

1.	Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
2.	Include the design engineer's seal and signature on each sheet of shop drawings.
B.	Design Data: As required by authorities having jurisdiction.
C.	Welders' Qualification Statement: Welders' certificates in accordance with AWS B2.1/B2.1M and dated no more than 12 months before start of scheduled welding work.
D.	Designer's Qualification Statement.
1.04 QUALITY ASSURANCE	
A.	Structural Designer Qualifications: Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located, or personnel under direct supervision of such an engineer.
B.	Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.1/D1.1M and dated no more than 12 months before start of scheduled welding work.
C.	Fabricator Qualifications: 1. A company specializing in manufacturing products specified in this section, with not less than ten years of documented experience.
PART 2 PRODUCTS	
2.01 METAL STAIRS - GENERAL	
A.	Metal Stairs: Provide stairs of the design specified, complete with landing platforms, vertical and horizontal supports, railings, and guards, fabricated accurately for anchorage to each other and to building structure.
1.	Regulatory Requirements: Provide stairs and railings that comply with most stringent requirements of local, state, and federal regulations; where requirements of Contract Documents exceed those of regulations, comply with Contract Documents.
2.	Handrails: Comply with applicable accessibility requirements of ADA Standards.
3.	Structural Design: Provide complete stair and landing assemblies that comply with the following: a. Stair Capacity: Uniform live load of 100 lbs/sq ft (4.7 kPa) and a concentrated load of 300 lb (and a concentrated load of 14.4 k) with deflection of stringer or railing framing not to exceed 1/360 of span. b. Railing Assemblies: Comply with applicable local code. c. Dimensions: As indicated on drawings. d. Shop assemble components; disassemble into largest practical sections suitable for transport and access to site. e. No sharp or rough areas on exposed travel surfaces and surfaces accessible to touch. f. Separate dissimilar metals using paint or permanent tape.
B.	Meeting Joinery and Finish Quality Levels: 1. Commercial: Exposed joints as inconspicuous as possible, whether welded or mechanical; underside of stair not covered by soffit IS considered exposed to view. a. Welded Joints: Intermittently welded on back side, filled with body putty, and sanded smooth and flush. b. Welds Exposed to View: Ground smooth and flush. c. Mechanical Joints: Sanded tight, flush, and hairline. d. Bolts Exposed to View: Countersunk flat or oval head bolts; no exposed nuts. e. Exposed Edges and Corners: Eased to small uniform radius. f. Metal Surfaces to be Painted: Sanded or ground smooth, suitable for stain or matte finish.
C.	Fasteners: Same material or compatible with materials being fastened; type consistent with design and specified quality level.
D.	Anchors and Related Components: Same material and finish as items to be anchored, except where specifically indicated otherwise; provide all anchors and fasteners required.
2.02 METAL STAIRS WITH CONCRETE TREADS	
A.	Joining and Finish Quality Level: Commercial, as defined above.
B.	Risers: Closed.
C.	Treads: Metal pan with field-installed concrete fill. 1. Concrete Depth: 1-1/2 inches (38 mm), minimum. 2. Tread Pan Material: Steel. 3. Tread Pan Thickness: As required by design; 14 gauge, 0.075 inch (1.9 mm) minimum. 4. Pan Anchorage to Stringers: Welded or bolted to tread angles welded or bolted to stringers. 5. Concrete Reinforcement: Welded wire mesh. 6. Concrete Finish: For resilient floor covering.
D.	Risers: Same material and thickness as tread pans. 1. Riser/Nosing Profile: Sloped riser with rounded nosing of minimum radius. 2. Nosing Depth: Not more than 1-1/2 inch (38 mm) overhang. 3. Nosing Rounding: Flush with top of concrete fill, not more than 1/2 inch (12 mm) wide.
E.	Stringers: Rolled steel channels. 1. Stringer Depth: 10 inches (250 mm). 2. End Closure: Sheet steel of same thickness as risers welded across ends.
F.	Landings: Same construction as treads, supported and reinforced as required to achieve design load capacity.
G.	Railings: Steel pipe railings.
H.	Finish: Shop- or factory-prime painted.
I.	Under Side of Stair: Exposed to view, to be finished same as specified for other exposed to view surfaces.
2.03 HANDRAILS AND GUARDS	
A.	Guards: 1. Top Rails: Round pipe or tube rails unless otherwise indicated. a. Outside Diameter: 1-1/4 inch (32 mm), minimum, to 1-1/2 inches (38 mm), maximum. 2. Infill at Picket Railings: Vertical pickets. a. Horizontal Spacing: Maximum 4 inches (100 mm) on center. b. Material: Solid steel bar. c. Shape: Square. d. Size: 1/2 inch (13 mm) square. e. Top Mounting: Welded to underside of top rail. f. Bottom Mounting: Welded to top surface of stringer. 3. Infill at Pipe Railings: Pipe or tube rails sloped parallel to stair. a. Outside Diameter: 1 inch (25 mm). b. Material: Steel pipe or tube, round. c. Vertical Spacing: Maximum 4 inches (100 mm) on center. d. Joining: Welded and ground smooth and flush. e. End and Intermediate Posts: Same material and size as top rails. f. Horizontal Spacing: As indicated on drawings. g. Mounting: Welded to top surface of stringer.
2.04 MATERIALS	
A.	Steel Sections: ASTM A36/A36M.
B.	Steel Tubing: ASTM A500/A500M or ASTM A501/A501M structural tubing, round and shapes as indicated.
C.	Pipe: ASTM A53/A53M Grade B Schedule 40, black finish.
D.	Ungalvanized Steel Sheet: Hot- or cold-rolled, except use cold-rolled where finished work will be exposed to view. 1. Hot-Rolled Steel Sheet: ASTM A1011/A1011M, Designation CS (commercial steel). 2. Cold-Rolled Steel Sheet: ASTM A1008/A1008M, Designation CS (commercial steel).
E.	Concrete Fill: Portland cement Type I, 3000 psi (20 MPa) 28 day strength, 2 to 3 inch (51 to 76 mm) slump.
F.	Concrete Reinforcement: Mesh type as detailed, galvanized.
2.05 ACCESSORIES	
A.	Steel Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1, plain.
B.	Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
C.	Shop and Touch-Up Primer: SSPC-Paint 15, and comply with VOC limitations of authorities having jurisdiction.
2.06 SHOP FINISHING	
A.	Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
B.	Do not prime surfaces in direct contact with concrete or where field welding is required.
C.	Prime Painting: Use specified shop- and touch-up primer. 1. Preparation of Steel: In accordance with SSPC-SP 2 Hand Tool Cleaning. 2. Number of Coats: One.
PART 3 EXECUTION	
3.01 EXAMINATION	
A.	Verify that field conditions are acceptable and are ready to receive work.
3.02 PREPARATION	
A.	When field welding is required, clean and strip primed steel items to bare metal.
3.03 INSTALLATION	
A.	Install components plumb and level, accurately fitted, free from distortion or defects.
B.	Provide anchors, plates, angles, hangers, and struts required for connecting stairs to structure.
C.	Allow for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
D.	Provide welded field joints where specifically indicated on drawings. Perform field welding in accordance with AWS D1.1/D1.1M.
E.	Other field joints may be either welded or bolted provided the result complies with the limitations specified for joining quality levels.
F.	Obtain approval prior to site cutting or creating adjustments not scheduled.
G.	After erection, prime welds, abrasions, and surfaces not shop primed or galvanized, except surfaces to be in contact with concrete.
3.04 TOLERANCES	
A.	Maximum Variation From Plumb: 1/4 inch (6 mm) per story, non-cumulative.
B.	Maximum Offset From True Alignment: 1/4 inch (6 mm).
END OF SECTION	
SECTION 05513	
METAL LADDERS	
PART 1 GENERAL	
1.01 SECTION INCLUDES	
A.	Shop-fabricated metal ladders.
1.02 REFERENCE STANDARDS	
A.	ANSI A14.1 - American National Standard for Ladders - Fixed - Safety Requirements; 2008 (Reaffirmed 2018).
B.	ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2019.
C.	ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
D.	ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates; 2018.
E.	ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2021.
F.	ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing; 2021.
G.	AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2020.
H.	AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification; 2021.
I.	AWS D1.1/D1.1M - Structural Welding Code - Steel; 2020, with Errata (2023).
J.	AWS D1.2/D1.2M - Structural Welding Code - Aluminum; 2014, with Errata (2

2.04 QUALITY ASSURANCE	A. Design ladders under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.
	B. Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.1/D1.1M and AWS D1.2/D1.2M and dated no more than 12 months before start of scheduled welding work.
PART 2 PRODUCTS	
2.01 MATERIALS - STEEL	
	A. Steel Sections: ASTM A36/A36M.
	B. Steel Tubing: ASTM A501/A501M hot-formed structural tubing.
	C. Plates: ASTM A283/A283M.
	D. Mechanical Fasteners: Same material or compatible with materials being fastened; type consistent with design and specified quality level.
	E. Bolts, Nuts, and Washers: ASTM A307, plain.
	F. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
	G. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.
	H. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.
2.02 FABRICATION	
	A. Fit and shop assemble items in largest practical sections, for delivery to site.
	B. Fabricate items with joints tightly fitted and secured.
	C. Continuously seal joint members by continuous welds.
	D. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
	E. Exposed Mechanical Fasteners: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
	F. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
2.03 FABRICATED LADDERS	
	A. Ladders: Steel, in compliance with ANSI A14.3, with mounting brackets and attachments; galvanized finish at exterior ladders and primed finished at interior ladders.
	1. Side Rails: 3/8 by 2 inches (9 by 50 mm) members spaced at 24 inches (610 mm).
	2. Rungs: One inch (25 mm) diameter solid round bar spaced 12 inches (300 mm) on center.
	3. Space rungs 7 inches (175 mm) from wall surface.
2.04 FINISHES - STEEL	
	A. Prime paint steel items.
	1. Do not prime surfaces in direct contact with concrete.
	2. Do not prime surfaces where field welding is required.
	B. Prepare surfaces to be primed in accordance with SSPC-SP2.
	C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
	D. Prime Painting: One coat.
	E. Galvanizing of Structural Steel Members: Galvanize after fabrication to ASTM A123/A123M requirements. Provide minimum 1.7 oz/sq ft galvanized coating. (Provide minimum 530 g/sq m galvanized coating).
	F. Galvanizing of Non-Structural Items: Galvanize after fabrication to ASTM A123/A123M requirements.
2.05 FABRICATION TOLERANCES	
	A. Squareness: 1/8 inch (3 mm) maximum difference in diagonal measurements.
	B. Maximum Offset Between Faces: 1/16 inch (1.5 mm).
	C. Maximum Misalignment of Adjacent Members: 1/16 inch (1.5 mm).
	D. Maximum Bow: 1/8 inch (3 mm) in 48 inches (1.2 m).
	E. Maximum Deviation From Plane: 1/16 inch (1.5 mm) in 48 inches (1.2 m).
PART 3 EXECUTION	
3.01 EXAMINATION	
	A. Verify that field conditions are acceptable and are ready to receive work.
3.02 PREPARATION	
	A. Clean and strip primed steel items to bare metal where site welding is required.
3.03 INSTALLATION	
	A. Install items plumb and level, accurately fitted, free from distortion or defects.
	B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
	C. Perform field welding in accordance with AWS D1.1/D1.1M.
	D. Obtain approval prior to site cutting or making adjustments not scheduled.
	E. After erection, prime welds, abrasions, and surfaces not shop primed, except surfaces to be in contact with concrete.
3.04 TOLERANCES	
	A. Maximum Variation From Plumb: 1/4 inch (6 mm) per story, non-cumulative.
	B. Maximum Offset From True Alignment: 1/4 inch (6 mm).
	C. Maximum Out-of-Position: 1/4 inch (6 mm).
	END OF SECTION
	SECTION 055213
	PIPE AND TUBE RAILINGS
PART 1 GENERAL	
1.01 SECTION INCLUDES	
	A. Stair railings and guardrails.
1.02 REFERENCE STANDARDS	
	A. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2022.
	B. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2021A.
	C. ASTM A780/A780M - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings; 2020.
	D. ASTM E935 - Standard Test Methods for Performance of Permanent Metal Railing Systems and Rails for Buildings; 2021.
	E. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2020.
	F. AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification; 2021.
	G. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2017, with Errata (2023).
	H. AWS D1.6/D1.6M - Structural Welding Code - Stainless Steel; 2017, with Amendment (2021).
	I. SSPC-Paint 15 - Steel Joint Shop Primer/Metal Building Primer; 2004.
1.03 SUBMITTALS	
	A. Shop Drawings: Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.
	1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
	2. Include the design engineer's seal and signature on each sheet of shop drawings.
	B. Samples: Submit two, 12 inch (305 mm) long samples of handrail. Submit two samples of elbow, wall bracket, and end stop.
	C. Welders' Qualification Statement: Welders' certificates in accordance with AWS B2.1/B2.1M and dated within the previous 12 months.
	D. Designer's Qualification Statement.
	E. Fabricator's Qualification Statement.
1.04 QUALITY ASSURANCE	
	A. Structural Designer Qualifications: Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located, or personnel under direct supervision of such an engineer.
	B. Welder Qualifications: Welding processes and welding operators qualified within previous 12 months.
PART 2 PRODUCTS	
2.01 RAILINGS - GENERAL REQUIREMENTS	
	A. Design, fabricate, and test railing assemblies in accordance with the most stringent requirements of applicable local code.
	B. Distributed Loads: Design railing assembly, wall rails, and attachments to resist distributed force of 75 pounds per linear foot (1095 N/m) applied to the top of the assembly and in any direction, without damage or permanent set. Test in accordance with ASTM E935
	C. Concentrated Loads: Design railing assembly, wall rails, and attachments to resist a concentrated force of 200 pounds (890 N) applied at any point on the top of the assembly and in any direction, without damage or permanent set. Test in accordance with ASTM E935
	D. Allow for expansion and contraction of members and building movement without damage to connections or members.
	E. Dimensions: See drawings for configurations and heights.
	1. Top Rails and Wall Rails: 1-1/2 inches (38 mm) diameter, round.
	2. Intermediate Rails: 1-1/2 inches (38 mm) diameter, round.
	3. Posts: 1-1/2 inches (38 mm) diameter, round.
	F. Provide anchors and other components as required to attach to structure, made of same materials as railing components unless otherwise indicated; where exposed fasteners are unavoidable provide flush countersunk fasteners.
	G. Provide slip-on non-weld mechanical fittings to join lengths, seal open ends, and conceal exposed mounting bolts and nuts, including but not limited to elbows, T-shapes, splice connectors, flanges, escutcheons, and wall brackets.
	H. Welded and Brazed Joints: Make visible joints butt tight, flush, and hairline; use methods to avoid discoloration and damage of finish; grind smooth, polish, and restore to required finish.
	1. Ease exposed edges to a small uniform radius.
	2. Welded Joints:
	a. Carbon Steel: Perform welding in accordance with AWS D1.1/D1.1M.
	b. Stainless Steel: Perform welding in accordance with AWS D1.6/D1.6M.
2.02 STEEL RAILING SYSTEM	
	A. Steel Tube: ASTM A500/A500M Grade B cold-formed structural tubing.
	B. Steel Pipe: ASTM A53/A53M Grade B Schedule 80, black finish.
	C. Non-Weld Mechanical Fittings: Slip-on, galvanized malleable iron castings, for Schedule 40 pipe, with flush setscrews for tightening by standard hex wrench, no bolts or screw fasteners.
	D. Welding Fittings: Factory- or shop-welded from matching pipe or tube; seams continuously welded; joints and seams ground smooth.
	E. Exposed Fasteners: No exposed bolts or screws.
	F. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.
2.03 GATES	
	A. Material and Finish: Match steel railing.
	B. Hardware: Provide hinges and latch.
2.04 FABRICATION	
	A. Accurately form components to suit specific project conditions and for proper connection to building structure.
	B. Fit and shop assemble components in largest practical sizes for delivery to site.
	C. Fabricate components with joints tightly fitted and secured. Provide splices and sleeves to accommodate site assembly and installation.
	D. Welded Joints:
	1. Interior Components: Continuously seal joints by intermittent welds and plastic filler.
	2. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

E.	Weld connections that cannot be shop welded due to size limitations.	1.	Weld in accordance with AWS D1.1/D1.1M.
F.	Match shop welding and bolting.	2.	Match shop welding and bolting.
G.	Clean welds, bolted connections, and abraded areas.	3.	Clean welds, bolted connections, and abraded areas.
H.	Touch up shop primer and factory-applied finishes.	4.	Touch up shop primer and factory-applied finishes.
I.	Repair galvanizing with galvanizing repair paint per ASTM A780/A780M.	5.	Repair galvanizing with galvanizing repair paint per ASTM A780/A780M.
PART 3 EXECUTION			
3.01 EXAMINATION			
A.	Verify that field conditions are acceptable and are ready to receive work.		
3.02 PREPARATION			
A.	Clean and strip primed steel items to bare metal where site welding is required.		
3.03 INSTALLATION			
A.	Install in accordance with manufacturer's instructions.		
B.	Install components plumb and level, accurately fitted, free from distortion or defects, with tight joints.		
C.	Anchor railings securely to structure.		
D.	Field weld anchors as indicated on drawings. Touch-up welds with primer. Grind welds smooth.		
E.	Conceal anchor bolts and screws whenever possible. Where not concealed, use flush countersunk fasteners.		
3.04 TOLERANCES			
A.	Maximum Variation From Plumb: 1/4 inch (6 mm) per floor level, non-cumulative.		
B.	Maximum Offset From True Alignment: 1/4 inch (6 mm).		
C.	Maximum Out-of-Position: 1/4 inch (6 mm).		
END OF SECTION			
DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES			
SECTION 06103			
MISCELLANEOUS ROUGH CARPENTRY			
PART 1 GENERAL			
1.01 SECTION INCLUDES			
A.	Roof-mounted curbs.		
B.	Roofing nailers.		
C.	Roofing cant strips.		
D.	Preservative treated wood materials.		
E.	Fire retardant treated wood materials.		
F.	Communications and electrical room mounting boards.		
G.	Concealed wood blocking, nailers, and supports.		
H.	Miscellaneous wood nailers, furring, and grounds.		
1.02 REFERENCE STANDARDS			
A.	ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.		
B.	ASTM D2898 - Standard Practice for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing; 2010 (Reapproved 2017).		
C.	ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2024.		
D.	AWPA U1 - Use Category System: User Specification for Treated Wood; 2023.		
E.	PS 1 - Structural Plywood; 2019.		
F.	PS 20 - American Softwood Lumber Standard; 2021.		
1.03 SUBMITTALS			
A.	Product Data: Provide technical data on wood preservative materials and application instructions.		
1.04 DELIVERY, STORAGE, AND HANDLING			
A.	General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.		
B.	Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, and installation.		
PART 2 PRODUCTS			
2.01 GENERAL REQUIREMENTS			
A.	Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.		
1.	If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.		
2.	Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who promotes grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.		
2.02 DIMENSION LUMBER			
A.	Sizes: Nominal sizes as indicated on drawings, S4S.		
B.	Moisture Content: S-dry or MC19.		
C.	Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:		
1.	Lumber: S4S, No.2 or Standard Grade.		
2.	Boards: Standard or No.3.		
2.03 CONSTRUCTION PANELS			
A.	Communications and Electrical Room Mounting Boards: PS 1, A-D plywood, or medium density fiberboard; 3/4 inch (19 mm) thick; flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.		
2.04 ACCESSORIES			
A.	Fasteners and Anchors:		
1.	Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.		
2.05 FACTORY WOOD TREATMENT			
A.	Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.		
1.	Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.		
2.	Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA Standards.		
B.	Fire Retardant Treatment:		
1.	Exterior Type: AWPA U1, Category UCFB, Commodity Specification H, chemically treated and pressure impregnated; capable of providing a maximum flame spread index of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes both before and after accelerated weathering test performed in accordance with ASTM D2898.		
a.	Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.		
b.	Treat exterior rough carpentry items.		
c.	Do not use treated wood in direct contact with ground.		
2.	Interior Type A: AWPA U1, Use Category UCFB, Commodity Specification H, low temperature, low hygroscopic type, chemically treated and pressure impregnated; capable of providing a maximum flame spread index of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes.		
a.	Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.		
b.	Interior rough carpentry items are to be fire retardant treated.		
c.	Treat rough carpentry items as indicated.		
d.	Do not use treated wood in applications exposed to weather or where the wood may become wet.		
C.	Preservative Treatment:		
1.	Preservative Pressure Treatment of Lumber Above Grade: AWPA U1, Use Category UCB3, Commodity Specification A.		
a.	Kiln dry lumber after treatment to maximum moisture content of 19 percent.		
2.	Preservative Pressure Treatment of Plywood Above Grade: AWPA U1, Use Category UC2 and UC3B, Commodity Specification F.		
a.	Kiln dry plywood after treatment to maximum moisture content of 19 percent.		
PART 3 EXECUTION			
3.01 PREPARATION			
A.	Coordinate installation of rough carpentry members specified in other sections.		
3.02 INSTALLATION - GENERAL			
A.	Select material sizes to minimize waste.		
B.	Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.		
C.	Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.		
3.03 BLOCKING, NAILERS, AND SUPPORTS			
A.	Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.		
B.	In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to framing.		
3.04 ROOF-RELATED CARPENTRY			
A.	Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.		

B.	Product Data:	Submit technical data on wood preservative materials, application instructions.	C.	Designer's Qualification Statement.
1.03	QUALITY ASSURANCE			
A.	Designer Qualifications: Design members under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.			
PART 2	PRODUCTS			
2.01	WOOD MATERIALS			
A.	Wood fabricated from old growth timber is not permitted.			
2.02	FABRICATION			
A.	Fabricate components in accordance with AITC 108, with joints neatly fitted, welded, and ground smooth.			
2.03	WOOD TREATMENT			
A.	Wood Preservative (Pressure Treatment): AWPA U1 - Use Category UC3B, Commodity Specification A, using waterborne preservative to 0.25 lb/cu ft retention (to 4.0 kg/Ga m retention).			
2.04	ACCESSORIES			
A.	Connectors: Type wearable steel.			
B.	Bolts, Nuts, Washers, Lags, and Screws, Preservative-Treated Wood: Stainless steel; size and type to suit application.			
PART 3	EXECUTION			
3.01	ERECTION			
A.	Set structural members level and plumb, in correct position.			
B.	Make provisions for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in true alignment until completion of erection and installation of permanent bracing.			
3.02	SITE APPLIED WOOD TREATMENT			
A.	Brush apply two coats of preservative treatment on wood in contact with cementitious materials and roofing and related metal flashings.			
END OF SECTION				
SECTION 061500				
WOOD DECKING				
PART 1	GENERAL			
1.01	SECTION INCLUDES			
A.	Plywood structural wood decking.			
B.	Fire retardant treatment of wood.			
C.	Preservative treatment of wood.			
1.02	SUBMITTALS			
A.	Product Data: Provide technical data on wood preservative materials.			
B.	Shop Drawings: Indicate deck framing system, loads and cambers, bearing details, and framed openings.			
PART 2	PRODUCTS			
2.01	WOOD MATERIALS			
A.	Wood fabricated from old growth timber is not permitted.			
B.	Wood Decking: PS 1 veneer plywood; APA Rated Sheathing, Span Rating as indicated on drawings; Exterior grade; 1 A interior veneer appearance grade; sanded.			
2.02	ACCESSORIES			
A.	Fasteners and Anchors:			
1.	Fastener Type and Finish: Hot-dipped galvanized steel for high humidity and preservative-treated wood locations, unfinished steel elsewhere.			
2.	Screws: Bugle head, hardened steel, power driven type, length three times thickness of decking.			
2.03	WOOD TREATMENT			
A.	Factory-Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.			
B.	Fire Retardant Treatment:			
1.	Exterior Type: AWPA U1, Use Category UCFB, Commodity Specification H, chemically treated and pressure impregnated; with maximum flame spread index of 25 when tested in accordance with ASTM E84 and with no evidence of significant combustion when test is extended for an additional 20 minutes both before and after accelerated weathering test performed in accordance with ASTM D2898.			
2.	Marking: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.			
C.	Preservative Pressure Treatment:			
PART 3	EXECUTION			
3.01	INSTALLATION - PLYWOOD DECKING			
A.	Install decking perpendicular to framing members with ends staggered over firm bearing. On sloped surfaces, lay decking with tongue upward.			
B.	Attach decking with adhesive and screws.			
END OF SECTION				
SECTION 064100				
ARCHITECTURAL WOOD CASEWORK				
PART 1	GENERAL			
1.01	SECTION INCLUDES			
A.	Specially fabricated cabinet units.			
B.	Hardware.			
1.02	REFERENCE STANDARDS			
A.	ANSI A208.2 - Medium Density Fiberboard (MDF) for Interior Applications; 2022.			
B.	AWIA/AWMA/CW (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).			
C.	AWMA/CW (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.			
D.	BHMA A156.9 - Cabinet Hardware; 2020.			
E.	NEMA LD 3 - High-Pressure Decorative Laminates; 2005.			
1.03	SUBMITTALS			
A.	Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.			
1.	Scale of Drawings: 1-1/2 inch to 1 foot (125 mm to 1 m), minimum.			
B.	Product Data: Provide data for hardware accessories.			
C.	Samples: Submit actual samples of architectural cabinet construction, minimum 12 inches (300 mm) square, illustrating proposed cabinet, countertop, and shelf unit substrate and finish.			
D.	Samples: Submit actual sample items of proposed pulls, hinges, shelf standards, and locksets, demonstrating hardware design, quality, and finish.			
1.04	QUALITY ASSURANCE			
A.	Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.			
1.	Company with at least one project in the past 5 years with value of woodwork within 20 percent of cost of woodwork for this Project.			
2.	Single Source Responsibility: Provide and install this work from single fabricator.			
1.05	DELIVERY, STORAGE, AND HANDLING			
A.	Protect units from moisture damage.			
1.06	FIELD CONDITIONS			
A.	During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.			
PART 2	PRODUCTS			
2.01	CABINETS			
A.	Finish Standard: Custom Grade, in accordance with AWIA/AWMA/CW (AWS) or AWMA/CW (NAAWS), unless noted otherwise.			
B.	Plastic Laminate Faced Cabinets: Custom grade.			
C.	Cabinets:			
1.	Finish - Exposed Exterior Surfaces: Decorative laminate.			
2.	Finish - Exposed Interior Surfaces: Decorative laminate.			
3.	Finish - Semi-Exposed Surfaces: Decorative laminate			
4.	Finish - Concealed Surfaces: Manufacturer's option.			
5.	Door and Drawer Front Edge Profiles: Square edge with thick applied band.			
6.	Adjustable Shelf Loading: 40 psf (19.5 gm/sq cm).			
a.	Deflection: L/144.			
7.	Cabinet Style: Flush overlay.			
8.	Cabinet Doors and Drawer Fronts: Flush style.			
9.	Drawer Side Construction: Multiple-dovetailed.			
10.	Drawer Construction Technique: Dovetail joints.			
2.02	WOOD-BASED COMPONENTS			
A.	Wood fabricated from old growth timber is not permitted.			
2.03	PANEL, CORE MATERIALS			
A.	Medium Density Fiberboard (MDF): Composite panel composed of cellulosic fibers, additives, and bonding system; cured under heat and pressure; comply with ANSI A208.2.			
1.	Grade: 115; moisture resistance: MR10.			
2.	Panel Thickness: 3/4 inch (19.1 mm).			
B.	Marine Grade Plywood: High-quality wood panel constructed of solid wood veneers bonded with waterproof adhesive, with minimal voids and cross-laminated construction; comply with APA PS1 for marine-grade plywood.			
1.	Grade: Moisture resistance: MR10.			
2.04	THERMALLY FUSED LAMINATE PANELS			
A.	Thermally Fused Laminate (TFL): Melamine- or polyester-resin-saturated decorative papers; for fusion to composite wood substrates under heat and pressure.			
1.	Test in accordance with NEMA LD 3 Section 3.			
2.	Panel Core Substrate: Particleboard.			
3.	Color: White.			
2.05	LAMINATE MATERIALS			
A.	Manufacturers:			
1.	Afbortle:			



FIRE STATION #23

City of Covington

HIGHWAY 36
COVINGTON GA 30014[illegible]

Drawn By PG
Checked By JDG

Date	Job No.
07/22/2026	25033

Sheet Title
SPECIFICATIONS

Sheet No. _____

G-3.14

RELEASED FOR CONSTRUCTION