General Structural Notes

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (2018 EDITION).

CRITERIA

ANALYSIS PROCEDURE: NON-STRUCTURAL COMPONENTS PER ASCE 7-16 CH. 13 SITE CLASS=E, Ss=1.45, Sds=1.17, S1=0.50, Sd1=0.67, SDC D, Ip=1.5

SEISMIC COEFFICIENTS FOR ARCHITECTURAL AND MECHANICAL COMPONENTS:

COMPONENT	ар	Rp	Ωο	
EGRESS STAIRS (STRUCTURE)	1	2. 5	2	
EGRESS STAIRS (FASTENERS & ATTACHMENTS)		2. 5	2. 5	2. 5

SEE PLANS FOR ADDITIONAL LOADING CRITERIA

- 3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATION, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK.
- 4. PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE ARCHITECTURAL PLANS AND DETAILS. VERTICAL DIMENSION CONTROL IS DEFINED BY THE ARCHITECTURAL WALL SECTIONS, BUILDING SECTION, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
- 6. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION".
- 7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
- 8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. ALL TYPICAL NOTES AND DETAILS SHOWN ON DRAWINGS SHALL APPLY, UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE PLANS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO TYPICAL DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED OR REQUEST ADDITIONAL INFORMATION. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.
- 9. ALL STRUCTURAL SYSTEMS, WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED, SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.
- 10. SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

STRUCTURAL STEEL
PRE-FABRICATED ASSEMBLIES (INCLUDING PANELIZED SYSTEMS)

APPROVED SETS OF ALL SHOP DRAWINGS SHALL ALSO BE SUBMITTED TO THE BUILDING DEPARTMENT (WHERE REQUIRED).

11. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED WITHIN TWO WEEKS OF RECEIPT WITH A NOTATION INDICATING THAT THE SUBMITTAL HAS BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

QUALITY ASSURANCE

12. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SECTIONS 110 AND 1705 OF THE INTERNATIONAL BUILDING CODE BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND TEST RESULTS. SPECIAL INSPECTION OF THE FOLLOWING TYPES OF CONSTRUCTION IS REQUIRED UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL FABRICATION AND ERECTION PER AISC 360
EXPANSION BOLTS AND THREADED EXPANSION INSERTS PER MANUFACTURER
EPOXY GROUTED INSTALLATIONS PER MANUFACTURER

PERIODIC INSPECTION: INSPECTION SHALL BE PERFORMED AT INTERVALS NECESSARY TO CONFIRM THAT WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE WITH REQUIREMENTS.

CONTINUOUS INSPECTION: INSPECTOR SHALL BE ONSITE AND OBSERVE THE WORK REQUIRING INSPECTION AT ALL TIMES THAT WORK IS PERFORMED.

ANCHORAGE

- 13. EXPANSION BOLTS INTO CONCRETE SHALL BE "STRONG-BOLT 2" WEDGE ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY AND INSTALLED IN STRICT CONFORMANCE TO ICC-ES REPORT NUMBER ESR-3037, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. PERIODIC SPECIAL INSPECTION IS REQUIRED TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, ANCHOR LOCATION, TIGHTENING TORQUE, HOLE DIMENSIONS, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS.
- 14. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-XP" HIGH STRENGTH EPOXY AS MANUFACTURED BY THE SIMPSON STRONG, TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2508. MINIMUM BASE MATERIAL TEMPERATURE IS 50 DEGREES, F. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED. PERIODIC SPECIAL INSPECTION OF INSTALLATION IS REQUIRED TO VERIFY ANCHOR OR EMBEDDED BAR TYPE AND DIMENSIONS, LOCATION, ADHESIVE IDENTIFICATION AND EXPIRATION, HOLE DIMENSIONS, HOLE CLEANING PROCEDURE, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR HORIZONTAL AND OVERHEAD INSTALLATIONS.
- 15. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "AT-XP" AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH IAMPO REPORT NO. ER-0281. MINIMUM BASE MATERIAL TEMPERATURE IS 14 DEGREES, F. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED. PERIODIC SPECIAL INSPECTION OF INSTALLATION IS REQUIRED TO VERIFY ANCHOR OR EMBEDDED BAR TYPE AND DIMENSIONS, LOCATION, ADHESIVE IDENTIFICATION AND EXPIRATION, HOLE DIMENSIONS, HOLE CLEANING PROCEDURE, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR HORIZONTAL AND OVERHEAD INSTALLATIONS.
- 16. CONCRETE SCREW ANCHORS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "TITEN HD" HEAVY DUTY SCREW ANCHOR AS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY, INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2713 (CONCRETE), NO. ESR-1056 (CMU), INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. SCREW ANCHORS INTO CONCRETE MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION IS REQUIRED.

STEEL

17. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON:

A. AISC 360-16 AND SECTION 2205. 2 OF THE INTERNATIONAL BUILDING CODE.
B. JUNE 15, 2016 AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AMENDED AS FOLLOWS: AS NOTED IN THE CONTRACT DOCUMENTS, BY THE DELETION OF PARAGRAPH 4. 4. 1, AND REVISE REFERENCE FROM "STRUCTURAL DESIGN DRAWINGS" TO "CONTRACT DOCUMENTS" IN PARAGRAPH 3. 1.
C. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.

18. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER	ASTM SPECIFICATION	FY
A. WIDE FLANGE SHAPES B. OTHER SHAPES, PLATES, AND RODS C. OTHER SHAPES AND PLATES (NOTED GRADE 50 ON PLANS)	A992 A36 A572 (GRADE 50)	50 KSI 36 KSI 50 KSI
D. PÌPE COLUMNS	A53 (E OR S, GR. B)	35 KSI
E. STRUCTURAL TUBING -SQUARE OR RECTANGULAR -ROUND	A500 (GR.C)	50 KSI 46 KSI
-ANY SHAPE F. CONNECTION BOLTS	ASTM A1085 A325-N	50 KSI
(3/4" ROUND, UNLESS SHOWN OTHERN	VISE)	

19. ALL STEEL EXPOSED TO THE WEATHER OR IN CONTACT WITH GROUND SHALL BE CORROSION PROTECTED BY GALVANIZATION OR PROVIDED WITH EXTERIOR PAINT SYSTEM, UNLESS OTHERWISE NOTED.

20. SHOP PRIME ALL STEEL EXCEPT:

A. STEEL ENCASED IN CONCRETE.
B. SURFACES TO BE WELDED.
C. CONTACT SURFACES AT HIGH-STRENGTH BOLTS.
D. MEMBERS TO BE GALVANIZED.
E. MEMBERS WHICH WILL BE CONCEALED BY INTERIOR FINISHES.
F. SURFACES TO RECEIVE SPRAYED FIREPROOFING.
G. SURFACES TO RECEIVE OTHER SPECIAL SHOP PRIMERS.

- 21. ALL A-325N CONNECTION BOLTS NEED ONLY BE TIGHTENED TO A SNUG TIGHT CONDITION, DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES IN A JOINT ARE IN FIRM CONTACT. THIS MAY BE ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH.
- 22. ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS USING E70XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED. ALL COMPLETE JOINT PENETRATION GROOVE WELDS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT-LBS AT -20 DEGREES F AND 40 FT LBS AT 70 DEGREES F, AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION.



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DRAWN:
BJH

DESIGN:
SWJ

CHECKED:
DJS

APPROVED:
DJS

REVISIONS:

JURISDICTIONAL APPROVAL STAMP:

PROJECT TITLE:

6610 E Mercer Way Mercer Island, WA 98040

Koneru Residence

ARCHITECT:

McCullough Architects

5601 6th Ave S. Suite 371

PH 206.443.1181

Seattle, WA 98108

Permit

Gen

General Notes —

SCALE: = 1'-0" U.N.O.

DATE: August 29, 2023

PROJECT NO: 13221-2023-01

SHEET NO:

MT (JCM) REVIEW: SHEETS S1.1 THROUGH S3.1

MALSAM TSANG

REVIEWED FOR LOADS IMPOSED ON BASIC STRUCTURE ONLY

THIS REVIEW IS LIMITED TO GENERAL CONFORMANCE WITH THE INFORMATION GIVEN AND STRUCTURAL DESIGN INTENT EXPRESSE

IN THE CONTRACT DOCUMENTS. CORRECTIONS OR COMMENTS MADE ON SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVI

THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS (

THE PLANS AND SPECIFICATIONS. THIS REVIEW DOES NOT CONSTITUTE APPROVAL OR ACCEPTANCE OF ANY DEVIATIONS FRO. THE CONTRACT DOCUMENTS. DEVIATIONS SHALL BE REQUESTED BY

AND CORRELATED AT THE JOB SITE; QUANTITIES; INFORMATION THA PERTAINS SOLELY TO THE FABRICATION PROCESSES OR TO THE

08/31/23

MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES CONSTRUCTION; COORDINATION OF THE WORK OF ALL TRADES; AND FOR PERFORMING ALL WORK IN A SAFE AND SATISFACTORY

HE CONTRACTOR IN WRITING IN ACCORDANCE WITH THE

REVIEWED AND NOTED FOR DESIGN INTENT ONLY

NO EXCEPTION TAKEN

NOTE MARKINGS

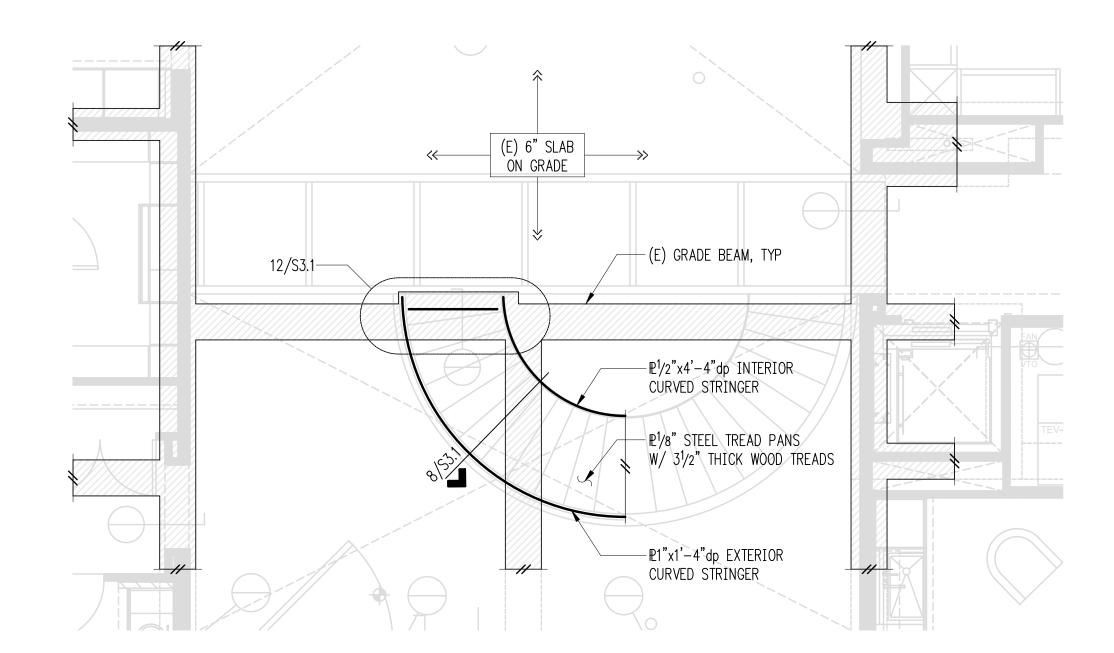
SKETCHES ATTACHED

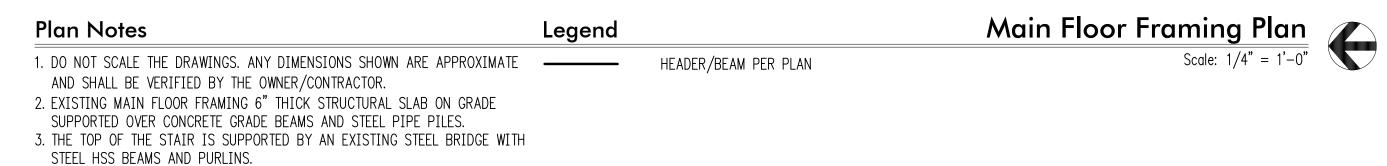
REVISE AND RESUBMIT

CONTRACT DOCUMENTS.

NOT REVIEWED

STRUCTURAL ENGINEERING





4. THE EXISTING STRUCTURE HAS BEEN PREVIOUSLY EVALUATED FOR LOADS

COMMENCING WORK AND NOTIFY THE ARCHITECT AND ENGINEER WHERE

6. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT STAIR DIMENSIONS.

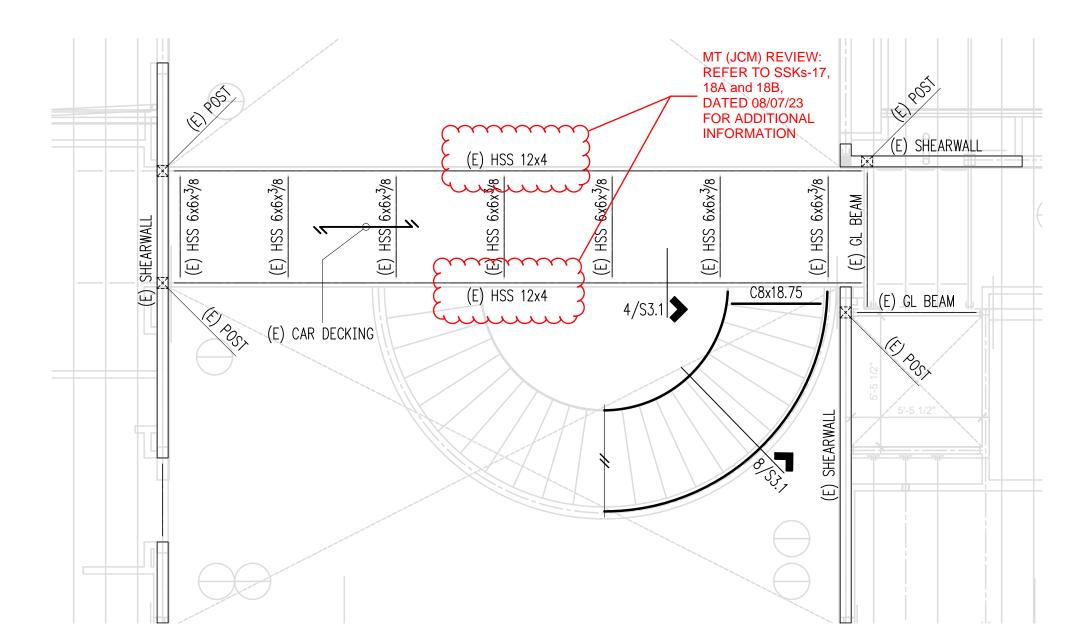
8. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

5. CONTRACTOR SHALL FIELD MEASURE AND VERIFY ALL CONDITIONS PRIOR TO

IMPOSED BY THE NEW STAIR.

CONDITIONS VARY FROM THOSE SHOWN.

7. REFER TO S3.1 FOR STAIR SUPPORT DETAILS.



Plan Notes Legend 1. DO NOT SCALE THE DRAWINGS. ANY DIMENSIONS SHOWN ARE APPROXIMATE EXISTING WALL OR POST BELOW AND SHALL BE VERIFIED BY THE OWNER/CONTRACTOR. 2. EXISTING MAIN FLOOR FRAMING 6" THICK STRUCTURAL SLAB ON GRADE HEADER/BEAM PER PLAN SUPPORTED OVER CONCRETE GRADE BEAMS AND STEEL PIPE PILES. 3. THE TOP OF THE STAIR IS SUPPORTED BY AN EXISTING STEEL BRIDGE WITH ———— EXISTING HEADER/BEAM STEEL HSS BEAMS AND PURLINS. 4. THE EXISTING STRUCTURE HAS BEEN PREVIOUSLY EVALUATED FOR LOADS IMPOSED BY THE NEW STAIR. 5. CONTRACTOR SHALL FIELD MEASURE AND VERIFY ALL CONDITIONS PRIOR TO COMMENCING WORK AND NOTIFY THE ARCHITECT AND ENGINEER WHERE CONDITIONS VARY FROM THOSE SHOWN. 6. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT STAIR DIMENSIONS. 7. REFER TO S3.1 FOR STAIR DETAILS. 8. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.



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DRAWN:	ВЈН	
DESIGN:	SWJ	
CHECKED:	DJS	
APPROVED:	DJS	

REVISIO	NS:		

JURISDICTIONAL APPROVAL STAMP:



Upper Floor Framing Plan

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

Koneru Residence

6610 E Mercer Way Mercer Island, WA 98040

ARCHITECT:

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:

Permit

IFFT TITLE:

Main Floor and
Upper Floor
Framing Plans

SCALE: 1/4" = 1'-0" U.N.O.

DATE: August 29, 2023

PROJECT NO: 13221-2023-01

SHEET NO:

S₂ 1

