

PROJECT MANUAL

PROJECT NAME AND LOCATION:

**DECK, STAIRS & LANDING REPLACEMENT
LANDMARK APARTMENTS - BUILDING 13**

Contract Number: DW2402931

TABLE OF CONTENTS

02	Invitation to Bid (1 Page)
03	Specifications (16 Pages)
04	Plans (70 Sheets)
05	Instruction to Bidders (6 Pages)
06	General Conditions (15 Pages)
07	Bid Form & Bidder Information (4 Pages) – <i>Return with Bid</i>
08	Sample Contract Form (1 Page)
09	Sample Certificate of Insurance (2 Pages)

INVITATION TO BID

King County Housing Authority (KCHA) will accept bids from qualified general contractors to furnish labor, materials and necessary equipment to perform the following:

SCOPE OF WORK: Work includes, but is not limited to, the replacement of stairs, landings, elevated walkway, wood structure, foundations, railings, concrete sidewalk, liquid applied deck membrane and exterior painting, and other tasks as described in the bid documents.

PROJECT MANUAL DISTRIBUTION:

Address: King County Housing Authority, 600 Andover Park, Seattle, WA 98188
Distribution: * Documents are available for download on KCHA's website at <http://www.kcha.org/business/construction/open/>

PRE-BID CONFERENCE:

Date and Time: 8/6/2025 at 11:00 A.M.
Jobsite Address: Landmark Apartments, 16330 NE 11th St., Bellevue, WA 98008.
In Addition: Contractors are strongly encouraged to attend the Pre-Bid Conference. Failure to attend the Conference will not relieve the Contractor of any responsibility for information provided at that time. Bidders must have a current certificate of registration as a contractor for the last three years under the same name and have completed the required L&I training.
For Questions: Questions pertaining to the bid are to be sent via email to MichelleJ@kcha.org no later than seven (7) calendar days prior to bid due date. All responses shall be in the form of Addenda.
Posting: Addenda will be posted on KCHA's website.

BIDS ARE DUE:

Time: 11:00 am
Date: August 21, 2025

Address: King County Housing Authority, 600 Andover Park West, Tukwila, WA 98188
Submittal Process: * Bids may be sent via email to MichelleJ@kcha.org or mail to the above address
Attn.: Michelle Jackson

Process: All Bids must be received by KCHA no later than the above due date and time.
No Bids will be accepted after that date and time.

BID GUARANTEE: Not Required.

PERFORMANCE AND PAYMENT BONDS: As a condition of award Performance and Payment bonds for 100% of the Contract Award Amount shall be furnished for the Work. On contracts of one hundred fifty thousand dollars (\$150,000.00) or less, at Contractors option the requirement may be waived in lieu of an additional 5% (total 10%) retainage.

KCHA is an Equal Employment Opportunity Employer and strongly encourages minority-owned and women-owned businesses, socially and economically disadvantaged businesses, and small businesses to submit bids or to participate as subcontractors and suppliers on KCHA Contracts.

KCHA reserves the right to reject any or all bids or to waive any informality in the bidding. No bid shall be withdrawn for a period of 60 calendar days subsequent to the opening of the bids without the written consent of KCHA.

CONTACT PERSON: Michelle Jackson at MichelleJ@kcha.org

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 1 of 16

SECTION 01010 - SUMMARY

PART 1 - GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Identification: Landmark Deck, Stairs & Landing Replacement

1. Project Location: Landmark Apartments, 16330 NE 11th St., Bellevue, WA 98008

Building 13 – 8 Units, 2 Levels

The Work consists of the replacement of stairs, landings, elevated walkway, wood structure, foundations, railings, concrete sidewalk, liquid applied deck membrane and exterior painting.

2. Demolition

- a. Good faith asbestos inspection(s) testing to comply with RCW 49.26.013 as required to achieve scope of work.
- b. Stairs, landings, stem walls, foundations, structural materials, decking, railings, siding as necessary for proper deck flashing and concrete sidewalk.

3. New Construction (See Structural Plans for details.)

- a. Concrete foundations & steel post columns.
- b. Wood framed structure, soffit, and strip vents.
- c. Deck surface and waterproof membrane.
- d. Fiberglass railings.
- e. Deck structure per structural plans.
 - 1) Joists to match existing configuration.
 - 2) Joist hangers as required.
 - 3) ¾" T&G CDX plywood
 - 4) Wall to Deck Flashing – Kynar finish
 - 5) Drip edge at front of deck – Kynar finish.
 - 6) 1"x 12" fiber cement board fascia
 - 7) Deck coating – Rhino Extreme, Rhino Lining of Auburn 253.735.1961
 - a) Epoxy primer coat.
 - b) Spray applied waterproof membrane.
 - c) Extreme appx 80-100 mil thick
 - d) Base coat with quartz embedded.
 - e) UV Topcoat (charcoal)
- f. Fiberglass Handrail
 - 1) Handrail assembly to be bidder designed per structural plans.

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 2 of 16

- a) Refer to Glassrail-Handrail Reference Drawings for example.
- g. Painting
 - 1) Prime and paint all new materials to match existing. Paint the entire plane of soffit or wall.

1.2 WORK SEQUENCE

- A. The Work shall be completed in 90 calendar days from the date of Notice to Proceed.
- B. Contractor will submit a written schedule outlining dates and duration of the job, including:
 - 1. Construction start date.
 - 2. Schedule for work
 - 3. Anticipated final completion date.

1.3 LIQUIDATED DAMAGES

- A. Liquidated damages will be assessed for each calendar day that the Contractor exceeds the time for completion in the amount of \$250.

1.4 USE OF THE PREMISES

- A. Use of Site: Limit use of premises to work areas. Do not disturb portions of site beyond areas in which the Work is indicated.
 - 1. Owner Occupancy: Allow for resident occupancy of site. Owner will occupy the site and existing building during the entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate resident usage.
 - 2. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to residents and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - 3. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect property, the buildings, and occupants during construction period.
- B. Tenant access must be maintained during deck and stair replacement work. Resident access may be impacted during regular working hours of 8am – 5pm with 48hrs notice. Contractor means and methods shall determine how tenants access Building 13 during construction which may include construction of a temporary access route.

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 3 of 16

1.5 PERMITS

- A. KCHA is responsible for acquiring the building permit prior to Notice To Proceed. The plans provided in this package were submitted to the City of Bellevue for the building permit. Any changes made as a result of the permit review that involve added scope or cost will be considered as part of the Change Order process as described in General Conditions. Contractor is responsible for obtaining and paying for all other required permits and for the coordination of all required inspections. Contractor shall be reimbursed the face value of the permit fees plus overhead and profit as indicated in the specifications.

1.6 PAYMENT PROCEDURES

- A. Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
- B. Each Application for Payment shall be consistent with previous applications and payments.
- C. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
- D. Waivers of Lien: With each Application for Payment, submit conditional waivers lien from every entity who is lawfully entitled to file a lien arising out of the Contract and related to the Work covered by the payment.
 - 1. Submit partial waivers on each item for amount requested, before deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - a. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
- E. Final Payment Application: Submit final Application for Payment with releases and close out supporting documentation.

1.7 PROJECT MEETINGS

- A. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner, but no later than seven days after execution of the Agreement.
- B. Progress Meetings: Conduct progress meetings at weekly intervals.

1.8 SUBMITTALS

- A. Subcontract list. Prepare written information that demonstrates capabilities and experience of firm or persons.

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 4 of 16

- B. Follow Washington Industrial Safety and Health Act (WISHA) regional directives and provide a site-specific safety program that will require an accident prevention and hazard analysis plan for the contractor and each subcontractor on the work site. The Contractor shall submit a site-specific Accident Prevention Program (APP) to the Owner's representative prior to the initial scheduled construction meeting.

1.9 TEMPORARY FACILITIES

- A. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
- B. Use of Owner's existing electric power service will be permitted where available.
- C. Coordinate parking and laydown areas with property management. Do not park in marked tenant spaces.

1.10 EXECUTION REQUIREMENTS

- A. General: Maintain constant access and use of egress throughout construction. Contractor to determine means and methods for maintaining use and access to egress throughout project. If temporary stairs are required, they must meet ADA width and standard stair riser/tread ratio. Pathways to remain clear of debris and tools so that tenants can enter or exit as needed safely. Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.

1.11 CUTTING AND PATCHING

- A. Quality Assurance
 - 1. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
 - 2. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Owner's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- B. Performance
 - 1. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 2. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 5 of 16

invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.

- a. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
- b. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

1.12 CLOSEOUT PROCEDURES

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
 1. Prior to acceptance of the work at each building, clean project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
- B. Prior to final acceptance and final payment
 1. Submit a written warranty covering labor and materials for a period of two (2) years from final completion.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION (not used)

END OF SECTION 01100

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 6 of 16

SECTION 01524 - CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. The section includes Administrative and procedural requirements for construction waste management activities.
- B. All materials removed are to be legally disposed of offsite.

1.2 QUALITY ASSURANCE

- A. Regulatory Requirements: Conduct construction waste management activities in accordance with State of Washington RCW 39.04.13, and all other applicable laws and ordinances.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REMOVAL OF CONSTRUCTION WASTE MATERIALS

- A. Remove CDL waste materials from the project site on a regular basis. Do not allow CDL waste to accumulate on-site.
- B. Transport CDL waste materials off Owner's property and legally dispose of them.
- C. Burning of CDL waste is not permitted.

END OF SECTION 0152

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 7 of 16

SECTION 01732 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes demolition, and removal and replacement.

1.2 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.

1.3 PROJECT CONDITIONS

- A. Owner will occupy portions of the building immediately adjacent to the selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted. Provide not less than 72-hours' notice to Owner of activities that will affect Owner's operations.
- B. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
 - 1. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from authorities having jurisdiction.
- C. Owner assumes no responsibility for condition of areas to be selectively demolished.
 - 1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. Comply with all applicable laws regarding removal and disposal of hazardous materials.
 - 2. If materials suspected of containing hazardous materials are encountered, do not disturb and immediately notify Owner.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 8 of 16

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

- A. Use repair materials identical to existing materials or as indicated.
 - 1. If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 2. Use materials whose installed performance equals or surpasses that of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

3.2 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic paths if required by governing regulations.
 - 2. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
 - 3. Protect existing site improvements, appurtenances, and landscaping to remain.

3.3 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations.

END OF SECTION 01732

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 9 of 16

SECTION 07620 - SHEET METAL FLASHING AND TRIM

PART 4 - GENERAL

4.1 SUMMARY

A. This Section includes the following:

1. Deck Edge Flashing.
2. Deck to Wall Flashing.

4.2 SUBMITTALS

A. Product Data: For each product indicated.

4.3 QUALITY ASSURANCE

A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual." Conform to dimensions and profiles shown unless more stringent requirements are indicated.

PART 5 - PRODUCTS

5.1 FLASHING

- A. 24-gauge min. zinc galvanized complying with ASTM A-93 coating not less than 1.50 ounce zinc coating per sq. ft. (total for both sides), with pre-painted finishes on both sides. ("Kynar" color to match deck coatings).
- B. Fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item.
1. Minimum Pre-primed 24 gauge hot-dipped galvanized steel sheet, or aluminum.
 - a. Include folded hem on all exposed flashing.
 2. Window and door flashing.
 3. Bellyband and blocking flashing.
 4. Joint flashing plate.
 5. Fasteners: Hot-dipped galvanized or stainless steel as required to penetrate minimum 1-1/4 inch into solid backing.

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 10 of 16

PART 6 - EXECUTION

6.1 FLASHING INSTALLATION

- A. General: Install sheet metal deck and wall flashing and to comply with performance requirements and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight.

END OF SECTION 07620

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 11 of 16

SECTION 09911 - EXTERIOR PAINTS AND COATINGS

PART 7 - GENERAL

7.1 SECTION INCLUDES

- A. Surface preparation and field painting of exposed exterior items and surfaces.
 - 1. Wood
 - a. Deck framing, handrails
 - b. Vertical wood trim.
 - c. Any previously painted wood
 - 2. Fiber Cement Siding & Trim
 - 3. Metal
 - a. Entry Unit Doors
 - b. All previously painted metal
 - 4. Deck Coatings
 - a. Coatings for all decks
 - 5. Excluded
 - a. Vinyl Windows
 - b. Unpainted Foundations

7.2 REFERENCES

- A. ASTM D 16 - Standard Terminology Relating to Paint, Varnish, Lacquer, and Related Products.
- B. ASTM D 3359 - Standard Test Methods for Measuring Adhesion by Tape Test.
- C. ASTM D 1653 - Standard Test Methods for Water Vapor Transmission of Organic Coating Films.
- D. ASTM E-96 - Standard Test Methods for Water Vapor Transmission of Materials.
- E. SSPC, The Society for Protective Coatings - Web Site <http://www.sspc.org>:
 - 1. SSPC-SP1 Solvent Cleaning.
 - 2. SSPC-SP2 Hand Tool Cleaning.
 - 3. SSPC-SP3 Power Tool Cleaning.
 - 4. SSPC-SP7 Brush-Off Blast Cleaning.
- F. PDCA Paint and Decorating Contractors of America - Web Site <http://www.pdca.org>:
 - 1. PDCA Standards P1 through P15

7.3 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 12 of 16

- B. Finish Schedule: Submit finish schedule including color information, gloss and model number for each type and color of finish specified.
- C. Verification Samples: For each finish product specified, two samples, minimum size 6 inches square, representing actual product, color, and patterns.

7.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: All primary products specified in this section will be supplied by a single manufacturer with a minimum of ten years' experience.
- B. Installer Qualifications: All products listed in this section are to be installed by a single installer with a minimum of five years demonstrated experience in installing finishes and coatings of the same type and scope as specified.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques, color, sheen, and application workmanship.
 - 1. Finish areas designated by Owner.
 - 2. Finish two exterior doors for adhesion test purposes.
 - 3. Do not proceed with remaining work until workmanship, color, and sheen are approved by Owner.
 - 4. Refinish mock-up area as required to produce acceptable work.
 - 5. Provide up to three color change mockups.

7.5 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
- C. Take special safety precautions against hazards from toxic and flammable materials.
- D. Place paint and solvent contaminated cloths and materials, subject to spontaneous combustion, in containers and remove from job site each day.
- E. Keep open flame, electrical and static spark, and other ignition sources from flammable vapors and materials at all times.

7.6 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturers for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
- B. Post "WET PAINT" signs during application and curing of all coatings that may be accessed by other trades or the public.
- C. Post "NO SMOKING" signs during application and curing of solvent-based materials.

7.7 COORDINATION

- A. Coordinate Work with other operations and installation of finished materials to avoid damage to installed materials.

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 13 of 16

- B. Do not apply coating materials until moisture or dust-producing work or other appearance or performance impairing construction activities have been completed.

7.8 WARRANTY

- A. At project closeout, provide to Owner an executed copy of the manufacturer's standard limited warranty against manufacturing defect, outlining its terms, conditions, and exclusions from coverage.
 - 1. Include final written approval from paint manufacturer's representative that the product has been applied in accordance with the manufacturer's instructions as required to obtain manufacturer's standard limited warranty.

PART 8 - PRODUCTS

8.1 MATERIALS

- A. Materials selected for coating systems for each type of surface shall be the product of a single manufacturer.
- B. Do not thin finish coats without the manufacturer's approval.
- C. Unsuitability of specified products: Claims concerning the unsuitability of any material specified or inability to satisfactorily produce the work will not be entertained, unless such claim is made in writing to Owner before work is started.
- D. The number of coats scheduled is minimum. Apply additional coats at no additional cost if necessary to completely hide base materials, produce uniform color, and provide satisfactory finishing result.

8.2 PAINT MANUFACTURERS

- A. Acceptable Manufacturer: The Sherwin-Williams Company
 - 1. Representative – Andrew Dickson
Phone: 253-258-1560
Email: andrew.dickson@sherwin.com
- B. Acceptable Manufacturer: Behr Paint Company, Santa Ana, California 92705.
- C. 1. Regional Accounts Manager: Jill Marlatt, 425.761.9077, jmarlatt@behr.com

8.3 DECK COATING

- A. Armorthane – ArmorThane STS-300
- B. Rhino Lining – Rhino Lining TuffGrip
- C. Include primer as recommended by the manufacturer selected.

PART 9 - EXECUTION

9.1 EXAMINATION

- A. Examine surfaces scheduled to receive paint and finishes for conditions that will adversely affect execution, permanence or quality of work and which cannot be put into acceptable condition through preparatory work as included in Article 3.2 "Preparation ". Notify Owner in writing of any defects or conditions which will prevent a satisfactory installation.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may affect proper application.

SPECIFICATIONS

Landmark Apartments Deck, Stairs & Landing Replacement Building 13	Contract Number: DW2402931 Page 14 of 16
---	--

- C. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - 1. Concrete: 12 percent
 - 2. Portland Cement Plaster and Stucco: 12 percent
 - 3. Masonry (Clay and CMU): 12 percent
 - 4. Wood: 15 percent
 - 5. Gypsum Board: 12 percent
- D. Portland Cement Plaster Substrates: Verify that plaster is fully cured.
- E. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- F. Proceed with surface preparation and coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating is construed as acceptance of surfaces and conditions.

9.2 PREPARATION

- A. Clean surfaces thoroughly prior to coating application.
- B. Masking: All masking over windows in occupied units shall be removed at the end of each workday.
- C. Do not start work until surfaces to be finished are in proper condition to produce finished surfaces of uniform, satisfactory appearance.
- D. Stains and Marks: Remove completely, if possible, using materials and methods recommended by coating manufacturer; cover stains and marks which cannot be completely removed with isolating primer or sealer recommended by coating manufacturer to prevent bleed-through.
- E. Remove Mildew, Algae, and Fungus using materials and methods recommended by coating manufacturers.
- F. Remove dust and loose particulate matter from surfaces to receive coatings immediately prior to coating application.
- G. Remove or protect adjacent hardware, electrical equipment plates, mechanical grilles and louvers, lighting fixture trim, fabric canopies, and other items not indicated to receive coatings.
- H. Move or protect equipment and fixtures adjacent to surfaces indicated to receive coatings to allow application of coatings.
- I. Protect adjacent surfaces not indicated to receive coatings.
- J. Prepare surfaces in accordance with manufacturer's instructions for specified coatings and indicated materials, using only methods and materials recommended by coating manufacturer.

9.3 SURFACE PREPARATION

- A. All surfaces to be painted shall be pressure washed.
- B. Mildew
 - 1. A solution of 1-part Jomax house cleaner and mildew killer concentrate and one part water will be applied by a low-pressure system such as:

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 15 of 16

- a. Gallon pressure sprayer
 - b. Juice box
 - c. Very low-pressure airless sprayer with little or no “bounce back.”
2. All surfaces will be wetted with this mildewcide solution, not just the most easily accessible. Do not allow this solution to dry before rinsing thoroughly with clean water.
- C. Metal: Pressure wash and then sand, wire brush, or scrape as necessary to remove excess rust scale and loose/peeling paint not removed initial cleaning. Prime all bare metal as soon as possible after preparation.
- D. All other surfaces: Pressure wash and scrape to remove dirt contaminants, dust, and loose/peeling paint to provide a smooth surface for paint application. Hammer all protruding nail heads flush with surface before painting. Prime all bare wood areas before applying the finish coat. Caulk any open miters or cracks in surface.
- E. Any debris or chemical residue on windows due to power wash operation will be removed by thoroughly rinsing the windows and surrounding trim. Due care is to be exercised around window seals to prevent damage. Protect all vehicles, other surfaces or plants which will not be receiving paint, but which might be harmed by chemical exposure. Temporary coverings are normally the preferred method.
- F. All washed surfaces will have at least two days of continuous drying time (no rain). Surfaces to be painted must have no more than 13% moisture content before priming and painting commences. Washing one day and painting the next is not acceptable.
- G. The Owner's Representative and paint manufacturer's representative shall inspect preparation prior to the application of paint finishes. Contractor will rework surfaces not properly prepared to receive paint finishes to the satisfaction of the either.

9.4 APPLICATION - GENERAL

- A. Apply each coat to uniform coating thickness in accordance with manufacturer's instructions, not exceeding manufacturer's specified maximum spread rate for indicated surface; thins, brush marks, roller marks, orange-peel, or other application imperfections are not permitted.
- B. Allow the manufacturer's specified drying time, and ensure correct coating adhesion, for each coat before applying the next coat.
- C. Inspect each coat before applying the next coat; touch-up surface imperfections with coating material, feathering, and sanding if required; touch-up areas to achieve flat, uniform surface without surface defects visible from 5 feet.
- D. Do not apply succeeding coat until Owner and paint manufacturer's representative has approved previous coat; only approved coats will be considered in determining number of coats applied.
- E. Remove dust and other foreign materials from substrate immediately prior to applying each coat.
- F. Where coating application abuts other materials or other coating colors, terminate coating with a clean sharp termination line without coating overlapping.
- G. Where color changes occur between adjoining spaces, through framed openings that are of same color as adjoining surfaces, change color at outside top corner nearest to face of closed door.
- H. Re-prepare and re-coat unsatisfactory finishes; refinish entire area to corners or other natural terminations.

SPECIFICATIONS

**Landmark Apartments
Deck, Stairs & Landing Replacement Building 13**

Contract Number: DW2402931
Page 16 of 16

- I. Disconnect downspouts from building during application to ensure adequate coverage of trim or siding. Re attach immediately after application.

9.5 DECK COATINGS

- A. Deck coatings shall be installed in accordance with the manufacturer's written instructions.
- B. Apply primer and topcoats as directed by the manufacturer's representative.
- C. Apply thickness as recommended for plywood decking.

9.6 CLEANING

- A. Clean excess coating materials, and coating materials deposited on surfaces not indicated to receive coatings, as construction activities of this section progress; do not allow them to dry.
- B. Re-install hardware, electrical equipment plates, mechanical grilles and louvers, lighting fixture trim, and other items that have been removed to protect from contact with coatings.
- C. Reconnect equipment adjacent to surfaces indicated to receive coatings.
- D. Relocate to original position equipment and fixtures that have been moved to allow application of coatings.
- E. Remove protective materials.

9.7 PROTECTION

- A. Protect completed coating applications from damage by subsequent construction activities.
- B. Repair to Owner's acceptance coatings damaged by subsequent construction activities. Where repairs cannot be made to Owner's acceptance, re-apply finish coating to nearest adjacent change of surface plane, in both horizontal and vertical directions.

9.8 PAINT SCHEDULE

- A. Finish surfaces in accordance with schedule. Catalog names and numbers refer to products as manufactured or distributed by the Behr Paint Company, Santa Ana, California 92705, except as otherwise specified by Architect.
- B. Provide paint finishes of even, uniform color, free from cloudy or mottled appearance. Properly correct non-complying work to satisfaction of Owner's representative and representative of the Behr Paint Company.
- C. Some colors, especially accent colors, may require multiple finish coats for adequate coverage and opacity.
- D. The specified number of primer and finish coats is minimum acceptable. If full coverage and opacity is not obtained with specified number of coats, apply additional coats as necessary to produce required finish.

9.9 COLORS

- A. Colors shall be selected from mockups and shall consist of a field color, trim color, and door color.

END OF SECTION 09911

GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

CRITERIA

1. ALL NEW MATERIALS, WORKMANSHIP, DESIGN AND CONSTRUCTION FOR NEW SCOPE OF WORKS AREAS SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (2021 EDITION). EXISTING COMPONENTS AND STRUCTURAL SYSTEMS NOT RELATED TO THE NEW SCOPE OF WORK WERE NOT ANALYZED FOR CODE COMPLIANCE.	
2. DESIGN LOADING CRITERIA FLOOR LIVE LOAD (RESIDENTIAL WALKWAYS AND STAIRS) EARTHQUAKE	100 PSF RISK CATEGORY 2, $I_e = 1.0$ $S_s = 1.30$, $S_1 = 0.45$ SITE CLASS = D (ASSUMED) $S_{DS} = 1.04$, $S_{D1} = 0.36$, SDC = D, BAYS = 1 TIMBER FRAME CANTILEVERED COLUMNS R = 15 CS = 0.632, R40 = 13 DESIGN BASE SHEAR V=61 KIPS EQUIVALENT LATERAL FORCE PROCEDURE

DESIGN LOADING CRITERIA - DEAD LOADS

WALKWAY DEAD LOAD
PRE-CAST CONCRETE TREADS

14 PSF

32 PSF

16. FOUNDATION AND SLAB NOTES: SUB-GRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN BY THE INDIVIDUAL TESTING AGENCY OR LOCAL BUILDING OFFICIAL AT THE TIME OF EXCAVATION.

FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH (CONTROLLED, COMPACTED STRUCTURAL FILL OR BOTH) AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY. THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB OR BUILDING INSPECTOR. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE.

ALLOWABLE SOIL PRESSURE
LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED)
PASSIVE EARTH PRESSURE

1500 PSF (ASSUMED)
60 PCF/35 PCF (ASSUMED)
300 PCF (ASSUMED)

CONCRETE

17. CONCRETE SHALL BE MOVED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH IBC SECTION 1908 AND ACI 301. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF F_c = 2500 PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-10 BAGS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 6" OR LESS.

THE MINIMUM AMOUNTS OF CEMENT MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL. TWO WEEKS PRIOR TO PLACING ANY CONCRETE, THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER-CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 318 SECTIONS 19.1.1 & 19.1.1.4. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION. THE COST OF WHICH SHALL BE PAID BY THE GENERAL CONTRACTOR. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C660, C434, C618, C593, AND C1011. TOTAL AIR CONTENT SHALL BE IN ACCORDANCE WITH ACI 318 TABLE 19.3.3.1.

18. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT B1) GRADE 60 F_y = 60,000 PSI. EXCEPTION: ANY BARS SPECIFICALLY NOTED ON THE DRAWINGS AS GRADE 40 F_y = 40,000 PSI. GRADE 60 REINFORCING BARS INDICATED ON DRAWINGS TO BE WELDED SHALL CONFORM TO ASTM A1006. REINFORCING COMPLYING WITH ASTM A615/616 MAY BE WELDED ONLY IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN AISC D14 ARE SUBMITTED.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-421.

SPIRAL REINFORCEMENT SHALL BE PLAIN WIRE CONFORMING TO ASTM A615, GRADE 60, F_y = 60,000 PSI.

19. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 318-66 DETAILING MANUAL AND THE LATEST EDITION OF ACI 318. LAP ALL CONTINUOUS REINFORCEMENT 30 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS 30 BAR DIAMETERS OR 2'-0" MINIMUM. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8' AT SIDES AND ENDS.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

20. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES, EARTH FACE
FORMED SURFACES EXPOSED TO EARTH (I.E. WALLS BELOW GROUND) OR WEATHER

3"
2"
(% BARS OR LARGER)
(% BARS OR SMALLER) 1 1/2"

21. CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES, BOTH CAST-IN-PLACE AND PRECAST.

22. EMBEDDED ITEMS IN CAST-IN-PLACE CONCRETE: EMBEDDED ITEMS IN CAST-IN-PLACE CONCRETE SHALL NOT BE UET-SET UNLESS SPECIFICALLY APPROVED BY ENGINEER OF RECORD. THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO: REINFORCING STEEL, ANCHOR BOLTS, DEFORMED BAR ANCHORS, EMBED PLATES, OR OTHER MISC. STEEL SHAPES TO BE CAST INTO CONCRETE.

23. PRECAST PRESTRESSED CONCRETE UNITS SHALL BE DESIGNED BY THE MANUFACTURER FOR THE LOADS AND SPANS SHOWN ON THE PLANS. MANUFACTURER SHALL DESIGN FOR SPECIAL CONDITIONS AT OPENINGS AND BLOCK-OUTS SHOWN ON STRUCTURAL, ARCHITECTURAL, AND MECHANICAL DRAWINGS. DESIGN AND FABRICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED SPECIFICATIONS FOR THE UNIT FURNISHED AND THE LATEST EDITION OF ACI 318. SUBMIT COMPLETE DESIGN CALCULATIONS AND SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. ALL SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF WASHINGTON.

PRECAST CONCRETE MEMBERS SHALL BE ADEQUATELY BRACED UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONTRACTOR SHALL PROVIDE ANY EXTRA REINFORCEMENT, INSERTS, LIFTING DEVICES, PRESTRESSING, ETC., REQUIRED FOR HANDLING AND ERECTION.

24. EPOXY-GROUTED ITEMS SPECIFIED ON THE DRAWINGS SHALL BE GROUTED WITH HIT-RE 5000 V3 ADHESIVE ANCHOR SYSTEMS AS MANUFACTURED BY HILTI, INC., SIMPSON SET-3G AS MANUFACTURED BY SIMPSON STRONG-TIE, OR PUREPO® ADHESIVE ANCHOR SYSTEM AS MANUFACTURED BY DEWALT - POLIERS OR AN ENGINEER APPROVED ALTERNATE THAT HAS I.C.C. TEST DATA FOR THEIR SPECIFIC PRODUCT AND APPLICATION. INSTALL IN STRICT ACCORDANCE WITH I.C.C. REPORTS FOR SPECIFIC EPOXY. UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, HOLE SIZE SHALL BE 1/8" LARGER THAN BAR, ROD OR BOLT SIZE. NOTE: NO WELDING IS TO TAKE PLACE WITHIN 24" OF HARDENED EPOXY.

WOOD

25. FRAMING LUMBER SHALL BE KILN DRIED, AND GRADED AND MARKED IN CONFORMANCE WITH U.S.C.B. STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 11, LATEST EDITION. FURNISH TO THE FOLLOWING MINIMUM STANDARDS, UNLESS OTHERWISE NOTED ON THE PLANS:

JOISTS: (2 X MEMBERS)

(3 X AND 4 X MEMBERS)

BEAMS AND STRINGERS:
(INCLUDING 6 X 10 AND LARGER MEMBERS)

POSTS AND TIMBERS: (6 X 6 AND LARGER)

PLATES & MISCELLANEOUS LIGHT FRAMING:

STRUCTURAL WALL STUDS:

BOLTED FRAMING, NAILERS, LEDGERS, AND PLATES:

FRAMING MEMBERS NOTED AS PRESSURE TREATED (PT):
(LEDGERS, STUDS, POSTS, PLATES, JOISTS & BEAMS)

PT PLATES AT ALL STRUCTURAL WALLS FOR 2 (3) STORIES:

DOUG FIR #2
MINIMUM BASIC DESIGN STRESS, FB = 3000 PSI

DOUG FIR #1
MINIMUM BASIC DESIGN STRESS, FB = 1000 PSI

DOUG FIR #1
MINIMUM BASIC DESIGN STRESS, FB = 1350 PSI

DOUG FIR #2
MINIMUM BASIC DESIGN STRESS, FB = 1500 PSI

DOUG FIR STUD GRADE
MINIMUM BASIC DESIGN STRESS, FB = 1000 PSI

DOUG FIR #2
MINIMUM BASIC DESIGN STRESS, FB = 3000 PSI

DOUG FIR #2
MINIMUM BASIC DESIGN STRESS, FB = 2500 PSI

DOUG FIR STUD GRADE
MINIMUM BASIC DESIGN STRESS, FB = 1000 PSI

26. PLYWOOD AND OSB SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PSI AND DOC PSI. SEE PLANS FOR THICKNESS, PANEL IDENTIFICATION INDEX AND NAILING REQUIREMENTS.

27. ALL WOOD MEMBERS EXPOSED TO WEATHER OR IN DIRECT CONTACT WITH SOIL SHALL BE PRESSURE-TREATED WITH ALKALINE COPPER QUATERNARY (ACQ). ALL WOOD MEMBERS (INCLUDING PLATES) IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH SODIUM BORATE (SEK).

28. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NO-C-2014. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE I.C.C. APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS. PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE COMMON ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

ALL JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "U" SERIES JOIST HANGERS. ALL MULTIPLE JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "H" SERIES JOIST HANGERS.

ALL METAL CONNECTORS IN CONTACT WITH PRESSURE-TREATED LUMBER SHALL HAVE MECHANICALLY APPLIED ZINC COATING IN ACCORDANCE WITH ASTM B633, CLASS 55. THIS INCLUDES WASHERS, SCREWS, NAILS, HANGERS, AND ANY OTHER MISCELLANEOUS LIGHT-GAGE METAL CONNECTORS. WHERE CONNECTORS ARE USED AT EXTERIOR CONDITIONS IN PRESSURE-TREATED LUMBER, CONNECTORS SHALL BE COATED TO G60 (HOT-DIP GALVANIZED TO 1.05 OUNCES PER SQUARE FOOT) MINIMUM. IN ANY CONDITION, METAL CONNECTORS CONSISTING OF STAINLESS STEEL TYPE 316 MAY BE USED IN LIEU OF ZINC COATED CONNECTORS DESCRIBED ABOVE.

29. HOLDDOWS CALLED OUT BY LETTERS "HD" ARE MANUFACTURED BY THE SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NO-C-2014. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE I.C.C. APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. EACH SIMPSON HOLD-DOWN SHALL BE BOLTED TO A MINIMUM OF (2) FULL HEIGHT STUDS. SEE SCHEDULE ON PLANS FOR FURTHER STUD REQUIREMENTS. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. ALL HOLDDOWS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD.

30. WOOD FRAMING NOTES-- THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS.

- A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE. MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO TABLE 2304.1(2) OF THE INTERNATIONAL BUILDING CODE. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE COMMON. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD.

- B. WALL FRAMING: ALL STUD WALLS SHOWN AND NOT OTHERWISE NOTED SHALL BE 2 X 4 STUDS @ 16" O.C. AT INTERIOR WALLS AND 2 X 6 @ 16" O.C. AT EXTERIOR WALLS. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS. TWO 2 X 8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW AT STUD WALLS WITHOUT PLYWOOD SHEATHING. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS LESS THAN OR EQUAL TO 8 FT IN HEIGHT. FOR HEIGHTS GREATER THAN 8 FT, PROVIDE CONTINUOUS SOLID BLOCKING AT 4'-0" O.C.

ALL STUD WALLS ATTACHED TO CONCRETE FOUNDATION WALLS SHALL HAVE THEIR LOWER WOOD PLATES BOLTED WITH 5/8" DIAMETER ANCHOR BOLTS @ 6'-0" O.C. WITH 3" X 3" X 1/4" SQUARE WASHERS OR 3" DIAMETER ROUND WASHERS UNLESS OTHERWISE NOTED. LAYOUT OF WALL PLATES, STUDS, AND ANCHORS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 2308.6 OF THE 2021 IBC. ALL BILL PLATE PIECES SHALL HAVE A MINIMUM OF TWO ANCHOR BOLTS EMBEDDED INTO CONCRETE, WITH THE FIRST ANCHOR BOLT LOCATED NOT MORE THAN 12" FROM THE END OF THE PLATE, AND NO CLOSER THAN 4" TO THE END. ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 1/2" NAILS AT 12" O.C. STAGGERED, UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH 1/2" O.C. STAGGERED. REFER TO THE PLANS AND SHEAR WALL SCHEDULE FOR REQUIRED SHEATHING AND NAILING.

- C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND MORE THAN ONE-HALF OF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE BRIDGINS @ 8' O.C. AND SOLID BLOCKING AT ALL BEARING POINTS. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. PROVIDE SIMPSON 425A CLIPS AT ALL ROOF JOIST/RAFTERS SUPPORTS.

TORNAIL JOISTS TO SUPPORTS WITH TWO 1/2" NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH 1/2" O.C. STAGGERED.

UNLESS OTHERWISE NOTED ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED WITH 8D NAILS @ 6' O.C. TO FRAMED PANEL EDGES AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" O.C. TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN ROOF JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES OR PROVIDE SOLID BLOCKING AT BLOCKED FLOOR AND ROOF DIAPHRAGMS. INSTALL FLAT 3X BLOCKING AT ALL UNFRAMED PANEL EDGES AND NAIL WITH EDGE NAILING SPECIFIED. TORNAIL BLOCKING TO PLATE WITH 1/2" O.C. OR (2) 1/2" 1/2" EACH END AT SUPPORTS UNLESS OTHERWISE NOTED. AT UNBLOCKED DIAPHRAGMS, ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE-AND-GROOVE JOINTS AT UNBLOCKED EDGES OR SHALL BE SUPPORTED WITH SOLID 2X BLOCKING.

- D. NAILING: MINIMUM NAIL DIAMETER AND LENGTH SHALL BE AS FOLLOWS:

	NAIL SIZE ON DRAWINGS OR DETAILS	DIAMETER AND LENGTH
SHEATHING NAILS	8D	0131" X 25"
	10D	0148" X 25"
FRAMING NAILS	8D	0131" X 25"
	10D	0148" X 31"
	16D	0161" X 35"



I.L. GROSS
STRUCTURAL
ENGINEERS

23914 56th Avenue W. ~ Suite 200
Mountlake Terrace, WA 98043-5263
Ph: (206) 623-0769, (425) 640-7333

www.ilgross.com



03/2025

LANDMARK APARTMENTS

16202 NE 11TH ST
BELLEVUE, WA 98008

REVISIONS

NO.	DATE	DESCRIPTION
1	03/18/25	PERMIT CORRECTIONS

TITLE

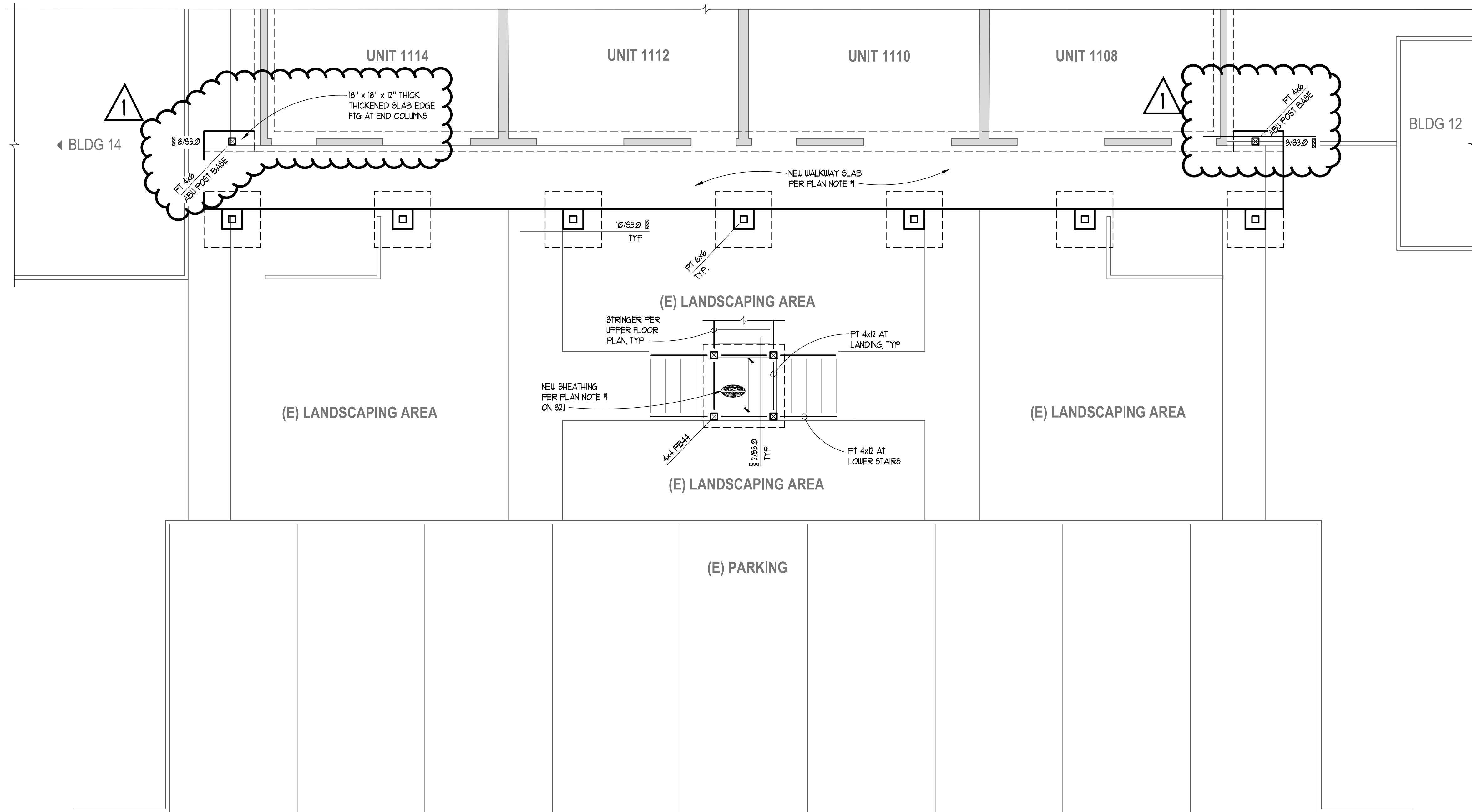
GENERAL
STRUCTURAL
NOTES

DESIGNED	YH
DRAWN	KPH
CHECKED	YH
DATE	10/21/2014
JOB NUMBER	

SHEET NO.

S1.0

CITY REVIEW



- PLAN NOTES**
- PROVIDE NEW 4" CONCRETE SLAB ON GRADE w/ 6x6 - W21 x 21 WLM, UON.
 - INDICATES CONCRETE WALL AND FOOTING.
 - INDICATES NEW POST AND PAD FOOTING.
 - INDICATES BEAM OR HEADER PER PLAN. PROVIDE MIN. (2) 2x6 AT ROOF. PROVIDE MIN (2) END STUDS TO SUPPORT NEW BEAMS AND HEADERS
 - SEE DETAIL 11/63.0 FOR HOLDOWN ANCHOR BOLTS
 - SEE DETAIL 12/63.0 FOR TYP ANCHOR BOLT EMBEDMENT
 - SEE SHEET 63.0 FOR TYPICAL CONCRETE DETAILS
 - EXISTING 4" CONCRETE SLAB ON GRADE TO REMAIN.

1

GROUND FLOOR PLAN

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

0

4

8



I.L. GROSS
STRUCTURAL
ENGINEERS

23914 56th Avenue W. ~ Suite 200
Mountlake Terrace, WA 98043-5263
Ph: (206) 623-0769, (425) 640-7333
www.ilgross.com



LANDMARK APARTMENTS

16202 NE 11TH ST
BELLEVUE, WA 98008

REVISIONS		
NO.	DATE	DESCRIPTION
1	03/18/25	PERMIT CORRECTIONS

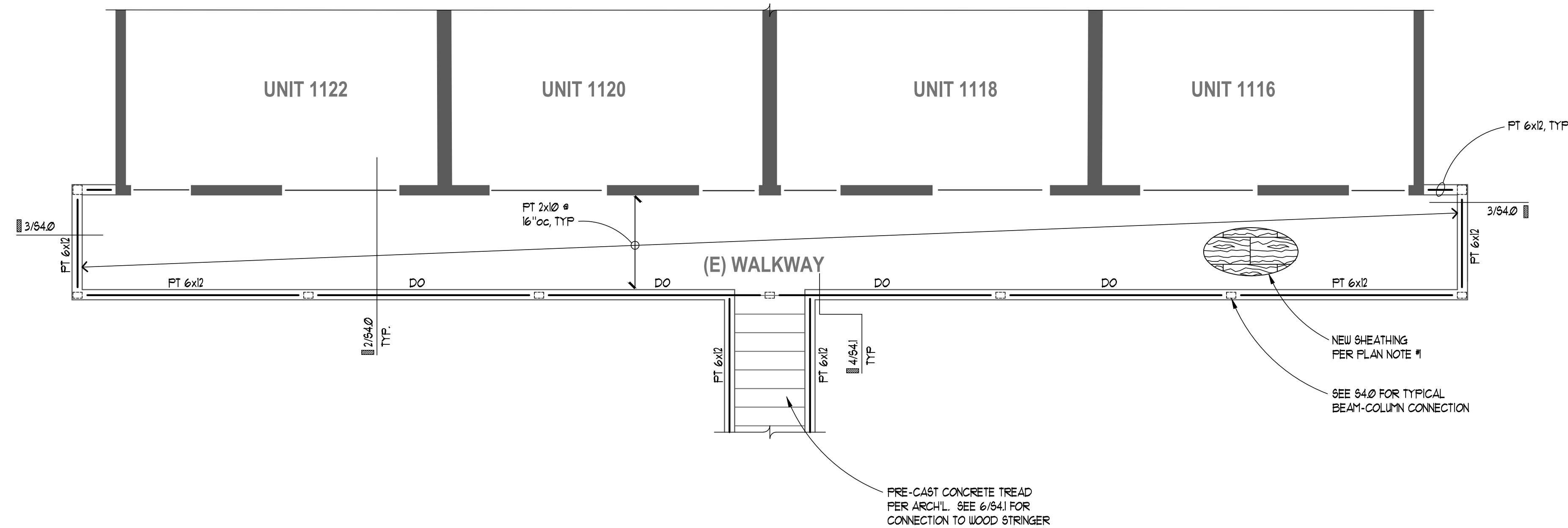
TITLE
FIRST FLOOR /
FOUNDATION
PLAN

DESIGNED	YH
DRAWN	KTH
CHECKED	YH
DATE	10/21/2014
JOB NUMBER	

SHEET NO.

S2.0

CITY REVIEW

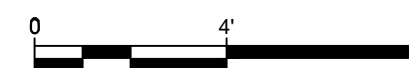


PLAN NOTES

- NEW FLOOR DIAPHRAGM SHALL BE 3/4" CDX PLYWOOD WITH MIN. PANEL INDEX OF 3216, NAILED WITH 2x4s x 3" NAILS AT:
6' oc AT ALL DIAPHRAGM BOUNDARIES AND SHEAR WALLS
6' oc AT ALL PANEL EDGES (BLOCKING REQUIRED)
12' oc AT FIELD
- INDICATES SPAN DIRECTION AND EXTENT OF FLOOR JOISTS. PER PLAN, PROVIDE PT 2x10 @ 16' oc JOISTS UON.
- SEE SHEET S4.0 FOR TYPICAL WOOD FRAMING DETAILS
- INDICATES WALL BELOW
- SEE 15/54.0 FOR TYPICAL HANGER SCHEDULE
- CONTRACTOR SHALL NOT DRILL THRU SHEAR WALL END STUDS OR BEAM SUPPORTS FOR MECHANICAL PENETRATIONS.
- SEE 6/54.1 FOR CONCRETE TREAD TO WOOD STRINGER DETAIL.

1 SECOND FLOOR PLAN

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



I.L. GROSS
STRUCTURAL
ENGINEERS

23914 56th Avenue W. ~ Suite 200
Mountlake Terrace, WA 98043-5263
Ph: (206) 623-0769, (425) 640-7333
www.ilgross.com



03/2025

LANDMARK APARTMENTS

16202 NE 11TH ST
BELLEVUE, WA 98008

REVISIONS

NO.	DATE	DESCRIPTION
1	03/18/25	PERMIT CORRECTIONS

TITLE

MAIN FLOOR
FRAMING PLAN

DESIGNED	YH
DRAWN	KH
CHECKED	YH
DATE	10/21/2024
JOB NUMBER	

SHEET NO.

S2.1

CITY REVIEW

(For Grade 60, Uncoated Bars, Normal Weight Concrete)

* "TOP BARS" ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.

IF CLEAR CONCRETE COVER IS NOT GREATER THAN THE DIAMETER OF THE BAR OR THE CENTER TO CENTER SPACING IS NOT GREATER THAN 3 BAR DIAMETERS, THEN VALUES SHALL BE INCREASED BY 43%.

SPLICES IN HORIZONTAL REINFORCING SHALL NOT OCCUR IN BOTH CURTAINS OF REINFORCING AT THE SAME LOCATION.

BAR SIZE	$f'_c = 2500$ PSI
# 3	9"
# 4	12"
# 5	15"
# 6	18"

1. SIDE COVER MUST BE EQUAL TO OR GREATER THAN 2½".
2. END COVER FOR 90° HOOKS MUST BE EQUAL TO OR GREATER THAN 2"
3. 90° HOOKS ONLY

CALLOUT	AB SIZE	CAPACITY (Kips)
HDU2	5/8" AB.	262
HDU4	5/8" AB.	419
HDU5	5/8" AB.	543
HDU8	1" AB	835
HDU11	1" AB	1127

ALTERNATE HOLDDOWN ANCHORS MAY BE SUBSTITUTED AT THE CONTRACTOR OR OWNER'S OPTION, PROVIDED THEY ARE APPROVED BY THE ENGINEER OF RECORD AND HAVE A CURRENT ICC REPORT STATING THEIR CAPACITY MEETS OR EXCEEDS THE DESIGN CAPACITY LISTED ABOVE.

HOLDOWN ANCHOR SCHEDULE

HOLDOWN EMBEDMENTS LISTED ARE BASED ON THE ALLOWABLE CAPACITIES DEVELOPED IN CONCRETE WALLS WITH TYPICAL REINFORCING SPACED NOT MORE THAN 18" ON CENTER.

ANCHOR CAPACITIES SHOWN ARE FOR HEAVY HEX HEAD TYPE BOLTS CONFORMING TO ASTM F1554, GRADE A36 OR A507. ALTERNATE ANCHORTYPES MAY BE ALLOWED, BUT MAY REQUIRE EMBEDMENTS GREATER THAN THOSE SHOWN. PRE-ENGINEERED ANCHORS SUCH AS "56TS" AND "PAB" ANCHORS MANUFACTURED BY SIMPSON STRONG TIE, ARE ALLOWED PROVIDED THEY HAVE CURRENT ICC REPORTS FOR CAPACITIES GREATER THAN OR EQUAL TO THOSE LISTED. PRE-ENGINEERED ANCHORS SHOULD BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.

4" CONC. SLAB ON GRADE PER PLAN

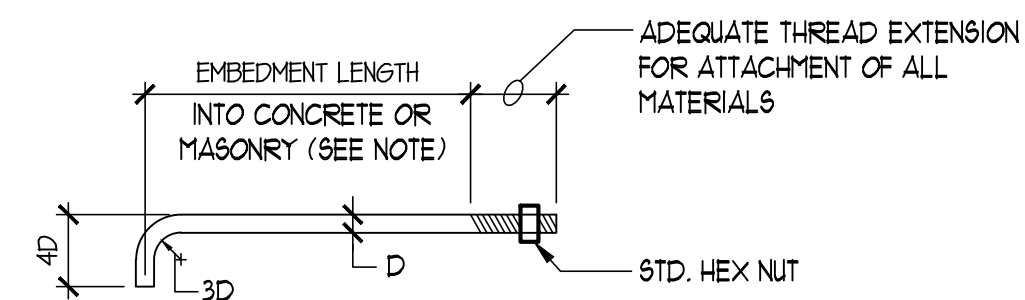
ø 4"

8"

4 #4 @ 24" oc EMBED 8" INTO EX. CONC.

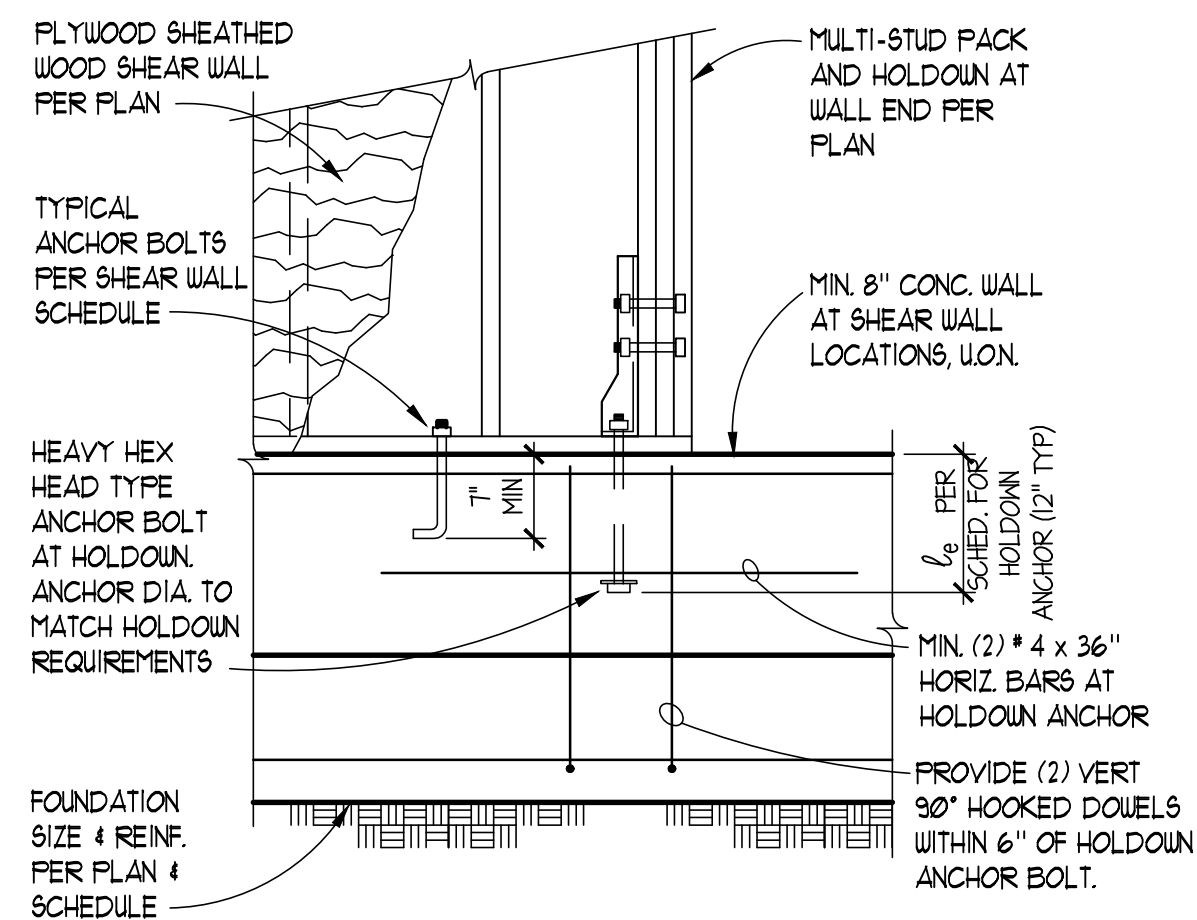
4 GROUT SOLID W/ 4 #4 @ 24" oc

NEW TO EX SLAB CONNECTION

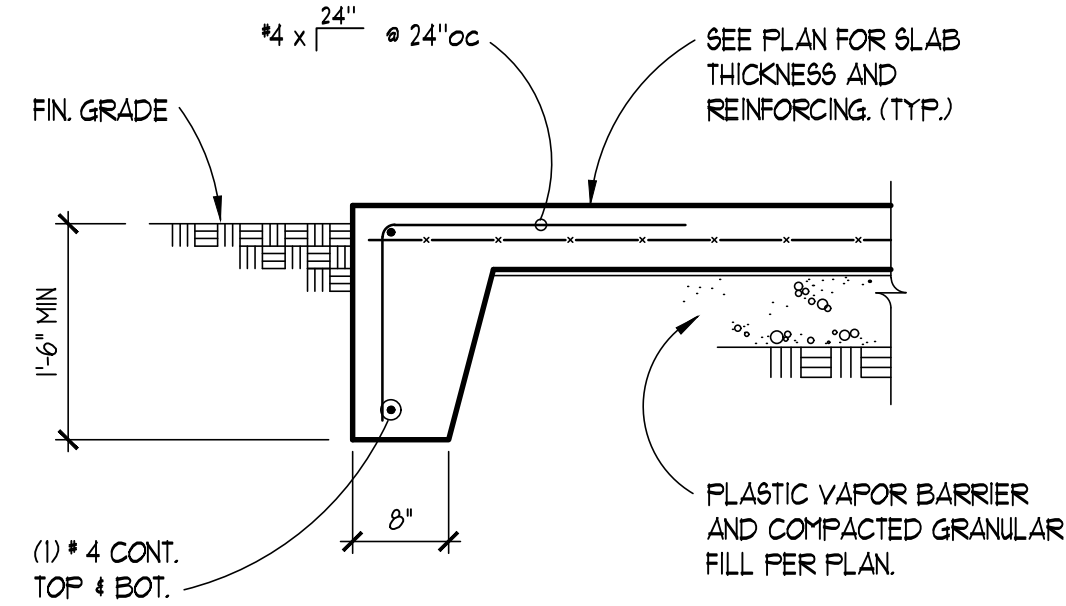


BOLT DIA. "D"	MINIMUM EMBEDMENT	
	ANCHOR BOLTS IN HORIZ. SURFACE	ANCHOR BOLTS IN VERT. SURFACE
1/2"	5"	7"
5/8"	5"	7"
3/4"	5"	7"

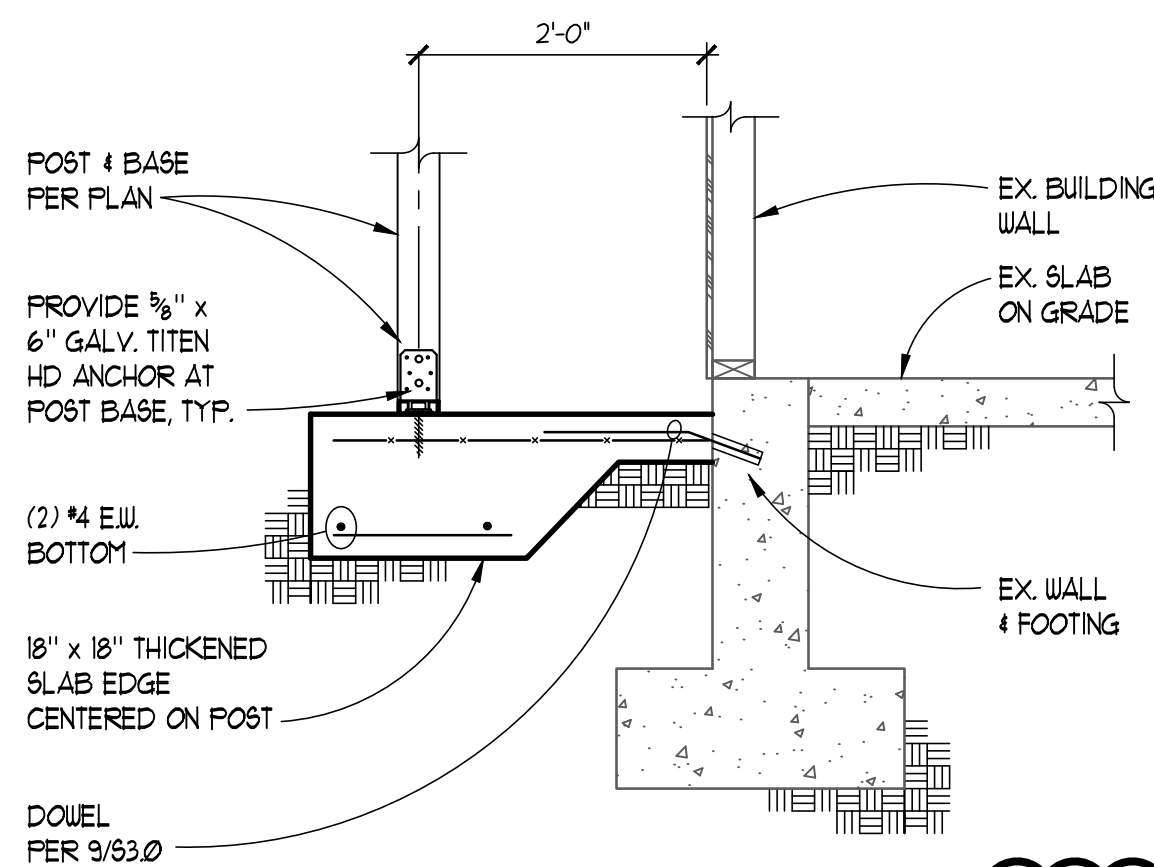
NOTE: ANCHOR BOLT EMBEDMENT IN VERTICAL SURFACE
APPLIES TO CONCRETE ONLY.



HOLDOWN EMBEDMENTS



TYPICAL TURNED DOWN SLAB EDGE



SEE PLAN FOR SLAB THICKNESS AND REINFORCING. (TYP.)

SAWCUT $\frac{1}{8}$ " x $\frac{1}{2}$ " CONTROL JOINT

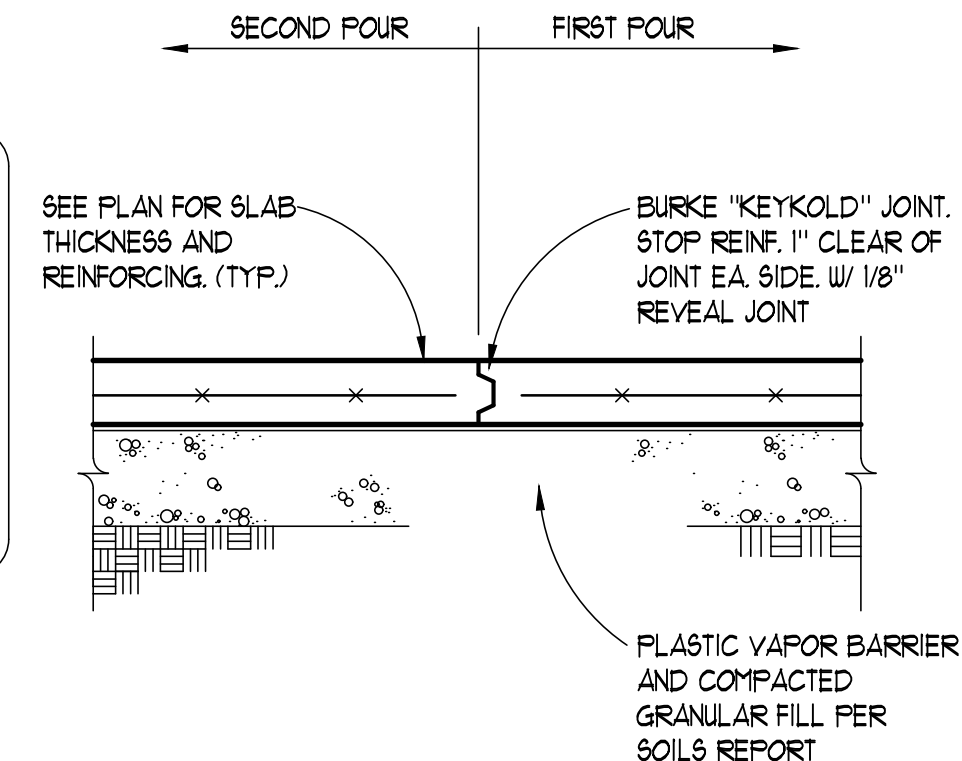
PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS ON GRADE TO BREAK UP SLAB INTO RECTANGULAR AREAS OF 400 SQUARE FEET OR LESS. AREAS TO BE APPROX. SQUARE AND HAVE NO ACUTE ANGLES. JOINT LOCATIONS TO BE APPROVED BY THE ARCHITECT.

OUT ALT. WIRES AT JOINT

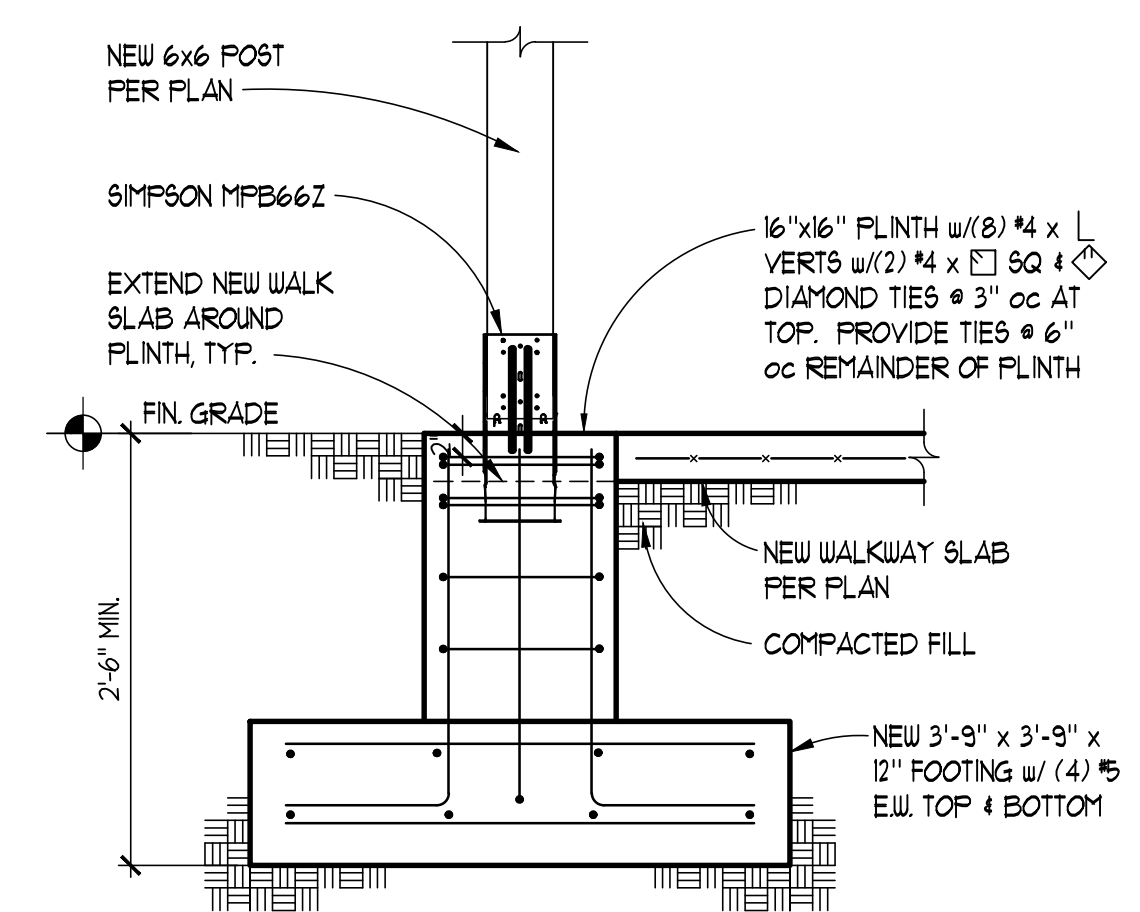
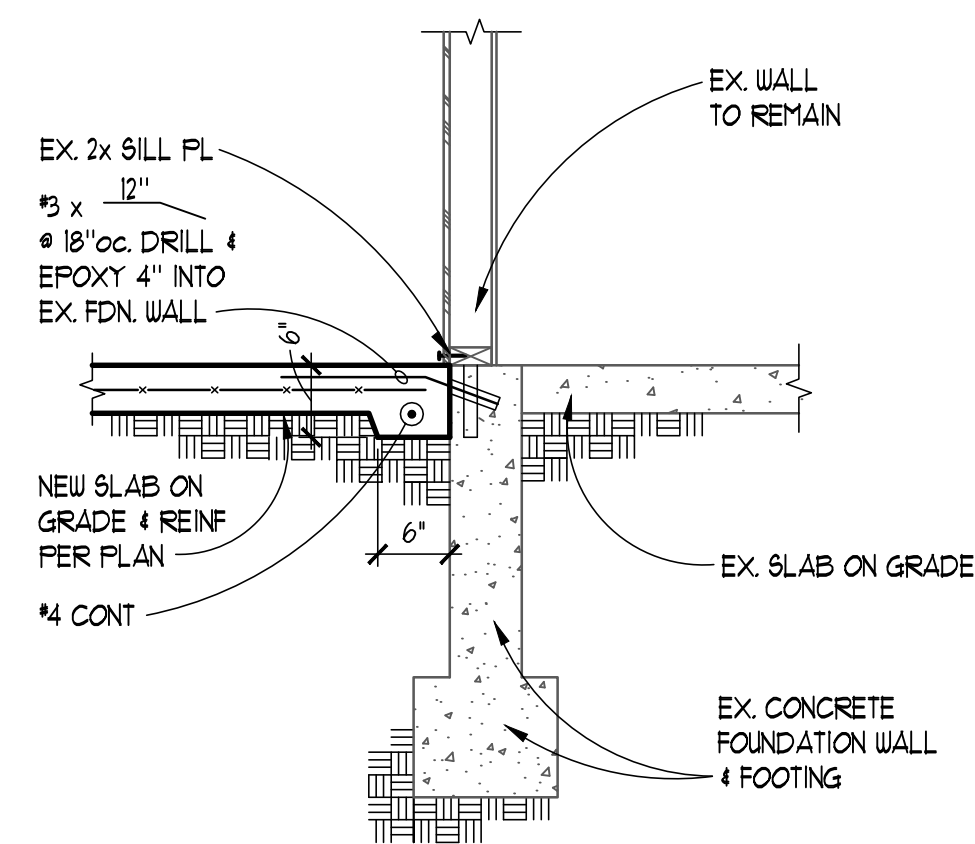
PLASTIC VAPOR BARRIER AND COMPACTED GRANULAR FILL PER SOILS REPORT

The diagram shows a cross-section of a concrete slab on grade. A vertical line represents a control joint, with a label indicating it is a sawcut $\frac{1}{8}$ " x $\frac{1}{2}$ ". Reinforcing bars (rebar) are shown within the slab, with a note pointing to them stating 'SEE PLAN FOR SLAB THICKNESS AND REINFORCING. (TYP.)'. At the joint, the rebar is cut, and a note says 'OUT ALT. WIRES AT JOINT'. Below the slab, a layer of plastic vapor barrier and compacted granular fill is shown, with a note pointing to it stating 'PLASTIC VAPOR BARRIER AND COMPACTED GRANULAR FILL PER SOILS REPORT'. A text box on the right provides additional instructions: 'PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS ON GRADE TO BREAK UP SLAB INTO RECTANGULAR AREAS OF 400 SQUARE FEET OR LESS. AREAS TO BE APPROX. SQUARE AND HAVE NO ACUTE ANGLES. JOINT LOCATIONS TO BE APPROVED BY THE ARCHITECT.'

CONTROL JOINT



CONSTRUCTION JOINT



POST TO FOOTING DETAIL

[illegible]

TITLE

TYPICAL CONCRETE DETAILS

DESIGNED	VM
DRAWN	KMH
CHECKED	VM
DATE	10/21/2024
JOB NUMBER	

SHEET NO.

S3.0

CITY REVIEW



I.L. GROSS
STRUCTURAL
ENGINEERS

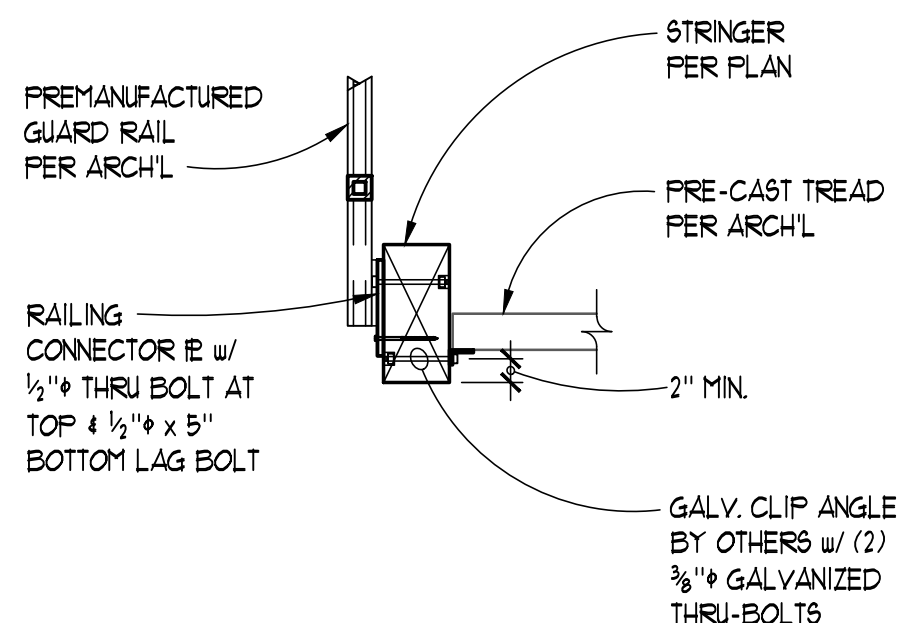
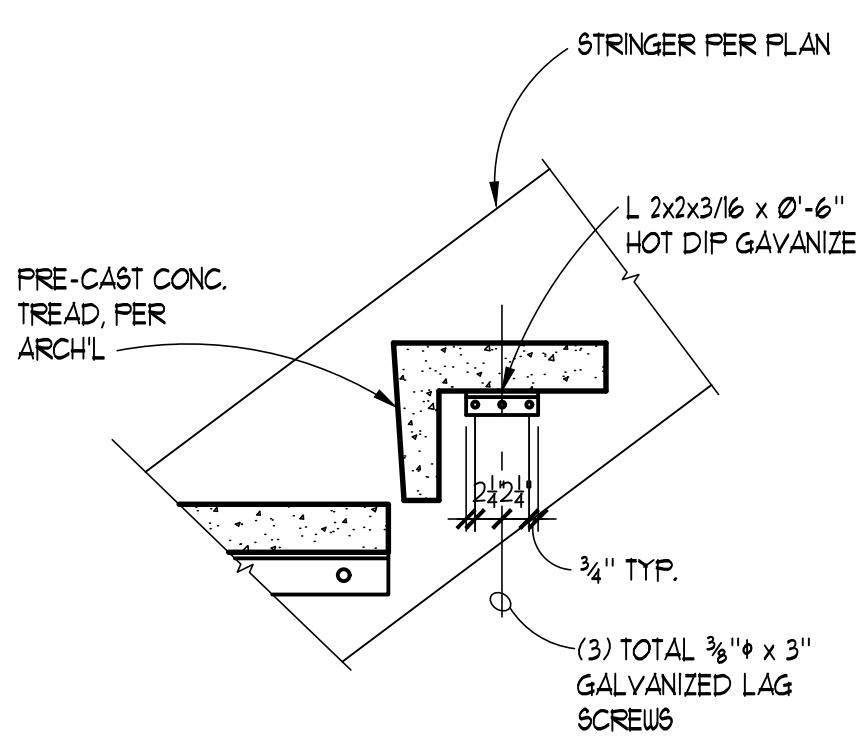
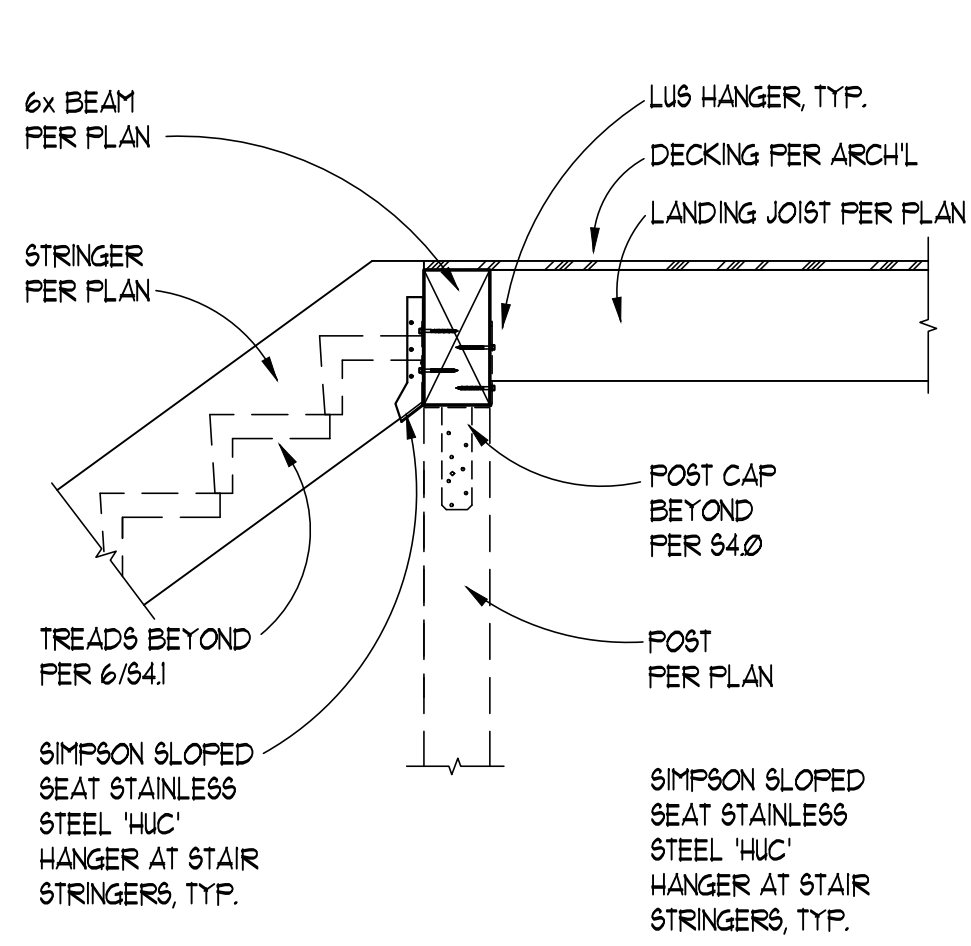
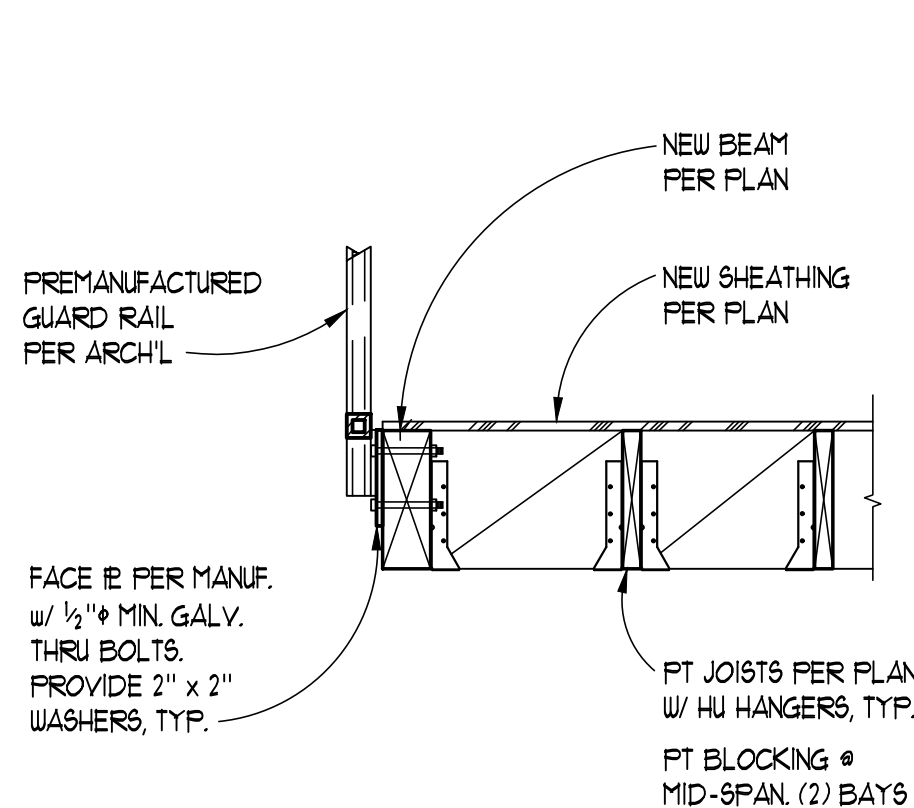
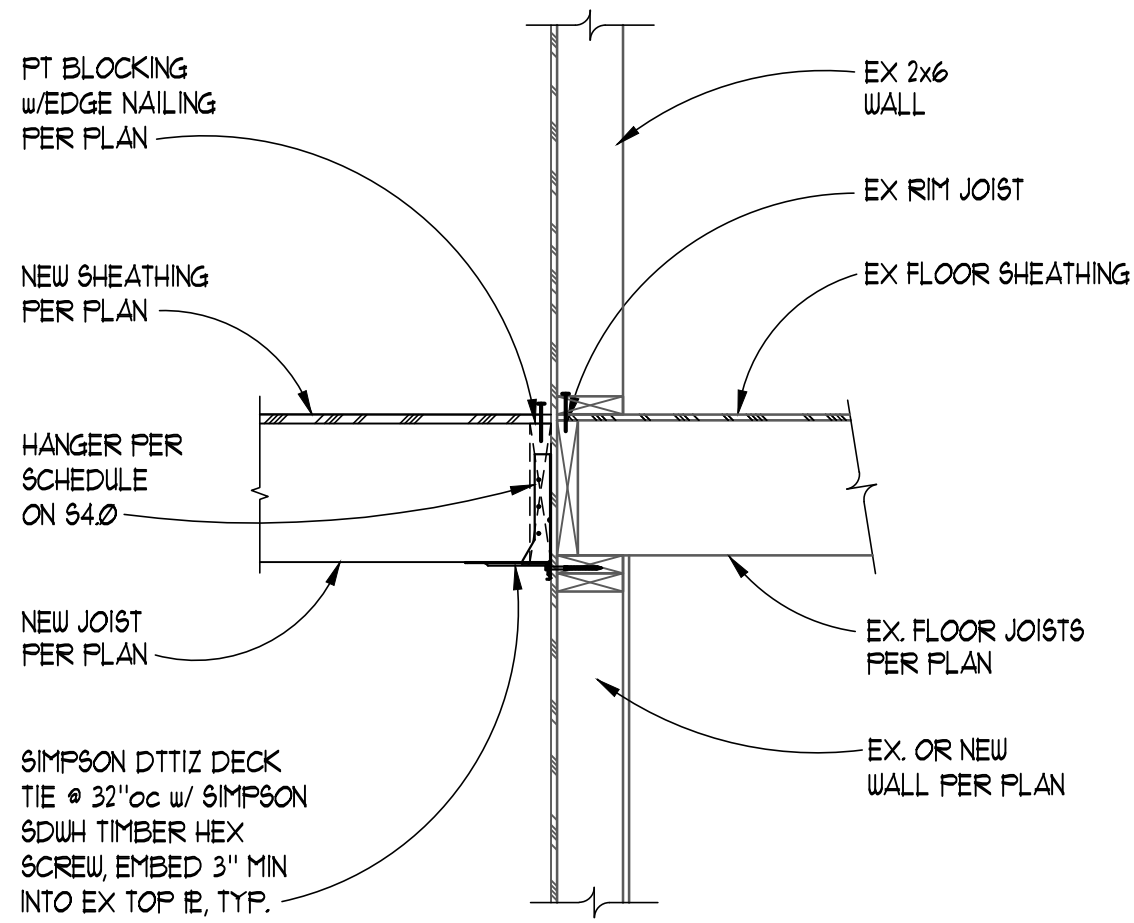
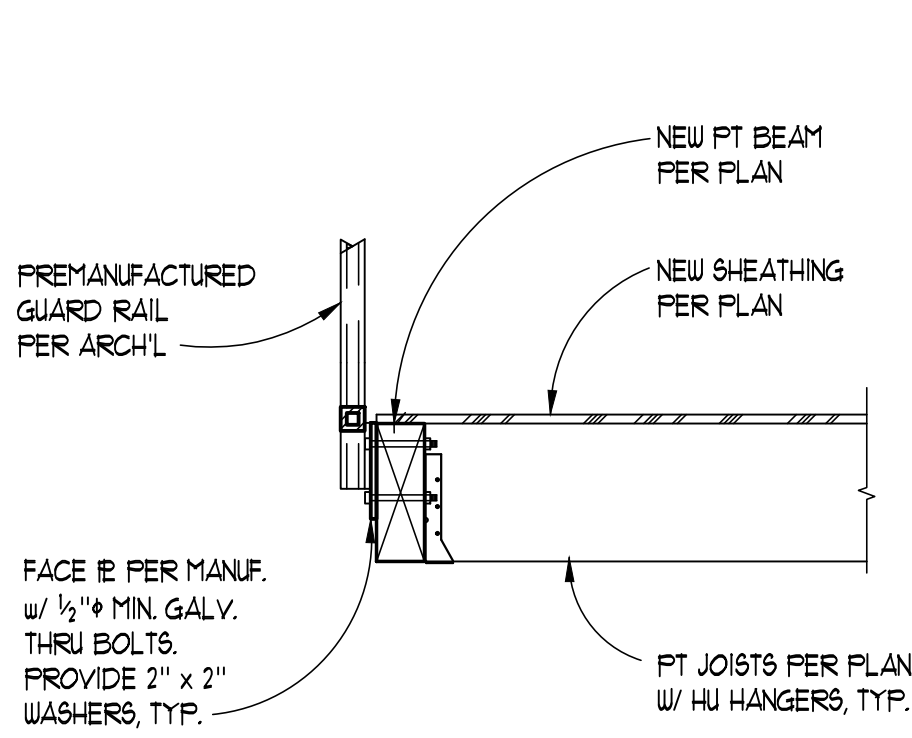
23914 56th Avenue W. ~ Suite 200
Mountlake Terrace, WA 98043-5263
Ph: (206) 623-0769, (425) 640-7333
www.ilgross.com



03/2025

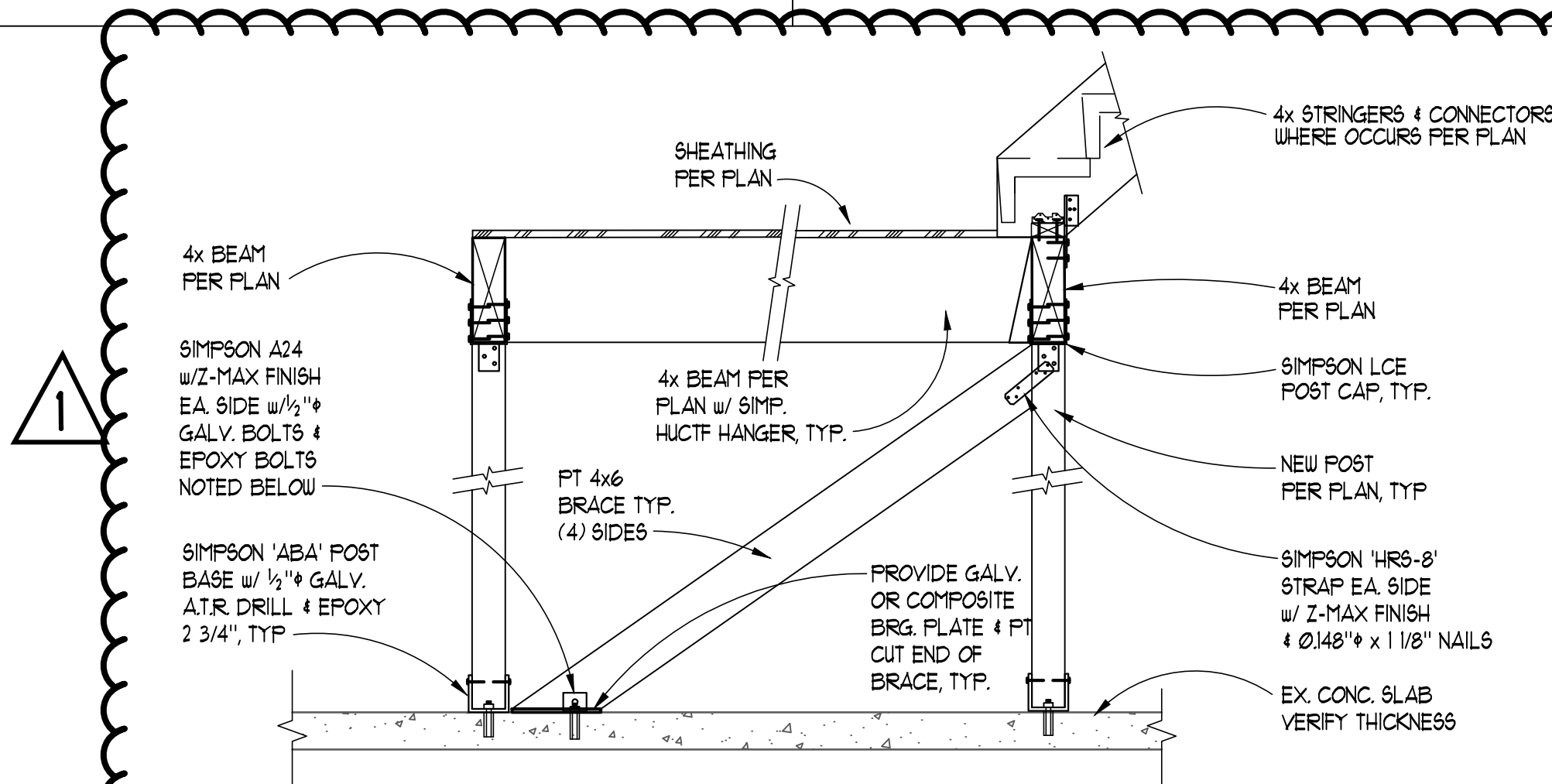
LANDMARK APARTMENTS

16202 NE 11TH ST
BELLEVUE, WA 98008



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

TYPICAL CONCRETE STAIR TREAD CONNECTION



TYPICAL SECTION AT ELEVATED LANDING



I.L. GROSS
STRUCTURAL
ENGINEERS

23914 56th Avenue W. ~ Suite 200
Mountlake Terrace, WA 98043-5263
Ph: (206) 623-0769, (425) 640-7333
www.ilgross.com



LANDMARK APARTMENTS

16202 NE 11TH ST
BELLEVUE, WA 98008

REVISIONS		
NO.	DATE	DESCRIPTION
1	03/18/25	PERMIT CORRECTIONS

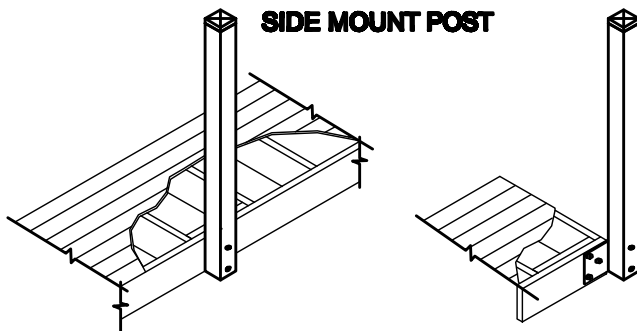
TITLE
TYPICAL
WOOD FRAMING
SECTIONS

DESIGNED	VM
DRAWN	K94
CHECKED	VM
DATE	10/21/2024
JOB NUMBER	

SHEET NO.

S4.1

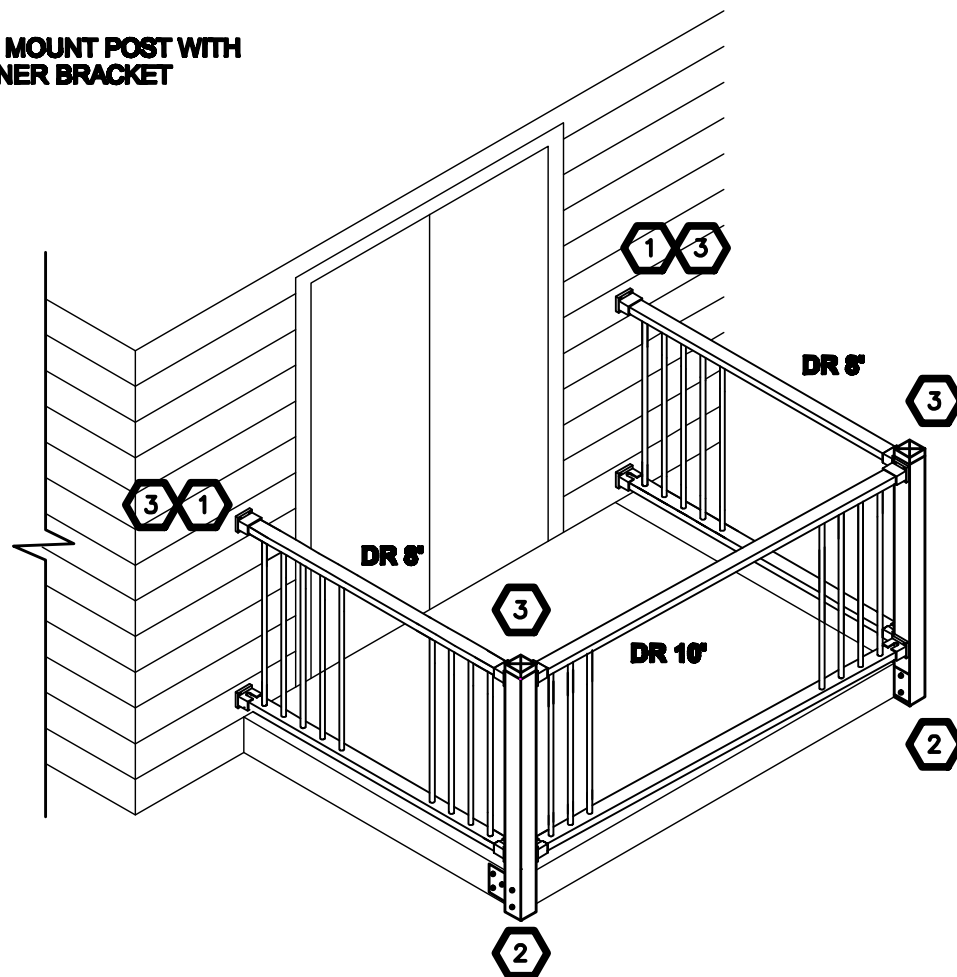
CITY REVIEW



THIS DESIGN EXAMPLE AND LIST OF MATERIALS IS FOR ILLUSTRATIVE PURPOSES ONLY. THE REQUIREMENTS FOR ANY SPECIFIC APPLICATION WILL DEPEND ON THE ACTUAL CONFIGURATION.

ITEM	LENGTH	QUANTITY
DECK RAIL ASSY 1 (DR8')	8 FEET	2
DECK RAIL ASSY 2 (DR10')	10 FEET	1
POST 1 (P4-55)	55 INCH	2

POST CORNER MOUNT SIDE WING RETURN INSTALL

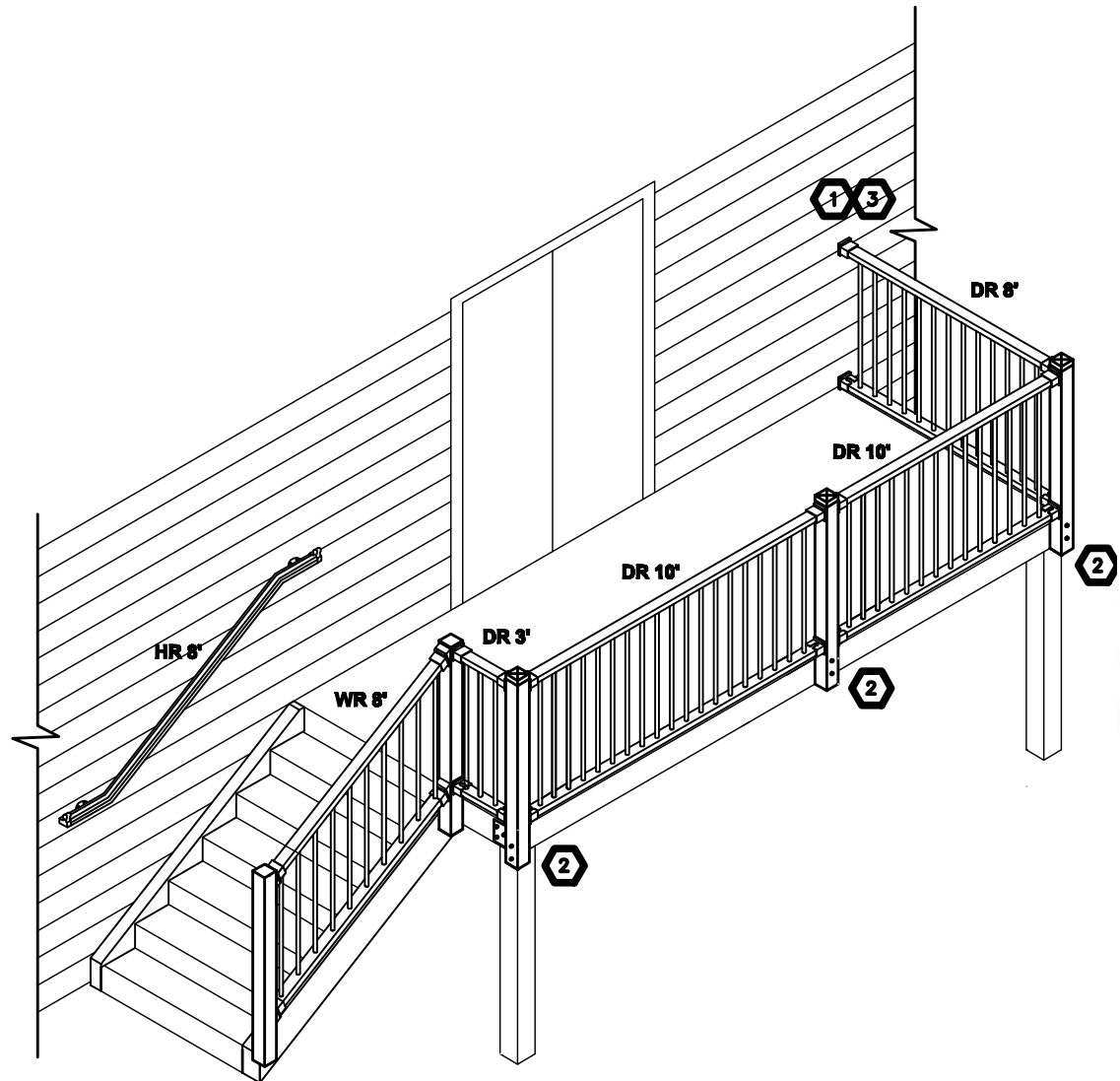


DESIGN EXAMPLE - NTS

- 1 RAIL ATTACH TO EXTERIOR WALL
- 2 SIDE MOUNT POST
- 3 SUITABLE BACKING NEEDED FOR END BRACKETS

PROJECT DESIGN EX		4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-348-3608		Fax 425-348-8476		FILE NO. EXAMPLE 1
						
SCALE CUSTOM		DRAWN CVH		DATE 5/7/2010		DX-1 SHEET 1 OF 6
				APP'D		

ITEM	LENGTH	QUANTITY
DECK RAIL ASSY 1 (DR8')	8 FEET	1
DECK RAIL ASSY 2 (DR10')	10 FEET	2
DECK RAIL ASSY 3 (DR3')	3 FEET	1
WIND RAIL ASSY (WR8')	8 FEET	1
HAND RAIL ASSY (HR8')	8 FEET	1
POST 1 (P4-65)	65 INCH	6



DESIGN EXAMPLE - NTS

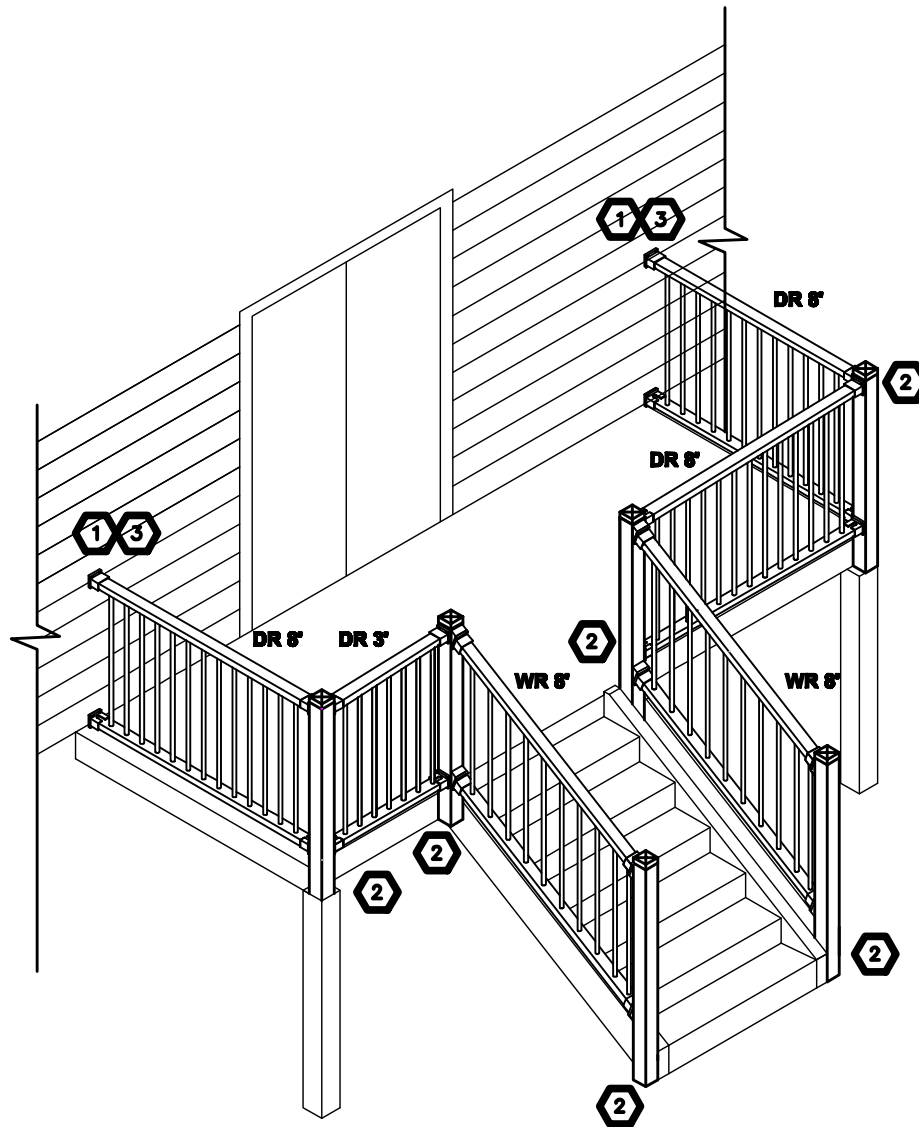
- 1 RAIL ATTACH TO EXTERIOR WALL
- 2 SIDE MOUNT POST
- 3 SUITABLE BACKING NEEDED FOR END BRACKETS

NOTE: LENGTHS FOR STAIR RAIL AND HAND RAIL ARE BASED ON THE DIAGONAL DISTANCE.

THIS DESIGN EXAMPLE AND LIST OF MATERIALS IS FOR ILLUSTRATIVE PURPOSES ONLY. THE REQUIREMENTS FOR ANY SPECIFIC APPLICATION WILL DEPEND ON THE ACTUAL CONFIGURATION.

PROJECT DESIGN EX		FILE NO. EXAMPLE 2	
4215-A Russell Road Mukilteo, WA. 98275		Fax 425-348-8476	
Main Office 425-349-3608			
GLASRAIL®			
DRAWN CVH	APP'D		
SCALE CUSTOM	DATE 5/7/2010		
DX-2		SHEET 2 OF 6	

ITEM	LENGTH	QUANTITY
DECK RAIL ASSY 1 (DR8')	8 FEET	3
DECK RAIL ASSY 3 (DR3')	3 FEET	1
STAIR RAIL ASSY (WR8')	8 FEET	2
POST 1 (P4-55)	55 INCH	6



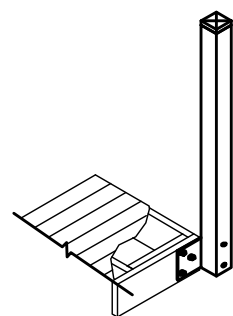
DESIGN EXAMPLE - NTS

- 1 RAIL ATTACH TO EXTERIOR WALL
- 2 SIDE MOUNT POST
- 3 SUITABLE BACKING NEEDED FOR END BRACKETS

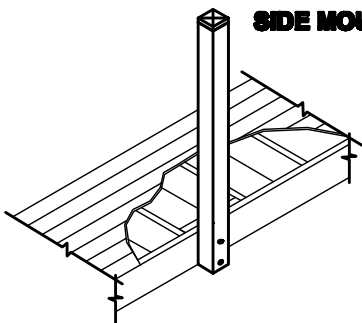
NOTE: LENGTHS FOR STAIR RAIL AND HAND RAIL ARE BASED ON THE DIAGONAL DISTANCE.

THIS DESIGN EXAMPLE AND LIST OF MATERIALS IS FOR ILLUSTRATIVE PURPOSES ONLY. THE REQUIREMENTS FOR ANY SPECIFIC APPLICATION WILL DEPEND ON THE ACTUAL CONFIGURATION.

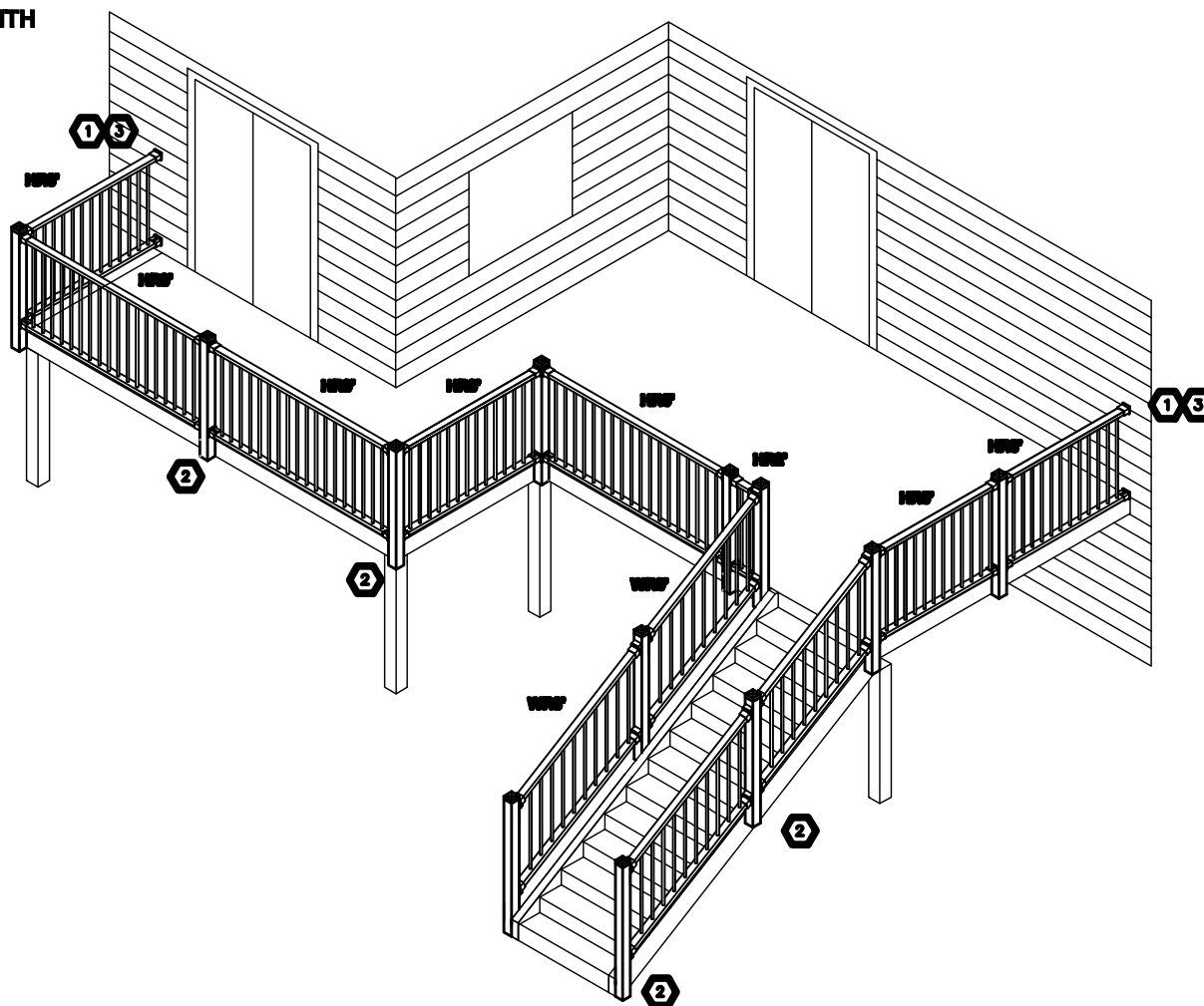
PROJECT DESIGN EX		FILE NO. EXAMPLE 3	
4215-A Russell Road Mukilteo, WA. 98275		Main Office 425-349-3608	Fax 425-348-8476
			
SCALE CUSTOM	DRAWN CVH	DATE 5/7/2010	APP'D
DX-3		SHEET 3	OF 6



**SIDE MOUNT POST WITH
CORNER BRACKET**



SIDE MOUNT POST



ITEM	LENGTH	QUANTITY
DECK RAIL ASSY 1 (DR1)	8 FEET	7
DECK RAIL ASSY 2 (DR2)	2 FEET	1
STAIR RAIL ASSY (NR1)	8 FEET	4
POST 1 (P4-SS)	55 INCH	12

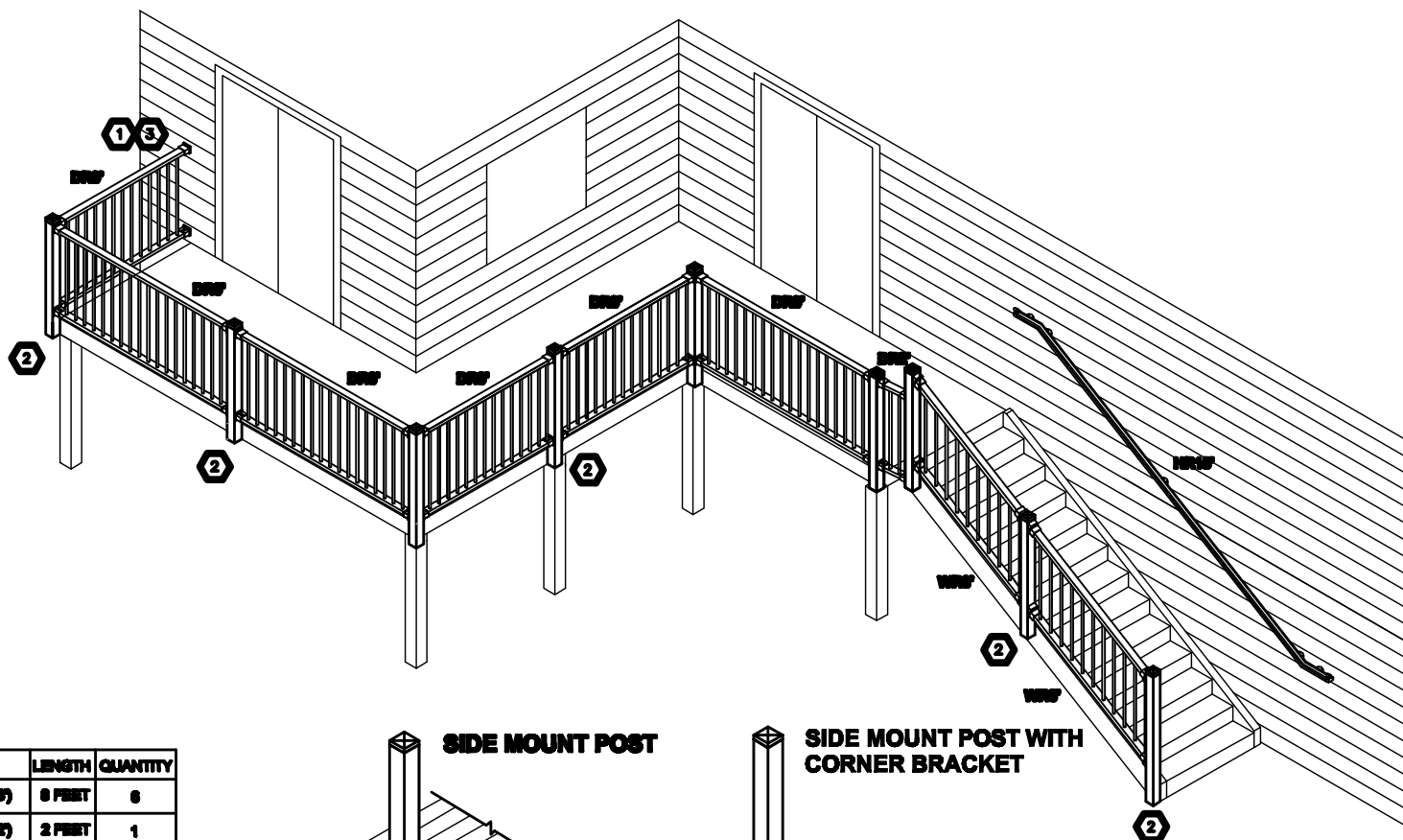
DESIGN EXAMPLE - NTS

- 1** RAIL ATTACH TO EXTERIOR WALL
- 2** SIDE MOUNT POST
- 3** SUITABLE BACKING NEEDED FOR END BRACKETS

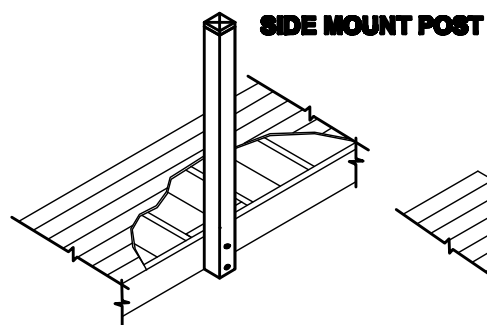
NOTE: LENGTHS FOR STAIR RAIL AND HAND
RAIL ARE BASED ON THE DIAGONAL DISTANCE.

THIS DESIGN EXAMPLE AND LIST OF MATERIALS
IS FOR ILLUSTRATIVE PURPOSES ONLY. THE
REQUIREMENTS FOR ANY SPECIFIC
APPLICATION WILL DEPEND ON THE ACTUAL
CONFIGURATION.

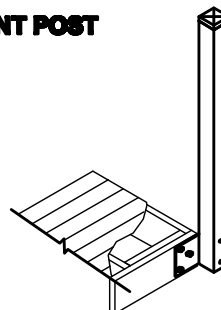
PROJECT DESIGN EX		4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-349-3608		Fax 425-348-8476	
GLASRAIL®					
DRAWN CVH	APP'D				
SCALE CUSTOM	DATE 5/7/2010				
DX-4		SHEET 4 OF 6			
		FILE NO. EXAMPLE 4			



ITEM	LENGTH	QUANTITY
DECK RAIL ASSY 1 (DR1)	8 FEET	8
DECK RAIL ASSY 2 (DR2)	2 FEET	1
STAIR RAIL ASSY (SR1)	8 FEET	2
HAND RAIL ASSY (HR1)	18 FEET	1
POST 1 (P1-SS)	55 INCH	8



SIDE MOUNT POST WITH CORNER BRACKET



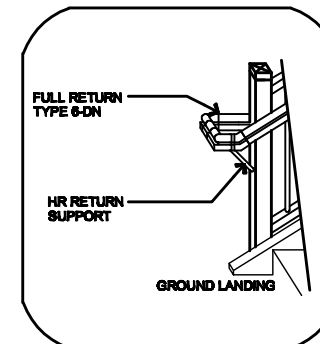
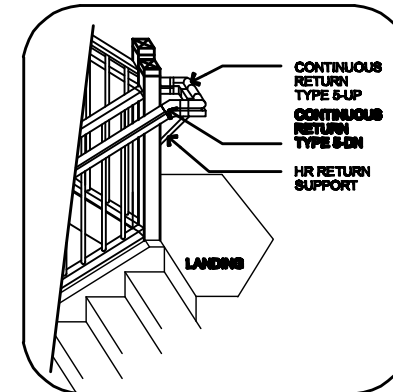
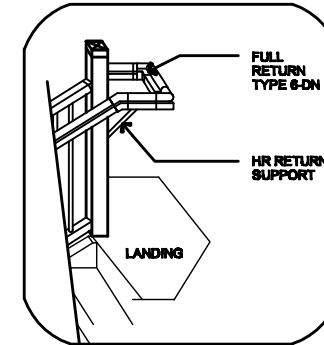
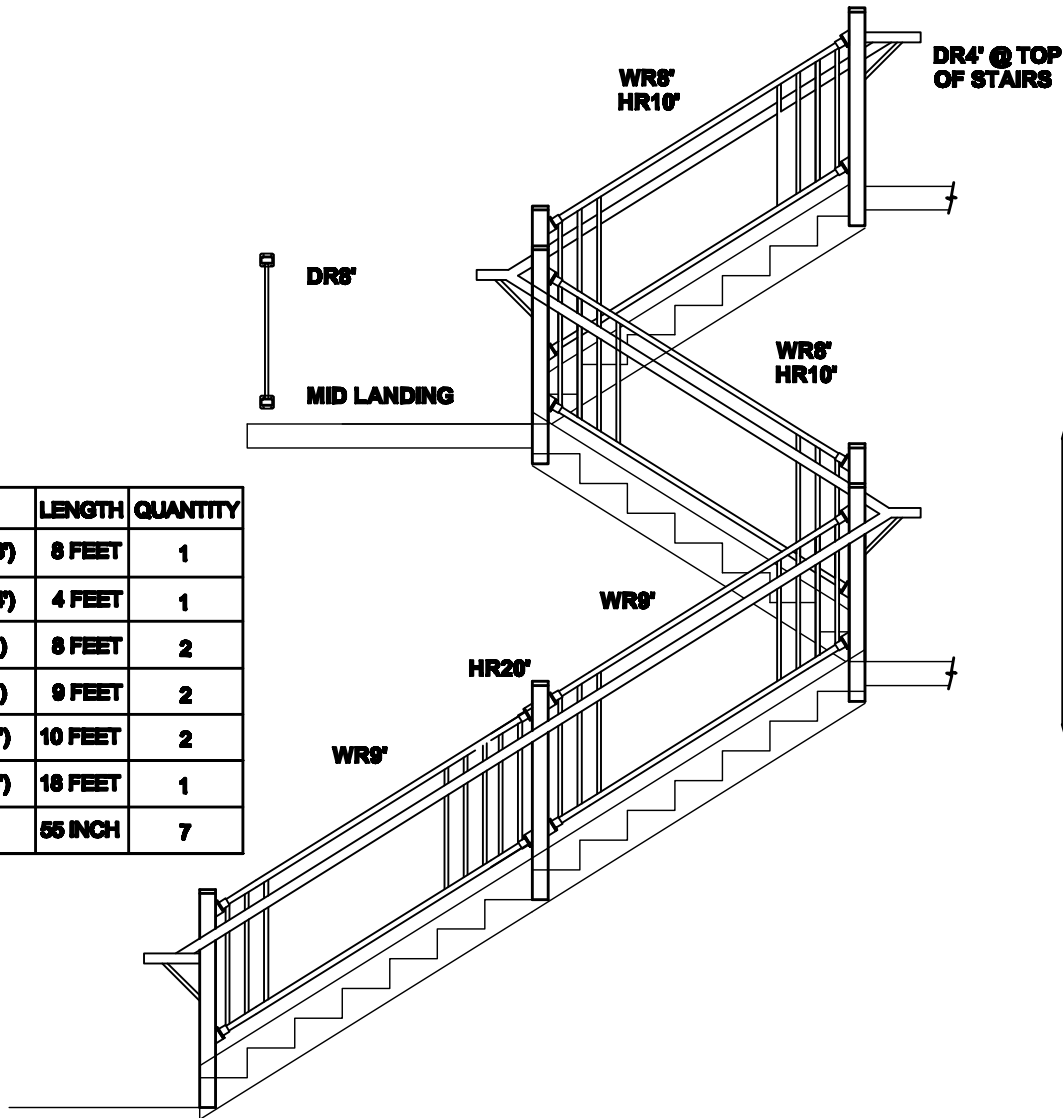
DESIGN EXAMPLE - NTS

- 1 RAIL ATTACH TO EXTERIOR WALL
- 2 SIDE MOUNT POST
- 3 SUITABLE BACKING NEEDED FOR END BRACKETS

NOTE: LENGTHS FOR STAIR RAIL AND HAND RAIL ARE BASED ON THE DIAGONAL DISTANCE.

THIS DESIGN EXAMPLE AND LIST OF MATERIALS IS FOR ILLUSTRATIVE PURPOSES ONLY. THE REQUIREMENTS FOR ANY SPECIFIC APPLICATION WILL DEPEND ON THE ACTUAL CONFIGURATION.

ITEM	LENGTH	QUANTITY
DECK RAIL ASSY 1 (DR8')	8 FEET	1
DECK RAIL ASSY 2 (DR4')	4 FEET	1
STAIR RAIL ASSY (WR8')	8 FEET	2
STAIR RAIL ASSY (WR9')	9 FEET	2
HAND RAIL ASSY (HR10')	10 FEET	2
HAND RAIL ASSY (HR18')	18 FEET	1
POST 1 (P4-55)	55 INCH	7



DESIGN EXAMPLE - NTS



NOTE: LENGTHS FOR STAIR RAIL AND HAND RAIL ARE BASED ON THE DIAGONAL DISTANCE FROM TREAD NOSE TO LANDING.
NOTE: THIS DESIGN EXAMPLE AND LIST OF MATERIALS IS FOR ILLUSTRATIVE PURPOSES ONLY. THE REQUIREMENTS FOR ANY SPECIFIC APPLICATION WILL DEPEND ON THE ACTUAL CONFIGURATION.
NOTE: THIS EXAMPLE IS OF A TYPICAL STAIRWELL WITH FULL-RETURN HANDRAIL (HR) AT TOP AND BOTTOM, CONTINUOUS HANDRAIL (HR) RETURN AT LANDINGS.
NOTE: WHEN THE STRINGER CLEARANCE IS BETWEEN 5" AND 8", THE POSTS CAN BE SIDE BY SIDE OFFSET. WHEN STRINGER CLEARANCE IS MORE THAN 8", THE 4" POSTS CAN BE SIDE BY SIDE.
NOTE: THE POST COUNT FOR STAIRWELLS DEPENDS ON THE STRINGER SPACING. THERE MUST BE 4"-5" STRINGER CLEARANCE FOR THE 4" GLASRAIL POST.

PROJECT
DESIGN EX

4215-A Russell Road
Mukilteo, WA. 98275

Main Office
425-349-3608

Fax
425-348-8476

FILE NO.
EXAMPLE 6



DRAWN
CVH

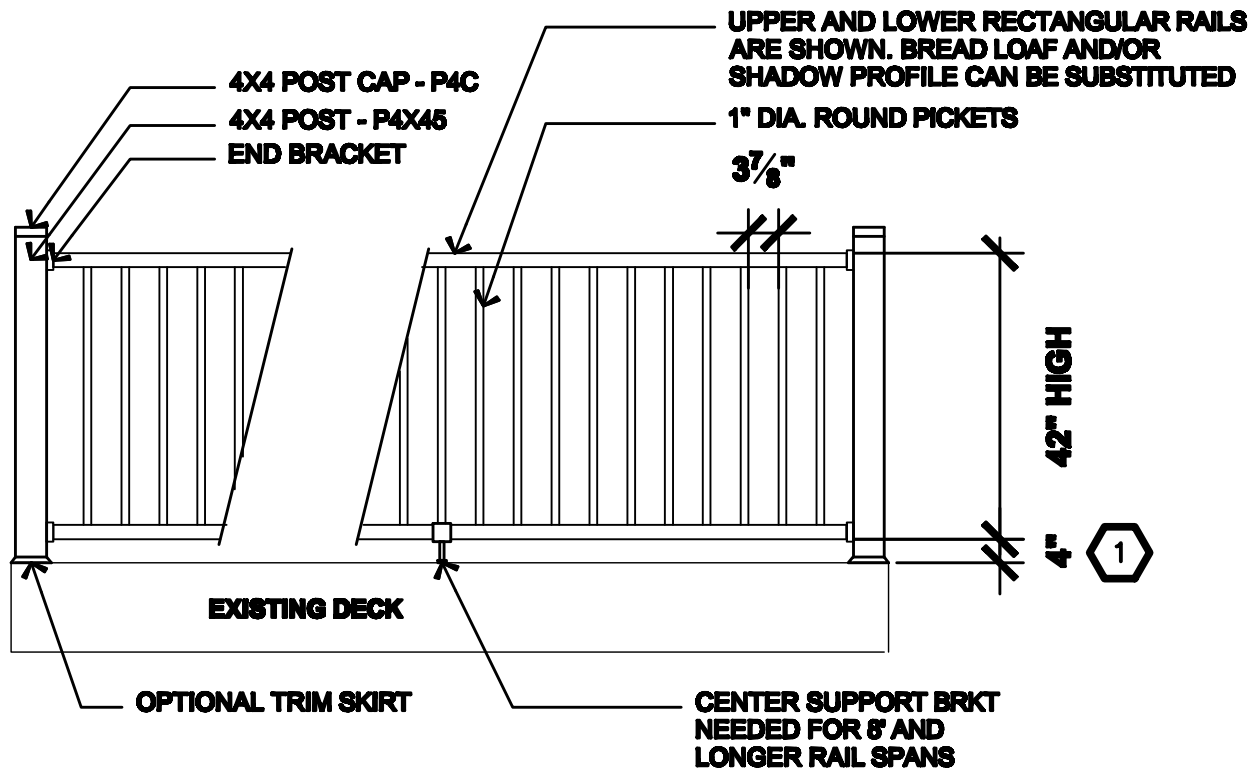
SCALE
CUSTOM

APP'D

DATE
5/7/2010

DX-6

SHEET 6 OF 6



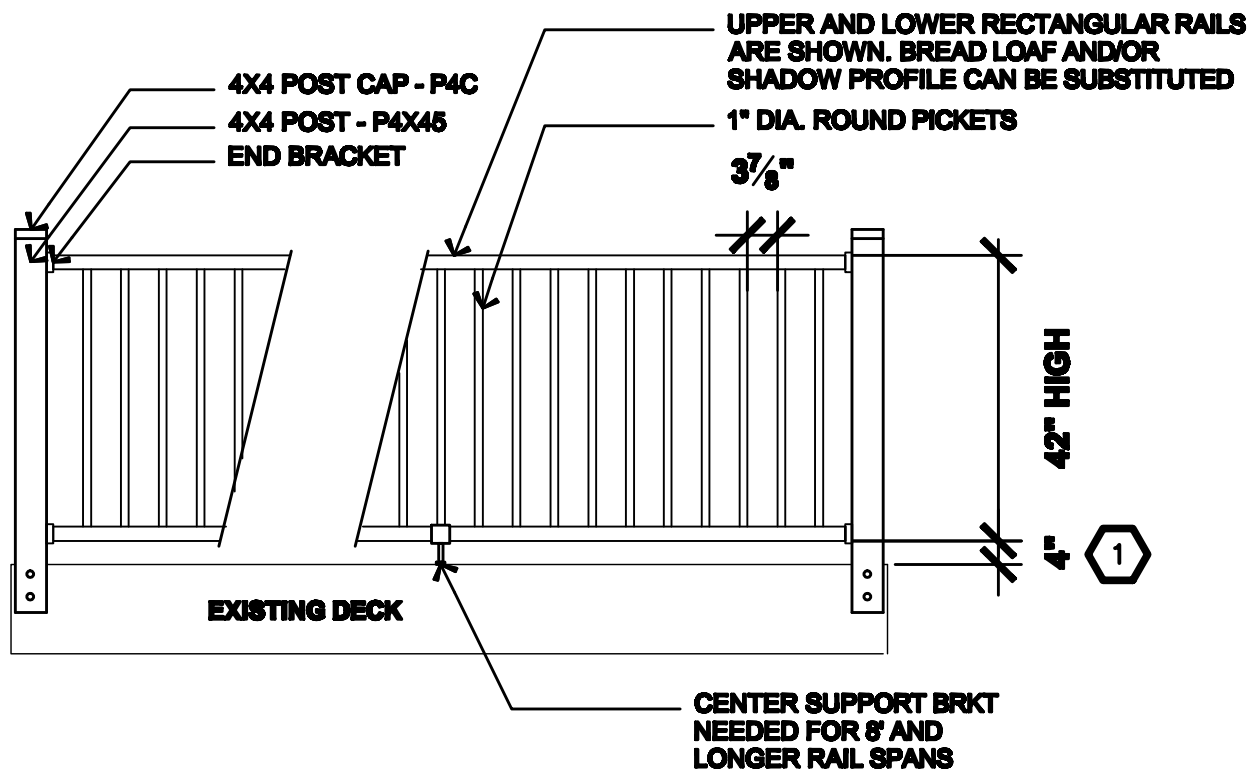
RAILING DETAIL - TOP MOUNT POSTS



CHECK LOCAL CODE FOR HEIGHT REQUIREMENT

DR-1	SHEET 1 OF 12	SCALE CUSTOM	DRAWN CVH	PROJECT DETAILS	
		DATE 5/18/2010	APP'D	4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-348-3808	FILE NO. 000-0-000





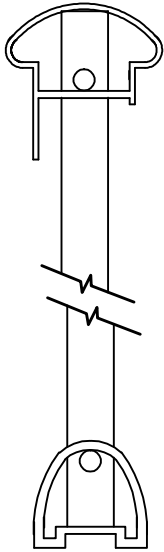
RAILING DETAIL - SIDE MOUNT POSTS



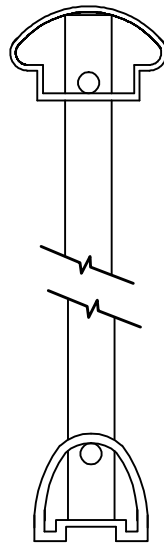
CHECK LOCAL CODE FOR HEIGHT REQUIREMENT

DR-2		SCALE 1/2" = 1'-0"	DRAWN CVH		4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-349-3808 Fax 425-348-8476	PROJECT DETAILS
SHEET	2 OF 12					
		DATE 5/18/2010	APP'D	FILE NO. 000-0-000		

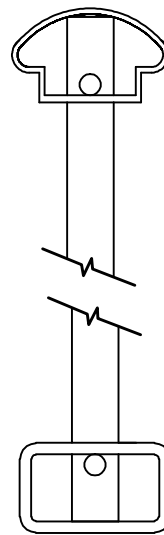
**SHADOW TOP
AND BOTTOM**



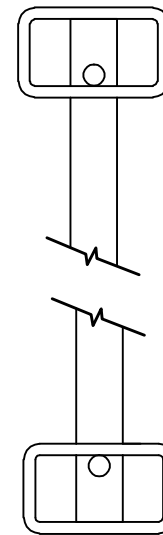
**BREADLOAF TOP
SHADOW BOTTOM**



**BREADLOAF TOP
RECTANGLE BOTTOM**



**RECTANGLE TOP
AND BOTTOM**



PICKET STYLE DECK RAILING - NTS



CAD FILES ON REQUEST

DR-3

SHEET 3 OF 12

SCALE
1/2" = 1'-0"

DATE
5/18/2010

DRAWN
CVH

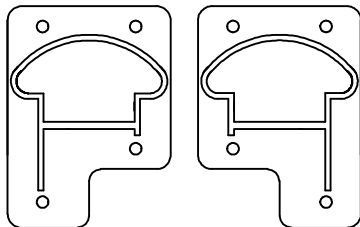
APP'D



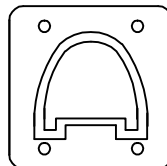
4215-A Russell Road
Mukilteo, WA. 98275
Main Office 425-348-3608
Fax 425-348-8476

PROJECT
DETAILS

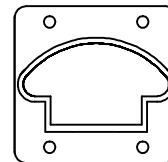
FILE NO.
000-0-000



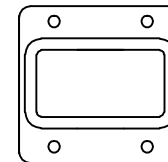
**SHADOW TOP LEFT AND RIGHT
(BESL - BESR)**



**SHADOW BOTTOM
(BESB-)**



**BREADLOAF
(BEL-)**



**RECTANGLE
(BE-)**

COLORS: WHITE
BLACK, -B
GREEN, -G
SAND, -S

EXAMPLES: WHITE BREADLOAF, BEL
BLACK BREADLOAF, BEL-B
SAND RECTANGLE, BE-S

END BRACKET STYLES - NTS



CAD FILES ON REQUEST



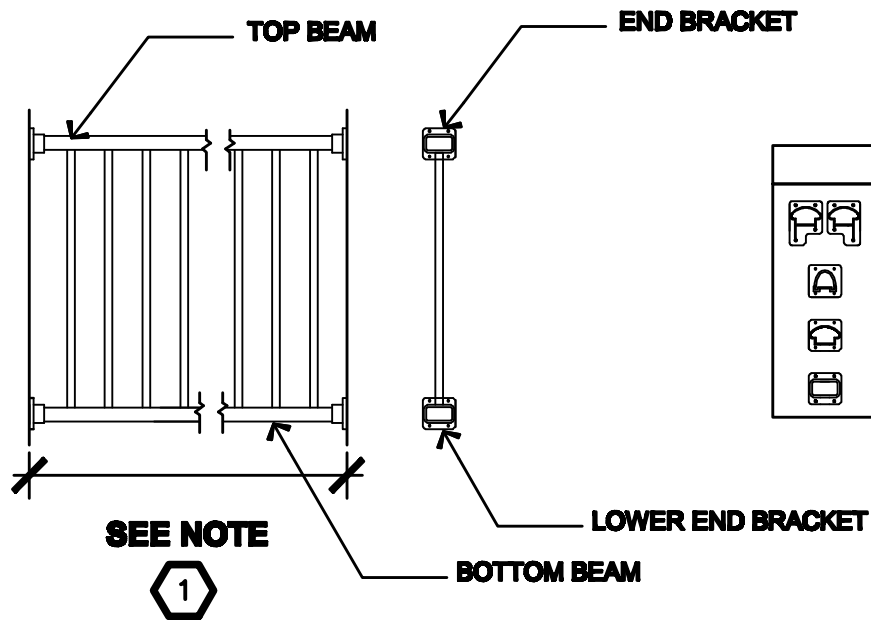
4215-A Russell Road
Mukilteo, WA. 98275
Main Office 425-348-3808
Fax 425-348-8476

**PROJECT
DETAILS**
FILE NO.
000-0-000

DR-4

SHEET 4 OF 12

SCALE
1/2" = 1'-0"
DRAWN
CVH
DATE
5/18/2010
APP'D



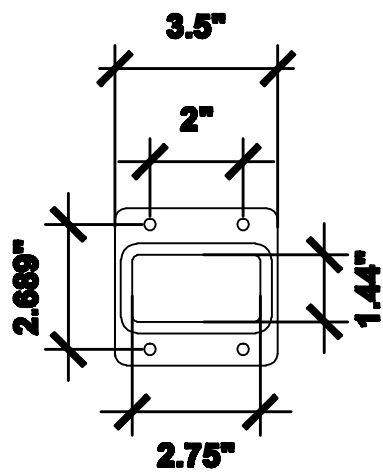
END BRACKET AND BEAM STYLES	
	SHADOW TOP, LEFT AND RIGHT
	SHADOW BOTTOM
	BREADLOAF TOP
	RECTANGULAR TOP AND/OR BOTTOM

GUARD RAIL CONFIGURATION

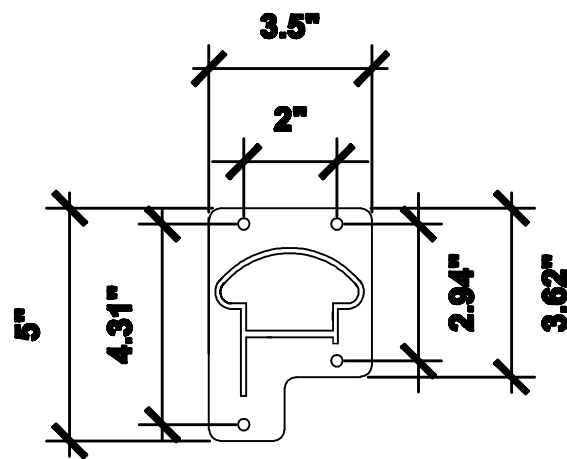
1

NOTE: MEASURE DIST. BETWEEN MOUNTING SURFACES AND CUT TO LENGTH, LESS THAN 1" ALLOWING FOR END BRACKET THICKNESS

DR-5	SHEET 5 OF 12	SCALE 1/2" = 1'-0"	DRAWN CVH		4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-348-3608 Fax 425-348-8476	PROJECT DETAILS
		DATE 5/18/2010	APP'D			FILE NO. 000-0-000



**RECTANGULAR END
BRACKET**



**DETAIL - SHADOW RAIL
END BRACKET**

END BRACKET / HOLE SPACING DETAIL - NTS



TYPICAL HOLE SPACING FOR ALL END BRACKET STYLES EXCEPT FOR
SHADOW RAIL



4215-A Russell Road
Mukilteo, WA. 98275
Main Office 425-349-3908
Fax 425-348-8476

PROJECT
DETAILS

FILE NO.
000-0-000

DRAWN
CVH

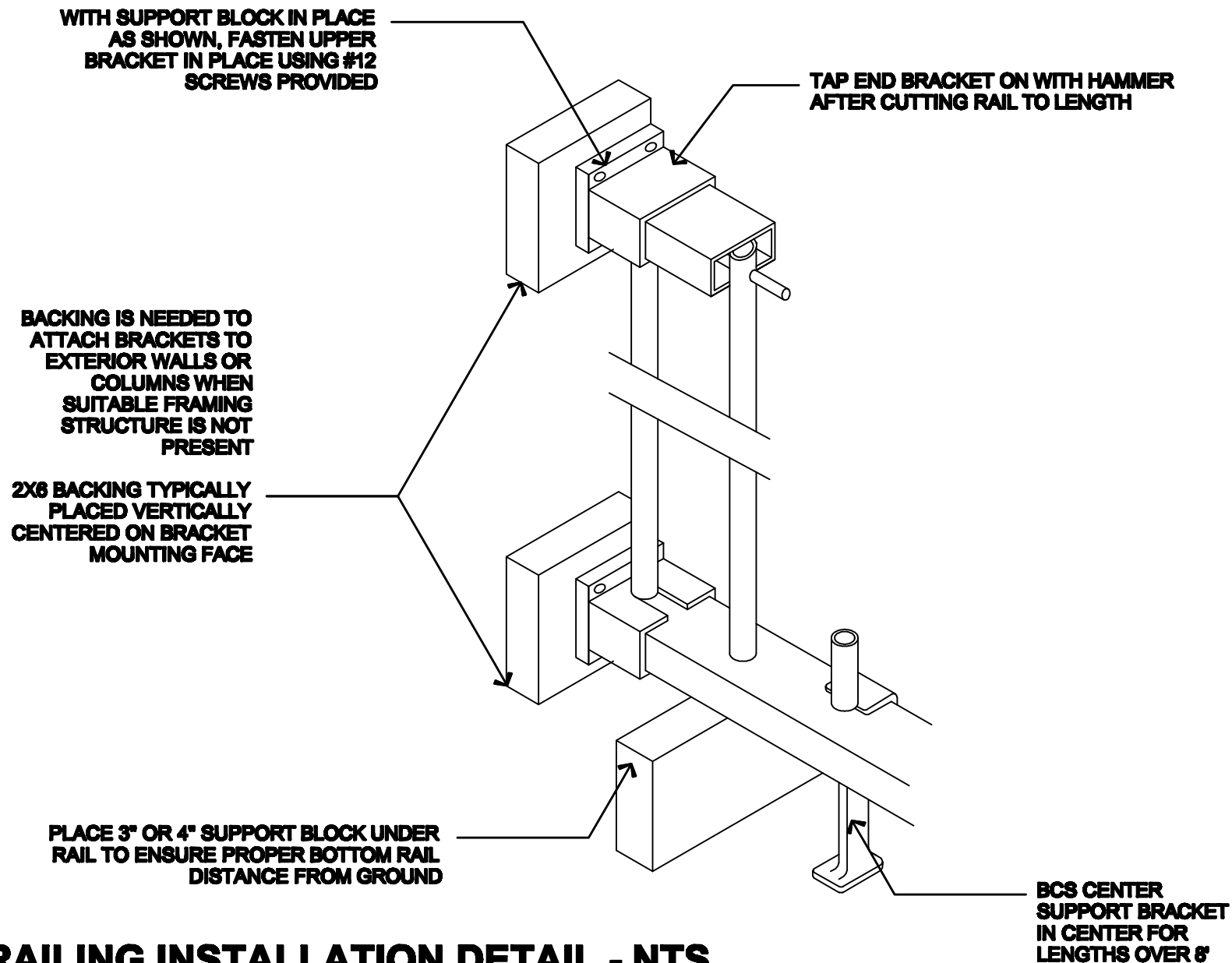
APP'D

SCALE
1/2" = 1'-0"

DATE
5/18/2010

DR-6

SHEET 6 OF 12

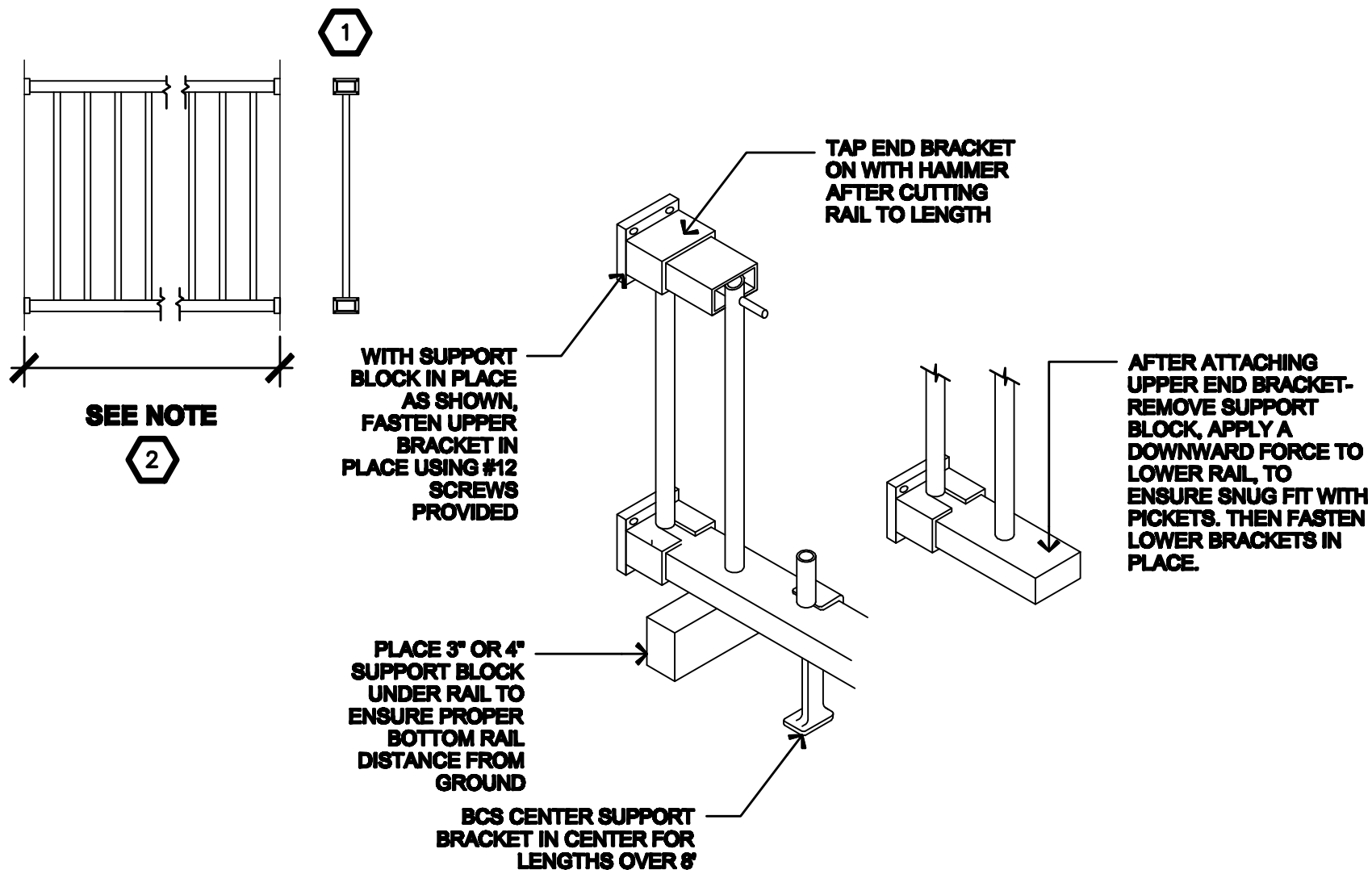


RAILING INSTALLATION DETAIL - NTS



GLASREIL MFR SPEC 7580C - RAILING DETAIL WITH BACKING
PLACEMENT

DR-7		SCALE 1/2" = 1'-0"		DRAWN CVH				4215-A Russell Road Mukilteo, WA. 98275		PROJECT DETAILS	
SHEET 7 OF 12		DATE 5/18/2010		APP'D				Main Office 425-348-3608		FILE NO. 000-0-000	
								Fax 425-348-8476			



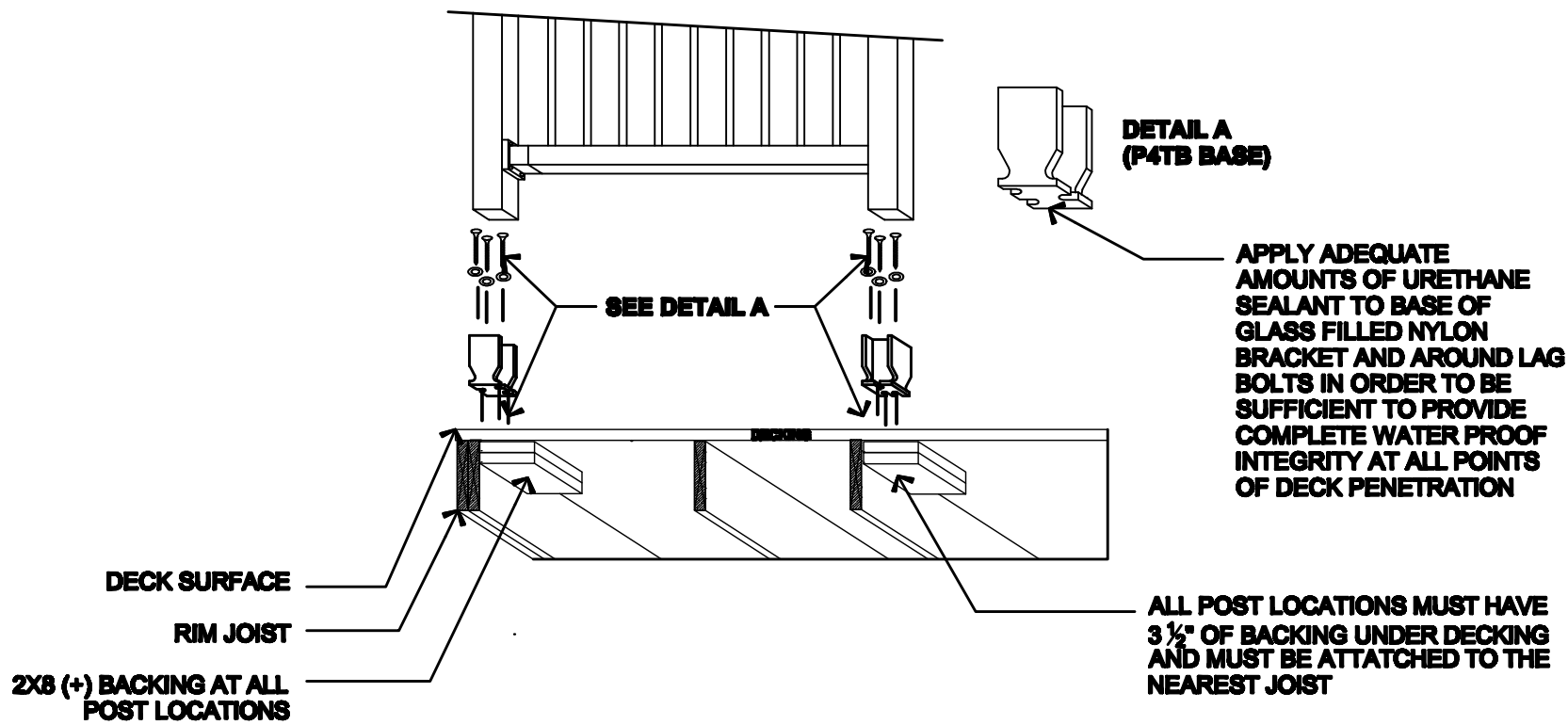
RAILING INSTALLATION DETAIL - NTS



THESE SHOP DRAWINGS ARE PROVIDED AS A VISUAL AIDE BASED ON DOCUMENTED SPECIFICATION TESTING

MEASURE DISTANCE BETWEEN MOUNTING SURFACE AND CUT TO LENGTH, LESS 1" ALLOWING FOR END CAP THICKNESS

DR-8		SCALE 1/2" = 1'-0"		DRAWN CVH				4215-A Russell Road Mukilteo, WA. 98275		PROJECT DETAILS			
SHEET 8 OF 12		DATE 5/18/2010		APP'D				Main Office 425-348-3608		Fax 425-348-8476		FILE NO. 000-0-000	

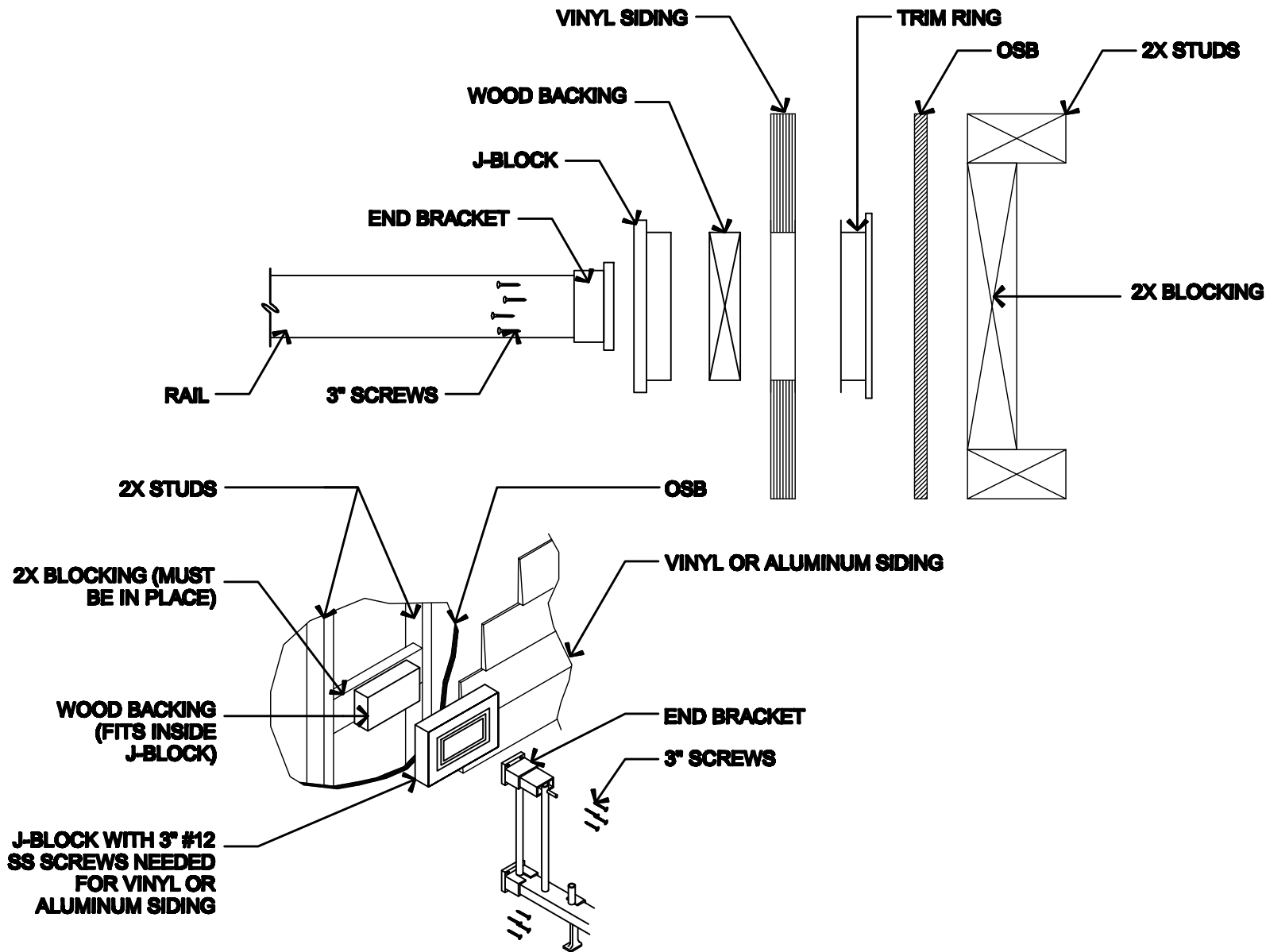


DECK MOUNTING DETAIL - TOP MOUNT



CHECK LOCAL CODE FOR ALLOWABLE DISTANCE

DR-9	SHEET 9 OF 12	SCALE 1/2" = 1'-0"	DRAWN CVH		4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-348-3608 Fax 425-348-8476	PROJECT DETAILS	FILE NO. 000-0-000
		DATE 5/18/2010	APP'D				

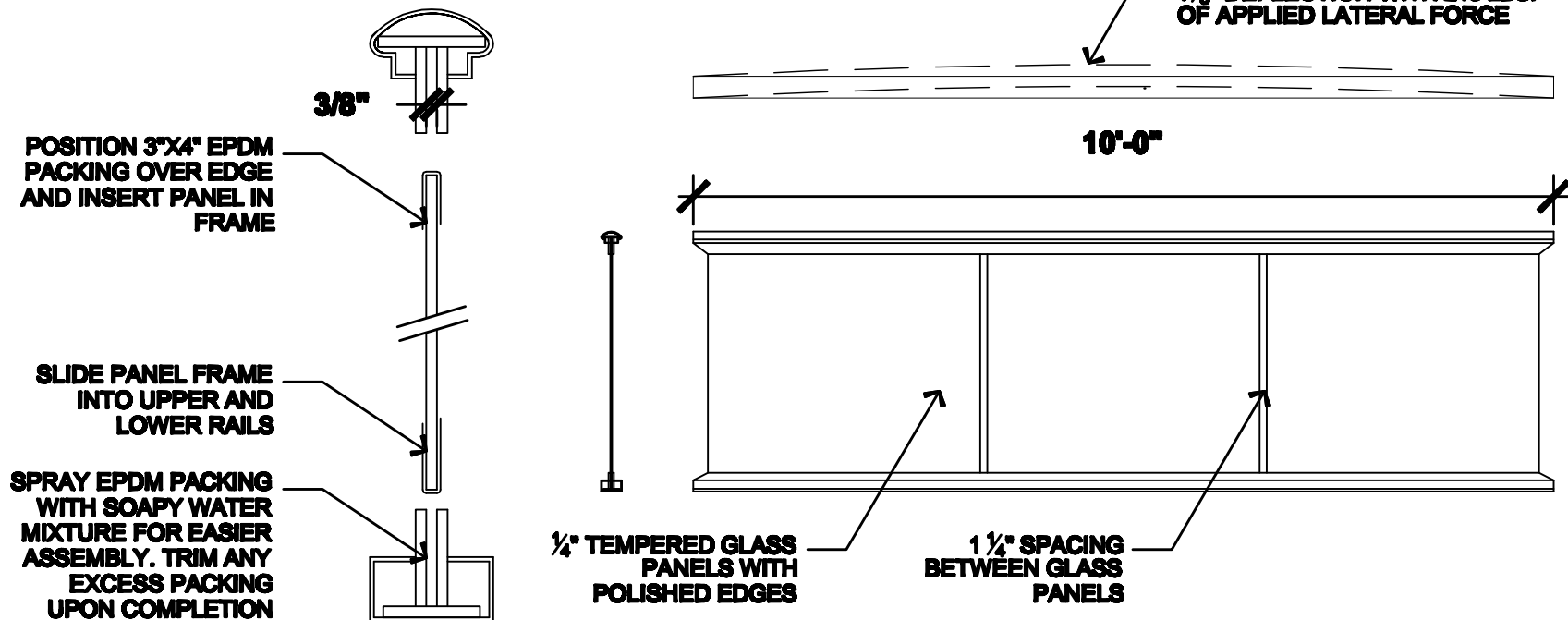


BRACKET DETAIL - J-BLOCK ATTACHMENT TO WALL

DR10	SHEET 10 OF 12	SCALE 1/2" = 1'-0"	DRAWN CVH		4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-348-3608 Fax 425-348-8476	PROJECT DETAILS
		DATE 5/18/2010	APP'D			

APPROXIMATE PANEL CONFIGURATION

2' RAIL ASSEMBLY	1 GLASS PANEL
4' RAIL ASSEMBLY	1 GLASS PANEL
5' RAIL ASSEMBLY	2 GLASS PANELS
6' RAIL ASSEMBLY	2 GLASS PANELS
8' RAIL ASSEMBLY	3 GLASS PANELS
10' RAIL ASSEMBLY	3 GLASS PANELS

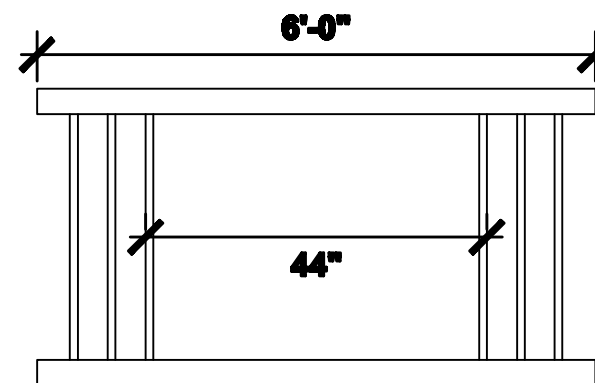
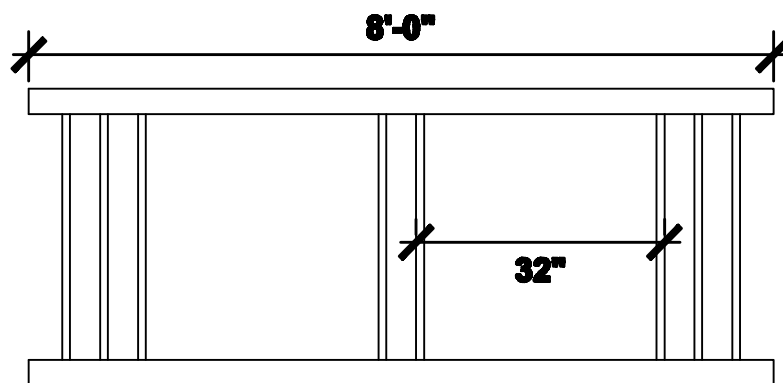
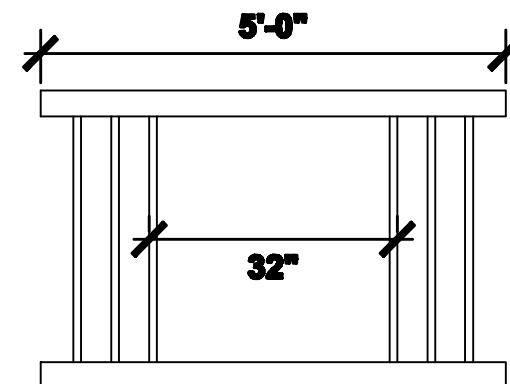
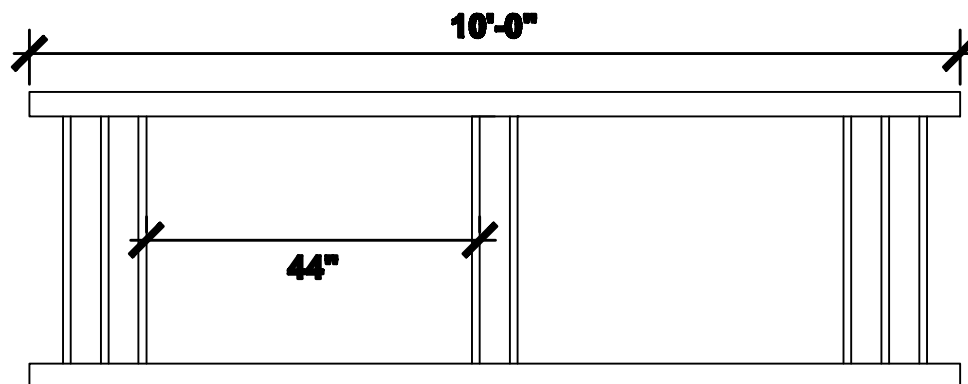
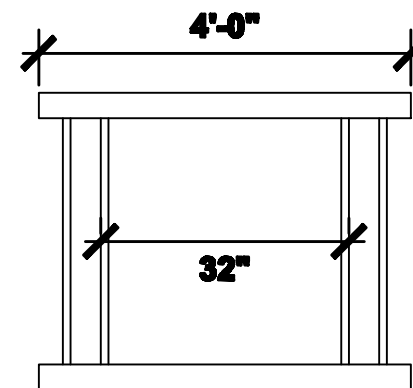
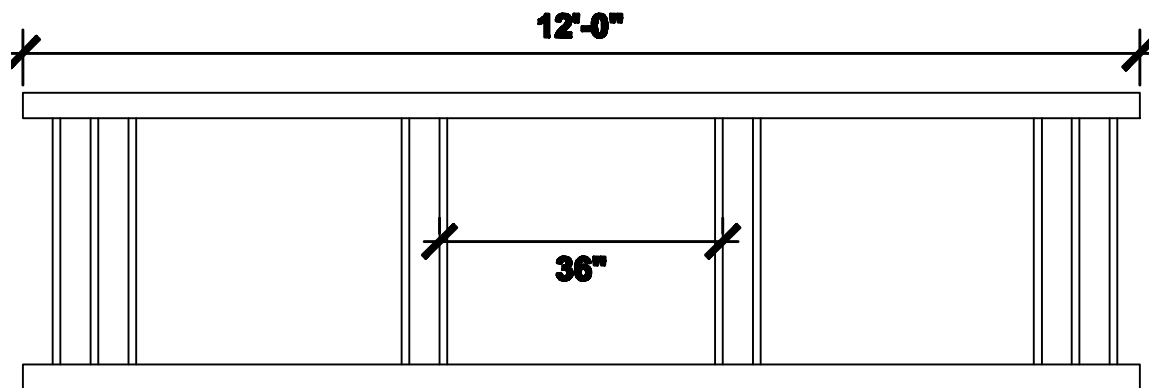


HURRICANE GLASS PANELS



THE EXACT DISTANCE BETWEEN POSTS MUST BE DETERMINED BEFORE RAIL ASSEMBLY CAN BE FABRICATED. ADD 3-5 DAYS DELIVERY WHEN GLASS IS SUPPLIED BY GLASRAIL

DR11	SCALE 1/2" = 1'-0"		DRAWN CVH		4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-349-3608 Fax 425-348-8476	PROJECT DETAILS
	DATE 5/18/2010	APP'D	FILE NO. 000-0-000			
SHEET 11 OF 12						

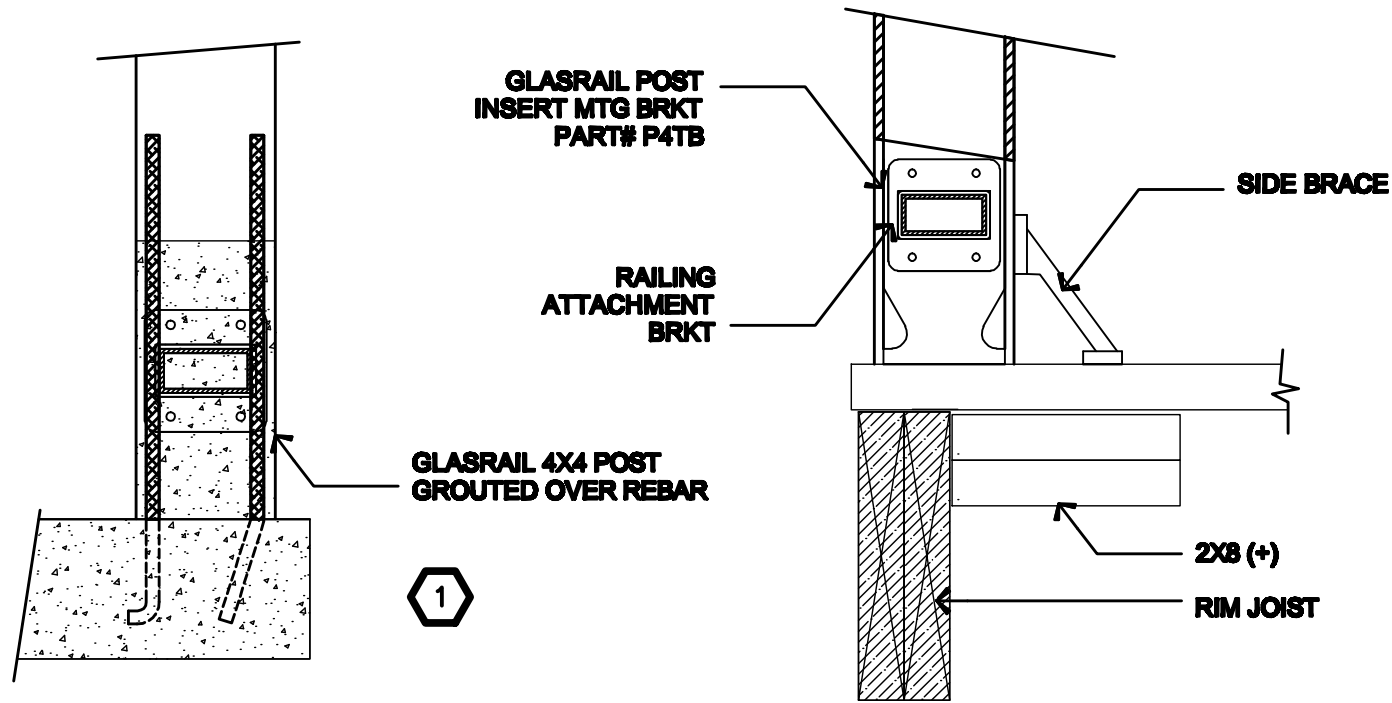


TIMELESS GLASS PANELS



THE EXACT DISTANCE BETWEEN POSTS MUST BE DETERMINED BEFORE RAIL ASSEMBLY CAN BE FABRICATED.

DR12	SHEET 12 OF 12			4215-A Russell Road Mukilteo, WA. 98275		PROJECT DETAILS	
	SCALE 1/2" = 1'-0"			DRAWN CVH	Main Office 425-349-3808		FILE NO. 000-0-000
		DATE 5/18/2010	APP'D	Fax 425-348-8476			



POST MOUNTING SYSTEMS - NTS



TYPICAL TOP MOUNT POST INSERT PROCEDURE



4215-A Russell Road
Mukilteo, WA. 98275
Main Office 425-348-3608
Fax 425-348-8476

PROJECT
DETAILS

FILE NO.
000-0-000

DRAWN
CVH

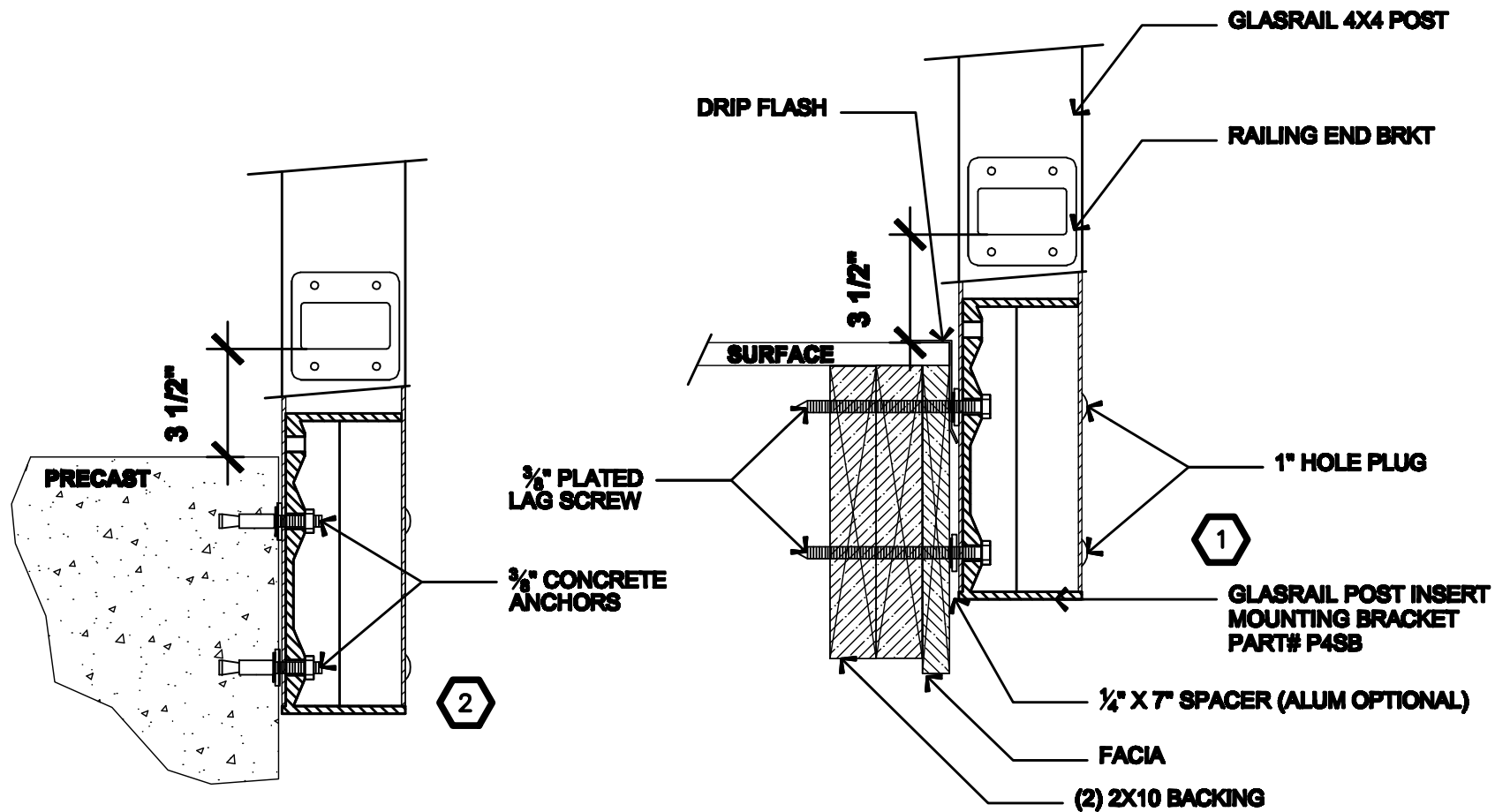
APP'D

SCALE
1/2" = 1'-0"

DATE
5/7/2010

PM-1

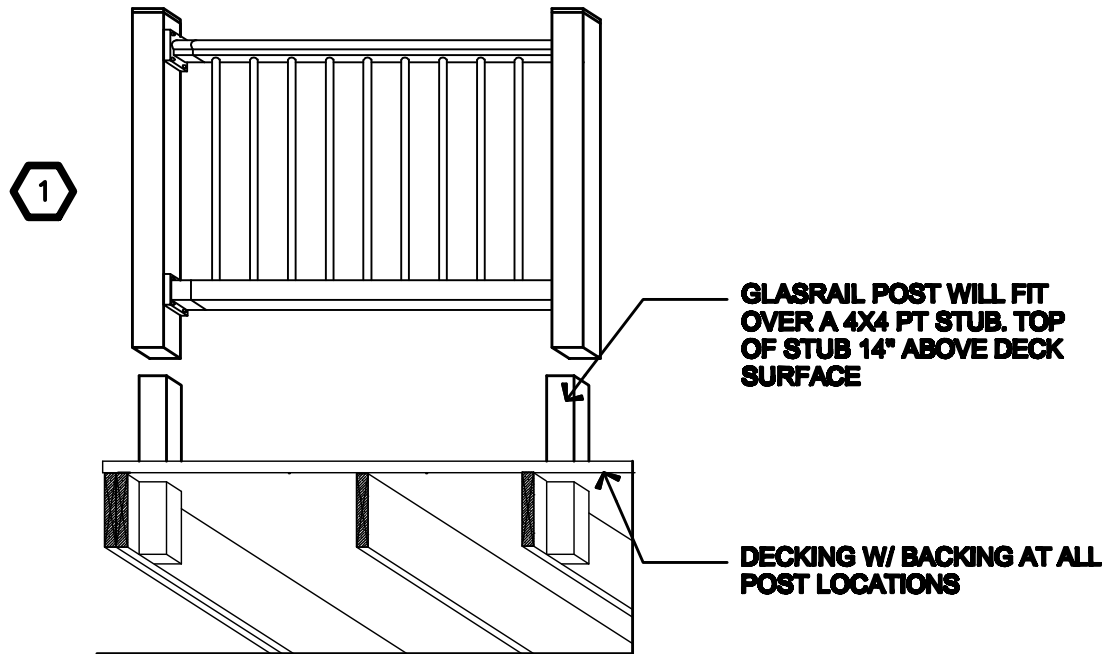
SHEET 1 OF 7



POST MOUNTING SYSTEMS - NTS

- 1 USE SPACERS AS REQ'D TO PLUMB UP POSTS
- 2 TYPICAL SIDE MOUNT POST INSERT PROCEDURE

PROJECT DETAILS		4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-348-3808 Fax 425-348-8476		FILE NO. 000-0-000
GLASRAIL®				
SCALE 1/2" = 1'-0"	DRAWN CVH	DATE 5/7/2010	APP'D	
PM-2		SHEET 2 OF 7		



POST MOUNTING SYSTEMS - STUB MOUNT

1

DECK MOUNTING DETAIL: ECONOMICAL METHOD, GOOD FOR COMPOSITE DECK SURFACES



4215-A Russell Road
Mukilteo, WA. 98275
Main Office 425-348-3608
Fax 425-348-8476

PROJECT
DETAILS

FILE NO.
000-0-000

DRAWN
CVH

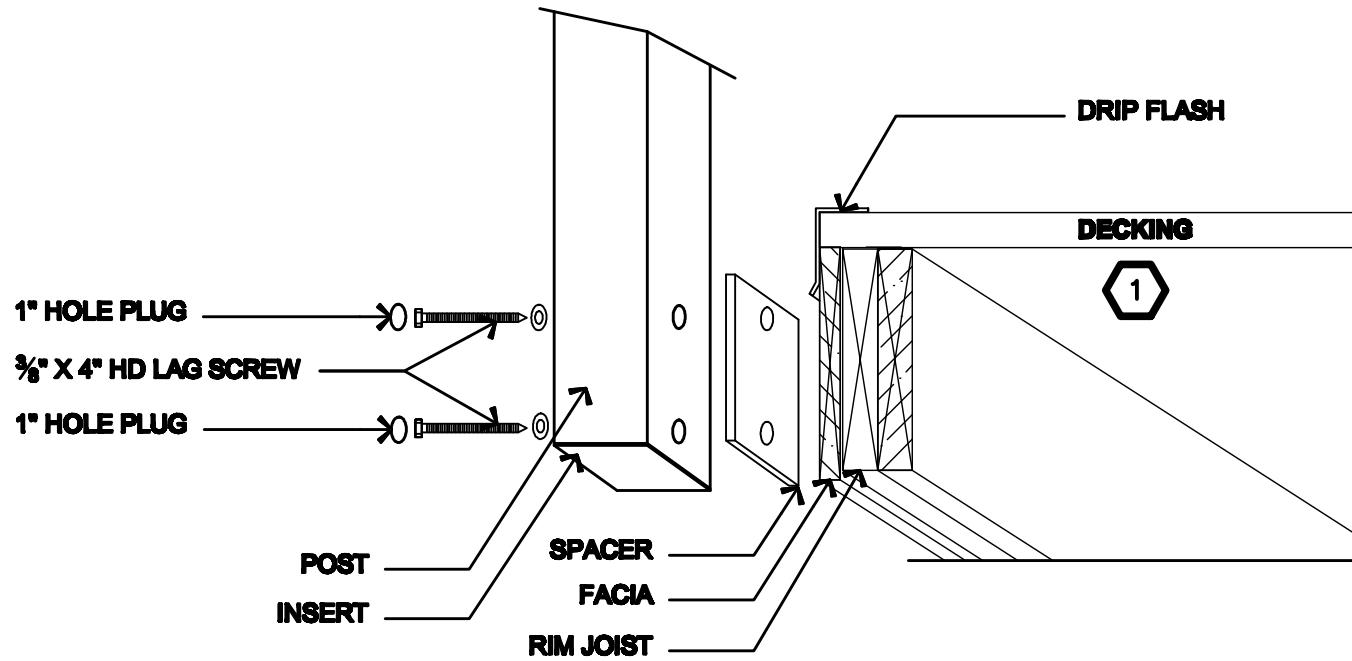
APP'D

SCALE
1/2" = 1'-0"

DATE
5/7/2010

PM-3

SHEET 3 OF 7



POST MOUNTING SYSTEMS - SIDE MOUNT - NTS



BACKING AT ALL POST LOCATIONS



4215-A Russell Road
Mukilteo, WA. 98275
Main Office 425-348-3808
Fax 425-348-8478

PROJECT
DETAILS

FILE NO.
000-0-000

DRAWN
CVH

APP'D

SCALE
1/2" = 1'-0"

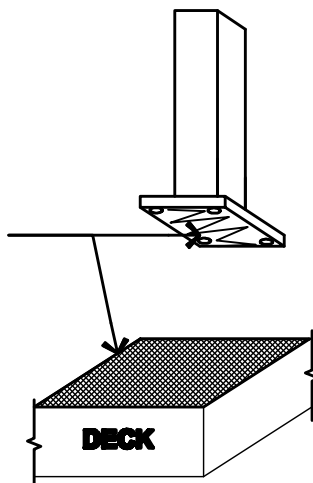
DATE
5/7/2010

PM-4

SHEET 4 OF 7

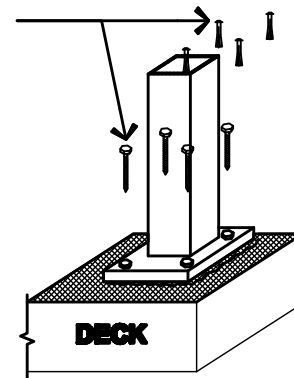
2. APPLY URETHANE SEALANT LIBERALLY TO BOTTOM OF POST BASE.

1. BEFORE ATTATCHING POST BASES, APPLY FIRST BASE COAT TO ENTIRE DECK SURFACE AND ALLOW TO DRY.



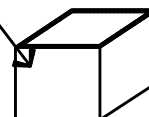
3A. FASTEN POST BASE TO CONCRETE DECK SURFACE WITH ANCHORS.

3B. FASTEN POST BASE TO WOOD DECK SURFACE WITH LAG BOLTS.



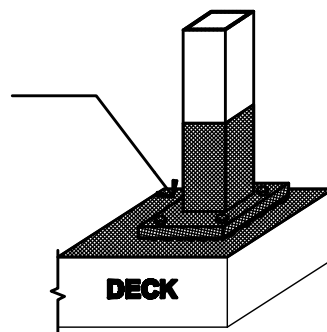
1

POSITION POST OVER BASE, POUR CONC. IN FROM TOP TO HOLD POST IN PLACE



4. APPLY SECOND BASE COAT TO ENTIRE DECK AND TOP OF FLANGE AND 4" - 6" UP THE VERTICAL

5. APPLY TOP COATS AS NEEDED PER MANUFACTURER SPEC.

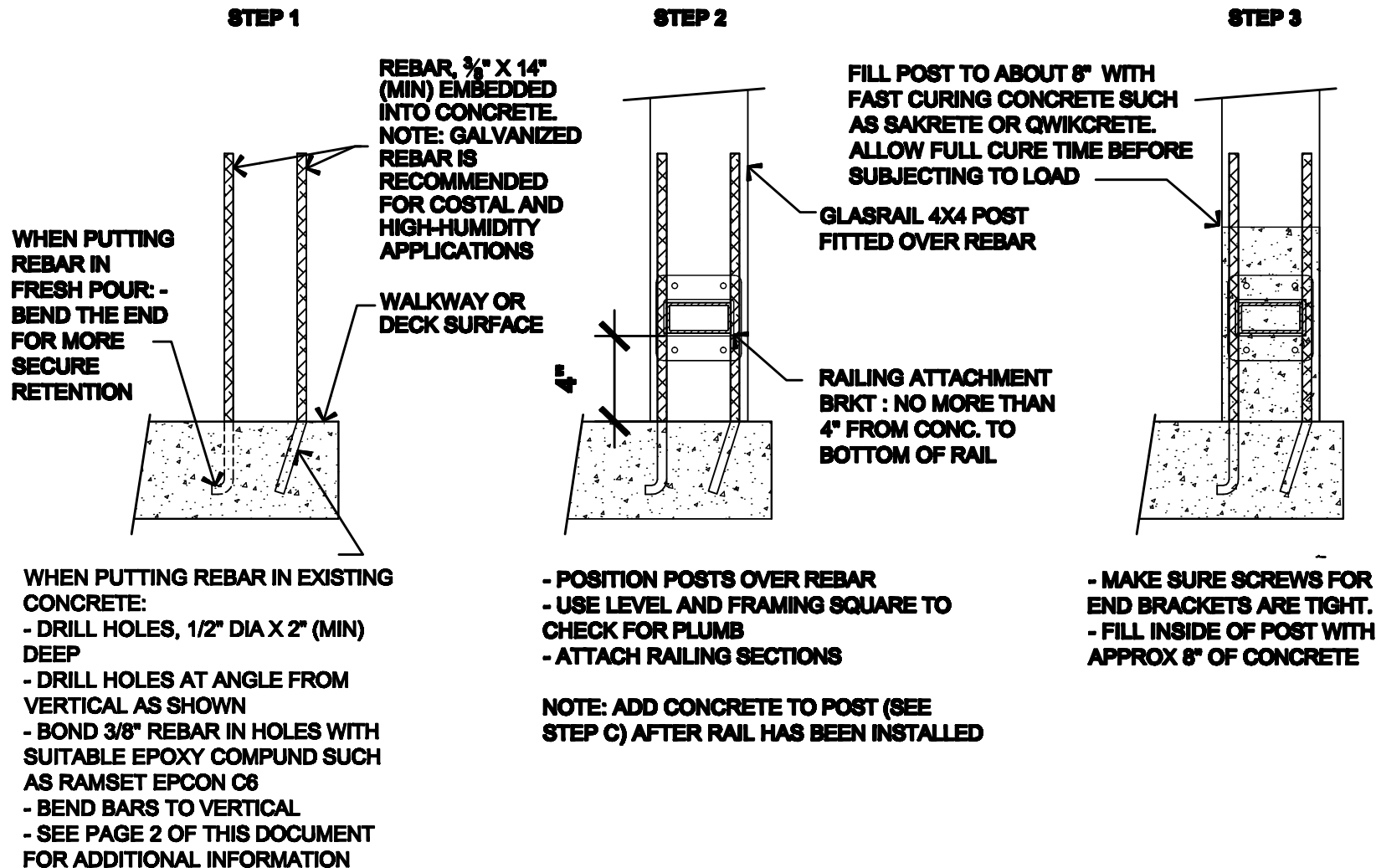


POST MOUNTING SYSTEMS - POST BASED FLANGE - NTS

1

TYPICAL TTOP MOUNT POST BASED FLANGE BASE INSTALLATION AND WATER PROOFING R1

PM-5		SCALE 1/2" = 1'-0"		DRAWN CVH				4215-A Russell Road Mukilteo, WA. 98275		PROJECT DETAILS	
								Main Office 425-349-3908		FILE NO. 000-0-000	
				DATE 5/7/2010				Fax 425-348-8478			
SHEET 5 OF 7				APP'D							

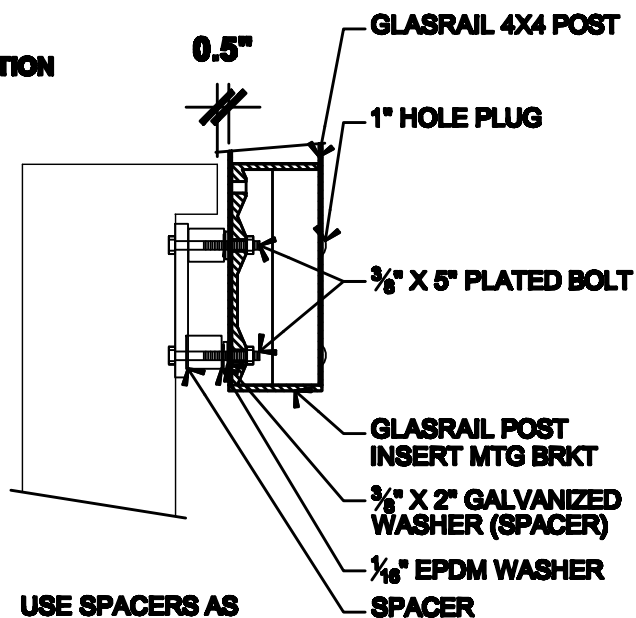


TOP MOUNT POST ON CONCRETE WITH REBAR - NTS

NOTE: MEASURE DIST. BETWEEN MOUNTING SURFACES AND CUT TO LENGTH, LESS THAN 1" ALLOWING FOR END BRACKET THICKNESS

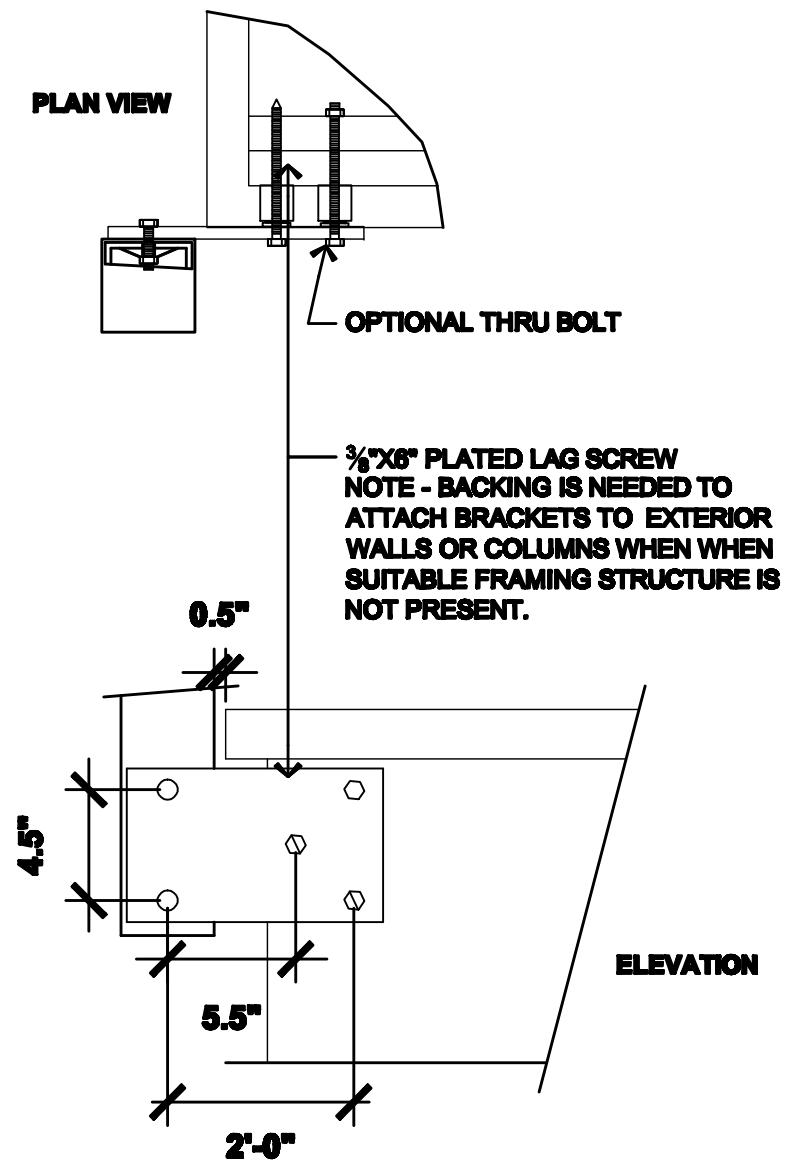
PM-6		SCALE 1/2" = 1'-0"	DRAWN CVH				4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-349-3908 Fax 425-348-8476		PROJECT DETAILS	
			DATE 5/7/2010						APP'D	
SHEET 6 OF 7										

SECTION



USE SPACERS AS
REQUIRED TO PLUMB
POSTS

PLAN VIEW



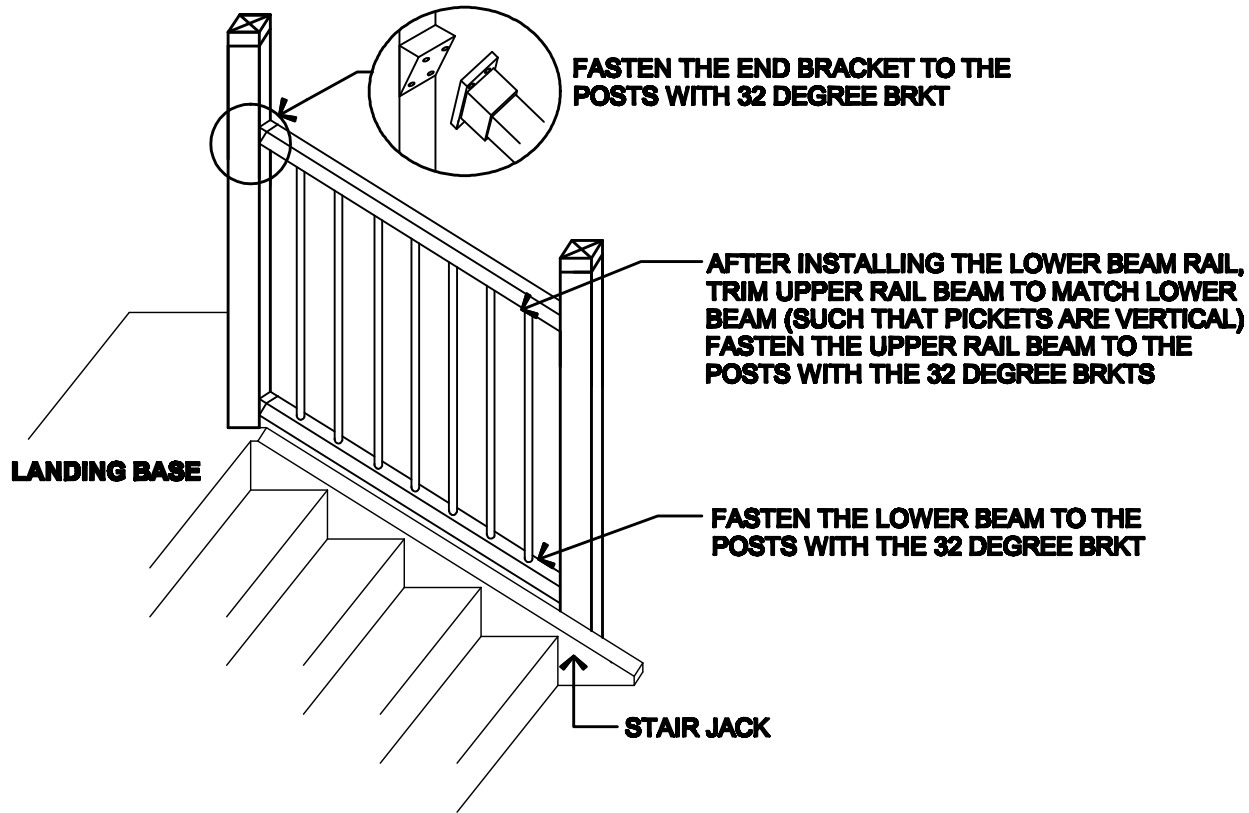
ELEVATION

SIDE MOUNT PLATE DETAIL - NTS

1

DETAIL - MOUNTING POSTS TO SIDE OF PARAPET WALL AT CORNER
NOTE - ALL DIMENSIONS SHOWN ARE NOMINAL, ADJUST AS REQUIRED BASED ON FIELD MEASUREMENT

PM-7	SHEET 7 OF 7			4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-349-3808 Fax 425-348-8476		PROJECT DETAILS
		SCALE 1/2" = 1'-0"	DRAWN CVH			
		DATE 5/17/2010	APP'D			

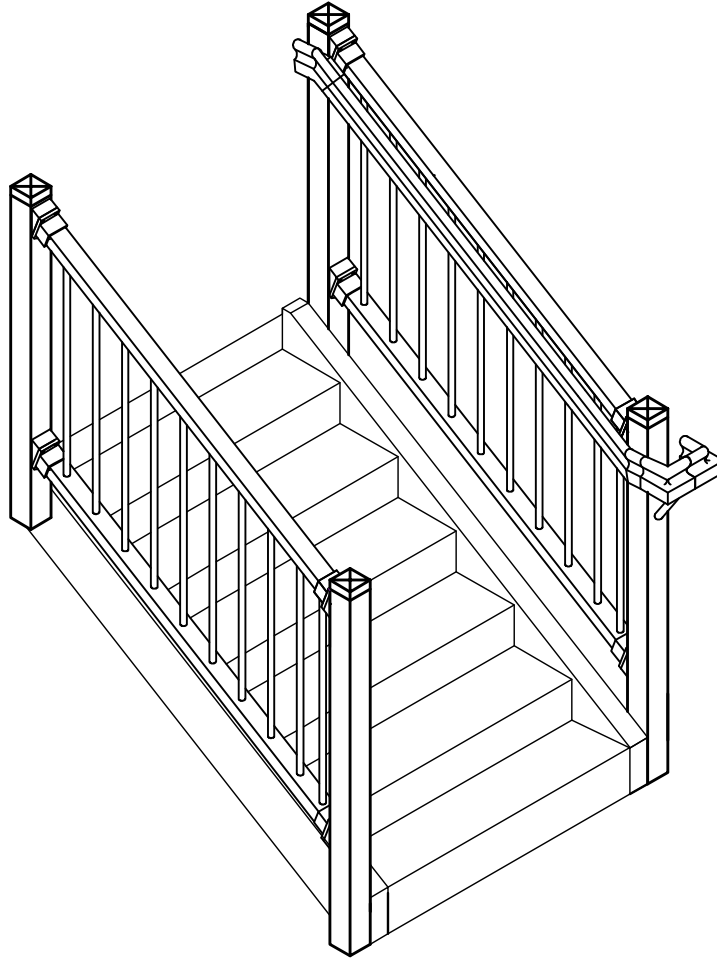


STAIR WINDOW RAIL INSTALL - 32 DEGREE BRKTS



CHECK LOCAL CODE FOR ALLOWABLE DISTANCE

ST-1	SHEET 1 OF 6	SCALE 1/2" = 1'-0"	DRAWN CVH	GLASRAIL® 	4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-348-3608 Fax 425-348-8476	PROJECT DETAILS	FILE NO. 000-0-000
		DATE 5/7/2010	APP'D				



**GLASRAIL OFFERS THE ADA STAIR
RETURN CONFIGURATIONS SHOWN
ABOVE**

STAIR RETURNS - ADA COMPLIANCE - NTS



GLASRAIL MFR SPEC 6580 C – GLASRAIL STAIR RETURNS



4215-A Russell Road
Mukilteo, WA. 98275
Main Office 425-348-3608
Fax 425-348-8476

PROJECT
DETAILS

FILE NO.
000-0-000

DRAWN
CVH

APP'D

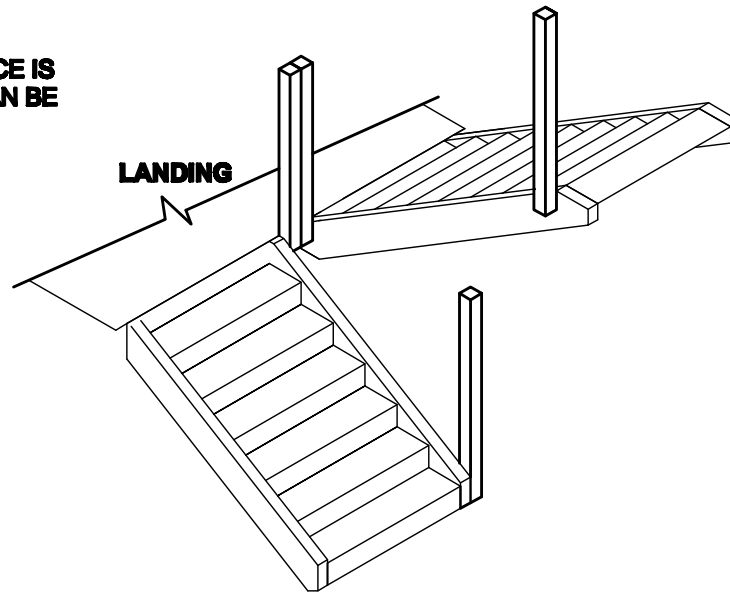
SCALE
1/2" = 1'-0"

DATE
5/7/2010

ST-2

SHEET 2 OF 6

WHEN THE STRINGER CLEARANCE IS MORE THAN 8", THE 4" POSTS CAN BE SIDE BY SIDE



STAIR DETAIL - STRINGER CLEARANCE REQUIREMENTS - NTS



GLASRAIL MFR SPEC 6580A SRTINGER CLEARANCE REQUIREMENTS

The logo for GLASRAIL, featuring the word "GLASRAIL" in a bold, sans-serif font, with a horizontal line through the middle of the letters. The logo is set against a dark background.

**4215-A Russell Road
Mukilteo, WA. 98275
Main Office
425-349-3808**

Fax
425-348-8476

PROJECT DETAILS

FILE NO.
000-0-0000

DRAWN
CVN

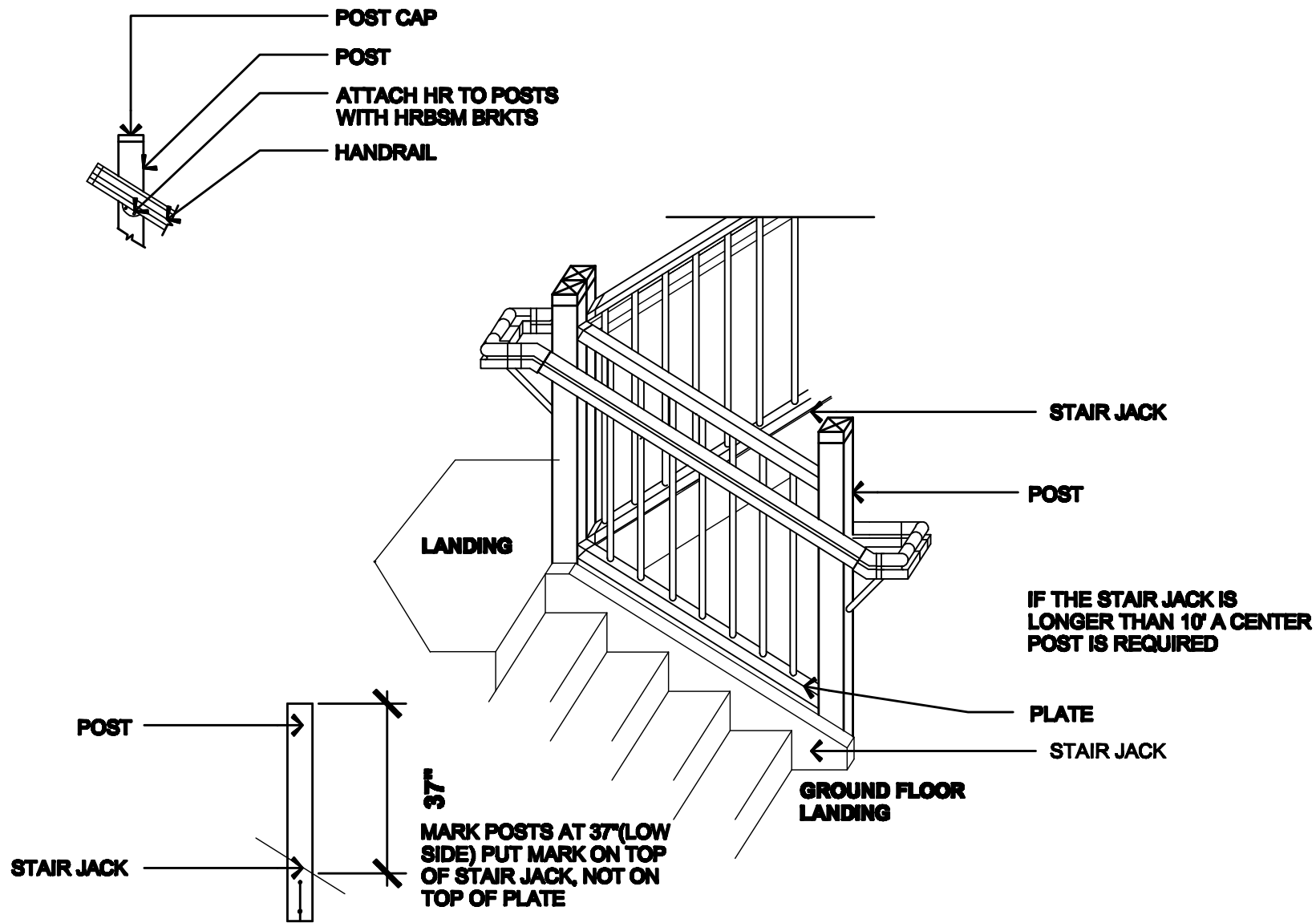
APP'D

SCALE
1/2" = 1' 0"

DATE 5/7/2010

3-TS

SHEET 3 OF 6

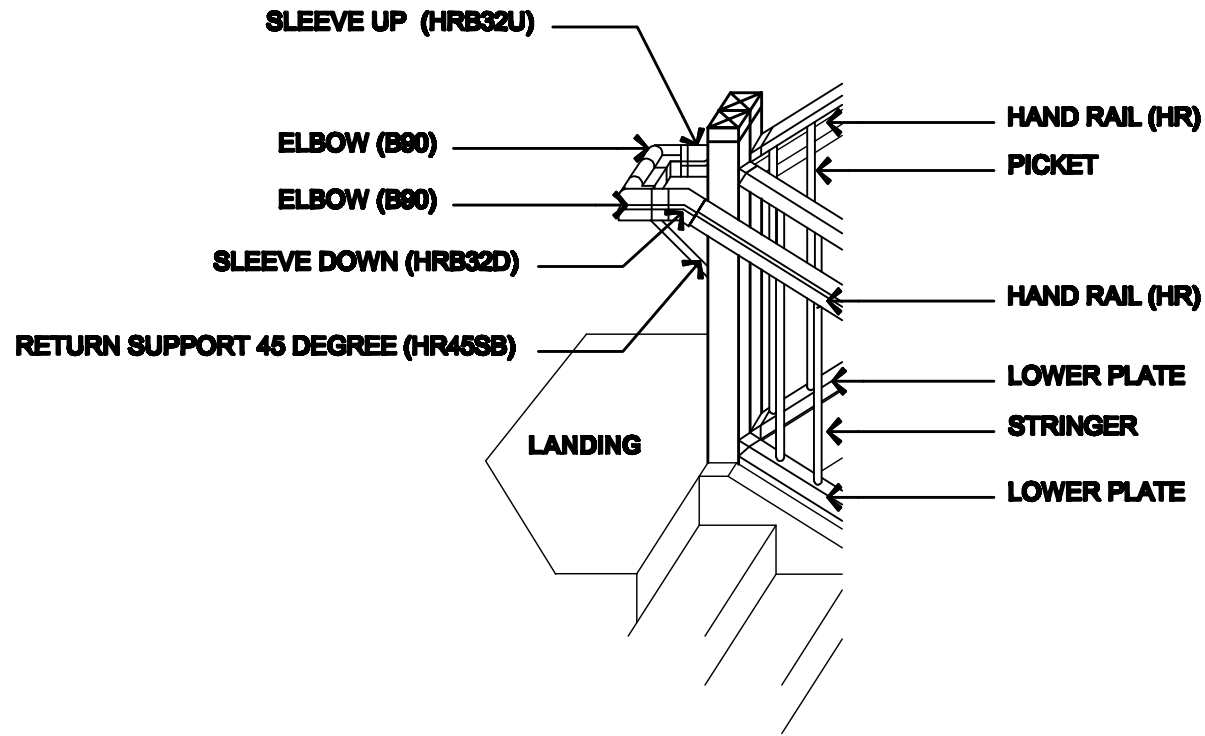


STAIR DETAIL AT GROUND LANDING - NTS



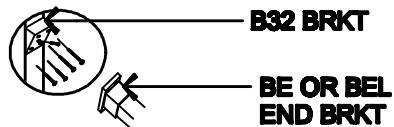
TYPICAL INSTALLATION (BASED ON BOCA) IS SHOWN. LOCAL BUILDING CODES MUST BE CHECKED FOR ANY ADDITIONAL REQUIREMENTS.

ST-4		SCALE 1/2" = 1'-0"		DRAWN CVH				4215-A Russell Road Mukilteo, WA. 98275		PROJECT DETAILS	
		DATE 5/20/2010		APP'D				Main Office 425-349-3608		FILE NO. 000-0-000	
SHEET 4 OF 6		Fax 425-348-8476									

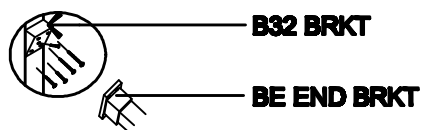


RAILING DETAIL - STAIR RAIL (SR) PARTS - NTS

ST-5	SCALE 1/2" = 1'-0"	DRAWN CVH	PROJECT DETAILS	
			4215-A Russell Road Mukilteo, WA. 98275	
SHEET 5 OF 6	DATE 5/7/2010	APP'D	Main Office 425-348-3808	File NO. 000-0-000
			Fax 425-348-8478	



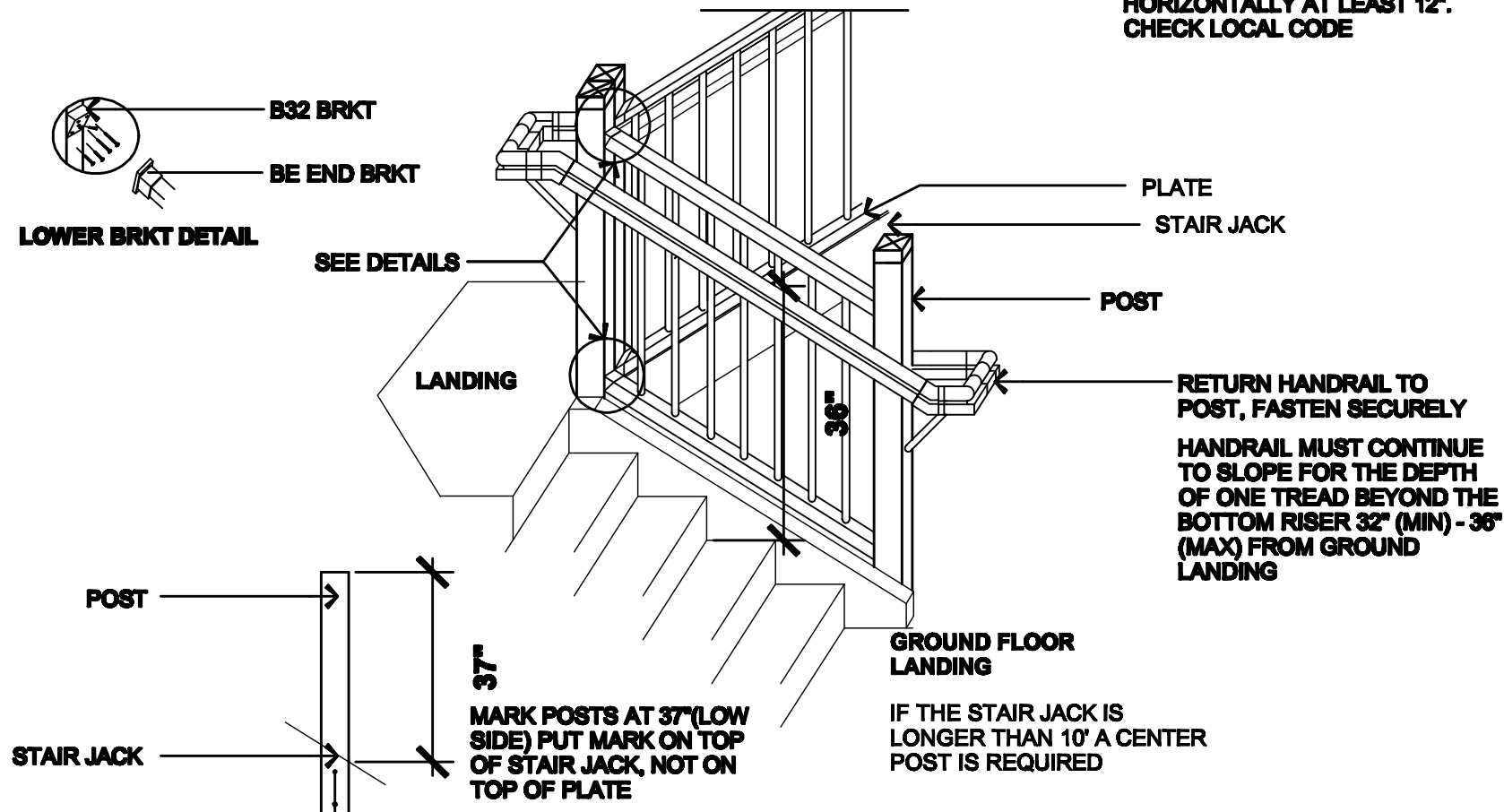
UPPER BRKT DETAIL



LOWER BRKT DETAIL

**CUT UNDERSIDE OF BOTH
RAILS 32" - 36" FROM
GROUND LANDING**

**HANDRAIL MUST EXTEND
HORIZONTALLY AT LEAST 12".
CHECK LOCAL CODE**

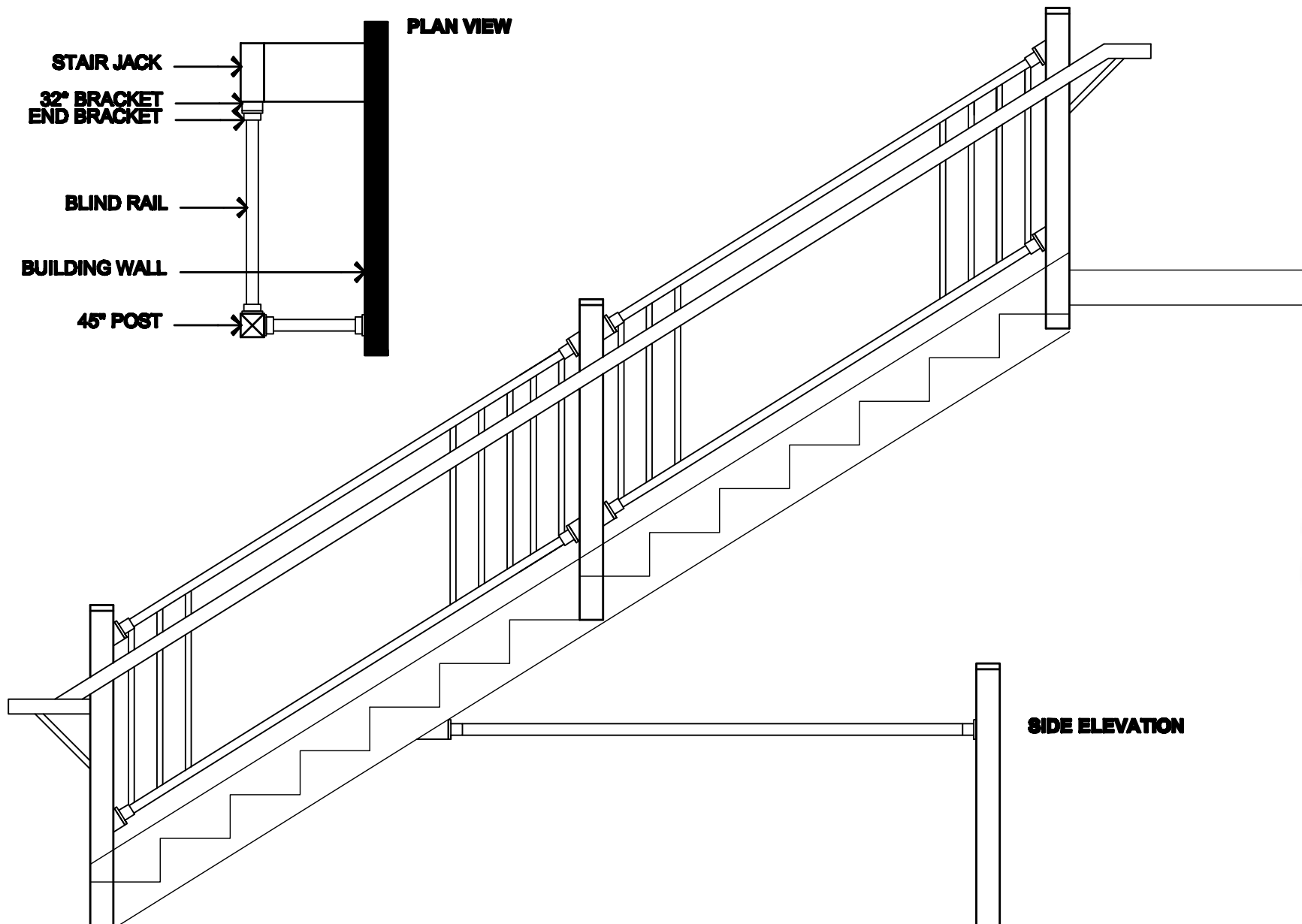
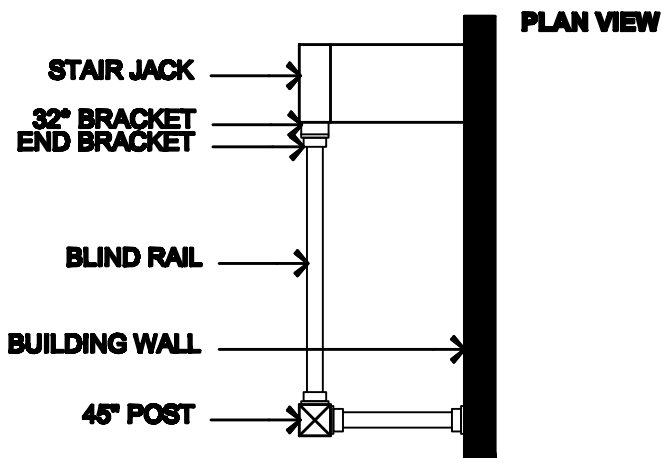


STAIR DETAIL - WINDOW RAIL WITH SIDE MOUNT POSTS - NTS



TYPICAL INSTALLATION (BASED ON BOCA) IS SHOWN. LOCAL BUILDING CODES MUST BE CHECKED FOR ANY ADDITIONAL REQUIREMENTS. WINDOW RAIL WITH SIDE MOUNT POSTS BETWEEN FLIGHTS MUST HAVE A MIN 8" CLEARANCE

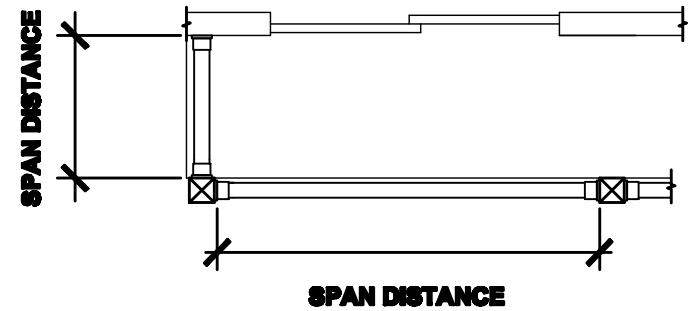
ST-6		SCALE 1/2" = 1'-0"		DRAWN CVH			4215-A Russell Road Mukilteo, WA. 98275		PROJECT DETAILS		
SHEET 6 OF 6		DATE 5/7/2010		APP'D		GLASRAIL®		Main Office 425-348-3608		Fax 425-348-8476	
										FILE NO. 000-0-000	



SIDE ELEVATION

BLIND RAIL

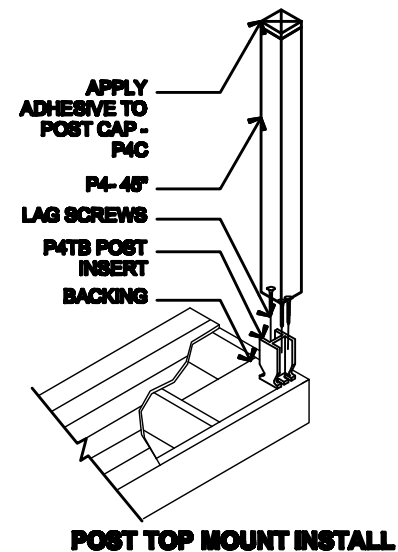
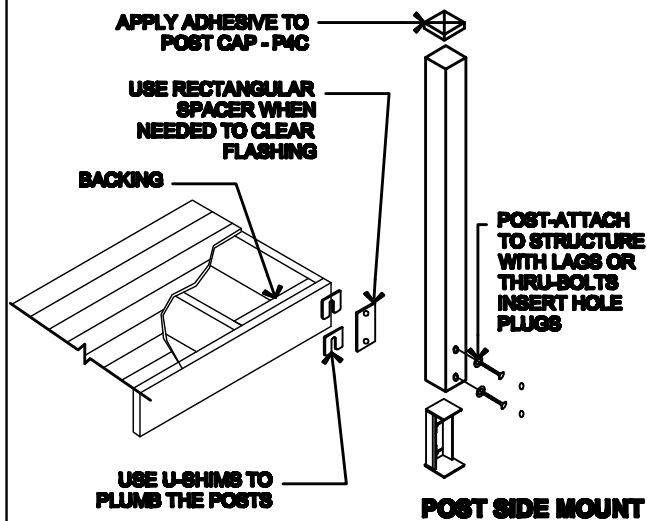
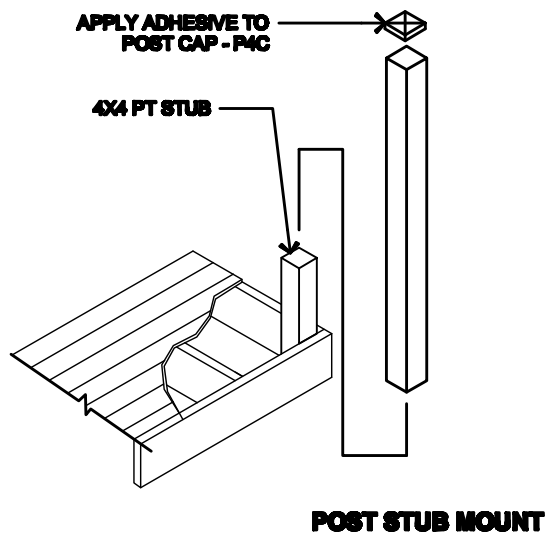
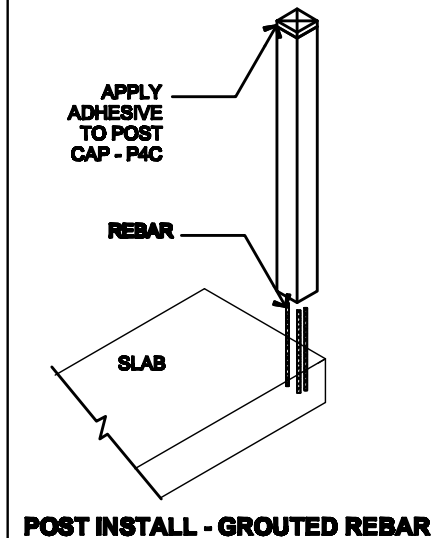
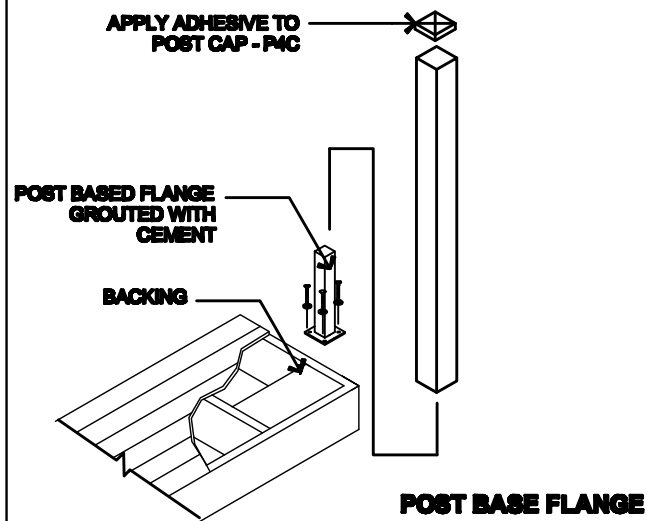
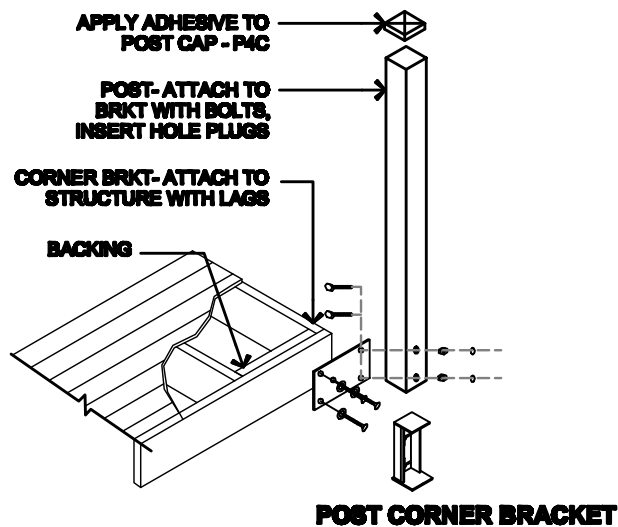
PROJECT DETAILS		FILE NO. 000-0-000	
		4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-348-3608 Fax 425-348-8476	
		SCALE 1/2" = 1'-0"	DATE 5/19/2010
		DRAWN CVH	APP'D
ST-7		SHEET 7	OF 7



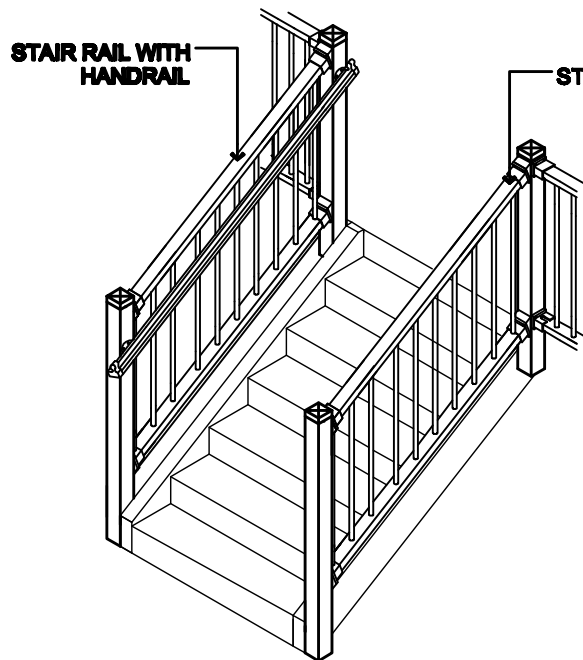
1 NOTE: MEASURE DIST. BETWEEN MOUNTING SURFACES AND CUT TO LENGTH, LESS THAN 1" ALLOWING FOR END BRACKET THICKNESS

2 SUITABLE BACKING NEEDED FOR END BRACKETS

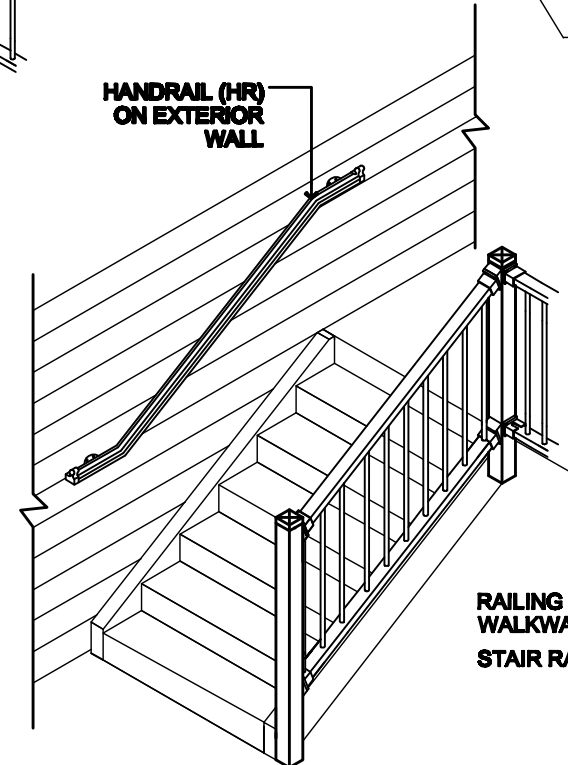
**STANDARD RAIL ASSEMBLY LENGTHS FOR PICKET STYLE GUARDRAIL ARE:
1', 2', 3', 4', 5', 6', 8', 10', AND 12' RAIL IS SHIPPED ASSEMBLED**



POST MOUNTING SYSTEMS - NTS

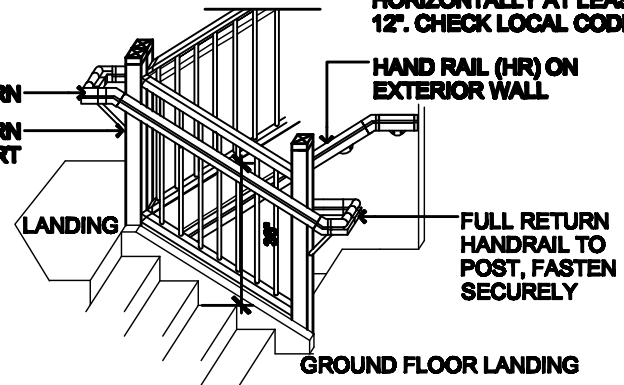


RAILING FOR STAIRS
NEXT TO EXTERIOR WALL



RAILING FOR STAIRS ALONG DECK OR
WALKWAY
STAIR RAIL (WR) HAND RAIL (HR)

CONTINUOUS RETURN
HR RETURN
SUPPORT

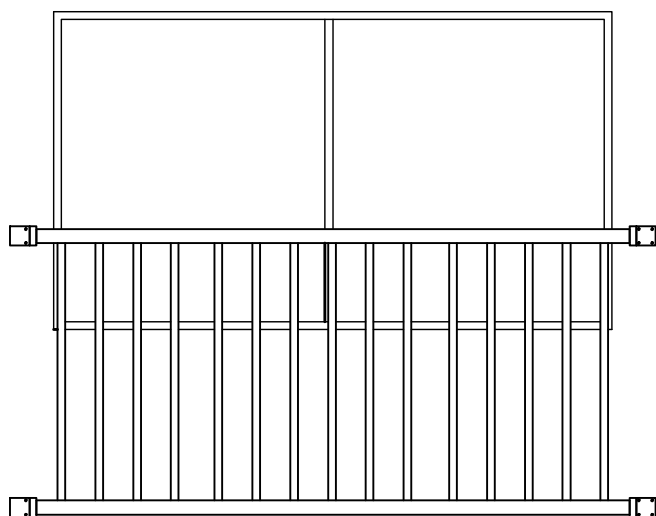


IF THE STAIR JACK IS LONGER
THAN 10' A CENTER POST IS
REQUIRED
TYPICAL HAND RAIL AND
STAIR RAIL IN MULTI-LEVEL
STAIRWELL

HANDRAIL MUST EXTEND
HORIZONTALLY AT LEAST
12". CHECK LOCAL CODE

TN-3		SCALE 1/4" = 1'-0"		DRAWN CVH			4215-A Russell Road Mukilteo, WA. 98275 Main Office 425-349-3608 Fax 425-348-8478		PROJECT TECHNOTE		
		DATE 5/20/2010		APP'D					FILE NO. 000-0-000		
SHEET 3 OF 6											

STAIR RAIL AND HAND RAIL DETAILS - NTS



EXAMPLE ELEVATION

USE 3" SCREWS TO
ATTACH BRKT TO
WALL SURFACE

ALUMINUM
MOUNTING
ANGLE BRACKET
FOR RAIL END
BRACKETS

ATTACH END BRKT TO
ALUMINUM
MOUNTING ANGLE
BRACKET USING
#12 STAINLESS
CAP-SCREWS AND
ACORN NUTS.

JULIETTE BALCONY ATTACHMENT - NTS

1

ATTACH ALUMINUM MOUNTING 90° ANGLE BRACKET TO SURFACE TO WALL USING 3" SCREWS. ATTACH
END BRACKET TO ALUMINUM MOUNTING 90° ANGLE BRACKET USING ACORN NUT AND WASHER.

TN-5	SCALE 1/2" = 1'-0"	DRAWN CVH			4215-A Russell Road Mukilteo, WA. 98275	PROJECT TECHNOTE
		DATE 5/7/2010	APP'D			
SHEET 5 OF 5	Main Office 425-349-3608					FILE NO. 000-0-000
	Fax 425-348-8476					

TYPE 6D
 2 B90
 1 HRB32D
 1 HRCL/R
 2 HRBSM
 1 HR45SB

TYPE 6U
 2 B90
 1 HRB32U
 1 HRCL/R
 2 HRBSM
 1 HR45SB

TYPE 4D
 1 B90
 1 HRB32D
 1 HRCL/R
 1 HRBSM

TYPE 4U
 1 B90
 1 HRB32U
 1 SRC
 1 HRCL/R
 1 HRBSM

TYPE 5U
 1 B90
 1 HRB32U
 1 HRBSM
 .5 HR45SB

TYPE 5D
 1 B90
 1 HRB32D
 1 HRBSM
 .5 HR45SB

TYPE 3D
 1 HRB32D
 1 HRCR
 1 HRBSM

TYPE 1
 1 HRCL/R
 1 HRBSM

TYPE 2
 1 B90
 1 SRC
 1 HRCL/R
 1 HRBSM

TYPE 3U
 1 HRB32U
 1 HRCL
 1 HRBSM

HAND RAIL TYPES - NTS

1

TN-6	SHEET 6 OF 6				4215-A Russell Road Mukilteo, WA. 98275		PROJECT TECHNOTE	
	SCALE 1/2" = 1'-0"		DRAWN CVH		Main Office 425-349-3808 Fax 425-348-8476		FILE NO. 000-0-000	
	DATE 5/20/2010		APP'D					

Landmark Apartments Walkway & Stair Replacement Bellevue, WA

Calculations for Permit Corrections



March 18, 2025

Landmark Apartments B13 Walkway Replacement

Design Criteria

2501 148th Ave SE Bellevue WA

2021 International Building Code
2016 ASCE 7

Seismic analysis

$I = 1.0$
 $S_s = 130\%$
 $S_1 = 45\%$
 $S_{DS} = 104\%$
 $S_{D1} = 56\%$
 $R = 1.50$

Seismic Design Category D

Live Loads

Entry Walkway & Stairs 100 psf

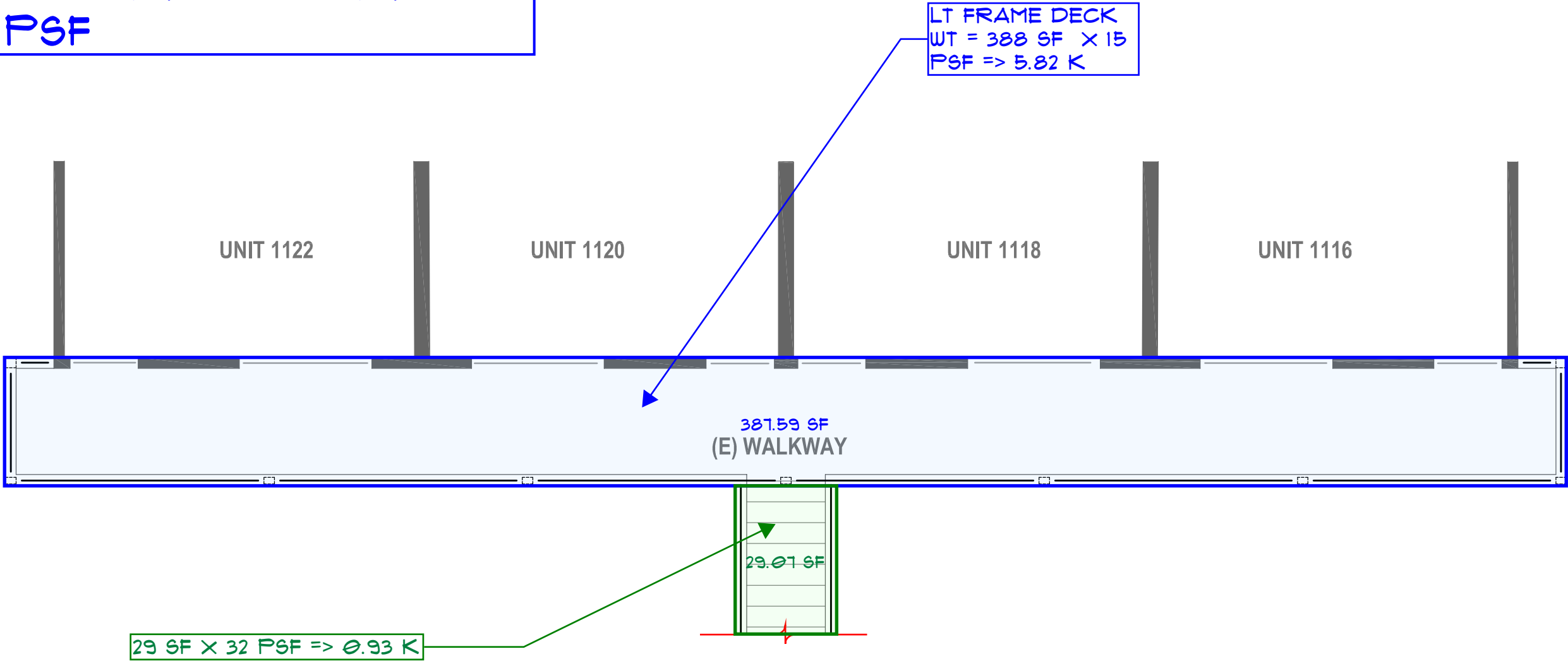
Dead Loads

New Deck Assembly

Waterproof Coating	3 psf
1/2" CDX plywood sheathing	2.5 psf
2x10 @ 16" oc	2.8 psf
Misc M/E	1.0 psf
Ceiling	2.8 psf
Beam Framing	1.5 psf
<hr/>	
	13.6 psf

Assumed Soil Bearing
Capacity = 1500 psf

DECK:
DL = 15 PSF
LL = 100 PSF
STAIRS:
DL = 32 PSF (PRECAST TREADS)
LL = 100 PSF



TOTAL DECK. WT = 5.82+0.93 = 6.75K

DECK PLAN 3/16" = 1'-0"

⚠ This is a beta release of the new ATC Hazards by Location website. Please [contact us](#) with feedback.

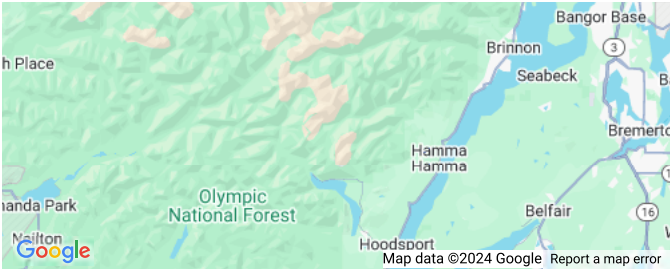
🔔 The ATC Hazards by Location website will not be updated to support ASCE 7-22. [Find out why.](#)

ATC

Hazards by Location

Search Information

Address:	16202 NE 11th St, Bellevue, WA 98008, USA
Coordinates:	47.619834, -122.124044
Elevation:	427 ft
Timestamp:	2024-10-18T17:29:39.217Z
Hazard Type:	Seismic
Reference Document:	ASCE7-16
Risk Category:	II
Site Class:	D-default



Basic Parameters

Name	Value	Description
S _S	1.298	MCE _R ground motion (period=0.2s)
S ₁	0.453	MCE _R ground motion (period=1.0s)
S _{MS}	1.557	Site-modified spectral acceleration value
S _{M1}	* null	Site-modified spectral acceleration value
S _{DS}	1.038	Numeric seismic design value at 0.2s SA
S _{D1}	* null	Numeric seismic design value at 1.0s SA

* See Section 11.4.8

▼Additional Information

Name	Value	Description
SDC	* null	Seismic design category
F _a	1.2	Site amplification factor at 0.2s
F _v	* null	Site amplification factor at 1.0s
CR _S	0.906	Coefficient of risk (0.2s)
CR ₁	0.896	Coefficient of risk (1.0s)
PGA	0.556	MCE _G peak ground acceleration
F _{PGA}	1.2	Site amplification factor at PGA
PGA _M	0.667	Site modified peak ground acceleration
T _L	6	Long-period transition period (s)
SsRT	1.298	Probabilistic risk-targeted ground motion (0.2s)
SsUH	1.432	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	2.764	Factored deterministic acceleration value (0.2s)
S1RT	0.453	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.505	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	1.163	Factored deterministic acceleration value (1.0s)
PGAd	0.975	Factored deterministic acceleration value (PGA)

* See Section 11.4.8

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Please note that the ATC Hazards by Location website will not be updated to support ASCE 7-22. [Find out why.](#)

Disclaimer

Hazard loads are provided by the U.S. Geological Survey [Seismic Design Web Services](#).

While the information presented on this website is believed to be correct, ATC and its sponsors and contributors assume no responsibility or liability for its accuracy. The material presented in the report should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. ATC does not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the report provided by this website. Users of the information from this website assume all liability arising from such use. Use of the output of this website does not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the report.

Seismic Design

Landmark Apartments B13 Walkway Replacement

International Building Code

Section 1613

ASCE7 Chapter 12

Maximum Considered Earthquake Spectral Response Acceleration Parameters

$$S_s = 130\%$$

$$S_{DS} = 104\%$$

$$F_a = 1 \text{ per Table 11.4-1}$$

$$S_1 = 45\%$$

$$S_{D1} = 56\%$$

$$F_v = 1.847 \text{ per Table 11.4-2}$$

Site Class

D

assumed

MCE

Interpolate Fv	
S1	Fv
0.4	1.9
0.5	1.8
45%	1.847

Section 1613

Design Spectral Response Acceleration Parameters

(IBC 1613.2.1)

5% damped design

Approximate Fundamental Period

$$T = C_t(h_n)^x$$

(ASCE7 12.8.2.1)

table 12.8-2

Where:

$$C_t = 0.02$$

$$h_n = 8.5$$

$$x = 0.75$$

$$T = 0.100 \text{ sec}$$

'OK, no increase'

(ASCE 11.4.8) Exception #2

(ASCE7 11.4.5)

General Resonse Spectrum

$$T_o = 0.2 * S_{D1}/S_{DS} = 0.11 \text{ sec}$$

$$T_s = S_{D1}/S_{DS} = 0.54 \text{ sec}$$

$$T_L = 6 \text{ sec}$$

figure 22-12

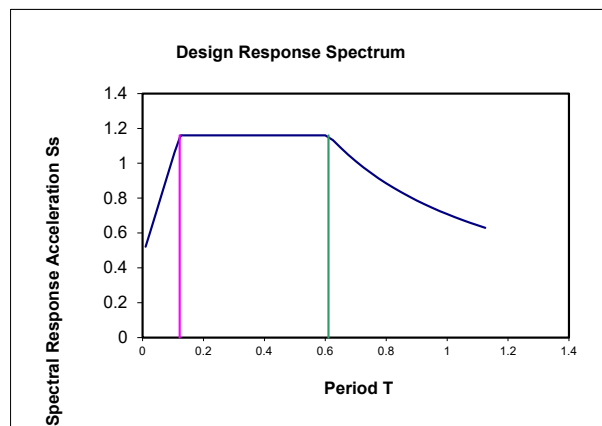
$$S_a = 4.728948 \text{ 11.4-5 if } T, T_o$$

$$S_a = 1.04 \text{ if } T_o < T < T_s$$

$$S_a = 5.602471 \text{ 11.4-6 if } T_s < T < T_L$$

$$S_a = 337.6266 \text{ 11.4-7 if } T > T_L$$

$$S_a = 4.728948$$



$$S_s = 0.992$$

Importance Factor

$$I = 1$$

Seismic Use Group=

II

(ASCE-7 Table 9.1.3)

Seismic Design Category

D Table 11.6-1

(ASCE-7 Table 11.6)

D Table 11.6-2

IBC Building Classification:

Regular Building

(ASCE7 12.3.2)

Equivalent Lateral Force Procedure (ASCE 7 section 12.8)

Requirements to use the Equivalent Lateral Force Procedure:

Regular Building

T < 3.5 Ts okay

Building Type

Timber Frame Cantilevered Columns

$$R = 1.50 \quad \Omega_o = 1.5 \quad C_D = 1.5 \quad (\text{ASCE7 Table 12.2.1})$$

Seismic Base Shear

$$V = C_s W \quad (\text{ASCE7 Eq 12.8-1})$$

$$C_s = \frac{S_{DS}}{R/I} \quad C_s = 0.692 \quad (\text{ASCE7 Eq 12.8-2})$$

but need not be greater than,

$$C_s = \frac{S_{D1}}{T(R/I)} \quad \text{For } T < T_L = 3.735 \quad (\text{ASCE7 Eq 12.8-3})$$

$$C_s = \frac{S_{D1} T_L}{T^2(R/I)} \quad \text{For } T > T_L = 225.084 \quad (\text{ASCE7 Eq 12.8-4})$$

$$C_s \max = 3.735$$

but shall not be less than:

$$C_s = .044 S_{DS} / (R/I_e) \quad C_s \min = 0.0057$$

$$C_s = 0.5 S_{D1} / (R/I_e)$$

Therefore: $C_s = 0.692 W$

$$\text{Deck Weight} = 6.8 \text{ kips}$$

$$V = 4.7 \text{ kips}$$

Redudancy Factor

$$E = r E_h + E_v \quad (\text{ASCE7 EQ 12.3.4})$$

where $r = 1.3$ unless criteria of table 12.3-3 are met for SDC D,E,F $r = 1.0$ for Seismic Design Categories A,B,C

Therefore: $r = 1.30$

$$E = 6.07 \text{ kips}$$

Building Weight

$$\text{Deck} = 14 \text{ psf}$$

$$\text{Deck Weight} = 6.75 \text{ k}$$

$$\text{Total Building Wt} = 6.8$$

SEISMIC DISTRIBUTION**STRENGTH / LRFD****ALLOW. STRESS DESIGN**

level	W (kips)	h (ft)	Wh (kip-ft)	Wh Σ Wh	story shear (kips)	Σ (kips)	story shear (kips)	Σ (kips)
Deck	6.8	8.5	57.8	1.00	6.07	6.07	4.25	4.25

7 kips

57.8

Seismic Design**Landmark Apartments B13 Walkway Replacement****International Building Code****Section 1613****Lower Landing Only****ASCE7 Chapter 12**

Maximum Considered Earthquake Spectral Response Acceleration Parameters

$$S_s = 130\%$$

$$S_{DS} = 104\%$$

$$F_a = 1 \text{ per Table 11.4-1}$$

$$S_1 = 45\%$$

$$S_{D1} = 56\%$$

$$F_v = 1.847 \text{ per Table 11.4-2}$$

Site Class

D

assumed

MCEInterpolate F_v S_1 F_v

0.4

1.9

0.5

1.8

45%

1.847

Section 1613**Design Spectral Response Acceleration Parameters**

(IBC 1613.2.1)

5% damped design

Approximate Fundamental Period

$$T = C_t(h_n)^x$$

(ASCE7 12.8.2.1)

table 12.8-2

Where:

$$C_t = 0.02$$

$$h_n = 3$$

$$x = 0.75$$

$$T = 0.046 \text{ sec}$$

'OK, no increase'

(ASCE 11.4.8) Exception #2

(ASCE7 11.4.5)

General Resonse Spectrum

$$T_o = 0.2 * S_{D1}/S_{DS} = 0.11 \text{ sec}$$

$$T_s = S_{D1}/S_{DS} = 0.54 \text{ sec}$$

$$T_L = 6 \text{ sec}$$

figure 22-12

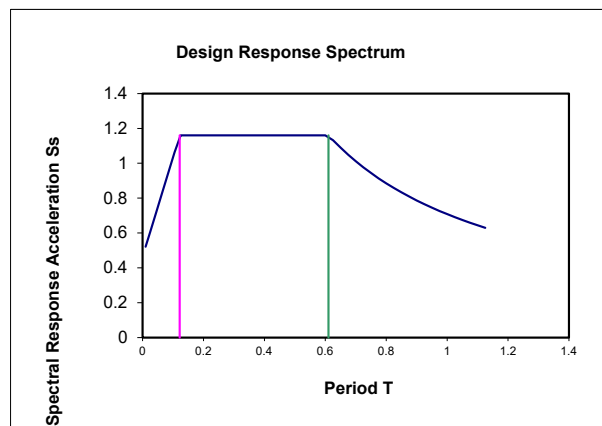
$$S_a = 4.416188 \text{ 11.4-5 if } T, T_o$$

$$S_a = 1.04 \text{ if } T_o < T < T_s$$

$$S_a = 12.23497 \text{ 11.4-6 if } T_s < T < T_L$$

$$S_a = 1610.213 \text{ 11.4-7 if } T > T_L$$

$$S_a = 4.416188$$



$$S_s = 0.679$$

Importance Factor

$$I = 1$$

Seismic Use Group=

II

(ASCE-7 Table 9.1.3)

Seismic Design Category

D Table 11.6-1

(ASCE-7 Table 11.6)

D Table 11.6-2

IBC Building Classification:

Regular Building

(ASCE7 12.3.2)

Seismic Design**Landmark Apartments B13 Walkway Replacement****Equivalent Lateral Force Procedure (ASCE 7 section 12.8)****Lower Landing Only**

Requirements to use the Equivalent Lateral Force Procedure:

Regular Building

T < 3.5 Ts okay

Building Type

Timber Frame Cantilevered Columns

$$R = 1.50 \quad \Omega_o = 1.5 \quad C_D = 1.5 \quad (\text{ASCE7 Table 12.2.1})$$

Seismic Base Shear

$$V = C_s W \quad (\text{ASCE7 Eq 12.8-1})$$

$$C_s = \frac{S_{DS}}{R/I} \quad C_s = 0.692 \quad (\text{ASCE7 Eq 12.8-2})$$

but need not be greater than,

$$C_s = \frac{S_{D1}}{T(R/I)} \quad \text{For } T < T_L = 8.157 \quad (\text{ASCE7 Eq 12.8-3})$$

$$C_s = \frac{S_{D1} T_L}{T^2(R/I)} \quad \text{For } T > T_L = 1073.475 \quad (\text{ASCE7 Eq 12.8-4})$$

$$C_s \text{ max} = 8.157$$

but shall not be less than:

$$C_s = .044 S_{DS} / (R/I_e) \quad C_s \text{ min} = 0.0057$$

$$C_s = 0.5 S_{D1} / (R/I_e)$$

Therefore: $C_s = 0.692 W$

$$\text{Deck Weight} = 0.4 \text{ kips}$$

$$V = 0.2 \text{ kips}$$

Redudancy Factor

$$E = r E_h + E_v \quad (\text{ASCE7 EQ 12.3.4})$$

where $r = 1.3$ unless criteria of table 12.3-3 are met for SDC D,E,F $r = 1.0$ for Seismic Design Categories A,B,C

Therefore: $r = 1.30$

$$E = 0.31 \text{ kips}$$

Building Weight

$$\text{Deck} = 15 \text{ psf}$$

$$\text{Deck Weight} = 0.35 \text{ k}$$

$$\text{Total Building Wt} = 0.4$$

SEISMIC DISTRIBUTION**STRENGTH / LRFD****ALLOW. STRESS DESIGN**

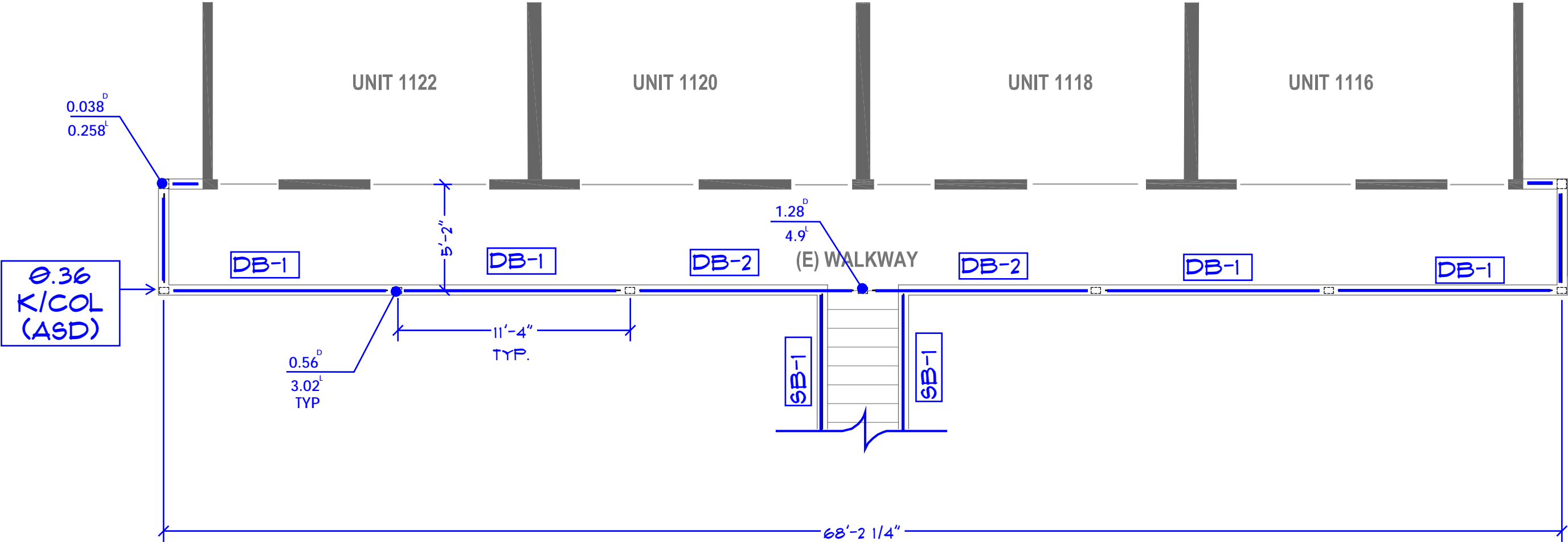
level	W (kips)	h (ft)	Wh (kip-ft)	Wh Σ Wh	story shear (kips)	Σ (kips)	story shear (kips)	Σ (kips)
Deck	0.4	3	1.1	1.00	0.31	0.31	0.22	0.22

0 kips

1.1

DECK:
DL = 15 PSF
LL = 100 PSF
STAIRS:
DL = 32 PSF (PRECAST TREADS)
LL = 100 PSF

TOTAL $V_{DECK} = 6.1$ (LRFD)
 $6.1K / (2) SIDES = 3.05K/SIDE$
 $3.05K / 68.16' \times 11.33' \Rightarrow 0.51K/COLUMN MAX$



DECK PLAN

3/16" = 1'-0"

$$3/16'' = 1'-0''$$

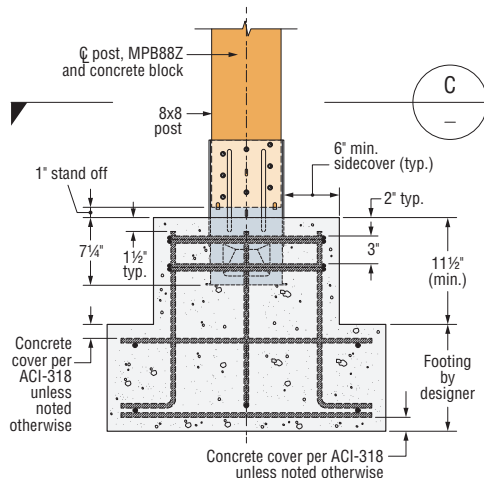
MPBZ™

Moment Post Base (cont.)

These products are available with additional corrosion protection. For more information, see p. 16.

Model No.	Nominal Column Size	Dimensions (in.)			Strong-Drive® SDS Screws	Concrete Allowable Loads						Wood Assembly DF/SP Allowable Loads			Rotational Stiffness (in.-lb./ rad.)	Code Ref.
		W ₁ / W ₂	D	H		Uplift		Lateral F ₁		Moment M (ft.-lb.)		Download (100)	Download (160)	Moment M (ft.-lb.) (160)		
						Uncracked	Cracked	Uncracked	Cracked	Uncracked	Cracked					
Nonreinforced Concrete																
Wind and Seismic Design Category A&B																
MPB44Z	4x4	3⅙	7¼	7¼	(16) ¼" x 2½"	4,900	3,820	1,750	1,225	1,350	945	6,240	6,410	1,520	1,245,000	IBC®, FL, LA
MPB66Z	6x6	5⅙	7¼	7¼	(24) ¼" x 2½"	5,815	5,815	3,435	2,405	2,680	1,875	9,360	10,855	3,730	2,405,000	
MPB88Z	8x8	7⅙	7¼	7¼	(36) ¼" x 3"	11,860	9,315	7,200	5,560	4,160	2,910	15,120	17,690	4,560	5,515,000	
Seismic Design Category C–F																
MPB44Z	4x4	3⅙	7¼	7¼	(16) ¼" x 2½"	4,785	3,350	1,535	1,075	1,180	830	6,240	6,410	1,520	1,245,000	IBC, FL, LA
MPB66Z	6x6	5⅙	7¼	7¼	(24) ¼" x 2½"	5,815	5,815	3,015	2,110	2,055	1,645	9,360	10,855	3,730	2,405,000	
MPB88Z	8x8	7⅙	7¼	7¼	(36) ¼" x 3"	10,155	8,165	6,965	4,875	3,470	2,550	15,120	17,690	4,560	5,515,000	
Reinforced Concrete																
Wind and Seismic Design Category A&B																
MPB44Z	4x4	3⅙	7¼	7¼	(16) ¼" x 2½"	4,900	3,820	1,750	1,225	1,520	1,520	6,240	6,410	1,520	1,245,000	IBC, FL, LA
MPB66Z	6x6	5⅙	7¼	7¼	(24) ¼" x 2½"	5,815	5,815	3,435	2,405	3,730	3,190	9,360	10,855	3,730	2,405,000	
MPB88Z	8x8	7⅙	7¼	7¼	(36) ¼" x 3"	11,860	9,315	7,200	5,560	4,560	4,560	15,120	17,690	4,560	5,515,000	
Seismic Design Category C–F																
MPB44Z	4x4	3⅙	7¼	7¼	(16) ¼" x 2½"	4,785	3,350	1,535	1,075	1,520	1,520	6,240	6,410	1,520	1,245,000	IBC, FL, LA
MPB66Z	6x6	5⅙	7¼	7¼	(24) ¼" x 2½"	5,815	5,815	3,015	2,110	3,350	2,795	9,360	10,855	3,730	2,405,000	
MPB88Z	8x8	7⅙	7¼	7¼	(36) ¼" x 3"	10,155	8,165	6,965	4,875	4,560	4,560	15,120	17,690	4,560	5,515,000	

1. Loads may not be increased for duration of load.
2. Higher download can be achieved by solidly packing grout in the 1" standoff area before installation of the post. Allowable download shall be based on either the wood post design or the concrete design calculated per code.
3. Concrete shall have a minimum compressive strength of $f'_c = 2,500$ psi.
4. Tabulated rotational stiffness accounts for the rotation of the base assembly attributable to deflection of the connector, fastener slip, and post deformation. Designer must account for additional deflection attributable to bending of the post.
5. Multiply seismic and wind ASD uplift and lateral load values by 1.43 or 1.67, respectively, to obtain LRFD capacities.
6. In accordance with IBC, Section 1613.1, detached one- and two-family dwellings in Seismic Design Category (SDC) C may use "Wind and SDC A&B" allowable loads.
7. Foundation dimensions are for anchorage only. Foundation design (size and reinforcement) by designer.
8. Allowable load shall be the lesser of the wood assembly or concrete allowable load.
9. For loading simultaneously in more than one direction, the allowable load must be evaluated using the following equation: (Design Uplift / Allowable Uplift, or Design Download / Allowable Download) + (Design Moment / Allowable Moment) + (Design Lateral / Allowable Lateral) ≤ 1.0 .
10. To account for shrinkage up to 3%, multiply rotational stiffness by 0.75. Reduction may be linearly interpolated for shrinkage less than 3%.
11. Tabulated load values may be used for rough sawn lumber or larger size posts without reduction factors. Rough-size and larger-size posts shall be planed uniformly on all four sides such that centerline of post is concentric with the center line of MPBZ.

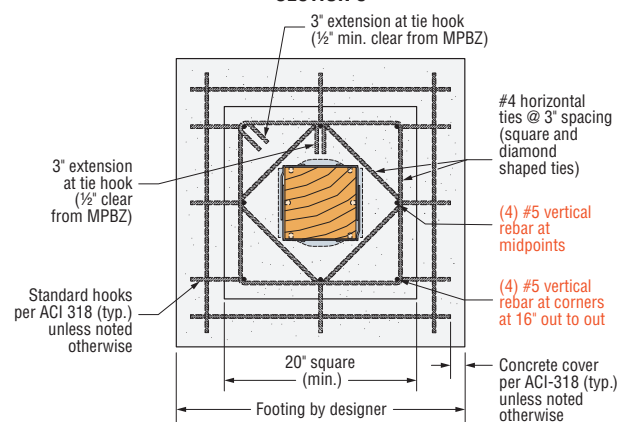


MPB88Z

Reinforced Concrete Footing

Footing (size and reinforcement) by designer. Standard hook geometry in accordance with ACI 318 unless noted otherwise.

SECTION C



Project Title:
Engineer:
Project ID:
Project Descr:

Building Code Information

Project File: Landmark Apts.ec6

LIC# : KW-06016108, Build:20.24.03.04

I.L. GROSS STRUCTURAL ENGINEERS

(c) ENERCALC INC 1983-2023

Governing Code : IBC 2021, ASCE 7-16, AISC 360-16, NDS 2018, ACI 318-19, TMS 402-16

City Jurisdiction :

Contact Name :

Alternate Contact :

Building Official :

Address : , Bellevue, WA

Phone : 425-640-7333

Fax :

eMail :

Notes :

Project Title: [Landmark Apts](#)
Engineer: [VM](#)
Project ID:
Project Descr: [Building 13 Walkway Replacement](#)

Project Information

Project File: Landmark Apts.ec6

LIC# : KW-06016108, Build:20.24.03.04

I.L. GROSS STRUCTURAL ENGINEERS

(c) ENERCALC INC 1983-2023

Project Title : [Landmark Apts](#)

Description : [Building 13 Walkway Replacement](#)

I.D. :

Address : , [Bellevue, WA](#)

Project Leader : [VM](#)

Phone : [425-640-7333](#)

Fax :

eMail : victorm@ilgross.com

Project Notes

Multiple Simple Beam

Project File: landmark apts.ec6

LIC#: KW-06016108, Build:20.24.10.30

I.L. GROSS STRUCTURAL ENGINEERS

(c) ENERCALC, LLC 1982-2025

Description : Landmark Apts Framing

Wood Beam Design : DB-1

Calculations per NDS 2018, IBC 2021

BEAM Size : 6x12, Sawn, Fully Braced

Using Allowable Stress Design with ASCE 7-16 Load Combinations, Major Axis Bending

Wood Species : Hem-Fir

Wood Grade : No.2

Fb - Tension	850.0 psi	Fc - Prll	1,300.0 psi	Fv	150.0 psi	Ebend- xx	1,300.0 ksi	Density	26.840 pcf
Fb - Compr	850.0 psi	Fc - Perp	405.0 psi	Ft	525.0 psi	Eminbend - xx	470.0 ksi		

Applied Loads

Beam self weight calculated and added to loads

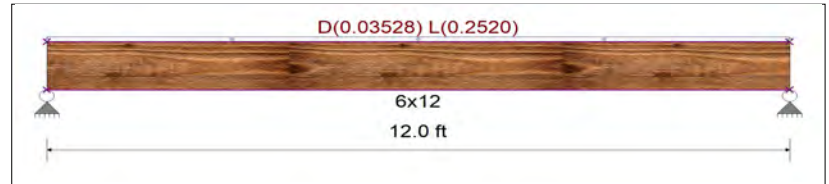
Unif Load: D = 0.0140, L = 0.10 k/ft, Trib= 2.520 ft

Design Summary

Max fb/Fb Ratio = **0.784** : 1
 fb : Actual : 532.87 psi at 6.000 ft in Span # 1
 Fb : Allowable : 680.00 psi
 Load Comb : +D+L

Max fv/FvRatio = **0.300** : 1
 fv : Actual : 36.03 psi at 11.080 ft in Span # 1
 Fv : Allowable : 120.00 psi
 Load Comb : +D+L

Max Reactions (k)	D	Lr	L	S	W	E	H
Left Support	0.28		1.51				
Right Support	0.28		1.51				



Max Deflections

Transient Downward	0.130 in	Total Downward	0.155 in
Ratio	1103	Ratio	930
	LC: L Only		LC: +D+L
Transient Upward	0.000 in	Total Upward	0.000 in
Ratio	9999	Ratio	9999
	LC:		LC:

Wood Beam Design : MAIN STAIR STRINGER

Calculations per NDS 2018, IBC 2021

BEAM Size : 6x12, Sawn, Fully Braced

Using Allowable Stress Design with ASCE 7-16 Load Combinations, Major Axis Bending

Wood Species : Hem-Fir

Wood Grade : No.2

Fb - Tension	850.0 psi	Fc - Prll	1,300.0 psi	Fv	150.0 psi	Ebend- xx	1,300.0 ksi	Density	26.840 pcf
Fb - Compr	850.0 psi	Fc - Perp	405.0 psi	Ft	525.0 psi	Eminbend - xx	470.0 ksi		

Applied Loads

Beam self weight calculated and added to loads

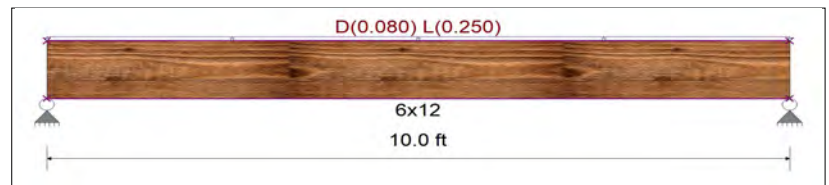
Unif Load: D = 0.0320, L = 0.10 k/ft, Trib= 2.50 ft

Design Summary

Max fb/Fb Ratio = **0.622** : 1
 fb : Actual : 422.90 psi at 5.000 ft in Span # 1
 Fb : Allowable : 680.00 psi
 Load Comb : +D+L

Max fv/FvRatio = **0.275** : 1
 fv : Actual : 32.96 psi at 9.067 ft in Span # 1
 Fv : Allowable : 120.00 psi
 Load Comb : +D+L

Max Reactions (k)	D	Lr	L	S	W	E	H
Left Support	0.46		1.25				
Right Support	0.46		1.25				



Max Deflections

Transient Downward	0.062 in	Total Downward	0.085 in
Ratio	1922	Ratio	1406
	LC: L Only		LC: +D+L
Transient Upward	0.000 in	Total Upward	0.000 in
Ratio	9999	Ratio	9999
	LC:		LC:

Multiple Simple Beam

Project File: landmark apts.ec6

LIC#: KW-06016108, Build:20.24.10.30

I.L. GROSS STRUCTURAL ENGINEERS

(c) ENERCALC, LLC 1982-2025

Wood Beam Design : DECK JOISTS

Calculations per NDS 2018, IBC 2021

BEAM Size : **2x10, Sawn, Fully Braced**

Using Allowable Stress Design with ASCE 7-16 Load Combinations, Major Axis Bending

Wood Species : Hem-Fir

Wood Grade : No.2

Fb - Tension	850.0 psi	Fc - Prll	1,300.0 psi	Fv	150.0 psi	Ebend- xx	1,300.0 ksi	Density	26.840 pcf
Fb - Compr	850.0 psi	Fc - Perp	405.0 psi	Ft	525.0 psi	Eminbend - xx	470.0 ksi		

Applied Loads

Beam self weight calculated and added to loads

Unif Load: D = 0.0140, L = 0.10 k/ft, Trib= 1.330 ft

Design Summary

Max fb/Fb Ratio = **0.340** : 1
 fb : Actual : 292.40 psi at 2.600 ft in Span # 1
 Fb : Allowable : 860.20 psi
 Load Comb : +D+L

Max fv/FvRatio = **0.255** : 1
 fv : Actual : 30.63 psi at 0.000 ft in Span # 1
 Fv : Allowable : 120.00 psi
 Load Comb : +D+L

Max Reactions (k)	D	Lr	L	S	W	E	H
Left Support	0.06		0.35				
Right Support	0.06		0.35				



Max Deflections

Transient Downward	0.017 in	Total Downward	0.020 in
Ratio	3648	Ratio	3146
	LC: L Only		LC: +D+L
Transient Upward	0.000 in	Total Upward	0.000 in
Ratio	9999	Ratio	9999
	LC:		LC:

Wood Beam Design : DB-2

Calculations per NDS 2018, IBC 2021

BEAM Size : **6x12, Sawn, Fully Braced**

Using Allowable Stress Design with ASCE 7-16 Load Combinations, Major Axis Bending

Wood Species : Hem-Fir

Wood Grade : No.2

Fb - Tension	850.0 psi	Fc - Prll	1,300.0 psi	Fv	150.0 psi	Ebend- xx	1,300.0 ksi	Density	26.840 pcf
Fb - Compr	850.0 psi	Fc - Perp	405.0 psi	Ft	525.0 psi	Eminbend - xx	470.0 ksi		

Applied Loads

Beam self weight calculated and added to loads

Unif Load: D = 0.0140, L = 0.10 k/ft, Trib= 2.50 ft

1Point: D = 0.460, L = 1.250 k @ 2.0 ft

Design Summary

Max fb/Fb Ratio = **0.965** : 1
 fb : Actual : 655.86 psi at 4.645 ft in Span # 1
 Fb : Allowable : 680.00 psi
 Load Comb : +D+L

Max fv/FvRatio = **0.555** : 1
 fv : Actual : 66.62 psi at 0.000 ft in Span # 1
 Fv : Allowable : 120.00 psi
 Load Comb : +D+L

Max Reactions (k)	D	Lr	L	S	W	E	H
Left Support	0.64		2.45				
Right Support	0.35		1.64				



Max Deflections

Transient Downward	0.140 in	Total Downward	0.173 in
Ratio	971	Ratio	786
	LC: L Only		LC: +D+L
Transient Upward	0.000 in	Total Upward	0.000 in
Ratio	9999	Ratio	9999
	LC:		LC:

Project Title: **Landmark Apts**
Engineer: **VM**
Project ID:
Project Descr: **Building 13 Walkway Replacement**

Multiple Simple Beam

Project File: landmark apts.ec6

LIC#: KW-06016108, Build:20.24.10.30

I.L. GROSS STRUCTURAL ENGINEERS

(c) ENERCALC, LLC 1982-2025

Wood Beam Design : SB-2

Calculations per NDS 2018, IBC 2021

BEAM Size : **6x12, Sawn, Fully Braced**

Using Allowable Stress Design with ASCE 7-16 Load Combinations, Major Axis Bending

Wood Species : Hem-Fir

Wood Grade : No.2

Fb - Tension	850.0 psi	Fc - Prll	1,300.0 psi	Fv	150.0 psi	Ebend- xx	1,300.0 ksi	Density	26.840 pcf
Fb - Compr	850.0 psi	Fc - Perp	405.0 psi	Ft	525.0 psi	Eminbend - xx	470.0 ksi		

Applied Loads

Beam self weight calculated and added to loads

Unif Load: D = 0.0320, L = 0.10 k/ft, Trib= 2.250 ft

Design Summary

Max fb/Fb Ratio = **0.090** : 1
fb : Actual : 61.13 psi at 2.000 ft in Span # 1
Fb : Allowable : 680.00 psi
Load Comb : +D+L

Max fv/FvRatio = **0.064** : 1
fv : Actual : 7.71 psi at 0.000 ft in Span # 1
Fv : Allowable : 120.00 psi
Load Comb : +D+L

Max Reactions (k)	D	Lr	L	S	W	E	H
Left Support	0.17		0.45				
Right Support	0.17		0.45				



Max Deflections

Transient Downward	0.001 in	Total Downward	0.002 in
Ratio	9999	Ratio	9999
	LC: L Only		LC: +D+L
Transient Upward	0.000 in	Total Upward	0.000 in
Ratio	9999	Ratio	9999
	LC:		LC:

Project Title: **Landmark Apts**
 Engineer: **VM**
 Project ID:
 Project Descr: **Building 13 Walkway Replacement**

Wood Column

Project File: landmark apts.ec6

LIC# : KW-06016108, Build:20.24.10.30

I.L. GROSS STRUCTURAL ENGINEERS

(c) ENERCALC, LLC 1982-2025

DESCRIPTION: Typ Walkway Column

Code References

Calculations per NDS 2018, IBC 2021, SDPWS 2021
 Load Combinations Used : ASCE 7-16

General Information

Analysis Method	Allowable Stress Design			Wood Section Name	6x6		
End Fixities	Top Free, Bottom Fixed			Wood Grading/Manuf.	Graded Lumber		
Overall Column Height	8.5 ft			Wood Member Type	Sawn		
(Used for non-slender calculations)				Exact Width	5.50 in	Allow Stress Modification Factors	
Wood Species	Hem-Fir			Exact Depth	5.50 in	Cf or Cv for Bending	1.0
Wood Grade	No.2			Area	30.250 in^2	Cf or Cv for Compression	1.0
Fb +	850.0 psi	Fv	150.0 psi	Ix	76.255 in^4	Cf or Cv for Tension	1.0
Fb -	850.0 psi	Ft	525.0 psi	Iy	76.255 in^4	Cm : Wet Use Factor	1.0
Fc - Prll	1,300.0 psi	Density	26.840 pcf	Incising Factors :		Ct : Temperature Fact	1.0
Fc - Perp	405.0 psi			for Bending	0.80	Cfu : Flat Use Factor	1.0
E : Modulus of Elasticity . . .	x-x Bending	y-y Bending	Axial	for Elastic Modulus	0.95	Kf : Built-up columns	1.0
	Basic	1,300.0	1,300.0			Use Cr : Repetitive ?	No
	Minimum	470.0	470.0	Column Buckling Condition:			
				ABOUT X-X Axis:	Lux = 8.5 ft, Kx = 2.1		
				ABOUT Y-Y Axis:	Luy = 8.5 ft, Ky = 1.0		

Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Column self weight included : 47.925 lbs * Dead Load Factor

AXIAL LOADS . . .

Axial Load at 8.50 ft, D = 0.60, L = 3.10 k

BENDING LOADS . . .

Lat. Point Load at 8.0 ft creating My-y, E = 0.360 k

DESIGN SUMMARY

Bending & Shear Check Results

PASS Max. Axial+Bending Stress Ratio = **0.9206 : 1**
 Load Combination +D+0.750L+0.5250E
 Governing NDS Formula Comp + Myy, NDS Eq. 3.9-3
 Location of max.above base 0.0 ft
 At maximum location values are .
 Applied Axial 2.973 k
 Applied Mx 0.0 k-ft
 Applied My -1.512 k-ft
 Fc : Allowable 198.401 psi

Maximum SERVICE Lateral Load Reactions . .

Top along Y-Y	0.0 k	Bottom along Y-Y	0.0 k
Top along X-X	0.0 k	Bottom along X-X	0.360 k

Maximum SERVICE Load Lateral Deflections . . .

Along Y-Y	0.0 in	at	0.0 ft	above base
for load combination :	n/a			
Along X-X	1.227 in	at	8.50 ft	above base
for load combination :	E Only			

Other Factors used to calculate allowable stresses . . .

<u>Bending</u>	<u>Compression</u>	<u>Tension</u>
----------------	--------------------	----------------

PASS Maximum Shear Stress Ratio = **0.06508 : 1**
 Load Combination +D+0.70E
 Location of max.above base 7.987 ft
 Applied Design Shear 18.744 psi
 Allowable Shear 192.0 psi

Load Combination Results

Load Combination	C _D	C _P	Maximum Axial + Bending Stress Ratios			Maximum Shear Ratios		
			Stress Ratio	Status	Location	Stress Ratio	Status	Location
D Only	0.900	0.207	0.1106	PASS	0.0 ft	0.0	PASS	8.50 ft
+D+L	1.000	0.187	0.6360	PASS	0.0 ft	0.0	PASS	8.50 ft
+D+0.750L	1.250	0.151	0.4995	PASS	0.0 ft	0.0	PASS	8.50 ft
+0.60D	1.600	0.119	0.06478	PASS	0.0 ft	0.0	PASS	8.50 ft
+D+0.70E	1.600	0.119	0.8331	PASS	0.0 ft	0.06508	PASS	7.987 ft
+D+0.750L+0.5250E	1.600	0.119	0.9206	PASS	0.0 ft	0.04881	PASS	7.987 ft
+0.60D+0.70E	1.600	0.119	0.8177	PASS	0.0 ft	0.06508	PASS	7.987 ft

Wood Column

Project File: landmark apts.ec6

LIC# : KW-06016108, Build:20.24.10.30

I.L. GROSS STRUCTURAL ENGINEERS

(c) ENERCALC, LLC 1982-2025

DESCRIPTION: Typ Walkway Column

Maximum Reactions

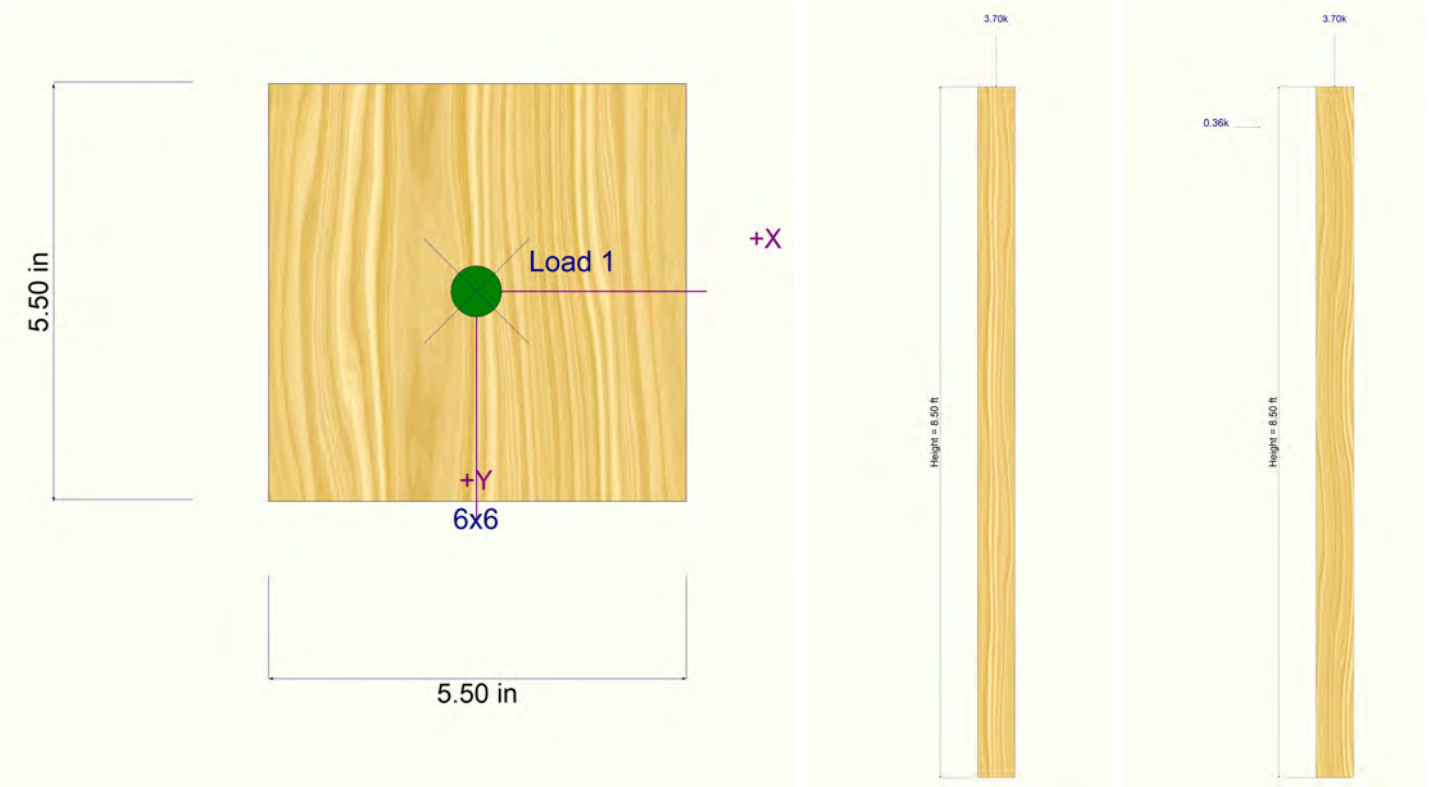
Note: Only non-zero reactions are listed.

Load Combination	X-X Axis Reaction		k	Y-Y Axis Reaction		Axial Reaction	My - End Moments		k-ft	Mx - End Moments	
	@ Base	@ Top		@ Base	@ Top	@ Base	@ Base	@ Top		@ Base	@ Top
D Only						0.648					
+D+L						3.748					
+D+0.750L						2.973					
+0.60D						0.389					
+D+0.70E	0.252					0.648	2.016				
+D+0.750L+0.5250E	0.189					2.973	1.512				
+0.60D+0.70E	0.252					0.389	2.016				
L Only						3.100					
E Only	0.360						2.880				

Maximum Deflections for Load Combinations

Load Combination	Max. X-X Deflection	Distance	Max. Y-Y Deflection	Distance
D Only	0.0000 in	0.000ft	0.000 in	0.000 ft
+D+L	0.0000 in	0.000ft	0.000 in	0.000 ft
+D+0.750L	0.0000 in	0.000ft	0.000 in	0.000 ft
+0.60D	0.0000 in	0.000ft	0.000 in	0.000 ft
+D+0.70E	0.8589 in	8.500ft	0.000 in	0.000 ft
+D+0.750L+0.5250E	0.6442 in	8.500ft	0.000 in	0.000 ft
+0.60D+0.70E	0.8589 in	8.500ft	0.000 in	0.000 ft
L Only	0.0000 in	0.000ft	0.000 in	0.000 ft
E Only	1.2149 in	8.443ft	0.000 in	0.000 ft

Sketches



General Footing

Project File: landmark apts.ec6

LIC#: KW-06016108, Build:20.24.10.30

I.L. GROSS STRUCTURAL ENGINEERS

(c) ENERCALC, LLC 1982-2025

DESCRIPTION: Typical Column

Code References

Calculations per ACI 318-19, IBC 2021
 Load Combinations Used : ASCE 7-16

General Information

Material Properties

f'c : Concrete 28 day strength	=	2.50 ksi
fy : Rebar Yield	=	60.0 ksi
Ec : Concrete Elastic Modulus	=	3,122.0 ksi
Concrete Density	=	145.0 pcf
φ Values Flexure	=	0.90
Shear	=	0.750

Analysis Settings

Min Steel % Bending Reinf.	=	
Min Allow % Temp Reinf.	=	0.00180
Min. Overturning Safety Factor	=	1.0 : 1
Min. Sliding Safety Factor	=	1.0 : 1
Add Ftg Wt for Soil Pressure	:	Yes
Use ftg wt for stability, moments & shears	:	Yes
Add Pedestal Wt for Soil Pressure	:	No
Use Pedestal wt for stability, mom & shear	:	No

Soil Design Values

Allowable Soil Bearing	=	1.50 ksf
Soil Density	=	110.0 pcf
Increase Bearing By Footing Weight	=	No
Soil Passive Resistance (for Sliding)	=	250.0 pcf
Soil/Concrete Friction Coeff.	=	0.30

Increases based on footing Depth

Footing base depth below soil surface	=	ft
Allow press. increase per foot of depth	=	ksf
when footing base is below	=	ft

Increases based on footing plan dimension

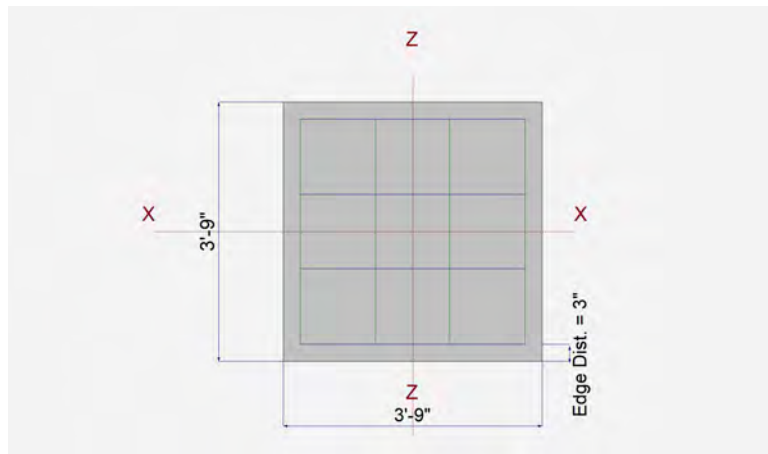
Allowable pressure increase per foot of depth	=	ksf
when max. length or width is greater than	=	ft

Dimensions

Width parallel to X-X Axis	=	3.750 ft
Length parallel to Z-Z Axis	=	3.750 ft
Footing Thickness	=	12.0 in

Pedestal dimensions...

px : parallel to X-X Axis	=	in
pz : parallel to Z-Z Axis	=	in
Height	=	in
Rebar Centerline to Edge of Concrete...	=	3.0 in
at Bottom of footing	=	



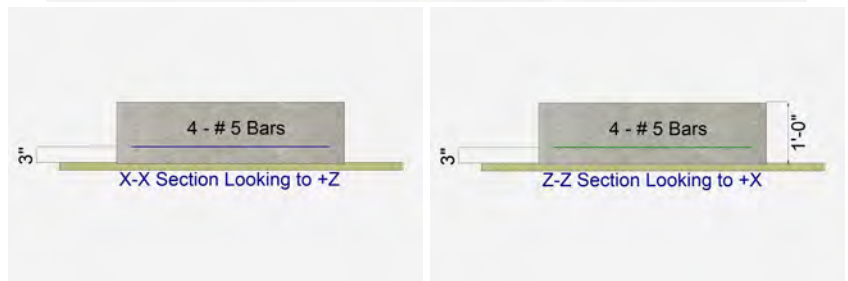
Reinforcing

Bars parallel to X-X Axis	=	4.0
Number of Bars	=	# 5
Reinforcing Bar Size	=	# 5

Bars parallel to Z-Z Axis	=	4.0
Number of Bars	=	# 5
Reinforcing Bar Size	=	# 5

Bandwidth Distribution Check (ACI 15.4.4.2)

Direction Requiring Closer Separation	=	n/a
# Bars required within zone	=	n/a
# Bars required on each side of zone	=	n/a



Applied Loads

	D	Lr	L	S	W	E	H
P : Column Load	=	1.280		4.90			k
OB : Overburden	=						ksf
M-xx	=					3.360	k-ft
M-zz	=						k-ft
V-x	=						k
V-z	=						k

General Footing

Project File: landmark apts.ec6

LIC# : KW-06016108, Build:20.24.10.30

I.L. GROSS STRUCTURAL ENGINEERS

(c) ENERCALC, LLC 1982-2025

DESCRIPTION: Typical Column

DESIGN SUMMARY

Design OK

	Min. Ratio	Item	Applied	Capacity	Governing Load Combination
PASS	0.4641	Soil Bearing	0.6961 ksf	1.50 ksf	+D+0.750L+0.5250E about X-X axis
PASS	1.588	Overturning - X-X	2.352 k-ft	3.734 k-ft	+0.60D+0.70E
PASS	n/a	Overturning - Z-Z	0.0 k-ft	0.0 k-ft	No Overturning
PASS	n/a	Sliding - X-X	0.0 k	0.0 k	No Sliding
PASS	n/a	Sliding - Z-Z	0.0 k	0.0 k	No Sliding
PASS	n/a	Uplift	0.0 k	0.0 k	No Uplift
PASS	0.09147	Z Flexure (+X)	1.172 k-ft/ft	12.813 k-ft/ft	+1.20D+1.60L
PASS	0.09147	Z Flexure (-X)	1.172 k-ft/ft	12.813 k-ft/ft	+1.20D+1.60L
PASS	0.09775	X Flexure (+Z)	1.252 k-ft/ft	12.813 k-ft/ft	+1.20D+L+E
PASS	0.09147	X Flexure (-Z)	1.172 k-ft/ft	12.813 k-ft/ft	+1.20D+1.60L
PASS	0.1594	1-way Shear (+X)	6.945 psi	43.562 psi	+1.20D+1.60L
PASS	0.1594	1-way Shear (-X)	6.945 psi	43.562 psi	+1.20D+1.60L
PASS	0.1734	1-way Shear (+Z)	7.555 psi	43.562 psi	+1.20D+L+E
PASS	0.1594	1-way Shear (-Z)	6.945 psi	43.562 psi	+1.20D+1.60L
PASS	0.1852	2-way Punching	27.781 psi	150.0 psi	+1.20D+1.60L



Top reinforcing mat required (see 'Bending' tab).

Hand check required for anchor pullout.

Detailed Results

Soil Bearing

Rotation Axis & Load Combination...	Gross Allowable	Xecc	Zecc (in)	Actual Soil Bearing Stress @ Location				Actual / Allow Ratio
				Bottom, -Z	Top, +Z	Left, -X	Right, +X	
X-X, D Only	1.50	n/a	0.0	0.2360	0.2360	n/a	n/a	0.157
X-X, +D+L	1.50	n/a	0.0	0.5845	0.5845	n/a	n/a	0.390
X-X, +D+0.750L	1.50	n/a	0.0	0.4974	0.4974	n/a	n/a	0.332
X-X, +0.60D	1.50	n/a	0.0	0.1416	0.1416	n/a	n/a	0.094
X-X, +D+0.70E	1.50	n/a	8.504	0.0	0.5032	n/a	n/a	0.336
X-X, +D+0.750L+0.5250E	1.50	n/a	3.027	0.2987	0.6961	n/a	n/a	0.464
X-X, +0.60D+0.70E	1.50	n/a	14.173	0.0	0.5056	n/a	n/a	0.337
Z-Z, D Only	1.50	0.0	n/a	n/a	n/a	0.2360	0.2360	0.157
Z-Z, +D+L	1.50	0.0	n/a	n/a	n/a	0.5845	0.5845	0.390
Z-Z, +D+0.750L	1.50	0.0	n/a	n/a	n/a	0.4974	0.4974	0.332
Z-Z, +0.60D	1.50	0.0	n/a	n/a	n/a	0.1416	0.1416	0.094
Z-Z, +D+0.70E	1.50	0.0	n/a	n/a	n/a	0.2360	0.2360	0.157
Z-Z, +D+0.750L+0.5250E	1.50	0.0	n/a	n/a	n/a	0.4974	0.4974	0.332
Z-Z, +0.60D+0.70E	1.50	0.0	n/a	n/a	n/a	0.1416	0.1416	0.094

Overturning Stability

Rotation Axis & Load Combination...	Overturning Moment	Resisting Moment	Stability Ratio	Status
X-X, D Only	None	0.0 k-ft	Infinity	OK
X-X, +D+L	None	0.0 k-ft	Infinity	OK
X-X, +D+0.750L	None	0.0 k-ft	Infinity	OK
X-X, +0.60D	None	0.0 k-ft	Infinity	OK
X-X, +D+0.70E	2.352 k-ft	6.223 k-ft	2.646	OK
X-X, +D+0.750L+0.5250E	1.764 k-ft	13.114 k-ft	7.434	OK
X-X, +0.60D+0.70E	2.352 k-ft	3.734 k-ft	1.588	OK
Z-Z, D Only	None	0.0 k-ft	Infinity	OK
Z-Z, +D+L	None	0.0 k-ft	Infinity	OK
Z-Z, +D+0.750L	None	0.0 k-ft	Infinity	OK
Z-Z, +0.60D	None	0.0 k-ft	Infinity	OK
Z-Z, +D+0.70E	None	0.0 k-ft	Infinity	OK
Z-Z, +D+0.750L+0.5250E	None	0.0 k-ft	Infinity	OK
Z-Z, +0.60D+0.70E	None	0.0 k-ft	Infinity	OK

Project Title: Landmark Apts
 Engineer: VM
 Project ID:
 Project Descr: Building 13 Walkway Replacement

General Footing

Project File: landmark apts.ecb

LIC# : KW-06016108, Build:20.24.10.30

I.L. GROSS STRUCTURAL ENGINEERS

(c) ENERCALC, LLC 1982-2025

DESCRIPTION: Typical Column

All units k

Sliding Stability

Force Application Axis Load Combination...	Sliding Force	Resisting Force	Stability Ratio	Status
---	---------------	-----------------	-----------------	--------

Footing Has NO Sliding

Footing Flexure

Flexure Axis & Load Combination	Mu k-ft	Side	Tension Surface	As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Status
X-X, +1.40D	0.2240	+Z	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
X-X, +1.40D	0.2240	-Z	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
X-X, +1.20D+1.60L	1.172	+Z	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
X-X, +1.20D+1.60L	1.172	-Z	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
X-X, +1.20D+L	0.8045	+Z	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
X-X, +1.20D+L	0.8045	-Z	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
X-X, +1.20D	0.1920	+Z	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
X-X, +1.20D	0.1920	-Z	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
X-X, +0.90D	0.1440	+Z	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
X-X, +0.90D	0.1440	-Z	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
X-X, +1.20D+L+E	1.252	+Z	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
X-X, +1.20D+L+E	0.3565	-Z	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
X-X, +0.90D+E	0.6693	+Z	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
X-X, +0.90D+E	0.2266	-Z	Top	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +1.40D	0.2240	-X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +1.40D	0.2240	+X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +1.20D+1.60L	1.172	-X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +1.20D+1.60L	1.172	+X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +1.20D+L	0.8045	-X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +1.20D+L	0.8045	+X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +1.20D	0.1920	-X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +1.20D	0.1920	+X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +0.90D	0.1440	-X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +0.90D	0.1440	+X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +1.20D+L+E	0.8045	-X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +1.20D+L+E	0.8045	+X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +0.90D+E	0.1440	-X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK
Z-Z, +0.90D+E	0.1440	+X	Bottom	0.2592	ACI 7.6.1.1	0.3307	12.813	OK

One Way Shear X

Load Combination...	Vu @ -X	Vu @ +X	Vu:Max	Phi Vn	Vu / Phi*Vn	Status
+1.40D	1.33 psi	1.33 psi	1.33 psi	43.56 psi	0.03	OK
+1.20D+1.60L	6.95 psi	6.95 psi	6.95 psi	43.56 psi	0.16	OK
+1.20D+L	4.77 psi	4.77 psi	4.77 psi	43.56 psi	0.11	OK
+1.20D	1.14 psi	1.14 psi	1.14 psi	43.56 psi	0.03	OK
+0.90D	0.85 psi	0.85 psi	0.85 psi	43.56 psi	0.02	OK
+1.20D+L+E	4.77 psi	4.77 psi	4.77 psi	43.56 psi	0.11	OK
+0.90D+E	0.85 psi	0.85 psi	0.85 psi	43.56 psi	0.02	OK

One Way Shear Z

Load Combination...	Vu @ -Z	Vu @ +Z	Vu:Max	Phi Vn	Vu / Phi*Vn	Status
+1.40D	1.33 psi	1.33 psi	1.33 psi	43.56 psi	0.03	OK
+1.20D+1.60L	6.95 psi	6.95 psi	6.95 psi	43.56 psi	0.16	OK
+1.20D+L	4.77 psi	4.77 psi	4.77 psi	43.56 psi	0.11	OK
+1.20D	1.14 psi	1.14 psi	1.14 psi	43.56 psi	0.03	OK
+0.90D	0.85 psi	0.85 psi	0.85 psi	43.56 psi	0.02	OK
+1.20D+L+E	1.98 psi	7.56 psi	7.56 psi	43.56 psi	0.17	OK
+0.90D+E	1.36 psi	4.17 psi	4.17 psi	43.56 psi	0.10	OK

Two-Way "Punching" Shear

All units k

Load Combination...	Vu	Phi*Vn	Vu / Phi*Vn	Status
+1.40D	5.31 psi	150.00psi	0.0354	OK
+1.20D+1.60L	27.78 psi	150.00psi	0.1852	OK
+1.20D+L	19.07 psi	150.00psi	0.1271	OK
+1.20D	4.55 psi	150.00psi	0.03034	OK
+0.90D	3.41 psi	150.00psi	0.02276	OK
+1.20D+L+E	19.07 psi	150.00psi	0.1271	OK

Project Title: Landmark Apts
Engineer: VM
Project ID:
Project Descr: Building 13 Walkway Replacement

General Footing

Project File: landmark apts.ec6

LIC# : KW-06016108, Build:20.24.10.30 I.L. GROSS STRUCTURAL ENGINEERS (c) ENERCALC, LLC 1982-2025

DESCRIPTION: Typical Column

Two-Way "Punching" Shear				All units k
Load Combination...	Vu	Phi*Vn	Vu / Phi*Vn	Status
+0.90D+E	3.58 psi	150.00 psi	0.02385	OK

General Footing

Project File: landmark apts.ec6

LIC# : KW-06016108, Build:20.24.10.30

I.L. GROSS STRUCTURAL ENGINEERS

(c) ENERCALC, LLC 1982-2025

DESCRIPTION: **FTG @ CORNER POSTS, TYP.**

Code References

Calculations per ACI 318-19, IBC 2021
 Load Combinations Used : ASCE 7-16

General Information

Material Properties

f'c : Concrete 28 day strength	=	2.50 ksi
fy : Rebar Yield	=	60.0 ksi
Ec : Concrete Elastic Modulus	=	3,122.0 ksi
Concrete Density	=	145.0 pcf
φ Values Flexure	=	0.90
Shear	=	0.750

Analysis Settings

Min Steel % Bending Reinf.	=	
Min Allow % Temp Reinf.	=	0.00180
Min. Overturning Safety Factor	=	1.0 : 1
Min. Sliding Safety Factor	=	1.0 : 1
Add Ftg Wt for Soil Pressure	:	Yes
Use ftg wt for stability, moments & shears	:	Yes
Add Pedestal Wt for Soil Pressure	:	No
Use Pedestal wt for stability, mom & shear	:	No

Soil Design Values

Allowable Soil Bearing	=	1.50 ksf
Soil Density	=	110.0 pcf
Increase Bearing By Footing Weight	=	No
Soil Passive Resistance (for Sliding)	=	250.0 pcf
Soil/Concrete Friction Coeff.	=	0.30

Increases based on footing Depth

Footing base depth below soil surface	=	ft
Allow press. increase per foot of depth when footing base is below	=	ksf
	=	ft

Increases based on footing plan dimension

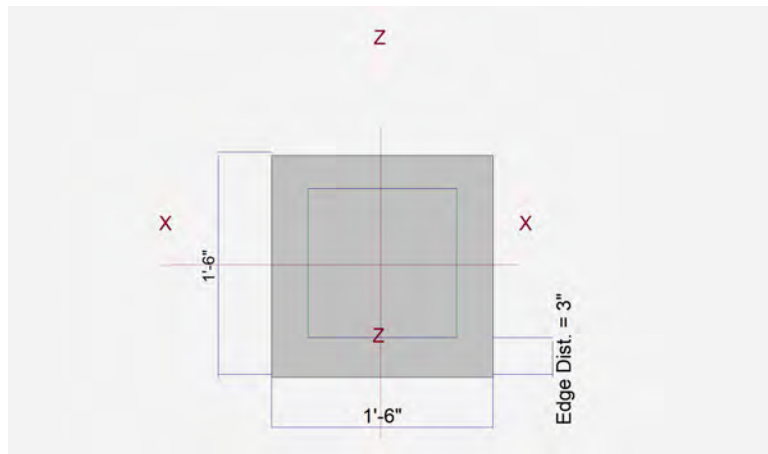
Allowable pressure increase per foot of depth when max. length or width is greater than	=	ksf
	=	ft

Dimensions

Width parallel to X-X Axis	=	1.50 ft
Length parallel to Z-Z Axis	=	1.50 ft
Footing Thickness	=	12.0 in

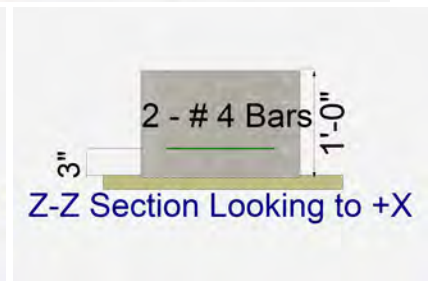
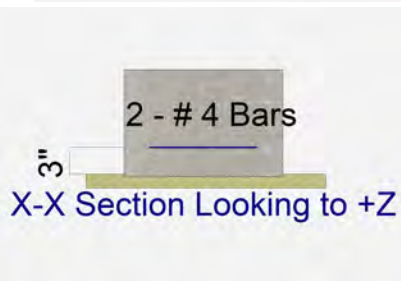
Pedestal dimensions...

px : parallel to X-X Axis	=	in
pz : parallel to Z-Z Axis	=	in
Height	=	in
Rebar Centerline to Edge of Concrete... at Bottom of footing	=	3.0 in



Reinforcing

Bars parallel to X-X Axis	=	
Number of Bars	=	2
Reinforcing Bar Size	=	# 4
Bars parallel to Z-Z Axis	=	
Number of Bars	=	2
Reinforcing Bar Size	=	# 4
Bandwidth Distribution Check (ACI 15.4.4.2)		
Direction Requiring Closer Separation		n/a
# Bars required within zone		n/a
# Bars required on each side of zone		n/a



Applied Loads

	D	Lr	L	S	W	E	H
P : Column Load	=	0.0380	0.2580				k
OB : Overburden	=						ksf
M-xx	=						k-ft
M-zz	=						k-ft
V-x	=						k
V-z	=						k

General Footing

Project File: landmark apts.ec6

LIC#: KW-06016108, Build:20.24.10.30

I.L. GROSS STRUCTURAL ENGINEERS

(c) ENERCALC, LLC 1982-2025

DESCRIPTION: FTG @ CORNER POSTS, TYP.

DESIGN SUMMARY

Design OK

	Min. Ratio	Item	Applied	Capacity	Governing Load Combination
PASS	0.1844	Soil Bearing	0.2766 ksf	1.50 ksf	+D+L about Z-Z axis
PASS	n/a	Overturning - X-X	0.0 k-ft	0.0 k-ft	No Overturning
PASS	n/a	Overturning - Z-Z	0.0 k-ft	0.0 k-ft	No Overturning
PASS	n/a	Sliding - X-X	0.0 k	0.0 k	No Sliding
PASS	n/a	Sliding - Z-Z	0.0 k	0.0 k	No Sliding
PASS	n/a	Uplift	0.0 k	0.0 k	No Uplift
PASS	0.005497	Z Flexure (+X)	0.05730 k-ft/ft	10.424 k-ft/ft	+1.20D+1.60L
PASS	0.005497	Z Flexure (-X)	0.05730 k-ft/ft	10.424 k-ft/ft	+1.20D+1.60L
PASS	0.005497	X Flexure (+Z)	0.05730 k-ft/ft	10.424 k-ft/ft	+1.20D+1.60L
PASS	0.005497	X Flexure (-Z)	0.05730 k-ft/ft	10.424 k-ft/ft	+1.20D+1.60L
PASS	n/a	1-way Shear (+X)	0.0 psi	40.548 psi	n/a
PASS	0.0	1-way Shear (-X)	0.0 psi	0.0 psi	n/a
PASS	n/a	1-way Shear (+Z)	0.0 psi	40.548 psi	n/a
PASS	n/a	1-way Shear (-Z)	0.0 psi	40.548 psi	n/a
PASS	n/a	2-way Punching	1.061 psi	40.548 psi	+1.20D+1.60L

Detailed Results

Soil Bearing

Rotation Axis & Load Combination...	Gross Allowable	Xecc		Zecc		Actual Soil Bearing Stress @ Location				Actual / Allow Ratio
				(in)		Bottom, -Z	Top, +Z	Left, -X	Right, +X	
X-X, D Only	1.50	n/a	0.0			0.1619	0.1619	n/a	n/a	0.108
X-X, +D+L	1.50	n/a	0.0			0.2766	0.2766	n/a	n/a	0.184
X-X, +D+0.750L	1.50	n/a	0.0			0.2479	0.2479	n/a	n/a	0.165
X-X, +0.60D	1.50	n/a	0.0			0.09713	0.09713	n/a	n/a	0.065
Z-Z, D Only	1.50	0.0	n/a			n/a	n/a	0.1619	0.1619	0.108
Z-Z, +D+L	1.50	0.0	n/a			n/a	n/a	0.2766	0.2766	0.184
Z-Z, +D+0.750L	1.50	0.0	n/a			n/a	n/a	0.2479	0.2479	0.165
Z-Z, +0.60D	1.50	0.0	n/a			n/a	n/a	0.09713	0.09713	0.065

Overturning Stability

Rotation Axis & Load Combination...	Overturning Moment	Resisting Moment	Stability Ratio	Status
Footing Has NO Overturning				

All units k

Sliding Stability

Force Application Axis Load Combination...	Sliding Force	Resisting Force	Stability Ratio	Status
Footing Has NO Sliding				

Footing Flexure

Flexure Axis & Load Combination	Mu k-ft	Side	Tension Surface	As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Status
X-X, +1.40D	0.006650	+Z	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
X-X, +1.40D	0.006650	-Z	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
X-X, +1.20D+1.60L	0.05730	+Z	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
X-X, +1.20D+1.60L	0.05730	-Z	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
X-X, +1.20D+L	0.03795	+Z	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
X-X, +1.20D+L	0.03795	-Z	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
X-X, +1.20D	0.00570	+Z	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
X-X, +1.20D	0.00570	-Z	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
X-X, +0.90D	0.004275	+Z	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
X-X, +0.90D	0.004275	-Z	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
Z-Z, +1.40D	0.006650	-X	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
Z-Z, +1.40D	0.006650	+X	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
Z-Z, +1.20D+1.60L	0.05730	-X	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
Z-Z, +1.20D+1.60L	0.05730	+X	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
Z-Z, +1.20D+L	0.03795	-X	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
Z-Z, +1.20D+L	0.03795	+X	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
Z-Z, +1.20D	0.00570	-X	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK

Project Title: **Landmark Apts**
 Engineer: **VM**
 Project ID:
 Project Descr: **Building 13 Walkway Replacement**

General Footing

Project File: landmark apts.ec6

LIC# : KW-06016108, Build:20.24.10.30

I.L. GROSS STRUCTURAL ENGINEERS

(c) ENERCALC, LLC 1982-2025

DESCRIPTION: **FTG @ CORNER POSTS, TYP.**

Footing Flexure

Flexure Axis & Load Combination	Mu k-ft	Side	Tension Surface	As Req'd in^2	Gvrn. As in^2	Actual As in^2	Phi*Mn k-ft	Status
Z-Z, +1.20D	0.00570	+X	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
Z-Z, +0.90D	0.004275	-X	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK
Z-Z, +0.90D	0.004275	+X	Bottom	0.2592	ACI 7.6.1.1	0.2667	10.424	OK

One Way Shear X

Load Combination...	Vu @ -X	Vu @ +X	Vu:Max	Phi Vn	Vu / Phi*Vn	Status
+1.40D	0.00 psi	0.00 psi	0.00 psi	40.55 psi	0.00	OK
+1.20D+1.60L	0.00 psi	0.00 psi	0.00 psi	40.55 psi	0.00	OK
+1.20D+L	0.00 psi	0.00 psi	0.00 psi	40.55 psi	0.00	OK
+1.20D	0.00 psi	0.00 psi	0.00 psi	40.55 psi	0.00	OK
+0.90D	0.00 psi	0.00 psi	0.00 psi	40.55 psi	0.00	OK

One Way Shear Z

Load Combination...	Vu @ -Z	Vu @ +Z	Vu:Max	Phi Vn	Vu / Phi*Vn	Status
+1.40D	0.00 psi	0.00 psi	0.00 psi	40.55 psi	0.00	OK
+1.20D+1.60L	0.00 psi	0.00 psi	0.00 psi	40.55 psi	0.00	OK
+1.20D+L	0.00 psi	0.00 psi	0.00 psi	40.55 psi	0.00	OK
+1.20D	0.00 psi	0.00 psi	0.00 psi	40.55 psi	0.00	OK
+0.90D	0.00 psi	0.00 psi	0.00 psi	40.55 psi	0.00	OK

Two-Way "Punching" Shear

Load Combination...	Vu	Phi*Vn	Vu / Phi*Vn	Status
+1.40D	0.12 psi	150.00psi	0.000821	OK
+1.20D+1.60L	1.06 psi	150.00psi	0.007074	OK
+1.20D+L	0.70 psi	150.00psi	0.004685	OK
+1.20D	0.11 psi	150.00psi	0.000704	OK
+0.90D	0.08 psi	150.00psi	0.000528	OK

All units k

INSTRUCTIONS TO BIDDERS

1.0 BIDDER RESPONSIBILITY CRITERIA

- A. It is the intent of Owner to award a contract to a responsible bidder submitting the lowest responsive bid. Before award, the bidder must meet the following bidder responsibility criteria to be considered a responsible bidder. The bidder may be required by the Owner to submit documentation demonstrating compliance with the criteria. The bidder must:
1. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of bid submittal;
 2. Have a current Washington Unified Business Identifier (UBI) number;
 3. If applicable, have industrial insurance coverage for the bidder's employees working in Washington as required in Title 51 RCW; an employment security department number as required in Title 50 RCW; and a state excise tax registration number as required in Title 82 RCW;
 4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3);
 5. Have received training on the requirements related to public works and prevailing wage under chapter 39.04.350 RCW and chapter 39.12 RCW or be listed as exempt by the department of labor and industries on its website; and
 6. Within the three-year period immediately preceding the date of the bid solicitation, not have been determined by a final and binding citation and notice of assessment issued by the department of labor and industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW;
 7. Before award of a public works contract, a bidder shall submit to the contracting agency a signed statement in accordance with RCW 9A.72.085 verifying under penalty of perjury that the bidder is in compliance with the responsible bidder criteria requirement of subsection A, 6 of this section.

1.1 SUBCONTRACTOR RESPONSIBILITY

- A. The Contractor shall include the language of this section in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the Owner, the Contractor shall promptly provide documentation to the Owner demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this section apply to all subcontractors regardless of tier.
- B. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:
1. Have a current certificate of registration in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;
 2. Have a current Washington Unified Business Identifier (UBI) number;
 3. If applicable, have:
 - a. Have Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW;
 - b. A Washington Employment Security Department number, as required in Title 50 RCW;

INSTRUCTIONS TO BIDDERS

- c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
 - d. An electrical contractor license, if required by Chapter 19.28 RCW;
 - e. An elevator contractor license, if required by Chapter 70.87 RCW.
- 4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3);
 - 5. Have received training on the requirements related to public works and prevailing wage under chapter 39.04.350 RCW and chapter 39.12 RCW or be listed as exempt by the department of labor and industries on its website; and
 - 6. Within the three-year period immediately preceding the date of the bid solicitation, not have been determined by a final and binding citation and notice of assessment issued by the department of labor and industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW.

1.2 SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA

- A. RCW 39.04.350(2) specifically authorizes municipalities to adopt relevant supplement criteria for determining bidder responsibility applicable to a particular project which the bidder must meet.
- B. For the work in this project a responsible/qualified Bidder must meet the following standards:
 - 1. Have a current certificate of registration as a contractor, in compliance with chapter 18.27 RCW, for the last three years under the same business name;
 - 2. Have a good record of past performance that includes, but is not limited to, high quality work, ability to complete projects on time, contractor's integrity, compliance with public policy, financial, contractual and tax obligations, as well as Federal and State rules and regulations in performing construction contracts.
 - 3. Have a current Experience Modification Rate (EMR) of 1.0 or less, or an average EMR rate of 1.0 or less over the last three years. The requirement may, at the Owner's sole discretion, be waived on review of a written explanation that includes details of accidents, L&I records, a Loss Ratio Report for the last five years, costs, dates of events, and changes that have been made by the contractor to reduce accidents. A current company Safety Plan shall also be reviewed.
 - 4. Bidder shall provide evidence of previous successful completion of deck, stairs & landing replacement projects of similar scope and complexity. Poor performance, lack of response, or failure to complete projects successfully within the contract time may be grounds for the rejection of bidder.
- C. Subcontractors shall have had three years minimum experience licensed in Washington State in the specific specialty contracting business.

1.3 PREPARATION OF BIDS – CONSTRUCTION

- A. Bids must be submitted on the Bid Form furnished by the Owner.
- B. All fields and questions on required forms must be fully answered and complete. Failure to do so may result in the bid being declared non-responsive.

INSTRUCTIONS TO BIDDERS

- C. Bidders shall acknowledge receipt of all addenda to this solicitation by inserting the addenda numbers in the space provided on the Bid Form. Failure to do so may result in the bid being declared non-responsive.
 - 1. Bidder is responsible for checking KCHA's website for addenda prior to submitting bid.
- D. In order for a bid to be considered responsive, bidders must submit the following signed documents with their bid package:
 - 1. Bid Form
 - 2. Bidder's Information Form
- E. The Bidder agrees to hold the base bid prices for sixty (60) days from date of bid opening.

1.4 AMENDMENTS TO INVITATION TO BID

- A. If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.
- B. Bidders shall acknowledge receipt of all addenda to this solicitation by inserting the addenda numbers in the space provided on the Bid Form. Failure to do so may result in the bid being declared non-responsive.
 - 1. Bidder is responsible for checking KCHA's website for addenda prior to the bid due date.
 - 2. Addenda will not be issued later than three (3) calendar days before the deadline for receipt of Bids except Addendum withdrawing the request for Bids or extending the deadline for receipt of Bids.

1.5 PRE-BID MEETING

- A. All potential bidders are strongly encouraged to attend. Oral statements may not be relied upon and will not be binding or legally effective.

1.6 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE

- A. Before submitting a bid, the Bidder shall carefully examine each component of the Contract Documents prepared for the Work and any other available supporting data so as to be thoroughly familiar with all the requirements.
- B. The Bidder shall obtain copies of all agencies and associations guidelines and standards cited in the Contract Documents and necessary to perform the Work, including full size reproductions of material provided by Owner, at their own expense.
- C. The Bidder shall make a thorough and reasonable examination of the project site, facility and conditions under which the Work is to be performed, including but not limited to: Building access; resident occupancy; fire lanes; landscaping; obstacles and character of materials which may be encountered; traffic conditions; public and private utilities; the availability and cost of labor; and available facilities for transportation, handling, and storage of materials and equipment.

INSTRUCTIONS TO BIDDERS

1.7 EXPLANATION TO PROSPECTIVE BIDDERS

- A. Any prospective bidder desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must submit a request in writing to the Owner seven (7) calendar days before the bid due date. Oral explanations or instructions given before the award of a contract will not be binding. Questions shall be submitted to:

Michelle Jackson
King County Housing Authority
600 Andover Park W
Tukwila, WA 98188
Email: MichelleJ@kcha.org

1.8 PREVAILING WAGES

- A. Contractor shall pay no less than the Washington State Department of Labor and Industries (L&I) prevailing rate of wages to all workers, laborers, or mechanics employed in the performance of any part of the Work in accordance with RCW 39.12 and the rules and regulations of L&I. The schedule of prevailing wage rates for the locality or localities of the Work is determined by the Industrial Statistician of L&I. It is the Contractor's responsibility to verify the applicable prevailing wage rate.
1. L&I prevailing wage rates may be found at <https://lni.wa.gov/licensing-permits/public-works-projects/prevaling-wage-rates/>
 2. The Owner has determined that the work meets the definition of residential construction.
 3. The prevailing wage rates publication date is determined by the bid due date.
 4. The work is to be performed in King County.
 5. A copy of the prevailing wage rates is available at KCHA.
 6. A copy of the prevailing wage rates may be mailed on request.

1.9 TAXES

- A. All taxes imposed by law shall be included in the bid amount. The Contractor shall pay the WSST to the Department of Revenue and shall furnish proof of payment to the Owner if requested.
- B. The retail sales tax does not apply to the gross contract price as indicated in WAC 458-20-17001.
- C. Prime and subcontractors are required to pay retail sales tax upon all purchases of materials, including prefabricated and precast items, equipment, leases or rentals of tools, consumables, and other tangible personal property which is installed, applied, attached, or otherwise incorporated in their work.

1.10 ASSURANCE OF COMPLETION

- A. Payment and performance bonds for 100% of the Contract Sum, including all Change Orders and taxes imposed by law, shall be furnished for the Work, and shall be in a form acceptable to the Owner.

INSTRUCTIONS TO BIDDERS

1. On contracts of one hundred fifty thousand dollars (\$150,000.00) or less, the requirement for a Performance and Payment Bond may, at Contractors option, be waived in lieu of an additional 5% (total 10%) retainage.

1.11 BID ERROR

- A. In the event Bidder discovers an error in its bid, the Bidder may, under certain conditions and if before the date and time that bids are due, modify, their bid, as detailed below:

1. Prior to Date and Time Bids are Due:

- a. A Bidder may withdraw its bid at any time prior to the date and time bids are due upon written request.
- b. After withdrawing an original submitted bid, a Bidder may modify and resubmit its bid at any time prior to the date and time bids are due.

2. After the Date and Time Bids are Due:

- a. A bidder who submits an erroneous low bid may withdraw the bid. The bid withdrawal is permissible if there was an obvious error in the low bid, and the mistake is readily apparent from the bid itself.
- b. Notification: Provide to the Owner, within 24 hours of bid opening, written notification of the bidder's intent to withdraw the bid due to error.
- c. Documentation: Provide to the Owner within 48 hours of bid opening, documentation sufficient in content to justify bid withdrawal to the satisfaction of the Owner. Include description and evidence of the error.
- d. Approval: the Owner will approve or reject the request for withdrawal in writing.
- e. Any low bidder who withdraws its bid is prohibited from bidding on the same project if it is subsequently re-solicited.

1.12 ADDITIVE OR DEDUCTIVE BID ITEMS

- A. The low bid, for purposes of award, shall be the lowest responsive bid from a qualified responsible bidder offering the low aggregate amount for the base bid, plus additive or deductive bid alternates selected by the Owner.

1.13 BID EVALUATION

- A. Responsive Bids: A bid will be considered responsive if it meets the conditions of the solicitation, in addition to but not limited to the following requirements:

1. Bid is received not later than the time and date specified.
2. Bid is submitted in the proper format on the form(s) provided.
3. Bid includes the complete scope of work as defined in bid package.
4. Bid does not include any exclusions or qualifications.
5. Bid includes Unit and Lump Sum Costs as listed in Proposal Form.
6. Forms are complete.

- B. After bid opening, bids will be checked for correctness of bid item price extensions and the total bid price. A discrepancy between a bid item price and the extended amount of any bid item shall be resolved by accepting the bid item price as correct.

INSTRUCTIONS TO BIDDERS

- C. Responsible Bidders: the Owner will award contracts only to responsible bidders who demonstrate the ability to successfully perform under the terms and conditions as set forth in the Contract Documents and have successfully completed projects similar in scope and complexity.
 - 1. Bidders must demonstrate relevant experience on similar types of projects and submit detailed information as required on the Bidder Information Form.
- D. The Owner reserves the right to contact references and investigate past performance and qualifications of the Bidder, subcontractor, and project team members, including contacting third parties and/or the references provided by the Bidder.
 - 1. The Owner may contact references for other projects including those the Bidder did not identify and/or provided references.
 - 2. References may be asked to rate the performance of and describe their experience with project team members and subcontractors. Bidder Information may be solicited and evaluated on the following subjects: type and features of work; overall quality of project performance and quality of work; experience and technical knowledge and competence of the Bidder and Project Team Members; ability, capacity and skill to perform the Work; ability to manage submittals, requests for information, prevailing wage filings, and other paperwork; compliance with laws, ordinances, and contract provisions; and other information as deemed necessary.
 - 3. Poor reference(s) may be justification to determine a Bidder is not responsible.
- E. At the Owner's request, provide any additional explanation or information, which would assist in evaluating the qualifications of the Bidder, subcontractors, project team members, and bid price.
- F. The Owner will verify information submitted and if the lowest bidder is determined to be “not responsible,” the Owner will issue, in writing, the specific reasons for this determination. The bidder may appeal this decision. The appeal must be in writing and shall be delivered to the Owner within two business days. The appeal may include additional information that was not included in the original bid documents. KCHA will make a final determination after the receipt of the appeal. The final determination may not be appealed.

1.14 CONTRACT AWARD

- A. Bonding and Insurance: Contract award will be contingent on ability to secure payment/performance bonding, and Contractor's ability to meet the Owner insurance requirements as detailed in the Bid Documents.
- B. Bonding, insurance certificates and endorsements, and an approved Statement of Intent to Pay Prevailing Wages shall be submitted to the Owner within 14 days of award. A Notice to Proceed shall be issued immediately after receipt.
- C. Right to Reject Bids/Waiver: The Owner reserves the right to reject any or all bids or to waive any informalities or irregularities in the bidding.
- D. Retainage Funds: The Owner will not pay interest to the Contractor for accounts where retainage funds are maintained by the Owner. As part of the procurement by which the Contractor was selected for this work, the Contractor agrees to waive any other options and has made allowances for this waiver.

GENERAL CONDITIONS

PART 1 - GENERAL PROVISIONS

1.1 DEFINITIONS

- A. "Authority Having Jurisdiction (AHJ)": A federal, state, local, or other regional department, or an individual such as a fire official, labor department, health department, building official, or other individual having statutory authority.
- B. "Contract Documents" means the Instructions to Bidders, Specifications, Plans, General Conditions, Contractor Certification of Prevailing Wage Responsibilities, Prevailing Wage Rates, Bid Form, Contract Form, other Special Forms, Drawings and Specifications, and all Addenda and modifications thereof.
- C. "Contract Sum" is the total amount payable by Owner to Contractor for performance of the Work in accordance with the Contract Documents.
- D. "Contract Time" is the number of consecutive Days allotted in the Contract Documents for achieving completion of the Work.
- E. "Contracting Officer" means the person delegated the authority by King County Housing Authority to enter into, and/or terminate this Contract. The term includes any successor Contracting Officer and any duly authorized representative of the Contracting Officer.
- F. "Contractor" means the person or other entity entering into the Contract with King County Housing Authority to perform all of the services or work required under the Contract.
- G. "Day" means calendar day, unless otherwise specified.
- H. "Final Acceptance" means the acceptance by Owner that the Contractor has completed the requirements of the Contract Documents.
- I. "Force Majeure" means those acts entitling Contractor to request an equitable adjustment in the Contract Time, including, but not limited to, unusually severe weather conditions which could not have been reasonably anticipated.
- J. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- K. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- L. "Liquidated Damages" means the amount prescribed in the Contract Documents to be deducted from any payments due or to become due Contractor, for each day's delay in completion of the Work beyond the time allowed in the Contract Documents as stated in the Notice to Proceed, plus any extensions of such time.
- M. "Manager" means the person who is an authorized agent of the King County Housing Authority to administer the Contract.
- N. "Notice to Proceed" means a notice from Owner to Contractor that defines the date on which the Contract Time begins to run.
- O. "Owner" means the King County Housing Authority or its authorized representative with the authority to enter into, administer, and/or terminate the Work in accordance with the Contract Documents and make related determinations and findings.
- P. "Property Manager" means the property management company, its officers and employees.
- Q. "Provide": Furnish and install, complete and ready for the intended use.

GENERAL CONDITIONS

- R. "Subcontract" means any contract, purchase order, or other purchase agreement, including modifications and change orders to the foregoing, entered into by a Subcontractor to furnish supplies, materials, equipment, and services for the performance of the prime Contract or a subcontract.
- S. "Subcontractor" means any supplier, vendor, or firm that furnishes supplies, materials, equipment, or services to or for the Contractor or another Subcontractor.
- T. "Work" means the construction and services required by the Contract Documents, and includes, but is not limited to, labor, materials, supplies, equipment, services, permits, and the manufacture and fabrication of components, performed, furnished, or provided in accordance with the Contract Documents.

1.2 EXECUTION AND INTENT

- A. The intent of the Specifications and Drawings is to describe a complete Project to be constructed in accordance with the Contract Documents. Contractor shall furnish all labor, materials, equipment, tools, transportation, permits, and supplies, and perform the Work required in accordance with the Contract Documents.
- B. All work is to be executed in accordance with the Building Codes, as adopted by the Authority Having Jurisdiction, and other applicable codes and generally accepted industry standards. All products and materials are to be new and handled and applied in accordance with the manufacturer's recommendations.
- C. Contractor makes the following representations to Owner:
 - 1. The Contract Sum is reasonable compensation for the Work and the Contract Time is adequate for the performance of the Work, as represented by the Contract Documents;
 - 2. Contractor has carefully reviewed the Contract Documents, had an opportunity to visit and examine the Project site, has become familiar with the local conditions in which the Work is to be performed, and has satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, permits, services and other items to be furnished and all other requirements of the Contract Documents, as well as the surface and subsurface conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof.
- D. The Contract Documents are complementary. What is required by one part of the Contract Documents shall be binding as if required by all. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.

PART 2 - INSURANCE AND BONDS

2.1 INSURANCE REQUIREMENTS FOR BUILDING TRADES CONTRACTORS

- A. Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property that may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or Subcontractors.

2.2 MINIMUM SCOPE OF INSURANCE

- A. Contractors shall maintain coverages no less than:
 - 1. Insurance Services Office Commercial General Liability coverage including Products/Completed Operations.
 - 2. Insurance Services Office covering Automobile Liability, code 1 (any auto).
 - 3. Workers' Compensation insurance as required by State law and Employer's Liability Insurance.

2.3 MINIMUM LIMITS OF INSURANCE

- A. Contractor shall maintain limits no less than:

GENERAL CONDITIONS

1. General Liability: \$1,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit of \$2,000,000.
2. Automobile Liability: \$1,000,000 per accident for bodily injury and property damage.
3. Employer's Liability: \$1,000,000 per accident for bodily injury/sickness or disease.

2.4 DEDUCTIBLES AND SELF INSURED RETENTION

- A. Any deductibles or self-insured retentions must be declared to and approved by the Owner. At the option of the Owner, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Owner, its officers, officials, employees and volunteers; or the Contractor shall provide a financial guarantee satisfactory to the Owner guaranteeing payment of losses and related investigations, claim administration and defense expenses. **NOTE: If this contract deals with hazardous materials or activities (i.e. lead based paint, asbestos, armed security guards) additional provisions covering those exposures must be included in order to protect the Owner's interests.**

2.5 OTHER INSURANCE PROVISIONS

- A. The policies are to contain, or be endorsed to contain, the following provisions:
 1. The Owner, the Property Manager, its officers, officials, employees, partners, agents and volunteers are to be covered as additional insureds under a "completed operations" type of additional insured endorsement with respect to general liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. The endorsement(s) effectuating the foregoing additional insured coverage shall be ISO form CG 20 10 11 85, or CG 20 10 10 01 issued concurrently with CG 20 37 10 01, or their equivalent as long as it provides additional insured coverage, without limitation, for completed operations; (ii) automobile liability arising out of vehicles owned, leased, hired, or borrowed by or on behalf of the Contractor; (iii) any insurance written on a claims made basis, shall have a retroactive date that coincides with, or precede, the commencement of any work under this contract. Evidence of such coverage shall be maintained for a minimum of six (6) years beyond the expiration of the project.
 2. King County will not accept Certificates of Insurance Alone. Improperly Completed Endorsements will be returned to your insured for correction by an authorized representative of the insurance company.
 3. For any claims related to this project, the Contractor's insurance coverage shall be primary insurance as respects the Owner, its officers, officials, agents, partners, employees, and volunteers. Any insurance or self-insurance maintained or expired by the Owner, its officers, officials, agents, partners, employees, volunteers, or shall be excess of the Contractor's insurance and shall not contribute with it. King County Housing Authority's Insurance is Non-Contributory in Claims Settlement Funding.
 4. The "General description of agreement(s) and/or activity(s) insured" shall include reference to the activity and/or to either specific King County Housing Authority's; project of site name, contract number, lease number, permit number or construction approval number.
 5. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled or materially changed, except after thirty (30) days' [ten (10) days for non-payment of premium] prior written notice by certified mail, return receipt requested, has been given to the Owner.
 6. Maintenance of the proper insurance for the duration of the contract is a material element of the contract. Material changes in the required coverage or cancellation of the coverage shall constitute a material breach of the contract.

2.6 ACCEPTABILITY OF INSURERS

- A. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A-:VII. The name of the Insurance Company underwriting the coverage and its address shall be noted on the endorsement form. Contractors must provide written verification of their insurer's rating.

GENERAL CONDITIONS

2.7 VERIFICATION OF COVERAGE

- A. Contractor shall furnish the Owner with original certificates and amendatory endorsements effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the Owner before work commences in sufficient time to permit contractor to remedy any deficiencies. The Owner reserves the right to require complete, certified copies of all required insurance policies or pertinent parts thereof, including endorsements affecting the coverage required by these specifications at any time.

2.8 SUBCONTRACTORS

- A. Subcontractors shall include the Contractor as additional insured under their policies. All coverage's for subcontractors shall be subject to all of the requirements stated herein. Contractor shall be responsible for the adequacy of required coverages for subcontractors, and compile related certificates of insurance and endorsements evidencing subcontractors' compliance.

2.9 PAYMENT AND PERFORMANCE BONDS

- A. Payment and performance bonds for 100% of the Contract Award Amount shall be furnished for the Work, using the Payment Bond and Performance Bond form AIA – form A312. Change order increases of cumulative 15% increments require revisions to the bond to match the new Contract Sum.
- B. On contracts of one hundred fifty thousand dollars or less, at the option of the contractor as defined in RCW 39.10.210, the Owner may, in lieu of the bond, retain ten percent of the contract amount for a period of forty-five days after date of final acceptance, or until receipt of all necessary releases from the department of revenue, the employment security department, and the department of labor and industries and settlement of any liens filed under chapter 60.28 RCW, whichever is later.

PART 3 - PERFORMANCE

3.1 CONTRACTOR CONTROL AND SUPERVISION

- A. Contractor shall be solely responsible for, and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work, and shall be responsible to Owner for acts and omissions of Contractor, Subcontractors, and their employees and agents.
- B. Contractor shall enforce strict discipline and good order among Contractor's employees and other persons performing the Work. Contractor shall not permit employment of persons not skilled in tasks assigned to them. Owner may, by Notice, request Contractor to remove from the Work or Project site any employee Owner reasonably deems incompetent, careless, or otherwise objectionable.
- C. The Contractor shall perform on the site, and with its own organization, work equivalent to at least 12% of the total amount of work to be performed under the contract.
- D. Work Hours: The Contractor's allowable hours of operation shall be limited to those hours between 8:00 A.M. and 6:00 P.M. Monday to Friday excluding public holidays.

3.2 PERMITS, FEES, AND NOTICES

- A. Unless otherwise provided in the Contract Documents, Contractor shall pay for and obtain all permits, licenses, and coordinate inspections necessary for proper execution and completion of the Work. Prior to final payment, the approved, signed permits shall be delivered to Owner.

3.3 PREVAILING WAGES

- A. Statutes of the State of Washington RCW 39.12 as amended shall apply to this contract. Requirements, in brief, are stated below:

GENERAL CONDITIONS

1. There shall be paid each laborer or mechanic of the Contractor or sub-Contractor engaged in work on the project under this contract in the trade or occupation listed in the schedule of Wage Rates, as determined by the Department of Labor and Industries, not less than the hourly wage rate listed therein, regardless of any contractual relationship which may be alleged to exist between the Contractor and any sub-contractor and such laborers and mechanics.
2. The "prevailing rate or wage" contained in the wage determination include health and welfare fund contributions and other fringe benefits collectively bargained for by the various management and labor organizations. Prevailing wages shall be paid based on the most recent semi-annual list as required by the Department of Labor and Industries (L&I).
3. In case any dispute arises as to what are the prevailing rates for wages of work of a similar nature, and such disputes cannot be resolved by the parties involved, including labor and management representatives, the matter shall be referred for arbitration to the Director of the Department of Labor and Industries of the State of Washington, and the Director's decision shall be final and conclusive and binding on all parties involved in the dispute.

B. Before commencing the Work, Contractor shall file a statement of "Intent to Pay Prevailing Wages."

C. After completion of the Work, Contractor shall file an "Affidavit of Wages Paid."

3.4 EQUAL EMPLOYMENT OPPORTUNITY

A. During performance of the Work:

1. Contractor shall not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, marital status, the presence of any physical, sensory, or mental disability, sexual orientation, Vietnam-era veteran status, disabled veteran status or political affiliation, nor commit any unfair practices as defined in RCW 49.60.
2. The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, national origin, of any physical, sensory, or mental disability, sexual orientation, Vietnam-era veteran status, disabled veteran status, or political affiliation.
3. The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations and orders in regard to Equal Employment Opportunity including but not limited to Executive Order 11246, as amended, Section 503 of the Rehabilitation Act of 1973, as amended, and the rules, regulations, and orders of the Secretary of Labor. The Contractor shall include the terms of this Clause in every subcontract so that such term shall be binding on each Subcontractor.
4. Non-Discrimination R.C.W. 49.60: These special requirements establish minimum requirements for affirmative action and are intended to define and implement the basic discrimination provisions of these specifications. Failure to comply with these requirements may constitute grounds for application of contract default.

3.5 SAFETY PRECAUTIONS

A. In performing this contract, the Contractor shall provide for protecting the lives and health of employees and other persons; preventing damage to property, materials, supplies, and equipment; and avoid work interruptions. For these purposes, the Contractor shall:

1. Follow Washington Industrial Safety and Health Act (WISHA) regional directives and provide a site-specific safety program that will require an accident prevention and hazard analysis plan for the contractor and each subcontractor on the work site. The Contractor shall submit a site-specific safety plan to the Owner's representative prior to the initial scheduled construction meeting.
2. Provide adequate safety devices and measures including, but not limited to, the appropriate safety literature, notice, training, permits, placement and use of barricades, signs, signal lights, ladders, scaffolding, staging, runways, hoist, construction elevators, shoring, temporary lighting, grounded outlets, wiring, hazardous materials, vehicles, construction processes, and equipment required by Chapter 19.27 RCW, State Building Code (Uniform Building, Electrical, Mechanical, Fire, and Plumbing Codes); Chapter 212-12 WAC, Fire Marshal Standards, Chapter 49.17 RCW, WISHA; Chapter 296-155 WAC, Safety Standards for Construction Work; Chapter 296-65 WAC; WISHA Asbestos Standard; WAC 296-62-071, Respirator Standard; WAC 296-62, General Occupation Health Standards, WAC 296-24, General Safety and Health Standards, WAC 296-24, General Safety and Health Standards, Chapter 49.70 RCW, and Right to Know Act.

GENERAL CONDITIONS

3. Comply with the State Environmental Policy Act (SEPA), Clean Air Act, Shoreline Management Act, and other applicable federal, state, and local statutes and regulations dealing with the prevention of environmental pollution and the preservation of public natural resources.
 4. Post all permits, notices, and/or approvals in a conspicuous location at the construction site.
 5. Provide any additional measures that the Owner determines to be reasonable and necessary for ensuring a safe environment in areas open to the public. Nothing in this part shall be construed as imposing a duty upon the Owner to prescribe safety conditions relating to employees, public, or agents of the Contractors.
- B. Contractor to maintain safety records: Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall immediately report any such incident to Owner. Owner shall, at all times, have a right of access to all records of exposure.
- C. Contractor to provide HazMat training: Contractor shall provide all persons working on the Project site with information and training on hazardous chemicals in their work at the time of their initial assignment, and whenever a new hazard is introduced into their work area.
1. Information. At a minimum, Contractor shall inform persons working on the Project site of:
 - a. WAC: The requirements of chapter 296-62 WAC, General Occupational Health Standards;
 - b. Presence of hazardous chemicals: Any operations in their work area where hazardous chemicals are present; and
 - c. Hazard communications program: The location and availability of written hazard communication programs, including the required list(s) of hazardous chemicals and material safety data sheets required by chapter 296-62 WAC.
 2. Training. At a minimum, Contractor shall provide training for persons working on the Project site which includes:
 - a. Detecting hazardous chemicals: Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);
 - b. Hazards of chemicals: The physical and health hazards of the chemicals in the work area;
 - c. Protection from hazards: The measures such persons can take to protect themselves from these hazards, including specific procedures Contractor, or its Subcontractors, or others have implemented to protect those on the Project site from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and
 - d. Hazard communications program: The details of the hazard communications program developed by Contractor, or its Subcontractors, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.
- D. Hazardous, toxic or harmful substances: Contractor's responsibility for hazardous, toxic, or harmful substances shall include the following duties:
1. Illegal use of dangerous substances: Contractor shall not keep, use, dispose, transport, generate, or sell on or about the Project site, any substances now or hereafter designated as, or which are subject to regulation as, hazardous, toxic, dangerous, or harmful by any federal, state or local law, regulation, statute or ordinance (hereinafter collectively referred to as "hazardous substances"), in violation of any such law, regulation, statute, or ordinance, but in no case shall any such hazardous substance be stored on the Project site.
 2. Contractor notifications of spills, failures, inspections, and fines: Contractor shall promptly notify Owner of all spills or releases of any hazardous substances which are otherwise required to be reported to any regulatory agency and pay the cost of cleanup. Contractor shall promptly notify Owner of all failures to comply with any federal, state, or local law, regulation, or ordinance; all inspections of the Project site by any regulatory entity concerning the same; all regulatory orders or fines; and all responses or interim cleanup actions taken by or proposed to be taken by any government entity or private party on the Project site.

GENERAL CONDITIONS

- E. Public safety and traffic: All Work shall be performed with due regard for the safety of the public. Contractor shall perform the Work so as to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians. All arrangements to care for such traffic shall be Contractor's responsibilities. All expenses involved in the maintenance of traffic by way of detours shall be borne by Contractor.
- F. Contractor to act in an emergency: In an emergency affecting the safety of life or the Work or of adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened loss or injury, and Contractor shall so act if so authorized or instructed.
- G. No duty of safety by Owner: Nothing provided in this section shall be construed as imposing any duty upon Owner with regard to, or as constituting any express or implied assumption of control or responsibility over, Project site safety, or over any other safety conditions relating to employees or agents of Contractor or any of its Subcontractors, or the public.

3.6 INDEPENDENT CONTRACTOR

- A. The Contractor and Owner agree the Contractor is an independent contractor with respect to the services provided pursuant to this Contract. Nothing in this Contract shall be considered to create a relationship of employer and employee between the parties hereto. Neither the Contractor nor any employee of the Contractor shall be entitled to any benefits accorded Owner employees by virtue of the services provided under this Contract. The Owner shall not be responsible for withholding or otherwise deducting federal income tax or social security or contributing to the State Industrial Insurance Program, or otherwise assuming the duties of an employer with respect to the Contractor, or any employees of the Contractor.

3.7 OPERATIONS, MATERIAL HANDLING, AND STORAGE AREAS

- A. Contractor shall confine all operations, including storage of materials, to Owner-approved areas.
- B. Contractor shall be responsible for the proper care and protection of its materials and equipment delivered to the Project site.
- C. Contractor shall protect and be responsible for any damage or loss to the Work, or to the materials or equipment until the date of Final Acceptance, and shall repair or replace without cost to Owner any damage or loss that may occur.

3.8 PRIOR NOTICE OF EXCAVATION

- A. Prior to any excavation Contractor shall engage a locate service for all underground facilities or utilities. Contractor shall pay all fees for locator services and pay for all damages caused by excavation.

3.9 UNFORESEEN PHYSICAL CONDITIONS

- A. Notice requirement for concealed or unknown conditions: If Contractor encounters conditions at the site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then Contractor shall give written notice to Owner promptly and in no event later than seven Days after the first observance of the conditions. Conditions shall not be disturbed prior to such notice.
- B. Adjustment in Contract Time and Contract Sum: If such conditions differ materially and cause a change in Contractor's cost of, or time required for, performance of any part of the Work, the Contractor may be entitled to an equitable adjustment in the Contract Time or Contract Sum, or both, provided it makes a request therefore as provided in Part 5.

3.10 PROTECTION OF EXISTING STRUCTURES, EQUIPMENT, VEGETATION, UTILITIES, AND IMPROVEMENTS

GENERAL CONDITIONS

- A. Contractor shall protect from damage all existing conditions, including soils, structures, equipment, improvements, utilities, and vegetation at or near the Project site; and on adjacent property of a third party, the locations of which are made known to or should be known by Contractor. Contractor shall repair any damage, including that to the property of a third party, resulting from failure to comply with the requirements of the Contract Documents, any defects of equipment, material, workmanship or design furnished by the Contractor, or failure by Contractor or subcontractor at any tier to exercise reasonable care in performing the Work. If Contractor fails or refuses to repair the damage promptly, Owner may have the necessary work performed and charge the cost to Contractor.
- B. New work which connects to existing work shall correspond in all respects with that to which it connects and/or be similar to existing work unless otherwise required by the Specifications.

3.11 MATERIAL AND EQUIPMENT

- A. All equipment, material, and articles incorporated into the Work shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in the Contract Documents. References in the Specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard quality and shall not be construed as limiting competition. Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of Owner, is equal to that named in the Specifications, unless otherwise specifically provided in the Contract Documents.
- B. Substitutions shall be considered where qualities and attributes including, but not limited to, cost, performance, weight, size, durability, visual effect, and specific features and requirements indicated are deemed equal or better by the Owner at the Owner's sole discretion. All requests for substitutions shall be made in writing to Owner and shall not be deemed to be approved unless approved in writing by Owner.

3.12 CORRECTION OF NONCONFORMING WORK

- A. Contractor shall promptly correct Work found by Owner not to conform to the requirements of the Contract Documents, whether observed before or after Final Acceptance.
- B. If Contractor fails to correct nonconforming Work, Owner may replace, correct, or remove the nonconforming Work and charge the cost thereof to the Contractor.

3.13 CLEAN UP

- A. Contractor shall at all times keep the Project site, including hauling routes, infrastructures, utilities, and storage areas, free from accumulations of waste materials. Before completing the Work, Contractor shall remove from the premises its rubbish, tools, scaffolding, equipment, and materials. Upon completing the Work, Contractor shall leave the Project site in a clean, neat, and orderly condition satisfactory to Owner. If Contractor fails to clean up as provided herein, and after reasonable notice from Owner, Owner may do so and the cost thereof shall be charged to Contractor.

3.14 SUBCONTRACTORS AND SUPPLIERS

- A. Contractor shall utilize Subcontractors and suppliers which are experienced and qualified.
- B. By appropriate written agreement, Contractor shall require each Subcontractor to be bound to Contractor by terms of those Contract Documents, and to assume toward Contractor all the obligations and responsibilities which Contractor assumes toward Owner in accordance with the Contract Documents. Each Subcontract shall preserve and protect the rights of Owner in accordance with the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights. Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. However, nothing in this paragraph shall be construed to alter the contractual relations between Contractor and its Subcontractors with respect to insurance or bonds.
- C. Contractor shall schedule, supervise, and coordinate the operations of all Subcontractors. No Subcontracting of any of the Work shall relieve Contractor from its responsibility for the performance of the Work in accordance with the Contract Documents or any other obligations of the Contract Documents.

GENERAL CONDITIONS

- D. It is the Contractor's responsibility to pay its Subcontractors and material suppliers on a timely basis. The Owner reserves the right to withhold a portion of the Contractor's payment if the Contractor fails to make timely payments to the Subcontractors and material suppliers.
- E. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Owner and any Subcontractor; or any persons other than Owner and Contractor.
- F. The Contractor shall not enter into any subcontract with any subcontractor who has been suspended or debarred from participating in contracting programs by any agency of the United States Government or by any state, territory, or municipality.

3.15 INDEMNIFICATION

- A. The Contractor hereby agrees to indemnify, defend, and hold harmless the Authority, its successors and assigns, director, officers, officials, employees, agents, partners and volunteers (all foregoing singly and collectively (Indemnities")) from a and against any and all claims, losses, harm costs, liabilities, damages and expenses, including, but not limited to, reasonable attorney's fees arising or resulting from the performance of the services, or the acts or omissions of the Contractor its successors, and assigns, employees, subcontractors or anyone acting on the contractor's behalf in connection with this Contract or its performance of this Contract.
- B. Provided, however, that the Contractor will not be required to indemnify, defend, or save harmless the indemnitee as provided in the preceding paragraphs of this section if the claim, suit, or action for injuries, death, or damages is caused by the sole negligence of the indemnitee. Where such claims, suites, or actions result from the concurrent negligence of (a) the indemnitee or the indemnitee's agents or employees and (b) the Contractor or the Contractor's agent or employee, the indemnity provisions provided in the proceeding paragraphs of this section shall be valid and enforceable only to the extent of the Contractor's negligence or the negligence of its agents and employees..
- C. The foregoing indemnity is specifically and expressly intended to constitute a waiver of the Contractor's immunity under Washington's Industrial Insurance act, RCW Title 51. The parties acknowledge that these provisions were specifically negotiated and agreed upon by them. If any portion of this indemnity clause is invalid or unenforceable, it shall be deemed excised and the remaining portions of the clause shall be given full force and effect.
- D. The Contractor hereby agrees to require all its Subcontractors or anyone acting under its direction or control or on its behalf in connection with or incidental to the performance of this Contract to execute an indemnity clause identical to the preceding clause, specifically naming the Owner as indemnity, and failure to do so shall constitute a material breach of this Contract by the Contractor.

3.16 PROHIBITION AGAINST LIENS

- A. The Contractor is prohibited from placing a lien on the Owner's property. This prohibition shall apply to all subcontractors of any tier and all materials suppliers, in accordance with RCW 35.82.190.

3.17 DAMAGES FOR FAILURE TO ACHIEVE TIMELY COMPLETION

- A. Liquidated Damages
 - 1. Timely performance and completion of the Work is essential to Owner and time limits stated in the Contract Documents are of the essence. The liquidated damage amounts set forth will be assessed not as a penalty, but as liquidated damages for breach of the Contract Documents. This amount is fixed and agreed upon by and between the Contractor and Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain. This amount shall be construed as the actual amount of damages sustained by the Owner, and may be retained by the Owner and deducted from any payments to the Contractor.
 - 2. If different completion dates are specified in the contract for separate parts or stages of the work, the amount of liquidated damages shall be assessed on those parts or stages which are delayed.

3.18 WAIVER AND SEVERABILITY

GENERAL CONDITIONS

- A. The failure or delay of either party to insist on performance of any provision of the Contract, or to exercise any right or remedy available under the Contract, shall not be construed as a waiver of that provision, right, or remedy in any later instance. Waiver or breach of any provision of the Contract shall not be construed to be a waiver of any other or subsequent breach and shall not be construed to be a modification of the terms of the Contract, unless the Contract is modified pursuant to the Clause entitled "Contract Modifications" herein.
- B. If any provision of the Contract is or becomes void or unenforceable by operation of law, the remaining provisions shall be valid and enforceable.

PART 4 - PAYMENTS AND COMPLETION

4.1 CONTRACT SUM

- A. The Contract Sum shall include all taxes imposed by law and properly chargeable to the Project, including sales tax. The Contractor shall pay the WSST to the Department of Revenue and shall furnish proof of payment to the Owner if requested.
- B. The retail sales tax does not apply to the gross contract price.
- C. Prime and subcontractors are required to pay retail sales tax upon all purchases of materials, including prefabricated and precast items, equipment, leases or rentals of tools, consumables, and other tangible personal property which is installed, applied, attached, or otherwise incorporated in their work.

4.2 APPLICATION FOR PAYMENT

- A. At monthly intervals, unless determined otherwise by Owner, Contractor shall submit to Owner an Application for Payment for Work completed in accordance with the Contract Documents. Each application shall be supported by such substantiating data as Owner may require.
- B. Each invoice shall include the following statement: "I hereby certify that the items listed are proper charges for materials, merchandise or services provided to the King County Housing Authority, and that all goods and/or services have been provided; that prevailing wages have been paid in accordance with the approved statements of intent filed with the Department of Labor and Industries; and that sub-contractors and/or suppliers have been paid, less earned retainage, as their interest appears in the last payment received."
- C. Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule. Each Application for Payment shall be consistent with previous applications and payments.
- D. Owner shall retain 5% of the amount of each progress payment until 45 Days after Final Acceptance and receipt of all documents required by law or the Contract Documents including releases by Washington State Employment Security Department and Washington State Department of Revenue and Department of Labor & Industries.
- E. Waivers of Lien: With each Application for Payment, submit conditional waivers lien from every entity who is lawfully entitled to file a lien arising out of the Contract and related to the Work covered by the payment.
 - 1. Submit partial waivers on each item for amount requested, before deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - a. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
- F. Final Payment Application: Submit final Application for Payment with releases and close out supporting documentation.
- G. Approved payments shall be mailed to the Contractor within 30 days.

GENERAL CONDITIONS

4.3 FINAL COMPLETION, ACCEPTANCE, AND PAYMENT

- A. The Owner shall make a final inspection of the Work on receipt of (1) written notice from the Contractor that the Work is ready for final inspection and (2) a final Application for Payment. When the Owner finds the Work acceptable and fully performed under the Contract Documents, and the Contractor has delivered to the Owner all warranties, permits, and operations manuals, the Owner will issue a Notice of Final Completion.
- B. Acceptance of final payment by Contractor, or any Subcontractor, shall constitute a waiver and release to Owner of all claims by Contractor, or any such Subcontractor, for an increase in the Contract Sum or the Contract Time, and for every act or omission of Owner relating to or arising out of the Work, except for those Claims made in accordance with the procedures, including the time limits, set forth in PART 7 - .

PART 5 - CHANGES

5.1 CHANGE IN THE WORK

- A. Owner may, at any time and without notice to Contractor's surety, order additions, deletions, revisions, or other changes in the Work. These changes in the Work shall be incorporated into the Contract Documents through the execution of Change Orders. If any change in the Work ordered by Owner causes an increase or decrease in the Contract Sum or the Contract Time, an equitable adjustment shall be made as provided in 5.2 and 5.3.
- B. Pending agreement on the terms of the Change Order, Owner may direct Contractor to proceed immediately with the Change Order Work. Contractor shall not proceed with any change in the Work until it has obtained Owner's written approval.
- C. The Contractor agrees that any change in the Contract Amount or Contract Time provided in a Change Order is full and complete compensation to the Contractor for the change(s) to the work, deleted work, modified work, direct or indirect impact on the Contractor's schedule, and for any equitable adjustment or time extension to which the Contractor may be entitled to in the Change Order, pursuant to the Contract between the Owner and Contractor.

5.2 CHANGE IN THE CONTRACT SUM

- A. Change Order Pricing - Fixed Price: When the fixed price or time and materials method is used to determine the value of any Work covered by a Change Order, or of a request for an equitable adjustment in the Contract Sum, the following procedures shall apply:
 - 1. Contractor's Change Order proposal, or request for adjustment in the Contract Sum, shall be accompanied by a complete itemization of the costs, including labor, material, subcontractor costs, and overhead and profit. The costs shall be itemized in the manner set forth below, and shall be submitted on breakdown sheets with documentation in a form approved by Owner.
 - 2. Any request for adjustment of Contract Sum shall include only the following items:
 - a. Craft labor costs for Contractors and Subcontractors.
 - 1) Basic wages and benefits: Hourly rates and benefits according to applicable prevailing wages.
 - 2) Direct supervision shall not to exceed 15% of the cost of direct labor. No supervision markup shall be allowed for a working supervisor's hours.
 - 3) Worker's Insurance. Direct contributions to the State for industrial insurance, medical aid, and supplemental pension by the class and rates established by L&I.
 - 4) Federal Insurance. Direct contributions required by the Federal Insurance Compensation Act; Federal Unemployment Tax Act; and the State Unemployment Compensation Act.
 - 5) Safety and small tools: 4% of the sum of the amounts calculated in (1), (2), and (3) above.
 - b. Material Costs: Material costs and applicable sales tax shall be developed from actual known costs, supplier quotations or standard industry pricing guides and shall consider all available discounts. Freight costs, express charges, or special delivery charges shall be itemized.

GENERAL CONDITIONS

- c. Equipment Costs: Itemization of the type of equipment and the estimated or actual length of time the equipment appropriate for the Work is or will be used on the change in the Work. Costs will be allowed for equipment and applicable sales tax only if used solely for the changed Work, or for additional rental costs actually incurred by the Contractor. The Date Quest Rental Rate (Blue Book) shall be used as a basis for establishing rental rates of equipment not listed in the above sources. The maximum rate for standby equipment shall not exceed 50% of the applicable rate.
- d. Allowance for Overhead: This allowance shall compensate Contractor for all noncraft labor, temporary construction facilities, field engineering, schedule updating, as-built drawings, home office cost, B&O taxes, office engineering, estimating costs, additional overhead because of extended time and any other cost incidental to the change in the Work. This allowance shall be strictly limited in all cases an amount not to exceed the following:
 - 1) For Contractor, for any Work actually performed by Contractor's own forces, 16% of the cost.
 - 2) For each Subcontractor (including lower tier subcontractors), for any Work actually performed by its own forces, 16% of the cost.
 - 3) For Contractor, for any Work performed by its Subcontractor(s), 6% of the amount due each Subcontractor.
 - 4) For each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, 5% of the amount due the sub-Subcontractor.
- e. Allowance for Profit:
 - 1) For Contractor or Subcontractor of any tier for work performed by their forces, 5% of the cost developed in accordance with subsections a, b & c above.
 - 2) For Contractor or Subcontractor of any tier for work performed by a subcontractor of a lower tier, 5% of the Subcontractor cost.
- f. Insurance or Premium: The costs of any change or additional premium of Contractor's liability insurance or bond premium arising directly from the changed Work. The costs of any change in insurance shall be added after overhead and profit are calculated.

B. Change Order Pricing - Unit Prices

- 1. Work on a unit-price basis as stated in the Specifications and at the price submitted in the Bid Form or as subsequently modified.
 - a. Unit prices shall include reimbursement for all direct and indirect costs of the Work, including overhead and profit, bond premium, and insurance costs; and
 - b. Quantities must be supported by field measurement verified by Owner.

5.3 CHANGE IN THE CONTRACT TIME

- A. The Contract Time shall only be changed by a Change Order. Contractor shall immediately notify Owner, and shall include any request for a change in the Contract Time in its Change Order proposal.
- B. If the time of Contractor's performance is changed due to an act of Force Majeure, Contractor shall request for an equitable adjustment in the Contract Time in writing within 24-hours of the occurrence.

PART 6 - CLAIMS AND DISPUTE RESOLUTION

6.1 CLAIMS PROCEDURE

- A. If the parties fail to reach agreement regarding any dispute arising from the Contract Documents, Contractor's only remedy shall be to file a Claim with Owner within 30 Days from Owner's final offer.
- B. The Claim shall be deemed to cover all changes in cost and time (including direct, indirect, impact, and consequential) to which Contractor may be entitled. It shall be fully substantiated and documented.

GENERAL CONDITIONS

- C. After Contractor has submitted a fully-documented Claim, Owner shall respond, in writing, to Contractor with a decision within 30 Days from the date the Claim is received.
- D. Contractor shall proceed with performance of the Work pending final resolution of any Claim. Owner's written decision as set forth above shall be final and conclusive as to all matters set forth in the Claim.
- E. Any Claim of the Contractor against the Owner for damages, additional compensation, or additional time, shall be conclusively deemed to have been waived by the Contractor unless timely made in accordance with the requirements of this section.

6.2 ARBITRATION

- A. If Contractor disagrees with Owner's decision rendered in accordance with paragraph 6.1C, Contractor shall provide Owner with a written demand for arbitration. No demand for arbitration of any such Claim shall be made later than 30 Days after the date of Owner's decision on such Claim; failure to demand arbitration within said 30 Day period shall result in Owner's decision being final and binding upon Contractor and its Subcontractors.
 - 1. Notice of the demand for arbitration shall be filed with the American Arbitration Association (AAA), with a copy provided to Owner. The parties shall negotiate or mediate under the Voluntary Construction Mediation Rules of the AAA, or mutually acceptable service.
- B. All Claims arising out of the Work shall be resolved by arbitration. The judgment upon the arbitration award may be entered, or review of the award may occur, in the superior court having jurisdiction thereof. No independent legal action relating to or arising from the Work shall be maintained.

6.3 CLAIMS AUDITS

- A. All Claims filed against Owner shall be subject to audit at any time following the filing of the Claim. Failure of Contractor, or Subcontractors of any tier, to maintain and retain sufficient records to allow Owner to verify all or a portion of the Claim or to permit Owner access to the books and records of Contractor, or Subcontractors of any tier, shall constitute a waiver of the Claim and shall bar any recovery.
 - 1. In support of Owner audit of any Claim, Contractor shall promptly make available to Owner all records relating to the Work.

PART 7 - TERMINATION OF THE WORK

7.1 TERMINATION BY OWNER FOR CAUSE

- A. Owner may, upon a written Notice to Contractor and to its surety, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for cause upon the occurrence of any one or more of the following events:
 - 1. Contractor fails to prosecute the Work or any portion thereof with sufficient diligence to ensure Completion of the Work within the Contract Time;
 - 2. Contractor is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency;
 - 3. Contractor fails in a material way to replace or correct Work not in conformance with the Contract Documents;
 - 4. Contractor repeatedly fails to supply skilled workers or proper materials or equipment;
 - 5. Contractor repeatedly fails to make prompt payment due to Subcontractors, suppliers, or for labor;
 - 6. Contractor materially disregards or fails to comply with laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction; or
 - 7. Contractor is otherwise in material breach of any provision of the Contract Documents.
- B. Upon termination, Owner may at its option:

GENERAL CONDITIONS

1. Take possession of the Project site and take possession of or use all materials, equipment, tools, and construction equipment and machinery thereon owned by Contractor to maintain the orderly progress of, and to finish, the Work;
 2. Finish the Work by whatever other reasonable method it deems expedient.
- C. Owner's rights and duties upon termination are subject to the prior rights and duties of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.
- D. When Owner terminates the Work in accordance with this section, Contractor shall take the actions set forth in paragraph 7.2B, and shall not be entitled to receive further payment until the Work is accepted.
- E. If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including compensation for A/E services and expenses made necessary thereby and any other extra costs or damages incurred by Owner in completing the Work, or as a result of Contractor's actions, such excess shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor shall pay the difference to Owner. Contractor shall also be liable for liquidated damages until such reasonable time as may be required for Completion. These obligations for payment shall survive termination.
- F. Termination of the Work in accordance with this section shall not relieve Contractor or its surety of any responsibilities for Work performed.
- G. If Owner terminates Contractor for cause, and it is later determined that none of the circumstances set forth in 7.1A exist, then such termination shall be deemed a termination for convenience pursuant to 7.2.

7.2 TERMINATION BY OWNER FOR CONVENIENCE

- A. Owner may, upon Notice, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for the convenience of Owner.
- B. Unless Owner directs otherwise, after receipt of a Notice of termination for either cause or convenience, Contractor shall promptly:
1. Stop performing Work on the date and as specified in the notice of termination;
 2. Place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of such portion of the Work as is not terminated;
 3. Cancel all orders and subcontracts, upon terms acceptable to Owner, to the extent that they relate to the performance of Work terminated;

PART 8 - MISCELLANEOUS PROVISIONS

8.1 RECORDS KEEPING AND REPORTING

- A. The Contractor and all Subcontractors shall maintain accounts and records in accordance with State Auditor's procedures, including personnel, property, financial and programmatic records which sufficiently and properly reflect all direct and indirect costs of any nature expended and services performed in the performance of this Contract and other such records as may be deemed necessary by the Owner to ensure proper accounting for all funds contributed by the Owner to the performance of this Contract and compliance with this Contract.
- B. The Contractor, and its Subcontractors, shall maintain these records for a period of six (6) years after the date of Final Acceptance.

8.2 AUDITS AND INSPECTIONS

- A. The records and documents with respect to all matters covered by this Contract shall be subject at all times to inspection, review or audit by the Owner or any other government agency so authorized by law during the performance of this Contract. The Owner shall have the right to an annual audit of the Contractor's financial statement and condition.

GENERAL CONDITIONS

8.3 ORGANIZATION CONFLICTS OF INTEREST

- A. The Contractor warrants that to the best of its knowledge and belief and except as otherwise disclosed, it does not have any organizational conflict of interest which is defined as a situation in which the nature of work under this Contract and the Contractor's organizational, financial, contractual or other interests are such that:
 - 1. Award of the Contract may result in an unfair competitive advantage; or
 - 2. The Contractor's objectivity in performing the Contract work may be impaired.
- B. The Contractor agrees that if after award they discover an organizational conflict of interest with respect to this Contract, they shall make an immediate and full disclosure in writing to the Contracting Officer, which shall include a description of the action, which the Contractor has taken or intends to take to eliminate or neutralize the conflict. The Owner may, however, terminate the Contract if it deems the action to be in the best interest of the Owner.
- C. In the event the Contractor was aware of an organizational conflict of interest before the award of this Contract and intentionally did not disclose the conflict to the Contracting Officer, the Owner may terminate the Contract for default.
- D. The provisions of this Clause shall be included in all subcontracts and consulting agreements wherein the work to be performed is similar to the services provided by the Contractor. The Contractor shall include in such subcontracts and consulting agreements any necessary provisions to eliminate or neutralize conflicts of interest.

8.4 INTERESTS OF MEMBERS OF CONGRESS

- A. No member of or delegate to the Congress of the United States of America shall be admitted to any share or part of this Contract or to any benefit to arise therefrom, but this provision shall not be construed to extend to this Contract if made with a corporation for its general benefit.

8.5 INTERESTS OF MEMBERS, OFFICERS, COMMISSIONERS AND EMPLOYEES, OR FORMER MEMBERS, OFFICERS AND EMPLOYEES

- A. No member, officer, or employee of the King County Housing Authority, no member of the governing body of the locality in which the project is situated, no member of the governing body in which the Owner was activated, and no other public official or such locality or localities who exercises any functions or responsibilities with respect to the project, shall, during his or her tenure, or for one year thereafter, have any interest, direct or indirect, in this Contract or the proceeds thereof.

BID FORM

PROJECT NAME AND LOCATION:

Landmark Apartments Replacement
Deck, Stairs & Landing Replacement

Contract Number: DW2402931

BID FORM

The undersigned, Legal Name of Bidder: _____

on this date: _____, 2025, having familiarized him/herself with the contract documents, site conditions, and has field verified all measurements contained in the project manual as prepared by the Owner, hereby proposes to furnish labor, materials and necessary equipment – all including, but not limited to, demolition, disposal, new installation and the required applicable taxes and fees to complete the work for the following bid amounts:

BASE BID _____ (\$ _____)
(Including sales tax indicated in Instructions to Bidders)

ADDENDA _____
Acknowledge receipt of any addenda by inserting the number(s) above

In submitting this bid, it is understood that the right is reserved by the Owner to reject any and all bids. The undersigned hereby agrees that this proposal shall be a valid and firm offer for a period of Sixty (60) calendar days from the date of Bid Opening.

Bidder agrees that Work will be substantially complete and ready for final payment in accordance with the Contract Documents on or before the date, within the number of calendar days indicated.

The undersigned Bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date for this Project, the bidder is not a “willful” violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

I certify (or declare) under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Signature of Bidder

Print Your Name

Submitted on _____ day of _____ 2025

City

State

BIDDER INFORMATION

BIDDER INFORMATION

Name of Bidder (Company): _____

Address: _____

Contact Name: _____

Phone Number: _____ Email Address: _____

Business Type: General Contractor () Other () (Please specify): _____

Bidder is a(n): ☐ Individual ☐ Partnership ☐ Joint Venture ☐ Incorporated in the state of _____

List business names & associated UBI # used by Bidder during the past 5 years if different than above:

Bidder has been in business continuously from: _____
Month, Year

Business License #: _____ Federal ID #: _____

Current UBI #: _____ Dept. of L&I Worker's Comp. Acct. #: _____

Bidder has experience in work "Similar in Scope and Complexity" comparable to that required for this Project:

As a prime contractor for _____ years. As a subcontractor for _____ years.

OWNER(S) OF COMPANY (List all owners):	OWNER'S SOCIAL SECURITY NUMBER (only required if sole proprietorship):

No. of regular full-time employees other than owner(s): _____

Indicate clearly the kind of work your company will actually perform in this project:

Approximate % of work your company will actually perform: _____

List the supervisory personnel to be employed by the Bidder and available for, and intended to, work on this project:

<u>Name</u>	<u>Title</u>	<u>How Long With Bidder</u>
_____	_____	_____
_____	_____	_____

BIDDER INFORMATION

SUBCONTRACTORS

Do you intend to use Subcontractor(s) in this project? Yes ☐ No ☐ (If yes, you must show the name of the subcontractors. Attach additional pages as necessary.)

Subcontractors Name	Subcontractor's UBI#	Phone Number	Trade	Years in Business
1.				
2.				
3.				
4.				
5.				

BIDDER'S EXPERIENCE

Projects successfully supervised and completed by your company for work of similar scope and value as specified in bid documents in the last 5 years. Attach additional pages as necessary.

Name of Project	Completion Date	Duration (Months)	Nature of Work	Amount of Contract
1.				
2.				
3.				
4.				
5.				

Owner's Name (of project listed above)	Project Address	Contact Person	Phone Number
1.			
2.			
3.			
4.			
5.			

Has Bidder ever been found guilty of violating any State or Federal employment laws? ☐ No ☐ Yes
If yes, give details & attach additional pages as necessary:

Has Bidder ever filed for protection under any provision of the federal bankruptcy laws or state insolvency laws?
☐ No ☐ Yes If yes, give details & attach additional pages as necessary:

BIDDER INFORMATION

Has any lien, claim and/or adverse legal action related to construction been rendered against Bidder in the past five years? (i.e., open claims, lawsuits, warrants, judgements including but not limited to those that would show on the L&I website) ☐ No ☐ Yes If yes, give details & attach additional pages as necessary:

Has Bidder or any of its employees filed any claims with Washington State Worker's Compensation or other insurance company for accidents resulting in fatal injury or dismemberment in the past 5 years? ☐ No ☐ Yes
If yes, please state:

<u>Date</u>	<u>Type of Injury</u>	<u>Agency Receiving Claim</u>
_____	_____	_____
_____	_____	_____

Bidders current Experience Modification Rate (EMR): _____

(If Bidder is self-insured, attach proof of EMR stated, showing complete worksheet calculations)

The bidder hereby certifies that the information contained in this Bidder's Information is accurate, complete and current.

BY: _____ NAME: _____
(signature) (print)

TITLE: _____ DATE: _____

CONTRACT FORM

This Contract is entered into by and between the King County Housing Authority, hereinafter referred to as the “Owner” whose principal office is located at 600 Andover Park West, Tukwila, WA 98188 and [Name of Contractor], referred to as the “Contractor”, whose principal office is located at [Contractor’s Address].

IN CONSIDERATION OF the mutual benefits and conditions hereinafter contained, the parties hereto agree as follows:

1.1 Contract Documents

- A. The provisions set forth in the Contract Documents are hereby incorporated into and made part of the Contract. Contractor acknowledges receipt and review of all Contract Documents applicable to performance of the work. The Contract shall consist of the following component parts:

1. This Instrument
2. Addenda
3. Specifications
4. Plans
5. Bid Form
6. Pre-Bid Agenda
7. General Conditions
8. Instructions to Bidders
9. Prevailing Wage Rates
10. Hazardous Material Report

- 1.2 Scope of Services to be Performed by the Contractor: The Contractor shall provide all labor, materials, tools, equipment, transportation, supplies, and incidentals required to complete the work in accordance with the Contract Documents for:

Project: Landmark Decks, Stairs & landing Replacement

Contract No.: DW2402931

- 1.3 Compensation: The total amount of the Contract shall be [\$\$\$] dollars and [¢¢] cents (\$[\$\$\$.\$\$]) subject to additions and deductions provided therein.

- 1.4 Duration of Contract: The Contractor shall commence work after receipt of Notice to Proceed, follow the schedule specified in the contract documents, and all work must be completed within ninety (90) consecutive calendar days from the date of the Notice to Proceed unless sooner terminated pursuant to the General Conditions. Upon expiration of the original Contract term, the Contract, at the Owner’s sole discretion, may be extended for a period determined by the Owner.

- 1.5 Liquidated Damages: Timely performance and completion of the Work is essential to Owner and time limits stated in the Contract Documents are of the essence. If Completion of the Work does not occur within the Contract Time, the Contractor agrees that Liquidated Damages in the amount of \$250.00 per day will be assessed for each calendar day that the Contractor exceeds the time for completion.

The individuals signing this Contract warrant and represent for themselves and for their respective organizations that they are duly authorized to sign this Contract and that upon such signing their respective organizations are bound thereby.

DATED this _____ day of _____, 2025

Contractor

Owner

President/Owner

[Name of Signer]

[Title of Signer]

KING COUNTY HOUSING AUTHORITY

CERTIFICATE OF INSURANCE							DATE(MM/DD/YY)			
							Issue Date			
PRODUCER Vendor's Insurance Agent Street Address City, State, Zip Phone Number				THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.						
				COMPANIES AFFORDING COVERAGE						
INSURED Vendor Name Street Address City, State, Zip				COMPANY A	ABC Insurance Company					
				COMPANY B	DEF Insurance Company					
				COMPANY C	GHI Insurance Company					
				COMPANY D						
COVERAGES THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH REPSECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.										
CO LTR	TYPE OF INSURANCE		POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS				
A	GENERAL LIABILITY		XXX123	01/01/00	01/01/01	GENERAL AGGREGATE		2,000,000		
	<input checked="" type="checkbox"/>	COMMERCIAL GENERAL LIABILITY				PRODUCTS-COMP/OP AGG		1,000,000		
	<input type="checkbox"/>	CLAIMS MADE				<input checked="" type="checkbox"/>	OCCUR	PERSONAL & ADV INJURY		1,000,000
	<input type="checkbox"/>	OWNER'S & CONTRACTOR'S PROT				EACH OCCURRENCE		1,000,000		
	<input type="checkbox"/>					FIRE DAMAGE (Any one fire)		50,000		
	<input type="checkbox"/>					MED EXP (Any one person)		5,000		
	<input type="checkbox"/>									
B	AUTOMOBILE LIABILITY		XXX456	01/01/00	01/01/01	COMBINED SINGLE LIMIT		1,000,000		
	<input checked="" type="checkbox"/>	ANY AUTO				BODILY INJURY (Per person)				
	<input type="checkbox"/>	ALL OWNED AUTOS				BODILY INJURY (Per accident)				
	<input type="checkbox"/>	SCHEDULED AUTOS				PROPERTY DAMAGE				
	<input checked="" type="checkbox"/>	HIRED AUTOS								
	<input type="checkbox"/>	NON-OWNED AUTOS								
	<input type="checkbox"/>									
	GARAGE LIABILITY					AUTO ONLY-EA ACCIDENT				
	<input type="checkbox"/>	ANY AUTO				OTHER THAN AUTO ONLY:				
	<input type="checkbox"/>					EACH ACCIDENT				
	<input type="checkbox"/>					AGGREGATE				
	<input type="checkbox"/>									
	EXCESS LIABILITY					EACH OCCURRENCE				
	<input type="checkbox"/>	UMBRELLA FORM				AGGREGATE				
	<input type="checkbox"/>	OTHER THAN UMBRELLA FORM								
	<input type="checkbox"/>									
C	WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY		XXX789	01/01/00	01/01/01	<input checked="" type="checkbox"/>	STATUTORY LIMITS			
	THE PROPRIETOR/ PARTNERS/EXECUTIVE OFFICERS ARE:					<input type="checkbox"/>	INCL	EACH ACCIDENT	1,000,000	
						<input type="checkbox"/>	EXCL	DISEASE-POLICY LIMIT	1,000,000	
						<input type="checkbox"/>		DISEASE-EACH EMPLOYEE	1,000,000	
	OTHER									
DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS Greystar Real Estate Partners, LLC and King County Housing Authority are named as additional insureds with respect to above general liability and auto coverage. Re: Contract DW2402931 at Landmark Apartments, 16330 NE 11 th St., Bellevue, WA 98008.										
CERTIFICATE HOLDER Greystar Real Estate Partners, LLC King County Housing Authority 600 Andover Park West Seattle, WA 98188-3326				CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE Signature of Insured's Agent						
ACORD 25-S (3/93)				ACORD CORPORATION 1993						

PROVIDE

GENERAL LIABILITY
ENDORSEMENT

and

AUTO LIABILITY
ENDORSEMENT