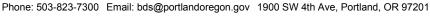
To improve security, on Feb. 11th the city will begin disabling TLS 1.0 on our websites. This change should not impact you unless you are using an old browser. More information (http://www.portlandoregon.gov//bts/article/672308)



# **Development Services**

### From Concept to Construction



More Contact Info (http://www.portlandoregon.gov//bds/article/519984)





#### APPEAL SUMMARY

Status: Decision Rendered - Held over from ID 16441	(2/7/18) and 16536 (2/21/18) for additional information
---	---

Appeal ID: 16563	Project Address: 5209 SE 18th Ave
Hearing Date: 2/28/18	Appellant Name: Gunnar Langhus
Case No.: P-002	Appellant Phone: 503-245-7100
Appeal Type: Plumbing	<b>Plans Examiner/Inspector:</b> Ed Matthews, Joe Blanco, McKenzie James
Project Type: commercial	Stories: 6 Occupancy: S-1, S-2, R-2 Construction Type: I-A, III-B
Building/Business Name:	Fire Sprinklers: Yes - (location not given
Appeal Involves: other: drywell near foundation wall	LUR or Permit Application No.: 16-197547-CO
Plan Submitted Option: pdf [File 1] [File 2]	Proposed use: multi-family housing

#### APPEAL INFORMATION SHEET

#### Appeal item 1

Code Section	OPSC 2014, 1101.5.3.

Requires	No drywell shall be located closer than 5 feet of a property line nor closer that 10 feet to a building
----------	---

unless approved by the building official.

#### **Proposed Design** Proposed design locates the drywell within 6.7' of the building foundation wall.

Reason for alternative On the north side of the proposed building there is approximately 14' between the property line and the proposed building face. Due to this dimension, the drywell cannot be placed 5' from the property line while also being 10' from the building. Due to proposed piping design and layout, as well as to limit the effects on the adjacent property as much as possible, the dry well was located within the proposed sidewalk at approximately the mid point between the building and the property line. This located the center of the drywell at 6.7' from the building and 7.3' from the property line.

> In addition, the drywell has been designed to manage the 100 yr storm and will not require any additional outfall pipe connections or overflows. This will limit the total effects on the proposed property and adjacent property to the maximum feasible amount.

The plans have been approved by BES Source Control (1/31/18) for the pollution mitigation associated with a leaking underground storage tank. Underground storage tank has been removed and all contaminated soil has been removed per approved plans.

Attached is a Structural letter and design to accommodate the drywells proximity to the foundation. Also, please see Geotech report attached with the Infiltration information.

#### APPEAL DECISION

Drywell closer than 10' to building: Granted provided engineering details are followed.

Note: soils and structural will need to be reviewed again by BDS.

The Administrative Appeal Board finds that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

Pursuant to City Code Chapter 25.07, you may appeal this decision to the Plumbing Code Board of Appeal within 180 calendar days of the date this decision is published. For information on the appeals process and costs, including forms, appeal fee, payment methods and fee waivers, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.

# SFA Design Group, LLC



STRUCTURAL | CIVIL | GEOTECHNICAL | LAND USE PLANNING
9020 SW Washington Square Drive, Suite 505, Portland, Oregon 97223
1813 Rutan Drive, Suite C, Livermore, California 94551
1912 S 146th Street, Seattle, Washington 98168
p: 503-641-8311 www.sfadg.com

February 23, 2018

Sarah Stevens Ankrom Moisan Architects, Inc. 38 NW Davis St. Ste 300 Portland, Oregon 97209

Re: SE 18th Apartments Dry Well Adjacent to Foundation

SFA Job #16-050

Sarah:

We have reviewed the information that you provided us regarding the potential impact of the drywell location to the new structure's footings on the north side of the property. There will be no impact on the new structure's foundation as we have designed the portion of the footing adjacent to the drywell to be supported by helical piles to a depth well below the base of the drywell as shown on sheet S2.1.

If you have any questions, regarding the comments above, please call.

Sincerely,

SFA Design Group, Inc.

Michael Anderson, P.E., S.E.

Project Engineer

EXPIRES: 12-31-2019



November 9, 2017 HGSI Project No. 16-2040

Lane Lowry

Optimal Productivity Systems Inc.

10117 SE Sunnyside Road, Suite F707

Clackamas, Oregon 97015

Copy: Sarah Stevens / Gunnar Langhus, Ankrom Moisan Architects, Inc.

Via e-mail with hard copies mailed on request

Subject: SUPPLEMENTAL INFILTRATION TESTING

SE 18<sup>TH</sup> AVENUE APARTMENTS 5209 AND 5219 SE 18<sup>TH</sup> AVENUE

PORTLAND, OREGON

As requested, Hardman Geotechnical Services Inc. (HGSI) performed supplemental soil infiltration testing for the property located at 2915 SE Division Street in Portland, Oregon (Figure 1). HGSI previously completed a geotechnical report for the site, referenced above. The purpose of this supplemental work was to further evaluate infiltration rates for subsurface disposal of storm water. We understand that design of the stormwater infiltration system is to be completed by others. Results of the infiltration testing are summarized below.

## SITE AND PROJECT DESCRIPTION

The site is approximately 0.11 acres in size and rectangular in shape. There was formerly an existing 2 story residential building with a basement, that has been removed from the site. The site is flat to gently sloping.

We understand the proposed development will consist of an apartment building up to 5 stories tall. The project will also include underground utilities and stormwater disposal facilities, with on-site infiltration if feasible.

#### FIELD EXPLORATION AND SUBSURFACE CONDITIONS

Previously, HGSI excavated one exploratory boring and one hand auger on site, designated B-1 and HA-1 respectively. Boring logs and other information are presented in the above-referenced geotechnical report. On September 22, 2017, HGSI observed the excavation of a test pit in the southern portion of the site, using a large excavator provided by the client. Figure 1 shows the location of the supplemental test pit, designated TP-1. Infiltration testing was performed in the test pit using the open-hole method, at a depth of 14 feet bgs.

#### SOIL CONDITIONS

Results of the exploration program indicate that the site is underlain by clayey silt, sand, and gravel belonging to the Willamette Formation. The observed conditions and soil properties are summarized below.

Clayey Silt: Beneath the ground surface, the supplemental test pit TP-1, encountered medium stiff to very stiff clay. The clay was brown and increased in moisture content with depth. This unit extended to a depth of about 8.5 feet bgs, and was interpreted as belonging to the Willamette Formation.

*Clayey to Silty Sand:* Beneath the clayey silt unit, explorations encountered clayey to silty sand, at a depth of about 8.5 feet bgs. The clayey/silty sand ranged from moist to very moist and extended to roughly 12 feet bgs.

*Silty Sandy Gravel:* Underlying the silty/clayey sand, TP-1 encountered silty sandy Gravel that was dense and very moist. The test pit was terminated at 14 feet bgs for infiltration testing.

#### **GROUNDWATER**

At the time of our explorations, groundwater was not encountered beneath the site. Regional geologic mapping (Snyder, 2008) indicates that seasonal high static groundwater is present at a depth of about 23 feet below the existing ground surface at the site. In our experience, it is not uncommon to encounter thin perched groundwater zones within the Willamette Formation in this area, particularly during the wet season.

The groundwater conditions reported above are for the specific date and locations indicated, and therefore may not necessarily be indicative of other times and/or locations. Furthermore, it is anticipated that groundwater conditions will vary depending on the season, local subsurface conditions, changes in land use and other factors.

#### INFILTRATION TESTING

Soil infiltration testing was performed using the open hole, falling head method in test pit TP-1. Soils in the test pit were pre-saturated prior to testing. Following the soil saturation, the infiltration test was conducted. The water level was measured to the nearest 0.1 inch from a fixed point. The change in water level was recorded at intervals for a total period of at least 1 hour. Table 1 presents the results of the falling head infiltration tests.

**Table 1: Summary of Infiltration Test Results** 

Test Pit	Depth (feet)	Soil Type	Infiltration Rate (in/hr)	Approx. Hydraulic Head Range (inches)
TP-1	14	Dense Sandy Silty Gravel	4 .	6 - 2

#### CONCLUSIONS AND RECOMMENDATIONS

### Infiltration Rates and Stormwater System Design

Based on results of the soil infiltration testing, soils on site exhibit moderate infiltration rate (4 inches/hour at depth of 14 feet bgs). We recommend shallow systems in the range of 2 to 5 feet bgs be designed using an infiltration rate of 1 inches/hour as recommended in the above-referenced geotechnical report. Based on results of this supplemental testing an ultimate infiltration rate of 4 inches/hour may be used to design deeper facilities such as dry wells, installed deeper than 10 feet bgs. We do not recommend infiltration facilities deeper than about 15 feet bgs to provide adequate separation between the bottom of the facility and seasonal high groundwater level (23 feet).

The designer should select an appropriate infiltration value based on our test results and the location of the proposed infiltration facility. The recommended infiltration rates do not incorporate a factor of safety. For the design infiltration rate, the system designer should incorporate an appropriate factor of safety against slowing of the rate over time due to biological and sediment clogging.

Infiltration test methods and procedures attempt to simulate the as-built conditions of the planned disposal system. However, due to natural variations in soil properties, actual infiltration rates may vary from the measured and/or recommended design rates. All systems should be constructed such that potential overflow is discharged in a controlled manner away from structures, and all systems should include an adequate factor of safety. Infiltration rates presented in this report should not be applied to inappropriate or complex hydrological models such as a closed basin without extensive further studies.

#### UNCERTAINTIES AND LIMITATIONS

We have prepared this report for the owner and his/her consultants for use in design of this project only. The conclusions and interpretations presented in this report should not be construed as a warranty of the subsurface conditions. Experience has shown that soil and groundwater conditions can vary significantly over small distances. Inconsistent conditions can occur between explorations that may not be detected by a geotechnical study. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, HGSI should be notified for review of the recommendations of this report, and revision of such if necessary.

Within the limitations of scope, schedule and budget, HGSI executed these services in accordance with generally accepted professional principles and practices in the field of geotechnical engineering at the time the report was prepared. No warranty, expressed or implied, is made. The scope of our work did not include environmental assessments or evaluations regarding the presence

November !	9, 2017
Project No.	16-2040

We appreciate this opportunity to be of service.

Sincerely,

HARDMAN GEOTECHNICAL SERVICES INC.



Scott L. Hardman, P.E., G.E. Geotechnical Engineer

Attachments: Reference

Figure 1 - Site and Exploration Plan

\*

#### REFERENCE

Snyder, D.T., 2008, Estimated Depth to Ground Water and Configuration of the Water Table in the Portland, Oregon Area: U.S. Geological Survey Scientific Investigations Report 2008–5059, 41 p., 3 plates.



# SITE AND EXPLORATION PLAN

Practical, Cost-Effective Geotechnical Solutions HA-1 TP-1 NO SCALE Base map obtained from Google Maps

(Current Study)

Project: SE 18th Apartments

TP-1

Portland, Oregon

Test Pit / Infiltration Test

Approximate Location

Legend

Project No. 16-2040

Previous Hand Auger Boring

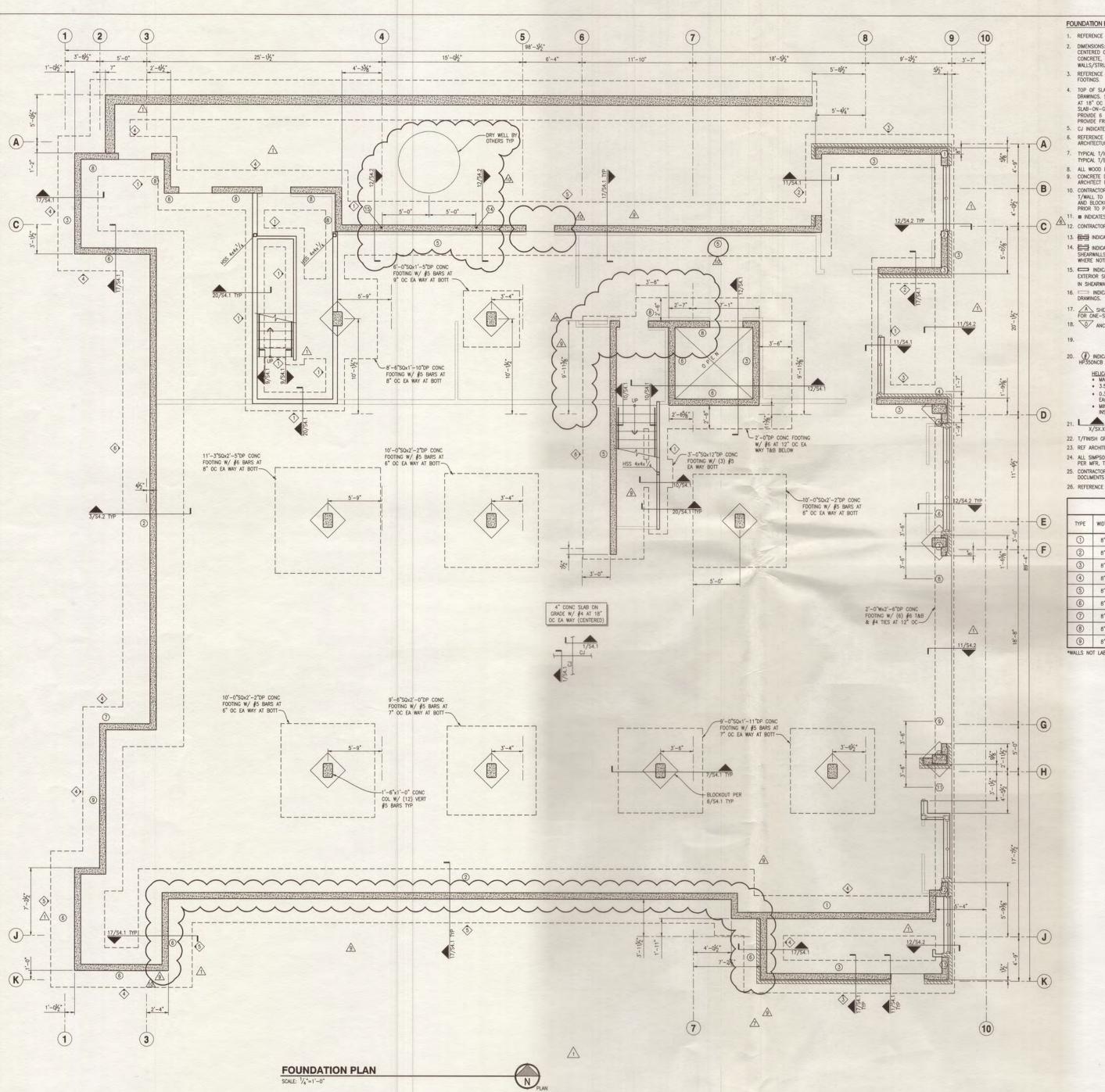
Approximate Location

HA-1

FIGURE 1

Previous Boring

Approximate Location



## FOUNDATION PLAN NOTES:

- 1. REFERENCE S1.1 & S1.2 FOR STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND.
- 2. DIMENSIONS: VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECT'S DRAWINGS. COLUMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL. ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE OR CENTERLINE OF GRID/STEEL CONTINUOUS FOOTINGS ARE CENTERED UNDER WALLS/STRUCTURAL PANELS. POSTS, BUNDLED STUDS OR COLUMNS TO BE CENTERED ON FOOTING OR WALL PIER, UND. 3. REFERENCE SOILS REPORT AS NOTED ON S1.1 FOR SUBGRADE PREPARATION AND FILL REQUIREMENTS AT SLABS AND

4. TOP OF SLAB (T/SLAB) ELEVATION ASSUMED 0'-0". FOR ACTUAL T/SLAB ELEVATION REFER TO CMIL AND ARCHITECTURAL DRAWINGS. SLAB ON GRADE ELEVATION VARIES PER PLAN AND ARCHITECTURAL PLAN. SLAB SHALL BE 4" THICK WITH [#4 BARS AT 18" OC EA WAY] [6x6-w2.1xw2.1 WWF] CENTERED, FIBERMESH IS AN ACCEPTABLE ALTERNATE TO WWF IN THE SLAB-ON-GRADE. PROVIDE FIBER DOSAGE PER MANUFACTURER RECOMMENDATIONS. SUBMIT TO ENGINEER FOR REVIEW. PROVIDE 6 MIL VAPOR BARRIER BELOW SLAB AT INTERIOR SPACES (REFERENCE ARCH FOR ADDITIONAL REQUIREMENTS). PROVIDE FREE-DRAINING GRANULAR FILL PER SOILS REPORT.

CJ INDICATES CONTROL JOINT. FOR INFORMATION, REF 1/S4.1 (PROVIDE AT 15'-0" OC SPACING EACH WAY MAX).
 REFERENCE MECHANICAL, PLUMBING, ELECTRICAL AND SPRINKLER DRAWINGS FOR ALL DUCTS, CHASES AND PIPES. REFERENCE ARCHITECTURAL DRAWINGS FOR STAIR DETAILS AND GUARDRAILS.

7. TYPICAL T/INTERIOR FOOTING ELEVATION = -6", UNO TYPICAL T/EXTERIOR FOOTING ELEVATION = -9", UNO

8. ALL WOOD EXPOSED TO CONCRETE, WEATHER, OR WITHIN 8" OF FINISHED GRADE SHALL BE PRESSURE—TREATED.

9. CONCRETE DIMENSIONS: CONTRACTOR SHALL LOCATE ALL DOOR OPENINGS IN EXTERIOR FOUNDATION WALLS AND VERIFY WITH ARCHITECT PRIOR TO POURING CONCRETE. CONTRACTOR TO COORDINATE CURBS.

10. CONTRACTOR TO VERIFY TOP OF CONCRETE (T/CONC) WALL ELEVATIONS ON ALL PARTIAL HEIGHT RETAINING WALLS. MAINTAIN T/WALL TO BE A MINIMUM 6" ABOVE FINISH GRADE. REFERENCE DETAIL 11/S4.1. CONTRACTOR TO COORDINATE DRAINS, SLOPE, AND BLOCKOUTS FOR POOLS, SPAS, FREEZERS, COOLERS, PLUMBING, SPRINKLERS AND HVAC WITH SUPPLIER AND ARCHITECT PRIOR TO POURING.

1. INDICATES WOOD POST/COLUMN ((3) 2x4 OR (2) 2x6 MIN).

12. CONTRACTOR TO BACKFILL RETAINING WALLS BEFORE THE PT SLAB IS INSTALLED TO RESIST LATERAL WALL MOVEMENT 13. ED INDICATES CONC WALL ON CONCRETE FOOTING.

- 14. INDICATES 2x BEARING WALL ON CONCRETE FOOTING. ALL EXTERIOR WALLS ARE 2x6 AT 16" OC BEARING WALLS AND SHEARWALLS WHERE NOTED. ALL INTERIOR BEARING WALLS ARE 2x6 AT 24" OC OR 2x4 AT 16" OC WALLS AND SHEARWALLS WHERE NO
- 15. ☐ INDICATES STRUCTURAL WOOD SHEARWALL. SHEATHING AND ANCHORAGE REQUIREMENTS PER SHEARWALL SCHEDULE. ALL EXTERIOR SHEARWALLS SHALL BE TYPE "A" UNLESS NOTED OTHERWISE ON PLAN. CONTRACTOR TO COORDINATE PENETRATIONS IN SHEARWALL SHEATHING GREATER THAN 4½" W/ ENGINEER OF RECORD.
- 16. The indicates non-structural partition wall wall types and anchorage requirements per architectural drawings.
- SHEARWALL SYMBOL REFERENCE SHEARWALL SCHEDULE ON 1/S3.3. INSTALL SHEATHING ON SYMBOL SIDE OF WALL FOR ONE-SIDED SHEARWALLS.
- 18. ANCHOR SYMBOL REFERENCE TIE-DOWN SCHEDULE PER 2/S3.3. "0" INDICATES NO TIE-DOWN REQUIRED.

 $\triangle$ 20. (1) INDICATES LOCATION OF HP350 HELICAL PIER W/ FSI HP350NCB NEW CONSTRUCTION BRACKET

HEUCAL PIER INSTALLATION NOTES:

• MAX LOAD TO ANCHOR = 40,000 LBS

• 3.5"# PIPE PILE W/ 0.313" THICK WALL

• 0.375" THICK 10/12/14" HELIX W/ 1/4" FILLET WELDS EACH SIDE OF HELIX TO PIER

• MINIMUM 20"-0" INSTALLATION DEPTH & 11,500 FT-LB INSTALLATION TORQUE

21. X/SX.X SECTION CUT - DETAIL NUMBER/SHEET NUMBER.

22. T/FINISH GRADE PER ARCHITECT, TYP.

23. REF ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN, TYP.

- 24. ALL SIMPSON HARDWARE IN CONTACT WITH PRESSURE TREATED LUMBER, CONCRETE OR MASONRY SHALL HAVE "ZMAX" COATING PER MFR. TVP.
- 25. CONTRACTOR TO NOTIFY ENGINEER OF RECORD OF DISCREPANCIES BETWEEN FIELD CONDITIONS AND THOSE SHOWN IN THESE DOCUMENTS PRIOR TO CONSTRUCTION TYP. 26. REFERENCE S4.1 FOR TYPICAL FOUNDATION DETAILS.

		CON	C SHEARW	ALL SCH	IEDULE	
TYPE	WIDTH -	MIN WALL R	NFORCING		MIN BOUNDARY REINFORCING	
	mio iii	HORIZ REINF	VERT REINF	VERT REINF	HOOP LENGTH	HOOP SIZE & VERT SPACING
1	8"	#5 AT 18" OC	#5 AT 18" OC	(4) #5	8"	#3 AT 8" OC
2	8"	#5 AT 18" OC	#5 AT 18" OC	(6) #5	20"	#3 AT 8" OC
3	8"	#5 AT 18" OC	#5 AT 16" OC	(4) #5	5"	#3 AT 8" OC
4	8"	#5 AT 18" OC	#5 AT 16" OC	(4) #5	6"	#3 AT 8" OC
(5)	8"	#5 AT 18" OC	#5 AT 16" OC	(4) #5	14"	#3 AT 8" OC
6	8"	#5 AT 18" OC	#5 AT 10" OC	(4) #5	5*	#3 AT 8" OC
7	8"	#5 AT 18" OC	#5 AT 8" OC	(4) #5	5"	#3 AT 8" OC
8	8"	#5 AT 18" OC	#5 AT 6" OC	(4) #5	6"	#3 AT 8" OC
9	8"	#5 AT 18" OC	#5 AT 10" OC	(4) #5	8"	#3 AT 8" OC

\*WALLS NOT LABELED TO HAVE #5 AT 18" OC VERT & HORIZ REINF

TYPE SIZE REINFORCING					
IIIL	SIZE	NEINFORGING			
0	2'-0"Wx1'-6"DP	(3) #5 CONT BOTT			
2	2'-9"Wx1'-6"DP	(4) #5 CONT BOTT			
3	3'-6"Wx1'-6"DP	(4) #5 CONT BOTT			
4	4'-3"Wx1'-6"DP	(8) #5 CONT BOTT			
5	5'-9"Wx1'-6"DP	(8) #5 CONT BOTT			
(6)	6'-6"Wx1'-6"DP	(9) #5 CONT BOTT			



6720 SW MACADAM AVENUE, SUITE 100 PORTLAND, OR 97219

1505 5TH AVE, SUITE 300 SEATTLE, WA 98101 T 206.576.1600

1014 HOWARD STREET SAN FRANCISCO, CA 94103 T 415.252.7063

D ANKROM MOISAN ARCHITECTS, INC.

SFA DESIGN GROUP, LLC

PORTLAND, OR 97223 PH 503.641.8311



**18TH** SE 9 12.20.17 GENERATOR REVISION 10 02.19.18 GTY COMMENTS

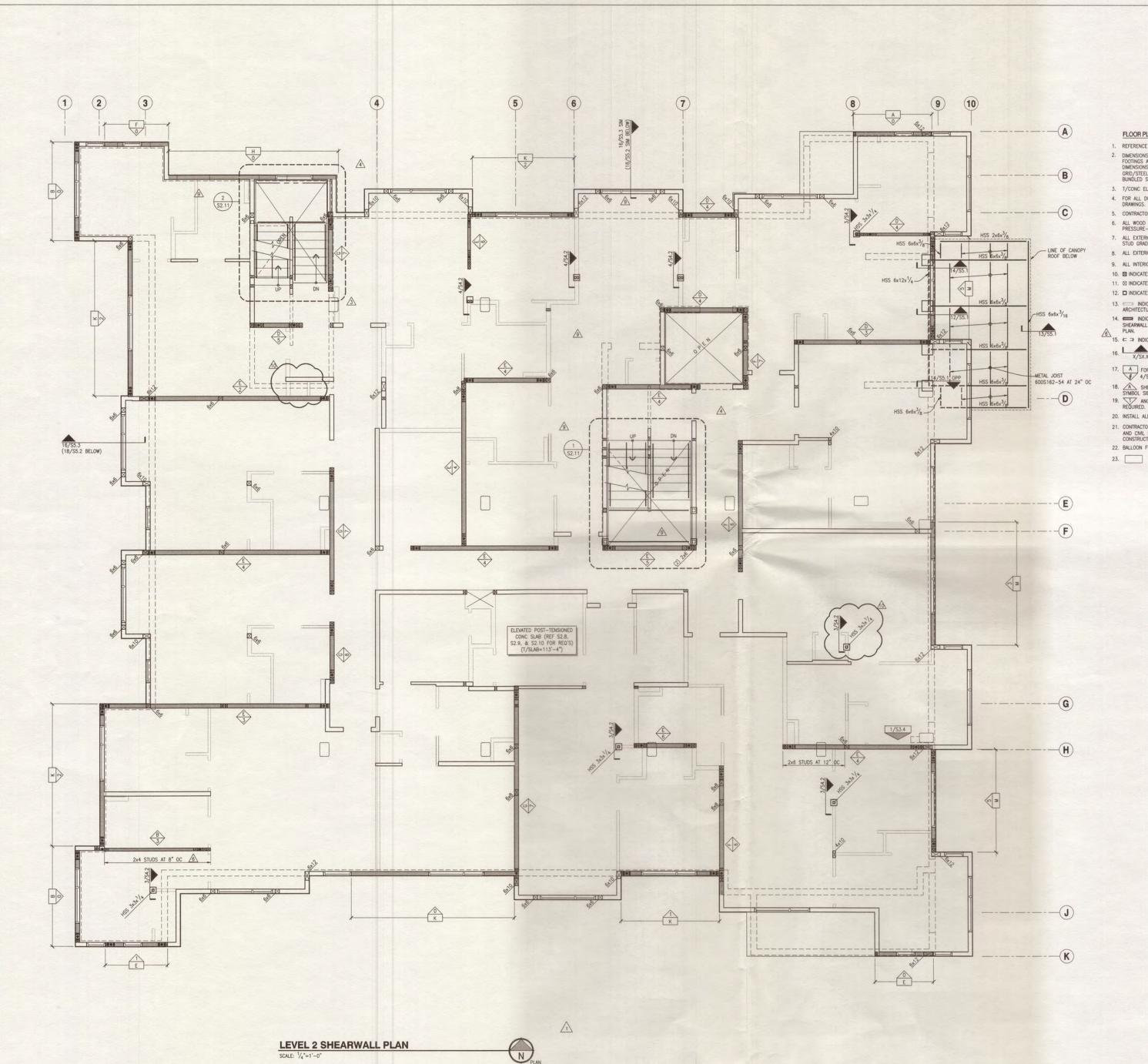
**APARTMENT** 

**FOUNDATION PLAN** 

BID SET - 11.30.16

Issue Date PROJECT NUMBER

S2.1 AS SHOWN



- 1. REFERENCE S1.1 FOR STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND. 2. DIMENSIONS: VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECT'S DRAWINGS. COLUMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL. ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE OR CENTERINE OF GRID/STEEL CONTINUOUS FOOTINGS ARE CENTERED UNDER WALLE/STRUCTURAL PANELS. POSTS, BUNDLED STUDS OR COLUMNS TO BE CENTERED ON FOOTING OR WALL PIER, UNO.
- 3. T/CONC ELEVATION PER ARCHITECT TYPICAL.
- FOR ALL DUCTS, CHASES AND PIPES. REFERENCE MECHANICAL, PLUMBING, ELECTRICAL AND SPRINKLER DRAWINGS.
- 5. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING.
- 6. ALL WOOD EXPOSED TO CONCRETE, WEATHER, OR WITHIN 6" OF FINISHED GRADE SHALL BE PRESSURE—TREATED.
- ALL EXTERIOR WALLS ARE 2x8 AT 16" OC BEARING WALLS AND SHEARWALLS WHERE NOTED. FOR THE STUD GRADE, REFER TO S1.1 AND S1.2.
- 8. ALL EXTERIOR WALL FRAMING TO BE FIREPRO FRTW TREATED LUMBER.
- 9. ALL INTERIOR STRUCTURAL WALLS SHALL BE 2x6 AT 16" OC OR 2x4 AT 8" OC UNO.
- 10. MINDICATES WOOD POST/COLUMN. REF PLAN FOR SIZE ((3) 2x4 OR (2) 2x6 MIN).
- 11. M INDICATES WOOD POST/COLUMN BELOW.
- 12. INDICATES HSS COLUMN. REF PLAN FOR SIZE.
- 13. 

  INDICATES NON-STRUCTURAL PARTITION WALL WALL TYPES AND ANCHORAGE REQUIREMENTS PER ARCHITECTURAL DRAWINGS.

  14. 

  INDICATES STRUCTURAL WOOD SHEARWALL. SHEATHING AND ANCHORAGE REQUIREMENTS PER SHEARWALL SCHEDULE. ALL EXTERIOR SHEARWALLS SHALL BE TYPE "A" UNLESS NOTED OTHERWISE ON PLAN.
- PLAN.

  15. ← → INDICATES CONCRETE WALL BELOW.
- 16. X/Sx.X SECTION CUT DETAIL NUMBER/SHEET NUMBER.
- 17. A FORCE TRANSFER WALL & HOLDOWN SYMBOL REFERENCE FORCE TRANSFER SCHEDULE 4/S3.3.INSTALL SHEATHING ON SYMBOL SIDE OF WALL FOR ONE-SIDED SHEARWALLS.
- SHEARWALL SYMBOL REFERENCE SHEARWALL SCHEDULE ON 1/S3.3. INSTALL SHEATHING ON SYMBOL SIDE OF WALL FOR ONE-SIDED SHEARWALLS.

  19. 
   ANCHOR SYMBOL REFERENCE TIE-DOWN SCHEDULE PER 2/S3.3. "O" INDICATES NO TIE-DOWN REQUIRED.
- 20. INSTALL ALL METAL CONNECTORS PER MANUFACTURERS RECOMMENDATIONS TYP.
- CONTRACTOR SHALL VERIFY ALL ELEVATIONS INDICATED ON STRUCTURAL PLANS WITH THE ARCHITECTS
  AND CMIL ENGINEERS PLANS. NOTIFY ARCHITECT/ENGINEER OF RECORD OF DISCREPANCIES PRIOR TO
  CONSTRUCTION. 22. BALLOON FRAME ALL WALLS GREATER THAN ONE LEVEL WITHOUT FLOOR OR ROOF SUPPORT.
- 23. INDICATES AREA DESIGNED TO WITHSTAND 100 PSF LIVE LOAD



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1505 5TH AVE, SUITE 300 SEATTLE, WA 98101 T 206.576.1600

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**18TH APARTMENTS** SE

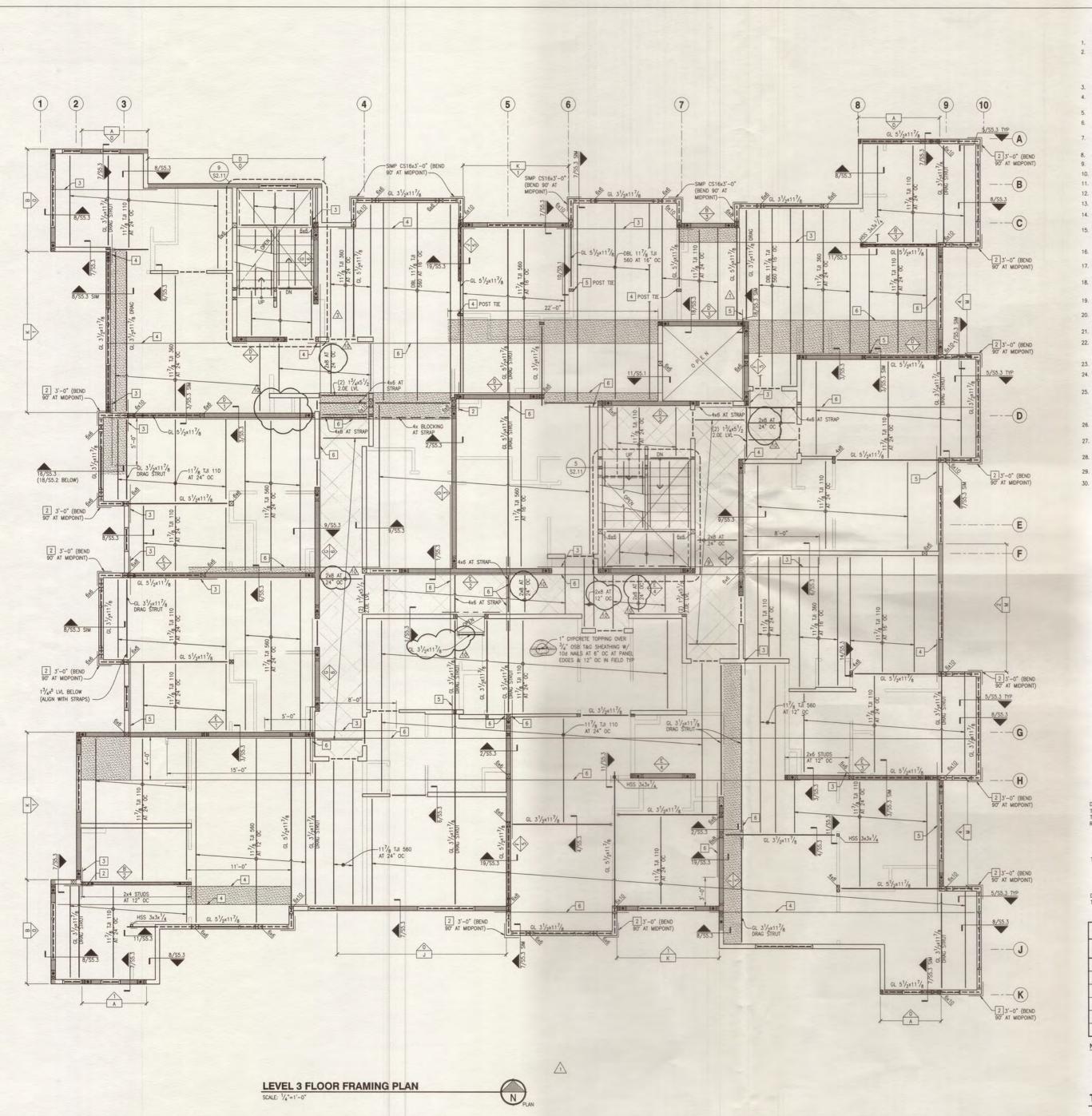
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5	05.25.17	CITY COMMENTS
6	06.19.17	GTY COMMENTS
7	08.21.17	GTY COMMENTS
8	10.12.17	GENERATOR REVISION
9	12.20.17	GENERATOR REVISION
10	02.19.18	GTY COMMENTS

2ND FLOOR SHEARWALL PLAN

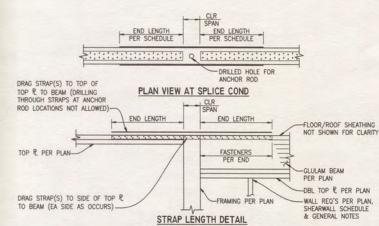
BID SET - 11.30.16

Issue Date	REVISION 1
PROJECT NUMBER 16-050	60.6

AS SHOWN



- REFERENCE S1.1 FOR STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND.
- DIMENSIONS: VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECT'S DRAWINGS. COLUMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL. ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE OR CENTERLINE OF GRID/STEEL. CONTINUOUS FOOTINGS ARE CENTERED UNDER WALLS/STRUCTURAL PANELS. POSTS, BUNDLED STUDS OR COLUMNS TO BE CENTERED ON FOOTING OR WALL PIER, UNO.
- 3. T/CONC ELEVATION PER ARCHITECT TYPICAL.
- FOR ALL DUCTS, CHASES AND PIPES. REFERENCE MECHANICAL, PLUMBING, ELECTRICAL AND SPRINKLER DRAWINGS.
- 5. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING.
- ALL WOOD EXPOSED TO CONCRETE, WEATHER, OR WITHIN 6" OF FINISHED GRADE SHALL BE PRESSURE—TREATED.
- ALL EXTERIOR WALLS ARE 2x8 AT 16" OC BEARING WALLS AND SHEARWALLS WHERE NOTED. FOR THE STUD GRADE, REFER TO S1.1 AND S1.2.
- 8. ALL EXTERIOR WALL FRAMING TO BE FIREPRO FRTW TREATED LUMBER.
- 9. ALL INTERIOR STRUCTURAL WALLS SHALL BE 2x6 AT 16" OC OR 2x4 AT 8" OC UNO. 10. MINDICATES WOOD POST/COLUMN. REF PLAN FOR SIZE ((3) 2x4 OR (2) 2x6 MIN).
- 11. M INDICATES WOOD POST/COLUMN BELOW.
- 12. INDICATES HSS COLUMN. REF PLAN FOR SIZE.
- 13. [] INDICATES HSS COLUMN BELOW.
- 14. \(\pi\) INDICATES NON-STRUCTURAL PARTITION WALL WALL TYPES AND ANCHORAGE REQUIREMENTS PER ARCHITECTURAL DRAWINGS.
- 15. INDICATES STRUCTURAL WOOD SHEARWALL SHEATHING AND ANCHORAGE REQUIREMENTS PER SHEARWALL SCHEDULE. ALL EXTERIOR SHEARWALLS SHALL BE TYPE "A" UNLESS NOTED OTHERWISE ON PLAN.
- 16.  $\begin{subarray}{l} \put(0.5,0.5) \put(0.5,0.5){\line(0.5,0.5){10}} \put(0.5,0.5){\line(0.5,0.$
- 17. X/SX.X SECTION CUT DETAIL NUMBER/SHEET NUMBER.
- 18. A FORCE TRANSFER WALL & HOLDOWN SYMBOL REFERENCE FORCE TRANSFER ANCHOR TIE-DOWN SCHEDULES S3.3 INSTALL SHEATHING ON SYMBOL SIDE OF WALL FOR ONE-SIDED SHEARWALLS.
- 19. A SHEARWALL SYMBOL REFERENCE SHEARWALL SCHEDULE 1/S3.3. INSTALL SHEATHING ON SYMBOL SIDE OF WALL FOR ONE-SIDED SHEARWALLS.
- 20. ANCHOR SYMBOL REFERENCE TIE-DOWN SCHEDULE PER 2/S3.3. "0" INDICATES NO TIE-DOWN REQUIRED.
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  CONSTRUCTION.
- 23. BALLOON FRAME ALL WALLS GREATER THAN ONE LEVEL WITHOUT FLOOR OR ROOF SUPPORT.
- 24. HEADERS SHOWN BUT NOT SPECIFIED ARE TO BE (1) 6x8 MINIMUM. FLUSH BEAMS SHOWN BUT NOT SPECIFIED ARE TO BE (1) GL 31/2×117/8. HEADERS AT EXTERIOR WALLS ARE TO BE 6x8 DF/L#2 TYP UNO
- 25. INDICATES SPECIAL DIAPHRAGM NAILING REGIONS. REFERENCE PLAN FOR NAILING/BLOCKING REQUIREMENTS. USE 10d NAILS AT 4" OC AT PANEL EDGES, 4" OC STAGGERED AT DIAPHRAGM BOUNDARIES, AND 12" OC IN FIELD. BLOCK ALL PLYWOOD EDGES W/ 4x BLOCKING (STAGGER NAILS ON EACH SIDE OF PLYWOOD JOINTS.).
- 26. I REF DRAG CONN AND POST TO POST TIE SCHEDULE ON THIS SHEET, BLOCK BETWEEN JOISTS WHERE STRAPS ARE PERPENDICULAR TO FRAMING.
- 27. NAIL FLOOR SHEATHING TO DRAG MEMBERS, SHEAR WALL TOP  $\ell$  AND BLOCKING WITH DIAPHRAGM PANEL EDGE NAILING MINIMUM (TYPICAL UNO).
- 28. HANGERS: ALL FLOOR JOIST HANGERS TO BE SIMP ITS OR DHUTF TYP. USE DHUTF AT CONDITIONS WHERE SHEETROCK IS BETWEEN THE HANGER AND THE WALL.
- 29. HANGERS: ALL BEAM HANGERS TO BE SIMPSON HU OR HUC TYPE, UNO. 30. INDICATES AREA DESIGNED TO WITHSTAND 100 PSF LIVE LOAD



DRAG CONNECTION & POST TO POST TIE SCHEDULE					
MARK	TYPE	CAPACITY PER STRAP	END LENGTH	FASTENERS PER END	
1	SIMP CS20	1030#	9"	(7) 10d	
2	SIMP CS16	1705#	13"	(11) 10d	
3	SIMP CS14	2490#	16"	(15) 10d	
4	SIMP CMSTC16	4585∦	20"	(28) 16d SINKER	
5	SIMP CMST14	6490#	30"	(38) 10d	
6	SIMP CMST12	9215#	44"	(48) 10d	

# NOTES:

- STRAP LENGTH PER PLAN. EACH MEMBER SHALL BE NAILED WITH AN EQUAL NUMBER OF FASTENERS AT EA END.
  NAILING SHALL BE PROVIDED AT EVERY 5TH HOLE, WHERE CONTINUOUS STRAPS ARE APPLIED TO BLOCKING.
  CENTER DRAG STRAP ON TOP PLATE/BEAM/BLOCKING.
  FASTENERS NOT SHOWN FOR CLARITY
- 5. WHERE DRAG STRAP SPLICES ARE REO'D TO MAKE CONTINUOUS, OVERLAP STRAPS PER SCHEDULE END LENGTH.

TYPICAL DRAG CONNECTION SCHEDULE



PORTLAND, OR 97219 503.245.7100

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O ANKROM MOISAN ARCHITECTS, INC.

SFA DESIGN GROUP, LLC

STRUCTURAL
9020 SW WASHINGTON SQUARE DRIVE, SUITE 505
PORTLAND, OR 97223
PH 503.641.8311



APARTMEN 18TH SE

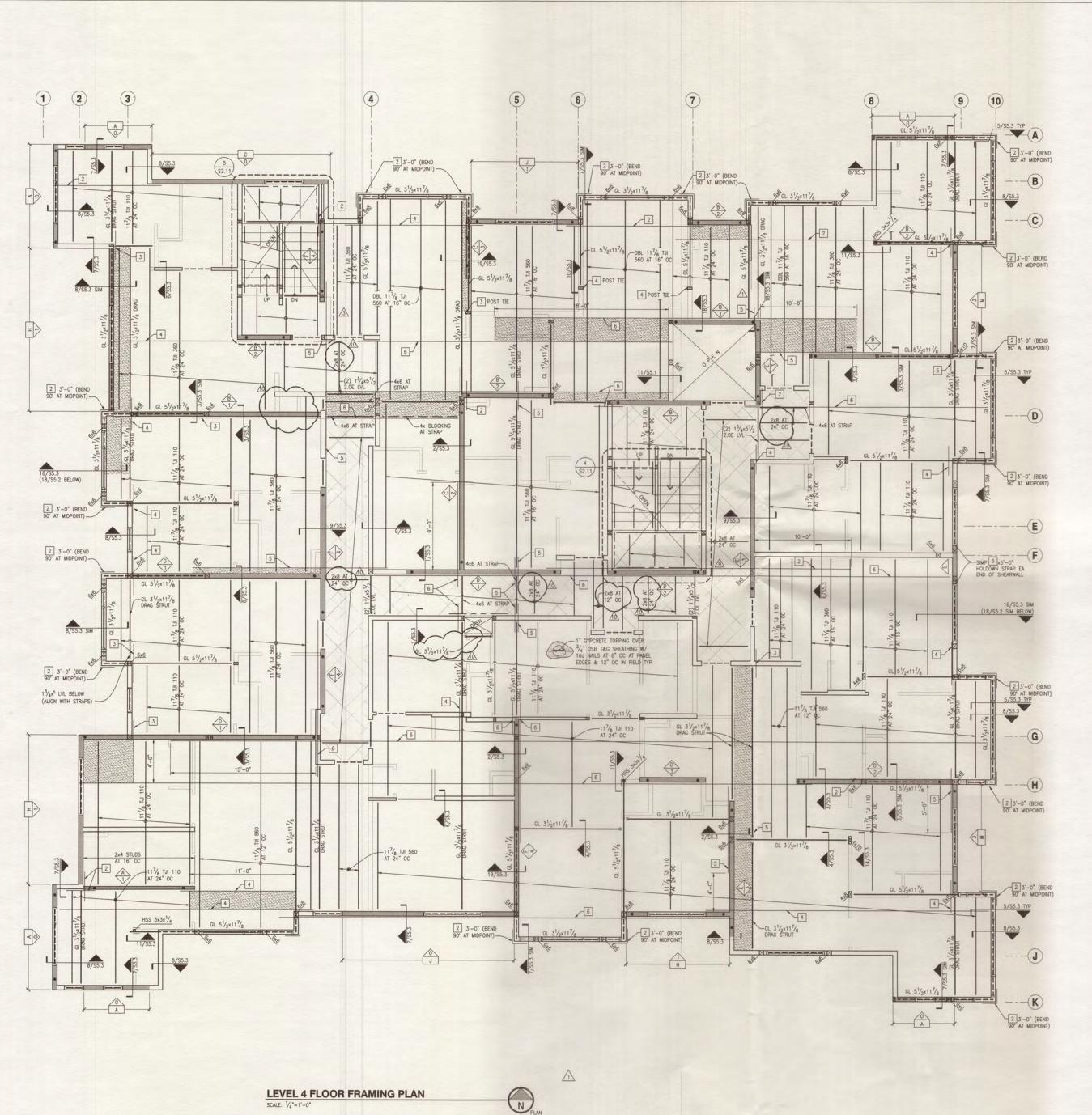
9 12.20.17 GENERATOR REVISION 10 02.19.18 CITY COMMENTS

3RD FLOOR FRAMING PLAN

BID SET - 11.30.16

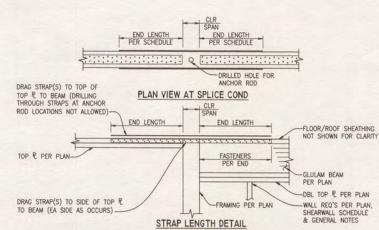
Issue Date PROJECT NUMBER

AS SHOWN



- 1. REFERENCE S1.1 FOR STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND.
- 2. DIMENSIONS: VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECT'S DRAWINGS. COLLIMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE OR CENTERLINE OF GRID/STEEL. CONTINUOUS FOOTINGS ARE CENTERED UNDER WALLS/STRUCTURAL PANELS. POSTS, BUNDLED STUDS OR COLUMNS TO BE CENTERED ON FOOTING OR WALL PIER, UND.
- 3. T/CONC ELEVATION PER ARCHITECT TYPICAL.
- FOR ALL DUCTS, CHASES AND PIPES. REFERENCE MECHANICAL, PLUMBING, ELECTRICAL AND SPRINKLER DRAWINGS.
- 5. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING.
- ALL WOOD EXPOSED TO CONCRETE, WEATHER, OR WITHIN 6" OF FINISHED GRADE SHALL BE PRESSURE—TREATED.
- ALL EXTERIOR WALLS ARE 2x6 AT 16" OC BEARING WALLS AND SHEARWALLS WHERE NOTED. FOR THE STUD GRADE, REFER TO S1.1 AND S1.2.
- 8. ALL EXTERIOR WALL FRAMING TO BE FIREPRO FRTW TREATED LUMBER.
- 9. ALL INTERIOR STRUCTURAL WALLS SHALL BE 2x6 AT 16" OC OR 2x4 AT 12" OC UNO.
- 10. ☑ INDICATES WOOD POST/COLUMN. REF PLAN FOR SIZE ((3) 2x4 OR (2) 2x6 MIN). 11. ⊠ INDICATES WOOD POST/COLUMN BELOW.
- 12. INDICATES HSS COLUMN, REF PLAN FOR SIZE,
- 13. 

  INDICATES HSS COLUMN BELOW.
- INDICATES NON-STRUCTURAL PARTITION WALL. WALL TYPES AND ANCHORAGE REQUIREMENTS PER ARCHITECTURAL DRAWINGS.
- 15. INDICATES STRUCTURAL WOOD SHEARWALL SHEATHING AND ANCHORAGE REQUIREMENTS PER SHEARWALL SCHEDULE. ALL EXTERIOR SHEARWALLS SHALL BE TYPE "A" UNLESS NOTED OTHERWISE ON PLAN.
- 16. ← → INDICATES STRUCTURAL BEARING AND/OR SHEARWALL BELOW.
- 17. X/SX.X SECTION CUT DETAIL NUMBER/SHEET NUMBER.
- 19. A SHEARWALL SYMBOL REFERENCE SHEARWALL SCHEDULE 1/S3.3. INSTALL SHEATHING ON SYMBOL SIDE OF WALL FOR ONE-SIDED SHEARWALLS.
- 20. T ANCHOR SYMBOL REFERENCE TIE-DOWN SCHEDULE PER 2/S3.3. "0" INDICATES NO TIE-DOWN REQUIRED.
- 21. INSTALL ALL METAL CONNECTORS PER MANUFACTURERS RECOMMENDATIONS TYP.
- CONTRACTOR SHALL VERIFY ALL ELEVATIONS INDICATED ON STRUCTURAL PLANS WITH THE ARCHITECTS AND CIVIL ENGINEERS PLANS. NOTIFY ARCHITECT/ENGINEER OF RECORD OF DISCREPANCIES PRIOR TO CONSTRUCTION.
- 23. BALLOON FRAME ALL WALLS GREATER THAN ONE LEVEL WITHOUT FLOOR OR ROOF SUPPORT.
- 24. HEADERS SHOWN BUT NOT SPECIFIED ARE TO BE (1) 6x8 MINIMUM. FLUSH BEAMS SHOWN BUT NOT SPECIFIED ARE TO BE (1) GL 3<sup>1</sup>/<sub>2</sub>x11<sup>7</sup>/<sub>8</sub>. HEADERS AT EXTERIOR WALLS ARE TO BE 6x8 DF/L#2 TYP UNO
- 25. INDICATES SPECIAL DIAPHRAGM NAILING REGIONS. REFERENCE PLAN FOR NAILING/BLOCKING REQUIREMENTS. USE 10d NAILS AT 4" OC AT PANEL EDGES, 4" OC STAGGERED AT DIAPHRAGM BOUNDARIES, AND 12" OC. IN FIELD. BLOCK ALL PLYWOOD EDGES W/ 4x BLOCKING (STAGGER NAILS ON EACH SIDE OF PLYWOOD JOINTS.)
- 26. 1 REF DRAG CONN AND POST TO POST TIE SCHEDULE ON THIS SHEET. BLOCK BETWEEN JOISTS WHERE STRAPS ARE PERPENDICULAR TO FRAMING.
- 27. NAIL FLOOR SHEATHING TO DRAG MEMBERS, SHEAR WALL TOP  $\P$ . AND BLOCKING WITH DIAPHRAGM PANEL EDGE NAILING MINIMUM (TYPICAL UNO).
- 28. HANGERS: ALL FLOOR JOIST HANGERS TO BE SIMP ITS OR DHUTF TYP. USE DHUTF AT CONDITIONS WHERE SHEETROCK IS BETWEEN THE HANGER AND THE WALL.
- 29. HANGERS: ALL BEAM HANGERS TO BE SIMPSON HU OR HUC TYPE, UNO.
- 30. INDICATES AREA DESIGNED TO WITHSTAND 100 PSF LIVE LOAD



DRAG CONNECTION & POST TO POST TIE SCHEDULE					
MARK	TYPE	CAPACITY PER STRAP	END LENGTH	FASTENERS PER END	
1	SIMP CS20	1030#	9"	(7) 10d	
2	SIMP CS16	1705#	13"	(11) 10d	
3	SIMP CS14	2490#	16"	(15) 10d	
4	SIMP CMSTC16	4585#	20"	(28) 16d SINKER	
5	SIMP CMST14	6490#	30"	(38) 10d	
6	SIMP CMST12	9215#	44"	(48) 10d	

STRAP LENGTH PER PLAN. EACH MEMBER SHALL BE NAILED WITH AN EQUAL NUMBER OF FASTENERS AT EA END
 NAILING SHALL BE PROVIDED AT EVERY 5TH HOLE, WHERE CONTINUOUS STRAPS ARE APPLIED TO BLOCKING.
 CENTER DRAG STRAP ON TOP PLATE/BEAM/BLOCKING.
 FASTENERS NOT SHOWN FOR CLARITY
 WHERE DRAG STRAP SPLICES ARE REQ'D TO MAKE CONTINUOUS, OVERLAP STRAPS PER SCHEDULE END LENGTH.

TYPICAL DRAG CONNECTION SCHEDULE

SCALE: 3/4"=1'-0"



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SFA DESIGN GROUP, LLC

STRUCTURAL 2020 SW WASHINGTON SQUARE DRIVE, SUITE 505 PORTLAND, OR 97223 PH 503.641.8311



**APARTMENTS** 18TH SE

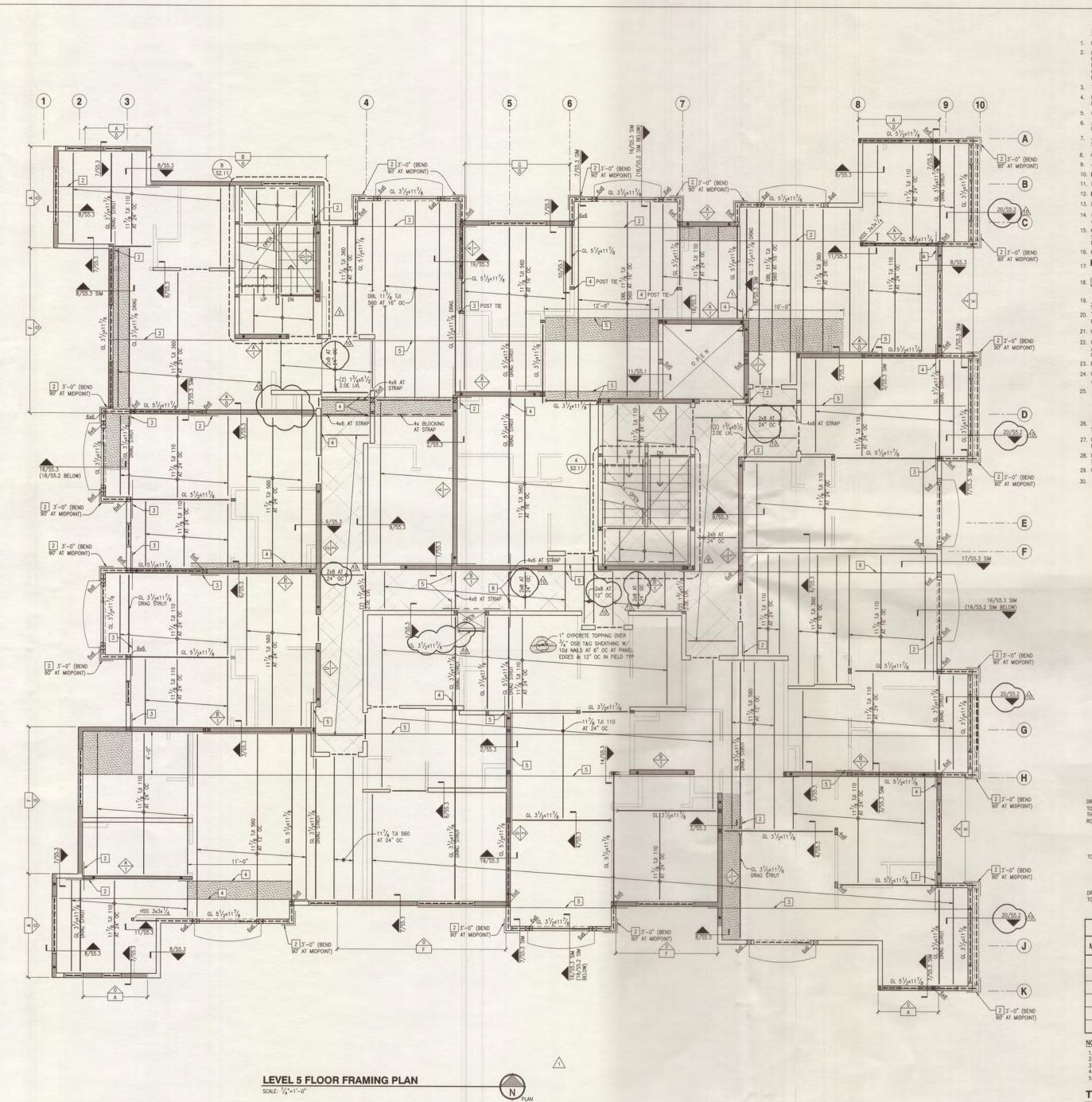
NOIR	DATE	REASON FOR ISSUE
5	05.25.17	CITY COMMENTS
6	06.19.17	GTY COMMENTS
7	08.21.17	CITY COMMENTS
8	10.12.17	GENERATOR REVISION
9	12.20.17	GENERATOR REVISION
0	02.19.18	CITY COMMENTS

4TH FLOOR FRAMING PLAN

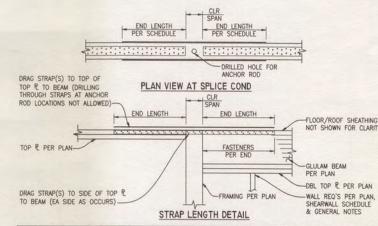
BID SET - 11.30.16

Issue Date

PROJECT NUMBER 16-050 AS SHOWN



- 1. REFERENCE S1.1 FOR STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND.
- 2. DIMENSIONS: VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECT'S DRAWINGS. COLUMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE OR CENTERLINE OF GRID/STEEL CONTINUOUS FOOTINGS ARE CENTERED UNDER WALLS/STRUCTURAL PANELS. POSTS, BUNDLED STUDS OR COLUMNS TO BE CENTERED ON FOOTING OR WALL PIER, UND.
- 3. T/CONC ELEVATION PER ARCHITECT TYPICAL.
- FOR ALL DUCTS, CHASES AND PIPES. REFERENCE MECHANICAL, PLUMBING, ELECTRICAL AND SPRINKLER DRAWINGS.
- 5. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING.
- ALL WOOD EXPOSED TO CONCRETE, WEATHER, OR WITHIN 6" OF FINISHED GRADE SHALL BE PRESSURE-TREATED.
- ALL EXTERIOR WALLS ARE 2x6 AT 16" OC BEARING WALLS AND SHEARWALLS WHERE NOTED. FOR THE STUD GRADE, REFER TO S1.1 AND S1.2.
- 8. ALL EXTERIOR WALL FRAMING TO BE FIREPRO FRTW TREATED LUMBER.
- 9. ALL INTERIOR STRUCTURAL WALLS SHALL BE 2x6 AT 24" OC OR 2x4 AT 16" OC UNO.
- 10. ☑ INDICATES WOOD POST/COLUMN. REF PLAN FOR SIZE ((3) 2x4 OR (2) 2x6 MIN). 11. ⊠ INDICATES WOOD POST/COLUMN BELOW.
- 12. INDICATES HSS COLUMN. REF PLAN FOR SIZE.
- 13. I INDICATES HSS COLUMN BELOW.
- 14. INDICATES NON-STRUCTURAL PARTITION WALL, WALL TYPES AND ANCHORAGE REQUIREMENTS PER ARCHITECTURAL DRAWINGS.
- 15. INDICATES STRUCTURAL WOOD SHEARWALL SHEATHING AND ANCHORAGE REQUIREMENTS PER SHEARWALL SCHEDULE. ALL EXTERIOR SHEARWALLS SHALL BE TYPE "A" UNLESS NOTED OTHERWISE ON PUAN.
- 16. ← → INDICATES STRUCTURAL BEARING AND/OR SHEARWALL BELOW.
- 17. X/SX.X SECTION CUT DETAIL NUMBER/SHEET NUMBER.
- 18. A FORCE TRANSFER WALL & HOLDOWN SYMBOL REFERENCE FORCE TRANSFER ANCHOR TIE-DOWN SCHEDULES \$3.3 INSTALL SHEATHING ON SYMBOL SIDE OF WALL FOR ONE-SIDED SHEARWALLS.
- 19. A SHEARWALL SYMBOL REFERENCE SHEARWALL SCHEDULE 1/S3.3. INSTALL SHEATHING ON SYMBOL SIDE OF WALL FOR ONE-SIDED SHEARWALLS.
- 20. ANCHOR SYMBOL REFERENCE TIE-DOWN SCHEDULE PER 2/S3.3. "0" INDICATES NO TIE-DOWN REQUIRED.
- 21. INSTALL ALL METAL CONNECTORS PER MANUFACTURERS RECOMMENDATIONS TYP.
- 22. CONTRACTOR SHALL VERIFY ALL ELEVATIONS INDICATED ON STRUCTURAL PLANS WITH THE ARCHITECTS AND CIVIL ENGINEERS PLANS. NOTIFY ARCHITECT/ENGINEER OF RECORD OF DISCREPANCIES PRIOR TO CONSTRUCTION.
- 23. BALLOON FRAME ALL WALLS GREATER THAN ONE LEVEL WITHOUT FLOOR OR ROOF SUPPORT.
- 24. HEADERS SHOWN BUT NOT SPECIFIED ARE TO BE (1) 6x8 MINIMUM. FLUSH BEAMS SHOWN BUT NOT SPECIFIED ARE TO BE (1) GL 31/2×117/8. HEADERS AT EXTERIOR WALLS ARE TO BE 6x8 DF/L#2 TYP UNO
- INDICATES SPECIAL DIAPHRAGM NAILING REGIONS. REFERENCE PLAN FOR NAILING/BLOCKING REQUIREMENTS. USE 10d NAILS AT 4" OC AT PANEL EDGES, 4" OC STAGGERED AT DIAPHRAGM BOUNDARIES, AND 12" OC IN FIELD. BLOCK ALL PLYWOOD EDGES W/ 4x BLOCKING (STAGGER NAILS ON EACH SIDE OF PLYWOOD JOINTS.)
- 26. 1 REF DRAG CONN AND POST TO POST TIE SCHEDULE ON THIS SHEET. BLOCK BETWEEN JOISTS WHERE STRAPS ARE PERPENDICULAR TO FRAMING.
- 27. NAIL FLOOR SHEATHING TO DRAG MEMBERS, SHEAR WALL TOP R AND BLOCKING WITH DIAPHRAGM PANEL EDGE NAILING MINIMUM (TYPICAL UNO).
- 28. HANGERS: ALL FLOOR JOIST HANGERS TO BE SIMP ITS OR DHUTF TYP. USE DHUTF AT CONDITIONS WHERE SHEETROCK IS BETWEEN THE HANGER AND THE WALL.
- 29. HANGERS: ALL BEAM HANGERS TO BE SIMPSON HU OR HUC TYPE, UNO.
- 30. INDICATES AREA DESIGNED TO WITHSTAND 100 PSF LIVE LOAD



MARK	TYPE	CAPACITY PER STRAP	END LENGTH	FASTENERS PER END
1	SIMP CS20	1030#	9"	(7) 10d
2	SIMP CS16	1705#	13"	(11) 10d
3	SIMP CS14	2490#	16"	(15) 10d
4	SIMP CMSTC16	4585#	20"	(28) 16d SINKER
5	SIMP CMST14	6490#	30"	(38) 10d
6	SIMP CMST12	9215#	44"	(48) 10d

# NOTES:

- 1. STRAP LENGTH PER PLAN. EACH MEMBER SHALL BE NAILED WITH AN EQUAL NUMBER OF FASTENERS AT EA END
  2. NAILING SHALL BE PROVIDED AT EVERY STH HOLE, WHERE CONTINUOUS STRAPS ARE APPLIED TO BLOCKING.
  3. CENTER DRAG STRAP ON TOP PLATE/BEAM/BLOCKING.
  4. FASTENERS NOT SHOWN FOR CLARIF.
  5. WHERE DRAG STRAP SPLICES ARE REQ'D TO MAKE CONTINUOUS, OVERLAP STRAPS PER SCHEDULE END LENGTH.

TYPICAL DRAG CONNECTION SCHEDULE

SCALE: 3/4"=1'-0"



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**APARTMENTS** 18TH

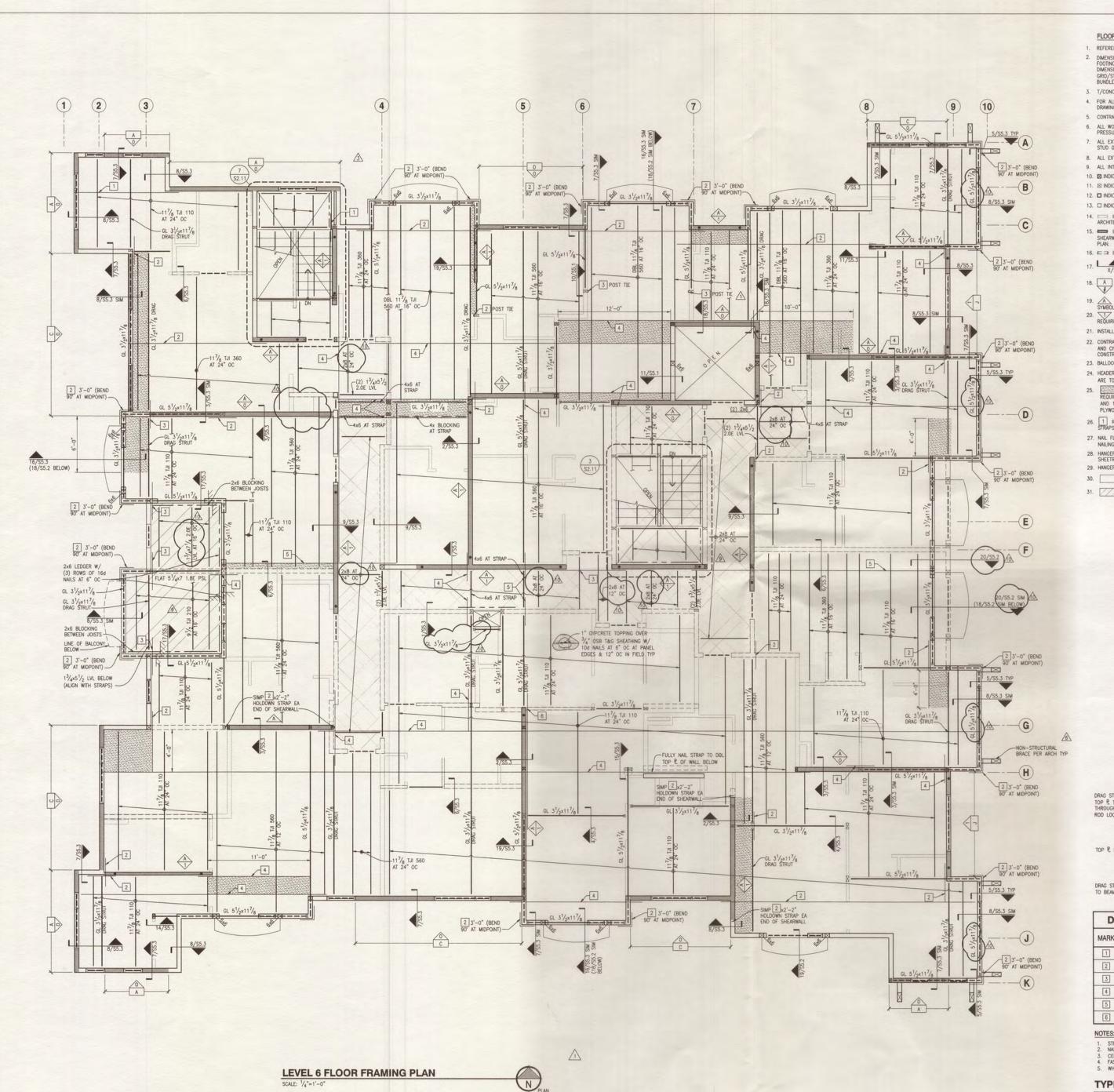
NORN	DATE	REASON FOR ISSUE
5	05.25.17	CITY COMMENTS
6	06.19.17	GTY COMMENTS
7	08.21.17	CITY COMMENTS
8	10.12.17	GENERATOR REVISION
9	12.20.17	GENERATOR REVISION
10	02.19.18	CITY COMMENTS

5TH FLOOR FRAMING PLAN

BID SET - 11.30.16

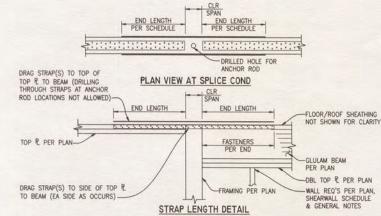
Issue Date

PROJECT NUMBER AS SHOWN



- REFERENCE S1.1 FOR STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND.
- DIMENSIONS: VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECT'S DRAWINGS. COLUMNS AND FOOTINGS ARE CENTERED ON GRID, TYPICAL. ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE OR CENTERLINE OF GRID/STEEL. CONTINUOUS FOOTINGS ARE CENTERED UNDER WALLS/STRUCTURAL PANELS. POSTS, BUNDLED STUDS OR COLUMNS TO BE CENTERED ON FOOTING OR WALL PIER, UND.
- 3. T/CONC ELEVATION PER ARCHITECT TYPICAL.
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- 5. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING.
- ALL WOOD EXPOSED TO CONCRETE, WEATHER, OR WITHIN 6" OF FINISHED GRADE SHALL BE PRESSURE—TREATED.
- ALL EXTERIOR WALLS ARE 2x6 AT 16" OC BEARING WALLS AND SHEARWALLS WHERE NOTED. FOR THE STUD GRADE, REFER TO S1.1 AND S1.2.
- 8. ALL EXTERIOR WALL FRAMING TO BE FIREPRO FRTW TREATED LUMBER.
- 9. ALL INTERIOR STRUCTURAL WALLS SHALL BE 2x6 AT 24" OC OR 2x4 AT 16" OC UNO. 10. ☑ INDICATES WOOD POST/COLUMN. REF PLAN FOR SIZE ((3) 2x4 OR (2) 2x6 MIN).
- 11. M INDICATES WOOD POST/COLUMN BELOW.
- 12. INDICATES HSS COLUMN. REF PLAN FOR SIZE.
- 13. 

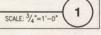
  INDICATES HSS COLUMN BELOW.
- 14.  $\hfill \mapsto$  indicates non-structural partition wall. Wall types and anchorage requirements per architectural drawings.
- INDICATES STRUCTURAL WOOD SHEARWALL SHEATHING AND ANCHORAGE REQUIREMENTS PER SHEARWALL SCHEDULE. ALL EXTERIOR SHEARWALLS SHALL BE TYPE "A" UNLESS NOTED OTHERWISE ON PLAN.
- 16.  $\[ \rightleftarrows \]$  INDICATES STRUCTURAL BEARING AND/OR SHEARWALL BELOW.
- 17. X/SX.X SECTION CUT DETAIL NUMBER/SHEET NUMBER.
- 18. A FORCE TRANSFER WALL & HOLDOWN SYMBOL REFERENCE FORCE TRANSFER ANCHOR TIE-DOWN SCHEDULES \$3.3 INSTALL SHEATHING ON SYMBOL SIDE OF WALL FOR ONE-SIDED SHEARWALLS.
- 19. A SHEARWALL SYMBOL REFERENCE SHEARWALL SCHEDULE 1/S3.3. INSTALL SHEATHING ON SYMBOL SIDE OF WALL FOR ONE-SIDED SHEARWALLS.
- 20. ANCHOR SYMBOL REFERENCE TIE-DOWN SCHEDULE PER 2/S3.3. "0" INDICATES NO TIE-DOWN REQUIRED.
- CONTRACTOR SHALL VERIFY ALL ELEVATIONS INDICATED ON STRUCTURAL PLANS WITH THE ARCHITECTS
  AND CIVIL ENGINEERS PLANS. NOTIFY ARCHITECT/ENGINEER OF RECORD OF DISCREPANCIES PRIOR TO
  CONSTRUCTION.
- 23. BALLOON FRAME ALL WALLS GREATER THAN ONE LEVEL WITHOUT FLOOR OR ROOF SUPPORT. 24. HEADERS SHOWN BUT NOT SPECIFIED ARE TO BE (1) 6x8 MINIMUM. FLUSH BEAMS SHOWN BUT NOT SPECIFIED
- ARE TO BE (1) GL 31/2×117/8. HEADERS AT EXTERIOR WALLS ARE TO BE 6x8 DF/L#2 TYP UNO 25. INDICATES SPECIAL DIAPHRAGM NAILING REGIONS. REFERENCE PLAN FOR NAILING/BLOCKING REQUIREMENTS. USE 104 NAILS AT 4" OC AT PANEL EDGES, 4" OC STAGGERED AT DIAPHRAGM BOUNDARIES. AND 12" OC IN FIELD. BLOCK ALL PLYWOOD EDGES W/ 4x BLOCKING (STAGGER NAILS ON EACH SIDE OF PLYWOOD JOINTS.)
- 26.  $\fbox{1}$  REF DRAG CONN AND POST TO POST TIE SCHEDULE ON THIS SHEET. BLOCK BETWEEN JOISTS WHERE STRAPS ARE PERPENDICULAR TO FRAMING.
- 27. NAIL FLOOR SHEATHING TO DRAG MEMBERS, SHEAR WALL TOP  ${\mathbb R}$  AND BLOCKING WITH DIAPHRAGM PANEL EDGE NAILING MINIMUM (TYPICAL UNO).
- HANGERS: ALL FLOOR JOIST HANGERS TO BE SIMP ITS OR DHUTF TYP. USE DHUTF AT CONDITIONS WHERE SHEETROCK IS BETWEEN THE HANGER AND THE WALL.
- 29. HANGERS: ALL BEAM HANGERS TO BE SIMPSON HU OR HUC TYPE, UNO.
- 30. INDICATES AREA DESIGNED TO WITHSTAND 100 PSF LIVE LOAD
- 31. INDICATES AREA DESIGNED TO WITHSTAND 60 PSF LIVE LOAD



DF	RAG CON	G CONNECTION & POST TO POST TIE SCHEDULE		TE SCHEDULE
MARK	TYPE	CAPACITY PER STRAP	END LENGTH	FASTENERS PER END
1	SIMP CS20	1030#	9"	(7) 10d
2	SIMP CS16	1705#	13"	(11) 10d
3	SIMP CS14	2490#	16"	(15) 10d
4	SIMP CMSTC16	4585#	20"	(28) 16d SINKER
5	SIMP CMST14	6490#	30"	(38) 10d
6	SIMP CMST12	9215#	44"	(48) 10d

- 5. WHERE DRAG STRAP SPLICES ARE REQ'D TO MAKE CONTINUOUS, OVERLAP STRAPS PER SCHEDULE END LENGTH.

TYPICAL DRAG CONNECTION SCHEDULE





6720 SW MACADAM AVENUE, SUITE 100 PORTLAND, OR 97219 T 503.245.7100

1505 5TH AVE, SUITE 300 SEATTLE, WA 98101 T 206.576.1600

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**APARTMENTS 18TH** SE

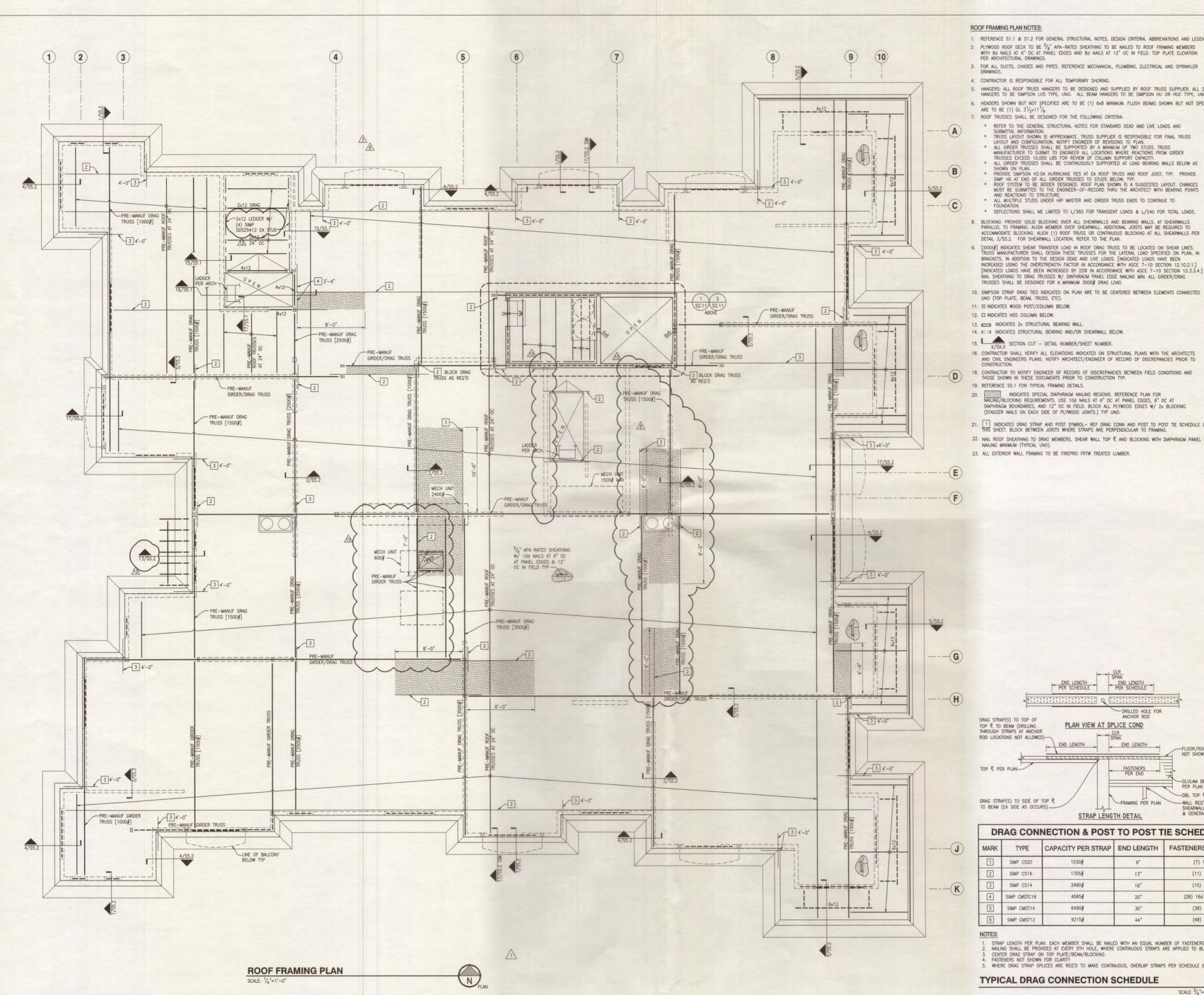
NOIR	DATE	REASON FOR ISSUE
5	05.25.17	GTY COMMENTS
6	06.19.17	CITY COMMENTS
7	08.21.17	CITY COMMENTS
8	10.12.17	GENERATOR REVISION
9	12.20.17	GENERATOR REVISION
0	02.19.18	GTY COMMENTS

**6TH FLOOR FRAMING** PLAN

BID SET - 11.30.16

Issue Date PROJECT NUMBER

AS SHOWN



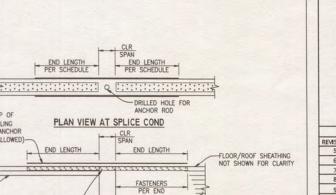
## ROOF FRAMING PLAN NOTES:

- 1. REFERENCE S1.1 & S1.2 FOR GENERAL STRUCTURAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND. PLYWOOD ROOF DECK TO BE  $\frac{5}{8}$  APA-RATED SHEATHING TO BE NAILED TO ROOF FRAMING MEMBERS WITH 8d NAILS AT 6" OC AT PANEL EDGES AND 8d NAILS AT 12" OC IN FIELD. TOP PLATE ELEVATION PER ARCHITECTURAL DRAWINGS.
- 3. FOR ALL DUCTS, CHASES AND PIPES. REFERENCE MECHANICAL, PLUMBING, ELECTRICAL AND SPRINKLER
- 4. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING.
- 5. HANGERS: ALL ROOF TRUSS HANGERS TO BE DESIGNED AND SUPPLIED BY ROOF TRUSS SUPPLIER. ALL 2x HANGERS TO BE SIMPSON LUS TYPE, UNO. ALL BEAM HANGERS TO BE SIMPSON HU OR HUC TYPE, UNO.
- HEADERS SHOWN BUT NOT SPECIFIED ARE TO BE (1) 6x8 MINIMUM. FLUSH BEAMS SHOWN BUT NOT SPECIFIED ARE TO BE (1) GL 3<sup>1</sup>/<sub>2</sub>x11<sup>7</sup>/<sub>8</sub>.
- 7. ROOF TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING CRITERIA:

- FOUNDATION.

  \* DEFLECTIONS SHALL ME LIMITED TO L/360 FOR TRANSIENT LOADS & L/240 FOR TOTAL LOADS.
- , BLOCKING: PROVIDE SOLID BLOCKING OVER ALL SHEARWALLS AND BEARING WALLS. AT SHEARWALLS PARALLEL TO FRAMING, ALIGN MEMBER OVER SHEARWALL, ADDITIONAL JOISTS MAY BE REQUIRED TO ACCOMMODATE BLOCKING, ALIGN (1) ROOF TRUSS OR CONTINUOUS BLOCKING AT ALL SHEARWALLS PER DETAIL 3/S5.2. FOR SHEARWALL LOCATION, REFER TO THE PLAN.
- [XXXX#] INDICATES SHEAR TRANSFER LOAD IN ROOF DRAG TRUSS TO BE LOCATED ON SHEAR LINES. TRUSS MANUFACTURER SHALL DESIGN THESE TRUSSES FOR THE LATERAL LOAD SPECIFIED ON PLAN, IN BRACKETS, IN ADDITION TO THE DESIGN DEAD AND LIVE LOADS. [INDICATED LOADS HAVE BEEN INCREASED USING THE OVERSTRENGTH FACTOR IN ACCORDANCE WITH ASCE 7-10 SECTION 12.10.2.1.] [INDICATED LOADS HAVE BEEN INCREASED BY 25% IN ACCORDANCE WITH ASCE 7-10 SECTION 12.3.3.4.] NAIL SHEATHING TO DRAG TRUSSES W/ DIAPHRAGM PANEL EDGE NAILING MIN. ALL GIRDER/DRAG TRUSSES SHALL BE DESIGNED FOR A MINIMUM 3000# DRAG LOAD.
- SIMPSON STRAP DRAG TIES INDICATED ON PLAN ARE TO BE CENTERED BETWEEN ELEMENTS CONNECTED UNO (TOP PLATE, BEAM, TRUSS, ETC).
- 11. ⊠ INDICATES WOOD POST/COLUMN BELOW.
- 12. C) INDICATES HSS COLUMN BELOW.
- 13. INDICATES 2x STRUCTURAL BEARING WALL.
- 14. ← ⇒ INDICATES STRUCTURAL BEARING AND/OR SHEARWALL BELOW.
- 15. X/SX.X SECTION CUT DETAIL NUMBER/SHEET NUMBER.

  16. CONTRACTOR SHALL VERIFY ALL ELEVATIONS INDICATED ON STRUCTURAL PLANS WITH THE ARCHITECTS AND CUT/LE ENGINEERS PLANS. NOTIFY ARCHITECT/ENGINEER OF RECORD OF DISCREPANCIES PRIOR TO CONSTRUCTION.
- 18. CONTRACTOR TO NOTIFY ENGINEER OF RECORD OF DISCREPANCIES BETWEEN FIELD CONDITIONS AND THOSE SHOWN IN THESE DOCUMENTS PRIOR TO CONSTRUCTION TYP.
- 19. REFERENCE S5.1 FOR TYPICAL FRAMING DETAILS.
- 20. INDICATES SPECIAL DIAPHRAGM NAILING REGIONS. REFERENCE PLAN FOR NAILING/BLOCKING REQUIREMENTS. USE 10d NAILS AT 6" OC AT PANEL EDGES, 6" OC AT DIAPHRAGM BOUNDARIES, AND 12" OC IN FIELD. BLOCK ALL PLYWOOD EDGES W/ 2x BLOCKING (STAGGER NAILS ON EACH SIDE OF PLYWOOD JOINTS.) TYP UND.
- 21. 1 INDICATES DRAG STRAP AND POST SYMBOL- REF DRAG CONN AND POST TO POST TIE SCHEDULE ON THIS SHEET. BLOCK BETWEEN JOISTS WHERE STRAPS ARE PERPENDICULAR TO FRAMING.
- 22. NAIL ROOF SHEATHING TO DRAG MEMBERS, SHEAR WALL TOP  $\Re$  AND BLOCKING WITH DIAPHRAGM PANEL EDGE NAILING MINIMUM (TYPICAL UNO).



DF	RAG CON	AG CONNECTION & POST TO POST TIE SCHEDULI		TE SCHEDULE
MARK	TYPE	CAPACITY PER STRAP	END LENGTH	FASTENERS PER END
1	SIMP CS20	1030#	9"	(7) 10d
2	SIMP CS16	1705#	13"	(11) 10d
3	SIMP CS14	2490#	16"	(15) 10d
4	SIMP CMSTC16	4585#	20"	(28) 16d SINKER
5	SIMP CMST14	6490#	30"	(38) 10d
6	SIMP CMST12	9215#	44"	(48) 10d

STRAP LENGTH DETAIL

- 1. STRAP LENGTH PER PLAN. EACH MEMBER SHALL BE NAILED WITH AN EQUAL NUMBER OF FASTENERS AT EA END NAILING SHALL BE PROVIDED AT EVERY 5TH HOLE, WHERE CONTINUOUS STRAPS ARE APPLIED TO BLOCKING.
  3. CENTER DRAG STRAP ON TOP PLATE/BEAM/BLOCKING.
  4. FASTENERS NOT SHOWN FOR CLARITY.
  5. WHERE DRAG STRAP SPLICES ARE REQ'D TO MAKE CONTINUOUS, OVERLAP STRAPS PER SCHEDULE END LENGTH.

TYPICAL DRAG CONNECTION SCHEDULE

SCALE: 3/4"=1'-0"

-DBL TOP PL PER PLAN



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**APARTMENTS** 18TH SE

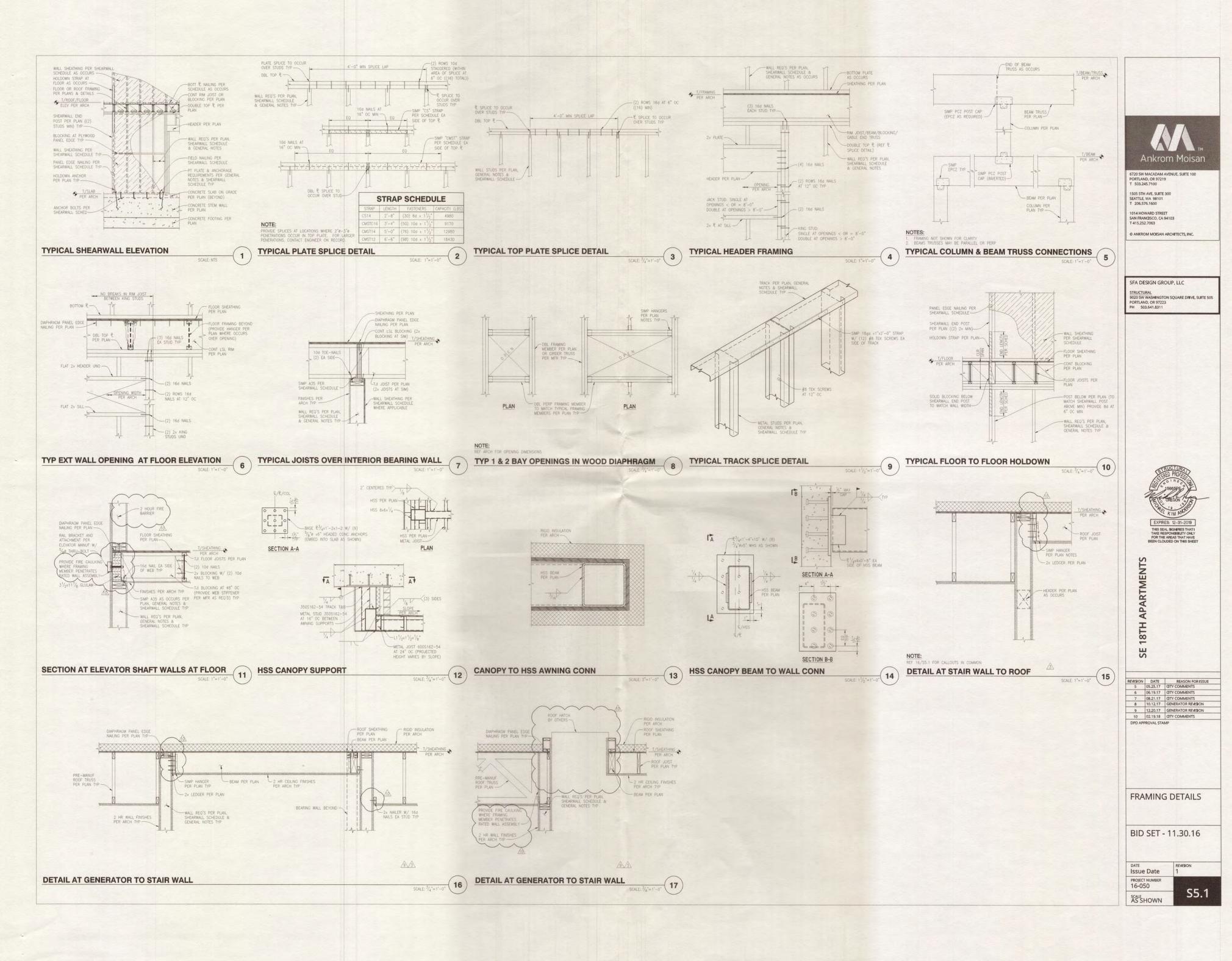
NOIR	DATE	REASON FOR ISSUE
5	05.25.17	CITY COMMENTS
5	06.19.17	GTY COMMENTS
7	08.21.17	GTY COMMENTS
В	10.12.17	GENERATOR REVISION
9	12.20.17	GENERATOR REVISION
0	02.19.18	CITY COMMENTS
D APF	PROVAL STA	MP

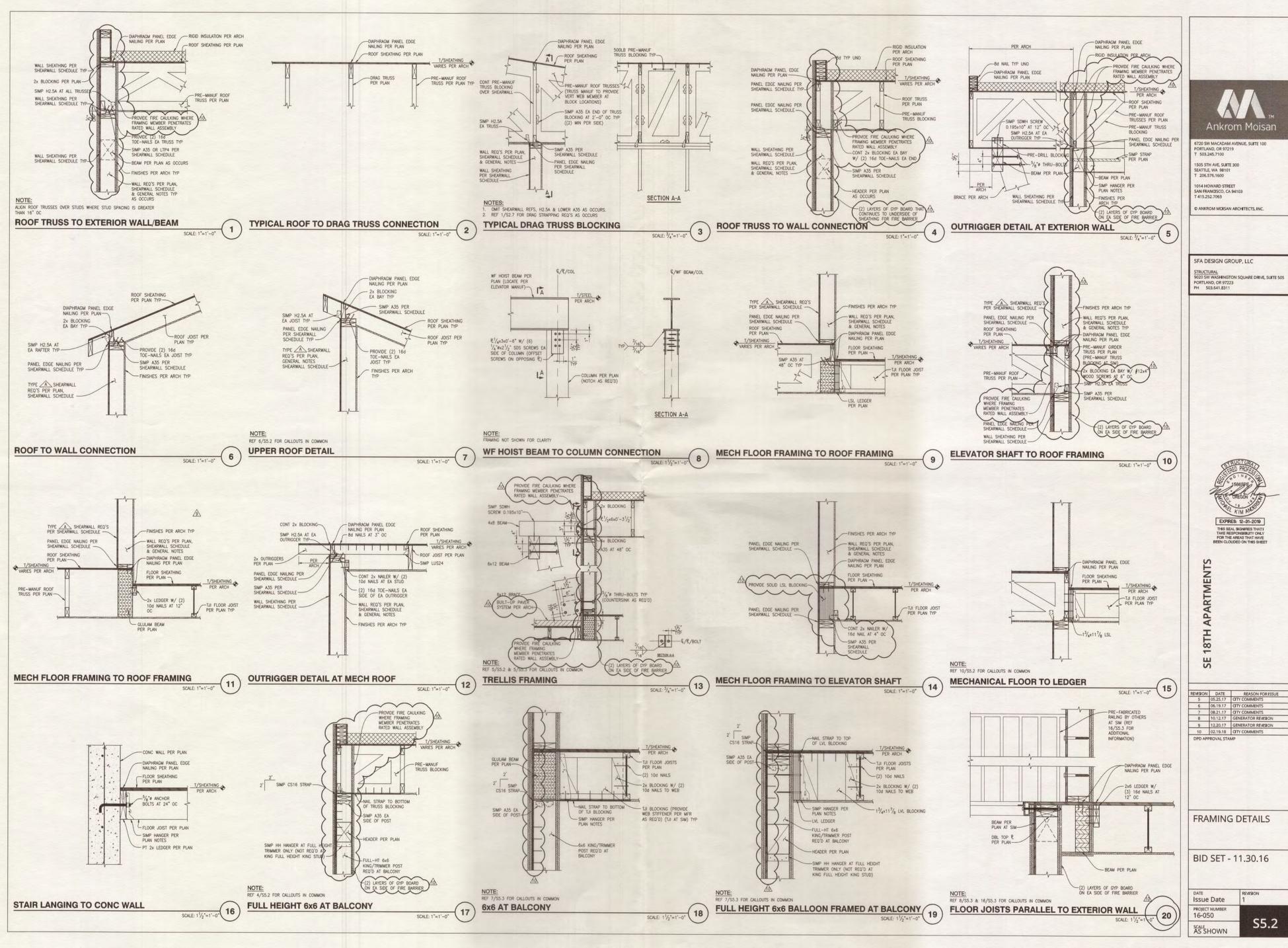
**ROOF FRAMING PLAN** 

BID SET - 11.30.16

Issue Date	REVISION 1
PROJECT NUMBER 16-050	60 -

AS SHOWN





5	05.25.17	
	05.25.17	CITY COMMENTS
6	06.19.17	CITY COMMENTS
7	08.21.17	CITY COMMENTS
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