANS	20 A	1			222 VA	360 VA			1	20 A	RO	OF RECEP.	16				
17	RECEPTACLE	20 A	1					540 VA	0 VA	3	20 A		Spare	18				
19	RECEPTACLE	20 A	1	720 VA	0 VA									20				
21	ROOF RECEP.	20 A	1			540 VA	0 VA							22				
23	Spare	20 A	1					0 VA	0 VA	1	20 A		Spare	24				
25	Spare	20 A	1	0 VA	0 VA					1	20 A		Spare	26				
27	Spare	20 A	1			0 VA	0 VA			1	20 A		Spare	28				
29	Space		1							1			Space	30				
31	Space		1							1			Space	32				
33	Space		1							1			Space	34				
35	Space		1							1			Space	36				
37	Space		1							1			Space	38				
39	Space		1							1			Space	40				
41	Space		1							1			Space	42				
		Total	Load:	6.10	kVA	5.64	kVA	5.06	kVA		11		•					
Load	Classification		0	onnecte	ed [Demand F	actor	Estimat	ed	4		Panel [•]	Totals					
Motor				13916 \	/A	106.08	%	14763	VA									
Recep	otacle			2880 V	A	100.00	%	2880 \	/A	Tota	l Conn	. Load:	16.8 kVA					
										Total	Est. De	emand:	17.64 kVA					
											Total	Conn.:	47 A					
										Total	Est. De	emand:	49 A					
														-				
Notes	::																	
	TOTAL CONNEC	TED									FS							
16.8 kVA							-		-	.64 kVA								

Supp	ocation: ELECTRIC B ly From: T3 Voltage: 208Y/120V-3F						ng: Surf ire: Type				Mains	ating: S Type: I ating: 2		ΙE
скт	Circuit Description	Trip	Poles		4		В		C	Poles	Trip	Circu	it Description	СК
1	SP-1 (E TANK)	20 A	3	901 VA	901 VA	\				3	20 A	SP	-2 (E TANK)	2
3						901 VA	901 VA							4
5								901 VA	901 VA					6
7	SP-1 (W TANK)	20 A	3	901 VA	901 VA	\				3	20 A	SP	-2 (W TANK)	8
9						901 VA	901 VA							10
11								901 VA	901 VA					12
13	DOOR CONTROLS	20 A	1	360 VA	360 VA	\				1	20 A	DOO	R CONTROLS	14
15	FUEL DISP. (W)	20 A	1			500 VA	500 VA			1	20 A	FU	EL DISP. (E)	16
17	VEEDEROOT	20 A	1					750 VA	500 VA	1	20 A	BLC	CK HEATER	18
19	BATTERY	20 A	1	500 VA	1000					1	20 A		GATES	20
21	IT RECEP.	20 A	1				360 VA			1	20 A	ľ	T RECEP.	22
23	IT RECEP.	20 A	1					360 VA	1560	2	20 A		OHD-1 (N)	24
25	OHD-1 (S)	20 A	2	1560	1560									26
27						1560	0 VA			3	20 A		Spare	28
29	Spare	20 A	1					0 VA	0 VA					30
31	Spare	20 A	1	0 VA	0 VA									32
33	Spare	20 A	1			0 VA	0 VA			2	20 A		Spare	34
35	Spare	20 A	1			• • • •		0 VA	0 VA					36
37	Space		1							1			Space	38
39	Space		1							1			Space	40
41	Space		1							1			Space	42
	0,000		Load:	8 94	kVA	6.88	kVA	6 77	kVA				00000	
oad	Classification	Total		Connecte		emand F		Estimat				Panel	Totals	
Motor				17048 \		104.58		17828				i unei		
Recep	tacle			5550 V		100.00		5550 \		Tota	l Conn	l oad:	22.6 kVA	
10000				0000 1		100.00		0000					23.38 kVA	
										Total		Conn.:		
										Total				
										Total	Est. De	emand:	65 A	
Notes	:													
		TED									FST		D DEMAND	
22.6 kVA							_			38 kVA				

ESTIMATED DEMAND 36.85 kVA (102 A)

43.58 kVA (52 A)



. 0 /28/2025

AV SYMBOLS

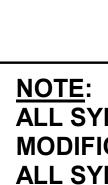
15 W	SINGLE FACED, WALL MOUNTED CLOCK (102" MH UNLESS NOTED OTHER SUBSCRIPT "15" FOR 15" DIAMETER FACE. SUBSCRIPT "W" INDICATES WI
15	DOUBLE FACED, WALL MOUNTED CLOCK (102" MH UNLESS NOTED OTHEF SUBSCRIPT "15" FOR 15" DIAMETER FACE.
42	FLAT PANEL DISPLAY WITH WALL MOUNTING HARDWARE (84" MH UNLESS SCREEN DIAGONAL SIZE.
AE	AREA OF REFUGE / AREA OF RESCUE EXPANSION SWITCH WITHIN A WAL
AM _W	AREA OF REFUGE / AREA OF RESCUE MAIN CONTROL PANEL. "W" INDICA OTHERWISE DESKTOP UNIT.
AP	AREA OF REFUGE / AREA OF RESCUE POWER SUPPLY WITHIN A WALL MO
AR	AREA OF REFUGE / AREA OF RESCUE REMOTE CALL STATION (46" MH UN
AV	AV SYSTEM CONTROLLER LOCATED ON DESK OR PODIUM. REFER TO PL
DVW	BLU-RAY/DVD PLAYER WITH CONNECTION TO LOCAL OUTLET. SUBSCRIP
IR	SOUND FIELD SYSTEM CEILING IR SENSOR. LOCATION SHOWN FOR ESTI REPRESENTS A QUANTITY OF TWO (2) SENSORS TO BE LOCATED FOR OF
IW	INTERACTIVE WHITE BOARD. REFER TO DETAILS.
PC	LOCAL RS-232/IP PROJECTOR CONTROLLER.
PRX	CEILING MOUNTED PROJECTOR. SUBSCRIPT "X" INDICATES CONFIGURAT
PS	CEILING MOUNTED MANUAL PROJECTION SCREEN.
-PS	WALL MOUNTED MANUAL PROJECTION SCREEN.
SBW	VIDEO ON DEMAND SET TOP BOX. SUBSCRIPT "W" INDICATES WALL MOU
SF	CEILING MOUNTED SOUND FIELD SYSTEM SPEAKER.
SFP	PENDANT MOUNTED SOUND FIELD SYSTEM SPEAKER.
SM	CEILING MOUNTED SOUND MASKING SYSTEM SPEAKER.
SMP	PENDANT MOUNTED SOUND MASKING SYSTEM SPEAKER.
SP	1' X 2' CEILING MOUNTED LAY-IN PAGING/INTERCOM SYSTEM SPEAKER.
SP	2' X 2' CEILING MOUNTED LAY-IN PAGING/INTERCOM SYSTEM SPEAKER.
SP	CEILING MOUNTED STANDARD ROUND PAGING/INTERCOM SYSTEM SPEA
SPP	PENDANT MOUNTED PAGING/INTERCOM SYSTEM SPEAKER.
SR	CEILING MOUNTED SOUND REINFORCEMENT SYSTEM SPEAKER.
SRP	PENDANT MOUNTED SOUND REINFORCEMENT SYSTEM SPEAKER.

TECHNOLOGY SYMBOLS

AP	CEILING MOUNTED WIRELESS ACCESS POINT WITH DATA DROP ABOVE CEILING. PROVIDE 20' COIL IN DATA CABLE TO FACILITATE FUTURE RELOCATION OF WAP.
ATEL	TELEPHONE SYSTEM ATTENDANT CONSOLE.
DSS	TELEPHONE SYSTEM MULTI-BUTTON DIRECT SELECTION STATION.
DTELW	TELEPHONE SYSTEM OFFICE TELEPHONE HANDSET. SUBSCRIPT "W" INDICATES WIRELESS BASE STATION AND HANDSET.
RA	REMOTE PATCH ANTENNA FOR LOCAL WIRELESS ACCESS POINT.
W	TELEPHONE SYSTEM CLASSROOM DESK MOUNT TYPE HANDSET. SUBSCRIPT "W" INDICATES WALL MOUNT (46" MH UNLESS NOTED OTHERWISE).
	WIREMOLD RACEWAY, AS NOTED ON PLANS.
SECURI	TY SYMBOLS
x	CCTV SYSTEM CEILING MOUNTED CAMERA. REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA SPECIFICATIONS. SUBSCRIPT "X" INDICATES ENTRY IN CAMERA SCHEDULE.
	CCTV SYSTEM CEILING MOUNTED CAMERA. REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA
CCX	CCTV SYSTEM CEILING MOUNTED CAMERA. REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA SPECIFICATIONS. SUBSCRIPT "X" INDICATES ENTRY IN CAMERA SCHEDULE. PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY
CC X CE	CCTV SYSTEM CEILING MOUNTED CAMERA. REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA SPECIFICATIONS. SUBSCRIPT "X" INDICATES ENTRY IN CAMERA SCHEDULE. PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY HARDWARE, PROGRAMMING AND CABLING AS COORDINATED WITH ELEVATOR CONTRACTOR.
CC X CE DB	CCTV SYSTEM CEILING MOUNTED CAMERA. REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA SPECIFICATIONS. SUBSCRIPT "X" INDICATES ENTRY IN CAMERA SCHEDULE. PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY HARDWARE, PROGRAMMING AND CABLING AS COORDINATED WITH ELEVATOR CONTRACTOR. WALL MOUNTED DOORBELL.
CC X CE DB GB	CCTV SYSTEM CEILING MOUNTED CAMERA. REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA SPECIFICATIONS. SUBSCRIPT "X" INDICATES ENTRY IN CAMERA SCHEDULE. PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY HARDWARE, PROGRAMMING AND CABLING AS COORDINATED WITH ELEVATOR CONTRACTOR. WALL MOUNTED DOORBELL. GLASS BREAK.
CC X CE DB GB M	CCTV SYSTEM CEILING MOUNTED CAMERA. REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA SPECIFICATIONS. SUBSCRIPT "X" INDICATES ENTRY IN CAMERA SCHEDULE. PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY HARDWARE, PROGRAMMING AND CABLING AS COORDINATED WITH ELEVATOR CONTRACTOR. WALL MOUNTED DOORBELL. GLASS BREAK. DESK MOUNTED INTERCOM MASTER STATION.
CC X CE DB GB M JS	CCTV SYSTEM CEILING MOUNTED CAMERA. REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA SPECIFICATIONS. SUBSCRIPT "X" INDICATES ENTRY IN CAMERA SCHEDULE. PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY HARDWARE, PROGRAMMING AND CABLING AS COORDINATED WITH ELEVATOR CONTRACTOR. WALL MOUNTED DOORBELL. GLASS BREAK. DESK MOUNTED INTERCOM MASTER STATION. CCTV SYSTEM REMOTE JOYSTICK/CONTROLLER AND KEYPAD OPERATOR'S STATION.
CC X CE DB GB M JS MD	CCTV SYSTEM CEILING MOUNTED CAMERA. REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA SPECIFICATIONS. SUBSCRIPT "X" INDICATES ENTRY IN CAMERA SCHEDULE. PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY HARDWARE, PROGRAMMING AND CABLING AS COORDINATED WITH ELEVATOR CONTRACTOR. WALL MOUNTED DOORBELL. GLASS BREAK. DESK MOUNTED INTERCOM MASTER STATION. CCTV SYSTEM REMOTE JOYSTICK/CONTROLLER AND KEYPAD OPERATOR'S STATION. CEILING MOUNTED MOTION DETECTOR.

SD	CEILING MOUNTED SCREAM DETECTOR.
<u>SECU</u>	RITY SYMBOLS WITH ELECTRICAL REQUIREMENTS
BR	WALL MOUNTED BIOMETRIC READER (46" MH UNLESS NOTED OTHERWISE). 2-GANG BOX WITH 0.75" CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, READER AND CABLING. REFER TO SECURITY ROUGH-IN
	DETAILS. CCTV SYSTEM WALL MOUNTED CAMERA (REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA SPECIFICATIONS). SUBSCRIPT "X" INDICATES ENTRY IN CAMERA SCHEDULE. 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE
CM	ACCESSIBLE CEILING, CAMERA AND CABLING. WALL MOUNTED MONITOR OUTLET FOR CCTV SYSTEM (84" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 1" CONDUIT TO ABOVE ACCESSIBLE CEILING, JACK, FACEPLATE AND CABLING.
CR	WALL MOUNTED PROXIMITY CARD READER (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, CARD READER AND CABLING. REFER TO SECURITY ROUGH-
	IN DETAILS. ELEVATOR CAB MOUNTED CARD READER. READER TO BE INSTALLED IN ELEVATOR CAB AS COORDINATED WITH
CREL	ELEVATOR CONTRACTOR. WIRING FROM CAB THRU TRAVELING CABLE TO ELEVATOR CONTROLLER IN ELEVATOR MACHINE ROOM AND INTERFACE WITH ELEVATOR CONTROLLER AND SMS, COORDINATE WITH ELEVATOR CONTRACTOR. REFER TO SECURITY ROUGH-IN DETAILS.
DC	LOCAL IP BASED 2-DOOR ACCESS CONTROL PANEL SERVING LOCAL CARD READER/SECURITY CONTROLLED DOORS. LOCATE ABOVE ADJACENT ACCESSIBLE CEILING. PROVIDE DATA DROP IN 0.75" CONDUIT TO LOCAL DATA CLOSET. EXTEND 1" CONDUIT WITH DOOR SECURITY WIRING TO LOCAL SECURITY SYSTEM JUNCTION BOX. REFER TO SECURITY ROUGH-IN DETAILS.
DM	DOOR POSITION SWITCH WITH WIRING. CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, PROVIDE ONE CONTACT FOR EACH LEAF IN MULTI-DOOR OPENINGS. REFER TO SECURITY ROUGH-IN DETAILS.
EDCX	ELECTRONIC DOOR CONTROL. SUBSCRIPT "X" INDICATES SPECIFIC DOOR. REFER TO ELECTRONIC DOOR CONTROL SCHEDULE FOR REQUIREMENTS.
E	ELECTRONIC DOOR LOCK AND INSTALLATION BY OTHERS. LOW VOLTAGE WIRING AND CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, REFER TO SECURITY ROUGH-IN DETAILS.
EM	ELECTRONIC MAG LOCK AND INSTALLATION BY OTHERS. LOW VOLTAGE WIRING AND CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, REFER TO SECURITY ROUGH-IN DETAILS.
ES	ELECTRONIC STRIKE AND INSTALLATION BY OTHERS. LOW VOLTAGE WIRING AND CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, REFER TO SECURITY ROUGH-IN DETAILS.
HA	WALL/PEDESTAL MOUNT HANDICAP DOOR ACTUATOR BUTTON, FURNISHED BY OTHERS. BOX AS REQUIRED BY SYSTEM MANUFACTURER WITH INSTALLATION AND CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, ALL LOW VOLTAGE WIRING AND INTERFACE WITH SMS AND DOOR MOTOR. REFER TO SECURITY ROUGH-IN DETAILS.
HD	HANDICAP DOOR OPERATOR MOTOR ASSEMBLY BY OTHERS. 120V POWER CONNECTION AND CONDUIT FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, LOW VOLTAGE WIRING AND INTERFACE WITH SMS AND DOOR ACTUATOR BUTTONS. REFER TO SECURITY ROUGH-IN DETAILS.
HOFA	WALL/FLOOR MOUNTED ELECTROMAGNETIC DOOR HOLD OPEN WITH POWER SUPPLY INSTALLED BY OTHERS. 120V POWER AND CONNECTION, BOX AS REQUIRED BY MANUFACTURER AND CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, LOW VOLTAGE WIRING FROM POWER SUPPLY TO HOLD OPEN AND INTERFACE WITH SMS. SUBSCRIPT "FA" INDICATES DEVICES POWERED FROM FIRE ALARM SYSTEM AND INTERFACE FROM SMS TO FIRE ALARM SYSTEM REQUIRED FOR DOOR RELEASE. REFER TO SECURITY ROUGH-IN DETAILS.
	WALL MOUNTED INTERCOM DOOR STATION (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING, INTERCOM AND CABLING.
JBM	SECURITY SYSTEM JUNCTION BOX TO BE LOCATED ABOVE ACCESSIBLE CEILING (MIN 6"X6"X4"). ROUTE LOCAL DOOR SECURITY WIRING CONDUITS/RACEWAYS TO JUNCTION BOX. EXTEND 1" CONDUIT WITH DOOR SECURITY WIRING TO LOCAL 2-DOOR CONTROL PANEL/REMOTE DOOR CONTROL PANEL AS INDICATED ON DRAWINGS. REFER TO SECURITY ROUGH-IN DETAILS.
K	WALL MOUNTED SECURITY KEYPAD ENTRY STATION (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, KEYPAD AND CABLING.
KC	WALL MOUNTED COMBINATION KEYPAD/CARD READER (46" MH UNLESS NOTED OTHERWISE). 2-GANG BOX WITH 0.75" CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, DEVICE AND CABLING.
KS	WALL MOUNTED LOCAL LOCK OVERRIDE KEYSWITCH INCLUDING 1-GANG BOX (46" MH UNLESS NOTED OTHERWISE), STAINLESS STEEL FACEPLATE, AND 0.75" CONDUIT WITH WIRING.
LB	ELECTRONIC LATCH BOLT MONITORING. HARDWARE AND INSTALLATION BY OTHERS. LOW VOLTAGE WIRING. CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SECURITY JUNCTION BOX ABOVE CEILING, REFER TO SECURITY ROUGH-IN DETAILS.
MD	CEILING MOUNTED MOTION DETECTOR. 1-GANG BOX MOUNTED IN CEILING, DETECTOR AND CABLING.
H MD	WALL MOUNTED MOTION DETECTOR (90" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING, MOTION DETECTOR, WALL MOUNT HARDWARE, AND CABLING. CEILING MOUNTED SECURITY/CCTV SYSTEM AUDIO MICROPHONE. 1-GANG BOX MOUNTED IN CEILING, MICROPHONE AND
MIC	CABLING. WALL MOUNTED PUSH BUTTON FOR LOCAL ELECTRONIC DOOR RELEASE (46" MH UNLESS NOTED OTHERWISE). 1-GANG
PBW	BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING, BUTTON AND CABLING. SITE POLE FOR MOUNTING SECURITY CAMERAS (REFER TO SPECIFICATIONS FOR SIZE/TYPE). PROVIDE POLE WITH
PL	CONCRETE BASE AS INDICATED ON PLANS. EXTEND AND CONNECT TO SITE CONDUIT SYSTEM AS INDICATED ON PLANS. PROVIDE NEMA 3R JUNCTION BOX AT BASE OF POLE FOR CAMERA EQUIPMENT (120V POWER SUPPLY, FIBER CONVERTERS, ETC.). REFER TO SECURITY ROUGH-IN DETAILS.
PPW	WALL MOUNTED PANIC/DURESS BUTTON (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING, BUTTON AND CABLING.
PSX	LOCAL LOW VOLTAGE POWER SUPPLY FOR EXTERIOR CAMERA. SUBSCRIPT "X" INDICATES ASSOCIATED CAMERA. 120V POWER INTO LOCAL JUNCTION BOX ABOVE CEILING AND CONNECTION TO POWER SUPPLY, POWER SUPPLY MOUNTED ABOVE CEILING AND LOW VOLTAGE WIRING TO LOCAL CAMERA.
RX	REQUEST TO EXIT SWITCH IN DOOR HARDWARE BY OTHERS. LOW VOLTAGE WIRING. CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, REFER TO SECURITY ROUGH-IN DETAILS.
WA	WALL/PEDESTAL MOUNT WAVE ACTIVATED DOOR DEVICE, FURNISHED BY OTHERS. BOX AS REQUIRED BY SYSTEM MANUFACTURER WITH INSTALLATION AND CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, ALL LOW VOLTAGE WIRING AND INTERFACE WITH SMS AND DOOR MOTOR. REFER TO SECURITY ROUGH-IN DETAILS.
WT	WALL MOUNTED WATCH TOUR BUTTON INCLUDING 1-GANG BOX (46" MH UNLESS NOTED OTHERWISE), STAINLESS STEEL FACEPLATE, AND 0.75" CONDUIT WITH WIRING.
	WALL MOUNTED SECURITY SYSTEM WIRING OUTLET MOUNTED BELOW COUNTER TOP. 2-GANG BOX WITH 2-1" CONDUITS TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING, GROMMETED FACEPLATE AND SECURITY SYSTEM

B T2	DETAIL: B = DETAIL DESIGNATION T2 = SHEET WHERE DETAIL IS LOCATED
	SECTION: 1 = SECTION DESIGNATION T2 = SHEET WHERE SECTION IS LOCATED
T2 1	ELEVATION: 1 = ELEVATION DESIGNATION T2 = SHEET WHERE ELEVATION IS LOCATED
3	PLAN NOTE. APPLIES ONLY TO THE SHEET WHICH IT IS SHOWN.
3	DETAIL NOTE. APPLIES ONLY TO THE ASSOCIATED DETAIL.
	LADDER TRAY, 12" x 4" DEEP UNLESS NOTED OTHERWISE.
	CABLE TRAY, 12" x 4" DEEP UNLESS NOTED OTHERWISE.
4"	CONDUIT RUN IN WALL OR ABOVE CEILING.
⊂ = = 4": = = =	CONDUIT RUN IN SLAB OR UNDERGROUND.
CM	CABLE MANAGEMENT SYSTEM PATHWAY.
\odot ∇ $[X]$	DASH SYMBOL INDICATES PARTICULAR OUTLET, DEVICE, OR EQUIPMENT TO BE REMOVED AND SUPPORTING CABLING TO BE REMOVED BACK TO SOURCE OF ORIGIN UNLESS NOTED OTHERWISE.
\mathbf{X} ∇ \mathbf{X}	EXISTING OUTLET, DEVICE, OR EQUIPMENT TO REMAIN. MAINTAIN EXISTING CABLING.
▼ 🗘	SURFACE MOUNTED OUTLET OR DEVICE. REFER TO PLANS AND DETAILS.



X WALL MOU JACKS, FAC WALL MOU ACCESSIBL WALL MOU CEILING, JA DATA OUT SUBSCRIP HAP WALL MOU ACCESSIBL WALL MOU REFER TO TELECOM E R WALL MOU JACKS, FAC WALL MOU JACKS, FAC CUSTOM C CUSTOM O FACEPLATE OUTLET L WILLET LO SMARTYA

OTHERWISE). 12" DIAMETER FACE UNLESS TES WIRE GÚARD. OTHERWISE). 12" DIAMETER FACE UNLESS UNLESS NOTED OTHERWISE). # INDICATES NOMINAL A WALL MOUNTED ENCLOSURE. ' INDICATES WALL MOUNTED WITHIN AN ENCLOSURE, VALL MOUNTED ENCLOSURE. ' MH UNLESS NOTED OTHERWISE). R TO PLANS FOR CONFIGURATION. BSCRIPT "W" INDICATES WALL MOUNTED ON SHELF. OR ESTIMATING PURPOSES ONLY. EACH SYMBOL) FOR OPTIMUM DROP-FREE RECEPTION. FIGURATION TYPE, REFER TO FACEPLATE DETAILS. LL MOUNTED ON SHELF. M SPEAKER.

TECHNOLOGY SYMBOLS WITH ELEC. REQUIREMENTS

	CONDUIT SLEEVE / FIRE RATED SLEEVE ASSEMBLY THRU WALL (1-2" SLEEVE UNLESS NOTED OTHERWISE).
×	WALL MOUNTED DATA OUTLET (18" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT(S) TO ABOVE ACCESSIBLE CEILING, JACKS, FACEPLATE AND CABLING. SUBSCRIPT "X" DESIGNATES QUANTITY OF DATA CABLES. REFER TO FACEPLATE DETAILS.
V	WALL MOUNTED VOICE/DATA OUTLET (18" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT(S) TO ABOVE ACCESSIBLE CEILING, JACKS, FACEPLATE AND CABLING. REFER TO FACEPLATE DETAILS.
▼	WALL MOUNTED PHONE OUTLET (46" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT TO ABOVE ACCESSIBLE CEILING, JACKS, FACEPLATE AND CABLING. REFER TO FACEPLATE DETAILS.
×	DATA OUTLET LOCATED ABOVE ACCESSIBLE CEILING. JACKS, PLENUM RATED SURFACE MOUNT BOX AND CABLING. SUBSCRIPT "X" DESIGNATES QUANTITY OF DATA CABLES. REFER TO FACEPLATE DETAILS.
HAP)	WALL MOUNTED WIRELESS ACCESS POINT (96" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT TO ABOVE ACCESSIBLE CEILING, WAP AND CABLING. REFER TO FACEPLATE DETAILS.
€¢x	WALL MOUNTED AV OUTLET (18" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUITS TO ABOVE ACCESSIBLE CEILING, REFER TO FACEPLATE DETAILS. JACKS, FACEPLATE AND CABLING. SUBSCRIPT "X" INDICATES ALTERNATE CONFIGURATION.
\bigcirc	TELECOM BOX AND CONDUIT TO ABOVE ACCESSIBLE CEILING, REFER TO PLANS. REFER TO FACEPLATE DETAILS.
₹ x	WALL MOUNTED AV OUTLET (84" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT TO ABOVE ACCESSIBLE CEILING, JACKS, FACEPLATE AND CABLING. SUBSCRIPT "X" INDICATES ALTERNATE CONFIGURATION. REFER TO FACEPLATE DETAILS.
Ŵx	WALL MOUNTED AV OUTLET (44" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT TO ABOVE ACCESSIBLE CEILING, JACKS, FACEPLATE AND CABLING. SUBSCRIPT "X" INDICATES ALTERNATE CONFIGURATION. REFER TO FACEPLATE DETAILS.
I	CUSTOM OUTLET IN SURFACE RACEWAY. SURFACE RACEWAY, OUTLET, JACKS, FACEPLATE AND CABLING. REFER TO FACEPLATE DETAILS.
₹	OUTLET LOCATED ABOVE ACCESSIBLE CEILING. JACKS, PLENUM RATED SURFACE MOUNT BOX AND CABLING. SUBSCRIPT "X" INDICATES ALTERNATE CONFIGURATION. # INDICATES OUTLET TYPE ON THIS LEGEND, REFER TO FACEPLATE DETAILS.
S	SMARTYARD OUTLET LOCATED ABOVE ACCESSIBLE CEILING. JACKS, PLENUM RATED SURFACE MOUNT BOX AND CABLING. REFER TO FACEPLATE DETAILS.
#	FLOOR BOX WITH CONDUIT(S) TO ABOVE ACCESSIBLE CEILING, # INDICATES TYPE, REFER TO FLOOR BOX (FB) SCHEDULE.

FLOOR BOX WITH CONDUIT(S) TO ABOVE ACCESSIBLE CEILING, # INDICATES TYPE, REFER TO FLOOR BOX (FB) SCHEDULE. SUBSCRIPT "X" INDICATES TECHNOLOGY DEVICE(S), REFER TO TECHNOLOGY DETAILS. POKE-THRU, # INDICATES TYPE, REFER TO POKE-THRU (PT) SCHEDULE. SUBSCRIPT "X" INDICATES TECHNOLOGY DEVICE(S), (#)X | POKE-THRU, # INDICATES TYPE, REF REFER TO TECHNOLOGY DETAILS.

GENERAL FLOOR PLAN NOTES

<u>NOTE:</u> ALL SYMBOLS AND ABBREVIATIONS ARE SUBJECT TO MODIFICATIONS ON OTHER DRAWINGS. ALL SYMBOLS OR ABBREVIATIONS MIGHT NOT NECESSARILY BE USED ON THIS PROJECT.

ABBREVIATIONS

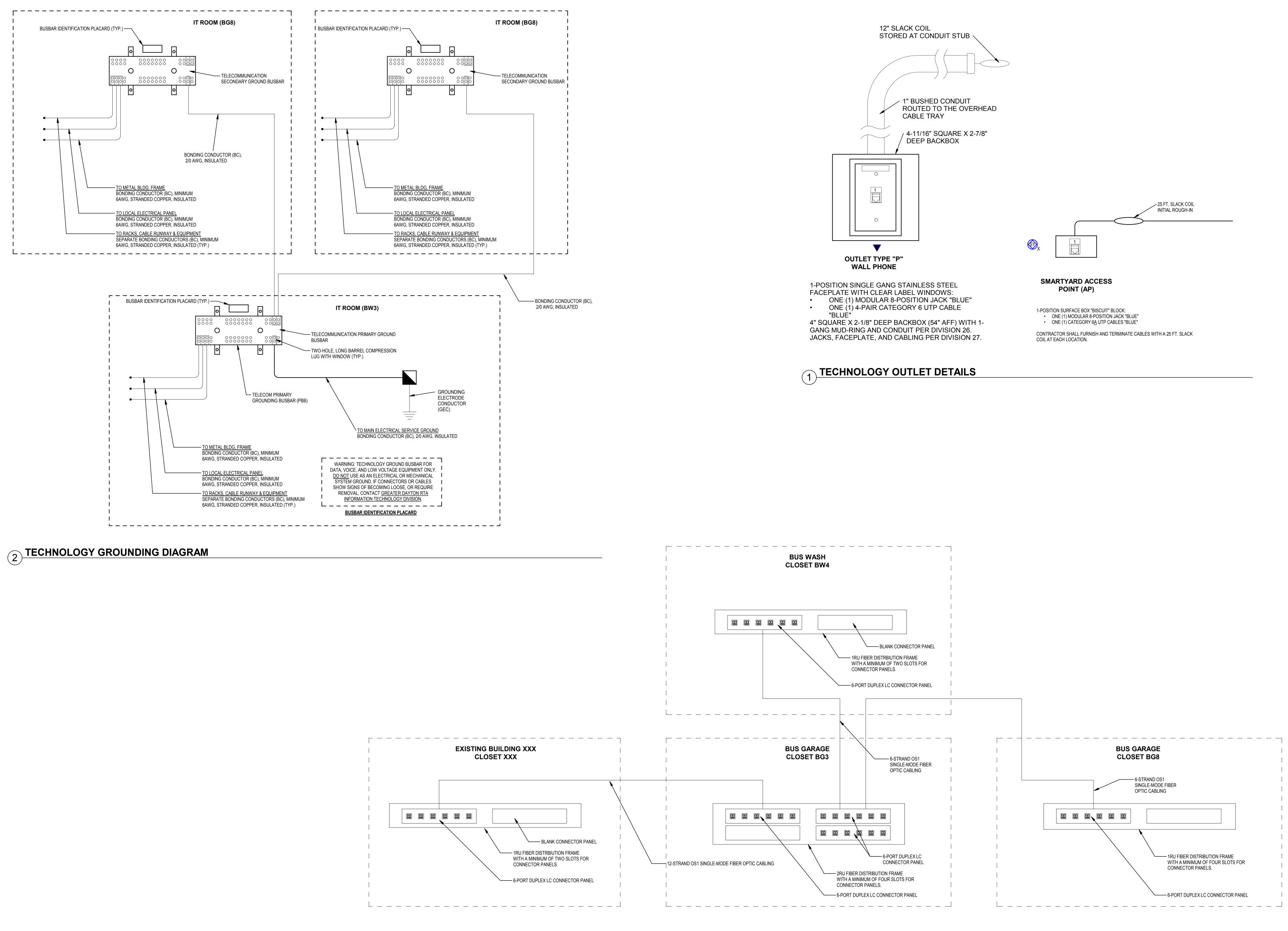
AAP ACC ADJ AF AFCI AFF AFG ALT AP APPROX ARCH ASSY ATS	 ACCESS ADJUSTABLE ARC FAULT CIRCUIT INTERRUPTER ARC FAULT CIRCUIT INTERRUPTER ABOVE FINISHED FLOOR TO BOTTOM OF ITEM ABOVE FINISHED GRADE TO BOTTOM OF ITEM ALTERNATE ACCESS PANEL APPROXIMATE ARCHITECT OR ARCHITECTURAL ASSEMBLY
BOE	- BUILDING - BOTTOM OF EQUIPMENT - BOTTOM - BETWEEN
CFCI CKT CLG CMU CONN CONTR CORR CTR	- CONCRETE MASONRY UNIT - CONNECT OR CONNECTION
D DET DIA DIM DIV DN DWG	- DEPTH - DETAIL - DIAMETER - DIMENSION - DIVISION - DOWN - DRAWING
EA EC EJ ELEC ELEV EM EQ EQS EQUIP ETR EX EXP EXT	 EXPANSION JOINT ELECTRICAL ELEVATION OR ELEVATOR EMERGENCY EQUAL EQUIPMENT SUPPLIER EQUIPMENT EXISTING TO REMAIN EXISTING EXPANSION
FCE FF FLR FSC FT FTG	- FINISHED FLOOR ELEVATION - FLOOR
GC GF GFCI GFFT	FURNISHED CONTRACTOR INSTALLED
HC HP HVAC	- HVAC CONTRACTOR (DIVISION 23) - HORSE POWER OR HIGH POINT - HEATING, VENTILATING, AND AIR CONDITIONING
ID IN	- INSIDE DIAMETER - INCHES
KEC L	- KITCHEN EQUIPMENT CONTRACTOR
LBS MAP	- POUNDS - MASTER ALARM PANEL (MEDICAL GAS)
MAX MEZZ MFR MH MIN MISC MTD MTG	- MAXIMUM - MEZZANINE - MANUFACTURER - MANHOLE OR MOUNTING HEIGHT TO CENTER LINE OF ITEM - MINIMUM OR MINUTE
NIC NOM NTS	- NOMINAL
OD OFCI OFOI	- OUTSIDE DIAMETER - OWNER FURNISHED CONTRACTOR INSTALLED - OWNER FURNISHED OWNER INSTALLED
PC PLBG	- PLUMBING CONTRACTOR (DIVISION 22) - PLUMBING
	- RADIUS - RECESSED - REQUIRED - ROUGH-IN
SCH SHT SMS SPEC SQ SS	- SECURITY CONTRACTOR - SCHEDULE - SHEET - SECURITY MANAGEMENT SYSTEM - SPECIFICATIONS - SQUARE
TC TEMP TOE TYP	- TECHNOLOGY CONTRACTOR - TEMPERATURE - TOP OF EQUIPMENT - TYPICAL
UNO	- UNLESS NOTED OTHERWISE
VFD VOL	- VARIABLE FREQUENCY DRIVE - VOLUME
W/ W/O WP	- WITH - WITHOUT - WEATHERPROOF
7VC	- ZONE VALVE CABINET

SHEET LIST						
SHEET NUMBER	SHEET NAME					
T001	TECHNOLOGY LEGEND AND SHEET INDEX					
T002	TECHNOLOGY DETAILS					
T003	TECHNOLOGY DETAILS AND SCHEDULES					
T004	TECHNOLOGY SITE PLAN					
T100	NEW WORK PLANS					
T400	ENLARGED PLANS AND ELEVATIONS					
Total Count: 6						

ZVC - ZONE VALVE CABINET



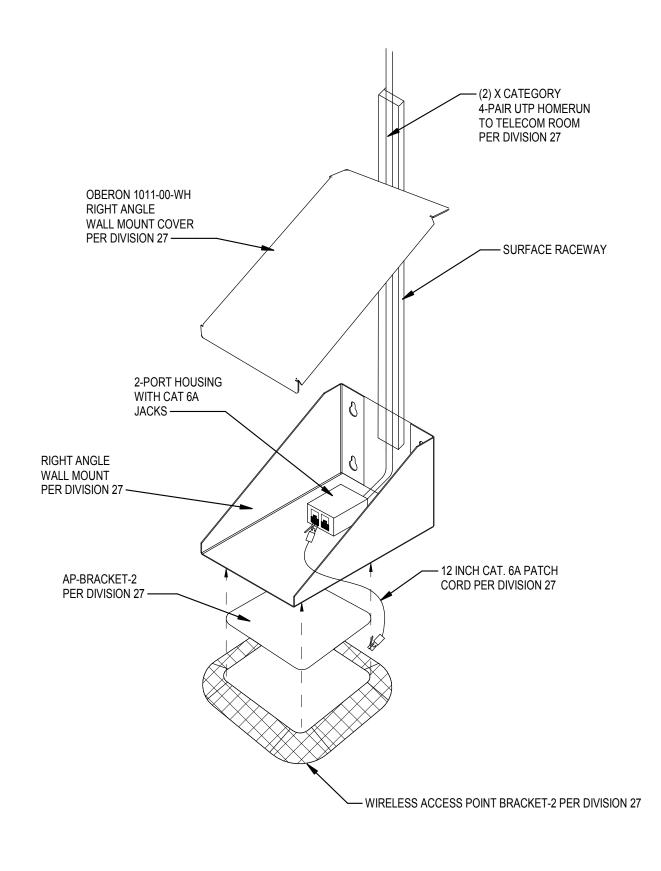
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3 BACKBONE CABLING DIAGRAMS





AP MOUNTING DETAILS

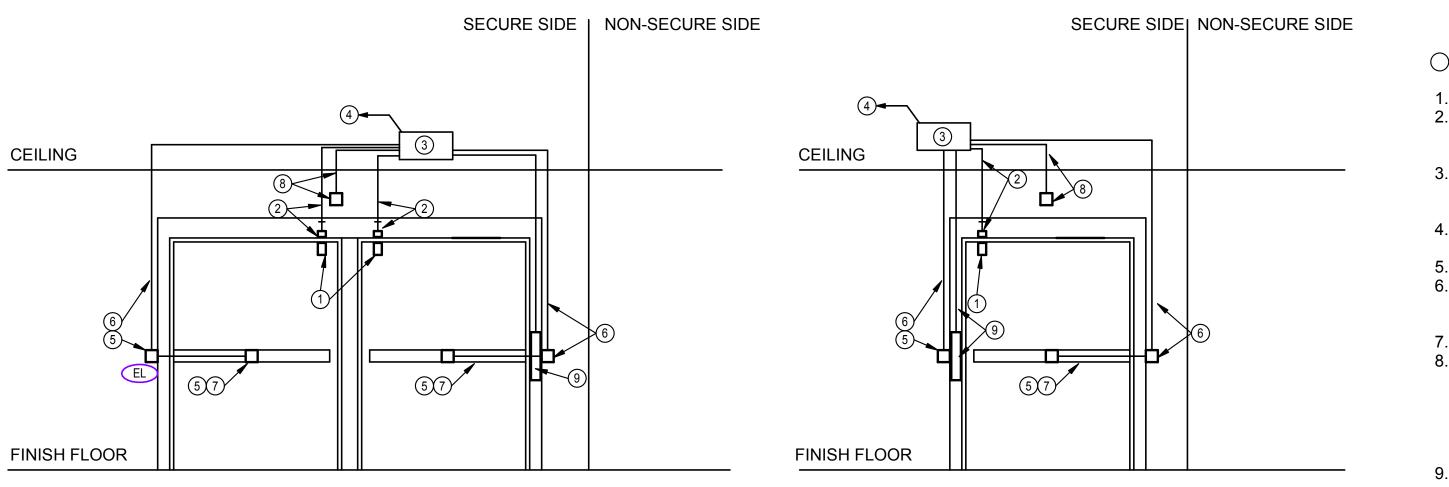
GENERAL NOTES

A. LOW VOLTAGE CABLING SHALL BE EXTENDED FROM THE OUTLET BOX THROUGH THE CONDUIT EMERGING INTO OPEN ARCHITECTURE J-HOOK SUPPORTS PLACED AT REGULAR INTERVALS FOR THE ENTIRE DISTANCE REQUIRED TO REACH THE NEAREST CABLE TRAY.

B. ALL OPEN ARCHITECTURE J-HOOK SUPPORTS AND CABLE MANAGEMENT SHALL BE THE RESPONSIBILITY OF THE DIVISION 27 CONTRACTOR.

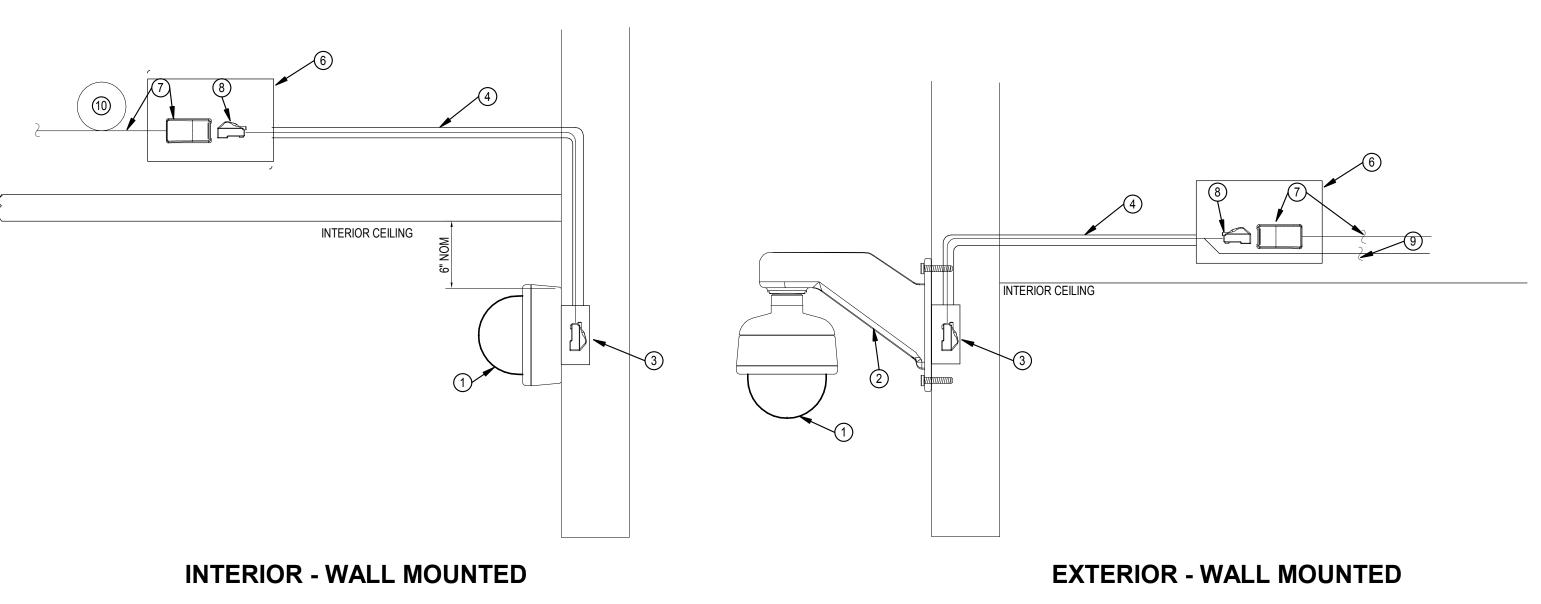
CAMERA SCHEDULE NOTES W - WIDE DYNAMIC RANGE; L - LOW LIGHT; D - DAY/NIGHT **OPTIONS LEGEND:** GENERAL SPECIFICATIONS TYPE AND MOUNTING LOCATION ANALYTICS POWER CABLE INDOOR CAMERA TYPE CAMERA NUMBER ROOM NAME EXTERIOR EXT IT-BG8 • 1 • • EXTERIOR EXT IT-BG3 3-8 3-8 • 1 • • • IT-BG3 EXTERIOR EXT • 1 • • • EXTERIOR IT-BG3 3-8 4 EXT • 1 • • • EXTERIOR EXT IT-BG3 3-8 • 1 • • EXTERIOR EXT IT-BG8 3-8 • • • 1 EXTERIOR EXT IT-BG8 3-8 • 1 EXTERIOR EXT IT-BG8 3-8 • 1 • • EXT EXTERIOR IT-BW4 3-8 • • 1 • • 10 EXTERIOR EXT IT-BW4 3-8 • • 1 • • EXTERIOR EXT IT-BW4 3-8 • • 1 • **BUS GARAGE** BG1 IT-BG3 3-8 • • • 1 • • **BUS GARAGE** IT-BG3 BG1 3-8 • 1 • • • • BUS GARAGE IT-BG8 BG1 3-8 14 • 1 • • IT-BG8 **BUS GARAGE** BG1 3-8 • 1 • • • • BUS GARAGE BG1 IT-BG8 3-8 • 1 • • • BUS GARAGE BG1 IT-BG8 3-8 • • • **BUS GARAGE** BG1 IT-BG3 3-8 • 1 • • • **BUS GARAGE** BG1 3-8 IT-BG3 • 1 • • **BUS GARAGE** BG1 IT-BG3 3-8 2 • 1 • • **BUS GARAGE** IT-BG3 BG1 3-8 2 • 1 • • • IT-BG3 **BUS GARAGE** BG1 3-8 • 1 • • • **BUS GARAGE** BG1 IT-BG3 3-8 • 1 • • • • EXTERIOR EXT 3-8 • 1 • IT-BW4 • • EXT EXTERIOR 3-8 2 • • IT-BW4 • 1 • EXTERIOR EXT IT-BG8 3-8 2 • 1 • EXTERIOR EXT IT-BG3 3-8 2 • 1 • • • •

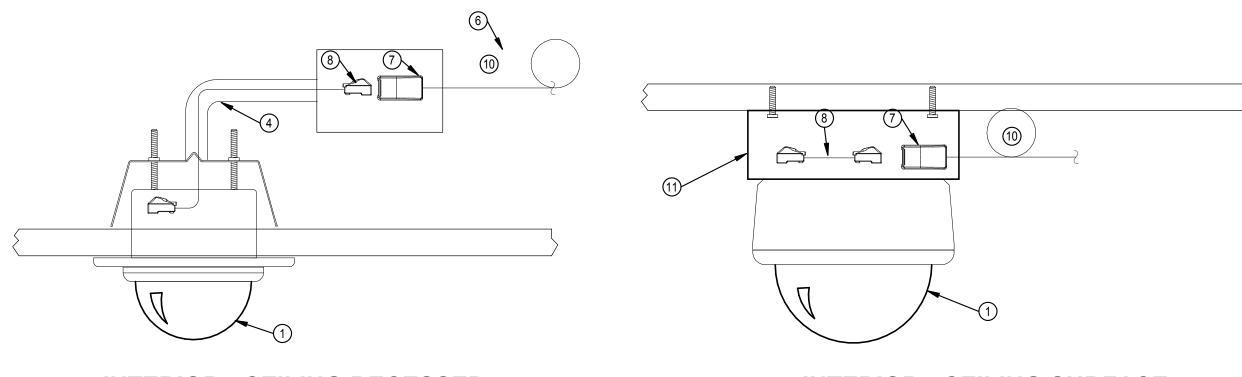
OTES:											3.																							
											4.																							
				СС		ROL					LOCKS					REQUEST TO EXIT						D			DR		AUTO							
	NUMBER		EA	с				INTERFACE						POWEF	2			TYPE			FUNCTION		LOCATION	ON	POSITION		N SW			L BOLT	BOND SENSOR	MOTOR	PUSHPLATE	
	NUN						2	Σ																										
EDC NUMBER	DOOR OPENING N	Level	READER	TOD	FIRE ALARM	INTERCOM		POE / POE+	VOLTAGE	LOCAL	REMOTE	LOCATION	NOTE	EP E	EL S	ML	N	ατγ	ALARM SHUNT UNLOCK	NOTE	HARDWARE	MOTION WALL SWITCH	NOTE	QTY	1#d#	BALANCED	HIGH SECURITY RECESSED	SURFACE	QTY	QTY	A A EAC INTERFACE		WIRELESS	
DBG1	DBG1	Level 1	•	•					24		•							0	•		•			0	DPDT	•	•		0	0	0	0		
DBG2	DBG2	Level 1	•	•					24		•							0	•		•			0	DPDT	•	•		0	0	0	0		
DBG3	DBG3	Level 1	•	•					24		•							0	•		•			0	DPDT	•	•		0	0	0	0		
DBG4	DBG4	Level 1	•	•					24		•							0	•		•			0	DPDT	•	•		0	0	0	0		
DBG5	DBG5	Level 1	•	•					24		•							0	•		•			0	DPDT	•	•		0	0	0	0		
DBG6	DBG6	Level 1	•	•					24		•							0	•		•			0	DPDT	•	•		0	0	0	0		
DBG7	DBG7	Level 1	•	•					24		•							<u> </u>	•		•			0	DPDT	•	•		0	0	0	0		
DBG8	DBG8	Level 1	•	•					24		•							•	•		•			0	DPDT	•	•		0	0	0	0		
DBW1	DBW1	Level 1	•						24		•							0	•		•			0	DPDT	•	•	-	0	0	0	0		
DBW2	DBW2	Level 1	•						24		•							0	•		•			0	DPDT	•	•	-	0	0	0	0		
DBW3 DBW4	DBW3 DBW4	Level 1 Level 1	•	•					24 24		•							0	•		•			0	DPDT DPDT	•	•		0	0	0	0		



AEC - Technology Access Control

AEC - Technology Access Control





INTERIOR - CEILING RECESSED

	JTDOC	JR						
CLG SURFACE	CLG STEM WALL SURFACE	WALL ARM	POLE MOUNTED	MOUNTING HEIGHT	Manufacturer	Model	Comments	SEE NOTE
		•		12' - 0"			180 Degree	
+ +		•		12' - 0"			180 Degree	
		•		12' - 0"			360 Degree	
		•		12' - 0"			180 Degree	
+		•		12' - 0"			180 Degree	
		•		12' - 0"			180 Degree	
		•		12' - 0"			360 Degree	
		•		12' - 0"			180 Degree	
		•		12' - 0"			360 Degree	
		•		12' - 0"			360 Degree	
		•		12' - 0"			360 Degree	
				14' - 0"			180 Degree	
				13' - 0"			360 Degree	
				15' - 0"			180 Degree	
				15' - 0"			180 Degree	
				14' - 0"			180 Degree	
				14' - 0"			180 Degree	
				14' - 0"			180 Degree	
				14' - 0"			180 Degree	
_				14' - 0"			180 Degree	
		_		14' - 0"			180 Degree	
		-		14' - 0"			180 Degree	
+				15' - 0"			180 Degree	
_		•		16' - 0"			360 Degree	
+		•		12' - 0"			180 Degree	
		•		12' - 0"			180 Degree	
		•		12' - 0"			180 Degree	

CCTV MOUNTING DETAILS_CAMERA FUTURE

(2) CCTV MOUNTING DETAILS_CAMERA FUTURE

• DETAIL NOTES

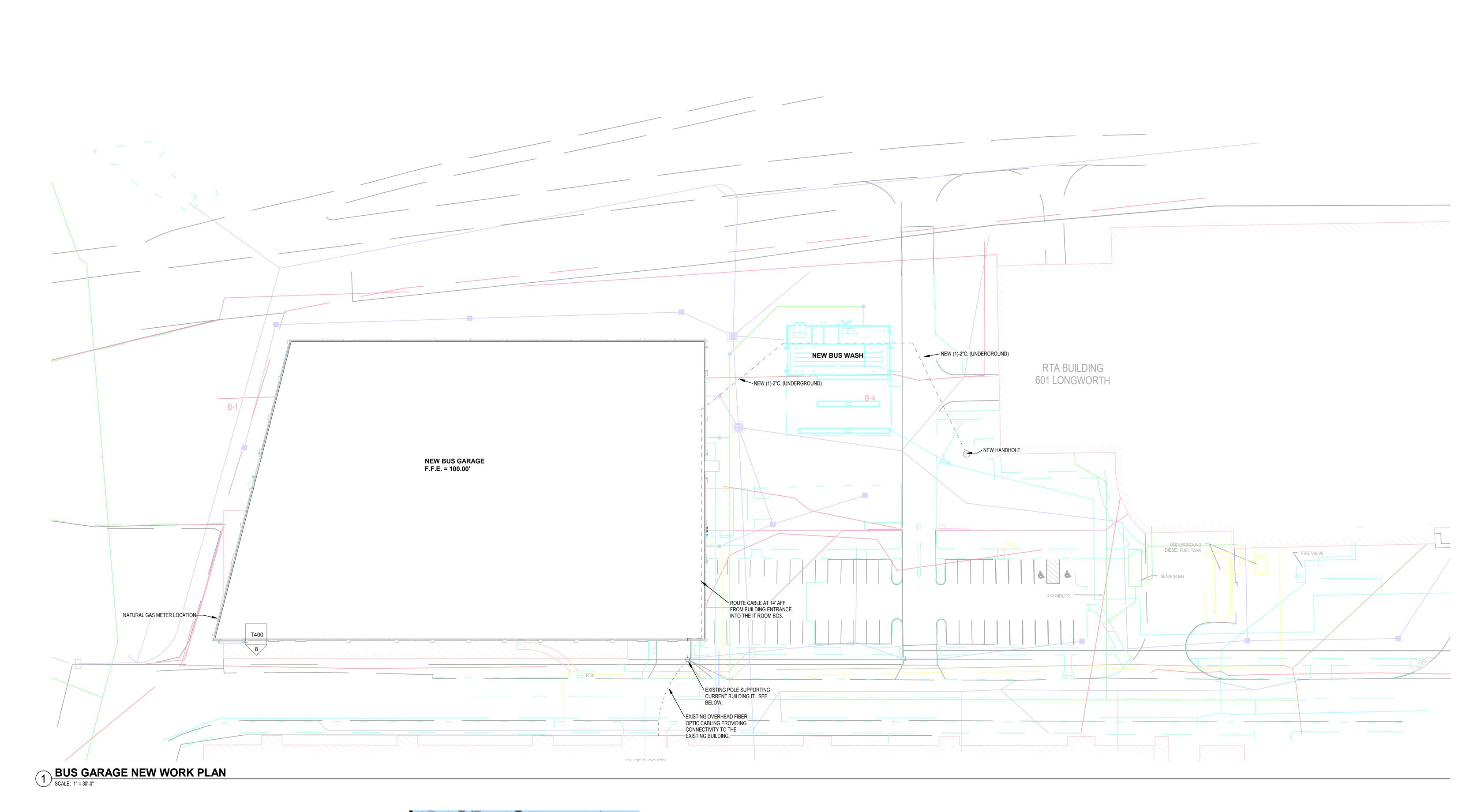
- MAGNETIC DOOR POSITION SWITCH, BY OTHERS. PROVIDE 0.5" CONDUIT FROM DOOR FRAME TO COMMON SECURITY JUNCTION BOX ON SECURE SIDE OF DOOR PER
- **DIVISION 26.** COMMON SECURITY JUNCTION BOX ON SECURE SIDE OF DOOR. (12"X12"X4" WITH SECURITY SCREW COVER) PER **DIVISION 26.**
- PROVIDE 1" CONDUIT FROM COMMON SECURITY JUNCTION BOX BACK TO EITHER BG3, BG8 OR BW4 PER DIVISION 26. ELECTRONIC DOOR LOCK BY OTHERS.
- PROVIDE 0.75" CONDUIT FROM DOOR FRAME TO COMMON SECURITY JUNCTION BOX ON SECURE SIDE OF DOOR PER **DIVISION 26.**
- REQUEST TO EXIT SENSOR IN THE HARDWARE BY OTHERS. WALL MOUNTED REQUEST TO EXIT MOTION SENSOR PER BY OTHERS. PROVIDE 1-GANG BOX WITH 0.5" CONDUIT TO COMMON SECURITY JUNCTION BOX ON SECURE SIDE OF DOOR PER DIVISION 26. SENSOR BOX TO BE LOCATED ON SECURE SIDE OF DOOR, DIRECTLY ABOVE THE DOOR FRAME.
- MULLION MOUNTED CREDENTIAL READER BY OTHERS. PROVIDE 1-GANG BOX AT 46" MH (UNLESS OTHERWISE NOTED) AND EXTEND 0.75" CONDUIT FROM BOX TO COMMÓN SECURITY JUNCTION BOX ON SECURE SIDE OF DOOR PER DIVISION 26.

INTERIOR - CEILING SURFACE

- \bigcirc CAMERA MOUNTING DETAIL NOTES
- 1. CAMERA AS SHOWN ON THE PLANS TO BE PROVIDED OTHERS. WORK CONSISTS OF ROUGH-INS ONLY.
- 2. WALL MOUNTED PENDANT ARM FOR CAMERA TO BE PROVIDED BY OTHERS.
- 1-GANG BOX, SEALED FOR MOUNTING OF FUTURE CAMERA.
 0.75" CONDUIT TO BE ROUTED TO ACCESSIBLE INTERIOR JUNCTION BOX
- 5. WIRING TO BE TAGGED AND COILED IN JUNCTION BOX FOR FUTURE CONNECTION. PROVIDE 24" TAIL (F&IBO).
- 6. PROVIDE JUNCTION BOX ABOVE ACCESSIBLE CEILING. 7. PROVIDE 1-DATA OUTLET UTILIZING SURFACE MOUNT "BISCUIT" FOR
- TERMINATION OF DATA DROP INTO RJ-45 OUTLET (F&IBO). 8. PATCH CABLE TO BE PROVIDED BY OTHERS. 9. PROVIDE BY OTHERS - ADDITIONAL LOW VOLTAGE POWER WIRING (2-# 14AWG) BACK TO MDF ROOM AND LEAVE 20' COIL AT BACKBOARD FOR
- FUTURE CONNECTION. 10. PROVIDE 20' COIL OF CABLE MANAGED ABOVE CEILING (F&IBO). 11. SURFACE CEILING MOUNTED JUNCTION BOX FOR CAMERA.



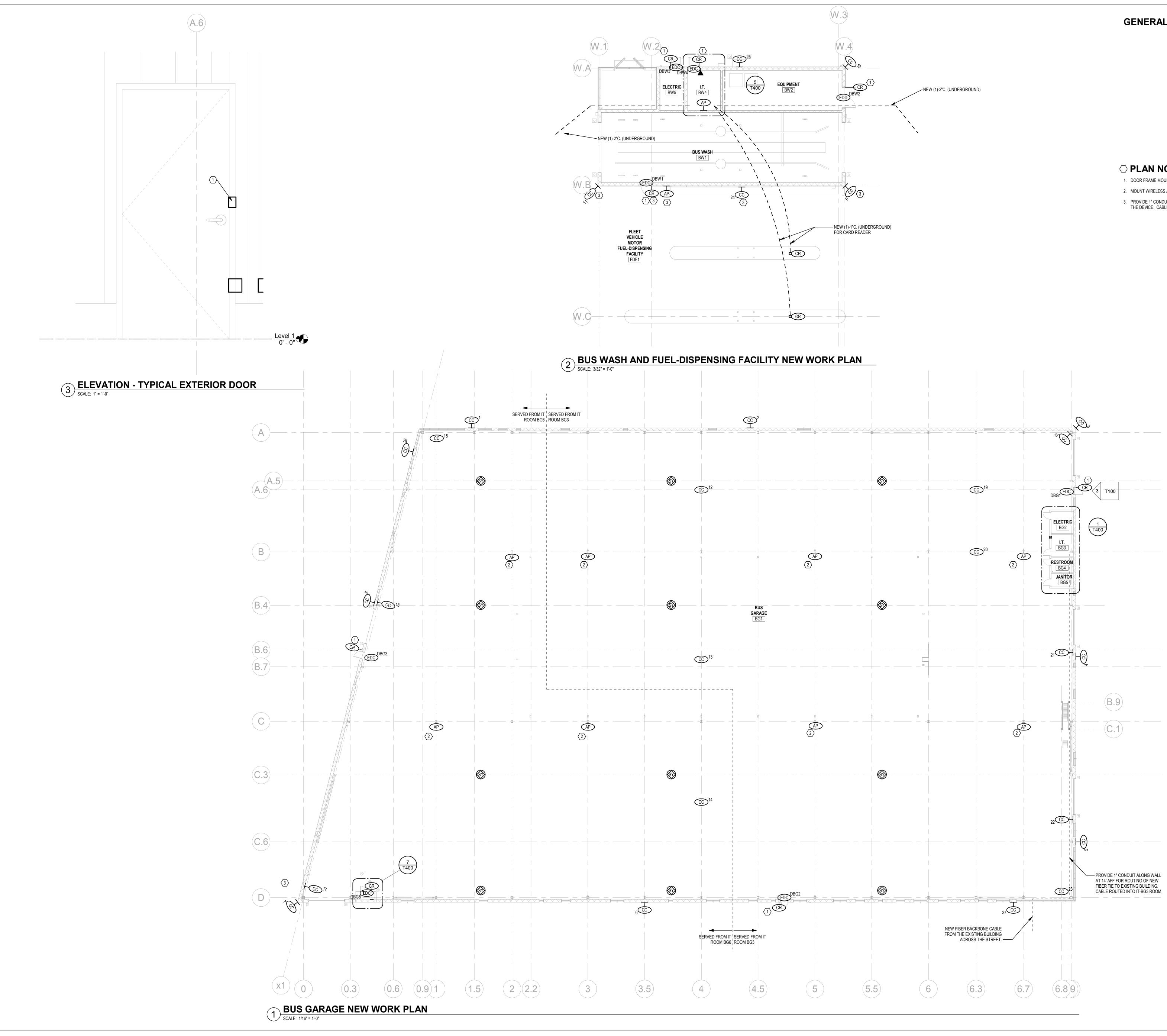
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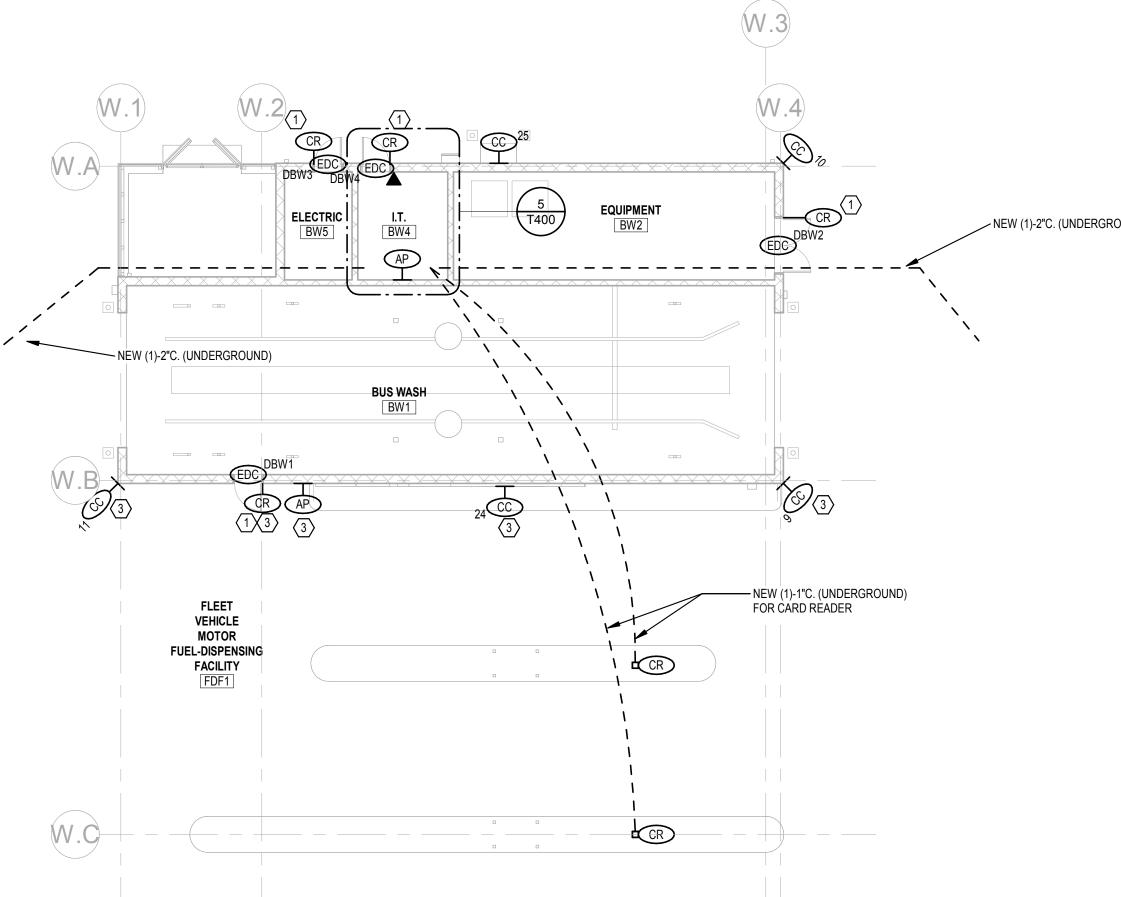






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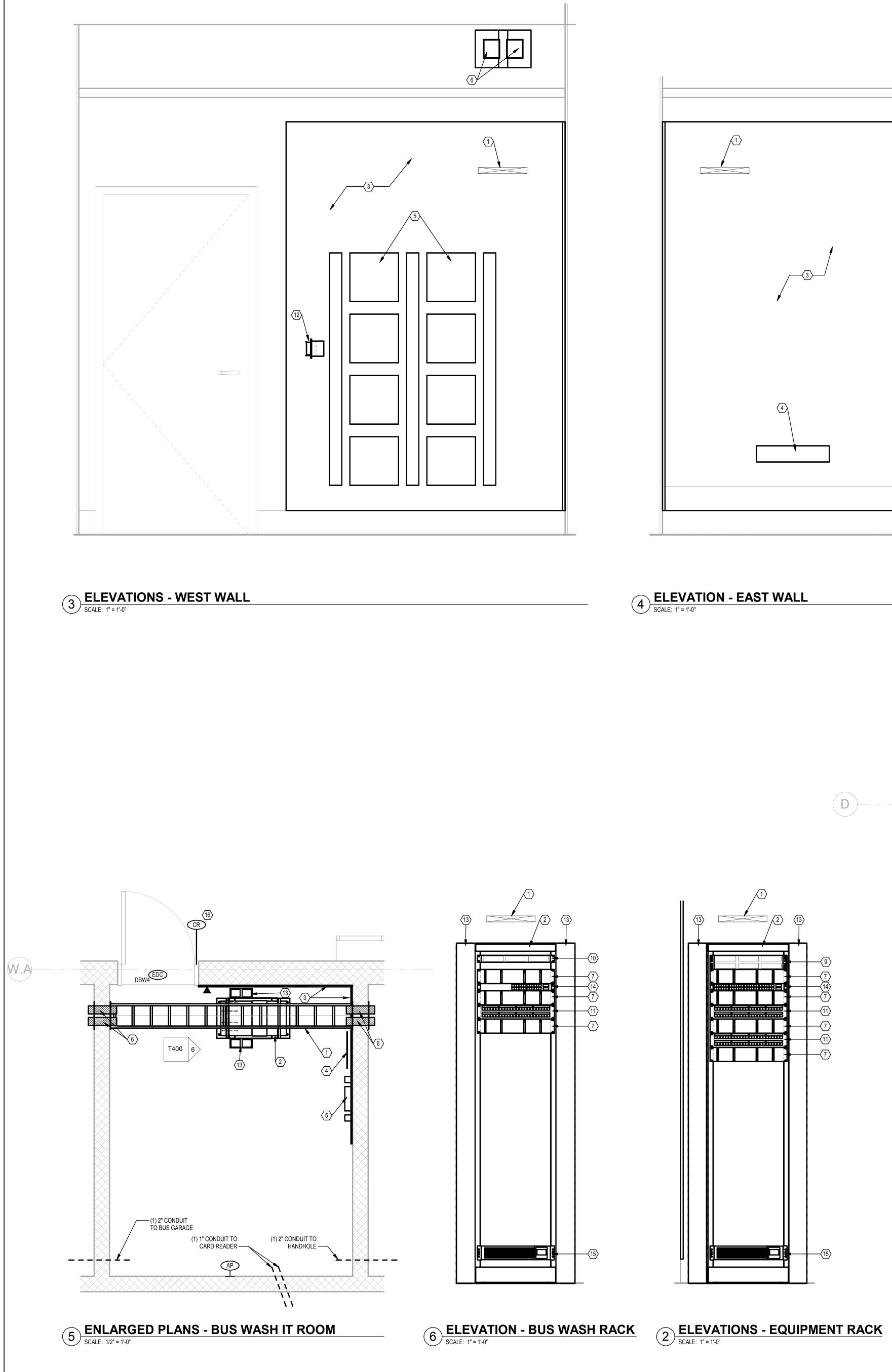
GENERAL NOTES

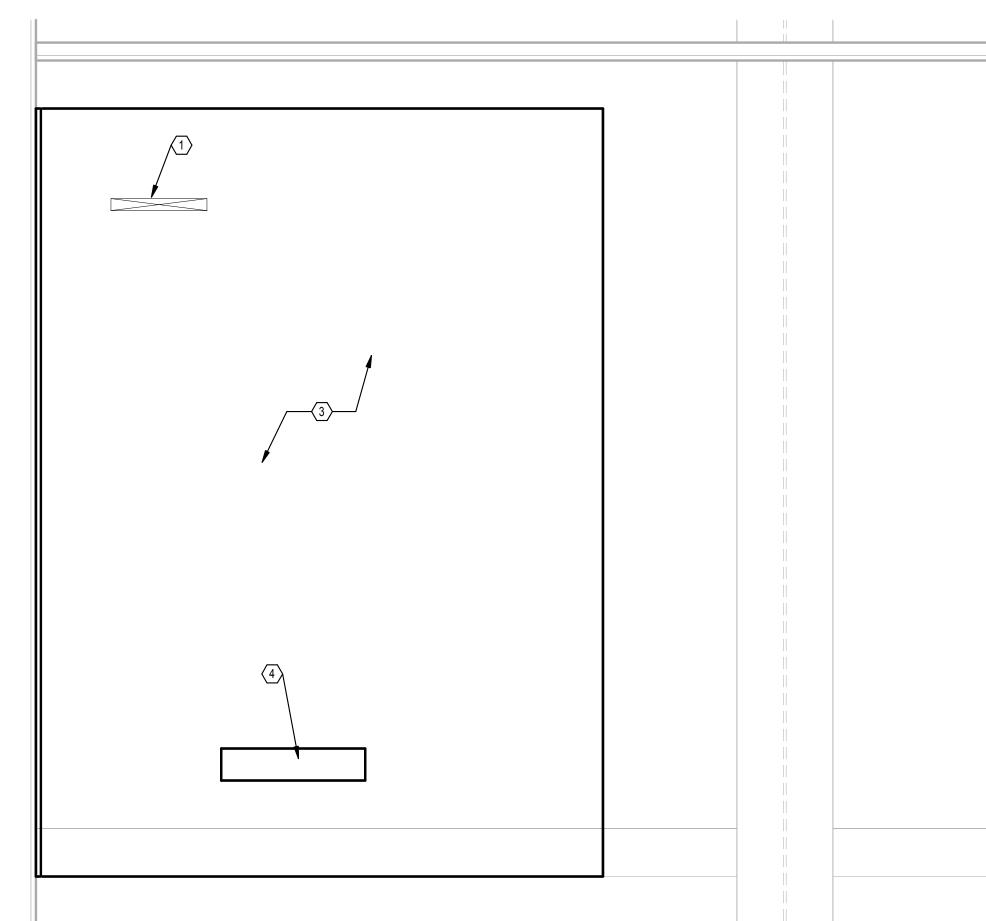


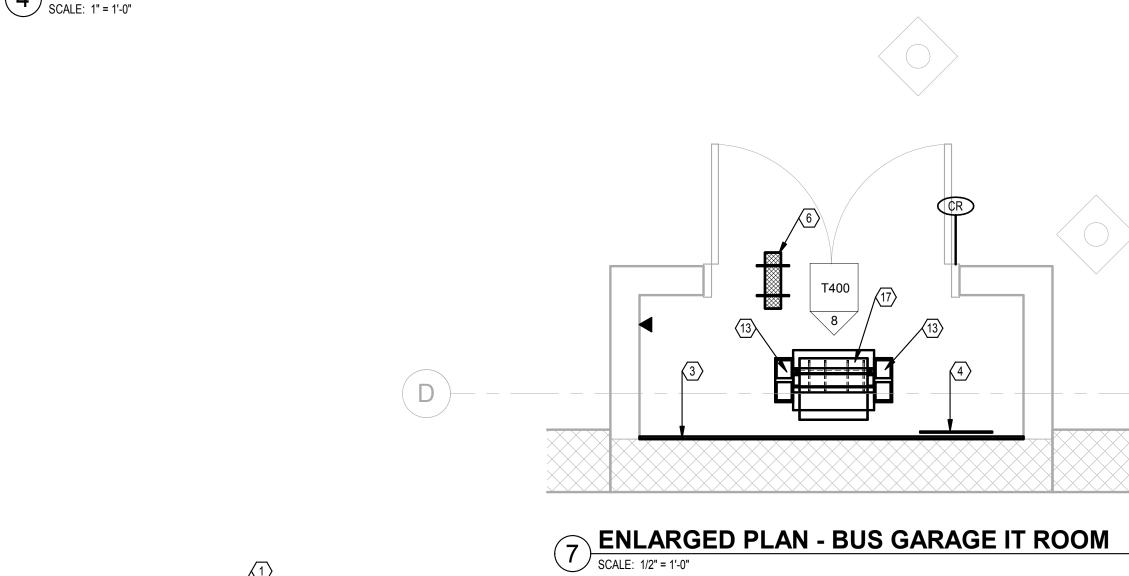
- 1. DOOR FRAME MOUNTED SLIM-LINE CARD READER.
- 2. MOUNT WIRELESS ACCESS POINTS PER T003, DETAIL 3 AT 14' AFF
- 3. PROVIDE 1" CONDUIT UNDERNEATH ROOF FROM IT ROOM BW4 TO THE DEVICE. CABLING INSTALLED SHALL BE OUTDOOR RATED.

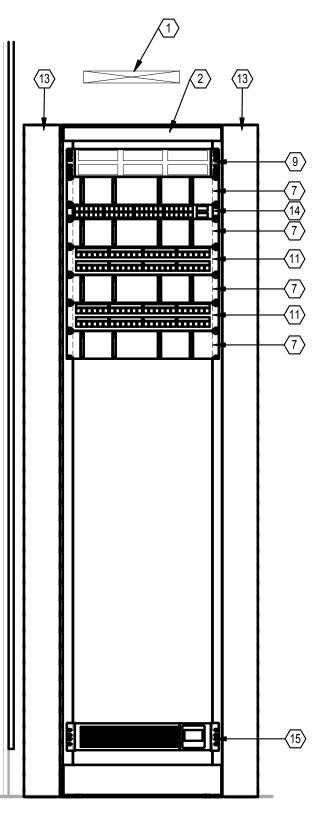


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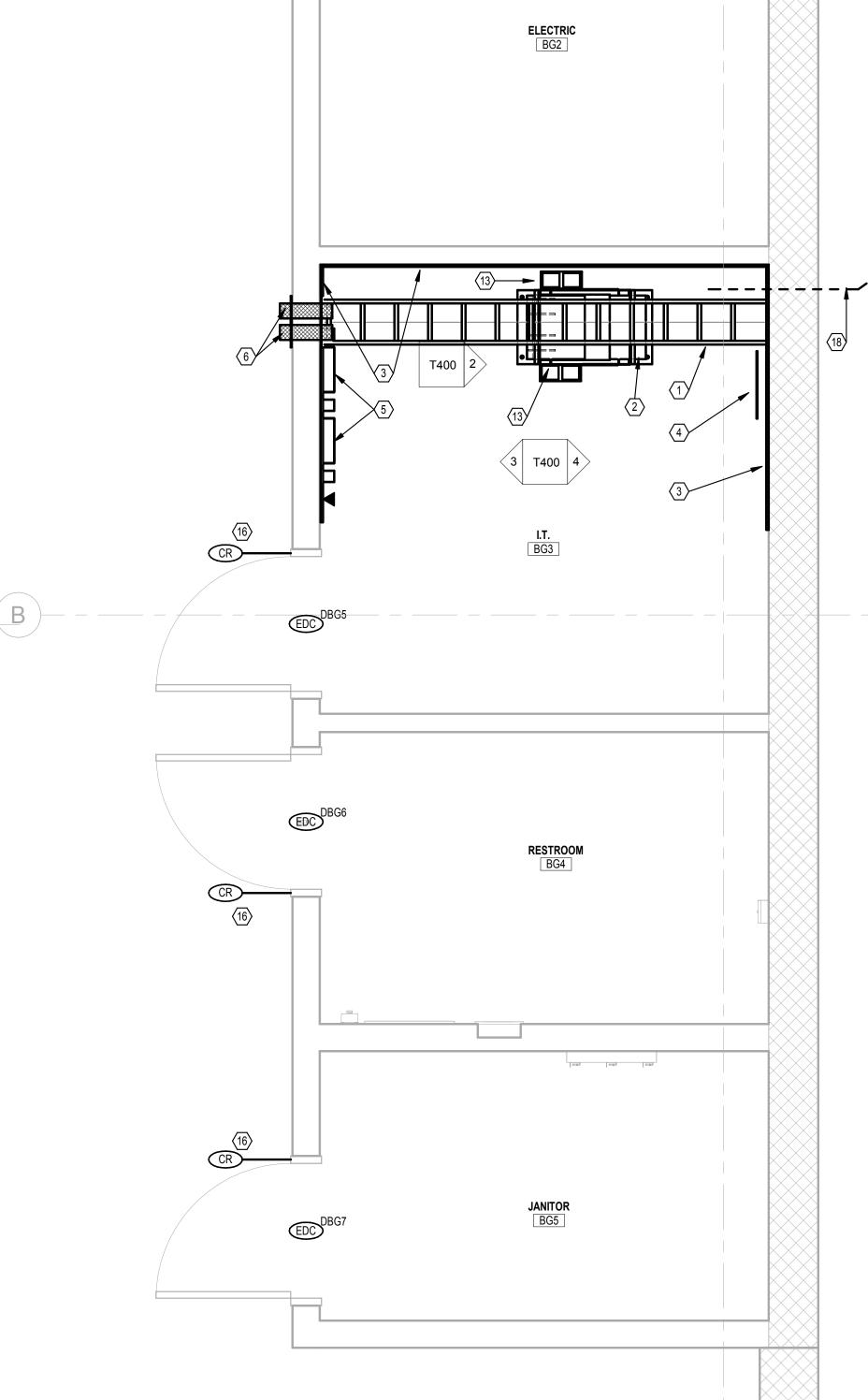
8 ELEVATION - EQUIPMENT RACK IT ROOM BG7 SCALE: 1" = 1'-0"

—(7



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

7



10. 1RU FIBER DISTIBUTION FRAME. 11. 48-PORT CATEGORY-6A MODULAR PATCH PANEL..

2. 4-POST RELAY RACK (84"H)

5. ACCESS CONTROL PANEL BOARD

6. 4" X 4" EZPATH FIRESTOP ASSEMBLY

7. 2RU HORIZONTAL WIRE MANAGER.

9. 2RU FIBER DISTRIBUTION FRAME

4. GROUND BUSBAR

8. NOT USED.

1. OVERHEAD CABLE LADDER RACK (12" X 1.75")

3. FIRE-RATED A-C GRADE PLYWOOD. PLYWOOD SHALL BE PAINTED WITH A FIRE-RETARDANDT PAINT.

- 12. WALL-MOUNTED PHONE.
- 13. VERTICAL WIRE MANAGER.

- 14. NETWORK SWITCH (FURNISHED AND INSTALLED BY OTHERS)

- 15. RACK MOUNT UPS 2200VA
- 16. DOOR FRAME MOUNTED SLIM-LINE CARD READER
- 17. 2-POST RELAY RACK (84"H).
- CONDUIT/FIBER ROUTE TO THE BUS WASH BUILDING. CONDUIT ROUTED UNDERGROUND.

(EDC)DBG4

(16)



/23/2025

PIPING SYMBOLS DOUBLE LINE SINGLE LINE _► D —► **—** _____O_____ \bigcirc ≺—R

WATER SERVICE GENERAL NOTES

- A THE ATTACHED WATER SERVICE STANDARD SCHEMATIC HAS BEEN PROVIDED FOR REFERENCE ONLY TO THE CONTRACTOR. NOT ALL SITUATIONS IN ATTACHED SCHEMATICS ARE APPLICABLE AND HAVE BEEN ANNOTATED AS MUCH AS POSSIBLE. DUE TO THE SPECIFIC WATER SERVICE LOCATION WITHIN THE BUILDING AND OTHER PROJECT RESTRAINTS, THERE ARE SLIGHT SCHEMATIC DEVIATIONS FROM THIS SCHEMATIC AND THE MODELED WATER SERVICE COMPONENTS ON FIRE SUPPRESSION AND PLUMBING DRAWINGS. STRIDES HAVE BEEN TAKEN TO COMPLY WITH WATER DEPARTMENT STANDARD CLEARANCES, REQUIRED DEVICES, AND AVOIDANCE OF CONFLICTS BETWEEN THE TWO. THE CONTRACTOR SHALL CROSS REFERENCE THE PROJECT LAYOUT AND WATER DEPARTMENT SCHEMATIC AS A WHOLE AND REPORT ANY CONFLICTS. THE FINAL INSTALLATION OF ALL WATER SERVICE COMPONENTS SHALL COMPLY WITH ALL CITY OF DAYTON WATER DEPARTMENT STANDARDS.
- B THE CONTRACTOR SHALL ADHERE TO ALL WATER DEPARTMENT PIPE MATERIAL STANDARDS AND VALVE/DEVICE STANDARDS OUTLINED BELOW FOR THE 8" COMBINATION WATER SERVICE AND 6" FIRE SERVICE.

COMBINAT	ION FIRE	& DOMES
METER LA	YOUT IN E	BUILDING
NOTE:		
RULONC / TH	A PET ON THE CLIED	With Seat
REFER TO PROJECT PLAN		
SECTIONS FOR FIRE SUPF DEVICE AND PIPING LAYO		
	\backslash	
(NOT APPLICABLE)		5
AND THE YEAR DALL		
AL STOLM	-4	1
DOUBLE OF NET 28, D-17 DA	swis	100 20
ASSENDLY, DEVELOPMENT RLAD IN OURS VEEK	7	143
0.5.47. OHIY VILVE	-X	Art
CONTENTING TLANDED RED. [C MEDISSARY]	100	
10 DANELOV. ANTON	Sha -	2" DC
15" MARKAN FROM INCO.		N/
		Lass
C" NINNUM FROM FLOOP		10
	1	. / "
Table 1	st is doc	X
		\rightarrow
		~
5010		
	NI TELM STACL GAUG	
NAMES TROU SALVES AND TO DR BRADS	Scale of Dire CLAS	OF WELEY
3 ALTERNATE OF	SON MAY BE SUBMIT	
4. FLOOR DRAW	S REGULACE IN ROOM	WHERE WE'RE
5. PROVOE SPRE	HAR AGE LOS MADER VI HOCK LOS MADER VI	
	DE METER SPREAD.	RATES.
k. MIGVOC 1/2"	conduct with Publics	TRND ID
OUISOE OF a	DUDIE (DE RIMOT A	IDD MANG
O'NERA NOT		
CONTACT WAVES	CONNER A STANDARD	

A WATER DEPARTMENT SCHEMATIC 1 (FIRE SUPPRESSION) SCALE: 12" = 1'-0"

	VALVES
BOTTOM CONNECTION (45°)	DOUBLE LINI
BOTTOM CONNECTION (90°)	
BRANCH TEE CONNECTION (NOTE: BULL HEAD TEE'S ARE NOT PERMITTED.)	BALL VALVE GATE VALVE
DIRECTION OF PITCH	
DROP	
ELBOW DOWN	
ELBOW UP	
EXISTING PIPE TO BE REMOVED	
EXISTING PIPE TO REMAIN	
FLOW DIRECTION DESIGNATION	
PIPE RISER	
PUMP	
RISE	
TOP CONNECTION (45°)	
TOP CONNECTION (90°)	

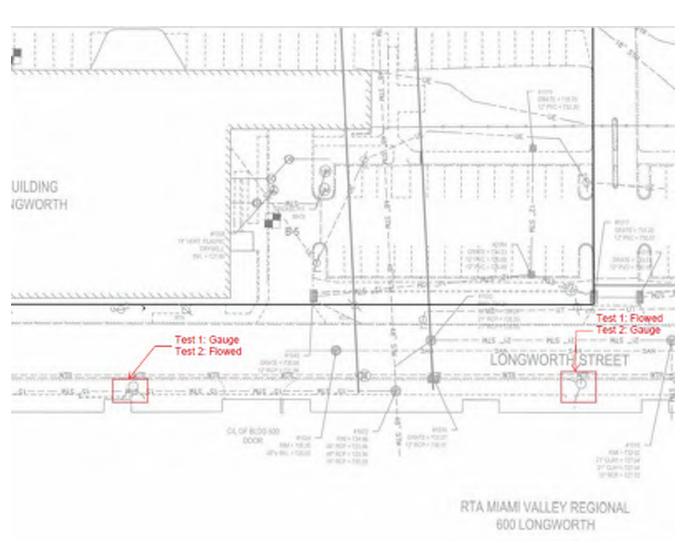
OUBLE LINE	SINGLE LINE							
		CHECK VALVE						
BALL VALVE		SHUTOFF VALVE (REFER TO SPECIFICATIONS FOR REQUIRED TYPE BASED ON APPLICATIONS)						
GATE VALVE								
		PRESSURE GAUGE						
		TEMPERATURE GAUGE OR THERMOMETER						
		UNION						
	I	CLEANOUT						
	- 'y	STRAINER						
		STRAINER WITH A BLOW DOWN VALVE AND HOSE CONNECTION						
	<u> </u>	DRAIN VALVE WITH HOSE END CONNECTION						
		AUTOMATIC FLOW CONTROLLER WITH P/T PLUG IN AND OUT						
		EXPANSION JOINT						
		PRESSURE REGULATING VALVE						
		TRAP PRIMER						
	V	VACUUM GAUGE WITH STOP						
	O	CLEANOUT TO GRADE OR FINISHED FLOOR						
		END CAP						
		SHUTOFF VALVE AND BOX						
		SHUTOFF VALVE ON RISER						
		SOLENOID VALVE						
		WATER METER						

PLUMBING AND FIRE SU	Ρ
PIPING DESIGNATIONS	

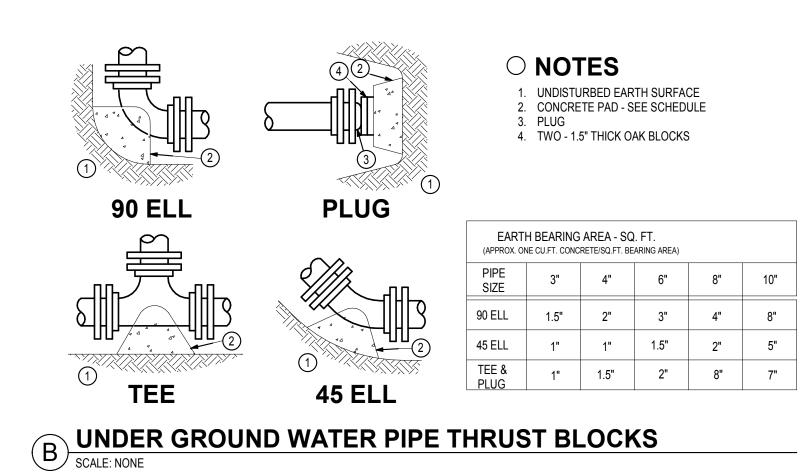
_	
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RET
	EXISTING PIPE TO REMAIN
	EXISTING PIPE TO BE REMO
CWS	COMBINATION FIRE SUPPRE WATER SERVICE
DS	SPRINKLER PIPE (DRY)
F	FIRE SUPPRESSION (STAND
G	NATURAL GAS PIPE
GS	GAS SERVICE
NLG	GASOLINE PIPE (NON-LEAD)
NPW	NON-POTABLE
OD	(OVERFLOW) SECONDARY S
PD	PUMP DISCHARGE PIPE
s	SPRINKLER PIPE (WET)
	SANITARY DRAINAGE PIPE
SD	SPRINKLER DRAIN PIPE
STM	STORM DRAINAGE PIPE
TP	TRAP PRIMER DISCHARGE F
	SANITARY SEWER VENT
	WATER SERVICE





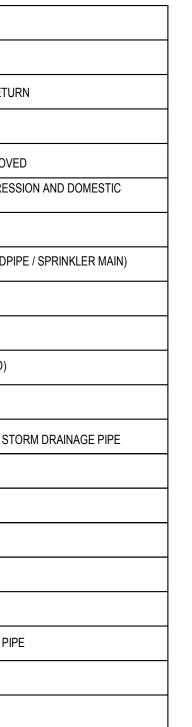


5 FLOW TEST MAP



PPRESSION

GENERAL FLOOR PLAN NOTES



ELEV: 8' - 0"	APPROXIMATE DIMENSION ABOVE FINISHED FLOOR TO CENTERLINE OF PIPE, UNLESS NOTED OTHERWISE			
TOE: 3' - 0" BOE: 0' - 6"	APPROXIMATE DIMENSION ABOVE FINISHED FLOOR TO TOP OR BOTTOM OF EQUIPMENT, UNLESS NOTED OTHERWISE			
2	RISER OR STACK NUMBER			
B P2	DETAIL: B = DETAIL DESIGNATION P2 = SHEET WHERE DETAIL IS LOCATED			
1 P2	SECTION: 1 = SECTION DESIGNATION P2 = SHEET WHERE DETAIL IS LOCATED			
(OH) 1	FIRE SUPPRESSION HAZARD CLASSIFICATION AND HAZARD CLASSIFICATION GROUP			
P1 OR P1	EQUIPMENT REFERENCE. LETTER DESIGNATION VARIES. REFER TO SCHEDULES.			
A1	EQUIPMENT, DEVICE, OR PLUMBING FIXTURE MARK. LETTER DESIGNATIONS REFER TO SCHEDULES.			
$\mathbf{\Theta}$	CONNECT TO EXISTING			
3>	PLAN NOTE. APPLIES ONLY TO THE SHEET WHICH IT IS SHOWN UNLESS NOTED OTHERWISE.			
3	DETAIL NOTE. APPLIES ONLY TO THE ASSOCIATED DETAIL.			
(A1)	"UP TO" SYMBOL (ITEM ON FLOOR ABOVE)			

FIRE SUPPRESSION SYMBOLS

DOUBLE LINE	SINGLE LINE	
	©	CONCEALED PENDENT SPRINKLER
		FIRE DEPARTMENT VALVE
	ď	FIRE HYDRANT
	FS	FLOW SWITCH
	Ă	GATE VALVE OS&Y
	\	INSTITUTIONAL PENDENT SPRINKLER
	•	PENDENT SPRINKLER
		POST INDICATOR VALVE
	@	RECESSED PENDENT SPRINKLER
	⊳	SIDE WALL SPRINKLER
		SUPERVISED VALVE
		UPRIGHT SPRINKLER

FIRE SUPPRESSION DESIGN NOTES

- A. FIRE SUPPRESSION SPRINKLER SYSTEMS. REFER TO DRAWING AND SPECIFICATIONS FOR COMPLETE SCOPE OF WORK. a. FIRE SUPPRESSION CONTRACTOR SHALL DESIGN AND INSTALL AUTOMATIC SPRINKLER
- SYSTEM(S) FOR THE ENTIRE BUILDING. BUILDING TO BE TOTALLY FIRE SUPPRESSED. B. ALL PIPING IS ABOVE THE CEILING (AT THE UNDERSIDE OF STRUCTURE IN EXPOSED STRUCTURAL AREAS) UNLESS OTHERWISE INDICATED.
- . REFER TO ARCHITECTURAL DRAWINGS FOR REFLECTED CEILING PLANS AND GENERAL TRADES CONSTRUCTION INFORMATION. COORDINATE SPRINKLER LOCATIONS WITH CEILING DEVICES (LIGHTING, GRILLES, ETC.) OBTAIN ARCHITECTS APPROVAL OF SPRINKLER LAYOUT PRIOR TO INSTALLATION. FINAL FINISHED APPEARANCE OF WORK MUST BE APPROVED BY THE ARCHITECT.
- D. TOTAL SQUARE FOOTAGE OF PROJECT IS <u>67,130 SQUARE FEET</u>. MAXIMUM PER FLOOR SQUARE FOOTAGE FOR EXTRA HAZARD DESIGN DENSITY IS 40,000. TOTAL NUMBER OF FIRE RISERS REQUIRED IS 2.
- E. CONTRACTOR SHALL MAKE REQUIRED FLOW TESTS, LAY OUT SYSTEMS, OBTAIN APPROVALS FROM THE AUTHORITY HAVING JURISDICTION AND THE OWNER'S INSURER PRIOR TO BEGINNING ANY FABRICATION OR INSTALLATION WORK.
- F. BASIS FOR DESIGN OF FIRE SUPPRESSION SYSTEM(S) TO BE: 1. LIGHT HAZARD 1500 SQUARE FEET, 0.10 GPM/SQ. FT., 225 SQUARE FEET MAXIMUM PER SPRINKLER (RESTROOM).
- 2. ORDINARY HAZARD, (GROUP 1) 1500 SQUARE FEET, 0.15 GPM/SQ. FT., 130 SQUARE FEET MAXIMUM PER SPRINKLER. (JANITOR'S CLOSET).
- 3. EXTRA HAZARD (GROUP 1), 2500 SQUARE FEET, 0.30 GPM/SQ. FT., 100 SQUARE FEET MAXIMUM PER SPRINKLER (BUS GARAGE). USE HIGH TEMPERATURE SPRINKLER 25%
- AREA REDUCTION. 4. A MINIMUM EXTERIOR STREAM OF 500 GPM SHALL BE INCLUDED IN THE HYDRAULIC
- CALCULATIONS. 5. AREA OF OPERATION REDUCTIONS AND INCREASES SHALL BE CALCULATED PER NFPA STANDARDS. VERIFY DENSITIES WITH GOVERNING AUTHORITIES AND OWNER'S INSURER BEFORE PROCEEDING WITH DESIGN OF SYSTEM(S). IF GOVERNING AUTHORITIES OR OWNER'S INSURER REQUIREMENTS ARE MORE STRINGENT THOSE REQUIREMENTS SHALL PREVAIL. ALL AREAS ARE TO BE LIGHT HAZARD CLASSIFICATION, UNLESS OTHERWISE INDICATED ON THE PLANS OR REQUIRED BY THE GOVERNING AUTHORITY.
- G. PROVIDE THE FOLLOWING SPRINKLER TYPES, UNLESS OTHERWISE NOTED ON THE DRAWINGS. PENDENT TYPE SPRINKLERS SHALL BE LOCATED IN THE CENTER OF SQUARE PADS AND AT THE CENTER OR AT QUARTERPOINTS OF THE LONG AXIS OF RECTANGULAR PADS.
- 1. SPRINKLERS IN AREAS WITH CEILINGS SHALL BE CONCEALED TWO PIECE ADJUSTABLE PENDENT QUICK RESPONSE TYPE WITH WHITE FINISH COVERPLATE.
- 2. SPRINKLERS IN EXPOSED AREAS SHALL BE QUICK RESPONSE BRASS UPRIGHT TYPE.
- 3. SPRINKLERS IN BUS GARAGE SHALL BE K-11 STANDARD RESPONSE HIGH TEMPERATURE BRASS UPRIGHT TYPE.
- H. ALL PIPING SHOWN (WITH SIZES) SHALL BE INSTALLED AS SIZED UNLESS HYDRAULIC CALCULATIONS INDICATED A LARGER SIZE IS NECESSARY. FOR PIPING NOT SHOWN OR SIZED ON THE DRAWINGS, PIPE SIZING SHALL BE BASED ON FIRE SUPPRESSION CONTRACTORS HYDRAULIC CALCULATIONS.
- I. EXERCISE SPECIAL CARE TO COORDINATE PIPING AND EQUIPMENT LOCATIONS WITH ALL OTHER TRADES.
- J. PROJECT HYDRANT/FIRE PUMP FLOW TEST DATA.

DATE:	10-04-24
TIME:	9:45 AM
DESCRIPTION:	WORSE CASE TEST #2
	600 LONGWORTH
STATIC PRESSURE:	68 PSIG
RESIDUAL PRESSURE:	66 PSIG AT FLOW: 1300 GPM

NOTE: FLOW TEST DATA SHOWN HERE IS FOR BIDDING PURPOSES ONLY. CONTRACTOF
SHALL CONDUCT A DESIGN FLOW TEST PRIOR TO HYDRAULIC CALCULATIONS.

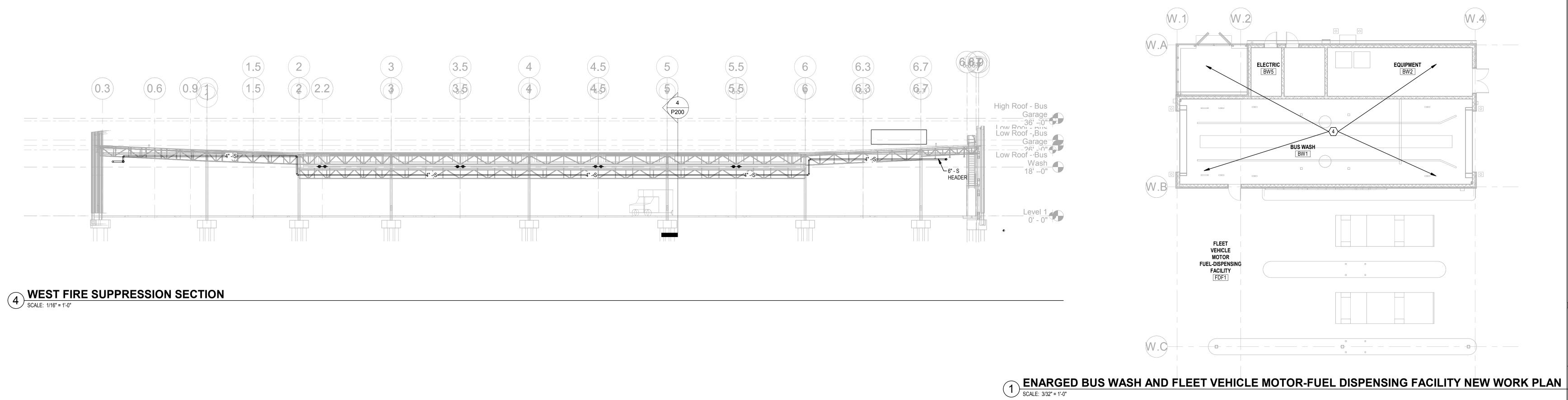
ABBREVIATIONS

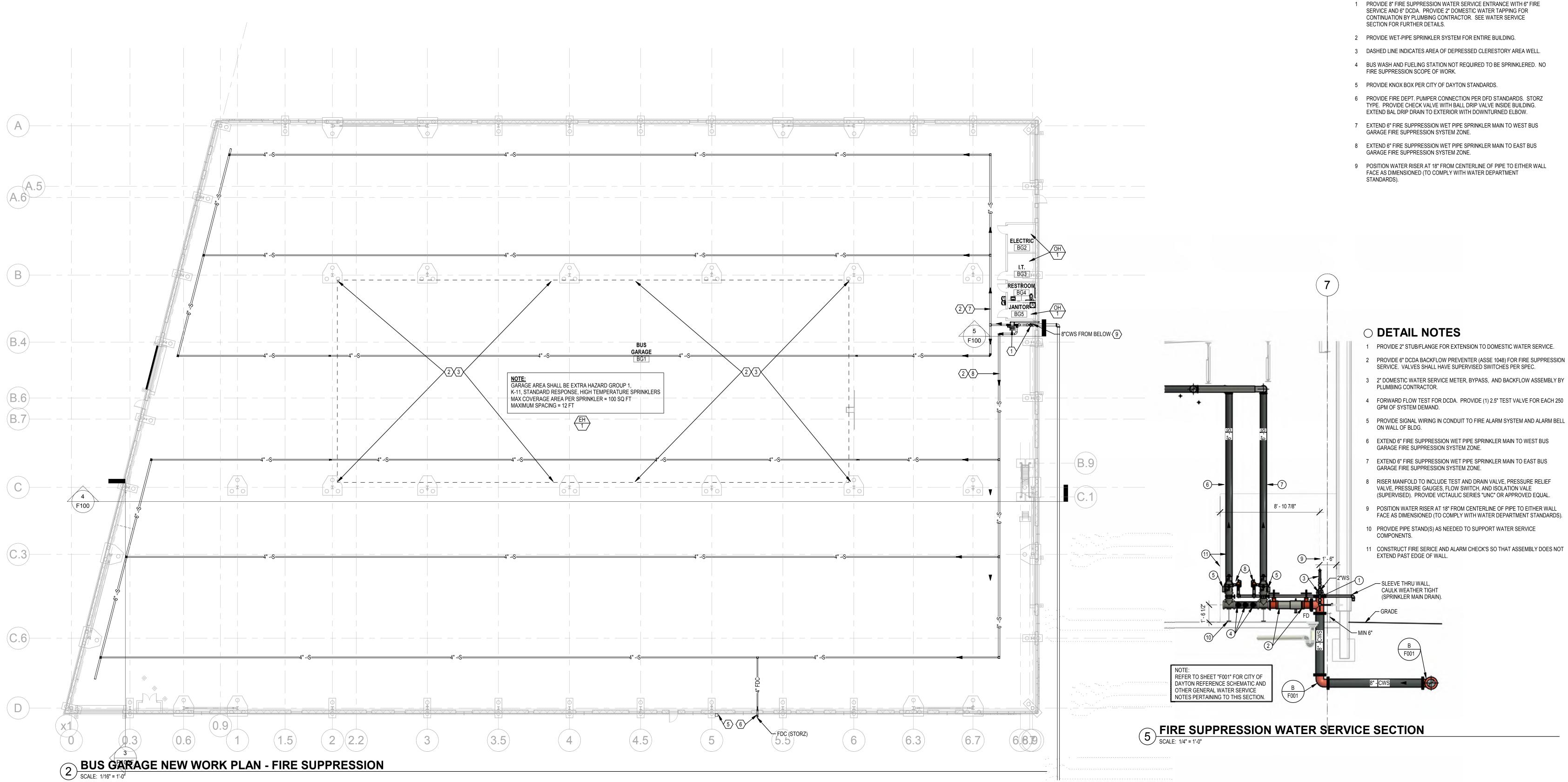
ABBREVIATIONS				
AFG AP	- ABOVE FINISHED FLOOR - ABOVE FINISHED GRADE - ACCESS PANEL - ARCHITECT OR ARCHITECTURAL			
BOB BOF BOP BT BTU BTUH	- BUILDING - BOTTOM OF BEAM - BOTTOM OF FOOTING - BOTTOM OF PIPE - BATHTUB			
CFM CO	- COMPRESSED AIR - CUBIC FEET PER MINUTE - CLEAN OUT - COMBINATION WATER SERVICE			
DF DFU DIA DN DS DT	- DRAINAGE FIXTURE UNIT			
	- EACH - ELECTRICAL CONTRACTOR (DIVISION 26) - EXISTING TO REMAIN			
FD FDC FDV FF FHC FLR	 FIRE SUPPRESSION (STANDPIPE/SPRINKLER MAIN) FLOOR DRAIN FIRE DEPARTMENT CONNECTION FIRE DEPARTMENT VALVE FINISHED FLOOR ELEVATION FIRE HOSE CABINET FLOOR FIRE RISER FIRE SERVICE 			
G	- GAS OR NATURAL GAS			
HB HD	- HOSE BIBB - HUB DRAIN			
INV	- INVERT ELEVATION			
LV	- LAVATORY			
MB	- MOP BASIN			
NPW NTS	- NON-POTABLE WATER - NOT TO SCALE			
OD PD				
RD	- ROOF DRAIN			
	- SPRINKLER (WET) - SANITARY OR SANITARY DRAIN - SPRINKLER DRAIN - SHOWER - SINK - SUPPLY RISER - SANITARY STACK (SOIL OR WASTE) - STORM OR STORM DRAINAGE			
TD TOF TOP TP TYP	- TOP OF PIPE			
UR	- URINAL			
V	- VENT OR SANITARY SEWER VENT			

- VENT OR SANITARY SEWER VENT VS - VENT STACK VTR - VENT THROUGH ROOF
- VR VENT RISER WCO - WALL CLEANOUT
- WH WALL HYDRANT OR WATER HEATER WS - WATER SERVICE

	SHEET LIST		
SHEET NUMBER	SHEET NAME		
F001	LEGEND, NOTES, AND DETAILS		
F100	NEW WORK PLANS		
Total Count: 2			









 \bigcirc **PLAN NOTES**