EYE LEVEL VIEW OF BUILDING B1 FROM THE SOUTHWEST

2/20/2024 7:48:3 AM PROJECT: 423-000 - CITY OF POULSBO PUBLIC WORKS MAINTENANCE FACILITY

PROGRAMMING + SCHEMATIC DESIGN REPORT - VOLUME I

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EXECUTIVE SUMMARY

THIS REPORT IS A COLLABORATIVE EFFORT BETWEEN THE CITY OF POULSBO PUBLIC WORKS DIVISION AND HELIX DESIGN GROUP TO DEVELOP THE PROGRAM AND SCHEMATIC DESIGN FOR THE PUBLIC WORKS MAINTENANCE FACILITY; PROJECT IS LOCATED AT 22125 VIKING AVENUE NW, POULSBO, WASHINGTON.

THE PROGRAMMING + SCHEMATIC DESIGN REPORT IS CONTAINED IN TWO VOLUMES;

VOLUME I - CONTENTS

- DRAWINGS
- DESIGN NARRATIVES
- OUTLINE SPECIFICATIONS

VOLUME II - CONTENTS

- SECTION I - COST ESTIMATE
- SECTION II - VEHICLE EQUIPMENT LIST
- SECTION III - BUILDING BI EQUIPMENT LIST AND LAYOUT
- SECTION IV - PRE-APPLICATION SUMMARY LETTER

VICINITY MAP

SYMBOLS

GRID LINE DESIGNATION

C.O.S. = center of structure
F.O.S. = face of structure
(E) = existing

INTERIOR ELEVATION

ELEVATION NUMBER
SHEET NUMBER

EXTERIOR ELEVATION

ELEVATION NUMBER
SHEET NUMBER

BUILDING SECTION

SECTION NUMBER
SHEET NUMBER

WALL SECTION

SECTION LETTER
SHEET NUMBER

DETAIL

DETAIL NUMBER
SHEET NUMBER

REVISION

REVISION

MATCHLINE

NORTH ARROW

ARCHITECTURAL OUTLINE SPECIFICATIONS

THE FOLLOWING ARCHITECTURAL SPECIFICATIONS ESTABLISH BASIS OF DESIGN AND QUALITY STANDARDS FOR THIS PROJECT:

DIVISION 3 - CONCRETE

03 11 00 CONCRETE FORMING
03 20 00 CONCRETE REINFORCING
03 30 00 CAST-IN-PLACE CONCRETE
03 45 00 PRECAST ARCHITECTURAL CONCRETE (DESIGN OPTION)

DIVISION 5 - METALS

05 12 00 STRUCTURAL STEEL FRAMING
05 21 00 STEEL JOIST FRAMING
05 31 00 STEEL DECKING
05 50 00 METAL FABRICATIONS
05 51 00 METAL STAIR SYSTEMS AND HANDRAILS
05 52 00 METAL RAILING SYSTEMS

DIVISION 6 - WOOD, PLASTIC, AND COMPOSITES

06 20 23 INTERIOR FINISH CARPENTRY

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

07 08 27 BUILDING AIR BARRIER SYSTEM TESTING FOR COMMISSIONING
07 14 00 FLUID APPLIED WATERPROOFING
07 16 16 CRYSTALLINE WATERPROOFING
07 21 00 THERMAL INSULATION
07 46 19 METAL SIDING, METAL SOFFIT AND METAL ROOFING PANELS (DESIGN OPTION)
07 61 13 STANDING SEAM SHEET METAL ROOFING
07 62 00 SHEET METAL FLASHING AND TRIM
07 71 00 ROOF SPECIALTIES
07 72 00 ROOF ACCESSORIES
07 84 00 FIRESTOPPING
07 92 00 JOINT SEALANTS

DIVISION 8 OPENINGS

08 11 13 HOLLOW METAL DOORS AND FRAMES
08 33 23 ROLLING SERVICE DOORS
08 36 13 SECTIONAL DOORS
08 45 00 TRANSLUCENT WALL AND ROOF ASSEMBLIES
08 45 23 SKYLIGHT SYSTEM
08 71 00 DOOR HARDWARE
08 81 00 GLASS GLAZING
08 91 00 LOUVERS

DIVISION 9 FINISHES

09 22 16 NON-STRUCTURAL METAL FRAMING
09 29 00 GYPSUM BOARD
09 30 00 TILING
09 61 14 MOISTURE VAPOR EMISSION CONTROL (MAPEI)
09 91 00 PAINTING

DIVISION 10 SPECIALTIES

10 14 00 SIGNAGE
10 26 13 CORNER GUARDS
10 28 13 TOILET ACCESSORIES
10 44 00 FIRE PROTECTION SPECIALTIES

DIVISION 12 FURNISHINGS

12 32 00 MANUFACTURED WOOD CASEWORK

DIVISION 13 SPECIAL CONSTRUCTION

13 34 19 METAL BUILDING SYSTEMS

DIVISION 14 CONVEYING EQUIPMENT

14 60 00 CRANES AND HOISTS

DIVISION 21 FIRE SUPPRESSION

21 00 00 GENERAL FIRE SUPPRESSION SYSTEM REQUIREMENTS

DIVISION 22 PLUMBING

22 00 00 GENERAL PLUMBING SYSTEM REQUIREMENTS

DIVISION 23 HEATING VENTILATION AND AIR CONDITIONING

23 00 00 GENERAL HVAC SYSTEM REQUIREMENTS

DIVISION 26 ELECTRICAL

26 00 00 GENERAL ELECTRICAL SYSTEM REQUIREMENTS
26 00 01 GENERAL LIGHTING SYSTEM REQUIREMENTS

DIVISION 31 EARTHWORK

31 10 00 SITE CLEARING
31 20 00 EARTH MOVING
31 23 33 TRENCHING AND BACKFILLING

DIVISION 32 EXTERIOR IMPROVEMENTS

32 12 16 ASPHALT PAVING
32 13 13 EXTERIOR CONCRETE PAVING
32 31 13 CHAIN LINK FENCES AND GATES
32 93 00 PLANTS

ENERGY CODE REQUIREMENTS

GOVERNING CODE:	2021 WASHINGTON STATE ENERGY CODE (WSEC)
COMMISSIONING AND TESTING:	
AIR BARRIER SYSTEM	TESTING IN ACCORDANCE TO 2021 WSEC REQUIREMENTS.
RENEWABLE ENERGY	SECTION C411
BUILDING BI	PHOTOVOLTAIC SYSTEM: (40) 72"x40" PV PANELS. REFER TO ELECTRICAL DESIGN NARRATIVE.
EFFICIENCY PACKAGES	SECTION C406
BUILDING BI	APPLICABLE. REFER TO MECHANICAL AND ELECTRICAL DESIGN NARRATIVES.
ENERGY MEASURE CREDITS (C406.2)	PROVIDE MINIMUM (49) CREDITS. PROVIDE MEASURES #7, #9, #14 AND #18. TOTAL 53 CREDITS.
LOAD MANAGEMENT CREDITS (C406.3)	PROVIDE MINIMUM (26) CREDITS. PROVIDE MEASURE #2. TOTAL 26 CREDITS.
BUILDING B2	APPLICABLE. REFER TO MECHANICAL AND ELECTRICAL DESIGN NARRATIVES.
ENERGY MEASURE CREDITS (C406.2)	PROVIDE MINIMUM (49) CREDITS PROVIDE MEASURES #7 AND #10. TOTAL 50 CREDITS.
LOAD MANAGEMENT CREDITS (C406.3)	PROVIDE MINIMUM (26) CREDITS. PROVIDE MEASURE #2. TOTAL 26 CREDITS.
BUILDING B3	EXEMPT

PROJECT SCOPE SUMMARY

PROJECT SCOPE:	REFER TO SCHEMATIC DESIGN DRAWINGS AND DESIGN CRITERIA INCLUDED WITHIN THIS REPORT.
SITE DEVELOPMENT	INCLUDES ON-SITE, FRONTAGE AND OFF-SITE IMPROVEMENTS
BUILDINGS	
BUILDING BI	MAINTENANCE AND CREW WORKSHOP (HEATED BUILDING). 2-STORY.
BUILDING B2	ENCLOSED VEHICLE AND EQUIPMENT STORAGE (HEATED BUILDING). 1-STORY.
BUILDING B3	OPEN VEHICLE AND EQUIPMENT STORAGE (NON-HEATED BUILDING). 1-STORY.
SITE STRUCTURES	
GENERATOR AREA	REFER TO ARCHITECTURAL SITE PLAN
DUMPSTER AREA (COVERED)	REFER TO ARCHITECTURAL SITE PLAN
EQUIPMENT AREA	REFER TO ARCHITECTURAL SITE PLAN
PHOTOVOLTAIC SYSTEM AREA	REFER TO ARCHITECTURAL SITE PLAN
TRANSFORMER AREA	REFER TO ARCHITECTURAL SITE PLAN
FIXTURES, FURNITURE AND EQUIPMENT:	FURNISHED AND INSTALLED BY OWNER. (F.I.O.)
CONSTRUCTION SCHEDULE:	SINGLE-PHASE PROJECT.

COST ESTIMATE SUMMARY

THE COST ESTIMATE FOR THE SCHEMATIC DESIGN FOR THE SITE AND BUILDINGS ARE PROVIDED AS A ROUGH ORDER OF MAGNITUDE; REFLECTING THE CONCEPTUAL LEVEL OF DETAIL AND PROJECT SCOPE. THE COST ESTIMATE ASSUMES A SINGLE-PHASE PROJECT WITH A CONSTRUCTION START IN LATE 2024 OR EARLY 2025. ESTIMATE IS PROVIDED IN 2024 DOLLARS. SALES TAX, SOFT COSTS AND OTHER OWNER COSTS ARE NOT INCLUDED FROM ESTIMATE.

REFER TO DETAILED COST ESTIMATE ISSUED BILL ACKER CONSULTING SERVICES FOR PROJECT COMPONENT COSTS, ESTIMATE INCLUSIONS AND EXCLUSIONS. DETAILED COST ESTIMATE INCLUDED IN VOLUME II OF REPORT.

PROBABLE PRELIMINARY MAXIMUM ALLOWABLE CONSTRUCTION COST (ROM) SUMMARY:

PROJECT COMPONENTS:	BARE COSTS	BARE COSTS WITH 30% MARKUP [1]	DESIGN OPTIONS AND UPGRADES
SITE DEVELOPMENT [2]	$2,619,830	$3,405,779	
BUILDING BI	$6,432,300	$8,361,990	[3]
BUILDING B2	$1,932,180	$2,511,834	[3]
BUILDING B3	$1,420,245	$1,846,319	[3]
SITE STRUCTURES AND SPECIALTY SYSTEMS			
GENERATOR SYSTEM [4]	$272,800	$354,640	
PHOTOVOLTAIC SYSTEM [5]	$248,300	$322,790	
BASE ESTIMATE (MACC) TOTAL	$12,925,655	$16,803,352	

FOOTNOTES:

[1] MARKUP IS INTENDED TO COVER CONTRACTOR'S GENERAL REQUIREMENTS, OVERHEAD AND PROFIT, BOND + INSURANCE, AND BUSINESS AND OCCUPATION TAX, AND THE EQUIVALENT OF ABOUT 8% COMBINED AND COMPOUNDED DESIGN CONTINGENCY AND COST ESCALATION PREMIUM

[2] SITE STRUCTURES: DUMPSTER AREA (COVERED), EQUIPMENT AREA AND TRANSFORMER AREA INCLUDED IN THE SITE DEVELOPMENT COSTS.

[3] ARCHITECTURAL BUILDING DESIGN OPTIONS AND UPGRADES: REFER TO VOLUME II OF REPORT FOR BUILDING DESIGN OPTION COSTS. REFER TO 'ARCHITECTURAL DESIGN CRITERIA' DRAWING IN VOLUME I OF THIS REPORT FOR LIST DESIGN OPTIONS AND UPGRADES.

[4] GENERATOR SYSTEM INCLUDES: GENERATOR, ENCLOSURE AND PAD, CATWALK SYSTEM AND SITE INFRASTRUCTURE.

[5] PHOTOVOLTAIC SYSTEM INCLUDES: PV PANELS, STRUCTURAL SUPPORTS AND PAD AND SITE INFRASTRUCTURE.

GENERAL NOTES:

1. OWNER COSTS: AS DETERMINED BY OWNER. EXCLUDED FROM COST ESTIMATE.
2. FIXTURES, FURNITURE AND EQUIPMENT: FURNISHED AND INSTALLED BY OWNER. (F.I.O.)

ABBREVIATIONS:

(MACC) MAXIMUM ALLOWABLE CONSTRUCTION COST
(ROM) ROUGH ORDER MAGNITUDE
GC GENERAL CONTRACTOR

REPORT CONTENTS-VOLUME I

GENERAL DRAWINGS

G00 REPORT COVERSHEET
G01 PROJECT INFORMATION
G02 ARCHITECTURAL DESIGN CRITERIA

PICTORIAL DRAWINGS OF SITE

P00 SOUTHEAST VIEW
P01 SOUTHWEST VIEW
P02 NORTHEAST VIEW
P03 NORTHWEST VIEW

CIVIL DRAWINGS

C1.0 GRADING AND DRAINAGE PLAN
C1.1 GRADING DETAILS
C2.0 PAVING AND UTILITY PLAN
C3.0 TRUCK TURNING MOVEMENT EXHIBIT

LANDSCAPE DRAWINGS

NO DRAWINGS

INDUSTRIAL ENGINEERING DRAWINGS

REFER TO VOLUME II OF REPORT FOR DRAWINGS.

ARCHITECTURAL DRAWINGS

SITE PLAN

SP-1 ARCHITECTURAL SITE PLAN

BUILDING BI

BI-A1 FLOOR PLAN - FIRST FLOOR
BI-A2 FLOOR PLAN - SECOND FLOOR
BI-A3 BUILDING SECTIONS + BUILDING ELEVATIONS
BI-A4 SCHEDULES + PICTORIAL VIEWS

BUILDING B2

B2-A1 FLOOR PLAN + BUILDING SECTIONS + BUILDING ELEVATIONS
B2-A2 SCHEDULES + PICTORIAL VIEWS

BUILDING B3

B3-A1 FLOOR PLAN + BUILDING SECTIONS + BUILDING ELEVATIONS
B3-A2 SCHEDULES + PICTORIAL VIEWS

STRUCTURAL DRAWINGS

NO DRAWINGS

MECHANICAL DRAWINGS

M00 MECHANICAL SYSTEMS GENERAL REQUIREMENTS
BI-M1 BUILDING BI FIRST FLOOR MECHANICAL SYSTEM
BI-M2 BUILDING BI SECOND FLOOR MECHANICAL SYSTEM
B2-M1 BUILDING B2 MECHANICAL SYSTEM
B3-M1 BUILDING B3 MECHANICAL SYSTEM

ELECTRICAL DRAWINGS

E00 ELECTRICAL SYSTEMS GENERAL REQUIREMENTS
BI-E1 BUILDING BI FIRST FLOOR LIGHTING SYSTEM
BI-E2 BUILDING BI SECOND FLOOR LIGHTING SYSTEM
BI-E1 BUILDING BI FIRST FLOOR POWER SYSTEM
BI-E2 BUILDING BI SECOND FLOOR POWER SYSTEM
B2-E1 BUILDING B2 LIGHTING + POWER SYSTEM
B3-E1 BUILDING B3 LIGHTING + POWER SYSTEM

PROJECT INFORMATION

ARCHITECTURAL DESIGN CRITERIA

ARCHITECTURAL OUTLINE SPECIFICATIONS:

GENERAL REQUIREMENTS

QUALITY ASSURANCE:

THE FOLLOWING SPECIFICATION INFORMATION DESCRIBES THE LEVEL OF QUALITY, TYPE, AND ESTABLISHES THE MINIMUM STANDARD FOR MATERIALS AND PRODUCTS TO BE USED FOR THIS PROJECT. IF A SPECIFIC MATERIAL IS NOT IDENTIFIED BELOW, THE MATERIAL SHALL BE EQUIVALENT TO THE BUILDING STANDARD (MATERIALS USED PREDOMINANTLY THROUGHOUT THE FACILITY) FOR TYPE, QUALITY AND FINISH.

FIRE-RATED BUILDING ASSEMBLIES:

PROVIDE ALL MATERIALS AND INSTALLATION REQUIREMENTS TO COMPLY WITH APPLICABLE BUILDING CODES AND TO MAINTAIN THE REQUIRED BUILDING ASSEMBLY FIRE-RATING, INCLUDING INSTALLATION OF SPRAY-APPLIED FIREPROOFING AND INSTALLATION OF FIRE-STOPPING OF PENETRATIONS AND JOINTS.

INSTALLATION:

INSTALL MATERIALS AND PRODUCTS IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, SPECIFICATIONS, STANDARD DETAILS AND WORKMANSHIP REQUIREMENTS. SHOULD MANUFACTURERS' INSTRUCTIONS CONFLICT WITH CONTRACT DOCUMENTS, REQUEST CLARIFICATION FROM ARCHITECT PRIOR TO PROCEEDING WITH WORK.

REFERENCES AND STANDARDS:

FOR PRODUCTS OR WORKMANSHIP SPECIFIED BY ASSOCIATION, TRADE, OR OTHER CONSENSUS STANDARDS, COMPLY WITH REQUIREMENTS OF THE STANDARD, EXCEPT WHEN MORE RIGID REQUIREMENTS ARE SPECIFIED OR ARE REQUIRED BY APPLICABLE CODES. COMPLY WITH SPECIFIED REFERENCES AND STANDARDS AS MINIMUM QUALITY FOR THE WORK EXCEPT WHERE MORE STRINGENT TOLERANCES, CODES, OR SPECIFIED REQUIREMENTS INDICATE HIGHER STANDARDS OR MORE PRECISE WORKMANSHIP.

STRUCTURAL SPECIFICATIONS:

REFER TO GENERAL NOTES ON STRUCTURAL DRAWINGS.

COLORS AND MATERIALS SCHEDULE:

SPECIFICATIONS FOR MATERIALS AND PRODUCTS NOT INCLUDED WITHIN THIS SPECIFICATION SHEET IS PROVIDED IN THE COLORS AND MATERIALS SCHEDULE.

COLORS:

COLORS ARE SPECIFIED ON THE COLORS AND MATERIALS SCHEDULE.

CAST-IN-PLACE CONCRETE

GENERAL REQUIREMENTS: PLACE CONCRETE IN CONFORMANCE WITH ACI 117, ACI 301 AND ACI 304.

CONCRETE MATERIALS, MIX AND REINFORCEMENT: REFER TO STRUCTURAL GENERAL NOTES.

ARCHITECTURAL CONCRETE: CONFORM TO ACI 303R. ALL EXPOSED CAST-IN-PLACE CONCRETE SHALL BE CONSIDERED ARCHITECTURAL CONCRETE.

CONCRETE SEALER: SHALL BE NON-YELLOWING, CLEAR, PENETRATING, NON-FLAMMABLE, ODORLESS, LOW VOC, WATER-BASED CONFORMING TO ASTM C309, TYPE I, CLASS B. ACRYLIC POLYMER MINIMUM 20% SOLIDS BY RESINS WEIGHT. PRODUCT: (1) W.R. MEADOWS, INC. VOCOMP-20; (2) DAYTON SUPERIOR, CURE & SEAL 1315 J22WB; OR APPROVED EQUAL.

VAPOR BARRIER: STEGO WRAP 15-MIL VAPOR BARRIER. THICKNESS: 15 MILS MINIMUM. MANUFACTURER: STEGO INDUSTRIES LLC. PROVIDE ALL MANUFACTURER'S ACCESSORIES FOR COMPLETE INSTALLATION INCLUDING; SEAM TAPE AND VAPOR-PROOFING MASTIC.

WATERSTOPS: GREENSTREAK, INC. PVC (POLYVINYLCHLORIDE) WATERSTOPS. SELECT SIZE, PROFILE AND TYPE APPROPRIATE FOR CONDITION.

JOINT FILLER: ASTM D994; ASPHALT IMPREGNATED FIBERBOARD OR FELT, 1/4 INCH THICK; FULL DEPTH OF SLAB.

CONCRETE FINISHING COAT (EXPOSED CONCRETE WALLS): MAPEI TILT FINISH POLYMER MODIFIED CEMENTITIOUS FINISHING COMPOUND.

PAINTING:

MATERIALS SHALL BE IN ACCORDANCE WITH THE MPI ARCHITECTURAL PAINTING SPECIFICATION MANUAL APPROVED PRODUCT LISTING AND SHALL BE FROM A SINGLE MANUFACTURER FOR EACH SYSTEM USED.

ALL WORK SHALL BE 'PREMIUM GRADE' IN ACCORDANCE WITH REFERENCED MPI MANUALS.

PERFORM THE WORK IN ACCORDANCE WITH MPI ARCHITECTURAL PAINTING SPECIFICATIONS MANUAL AND MANUFACTURER'S DIRECTIONS. WHERE THESE MAY BE IN CONFLICT, THE MORE STRINGENT REQUIREMENTS GOVERN.

MEDIUM DENSITY OVERLAY (MDO) PLYWOOD PANELS:

PRODUCT: APA RATED, MEDIUM DENSITY OVERLAY PLYWOOD, GRADE A VENEER FACE, PAINT GRADE. 3/4-INCH THICKNESS SHEETS. 4'x8' SHEETS.

ROOM FINISH SCHEDULE:

BUILDING B1:

FLOORS (SLAB-ON-GRADE):	CAST-IN-PLACE CONCRETE. PAINT: CLEAR SEALER.
FLOORS (COMPOSITE ASSEMBLY):	CAST-IN-PLACE COMPOSITE CONCRETE SLAB. PAINT: CLEAR SEALER. EXPOSED STRUCTURAL MEMBERS AND METAL DECK. PAINTED.
EXTERIOR WALLS:	
LOWER WALLS (0' TO 8' HT):	MDO PLYWOOD PANELS. PAINTED. 6" HT RUBBER BASE. 8' STAINLESS STEEL CORNER GUARDS.
UPPERS WALLS (ABOVE 8' HT):	EXPOSED STRUCTURAL MEMBERS. PAINTED. EXPOSED INSULATION + VAPOR BARRIER SYSTEM.
INTERIOR WALLS:	GYPSUM WALL BOARD (FULL HEIGHT). PAINTED. MDO PLYWOOD PANELS (8' HT). PAINTED. 6" HT RUBBER BASE. 8' STAINLESS STEEL CORNER GUARDS.
ROOF / CEILING:	EXPOSED STRUCTURAL MEMBERS. PAINTED. EXPOSED INSULATION + VAPOR BARRIER SYSTEM.
RESTROOMS:	FLOOR TILE. WALL TILE TO 60" HT. M-R GYPSUM WALL BOARD AT UPPER WALLS AND CEILINGS. PAINTED.
FIELD PAINTING:	METAL STAIR SYSTEM (MSS), METAL RAILING SYSTEM (MRS), HOLLOW METAL DOORS AND FRAMES AND RELITES.

BUILDING B2:

FLOORS:	CAST-IN-PLACE CONCRETE. PAINT: CLEAR SEALER.
WALLS:	
LOWER WALLS (0' TO 8' HT):	WALL LINER PANEL. FACTORY FINISH.
UPPERS WALLS (ABOVE 8' HT):	EXPOSED STRUCTURAL MEMBERS. PAINTED. EXPOSED INSULATION + VAPOR BARRIER SYSTEM.
ROOF / CEILING:	EXPOSED STRUCTURAL MEMBERS. PAINTED. EXPOSED INSULATION + VAPOR BARRIER SYSTEM.

BUILDING B3:

FLOORS:	CAST-IN-PLACE CONCRETE. PAINT: CLEAR SEALER.
WALLS:	
LOWER WALLS (0' TO 8' HT):	WALL LINER PANEL. FACTORY FINISH.
UPPERS WALLS (ABOVE 8' HT):	EXPOSED STRUCTURAL MEMBERS. PAINTED.
ROOF / CEILING:	EXPOSED STRUCTURAL MEMBERS. PAINTED. EXPOSED INSULATION + VAPOR BARRIER SYSTEM.

GENERAL NOTES (ALL BUILDINGS):

INTERIOR PAINTING: ALL WORK SHALL BE 'PREMIUM GRADE' IN ACCORDANCE WITH REFERENCED MPI MANUALS.

1. PAINT EXPOSED PIPES, CONDUIT, HVAC DUCTWORK, UNISTRUT METAL FRAMING AND OTHER SUPPORTS.
2. PAINT EXPOSED STRUCTURAL STEEL MEMBERS.
3. PAINT EXPOSED PRE-ENGINEERED METAL BUILDING (PEMB) STRUCTURAL MEMBERS.
4. PAINT EXPOSED METAL DECK.
5. PAINT BOLLARDS.

ARCHITECTURAL BASIS OF DESIGN:

PRE-ENGINEERED METAL BUILDING (PEMB):

MANUFACTURER:	NUCOR BUILDING SYSTEMS.	
STANDARDS:	NUCOR BUILDING GROUP. STANDARD SPECIFICATIONS GUIDE.	
PRIMARY FRAMING:	RIGID FRAME (RCG). CLEAR SPAN. GABLE BUILDING. SINGLE SLOPE (RCS). CLEAR SPAN. SINGLE-SLOPE BUILDING.	BUILDING: B1. BUILDINGS: B2 AND B3.
PURLINS:	Z-PURLINS. 5'-0" MAXIMUM SPACING.	
GIRTS:	Z-GIRTS. BY-PASS. C-GIRTS AT OPENINGS.	
PROTECTIVE COATING:	STRUCTURAL MEMBERS. HOT-DIP GALVANIZED.	
BRACING SYSTEM:	PORTAL FRAMES AT STRUCTURAL BAYS WITH WALL OPENINGS. ROD BRACING OR CABLE X-BRACING AT ROOF AND WALL ASSEMBLIES.	
METAL ROOF SYSTEM:	NUCOR. CFR STANDING SEAM ROOF PANEL. VISE LOCK 360 SEAM. 24 GA. GALVALUME. SUPER TALL CLIPS + THERMAL BLOCKS.	
METAL WALL SYSTEM:	NUCOR. METAL WALL PANEL. VERTICAL. REVERSE CLASSIC PROFILE. 26 GA. GALVALUME.	
METAL SOFFIT PANELS:	NUCOR. METAL WALL PANEL. REVERSE CLASSIC PROFILE. 26 GA. GALVALUME.	
WALL LINER PANELS:	NUCOR. METAL WALL PANEL. REVERSE CLASSIC PROFILE. 26 GA. GALVALUME.	
INSULATION SYSTEM: (ROOF ASSEMBLY)	NUCOR. DOUBLE-LAYER FIBERGLASS BATT INSULATION SYSTEM + SUPER TALL CLIPS AND THERMAL SPACER BLOCKS (TSB). U-VALUE: COMPLY 2021 WSEC.	
METAL TRIM:	NUCOR. PROVIDE ALL METAL TRIM AND FLASHING FOR COMPLETE INSTALLATION. MIN 26 GA. INCLUDING CORNER TRIM, GUTTERS, DOWNSPOUTS, RAKE TRIM, BASE TRIM AND FRAMED OPENING TRIM.	
ACCESSORIES:	NUCOR. PROVIDE ALL ACCESSORIES AND COMPONENTS FOR COMPLETE INSTALLATION.	
WARRANTIES:	20 YEAR WEATHERTIGHTNESS. 35 YEAR PVDF PAINT FINISH.	

FLOOR-CEILING ASSEMBLY:

FLOOR STRUCTURE:	COMPOSITE SLAB (CAST-IN-PLACE CONCRETE + REINFORCING STEEL OVER METAL DECK) STRUCTURAL STEEL FRAMING AND/OR OPEN WEB STEEL JOISTS.
COLUMNS:	TUBE STEEL COLUMNS.

SECTIONAL DOORS (SD):

MANUFACTURER:	OVERHEAD DOOR COMPANY.
SERIES:	EVERSERVE ALUMINUM GLASS DOORS. MODEL: 5215. FACE OF WALL MOUNTING.
WINDOW GLAZING:	5/8-INCH TRIPLE-WALL IMPACT FROSTED POLYCARBONATE.
OPERATION:	ELECTRIC OPERATOR.
CONTROLS:	SURFACE-MOUNTED (INTERIOR). KEYED. PUSH-BUTTON.
ACCESSORIES:	PROVIDE BOTTOM SENSING EDGE, HIGH-USAGE PACKAGE, HIGH-WIND LOAD, WEATHERSEALS AND AIR INFILTRATION PACKAGE
FINISH:	POWDERGUARD PREMIUM POWDER COAT FINISH.

ROLLING SERVICE DOORS (RSD):

MANUFACTURER:	OVERHEAD DOOR COMPANY.
SERIES:	STORMTITE INSULATED HEAVY-DUTY ROLLING DOOR. MODEL: 625. 24 GA CURTAIN. FACE OF WALL MOUNTING.
OPERATION:	ELECTRIC OPERATOR.
CONTROLS:	SURFACE-MOUNTED (INTERIOR). KEYED. PUSH-BUTTON.
ACCESSORIES:	PROVIDE BOTTOM SENSING EDGE, INSULATED GUIDES, HIGH-USAGE PACKAGE, HIGH-WIND LOAD, WEATHERSEALS AND AIR INFILTRATION PACKAGE
FINISH:	POWDERGUARD PREMIUM POWDER COAT FINISH.

CLERESTORY WINDOWS (CW):

PRODUCT:	KALWALL CORPORATION. SERIES: FACADES. THERMALLY BROKEN WALL SYSTEM. KALWALL (70 mm) SHO.II PANELS. 2-3/4-INCH THICK PANELS.

SNOW GUARD SYSTEM (SG):

PRODUCT:	S-5! METAL ROOF INNOVATIONS, LTD. SERIES: DUALGARD. SNOW GAURD SHALL BE PIPE RAIL-TYPE SNOW RETENTION SYSTEM FOR INSTALLATION ON STANDING SEAM METAL ROOFING.

FALL ARREST SYSTEM (FA):

PRODUCT:	FLEXIBLE LIFELINE SYSTEMS INC. FALL ARREST SYSTEM AS DESIGNED, SUPPLIED AND INSTALLED BY MANUFACTURER; FLEXIBLE HORIZONTAL LIFELINE SYSTEMS ON ROOFTOP ENERGY ANCHOR POSTS. STANDING SEAM METAL ROOFING INSTALLATION. OSHA COMPLIANT.

SKYLIGHT SYSTEM (S):

PRODUCT:	KALWALL. SERIES: CUSTOM PRE-ENGINEERED SKYROOFS. TYPE: SELF SUPPORTING RIDGE ROOF. CURB MOUNTED SKYLIGHT SYSTEM.

METAL STAIR SYSTEM (MSS):

PRODUCT:	PACIFIC STAIR CORPORATION. STAIR AND LANDING SYSTEMS. SERIES: S100. CONCRETE FILLED TREADS AND LANDINGS. MC STRINGERS. PROVIDE METAL RAILING SYSTEM AND HANDRAILS.

METAL RAILING SYSTEM AND HANDRAILS (MRS):

PRODUCT:	PACIFIC STAIR CORPORATION. RAILING SERIES: R300 STEEL TUBE. 1-1/2-INCH DIAMETER TUBULAR STEEL HANDRAILS.

ARCHITECTURAL DESIGN REQUIREMENTS:

LIFE EXPECTANCY REQUIREMENTS:

DESIGN CRITERIA:	50-YEAR LIFE SPAN

STRUCTURAL DESIGN REQUIREMENTS:

DESIGN LOAD CRITERIA:	REFER TO STRUCTURAL DESIGN NARRATIVE.
STRUCTURAL SYSTEM:	PRE-ENGINEERED METAL BUILDING (PEMB). REFER TO ARCHITECTURAL BASIS OF DESIGN.

ENERGY CODE REQUIREMENTS:

THERMAL ENVELOPE:	2021 WASHINGTON STATE ENERGY CODE (WSEC)

BUILDING THERMAL ENVELOPE:

THERMAL ENVELOPE ASSEMBLY:	COMPLY WITH 2021 WSEC REQUIREMENTS. COMPLIANCE BASED ON PRESCRIPTIVE BUILDING ENVELOPE METHOD.
EXTERIOR WALL ASSEMBLY:	
METAL BUILDING:	R-13 + R-14 (C.I.)
MASS:	R-9.5 (C.I.)
BELOW GRADE MASS:	R-9.5 (C.I.)
ROOF ASSEMBLY:	
METAL BUILDING:	R-25 + R-22 (LS)
SLAB-ON-GRADE FLOORS:	
UNHEATED SLABS:	R-10 (C.I.)

FOUNDATIONS:

FOUNDATION WALLS AND FOOTINGS:	CAST-IN-PLACE CONCRETE WITH REINFORCING STEEL. REFER TO STRUCTURAL DESIGN NARRATIVE.
SLAB-ON-GRADE:	CAST-IN-PLACE CONCRETE WITH REINFORCING STEEL. REFER TO STRUCTURAL DESIGN NARRATIVE.

EXTERIOR WALLS:

EXTERIOR WALLS (ABOVE GRADE):	REFER TO BUILDING SECTIONS AND EXTERIOR ELEVATIONS.
FOUNDATION WALLS (BELOW GRADE):	INSTALL DAMPROOFING SYSTEM AT EXTERIOR FACE. REFER TO ARCHITECTURAL OUTLINE SPECIFICATIONS.
RETAINING WALLS (BELOW GRADE):	INSTALL WATERPROOFING SYSTEM AT EXTERIOR FACE. REFER TO ARCHITECTURAL OUTLINE SPECIFICATIONS.

BUILDING EXTERIOR MATERIALS:

MATERIALS AND FINISHES:	REFER TO EXTERIOR FINISH SCHEDULE.

ROOF SPECIALTIES:

SNOW GUARD SYSTEM (SG):	PROVIDE SNOW GUARD SYSTEM AT ALL BUILDING ROOFS. REFER TO ARCHITECTURAL BASIS OF DESIGN.
FALL ARREST SYSTEM (FA):	PROVIDE FALL ARREST SYSTEM AT ALL BUILDING ROOFS. REFER TO ARCHITECTURAL BASIS OF DESIGN.
ROOF HATCH (RH):	PROVIDE (2) ROOF HATCHES AT BUILDING B1 ROOF. **HATCH** SIZE: 5'x5'. LOCKING. PROVIDE FIXED STEEL LADDERS (MF).

OPENINGS:

CLERESTORY WINDOWS (CW):	PROVIDE CLERESTORY WINDOWS WHERE SHOWN ON DRAWINGS. REFER TO ARCHITECTURAL BASIS OF DESIGN.
HOLLOW METAL DOORS AND FRAMES:	REFER TO ARCHITECTURAL OUTLINE SPECIFICATIONS. INTERIOR DOORS AND EXTERIOR DOORS. INTERIOR RELITES. DOOR HARDWARE COMMERCIAL GRADE.
ROLLING SERVICE DOORS (RSD):	REFER TO ARCHITECTURAL BASIS OF DESIGN. MOTORIZED OPERATION.

INTERIOR PARTITIONS:

INTERIOR PARTITIONS (METAL STUDS):	NON-STRUCTURAL METAL FRAMING. GYPSUM WALL BOARD (SINGLE-LAYER EACH SIDE OF METAL STUDS) STUD CAVITY: SOUND BATT MINERAL WOOL INSULATION.

BUILDING INTERIOR MATERIALS AND FINISHES:

MATERIALS AND FINISHES:	REFER TO ROOM FINISH SCHEDULE.

PLUMBING FIXTURES:

PLUMBING FIXTURES:	REFER TO PLUMBING DRAWINGS AND PLUMBING DESIGN NARRATIVE.
TRENCH DRAINS:	PROVIDE AT SPACES SHOWN ON PLUMBING DRAWINGS.
FLOOR DRAINS:	PROVIDE AT RESTROOMS, MECHANICAL ROOMS AND OTHER SPACES SHOWN ON PLUMBING DRAWINGS.
RESTROOMS:	PROVIDE WALL-MOUNTED HANDSINK AND FLOOR MOUNTED WATER CLOSET.
HOSE BIBBS:	PROVIDE AT EXTERIOR LOCATIONS SHOWN ON PLUMBING DRAWINGS.
JANITOR ROOMS:	PROVIDE MOP SINK.
EYE WASH STATIONS:	PROVIDE AT SPACES SHOWN ON PLUMBING DRAWINGS.

TOILET ACCESSORIES:

RESTROOMS:	PROVIDE TOILET ACCESSORIES AT ALL RESTROOMS. (F.I.C.)

UNISTRUT METAL FRAMING:

PRODUCT:	UNISTRUT BUFFALO SUPPORTS (UBS) METAL FRAMING SYSTEM.

SIGNAGE:

BUILDING (EXTERIOR):	PROVIDE EXTERIOR SIGNAGE AT ALL BUILDINGS; BUILDING NUMBERS AND AT VEHICLE BAYS. (F.I.C.)
BUILDING (INTERIOR):	PROVIDE INTERIOR SIGNAGE AT ALL ROOMS, STAIRS AND EXITS. (F.I.C.)

FIXTURES FURNITURE AND EQUIPMENT (FFE):

SHOP EQUIPMENT:	FURNISHED AND INSTALLED BY OWNER. F.I.O. (U.N.O.)
FREE-STANDING BRIDGE CRANE:	5-TON. FURNISHED AND INSTALLED BY CONTRACTOR. F.I.C.
STORAGE RACKS AND CABINETS:	FURNISHED AND INSTALLED BY OWNER. F.I.O.

ARCHITECTURAL BUILDING DESIGN OPTIONS AND UPGRADES:

METAL ROOF SYSTEM:

[R1]	INSULATED METAL PANEL (IMP):	KINGSPAN. ROOF PANEL SYSTEM. SERIES: KINGSEAM. GAUGE: 24 MINIMUM (EXTERIOR SIDE + INTERIOR SIDE). U-VALUE: COMPLY 2021 WSEC. USE: ROOFING AS ALTERNATE TO STANDING SEAM METAL ROOFING.

METAL WALL SYSTEM:

[W1]	VERTICAL METAL SIDING (VMS):	AEP SPAN. PROFILE: NE-WAVE. CORRUGATED METAL SIDING. VERTICAL INSTALLATION. 22 GAUGE. DURA TECH 5000 PVDF FINISH. USE: WALL CLADDING AS ALTERNATE TO METAL WALL PANELS (MWP).
[W2]	INSULATED METAL PANEL (IMP):	KINGSPAN. WALL PANEL SYSTEM. SERIES: QUADCORE. KS SERIES. GAUGE: 24 MINIMUM (EXTERIOR SIDE + INTERIOR SIDE). U-VALUE: COMPLY 2021 WSEC. USE: WALL CLADDING AS ALTERNATE TO METAL WALL PANELS (MWP).

METAL SOFFIT PANELS:

[S1]	METAL SOFFIT PANELS (MSP):	AEP SPAN. PROFILE: FLUSH PANEL. FLAT. PERFORATED (VENTED). HORIZONTAL INSTALLATION. 22 GAUGE. DURA TECH 5000 PVDF FINISH. USE: EXTERIOR ROOF EAVES AND SOFFITS AS ALTERNATE TO METAL WALL PANELS (MWP).

INSULATED WALL PANELS:

[IWP1]	INSULATED WALL PANELS (IWP):	KNIFE RIVER, SPOKANE WASHINGTON. HIGH PERFORMANCE INSULATED CARBONCAST PANELS; 4-INCH OUTER WYTHE OF CONCRETE, 4-INCH EPS INSULATION CORE, 4-INCH INNER CONCRETE. NON-LOAD BEARING. USE: BUILDING LOWER WALLS AS ALTERNATE TO CAST-IN-PLACE CONCRETE WALLS.

BUILDING THERMAL ENVELOPE:

BUILDING THERMAL ENVELOPE:			
EXTERIOR WALL ASSEMBLY:			
METAL BUILDING:	R-13 + R-14 (C.I.)		THERMAL BATT INSULATION (UNFACED FIBERGLASS)
MASS:	R-10 (C.I.)		XPS RIGID INSULATION (2-INCH THICKNESS)
BELOW GRADE MASS:	R-10 (C.I.)		XPS RIGID INSULATION (2-INCH THICKNESS)
ROOF ASSEMBLY:			
METAL BUILDING:	R-25 + R-22 (LS)		THERMAL BATT INSULATION (UNFACED FIBERGLASS) DOUBLE-LAYER
SLAB-ON-GRADE FLOORS:			
UNHEATED SLABS:	R-10 (C.I.)		XPS RIGID INSULATION (2-INCH THICKNESS)
INSULATION MATERIALS:			
LINER SYSTEM (LS)			
ABBREVIATIONS:			
(C.I.) = CONTINUOUS INSULATION			

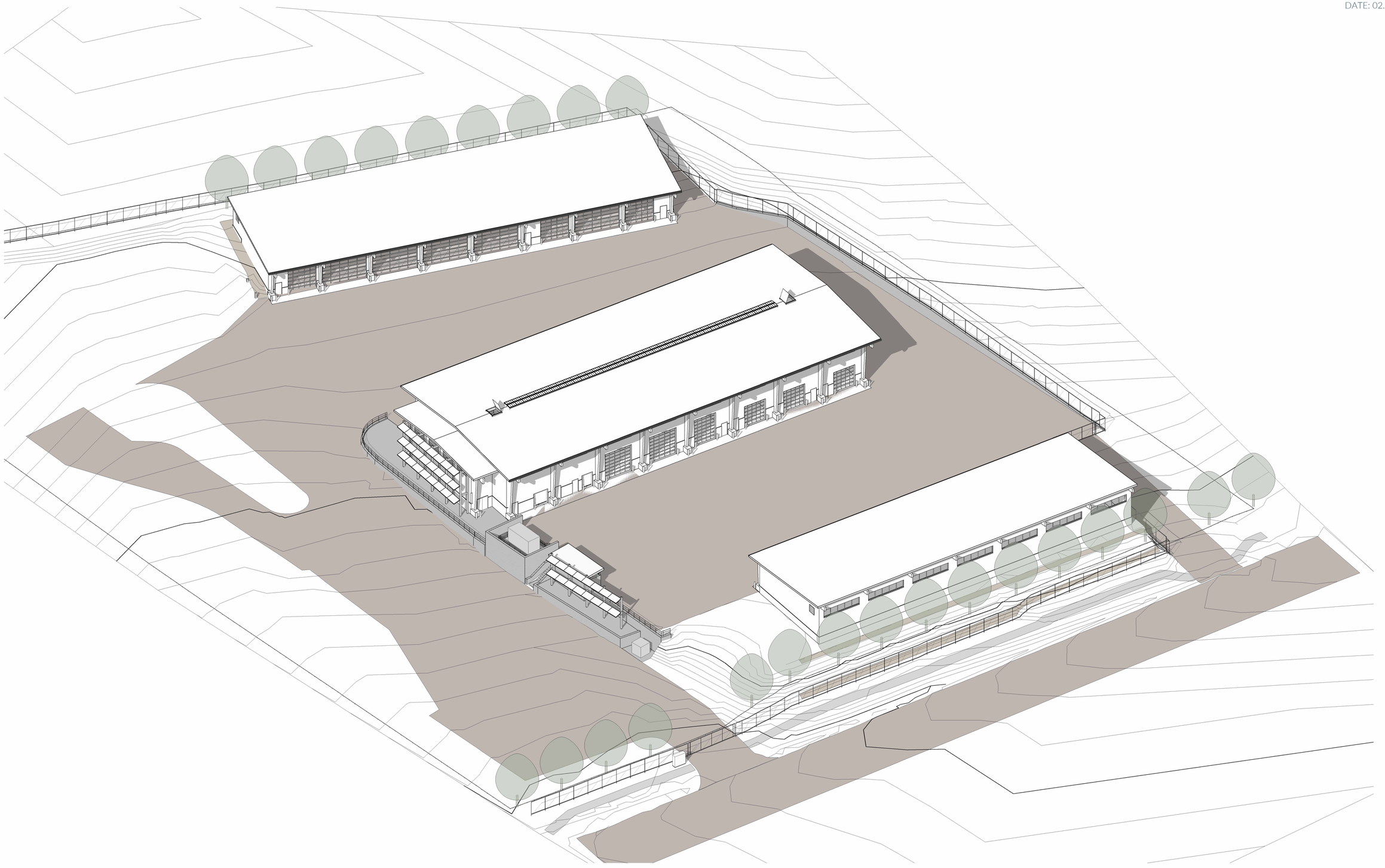
SITE DESIGN REQUIREMENTS:

SECURITY FENCE:

FENCE AND PERSONNEL GATES:	VINYL COATED GALVANIZED STEEL CHAINLINK FENCE SYSTEM. PRIVACY SLATS. 8' HT FENCE AND GATES. 3' WIDE SWINGING PERSONNEL ACCESS GATES.

SECURITY GATES:

VEHICLE GATES:	SINGLE-SLIDING AND DOUBLE-LEAF SWINGING (CHAINLINK TYPE) SECURITY GATES. 8' HT GATES. TYPE AND SIZES AS SHOWN ON SITE PLAN. MOTOR OPERATED. ACCESS CONTROL SYSTEM WITH PEDESTALS. SECURITY GATES TO MATCH SECURITY FENCE MATERIALS AND FINISHES.



SOUTHEAST VIEW

HELIX DESIGN GROUP, INC.

Helix
design group

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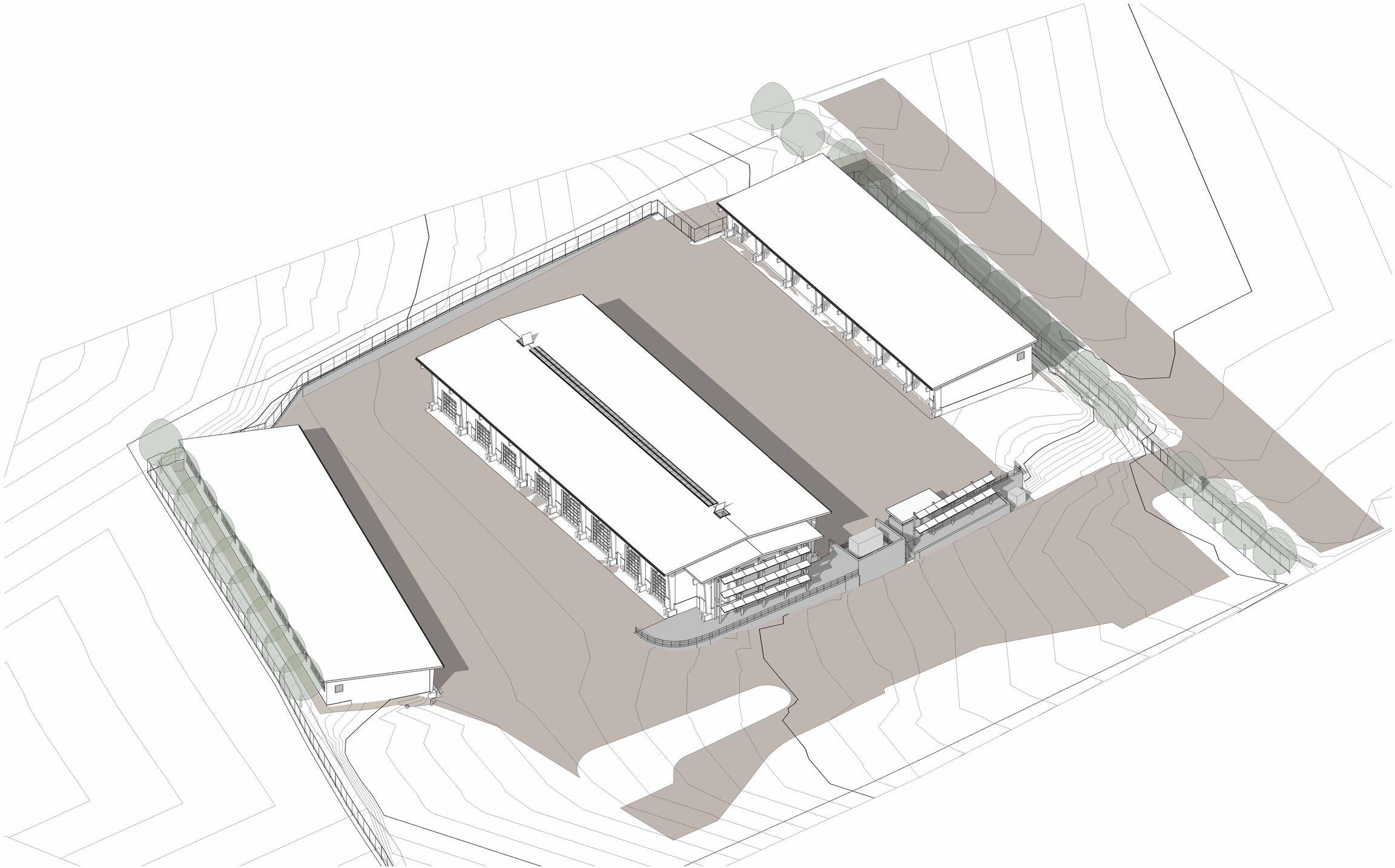

SOUTHWEST VIEW

HELIX DESIGN GROUP, INC.

Helix design group

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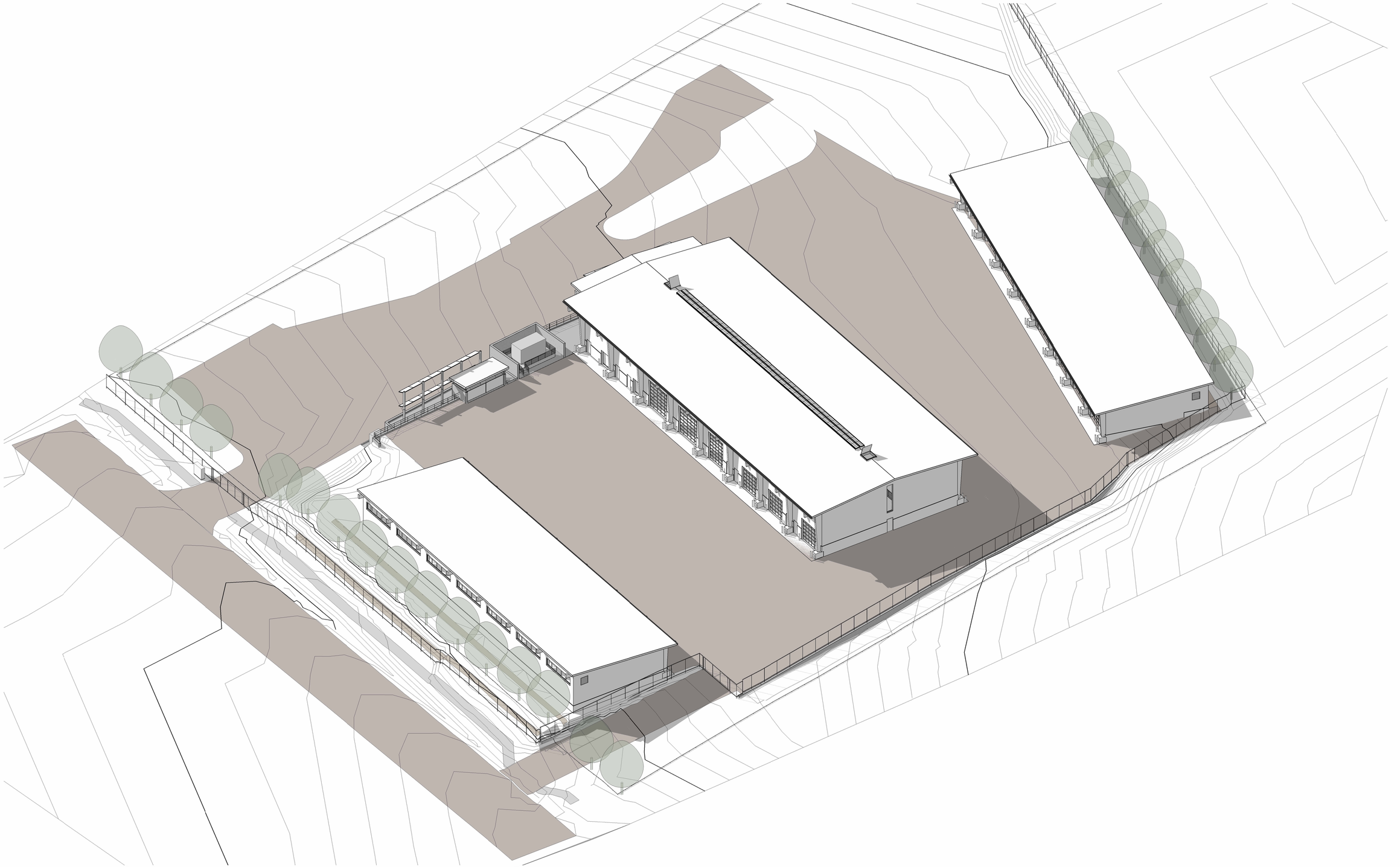

NORTHEAST VIEW

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Helix
design group

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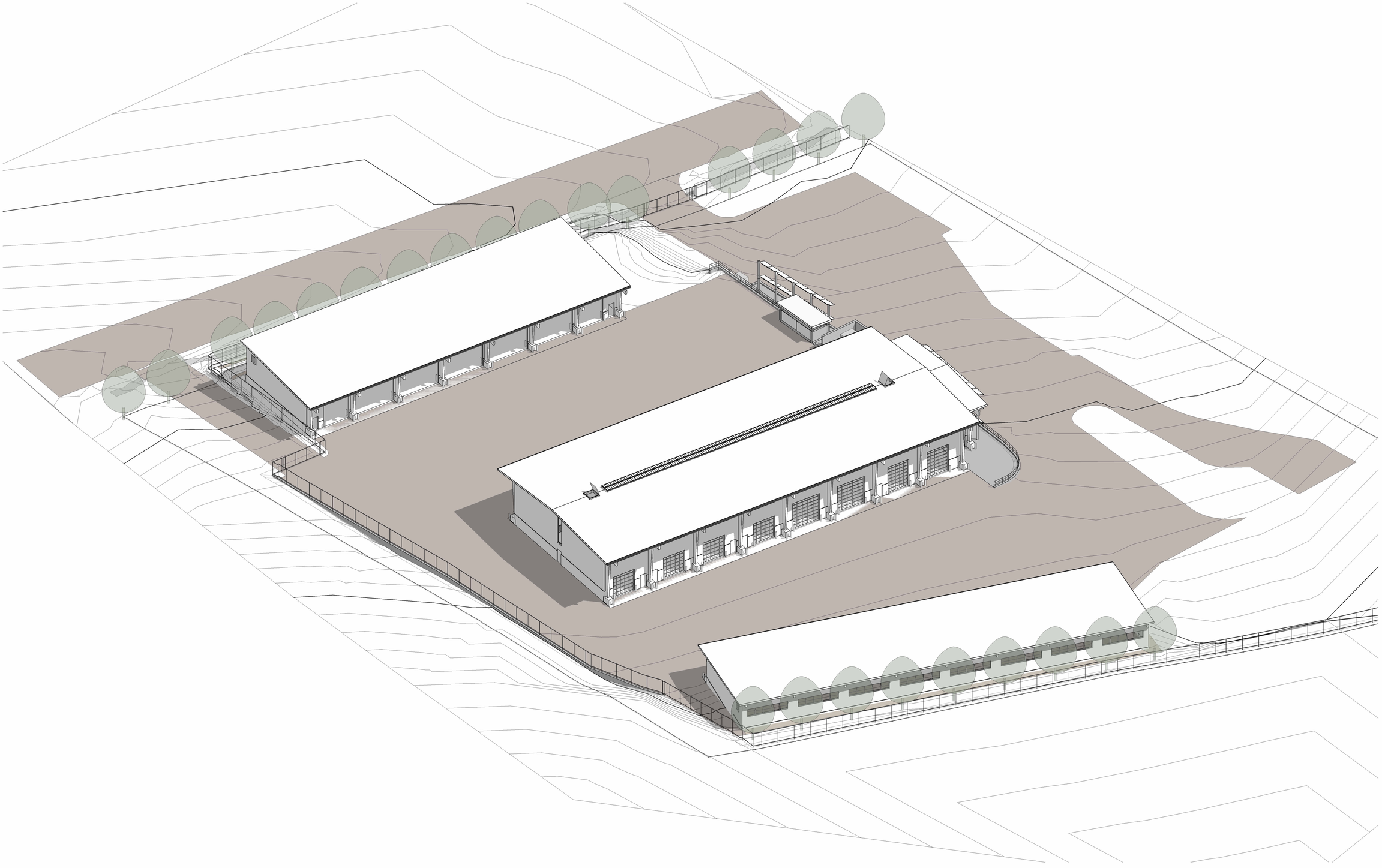


NORTHWEST VIEW

PROJECT INFORMATION

SITE AREA

ACRES	4.38 ACRES
SQUARE FOOTAGE	190,793 SQ FT

BUILDING AREA

BUILDING B1	MAINTENANCE AND CREW WORKSHOP (HEATED) 2-STORY. (15,612 SQ FT + 8,880 SQ FT)	24,492 SQ FT
BUILDING B2	ENCLOSED VEHICLE / EQUIPMENT STORAGE (HEATED) 1-STORY.	9,950 SQ FT
BUILDING B3	OPEN VEHICLE / EQUIPMENT STORAGE (NON-HEATED) 1-STORY.	8,750 SQ FT
TOTAL BUILDING AREA:		43,192 SQ FT

ZONING INFORMATION

GOVERNING CODE	CITY OF POULSBO MUNICIPAL CODE TITLE 18 - ZONING ORDINANCE
PARCEL NUMBER	102601-1-007-2004
ZONING CHAPTER 18.90	LIGHT INDUSTRIAL (LI)
LAND USE CHAPTER 18.90	
PERMIT USES	GOVERNMENT MAINTENANCE SHOPS GOVERNMENT FLEET VEHICLE STORAGE

DEVELOPMENT STANDARDS

CHAPTER 18.90.040

SETBACKS	
FRONT YARD	10 FEET
STREET FRONTAGE	10 FEET
OTHER YARDS	5 FEET
MAXIMUM BUILDING HEIGHT	35 FEET
LANDSCAPING	CHAPTER 18.90.050
BUILDING DESIGN STANDARDS	CHAPTER 18.90.050
CITY CONSTRUCTION CODE	CHAPTER 15.04

OFF-STREET PARKING STALL REQUIREMENTS

CHAPTER 18.140

PARKING SPACE MINIMUM DIMENSIONS:

STANDARD STALL	9' x 18'
ADA STANDARD STALL	9' x 18'
ADA VAN STALL	14' x 18'
COMPACT STALL	8' x 15'
ELECTRIC VEHICLE STANDARD STALLS	9' x 18'
ELECTRIC VEHICLE ADA STANDARD STALL	9' x 18'
DELIVERY AND LOADING BAY	10' x 45'

CHAPTER 18.090

PARKING AND LOADING STANDARDS:

REQUIRED STALLS:

BUSINESS	1:300 SQ FT
WAREHOUSE	1:500 SQ FT
OTHER USE	1:750 SQ FT (PROPOSED) [2]

PARKING STALLS REQUIRED:

BUILDING B1	30 STALLS [1] / 20 STALLS [2] [4]
BUILDING B2	0 STALLS [3]
BUILDING B3	0 STALLS [3]

[1] WAREHOUSE 1:500 SQ FT

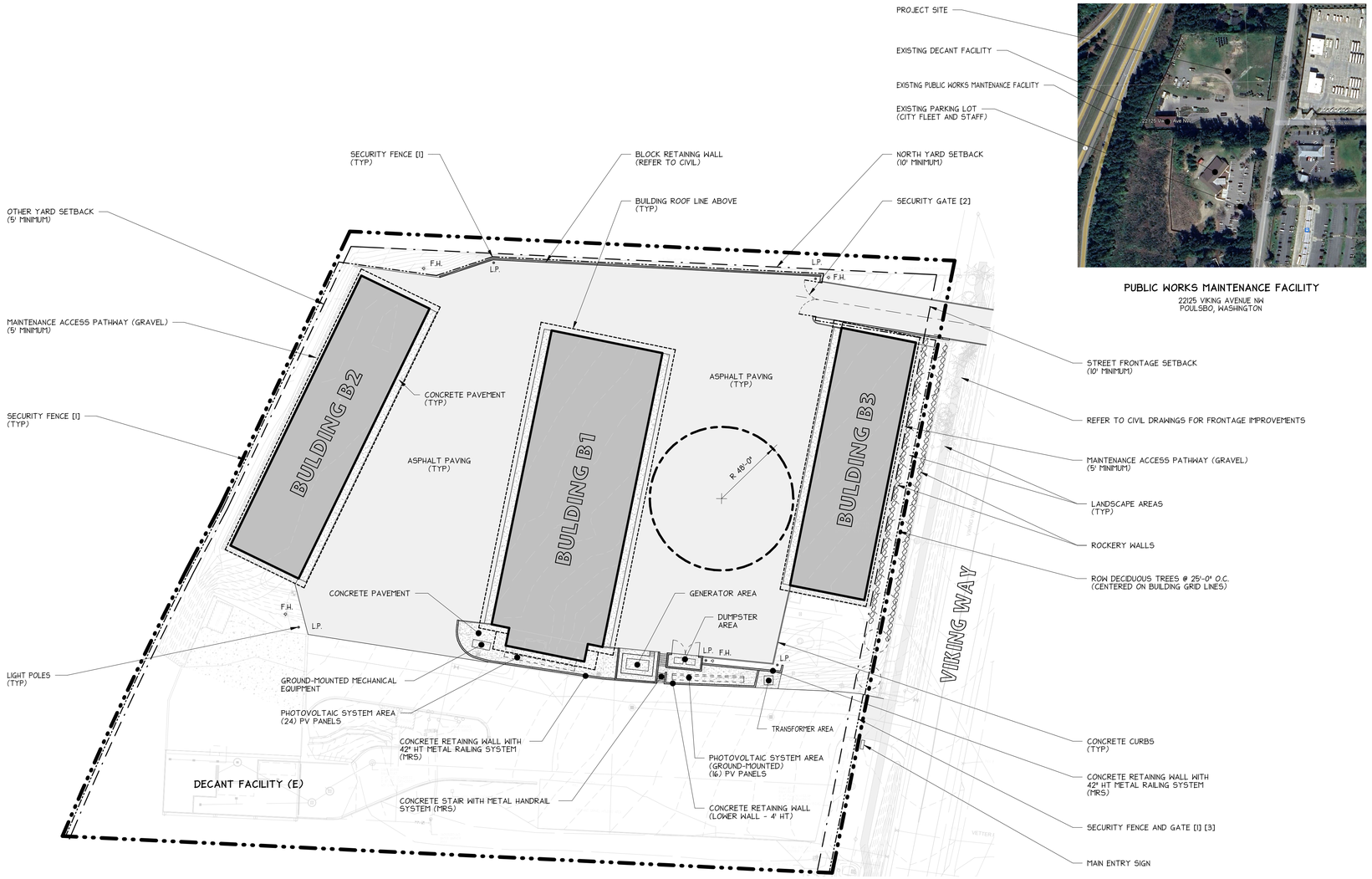
[2] OTHER USES NOT SPECIFIED (CHAPTER 18.090): AS REQUIRED BY THE DIRECTOR

[3] NON-OCCUPIED USE.

[4] PARKING STALLS PROVIDE AT EXISTING HEADQUARTERS / ADMINISTRATION BUILDING.

SITE STRUCTURES

GENERATOR AREA	DIMENSIONS: 28'x18' (OVERALL). CONCRETE PAVEMENT. ENCLOSURE: 8' HT CONCRETE WALLS (3-SIDES) GENERATOR: 7'x15' (FOOTPRINT.) 3' HT RAISED PLATFORM (ALL SIDES) 42" METAL GUARDRAILS AND STAIRS CONTAINMENT AREA BELOW PLATFORM
DUMPSTER AREA	DIMENSIONS: 24'x10' (OVERALL). CONCRETE PAVEMENT. ENCLOSURE: 8' HT CONCRETE WALLS (3-SIDES) GATES: (2) 9'x6' ALUMINUM SWINGING GATES. (MF) CANOPY: STEEL STRUCTURE WITH METAL ROOFING. DUMPSTER: (2) DUMPSTER (F.I.O.)
PHOTOVOLTAIC SYSTEM AREA	GROUND-MOUNTED PV PANELS (48 LF) WITH STEEL SUPPORT FRAME (MF). CONCRETE PAVEMENT.
CONCRETE STAIR	5' WIDTH CONCRETE STAIR WITH CONCRETE RETAINING WALLS AND METAL HANDRAILS (BOTH SIDES).
TRANSFORMER AREA	CONCRETE RETAINING WALLS AND CONCRETE PAVEMENT.



PUBLIC WORKS MAINTENANCE FACILITY
22125 VIKING AVENUE NW
POULSBO, WASHINGTON

SECURITY FENCE AND SECURITY GATES:

[1] INSTALL 8' HT CHAINLINK FENCE WITH PRIVACY SLATS.

[2] INSTALL MOTOR OPERATED 24' WIDE PAIR OF 8' HT SWINGING SECURITY GATES. GATE MATERIALS AND FINISHES MATCH SECURITY FENCE.

[3] INSTALL MOTOR OPERATED 30' WIDE x 8' HT SLIDING SECURITY GATE. GATE MATERIALS AND FINISHES MATCH SECURITY FENCE.

1 SITE PLAN
1" = 40'-0"

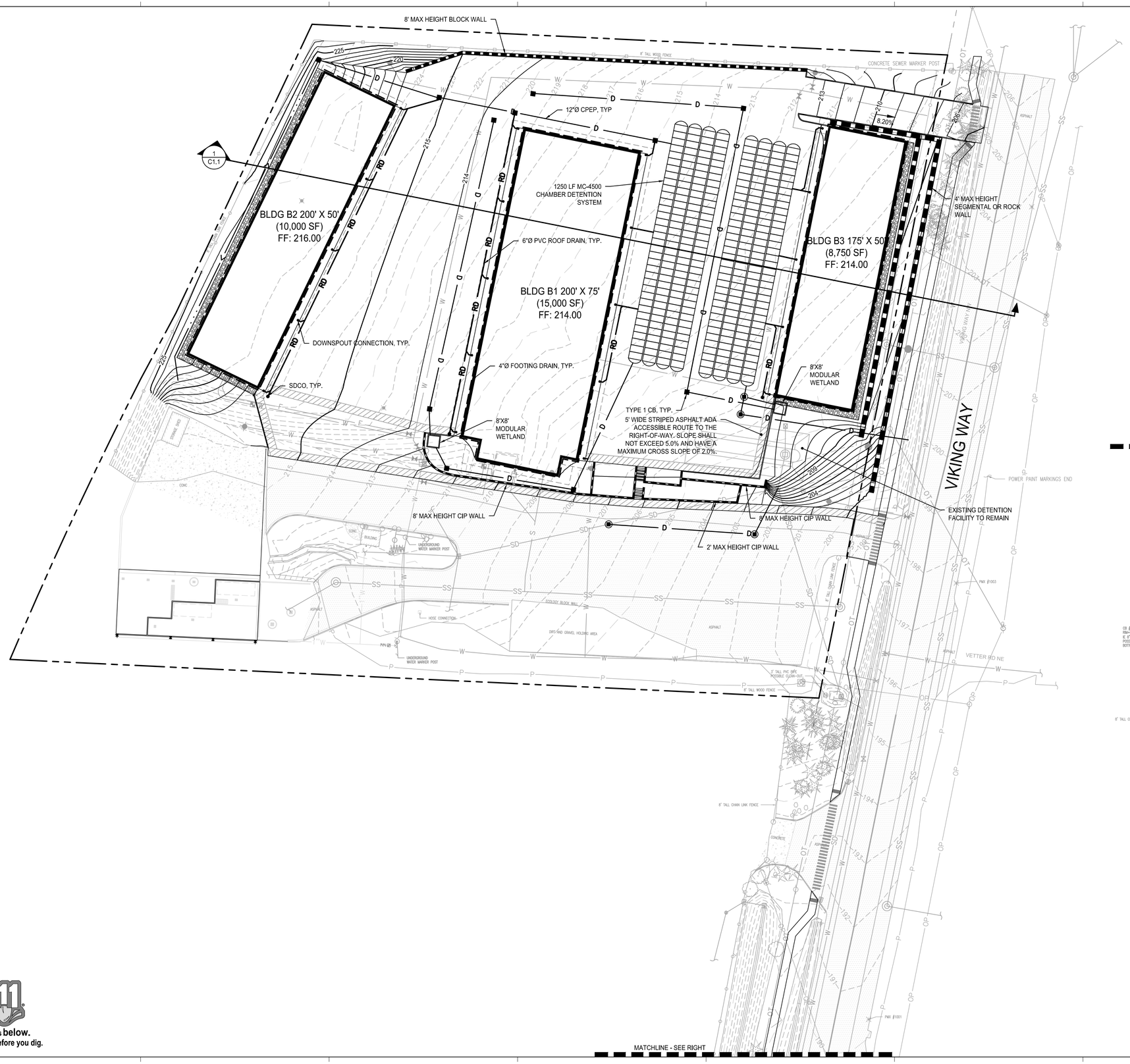
NORTH

0' 10' 20' 40' 80'
SCALE: 1" = 40'

ARCHITECTURAL SITE PLAN

HELIX DESIGN GROUP, INC.

Helix design group



LEGEND

- RIGHT-OF-WAY / PROPERTY LINE
- CENTERLINE
- EASEMENT
- BUILDING OUTLINE
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- CATCH BASIN TYPE 2
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 30
- STORM DRAINAGE CLEANOUT
- D — STORM DRAINAGE PIPING
- RD — ROOF DRAIN PIPING
- FD — FOOTING DRAIN/PERFORATED UNDERDRAIN

EARTHWORK QUANTITIES

THE EARTHWORK QUANTITIES SHOWN BELOW ARE ESTIMATES ONLY. DO NOT USE THEM FOR BIDDING PURPOSES. THE QUANTITIES DO NOT ACCOUNT FOR STRIPPING, COMPACTION, CUT OR FILL ADJUSTMENT FACTORS, PAVEMENT SECTIONS, UTILITY TRENCHING, OR OTHER FACTORS THAT AFFECT EARTHWORK QUANTITIES.

CUT: 11,200 CY
FILL: 8,100 CY
NET: 3,100 CY (CUT/EXPORT)

N

30 15 0 30 60
SCALE IN FEET

Know what's **below.** **Call** before you dig.

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POULSBO PUBLIC WORKS FACILITY

22125 VIKING AVE NW
POULSBO, WA 98370

SCHEMATIC DESIGN

PERMIT NUMBERS

ETHOS CIVIL
Engineering Entitlement Project Management
ethosciv8.com info@ethosciv8.com 253.414.1989

TREVOR LAMES MCDANNELL — STATE OF WASHINGTON — 57658 — REGISTERED PROFESSIONAL ENGINEER

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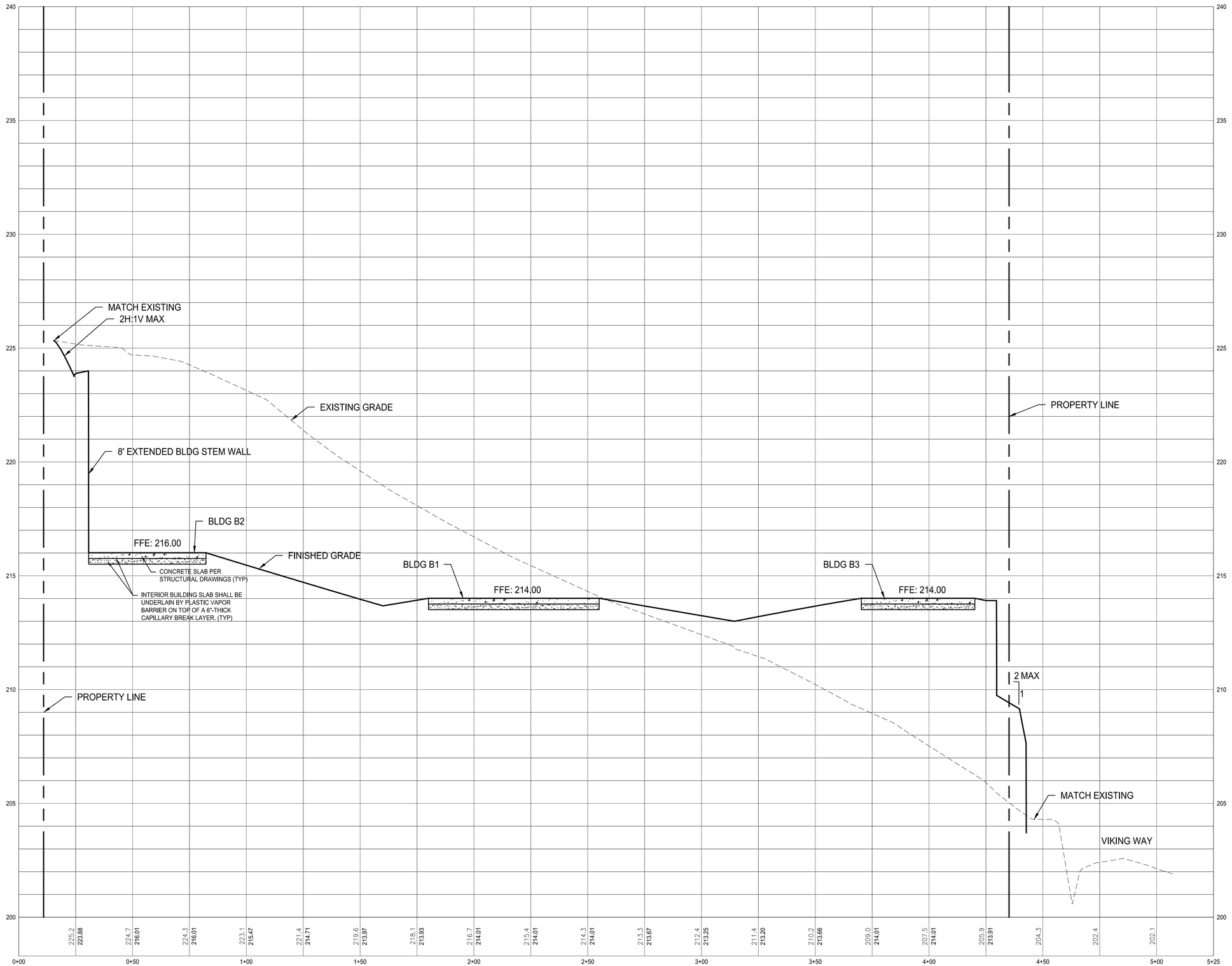
02.28.2024

GRADING AND DRAINAGE

C1.0



1 SITE SECTION WEST - EAST

SCALE: HORZ: 1"=20'; VERT: 1"=2'

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POULSBO
PUBLIC
WORKS
FACILITY

22125 VIKING AVE NW
POULSBO, WA 98370

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TREVOR JAMES MCDONALD
STATE OF WASHINGTON
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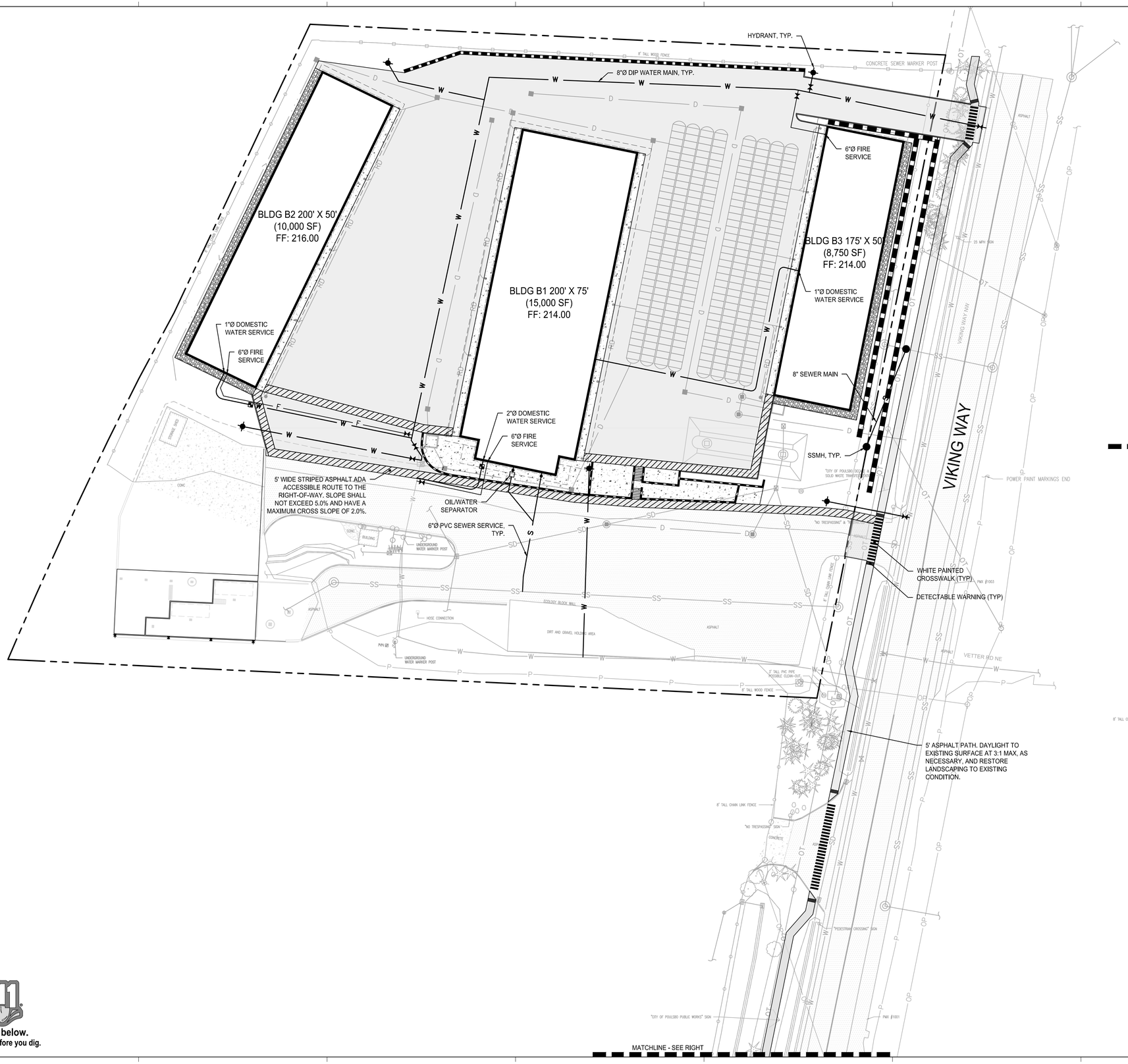
GRADING DETAILS

C1.1



LEGEND

- RIGHT-OF-WAY/PROPERTY LINE
- CENTERLINE
- PROPOSED BUILDING OUTLINE
- ASPHALT PAVEMENT - STANDARD DUTY
- ASPHALT PAVEMENT - HEAVY DUTY
- CEMENT CONCRETE - STANDARD DUTY
- CEMENT CONCRETE - HEAVY DUTY
- GRAVEL SURFACING
- RETAINING WALL
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION (FDC)
- METER AS NOTED
- POST INDICATOR VALVE (PIV)
- GATE VALVE
- THRUST BLOCKING
- FITTINGS AS NOTED
- W — WATER PIPING
- W — WATER SERVICE PIPING
- F — FIRE SERVICE PIPING
- S — SANITARY SIDE SEWER
- SANITARY SEWER CLEANOUT
- SANITARY SEWER MANHOLE

N

30 15 0 30 60

SCALE IN FEET

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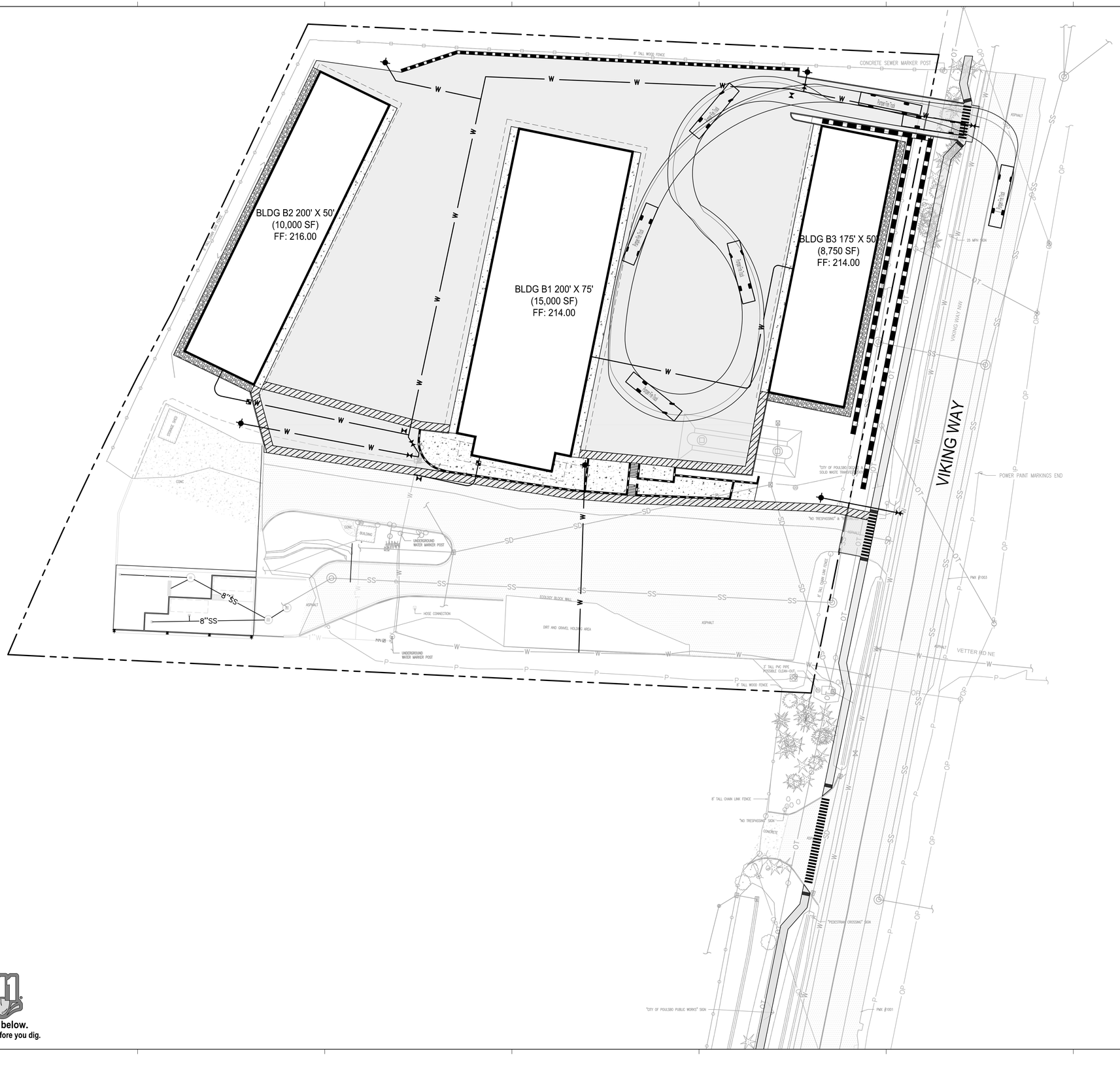
PAVING AND UTILITY PLAN

C2.0



Know what's **below.**
Call before you dig.

30 15 0 30 60
SCALE IN FEET

POULSBO PUBLIC WORKS FACILITY

22125 VIKING AVE NW
POULSBO, WA 98370

SCHEMATIC DESIGN

PERMIT NUMBERS

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ethosciv.com info@ethosciv.com 253.414.1989

TREVOR LAMES MCDONNELL
STATE OF WASHINGTON
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TRUCK TURNING MOVEMENTS

C3.0

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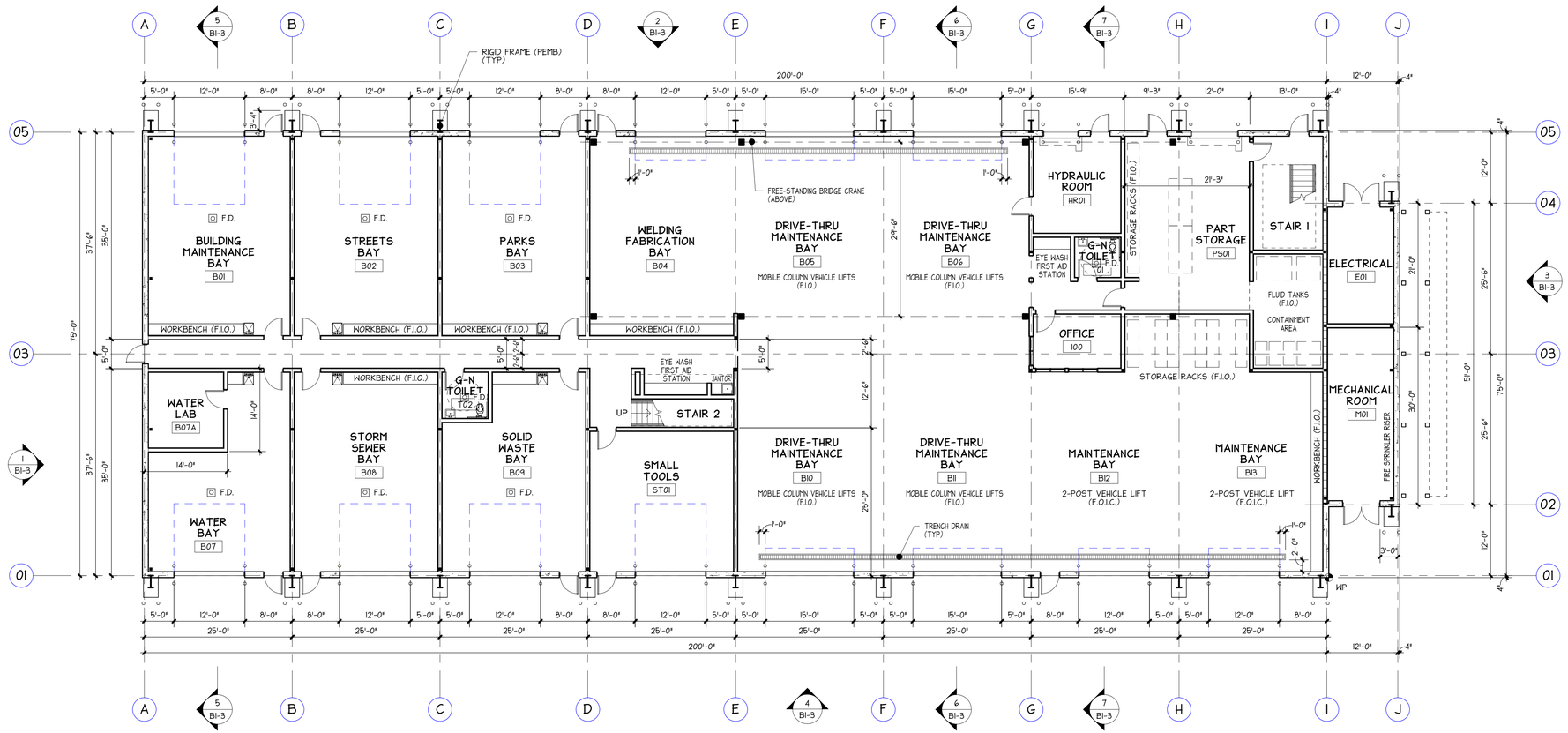

USE: MAINTENANCE AND CREW WORKSHOP (HEATED BUILDING)

GENERAL NOTES:

1. PROVIDE DOWNSPOUTS AT GRID LINES; A, C, E, G AND I. (QTY = 10)

FLOOR PLAN - FIRST FLOOR

3/32" = 1'-0"

NORTH

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

BUILDING B1

HELIX DESIGN GROUP, INC.

Helix design group

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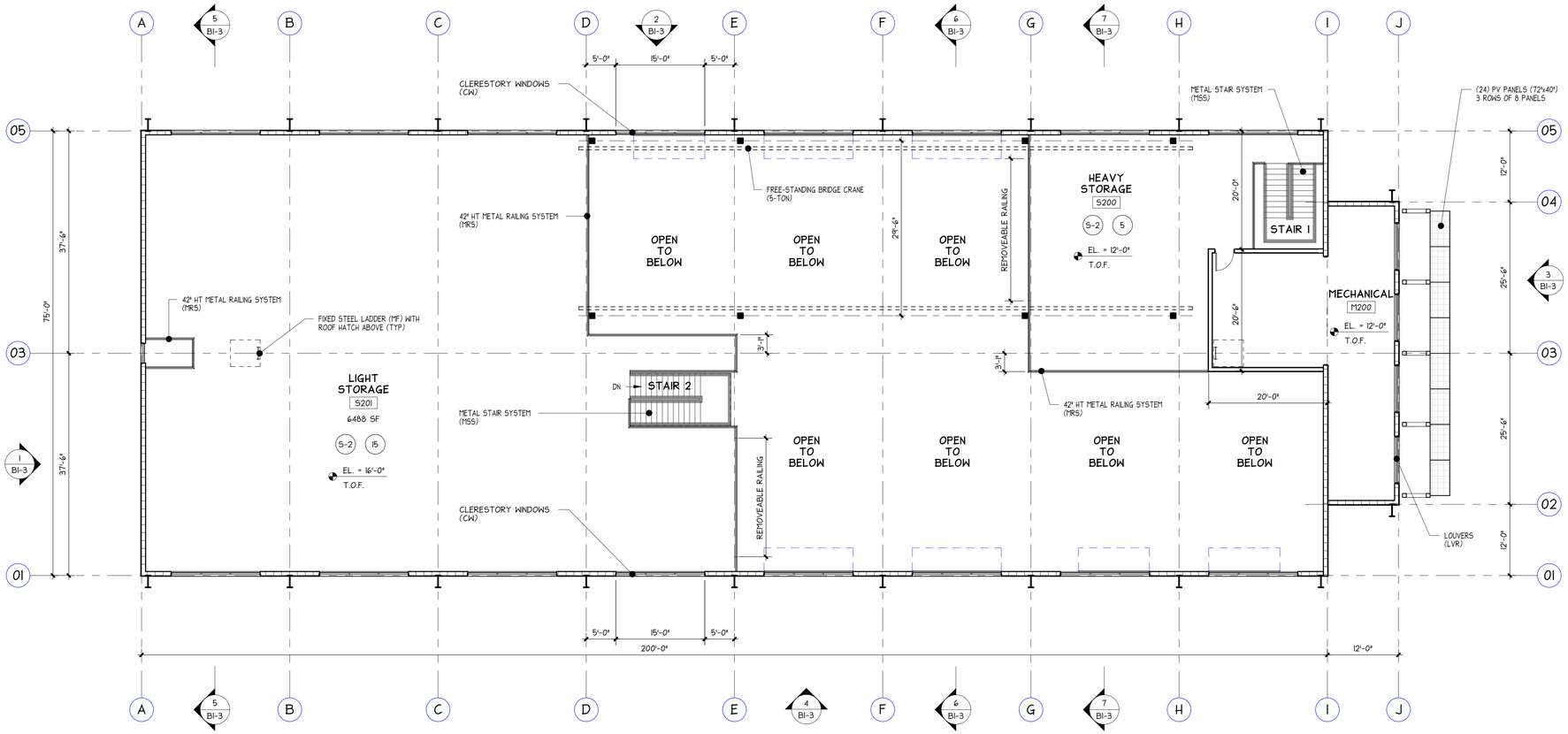

1 FLOOR PLAN - SECOND FLOOR

3/32" = 1'-0"

NORTH

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

BUILDING B1

HELIX DESIGN GROUP, INC.

Helix design group

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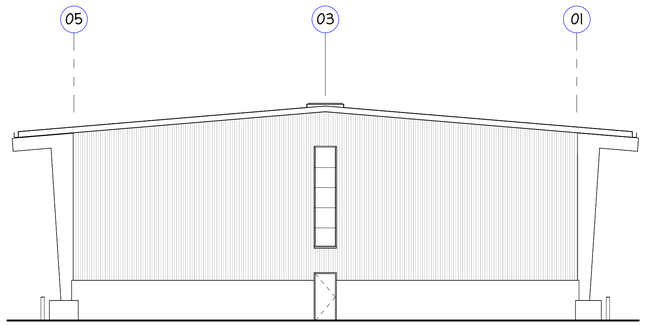
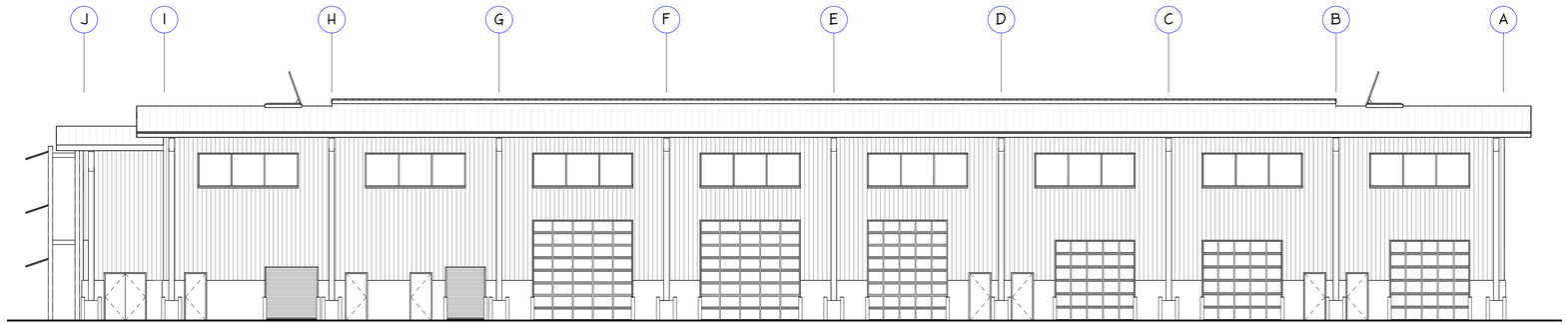


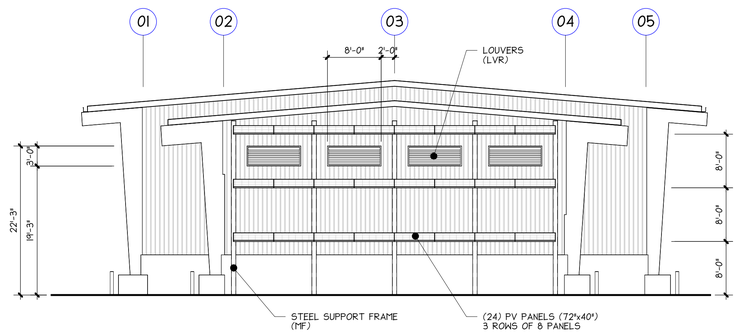
1 NORTH ELEVATION

3/32" = 1'-0"



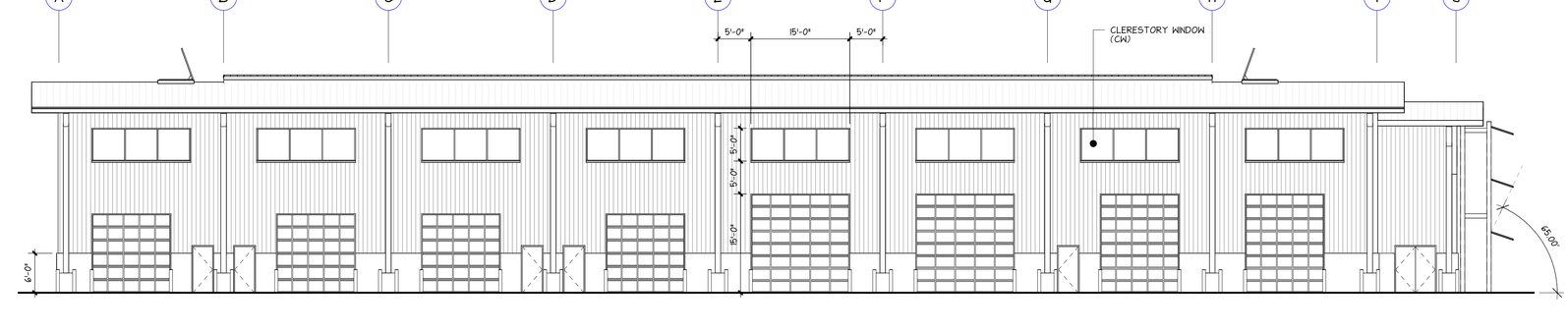
2 EAST ELEVATION

3/32" = 1'-0"



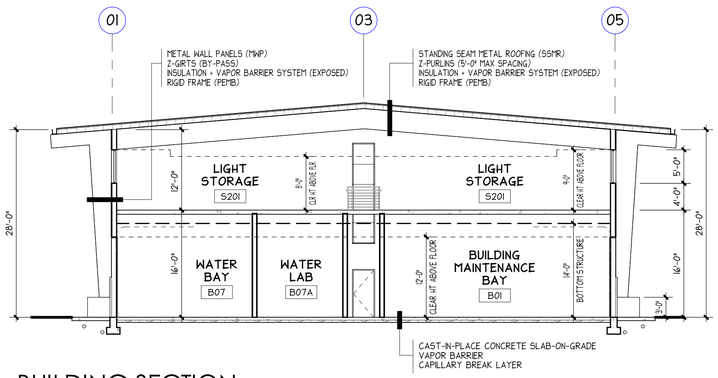
3 SOUTH ELEVATION

3/32" = 1'-0"



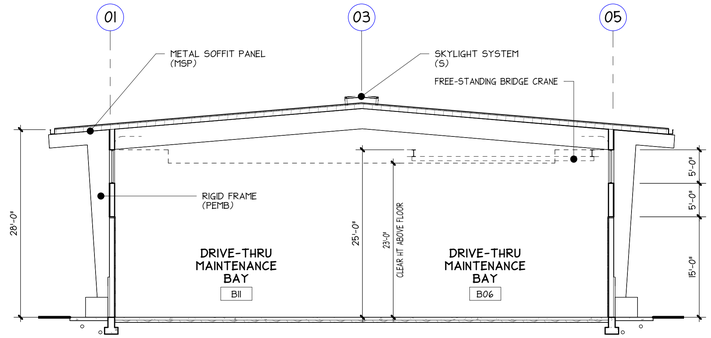
4 WEST ELEVATION

3/32" = 1'-0"



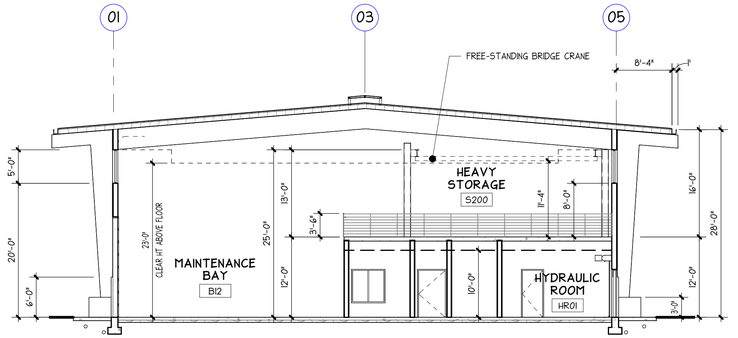
5 BUILDING SECTION

3/32" = 1'-0"



6 BUILDING SECTION

3/32" = 1'-0"



7 BUILDING SECTION

3/32" = 1'-0"

0' 3' 6' 12' 20'

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

BUILDING B1

CODE INFORMATION

GOVERNING CODE

2021 INTERNATIONAL BUILDING CODE (IBC)
WASHINGTON STATE AMENDMENTS

2021 WASHINGTON STATE ENERGY CODE (WSEC)

2021 UNIFORM PLUMBING CODE (UPC)
WASHINGTON STATE AMENDMENTS

OCCUPANCY CLASSIFICATION AND USE

IBC CHAPTER 3

GROUP S-1 STORAGE (MODERATE-HAZARD)
GROUP S-2 STORAGE (LOW-HAZARD)

CONSTRUCTION CLASSIFICATION

IBC SECTION 602

TYPE II-B BUILDING ELEMENTS SPECIFIED IN TABLE 601 ARE OF NON-COMBUSTIBLE CONSTRUCTION

AUTOMATIC SPRINKLER SYSTEM

IBC CHAPTER 9

AN APPROVED AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 903 SHALL BE PROVIDED THROUGHOUT THE BUILDING.

FIRE ALARM AND DETECTION SYSTEM

IBC CHAPTER 9

AN APPROVED FIRE ALARM AND DETECTION SYSTEM INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 907 SHALL BE PROVIDED THROUGHOUT THE BUILDING.

FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE

IBC TABLE 705.5

FIRE SEPARATION DISTANCE (FEET)

X < 5 FT	2 HR [1]
5 FT < X < 10 FT	1 HR [1]
10 FT < X < 30 FT	0 HR [1]
X > 30 FT	0 HR [1]

[1] OCCUPANCY GROUP S-1
TYPE OF CONSTRUCTION II-B

OCCUPANT LOAD

IBC SECTION 1004

DESIGN OCCUPANT LOAD
IBC SECTION 1004.1

BUILDING B1

FIRST FLOOR	30 OCCUPANTS [1]
SECOND FLOOR	20 OCCUPANTS [1]
TOTAL	50 OCCUPANTS

MAXIMUM FLOOR AREA ALLOWANCE PER OCCUPANT
IBC TABLE 1004.5

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR
WAREHOUSES	500 GROSS [1]

INTERIOR MATERIALS AND FINISHES

REFER TO ROOM FINISH SCHEDULE.

EXTERIOR FINISH SCHEDULE

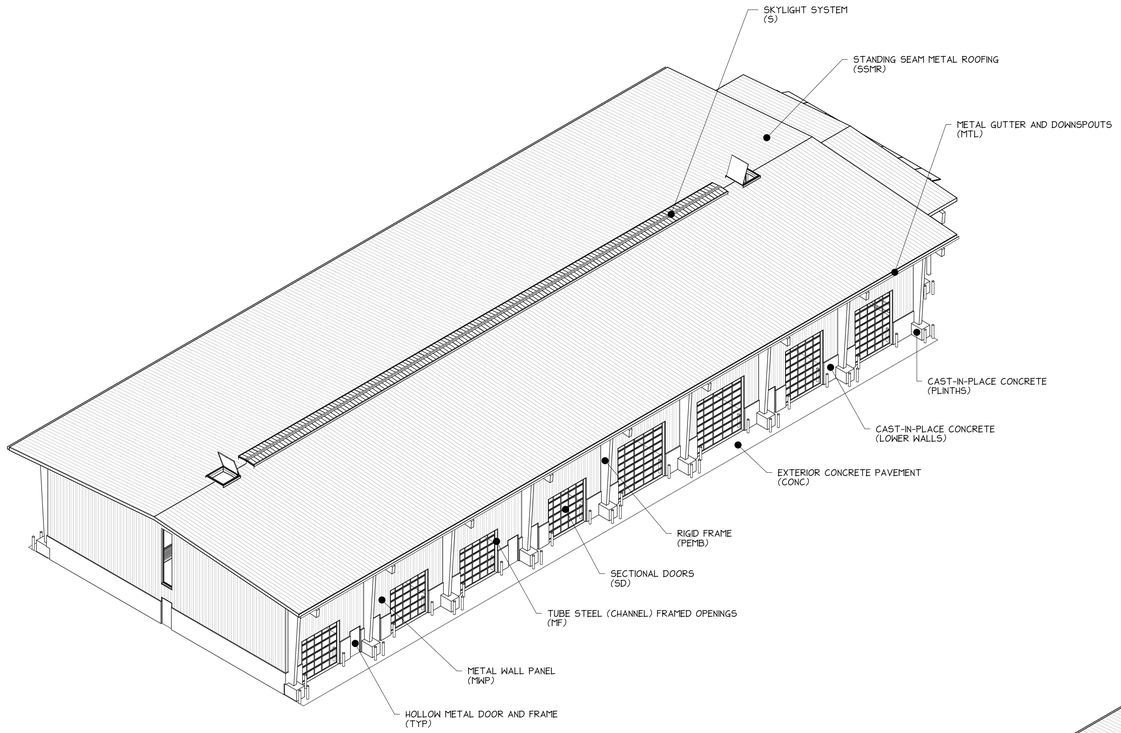
STANDING SEAM METAL ROOFING (SSMR)	FACTORY FINISH
METAL GUTTERS AND DOWNSPOUTS (MTL)	FACTORY FINISH
METAL FLASHING AND TRIM (MTL)	FACTORY FINISH
METAL WALL PANEL (MWP)	FACTORY FINISH
METAL SOFFIT PANEL (MSP)	FACTORY FINISH
HOLLOW METAL DOORS AND FRAMES	PAINT
ROLLING SERVICE DOORS (RSD)	FACTORY FINISH
SECTIONAL DOORS (SD)	FACTORY FINISH
METAL FABRICATIONS (MF)	PAINT [2]
RIGID FRAME (PEMB)	PAINT
CLERESTORY WINDOWS (CW)	FACTORY FINISH
LOUVERS (LVR)	FACTORY FINISH
SKYLIGHT SYSTEM (S)	FACTORY FINISH
ARCHITECTURAL CONCRETE (HORIZONTAL)	PAINT [1]
ARCHITECTURAL CONCRETE (VERTICAL)	PAINT
BOLLARDS (STEEL) [3]	PAINT [2]

1. REFER TO EXTERIOR COLORS AND MATERIALS SCHEDULE FOR COLORS AND FINISHES.
2. FOOTNOTES:

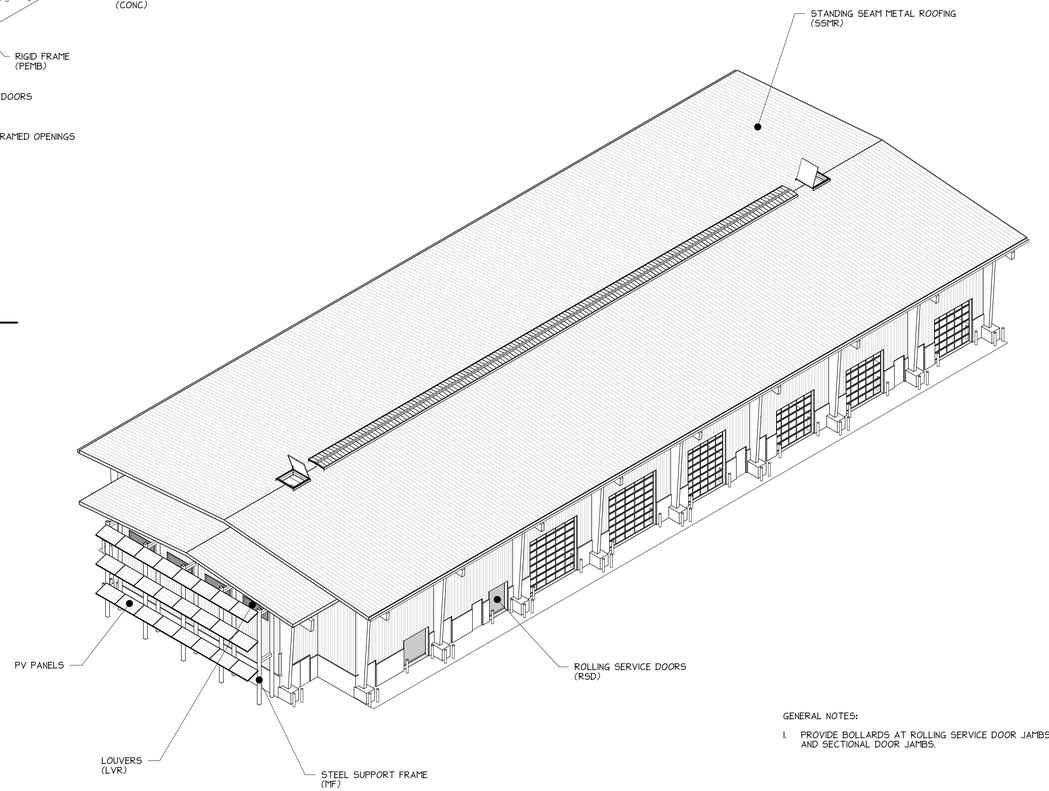
   [1] CLEAR SEALER. REFER TO COLORS AND MATERIALS SCHEDULE.
   [2] PROTECTIVE COATING: HOT-DIP GALVANIZED COATING.
   [3] METAL FABRICATIONS.

3. GENERAL NOTES:

   (1) PAINT ALL EXPOSED CONDUITS AND PIPES; MATCH COLOR OF ADJACENT MATERIAL.



1 ISOMETRIC VIEW - NORTHWEST



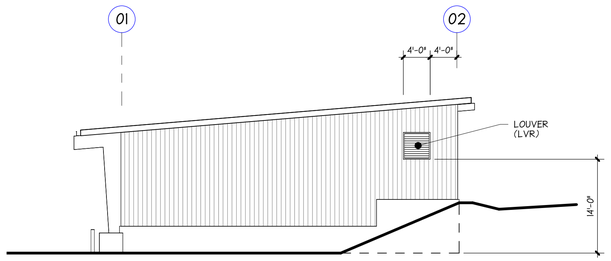
GENERAL NOTES:

1. PROVIDE BOLLARDS AT ROLLING SERVICE DOOR JAMBS AND SECTIONAL DOOR JAMBS.

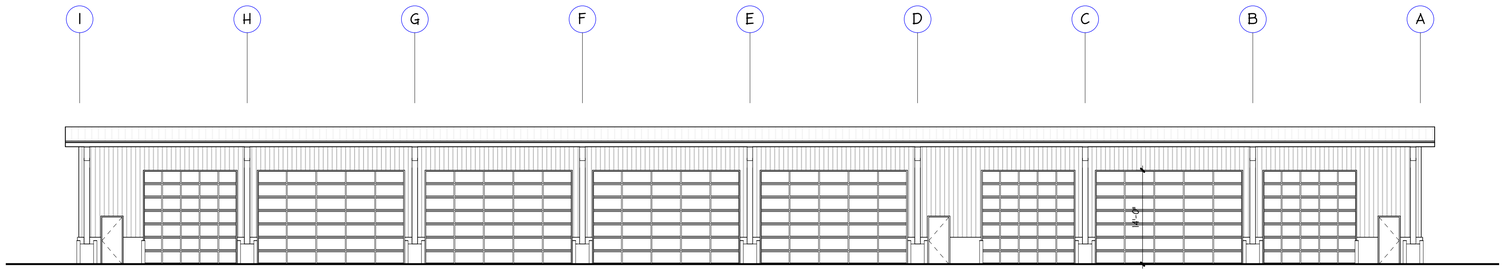
2 ISOMETRIC VIEW - SOUTHEAST

BUILDING B1

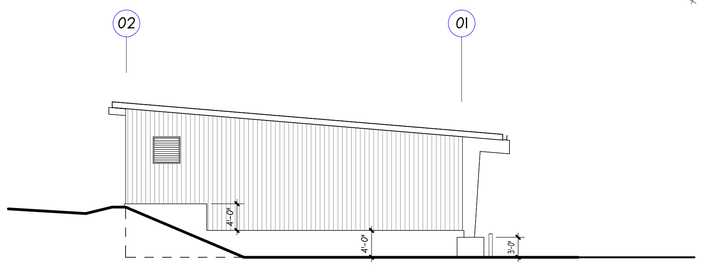
Helix design group



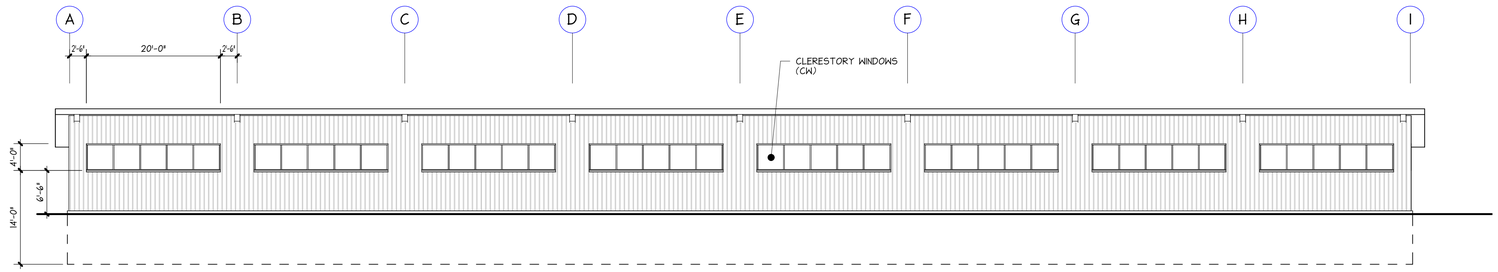
1 NORTH ELEVATION
3/32" = 1'-0"



2 EAST ELEVATION
3/32" = 1'-0"



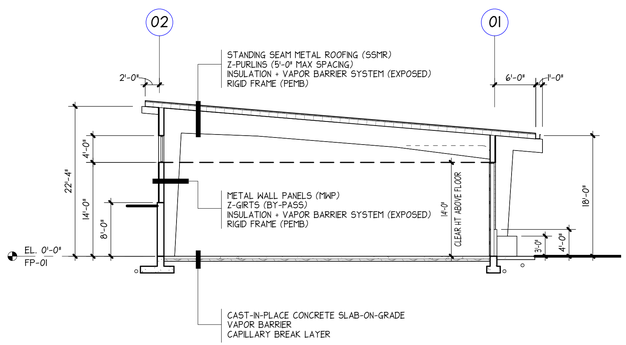
3 SOUTH ELEVATION
3/32" = 1'-0"



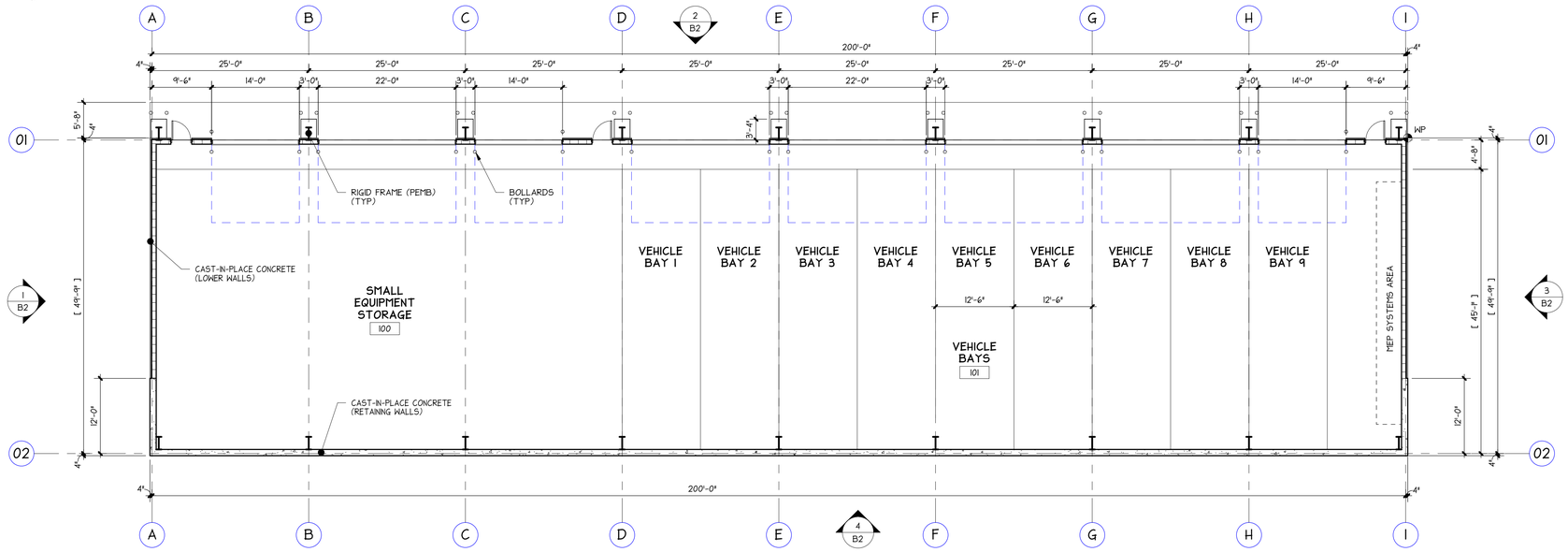
4 WEST ELEVATION
3/32" = 1'-0"

GENERAL NOTES:

1. PROVIDE DOWNSPOUTS AT GRID LINES; A, C, E, G AND I. (QTY = 5)



5 BUILDING SECTION
3/32" = 1'-0"



6 FLOOR PLAN
3/32" = 1'-0"

USE: ENCLOSED VEHICLE AND EQUIPMENT STORAGE (HEATED BUILDING)

NORTH

0' 3' 6' 12' 20'

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

BUILDING B2

HELIX DESIGN GROUP, INC.

Helix design group

2/19/2024 12:59:56 PM PROJECT: 423-000 - CITY OF POULSBO PUBLIC WORKS MAINTENANCE FACILITY

CODE INFORMATION

GOVERNING CODE

2021 INTERNATIONAL BUILDING CODE (IBC)
WASHINGTON STATE AMENDMENTS

2021 WASHINGTON STATE ENERGY CODE (WSEC)

2021 UNIFORM PLUMBING CODE (UPC)
WASHINGTON STATE AMENDMENTS

OCCUPANCY CLASSIFICATION AND USE

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CONSTRUCTION CLASSIFICATION

IBC SECTION 602 — TYPE II-B BUILDING ELEMENTS SPECIFIED IN TABLE 601 ARE OF NON-COMBUSTIBLE CONSTRUCTION

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IBC TABLE 705.5

FIRE SEPARATION DISTANCE (FEET)

X < 5 FT	2 HR [1]
5 FT < X < 10 FT	1 HR [1]
10 FT < X < 30 FT	0 HR [1]
X > 30 FT	0 HR [1]

[1] OCCUPANCY GROUP S-1
TYPE OF CONSTRUCTION II-B

OCCUPANT LOAD

IBC SECTION 1004

DESIGN OCCUPANT LOAD
IBC SECTION 1004.1

BUILDING B2 — 20 OCCUPANTS [1]

MAXIMUM FLOOR AREA ALLOWANCE PER OCCUPANT
IBC TABLE 1004.5

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR
WAREHOUSES	500 GROSS [1]

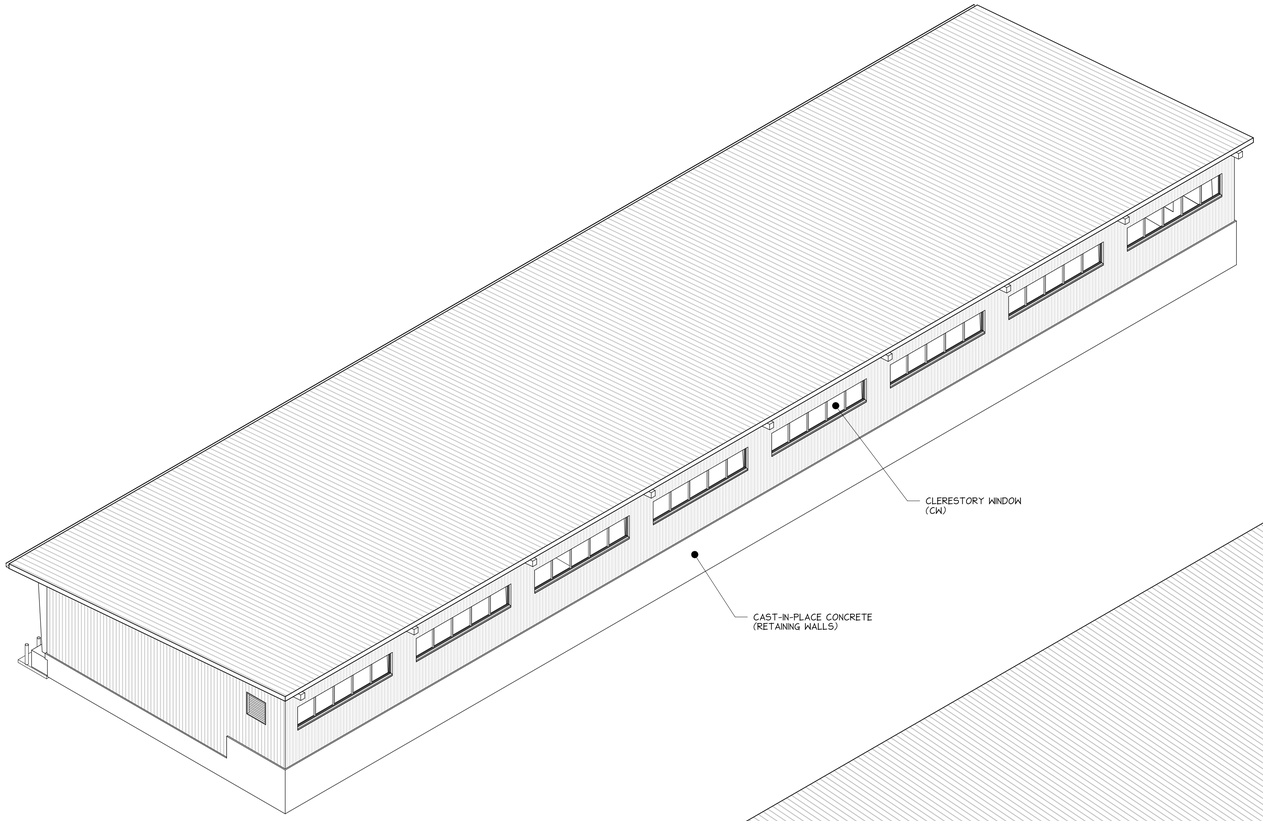
INTERIOR MATERIALS AND FINISHES

REFER TO ROOM FINISH SCHEDULE.

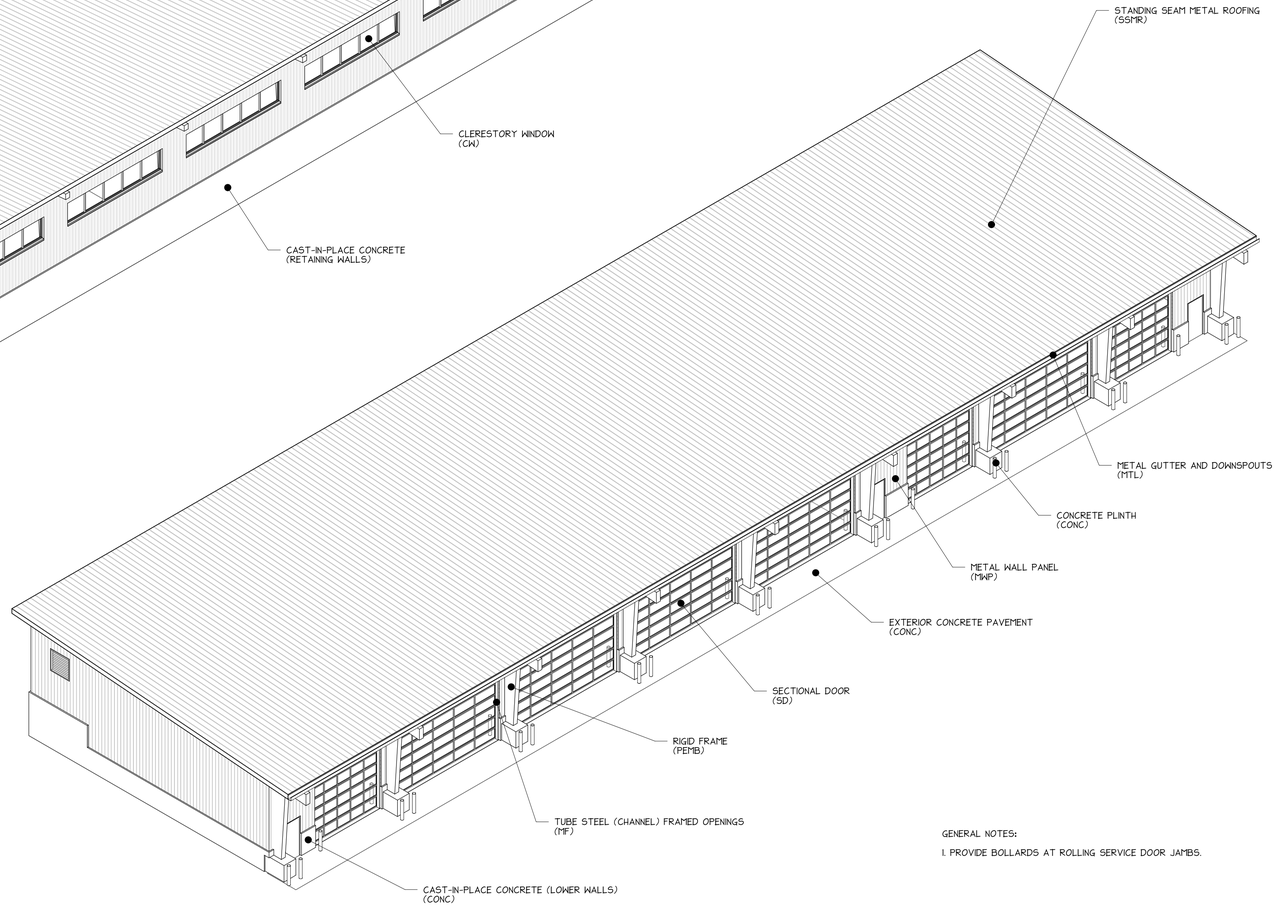
EXTERIOR FINISH SCHEDULE

STANDING SEAM METAL ROOFING (SSMR)	FACTORY FINISH
METAL GUTTERS AND DOWNSPOUTS (MTL)	FACTORY FINISH
METAL FLASHING AND TRIM (MTL)	FACTORY FINISH
METAL WALL PANEL (MWP)	FACTORY FINISH
METAL SOFFIT PANEL (MSP)	FACTORY FINISH
HOLLOW METAL DOORS AND FRAMES	PAINT
SECTIONAL DOORS (SD)	FACTORY FINISH
METAL FABRICATIONS (MF)	PAINT [2]
RIGID FRAME (PEMB)	PAINT
CLERESTORY WINDOWS (CW)	FACTORY FINISH
LOUVERS (LVR)	FACTORY FINISH
ARCHITECTURAL CONCRETE (HORIZONTAL)	PAINT [1]
ARCHITECTURAL CONCRETE (VERTICAL)	PAINT
BOLLARDS (STEEL) [3]	PAINT [2]

1. REFER TO EXTERIOR COLORS AND MATERIALS SCHEDULE FOR COLORS AND FINISHES.
2. FOOTNOTES:
   [1] CLEAR SEALER. REFER TO COLORS AND MATERIALS SCHEDULE.
   [2] PROTECTIVE COATING: HOT-DIP GALVANIZED COATING.
   [3] METAL FABRICATIONS.
3. GENERAL NOTES:
   (1) PAINT ALL EXPOSED CONDUITS AND PIPES; MATCH COLOR OF ADJACENT MATERIAL.



1 ISOMETRIC VIEW - SOUTHEAST

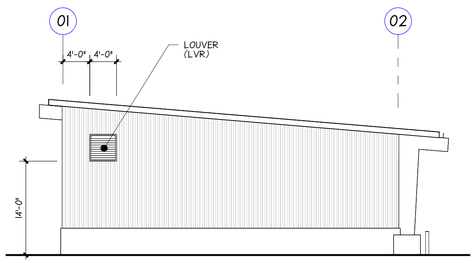


GENERAL NOTES:

1. PROVIDE BOLLARDS AT ROLLING SERVICE DOOR JAMBS.

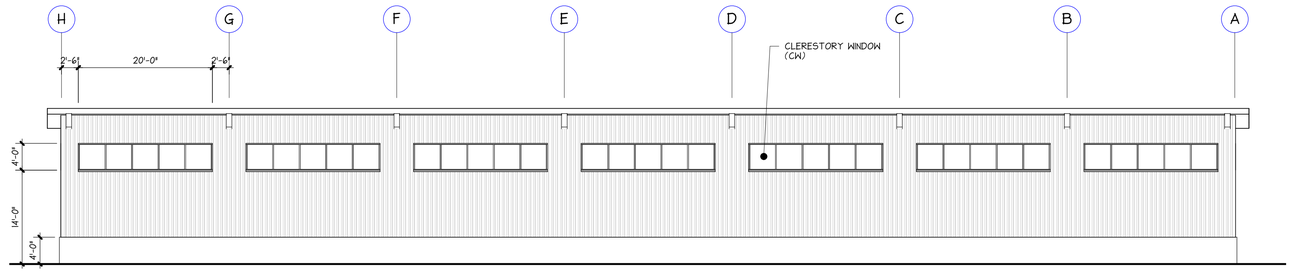
2 ISOMETRIC VIEW - NORTHWEST

BUILDING B2



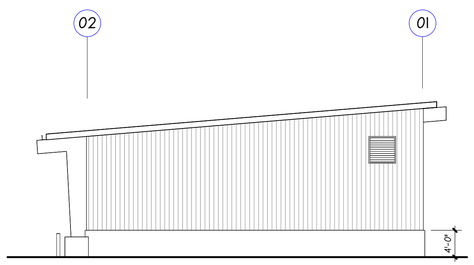
1 NORTH ELEVATION

3/32" = 1'-0"



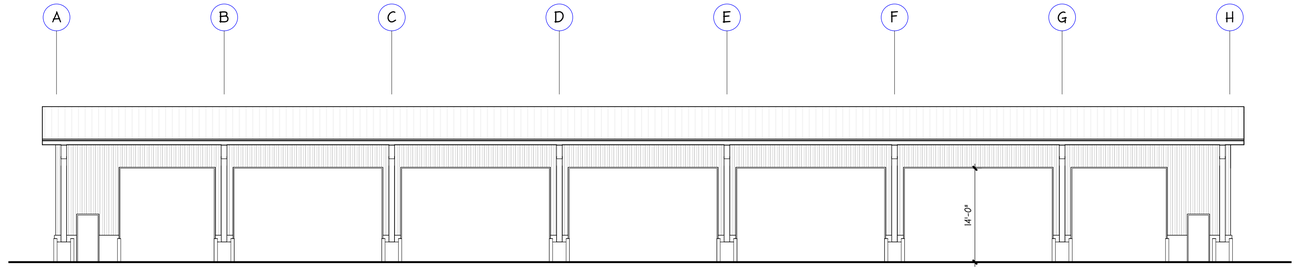
2 EAST ELEVATION

3/32" = 1'-0"



3 SOUTH ELEVATION

3/32" = 1'-0"

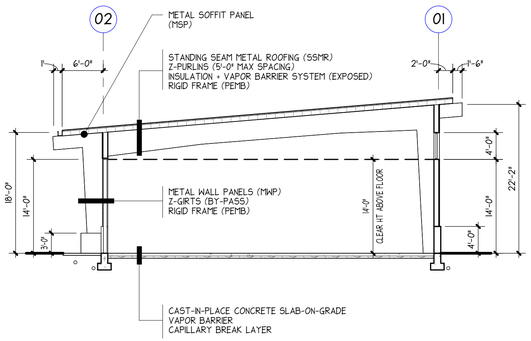


4 WEST ELEVATION

3/32" = 1'-0"

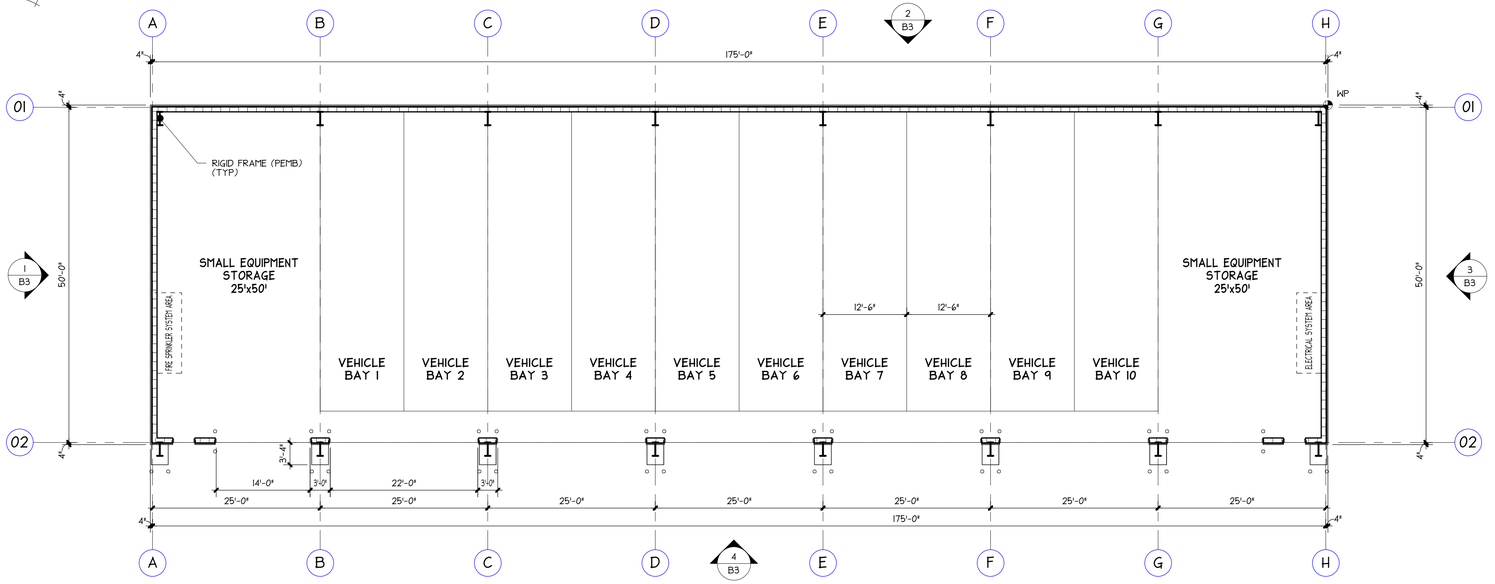
GENERAL NOTES:

1. PROVIDE DOWNSPOUTS AT GRID LINES; B, D, E AND G. (QTY 4)



5 BUILDING SECTION

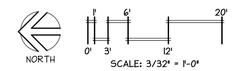
3/32" = 1'-0"



USE: OPEN VEHICLE AND EQUIPMENT STORAGE (NON-HEATED BUILDING)

6 FLOOR PLAN

3/32" = 1'-0"



BUILDING B3

Helix design group

CODE INFORMATION

GOVERNING CODE

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5 FT < X < 10 FT	1 HR [1]
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X > 30 FT	0 HR [1]

[1] OCCUPANCY GROUP S-1
TYPE OF CONSTRUCTION II-B

OCCUPANT LOAD

IBC SECTION 1004

DESIGN OCCUPANT LOAD
IBC SECTION 1004.1

BUILDING B3 — 20 OCCUPANTS [1]

MAXIMUM FLOOR AREA ALLOWANCE PER OCCUPANT
IBC TABLE 1004.5

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR
WAREHOUSES	500 GROSS [1]

INTERIOR MATERIALS AND FINISHES

REFER TO ROOM FINISH SCHEDULE.

EXTERIOR FINISH SCHEDULE

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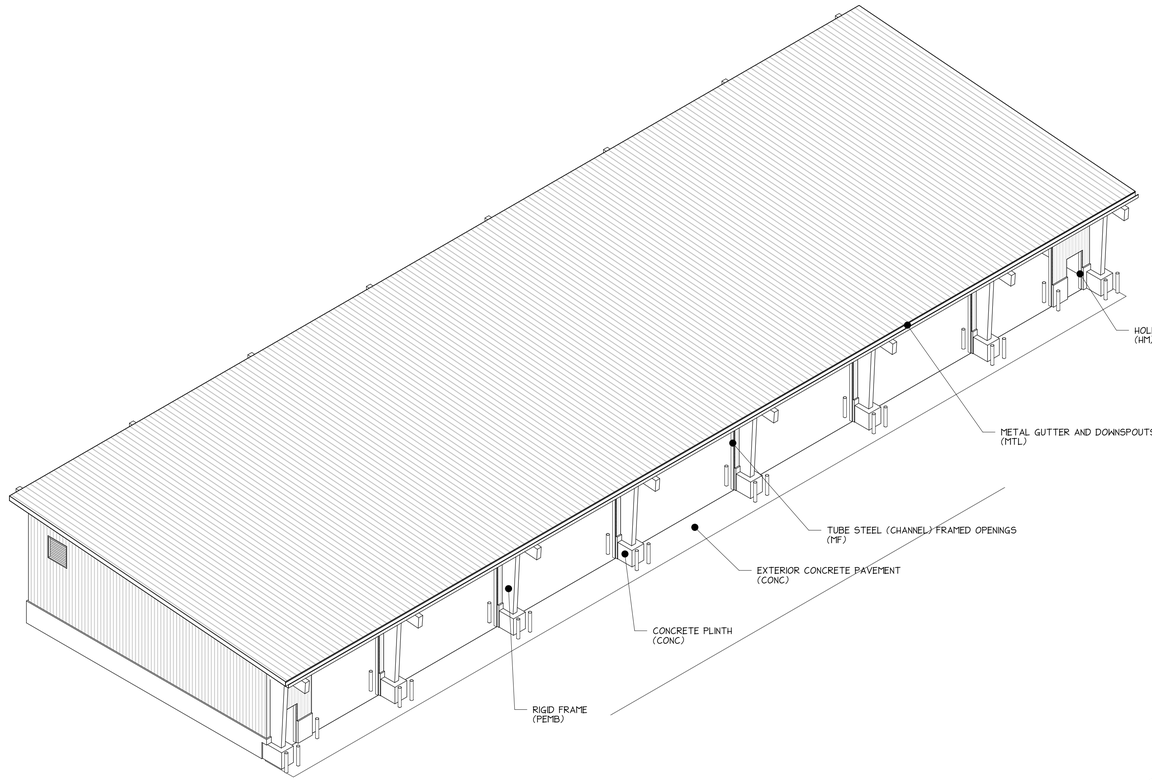
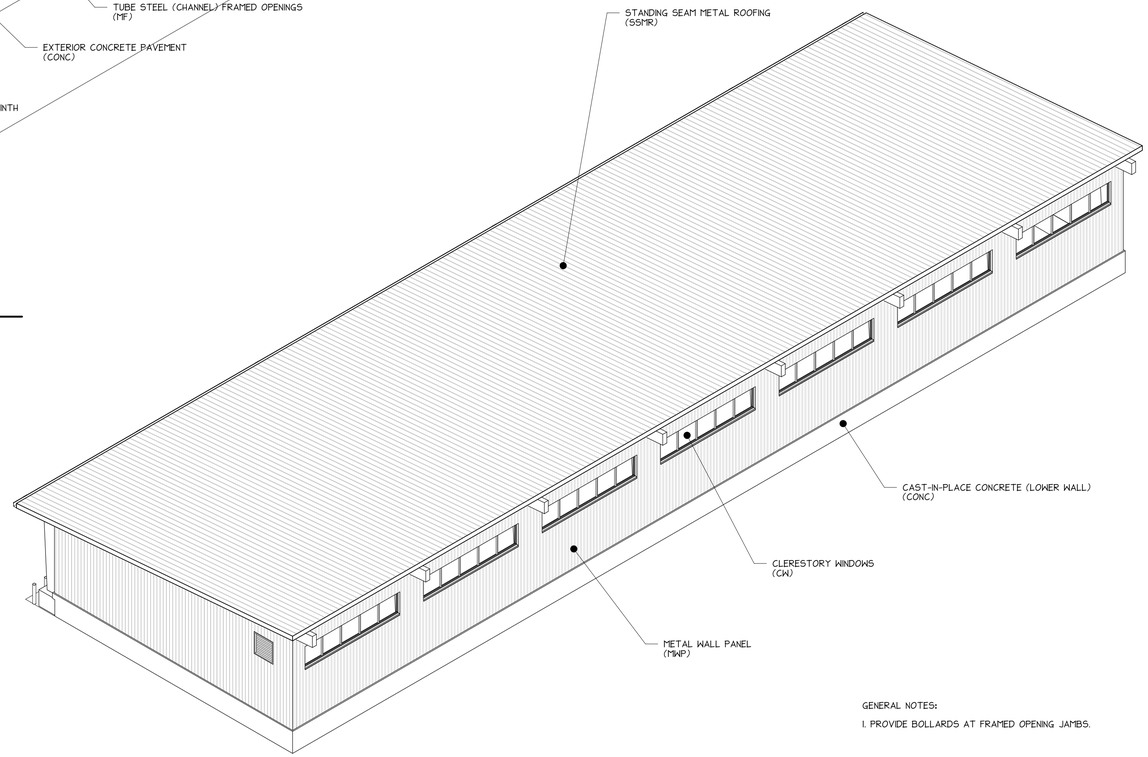
METAL GUTTERS AND DOWNSPOUTS (MTL)	FACTORY FINISH
METAL FLASHING AND TRIM (MTL)	FACTORY FINISH
METAL WALL PANEL (MWP)	FACTORY FINISH
METAL SOFFIT PANEL (MSP)	FACTORY FINISH
HOLLOW METAL DOORS AND FRAMES	PAINT
CLERESTORY WINDOWS (CW)	FACTORY FINISH
LOUVERS (LVR)	FACTORY FINISH
ARCHITECTURAL CONCRETE (HORIZONTAL)	PAINT [1]
ARCHITECTURAL CONCRETE (VERTICAL)	PAINT
METAL FABRICATIONS (MF)	PAINT [2]
RIGID FRAME (PEMB)	PAINT
BOLLARDS (STEEL) [3]	PAINT [2]

1. REFER TO EXTERIOR COLORS AND MATERIALS SCHEDULE FOR COLORS AND FINISHES.
2. FOOTNOTES:
   [1] CLEAR SEALER. REFER TO COLORS AND MATERIALS SCHEDULE.
   [2] PROTECTIVE COATING: HOT-DIP GALVANIZED COATING.
   [3] METAL FABRICATIONS.
3. GENERAL NOTES:
   (1) PAINT ALL EXPOSED CONDUITS AND PIPES; MATCH COLOR OF ADJACENT MATERIAL.



1 ISOMETRIC VIEW - NORTHWEST



GENERAL NOTES:

1. PROVIDE BOLLARDS AT FRAMED OPENING JAMBS.

2 ISOMETRIC VIEW - SOUTHEAST

BUILDING B3

Helix design group

MECHANICAL GENERAL DESIGN CRITERIA

CODES AND STANDARDS: THE MECHANICAL SYSTEM DESIGN WILL BE BASED ON THE FOLLOWING CODES AND STANDARDS:

INTERNATIONAL BUILDING CODE (IBC), LATEST EDITION
INTERNATIONAL MECHANICAL CODE (IMC), LATEST EDITION
UNIFORM PLUMBING CODE (UPC), LATEST EDITION
INTERNATIONAL FIRE CODE (IFC), LATEST EDITION
WASHINGTON STATE ENERGY CODE (WSEC), LATEST EDITION
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), CODES, STANDARDS, AND RECOMMENDED PRACTICES
DEPARTMENT OF LABOR, OSHA, OCCUPATIONAL SAFETY AND HEALTH STANDARDS
SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS, FIRST EDITION 1991, PUBLISHED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC.
ASHRAE STANDARDS

DESIGN TEMPERATURES: THE HVAC SYSTEMS WILL BE DESIGN FOR THE FOLLOWING CONDITIONS:

OUTDOOR TEMPERATURES:	20°F WINTER 83°D DB/68°WB SUMMER	
INDOOR TEMPERATURES:	OFFICE SPACES	70° WINTER/95° SUMMER*
	SHOP/WAREHOUSE SPACES	60° WINTER/95° SUMMER*
	VEHICLE STORAGE BUILDING	50° WINTER/95° SUMMER*

*NO AIR CONDITIONING

VENTILATION: VENTILATION RATES WILL BE BASED ON IMC REQUIREMENTS. RESTROOM EXHAUST WILL BE BASED ON 12 AIR CHANGES/HOUR. VEHICLE MAINTENANCE SHOP AREAS WILL BE PROVIDED WITH NO LESS THAN 1 CFM EXHAUST PER SQUARE OF FLOOR AREA.

PLUMBING SYSTEMS: THE DESIGN ASSUMES ADEQUATE WATER PRESSURE TO EACH BUILDING (NO LESS THAN 60 PSIG), ADEQUATE FIRE FLOWS FOR A FULLY SPRINKLERED BUILDING, AND SUFFICIENT MAIN SEWER DEPTH FOR A GRAVITY SEWER SYSTEM.

PLUMBING SYSTEMS

DOMESTIC WATER PIPING SYSTEM: WILL USE TYPE L COPPER ABOVEGROUND, AND TYPE K COPPER BELOWGROUND. A BACKFLOW PREVENTOR WILL BE PROVIDED ON THE WATER MAIN TO EACH BUILDING. VALVES WILL BE RATED FOR 125 PSI-SWP. VALVES 2-1/2" AND SMALLER WILL BE OF BRONZE CONSTRUCTION, THREADED OR SOLDER TYPE; LARGER VALVES WILL HAVE IRON BODIES BRONZE MOUNTED, AND BE FLANGED. WATER HAMMER ARRESTERS WILL BE PROVIDED AT COLD WATER HEADERS SERVING FIXTURES WITH FLUSH VALVES.

HOT WATER GENERATION: HEAT PUMP WATER HEATER WITH STORAGE TANK WILL PROVIDE DOMESTIC HOT WATER. A CIRCULATION PUMP WILL MAINTAIN CIRCULATION THROUGH THE SYSTEM TO ENSURE HOT WATER AT THE MOST REMOTE FIXTURE. PUMP WILL BE CONTROLLED BY A TIMECLOCK AND AQUASTAT, CONNECTED IN SERIES AND MONITORED BY THE CONTROL SYSTEM. A DIAPHRAGM TYPE EXPANSION TANK WILL BE PROVIDED ON SYSTEM.

SANITARY WASTE & VENT SYSTEM: SYSTEM WILL USE NO-HUB CAST IRON, SCHEDULE 40 GALVANIZED STEEL (DWV), OR COPPER DWV. CLEANOUTS WILL BE PROVIDED PER CODE REQUIREMENTS. FLOOR CLEANOUTS WILL HAVE ROUND CAST IRON ADJUSTABLE HOUSINGS, WITH HEAVY DUTY BRONZE TOP, AND BE INDEPENDENT FROM THE WASTE PIPING CLEANOUT. ALL FLOOR DRAINS WILL HAVE TRAP PRIMERS.

PLUMBING FIXTURES:

1. WATER CLOSETS: SHALL BE FLOOR MOUNTED, SIPHON JET TYPE, VITREOUS CHINA, WITH HARD WIRED SENSOR OPERATED, LOW CONSUMPTION FLUSH VALVES.
2. LAVATORIES: SHALL BE WALL MOUNTED, VITREOUS CHINA WITH HARD WIRED SENSOR OPERATED FAUCETS.
3. UTILITY SHOP SINKS: SHALL BE STAINLESS STEEL FLOOR MOUNTED WITH MANUAL GOOSENECK FAUCETS.
4. FLOOR DRAINS: CAST IRON TYPE WITH TRAP PRIMER. LOCATED IN ALL RESTROOMS, MECHANICAL ROOM, AND WHEN SHOWN ON PLANS.
5. WALL HYDRANTS: FREEZE PROOF, RECESSED BOX TYPE WHERE SHOWN ON PLANS.
6. EMERGENCY EYEWASH: WALL MOUNTED UNIT WITH DRAIN AND THERMOSTATIC MIXING VALVE.
7. YARD HYDRANT: RECESSED BOX TYPE WHERE SHOWN ON PLANS.
8. TRENCH DRAIN: POLYMER CONCRETE WHERE SHOWN ON PLANS.

SPECIAL PLUMBING SYSTEMS

SHOP PIPING SYSTEMS: LUBRICANT PIPING SYSTEMS WILL BE PROVIDED AT THE VEHICLE MAINTENANCE BUILDING, PIPED FROM A CENTRAL STORAGE CENTER TO OVERHEAD HOSE REELS. LUBRICANT SYSTEM DETAILS WILL BE REVIEWED AND FINALIZED WITH THE OWNER. A COMPRESSED AIR PIPING SYSTEM WILL BE PROVIDED AT THE VEHICLE MAINTENANCE BUILDING, PIPED OVERHEAD FROM A CENTRALLY LOCATED AIR COMPRESSOR TO HOSE REELS AND FITTINGS SPACED THROUGHOUT THE SHOP AREA. A WASTE OIL SYSTEM COMPRISING OF AN ABOVE-GROUND TANK WITH PUMP, PIPING, AND ACCESSORIES WILL ALSO BE PROVIDED.

HVAC SYSTEM

VEHICLE MAINTENANCE BUILDING B1: A HYDRONIC HEATING SYSTEM CONSISTING OF MODULAR OUTDOOR AIR-TO WATER HEAT PUMPS AND ASSOCIATED PUMPS, EXPANSION TANKS, AND ACCESSORIES WILL BE PROVIDED. AN INDOOR ELECTRIC BOILER WILL PROVIDE BACK-UP HEAT. THE VEHICLE MAINTENANCE SHOP AREAS WILL BE PROVIDED WITH A FLOOR RADIANT HEATING SYSTEM. OTHER SPACES WILL BE PROVIDED WITH HYDRONIC UNIT HEATERS. VENTILATION TO ALL SPACES WILL BE PROVIDED BY INDOOR ENERGY RECOVERY VENTILATORS WITH HYDRONIC HEATING COILS TO TEMPER OUTSIDE AIR. PADDLE FANS WILL BE USED TO HELP CIRCULATE THE AIR IN THE HIGH BAY VEHICLE MAINTENANCE SHOP AREAS. ABOVE GROUND HYDRONIC PIPING WILL BE STEEL WITH WELDED, GROOVED, OR THREADED FITTINGS. UNDERFLOOR PIPING WILL BE PEX.

HEATED VEHICLE STORAGE BUILDING B2: AN EXHAUST FAN WITH MAKE-UP AIR LOUVERS WILL PROVIDE CODE REQUIRED VENTILATION. ELECTRIC UNIT HEATERS WILL PROVIDE HEATING. PADDLE FANS WILL BE USED TO HELP CIRCULATE THE AIR THROUGHOUT THE BUILDING.

UNHEATED VEHICLE STORAGE BUILDING B3: NO HEATING OR VENTILATION WILL BE PROVIDED.

AIR DISTRIBUTION: DUCTWORK WILL BE GALVANIZED STEEL, CONSTRUCTED PER SMACNA AND LOCAL CODE STANDARDS. DUCT LINING WOULD TYPICALLY BE USED WITHIN 15 FEET OF UNITS (SUPPLY AND RETURN DUCTS). AIR OUTLETS AND INLETS WILL BE OF STEEL OR ALUMINUM CONSTRUCTION. THE RETURN SYSTEM WILL BE FULLY DUCTED.

EXHAUST: EXHAUST FANS WILL TYPICALLY BE INLINE OR CEILING TYPE.

CONTROLS: CONTROLS WILL BE THE DIRECT-DIGITAL CONTROL (DDC) TYPE, AND WILL CONNECT ALL THE BUILDINGS. DDC SYSTEM WILL PROVIDE TIMECLOCK, TEMPERATURE, AND VENTILATION CONTROL FOR ALL AREAS. ENERGY SAVING FEATURES OF THE DDC SYSTEM INCLUDE: OPTIMUM START (TO START EQUIPMENT ONLY WHEN NEEDED TO ACHIEVE SETPOINT WHEN THE BUILDING BECOMES OCCUPIED), CO2 SENSORS (TO VARY THE OUTSIDE AIR PROVIDED IN RESPONSE TO THE BUILDING'S DEMAND), OCCUPANCY SENSORS (TO LOWER THE SPACE TEMPERATURE SETPOINT WHEN NO ONE IS IN A SPACE), AND TREND LOGGING (TO CREATE BASELINES AND MONITOR ONGOING PERFORMANCE).

SPECIAL HVAC SYSTEMS

VEHICLE EXHAUST: A VEHICLE EXHAUST SYSTEM SHALL BE PROVIDED AT THE VEHICLE MAINTENANCE BUILDING. THE SYSTEM SHALL COMPRISE OF EXHAUST FANS DUCTED TO OVERHEAD HOSE REELS WITH FITTINGS FOR CONNECTING TO VEHICLE TAIL PIPES.

FIRE SPRINKLER SYSTEM

WATER SUPPLY: A DOUBLE-CHECK BACKFLOW PREVENTOR WILL BE PROVIDED ON THE FIRE LINE TO EACH BUILDING. A FIRE DEPARTMENT CONNECTION WILL ALSO BE PROVIDED, TYPE TO BE CONFIRMED WITH LOCAL AUTHORITY.

SPRINKLER SYSTEM: BUILDINGS B1 AND B2 WILL BE PROVIDED WITH WET TYPE SYSTEMS THROUGHOUT, WITH A DRY SYSTEM TO SERVE AREAS SUBJECT TO FREEZING. BUILDING B3 WILL BE A DRY TYPE SYSTEM THROUGHOUT. AREA HAZARD CLASS WILL BE ACCORDING TO NFPA 13. SYSTEM DESIGN WILL CONFORM TO NFPA 13.

SPECIFICATION INDEX

DIVISION 20 - GENERAL MECHANICAL
20 02 00 OPERATION AND MAINTENANCE MANUAL FOR MECHANICAL
20 05 00 COMMON WORK RESULTS FOR MECHANICAL
20 05 19 PIPING SPECIALTIES FOR MECHANICAL
20 05 29 HANGERS AND SUPPORTS FOR MECHANICAL
20 05 30 SLEEVES AND SEALS FOR MECHANICAL
20 05 48 VIBRATION AND SEISMIC CONTROLS FOR MECHANICAL
20 05 90 UNDERGROUND UTILITIES EXCAVATION AND FILL FOR MECHANICAL
20 05 93 TESTING, ADJUSTING, AND BALANCING FOR MECHANICAL
20 07 00 MECHANICAL INSULATION
20 08 00 COMMISSIONING OF MECHANICAL SYSTEMS

DIVISION 21 - FIRE SUPPRESSION
21 10 00 WATER-BASED FIRE SUPPRESSION SYSTEMS

DIVISION 22 - PLUMBING

22 09 00 INSTRUMENTATION AND CONTROL FOR PLUMBING
22 11 00 FACILITY WATER DISTRIBUTION
22 11 23 DOMESTIC WATER PUMPS
22 13 00 FACILITY SANITARY SEWERAGE
22 15 00 COMPRESSED-AIR SYSTEMS
22 33 00 DOMESTIC WATER HEATERS
22 40 00 PLUMBING FIXTURES
22 60 05 BREATHING AIR SYSTEM
22 62 00 SHOP PIPING SYSTEMS

DIVISION 23 - HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)

23 05 94 INDOOR AIR QUALITY ASSURANCE
23 09 00 INSTRUMENTATION AND CONTROL
23 21 13 HYDRONIC PIPING
23 21 15 MECHANICALLY COUPLED HYDRONIC PIPING SYSTEM
23 21 23 HYDRONIC PUMPS
23 21 28 HVAC CONDENSATE PIPING
23 23 00 REFRIGERANT PIPING
23 31 00 HVAC DUCTS AND CASINGS
23 33 00 DUCT ACCESSORIES
23 34 00 FANS
23 35 00 SPECIAL EXHAUST SYSTEMS
23 35 10 WELDING FUME EXHAUST SYSTEM
23 37 00 AIR OUTLETS AND INLETS
23 40 00 AIR CLEANING DEVICES
23 64 00 CHILLERS [AIR COOLED UNDER 125 TONS]
23 64 00.1 CHILLERS [INDOOR MODULAR]
23 64 00.2 CHILLERS [AIR COOLED LARGER 125 TONS]
23 65 00 COOLING TOWERS [CENTRIFUGAL FAN - VERTICAL]
23 65 00 COOLING TOWER [AXIAL FAN-DRAW THRU]
23 65 01 COOLING TOWER REFURBISHMENT
23 65 10 FLUID COOLER
23 72 23 ENERGY RECOVERY UNITS
23 73 00 AIR HANDLING UNITS
23 81 26 SPLIT-SYSTEM AIR-CONDITIONERS
23 81 27 VRF SPLIT-SYSTEM HEAT PUMPS
23 81 44 AIR-SOURCE SPLIT SYSTEM HEAT PUMPS
23 82 39 UNIT HEATERS
23 82 46 ELECTRIC HEATERS
23 83 15 RADIANT FLOOR HEAT SYSTEMS

DIVISION 25 - INTEGRATED AUTOMATION

25 50 00 INTEGRATED AUTOMATION FACILITY CONTROLS
25 90 00 INTEGRATED AUTOMATION CONTROL SEQUENCE

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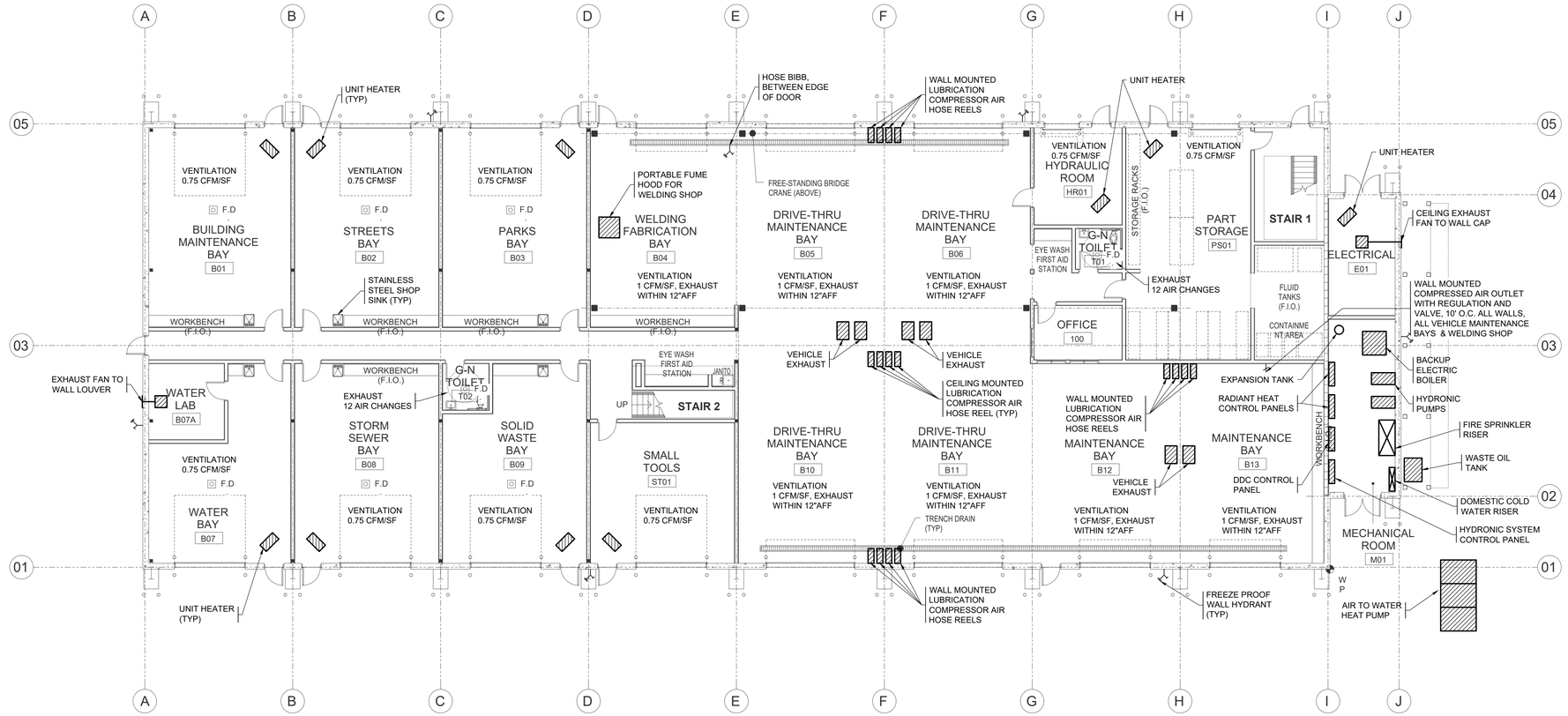
GENERAL REQUIREMENTS - MECHANICAL SYSTEMS



USE: MAINTENANCE AND CREW WORKSHOP (HEATED BUILDING)

1 FLOOR PLAN - FIRST FLOOR

3/32" = 1'-0"

NORTH

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

BUILDING B1 - FIRST FLOOR - MECHANICAL SYSTEMS

HELIX DESIGN GROUP, INC.

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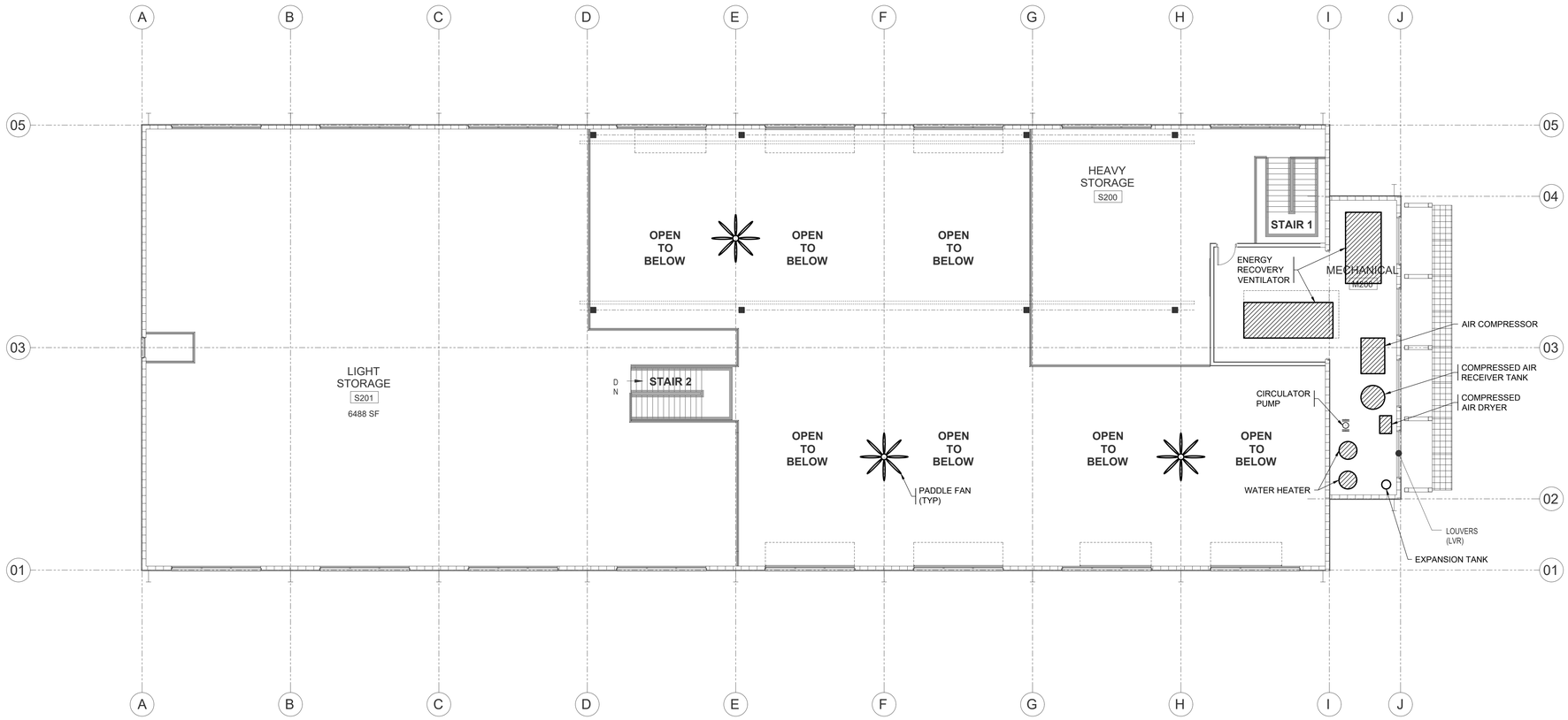
10/2/2024 3:36:28 PM PROJECT: 423-000 - CITY OF POULSBO PUBLIC WORKS MAINTENANCE FACILITY



1 FLOOR PLAN - SECOND FLOOR
3/32" = 1'-0"

NORTH

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

BUILDING B1 - SECOND FLOOR - MECHANICAL SYSTEMS

HELIX DESIGN GROUP, INC.

Helix design group

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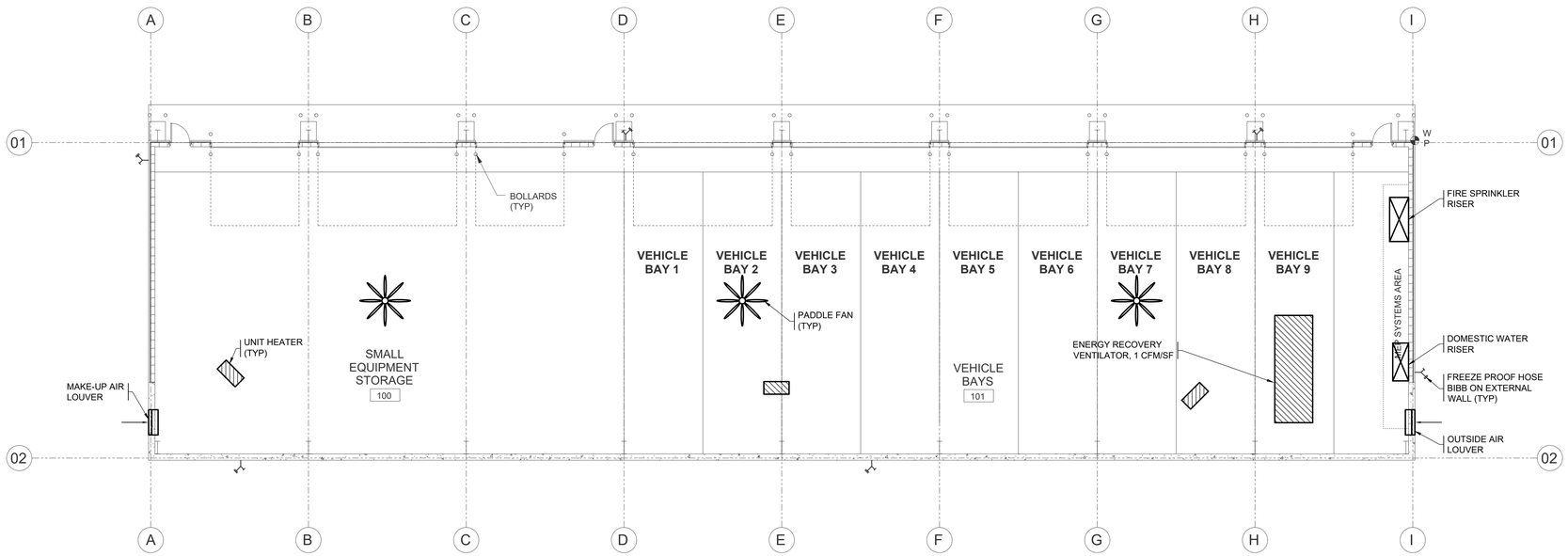


FLOOR PLAN

3/32" = 1'-0"

USE: ENCLOSED VEHICLE AND EQUIPMENT STORAGE (HEATED BUILDING)

NORTH

0' 3' 1' 6' 20'

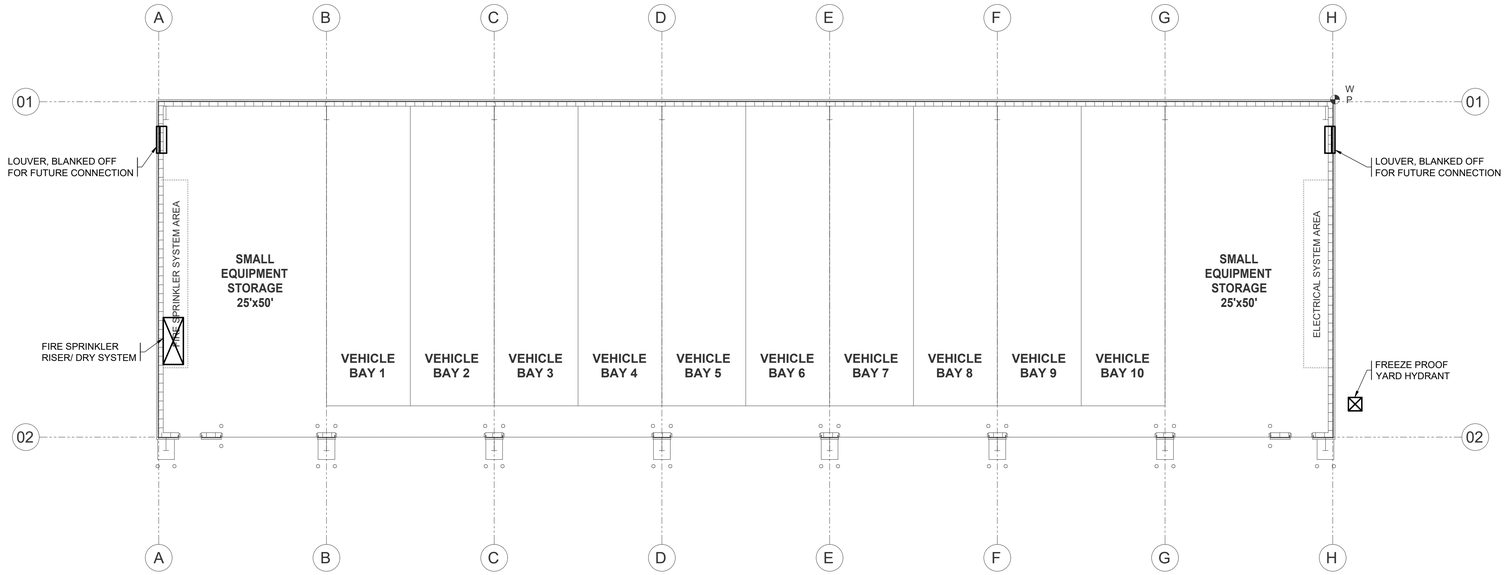
SCALE: 3/32" = 1'-0"

BUILDING B2 - MECHANICAL SYSTEMS

HELIX DESIGN GROUP, INC.

Helix design group

1/26/2024 3:36:29 PM PROJECT: #23-000 - CITY OF POULSBO PUBLIC WORKS MAINTENANCE FACILITY



USE: OPEN VEHICLE AND EQUIPMENT STORAGE (NON-HEATED BUILDING)

6 FLOOR PLAN
3/32" = 1'-0"

NORTH

0' 1' 3' 6' 1' 20'
SCALE: 3/32" = 1'-0"

BUILDING B3 - MECHANICAL SYSTEMS

HELIX DESIGN GROUP, INC.

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ELECTRICAL GENERAL DESIGN CRITERIA

CODES AND STANDARDS: THE ELECTRICAL SYSTEM DESIGN WILL BE BASED ON THE FOLLOWING CODES AND STANDARDS:

- NFPA 70, NATIONAL ELECTRICAL CODE, LATEST EDITION
- WAC 296-46B - WASHINGTON STATE ELECTRICAL SAFETY STANDARDS, ADMINISTRATION, AND INSTALLATION
- INTERNATIONAL BUILDING CODE, LATEST EDITION
- INTERNATIONAL FIRE CODE, LATEST EDITION
- WASHINGTON STATE ENERGY CODE, LATEST EDITION

ENERGY CODE REQUIREMENTS, LIGHTING: LIGHTING DESIGN SHALL COMPLY WITH THE FOLLOWING:

1. INTERIOR LIGHTING POWER ALLOWANCE SHALL BE 0.64 WATTS/SF. EXEMPT SPACES SHALL INCLUDE ELECTRICAL/MECHANICAL EQUIPMENT ROOMS.
2. PROVIDE EACH ROOM WITH LOCAL LIGHTING CONTROL AT THE ENTRY/EXIT DOOR/S UNLESS OTHERWISE NOTED AS AN EXCEPTION.
3. THE MAXIMUM LIGHTING LOAD CONTROLLED BY A SINGLE SWITCH OR AUTOMATIC CONTROL SHALL NOT EXCEED 16 AMPS.
4. PROVIDE SEPARATE CONTROL OF DAYLIGHT ZONES INDEPENDENT OF GENERAL AREA LIGHTING.
6. PROVIDE AUTOMATIC CONTROL OF EXTERIOR LIGHTING USING COMBINATION TIMER AND/OR PHOTOCELL.
7. THE VEHICLE MAINTENANCE BUILDINGS SHALL BE EQUIPPED WITH AUTOMATIC CONTROLS TO SHUT OFF INTERIOR LIGHTING DURING UNOCCUPIED TIMES. CONTROLS SHALL BE CENTRAL LOW VOLTAGE RELAY TYPE CONTROLLED BY TIMER EXCEPT PROVIDE OCCUPANCY SENSOR IN OFFICE AREA TO AUTOMATICALLY TURN OFF LIGHTS WHEN ROOM IS UNOCCUPIED. SET TIME DELAY FOR 10 MINUTES.

UTILITY SERVICES: ELECTRIC AND SIGNAL UTILITIES REQUIRED FOR THE NEW BUILDING SHALL INCLUDE THE FOLLOWING:

A SINGLE PAD MOUNTED SERVICE TRANSFORMER AND UTILITY METER WILL BE PROPOSED. TRANSFORMER LOCATION IS TO BE DETERMINED. MAIN SERVICE TO BE LOCATED IN BUILDING 1 WITH BUILDINGS 2 &3 BEING SUB FED FROM THE MAIN SERVICE IN BUILDING 1.

LIGHTING SYSTEMS: INTERIOR LIGHT FIXTURES SHALL PRIMARILY BE LED. IN THE OFFICE AND STORAGE AREAS, TROFFER TYPE FIXTURES ARE PROPOSED. IN MAINTENANCE AND EQUIPMENT STORAGE AREAS, INDUSTRIAL HIGH BAY FIXTURES SHALL BE USED IN HIGH BAY AREAS AND ECONOMY INDUSTRIAL STRIP FIXTURES WILL BE USED IN LOW BAY AREAS.

OUTDOOR LIGHT FIXTURES SHALL USE WALL-PACK TYPE FIXTURES. LIGHTING SHALL BE PROVIDED AT EACH BUILDING ENTRANCE, AT OVERHEAD DOORS, AND AT BUILDING SIGNAGE. SITE LIGHTING SHALL BE PROVIDED FROM BUILDING MOUNTED FIXTURES WHERE PRACTICAL. OUTDOOR BUILDING, PARKING AREA, AND SIGN LIGHTING SHALL EACH BE CONTROLLED ON SEPARATE CIRCUITS.

AUTOMATIC LIGHTING CONTROLS FOR EXTERIOR LIGHTING AND FOR INTERIOR SPACES WITHOUT OCCUPANCY SENSORS SHALL BE PROGRAMMABLE LOW VOLTAGE RELAY PANELS WITH TIME SWITCH AND PHOTO CONTROL.

POWER DISTRIBUTION: THE NEW FACILITY SHALL HAVE A 480/277 VOLT 3 PHASE ELECTRICAL SERVICE WITH SINGLE METER. HVAC EQUIPMENT, WELDERS, AND DESIGNATED SHOP EQUIPMENT SHALL BE SERVED AT 480/277 VOLTS. DRY TYPE TRANSFORMERS SHALL BE INSTALLED FOR DISTRIBUTION SERVING CONVENIENCE OUTLETS, LIGHTING, AND SMALL POWER LOADS. SWITCHGEAR AND PANELBOARDS SHALL BE PROVIDED WITH COPPER BUSSING. 480 VOLT MAIN AND DISTRIBUTION SWITCHGEAR SHALL HAVE BOLT ON CIRCUIT BREAKERS. BRANCH CIRCUIT PANELBOARDS SHALL HAVE BOLT ON CIRCUIT BREAKERS.

PHOTOVOLTAIC POWER SYSTEM: A COMPLETE PHOTOVOLTAIC SYSTEM SHALL BE PROVIDED TO MEET OR EXCEED CODE REQUIREMENTS. SYSTEM TO INCLUDE PHOTOVOLTAIC PANEL ARRAYS MOUNTED ON THE SIDE OF BUILDING B1 AND B2 AND OPERATE SYNCHRONOUSLY AND IN PARALLEL WITH ELECTRIC UTILITY NETWORK.

EMERGENCY AND STAND-BY POWER: GENERATOR SHALL BE PROVIDED TO MEET EMERGENCY AND STAND-BY POWER REQUIREMENTS FOR LIFE SAFETY SYSTEMS, FIRE PROTECTION (FIRE PUMP), AND FOR DESIGNATED PUBLIC WORKS AND MAINTENANCE AREAS CRITICAL TO COUNTY EMERGENCY AND DISASTER RESPONSE OPERATIONS. LIGHT FIXTURES AND EXIT LIGHTS REQUIRED BY THE IBC FOR BUILDING EGRESS WILL BE CONNECTED TO THE GENERATOR IN LIEU OF BATTERY PACKS EXCEPT BATTERY OPERATED EMERGENCY LIGHTS SHALL BE PROVIDE IN SHOP AREAS WITH ROTATING MACHINERY FOR ILLUMINATION DURING EMERGENCY TRANSFER. EMERGENCY LIGHTING WILL BE PROVIDED FOR EXIT PATHWAYS AND IN RESTROOMS, EQUIPMENT ROOMS, AND WINDOWLESS WORK AREAS.

BASIC MATERIALS AND METHODS: MATERIAL AND EQUIPMENT SHALL BE UL LISTED AND LABELED WHERE STANDARDS HAVE BEEN ESTABLISHED AND LABEL SERVICE IS AVAILABLE.

FEEDERS AND BRANCH CIRCUITS SHALL CONSIST OF CONDUCTORS INSTALLED IN CONDUIT. CONDUIT INSTALLED ABOVE GRADE SHALL BE METAL. BRANCH CIRCUITS AND FEEDERS SHALL BE COPPER CONDUCTORS.

WIRING DEVICES SHALL BE SPECIFICATION GRADE. CONVENIENCE OUTLETS SHALL BE RATED 20 AMPERES FOR DEDICATED CIRCUITS, AND 15 AMPERES FOR MULTI-OUTLET CIRCUITS. CONVENIENCE OUTLETS LOCATED OUTDOORS AND INDOORS NEAR SINKS SHALL BE GFCI PROTECTED. AS A GENERAL DESIGN, THERE SHALL BE NO MORE THAN SIX CONVENIENCE OUTLETS PER 20 AMPERE CIRCUIT AND NO MORE THAN 4 COMPUTER PURPOSE OUTLETS PER 20 AMPERE CIRCUIT.

GROUNDING: SERVICE AND EQUIPMENT GROUNDING SHALL BE PROVIDE PER CODE EXCEPT AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCLUDED IN ALL FEEDER AND POWER BRANCH CIRCUIT RACEWAYS. A SINGLE POINT GROUNDING DEVICE, BONDED TO THE BUILDING ELECTRICAL SERVICE, SHALL BE PROVIDED IN THE DATA/SERVER ROOM.

TRANSIENT VOLTAGE SURGE SUPPRESSION (TVSS) IS PROPOSED FOR INSTALLATION AT EACH APPLIANCE PANELBOARD SERVING LED LIGHTING, TECHNOLOGY, AND COMPUTER PURPOSE BRANCH CIRCUITS. PANELBOARDS SERVING THE DATA/SERVER ROOM AND THE EOC SHALL INCLUDE ISOLATED GROUNDING PROVISIONS.

LIGHTNING PROTECTION SYSTEM: A COMPLETE LIGHTNING PROTECTION SYSTEM SHALL BE PROVIDED PER CODE FOR EACH BUILDING. SYSTEM TO INCLUDE ROOF MOUNTED AIR TERMINALS CONNECTED TO BUILDING GROUNDING SYSTEM.

FIRE ALARM: AN ADDRESSABLE FIRE ALARM SYSTEM WILL BE PROVIDED. AUTOMATIC DETECTORS SHALL BE PROVIDED WHERE REQUIRED BY CODE. MANUAL STATIONS, HORNS AND VISUAL ALARM SIGNALS SHALL BE INSTALLED PER ADA REQUIREMENTS. SYSTEM SHALL INCLUDE ALARM AND SUPERVISION OF THE BUILDING SPRINKLER SYSTEM AND OPERATIONAL INTERFACE WITH BUILDING FIRE/SMOKE DAMPERS.

VOICE/DATA PRE-WIRE: A VOICE/DATA PREMISES DISTRIBUTION SYSTEM (PDS) SHALL BE PROVIDED. THE PDS SHALL CONSIST OF EIA/TIA CATEGORY 6 UTP STATION CABLING FROM A TELECOMMUNICATIONS OUTLET AT EACH WORK STATION BACK TO PATCH PANELS IN THE DATA/SERVER ROOM. PATCH PANELS SHALL BE MOUNTED IN 19 INCH WIDE FLOOR MOUNTED RACKS. EACH TELECOMMUNICATIONS OUTLET SHALL BE POPULATED WITH A MINIMUM OF THREE CABLE DROPS TERMINATED ON RJ45 JACKS. THE PDS SHALL BE DESIGNED SO THAT ANY JACK CAN BE ASSIGNED AS VOICE OR DATA AT THE DISTRIBUTION FRAME PATCH PANELS.

SIGNAL PATHWAY: TELECOMMUNICATION OUTLETS SHALL TYPICALLY CONSIST OF 4 INCH SQUARE OUTLET BOX AND SINGLE GANG DEVICE RING WITH A 1 INCH CONDUIT PATHWAY. FLEXIBLE CONDUIT CONNECTION(S) SHALL BE PROVIDED TO OPEN OFFICE PARTITIONS THAT HAVE WIRING PROVISIONS. A TELECOMMUNICATIONS OUTLET SHALL BE PROVIDED FOR EACH WORK STATION OR DESK.

SECURITY: AN INTRUSION ALARM SYSTEM THAT INCORPORATES BUILDING ACCESS CONTROL SHALL BE INCLUDED IN THIS PROJECT. SYSTEM COMPONENTS SHALL INCLUDE MOTION DETECTORS, DOOR CONTACTS, ZONED DIGITAL KEY PAD ARM/DISARM, AND PROXIMITY CARD BUILDING ACCESS. IN ADDITION, A VIDEO SURVEILLANCE SYSTEM SHALL BE INCLUDED. SYSTEM TO INCLUDE NETWORK VIDEO RECORDER, IP CAMERAS, AND MANAGEMENT SOFTWARE.

SPECIFICATION INDEX

DIVISION 26 ELECTRICAL
26 01 00 ELECTRICAL GENERAL REQUIREMENTS
26 05 00 BASIC MATERIALS AND METHODS
26 05 26 GROUNDING AND BONDING
26 05 30 LOW VOLTAGE ELECTRICAL SYSTEMS PATHWAY
26 05 80 UTILITY SERVICES
26 09 20 LIGHTING CONTROLS
26 20 00 ELECTRICAL DISTRIBUTION
26 31 00 PHOTOVOLTAIC POWER (PV) SYSTEMS
26 32 00 PACKAGED ENGINE GENERATOR SERVICE
26 36 00 TRANSFER SWITCHES
26 41 00 LIGHTNING PROTECTION SYSTEM
26 43 00 AC SURGE SUPPRESSION BELOW 600 VOLTS
26 50 00 LIGHTING FIXTURES

DIVISION 27 COMMUNICATIONS
27 05 28 SIGNAL SYSTEMS PATHWAY
27 10 01 TELECOMMUNICATIONS STRUCTURED CABLING (PREMISES WIRING)

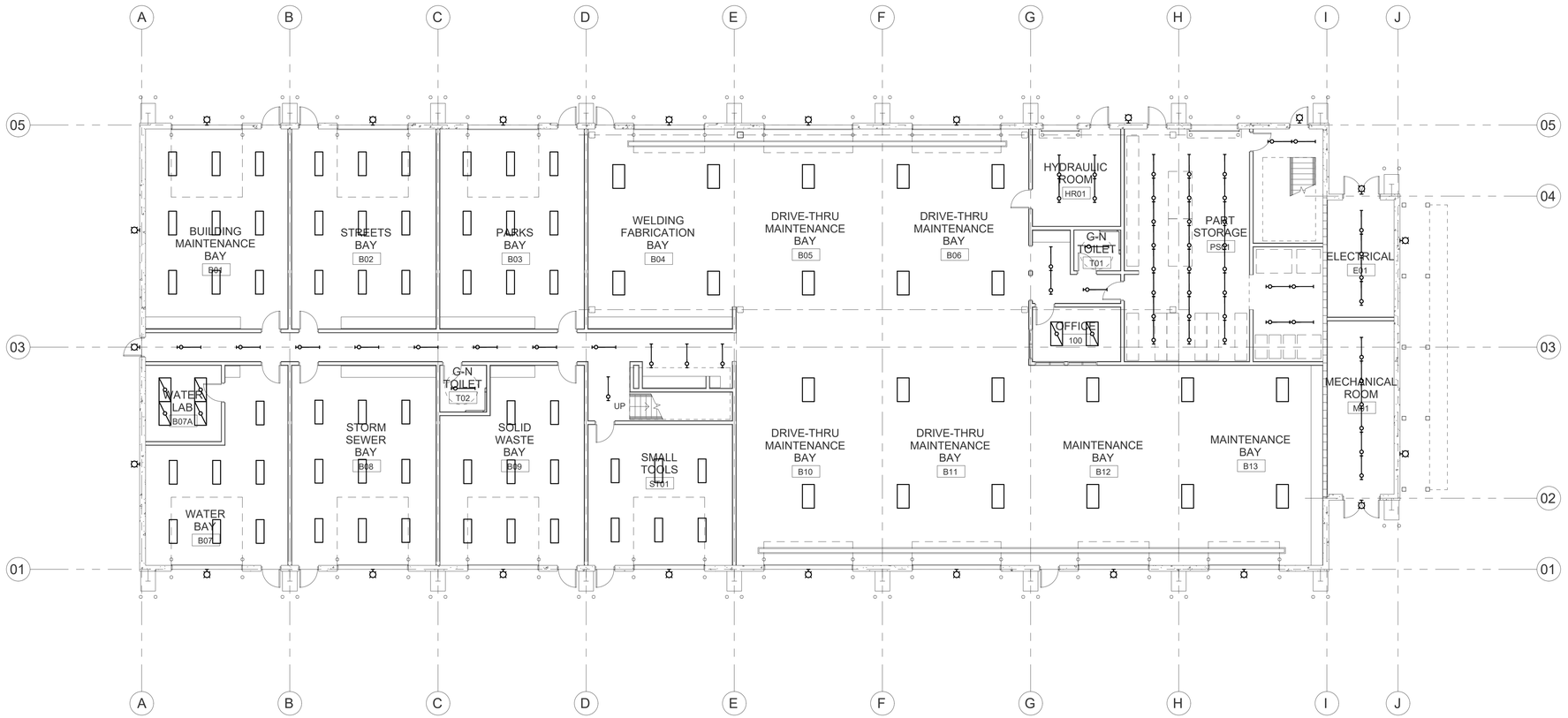
DIVISION 28 ELECTRONIC SAFETY AND SECURITY
28 16 00 INTRUSION ALARM SYSTEM WITH CONTROL ACCESS
28 20 00 ELECTRONIC SURVEILLANCE IP
28 31 00 FIRE ALARM SYSTEM

1/25/2024 8:55:51 AM PROJECT: #23-000 - CITY OF POULSBO PUBLIC WORKS MAINTENANCE FACILITY

GENERAL REQUIREMENTS - ELECTRICAL SYSTEMS

CITY OF POULSBO PUBLIC WORKS MAINTENANCE FACILITY

DATE: 02.28.24



LED HIGH BAY FIXTURE

LED LOW BAY FIXTURE

LAY-IN TROFFER FIXTURE

INDUSTIAL STRIP FIXTURE

EXTERIOR WALL-PACK

BUILDING B1 FLOOR PLAN - FIRST FLOOR LIGHTING

3/32" = 1'-0"

BUILDING B1 - FIRST FLOOR LIGHTING

HELIX DESIGN GROUP, INC.

NORTH

1 6' 20'

0' 3' 1'

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

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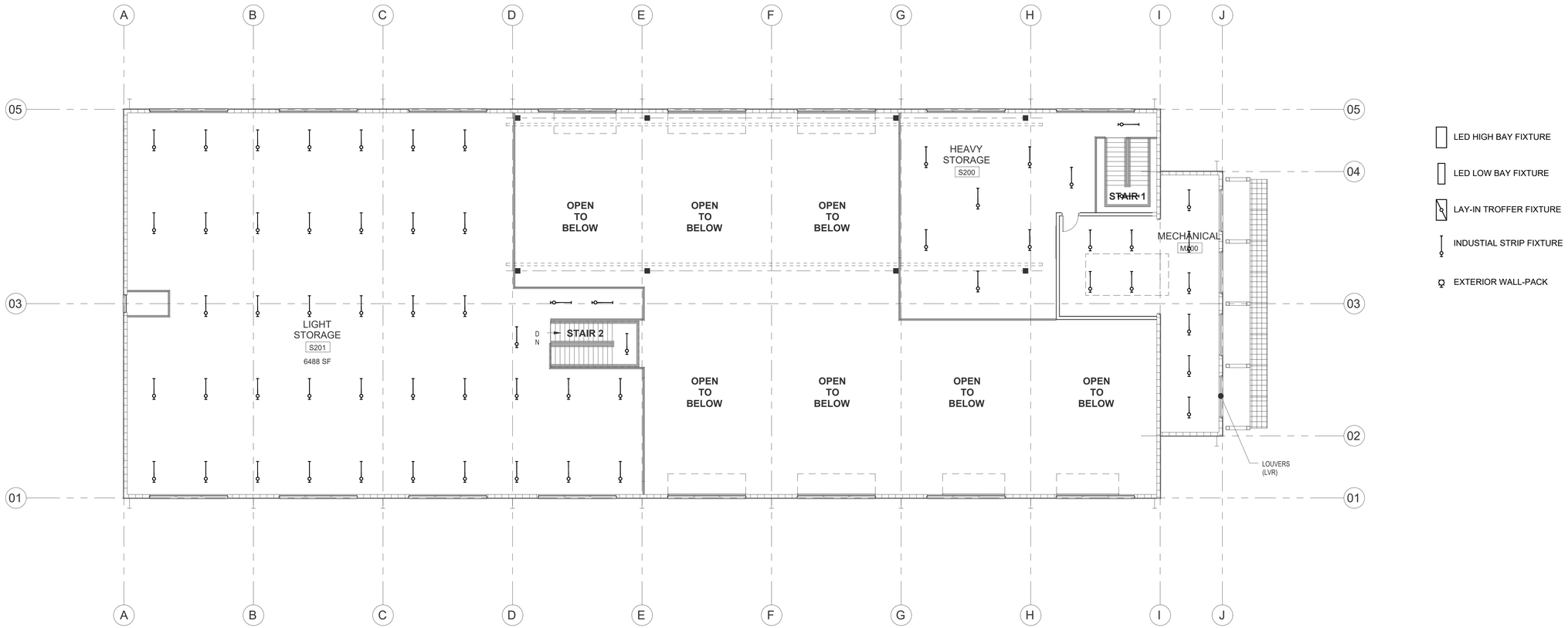

LED HIGH BAY FIXTURE

LED LOW BAY FIXTURE

LAY-IN TROFFER FIXTURE

INDUSTIAL STRIP FIXTURE

EXTERIOR WALL-PACK

BUILDING B1 FLOOR PLAN - SECOND FLOOR LIGHTING

3/32" = 1'-0"

BUILDING B1 - SECOND FLOOR LIGHTING

HELIX DESIGN GROUP, INC.

NORTH

0' 3' 1 6' 20'

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

Helix design group

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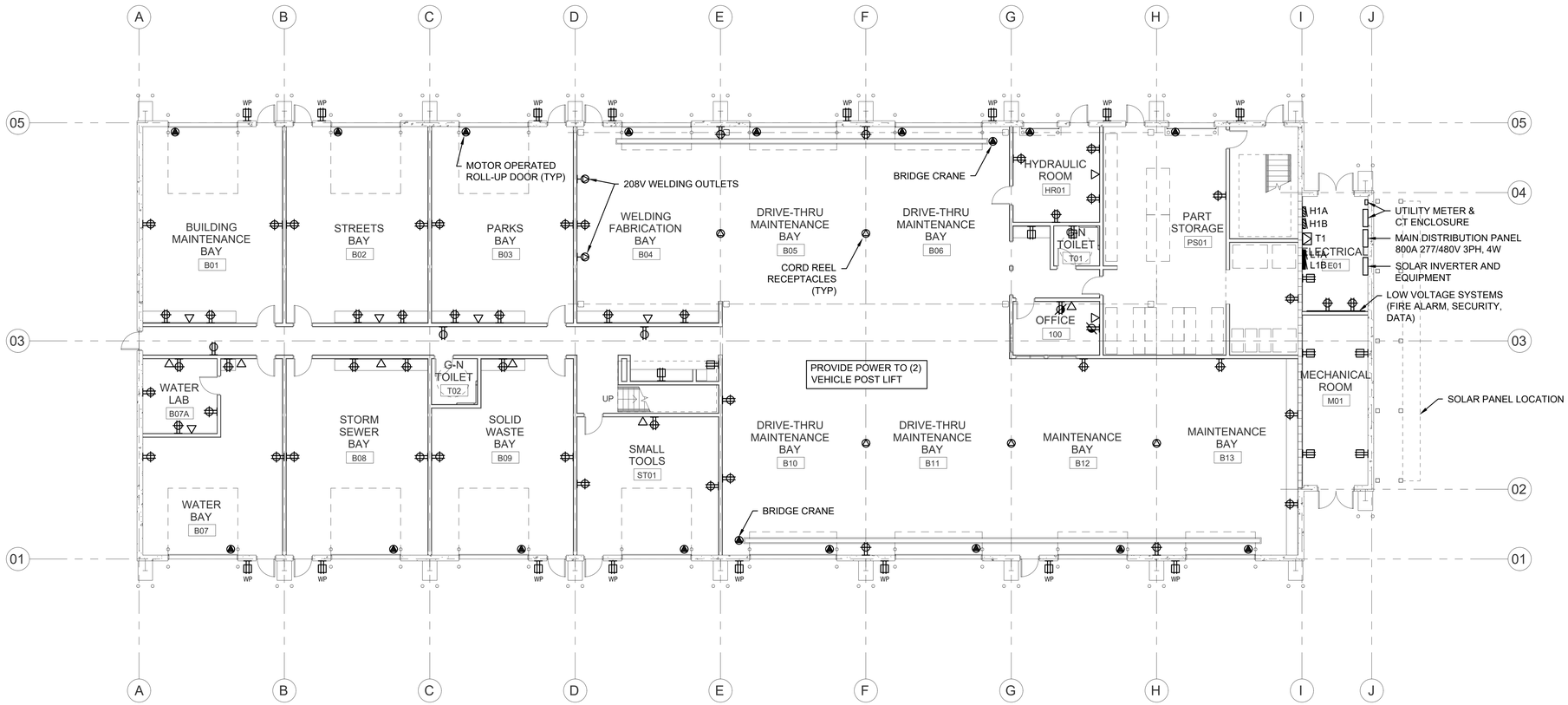

BUILDING B1 FLOOR PLAN - FIRST FLOOR POWER

3/32" = 1'-0"

BUILDING B1 - FIRST FLOOR POWER & DATA

HELIX DESIGN GROUP, INC.

NORTH

0' 3' 1' 6' 20'

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

Helix design group

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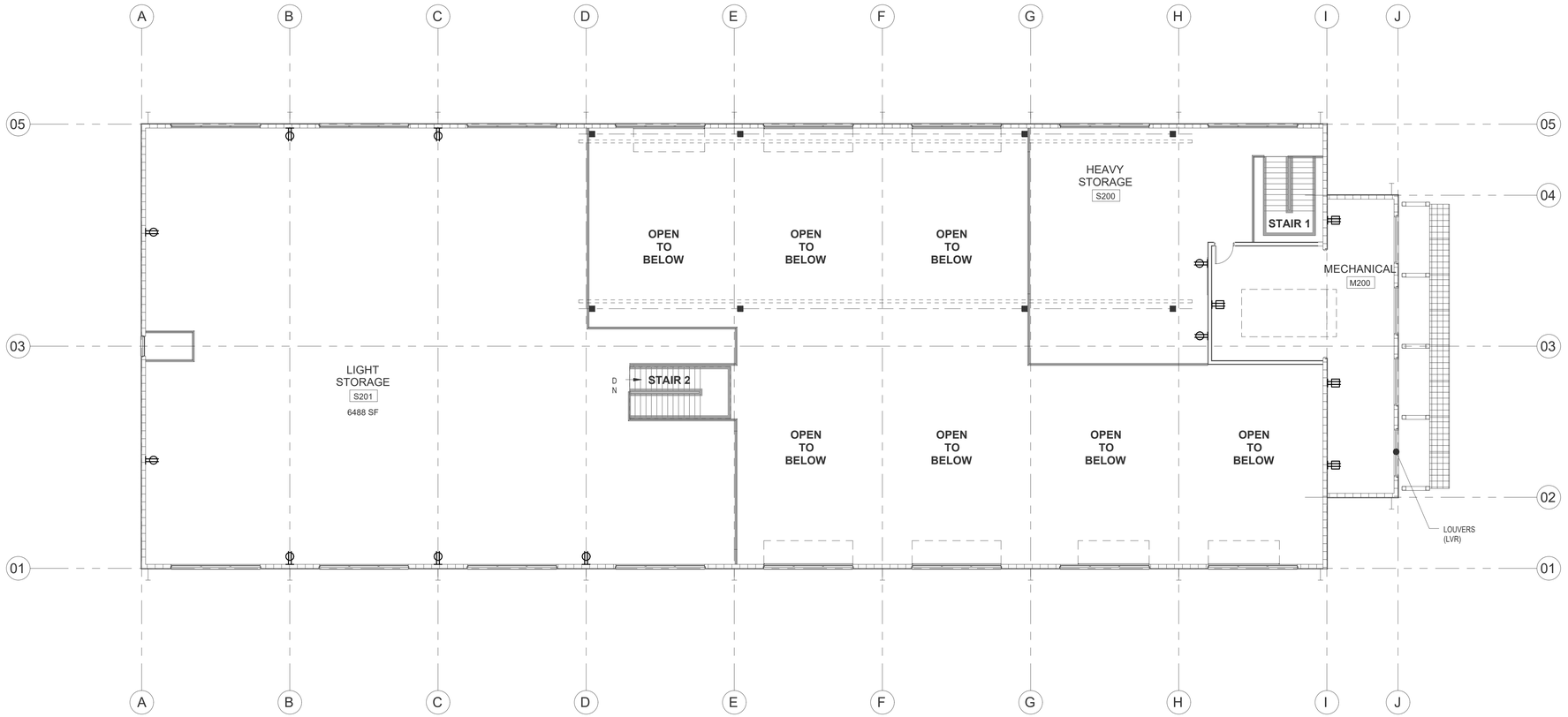

BUILDING B1 FLOOR PLAN - SECOND FLOOR POWER

3/32" = 1'-0"

BUILDING B1 - SECOND FLOOR POWER

HELIX DESIGN GROUP, INC.

NORTH

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

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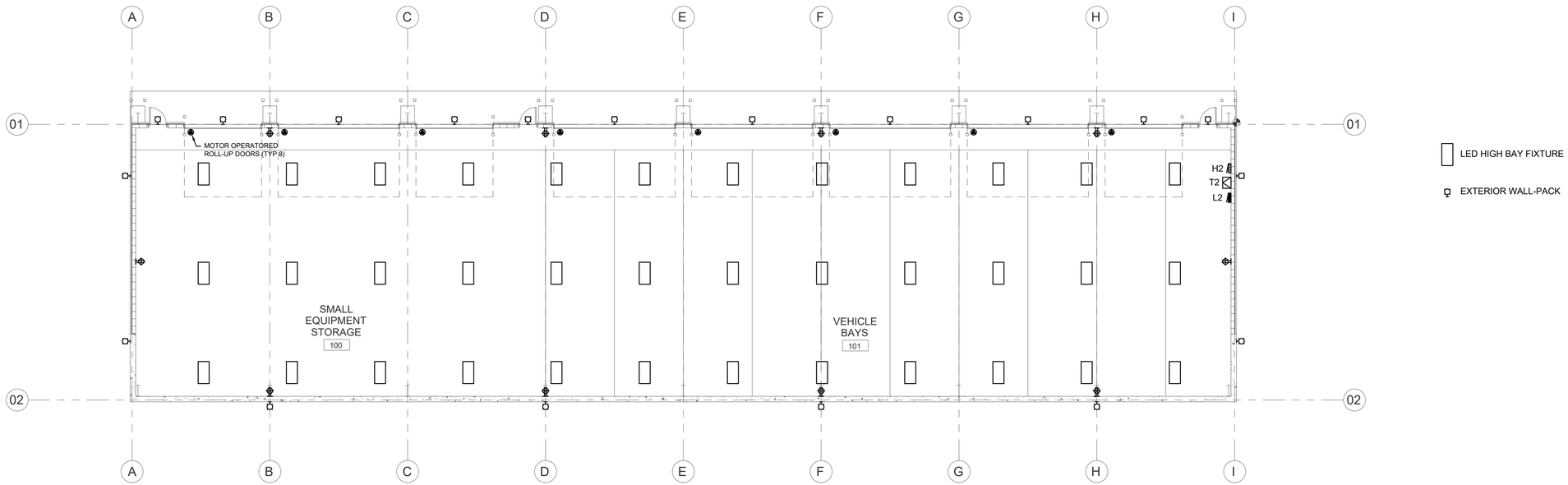

LED HIGH BAY FIXTURE

EXTERIOR WALL-PACK

BUILDING B2 FLOOR PLAN - LIGHTING & POWER

3/32" = 1'-0"

BUILDING B2 - LIGHTING & POWER

HELIX DESIGN GROUP, INC.

NORTH

0' 3' 1' 6' 20'

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

Helix design group

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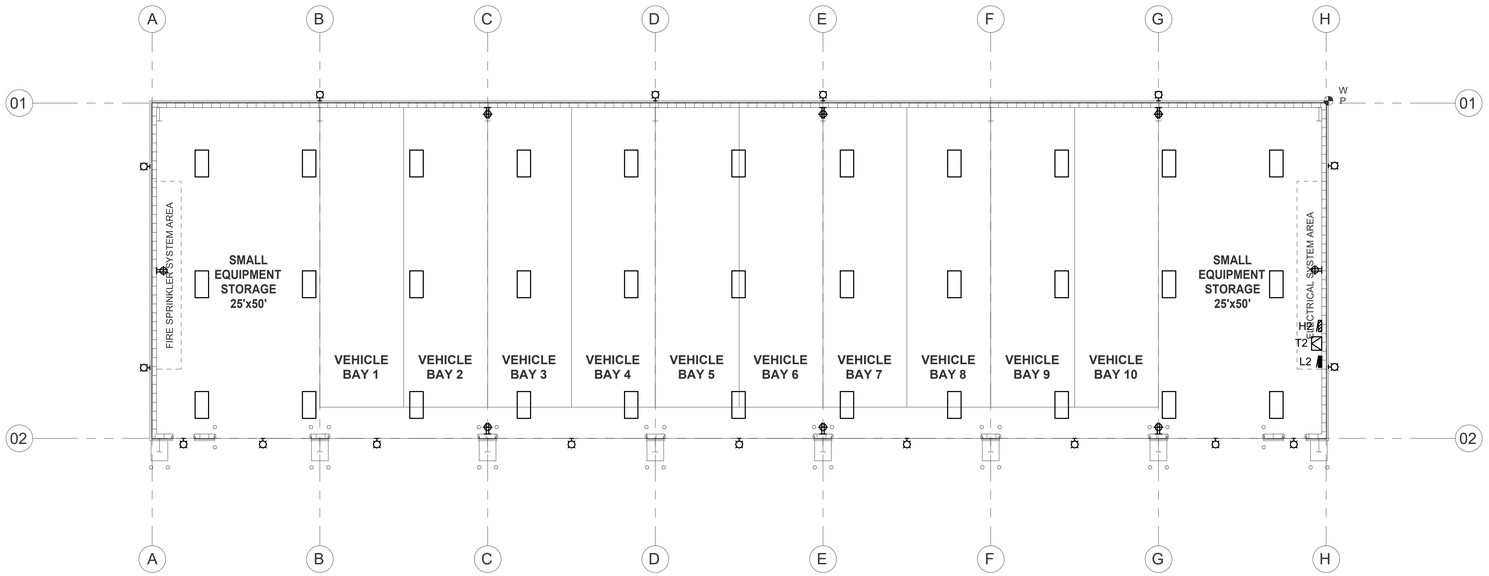

LED HIGH BAY FIXTURE

EXTERIOR WALL-PACK

USE: OPEN VEHICLE AND EQUIPMENT STORAGE (NON-HEATED BUILDING)

1 BUILDING B3 FLOOR PLAN - LIGHTING & POWER

3/32" = 1'-0"

BUILDING B3 - LIGHTING & POWER

HELIX DESIGN GROUP, INC.

NORTH

1 6" 20'

0" 3' 1'

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

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