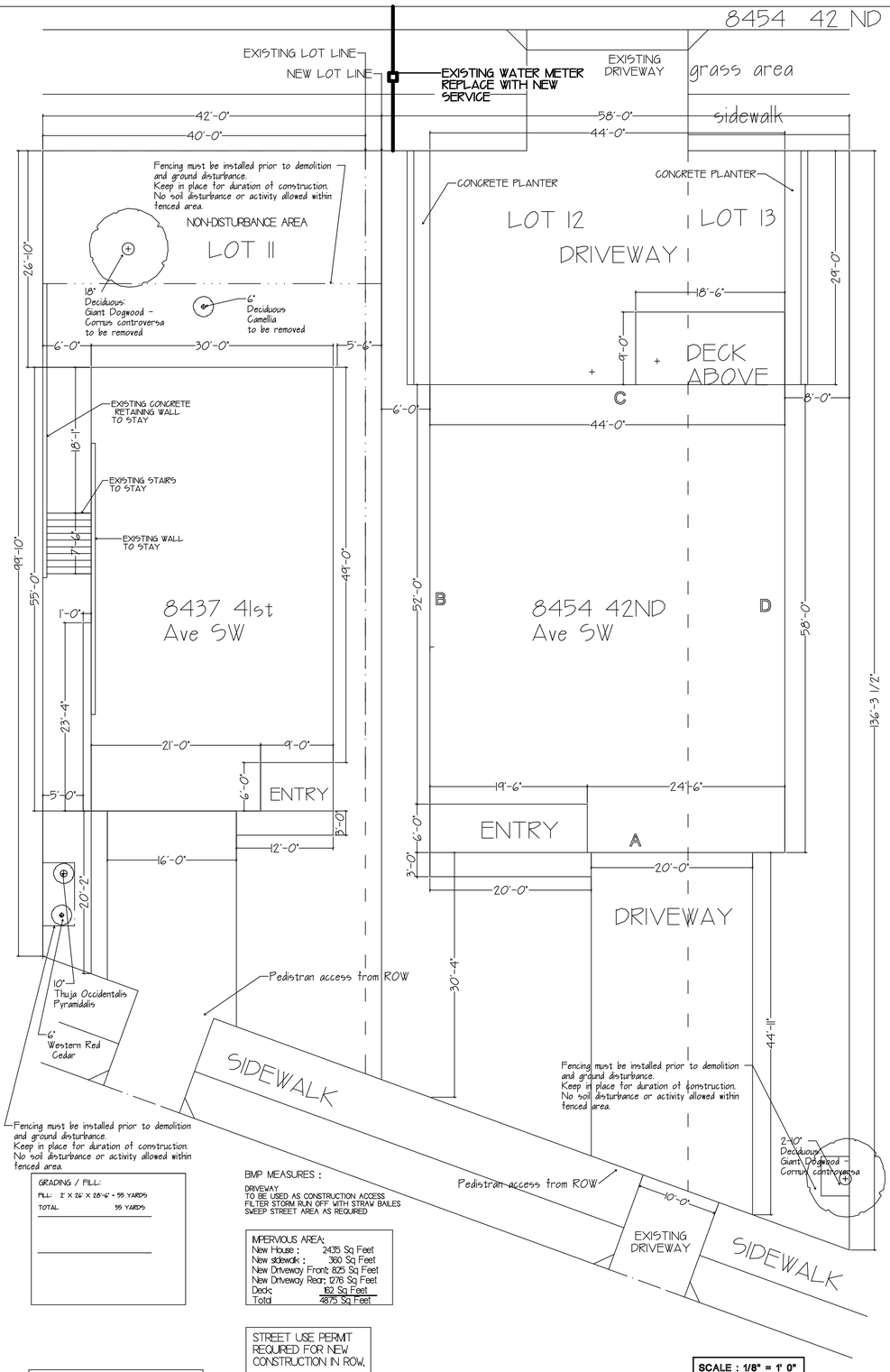
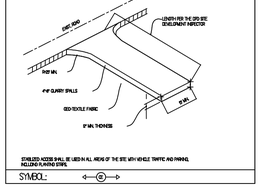


STABILIZED CONSTRUCTION ACCESS



Building Height Calculations:
A- 38.10 X 44 = 16764
B- 38.10 X 58 = 22098
C- 378.58 X 44 = 16657
D- 38.10 X 58 = 22098
77717 / 204 = 380.96 AVERAGE GRADE
+ 35.0 = 415.96 MAX HEIGHT

GRADING / FILL:
FILL: 2' X 26' X 28'-6" - 55 YARDS
TOTAL 55 YARDS

BMP MEASURES :
DRIVEWAY
TO BE USED AS CONSTRUCTION ACCESS
FILTER STORM RUN OFF WITH STRAW BAILES
SWEEP STREET AREA AS REQUIRED

IMPERVIOUS AREA:
New House : 2435 Sq Feet
New sidewalk : 360 Sq Feet
New Driveway Front: 825 Sq Feet
New Driveway Rear: 1276 Sq Feet
Deck: 152 Sq Feet
Total 4875 Sq Feet

STREET USE PERMIT REQUIRED FOR NEW CONSTRUCTION IN ROW.

FRONT YARD SETBACK: 30'-4"
SIDE YARD: 7'TO NORTH
SIDE YARD: 7'TO SOUTH
REAR YARD: 29'

REQUIRED TREES 2 CALIPER INCHES PER 1000 SQ FEET
7291/1000 X 2 = 14.58 CALIPER INCHES.
Existing: Giant Dogwood: 2 @ 10"; Total 20"
- exceeds requirement.

SCALE : 1/8" = 1' 0"

VICINITY / LOCATION MAP :

INDEX OF DRAWINGS:

PROJECT INFO:

8454 42nd Ave SW
SEATTLE WA 98136

LEGAL DESCRIPTION:

Lot 13, Lot 12 less S 2' of Lot 12
Block 3 Fauntleroy View
add to Seattle
Vol 24, page 36

TAX ID NUMBER: 249320-0195

ZONE: SF-5000

OCCUPANCY: SINGLE FAMILY

BUILDING TYPE: V-B

SEISMIC: D-2

CODE: 2012 IRC

LOT SIZE: 7291 SF

LOT COVERAGE ALLOWED:

STRUCTURAL: 2551.85 SQ FEET

ACTUAL COVERAGE:

2540 SF STRUCTURAL

4875 SF IMPERVIOUS

OWNER:
GT MANAGEMENT LLC
4711 45TH AVE SW
SEATTLE WA 98116

DATE REVISED: 9/24/14

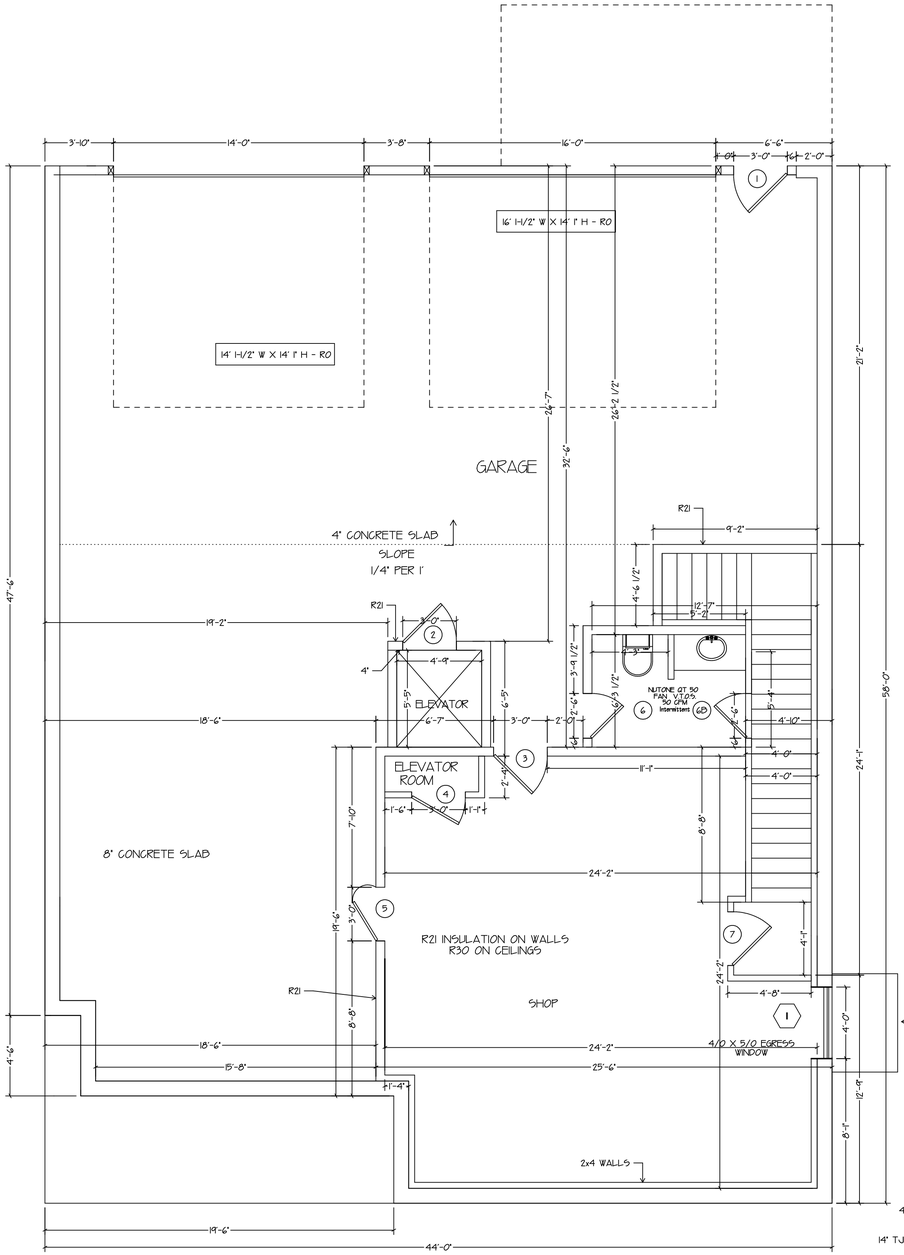
COVERSHEET
SITE PLAN

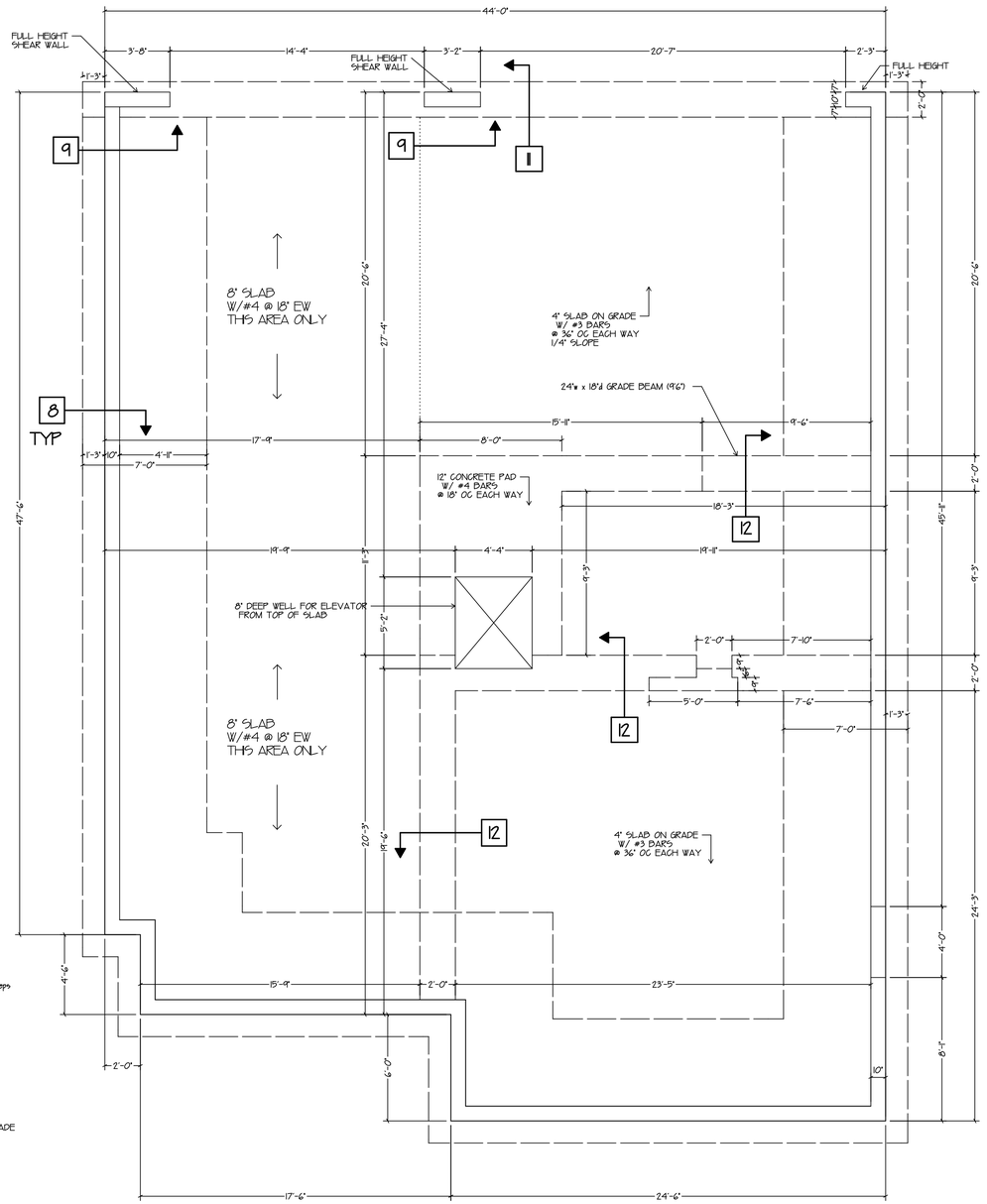
8444 42nd AVE SW

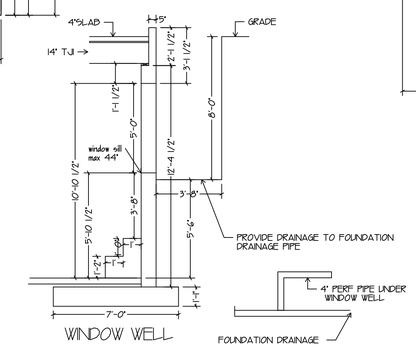
DATE ISSUED
9/06/14

SHEET
1

DATE REVISED:
1/05/15
2/21/15







DOOR SCHEDULE nitrc certified

NUMBER	SIZE	HINGE	MATERIAL	FRAME	NOTES	U Value
1	3-0	R	STEEL	6-7/8"	GARAGE	.20
2	3-0	R	WOOD	6-7/8"	ELEVATOR	
3	3-0	L	WOOD	6-7/8"	FIRE	.20
4	3-0	L	WOOD	4-5/8"		
5	2-4	L	WOOD	6-7/8"	FIRE	.20
6	3-0	L	WOOD	4-5/8"		
7	2-4	L	WOOD	4-5/8"	FIRE	.20

DOOR DRAWING NOTES:

BIFOLDS, WIDTH + 1-1/4"
HEIGHT 82"
REGULAR, WIDTH + 2"
HEIGHT 82 1/2"
BYPASS, WIDTH ONLY
HEIGHT 82 1/2"
POCKET, WIDTH + 2"
HEIGHT 84 1/2"

GARAGE / SHOP PLAN 2258 SQ. FEET

GARAGE / SHOP PLAN 2258 SQ. FEET

TOTAL SQ. FOOTAGE 5706

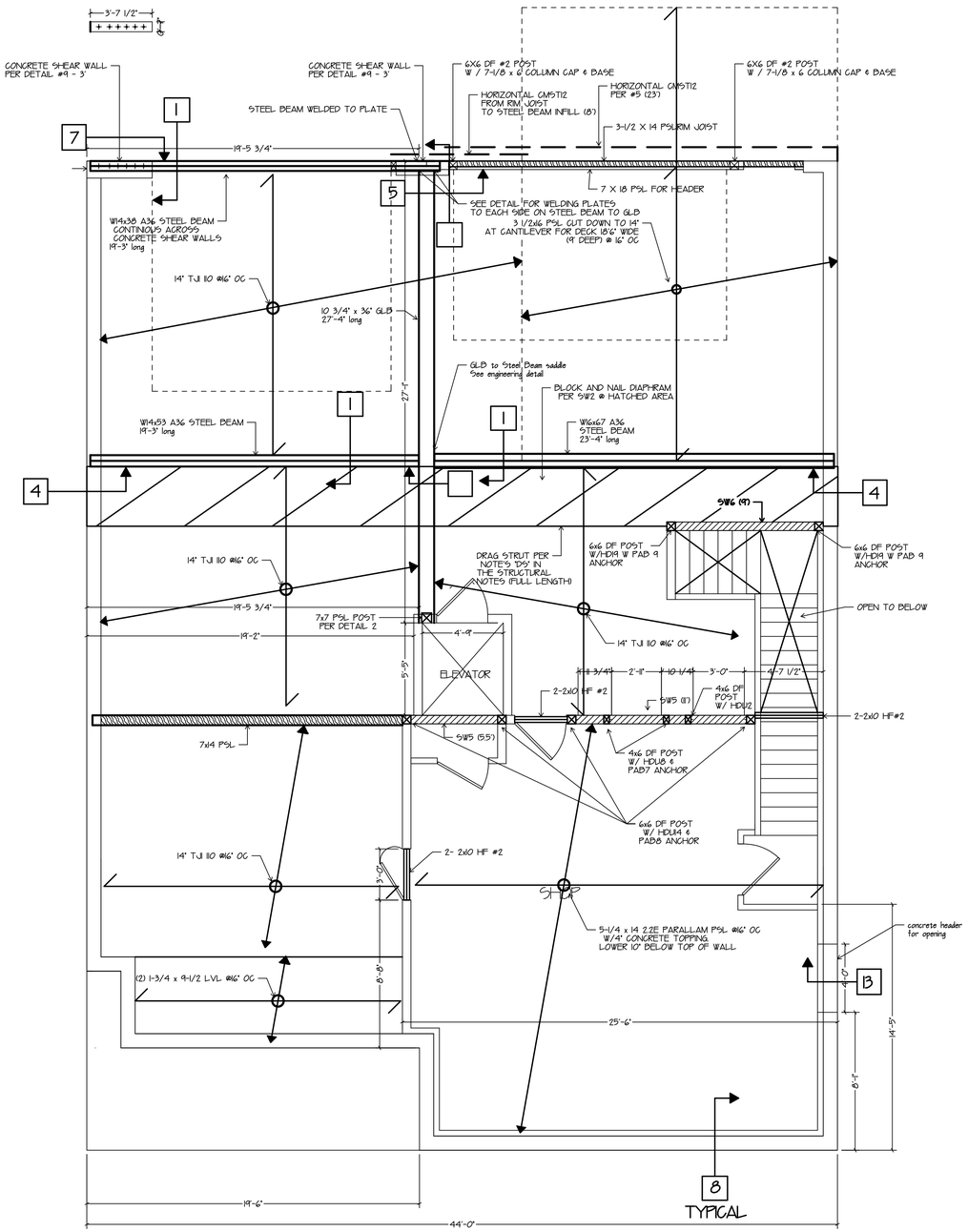
SCALE 1/4" = 1' 0"

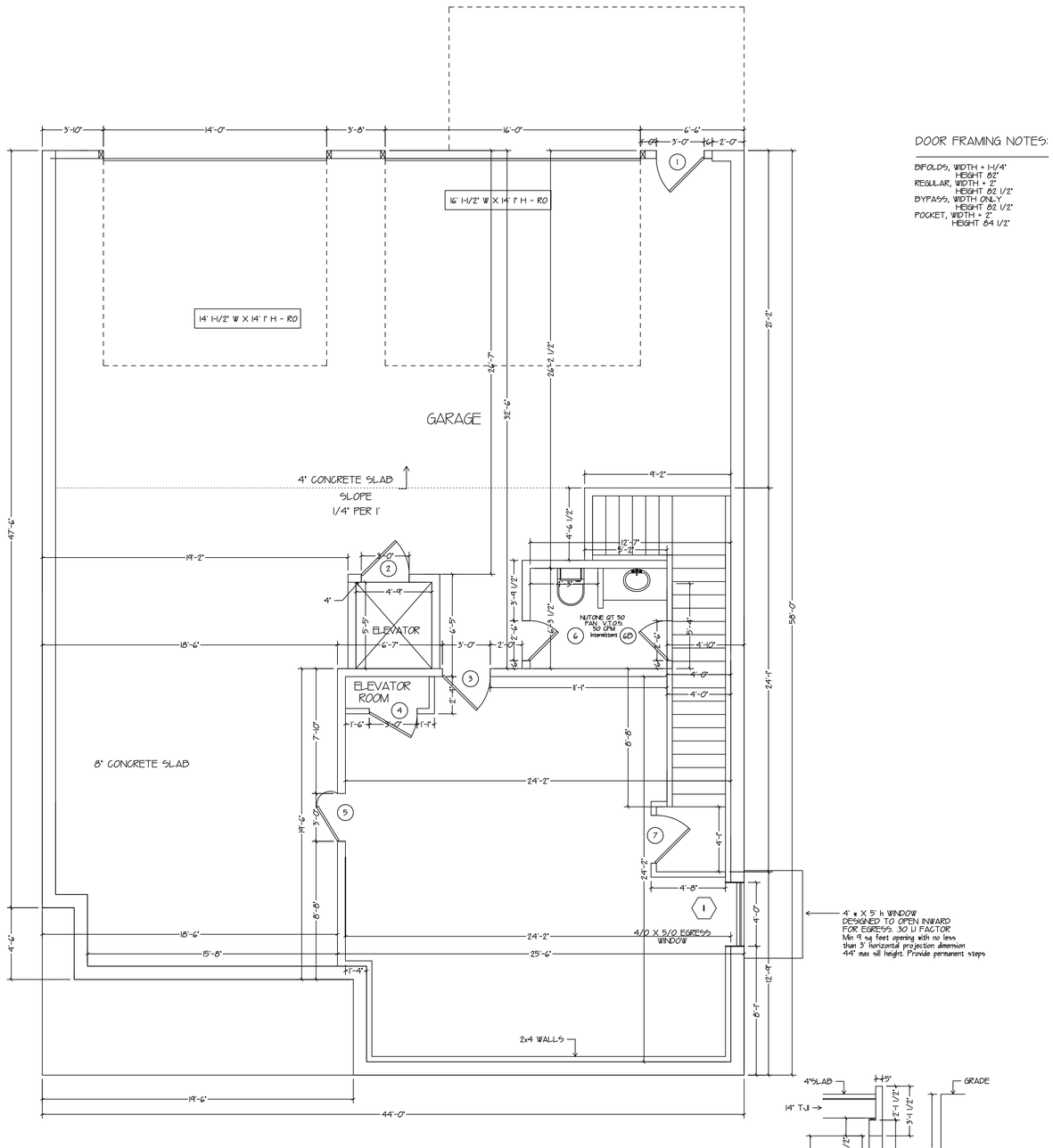
FOUNDATION GARAGE PLAN

8454
42nd SW

DATE ISSUED
07/08/14

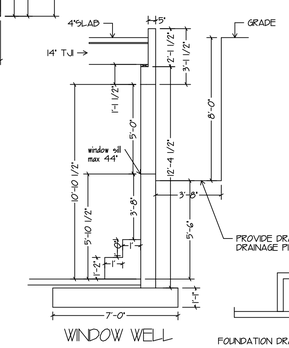
SHEET
2





DOOR FRAMING NOTES:

BIFOLDS, WIDTH + 1-1/4" HEIGHT 82"
REGULAR, WIDTH + 2" HEIGHT 82 1/2"
BYPASS, WIDTH ONLY HEIGHT 82 1/2"
POCKET, WIDTH + 2" HEIGHT 84 1/2"



WINDOW GLAZING:

GLAZING - XXX SQ. FEET
FLOOR - XXXX SQ. FEET
GLAZING VS FLOOR XXX %
MILLGUARD VINYL WINDOWS GLASS 30

WINDOW SCHEDULE ntrc certified

NUMBER	SIZE	TYPE	FIN	FRAME	U Value	AREA	NOTES	TOTAL
1	4/0 X 5/0	EGRESS	W	Vinyl	.30	20	VENTED	20
							BASE	20
							1ST	XXX
							2ND	XXX
							3RD	XXX
							TOTAL	XXX

Note: Vented windows to provide 4 sq. inches net air flow per SRC M1508.4.5

DOOR SCHEDULE ntrc certified

NUMBER	SIZE	HINGE	MATERIAL	FRAME	NOTES	U Value
1	3-0	R	STEEL	6-7/8"	GARAGE	.20
2	3-0	R	WOOD	6-7/8"	ELEVATOR	
3	3-0	L	WOOD	6-7/8"	FIRE	.20
4	3-0	L	WOOD	4-5/8"		
5	3-0	L	WOOD	6-7/8"	FIRE	.20
6	2-6	L	WOOD	4-5/8"		
6D	2-6	L	WOOD	4-5/8"		
7	3-0	L	WOOD	4-5/8"	FIRE	.20

DOOR FRAMING NOTES:

BIFOLDS, WIDTH + 1-1/4" HEIGHT 82"
REGULAR, WIDTH + 2" HEIGHT 82 1/2"
BYPASS, WIDTH ONLY HEIGHT 82 1/2"
POCKET, WIDTH + 2" HEIGHT 84 1/2"
FIRE DOOR shall be 1-3/8" solid core, 20 min rating with self closing device

GARAGE / SHOP PLAN 2258 SQ. FEET

SCALE 1/4" = 1' 0"

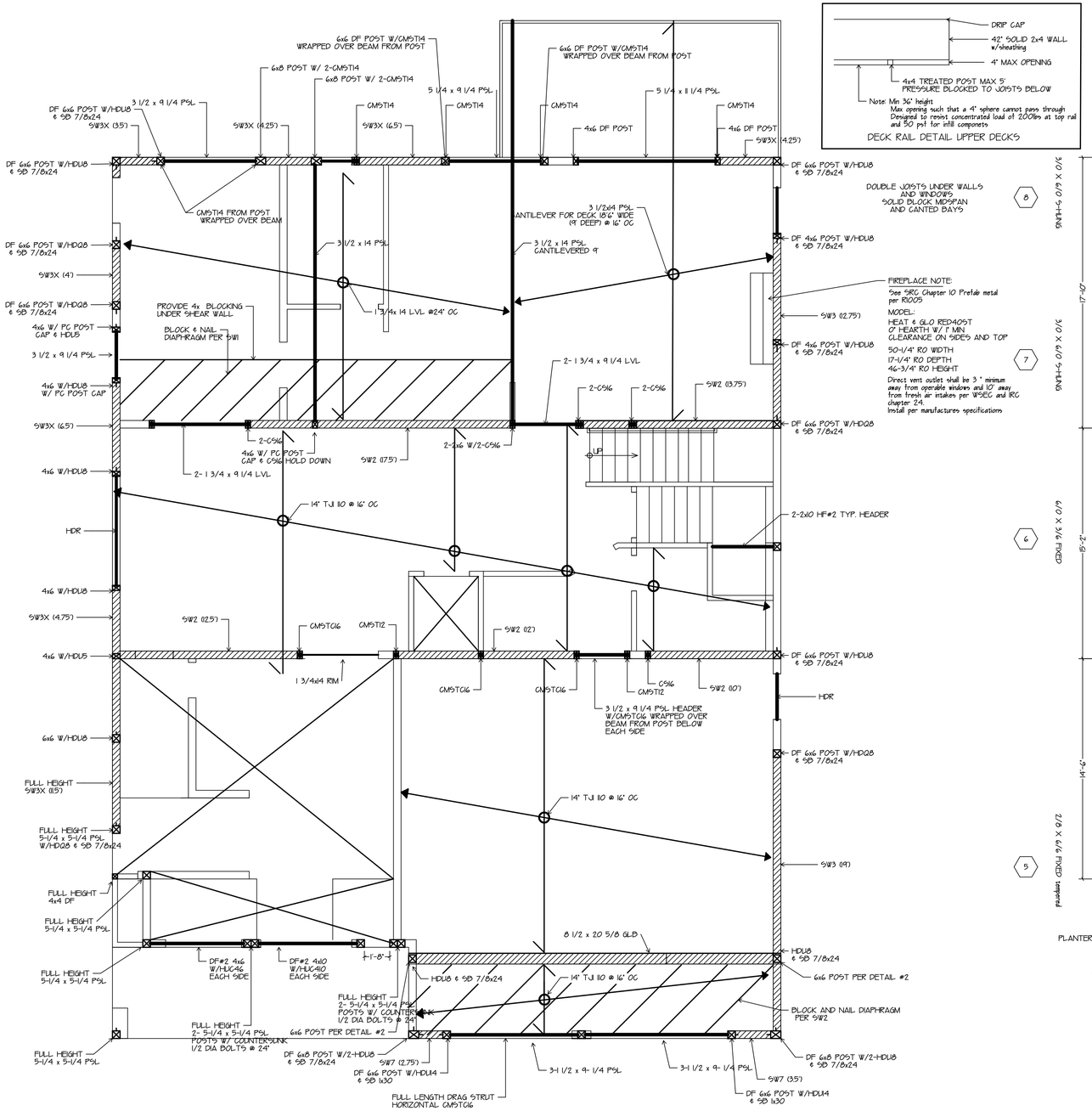
DATE REVISED: 2/15/15 ELEV GLB

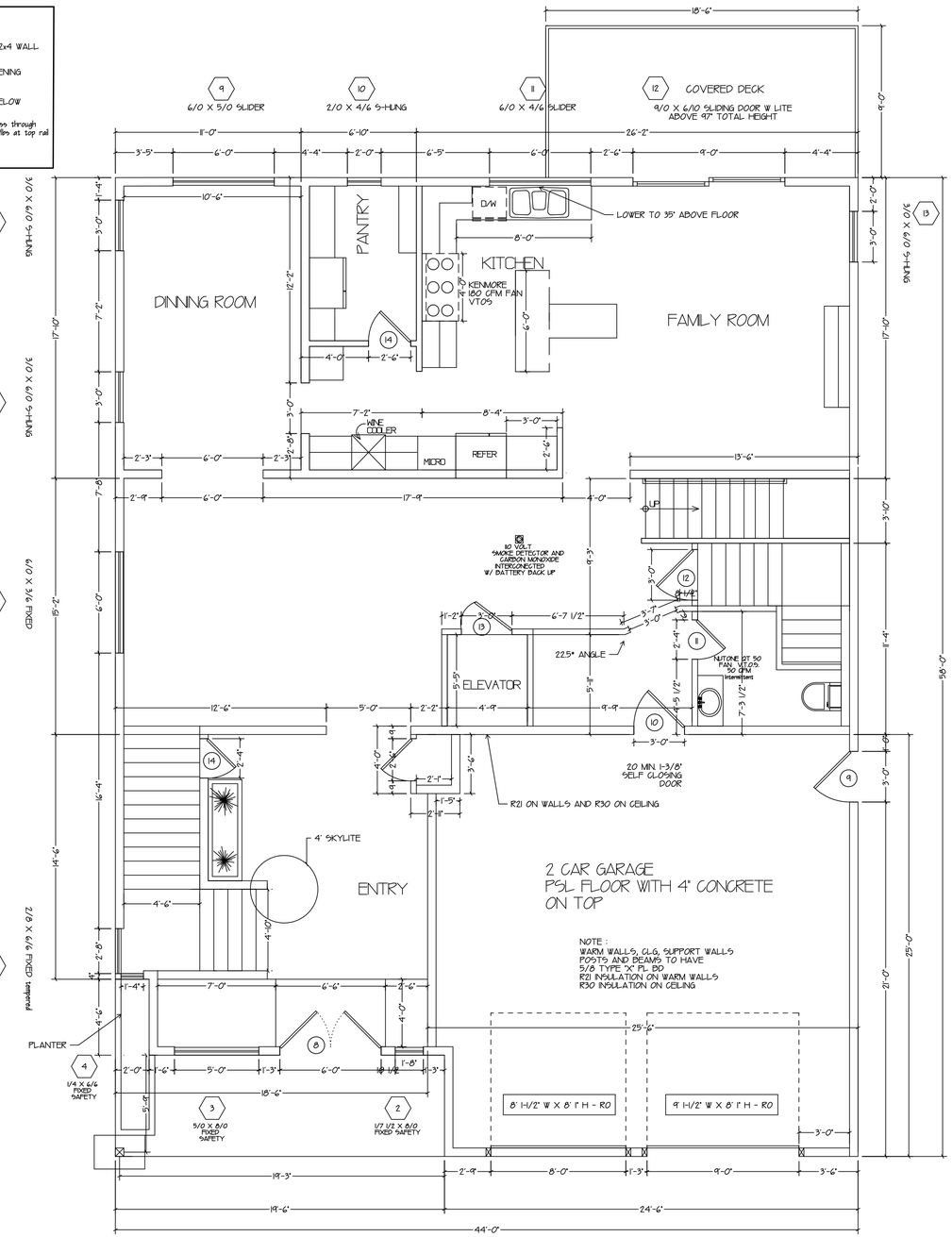
GARAGE PLAN LOWER FLOOR FRAMING PLAN BASEMENT SHEAR WALLS

8454 42nd SW

DATE ISSUED 09/24/14

SHEET 3





WINDOW SCHEDULE ntrc certified								
NUMBER	SIZE	TYPE	FIN	FRAME	U Value	AREA	NOTES	TOTAL
2	3/0 X 8/0	FIXED	W	Vinyl	.30	24	SAFETY	24
3	5/0 X 8/0	FIXED	W	Vinyl	.30	40	SAFETY	40
4	1/4 X 6/6	FIXED	W	Vinyl	.30	8.6	SAFETY	8.6
5	2/8 x 6/6	FIXED	W	Vinyl	.30	17.3	SAFETY	17.3
6	6/0 x 2/0	FIXED	W	Vinyl	.30	12		12
7,8	3/0 x 6/0	S-HUNG	W	Vinyl	.30	18		36
9	6/0 x 5/0	SLIDER	W	Vinyl	.30	30		30
10	2/0 x 4/6	S-HUNG	W	Vinyl	.30	9		9
11	6/0 x 4/6	SLIDER	W	Vinyl	.30	27		27
12**	9/0 x 6/8	DOOR	W	Vinyl	.30	60	97" HIGH	60
13	3/0 x 6/0	S-HUNG	W	Vinyl	.30	18		18
							BASE	20
							1ST	281.9
							2ND	442.4
							3RD	262.5
							TOTAL	1006.8

Note: Vented windows to provide 4 sq. inches net air flow per SRC M1508.4.5

** 9' SLIDING DOOR WITH FIXED LITE ABOVE. 95" HEIGHT

DOOR SCHEDULE ntrc certified						
NUMBER	SIZE	HINGE	MATERIAL	FRAME	NOTES	U Value
8	4-0	R	WOOD	6-7/8"	ENTRY	.20
9	3-0	L	STEEL	6-7/8"	Ext Garage	
10	3-0	L	WOOD	4-5/8"	GARAGE	
11	2-4	R	WOOD	4-5/8"		
12	3-0	L	WOOD	4-5/8"	To Shop	
13	3-0	L	WOOD	4-5/8"	Elevator	
14	2-6	L	WOOD	4-5/8"		

DOOR FRAMING NOTES:

BIFOLDS, WIDTH + 1-1/4"
HEIGHT 98 1/2"
REGULAR, WIDTH + 2"
HEIGHT 98 1/2"
BYPASS, WIDTH ONLY
HEIGHT 98 1/2"
POCKET, WIDTH + 2"
HEIGHT 102 1/2"
FIRE DOOR shall be 1-3/8" solid core, 20 min rating with self closing device

1ST FLOOR PLAN 1804 SQ. FEET
1ST FLOOR DECKS 1665 SQ. FEET
1ST FLOOR GARAGE 662 SQ. FEET

SCALE 1/4" = 1' 0"

N

DATE REVISED:
9/24/14
12/20/14
01/26/15
ELV
4/24/15

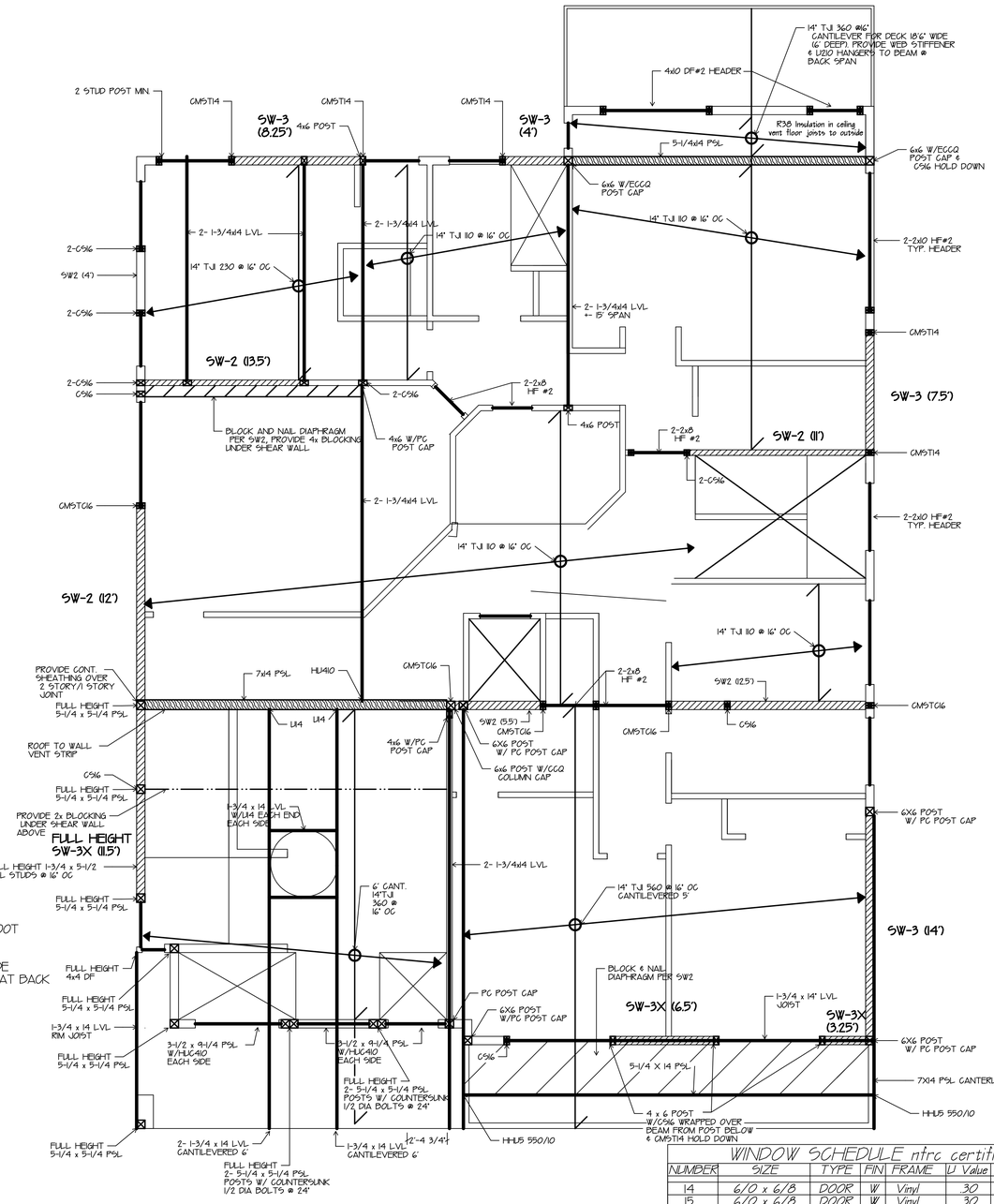
FIRST FLOOR PLAN
FRAMING PLAN

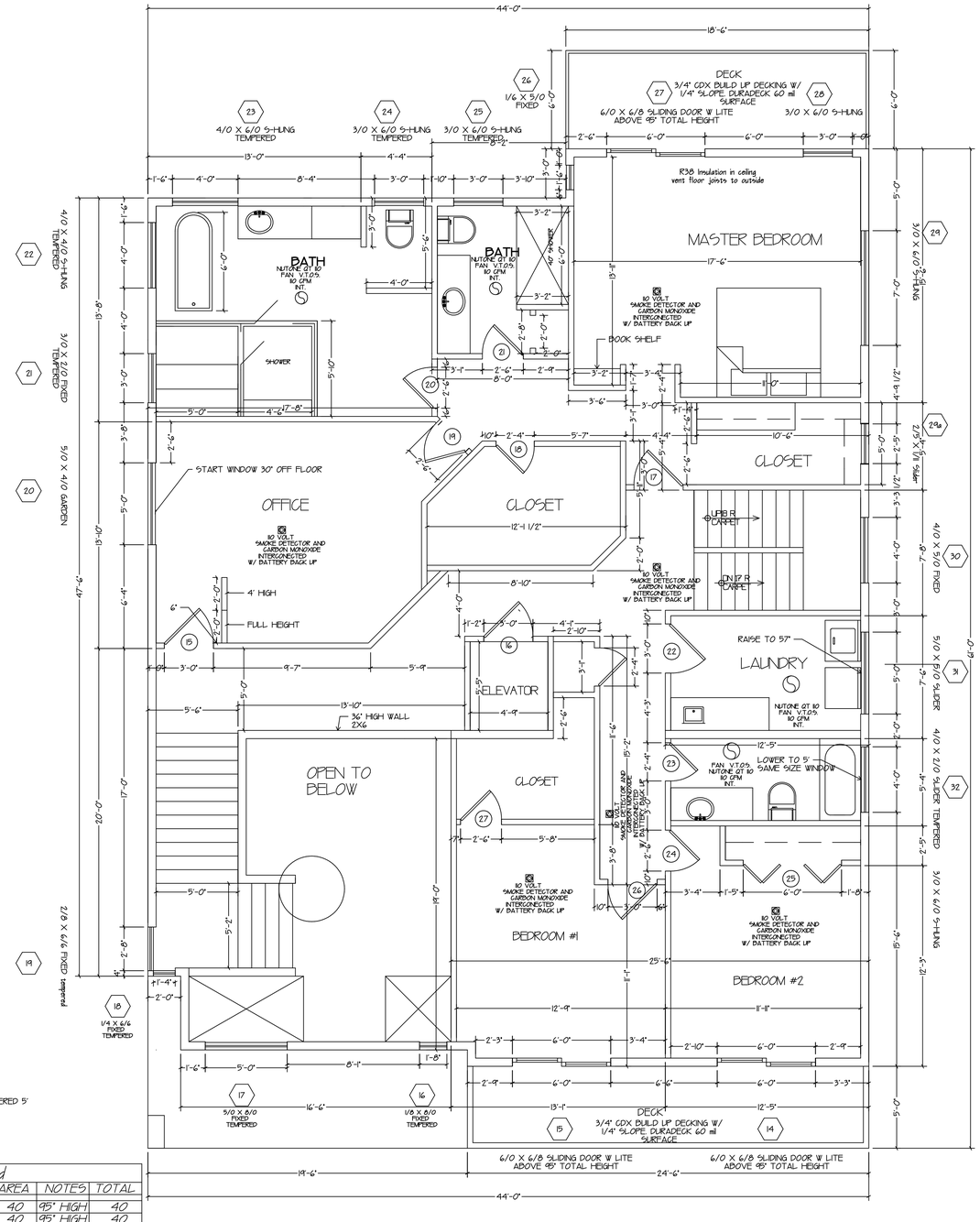
8454
42nd SW

DATE ISSUED
09/06/14

SHEET
4

DATE REVISED:
01/26/15
ELV
04/24/15
05/05/15





DOOR FRAMING NOTES:

BIFOLDS, WIDTH + 1-1/4"
HEIGHT 98 1/2"
REGULAR, WIDTH + 2"
HEIGHT 98 1/2"
BYPASS, WIDTH ONLY
HEIGHT 98 1/2"
POCKET, WIDTH + 2"
HEIGHT 102 1/2"
FIRE DOOR shall be 1-3/8" solid core, 20 min rating with self closing device

DOOR SCHEDULE nitrc certified

NUMBER	SIZE	HINGE	MATERIAL	FRAME	NOTES	U Value
15	3-0	R	WOOD	4-5/8"		
16	3-0	R	WOOD	4-5/8"	ELEVATOR	
17	3-0	L	WOOD	4-5/8"		
18	2-4	L	WOOD	4-5/8"		
19	2-6	R	WOOD	4-5/8"		
20	2-6	R	WOOD	4-5/8"		
21	2-6	L	WOOD	4-5/8"		
22	3-0	R	WOOD	4-5/8"		
23	2-4	R	WOOD	4-5/8"		
24	2-6	R	WOOD	4-5/8"		
25	6-0	BI-FOLD	WOOD	4-5/8"		
26	3-0	R	WOOD	4-5/8"		
27	2-6	R	WOOD	4-5/8"		

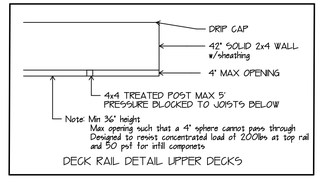
WINDOW SCHEDULE nitrc certified

NUMBER	SIZE	TYPE	FIN	FRAME	U Value	AREA	NOTES	TOTAL
14	6/0 x 6/8	DOOR	W	Vinyl	.30	40	95" HIGH	40
15	6/0 x 6/8	DOOR	W	Vinyl	.30	40	95" HIGH	40
16	3/0 X 8/0	FIXED	W	Vinyl	.30	24		24
17	5/0 x 8/0	FIXED	W	Vinyl	.30	40	SAFETY	40
18	1/4 x 6/6	FIXED	W	Vinyl	.30	8.6		8.6
19	2/8 x 6/6	FIXED	W	Vinyl	.30	17.3		17.3
20	6/0 x 4/0	SLIDER	W	Vinyl	.30	24		24
21	3/0 x 2/0	FIXED	W	Vinyl	.30	6		6
22	4/0 x 4/0	FIXED	W	Vinyl	.30	16	SAFETY	16
23	4/0 x 6/0	S-HUNG	W	Vinyl	.30	24	SAFETY	24
24	3/0 x 6/0	S-HUNG	W	Vinyl	.30	18	OPG	18
25	3/0 X 6/0	S-HUNG	W	Vinyl	.30	18		18
26	1/6 x 5/0	FIXED	W	Vinyl	.30	7.5		7.5
27	6/0 x 6/8	DOOR	W	Vinyl	.30	40	95" HIGH	40
28	3/0 x 6/0	S-HUNG	W	Vinyl	.30	18		18
29	8/0 x 6/0	SLIDER	W	Vinyl	.30	48		48
30	4/0 x 5/0	FIXED	W	Vinyl	.30	20	SAFETY	20
31	5/0 x 5/0	SLIDER	W	Vinyl	.30	25		25
32	4/0 x 2/0	SLIDER	W	Vinyl	.30	8		8

BASE	20
1ST	2819
2ND	442.4
3RD	262.5
TOTAL	XX

Note: Vented windows to provide 4 sq. inches net air flow per SRC M1508.4.5

** 6' SLIDING DOOR WITH FIXED LITE ABOVE. 95" HEIGHT



DECK RAIL DETAIL UPPER DECKS

2ND FLOOR PLAN 2016 SQ. FEET
2ND FLOOR DECKS 233.5 SQ. FEET

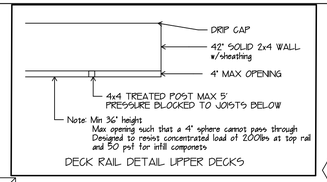
SCALE 1/4" = 1' 0"

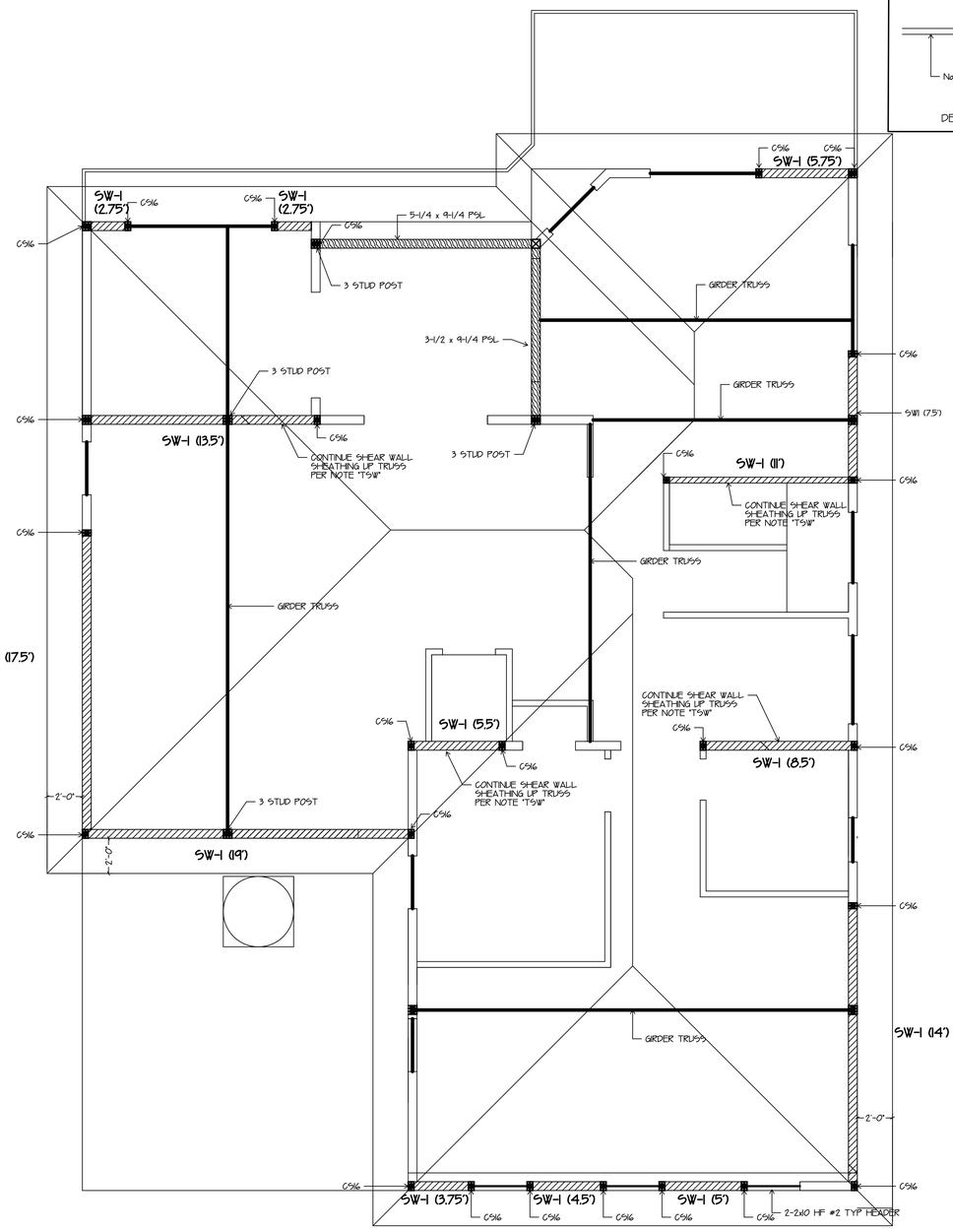
SECOND FLOOR PLAN
FRAMING PLAN

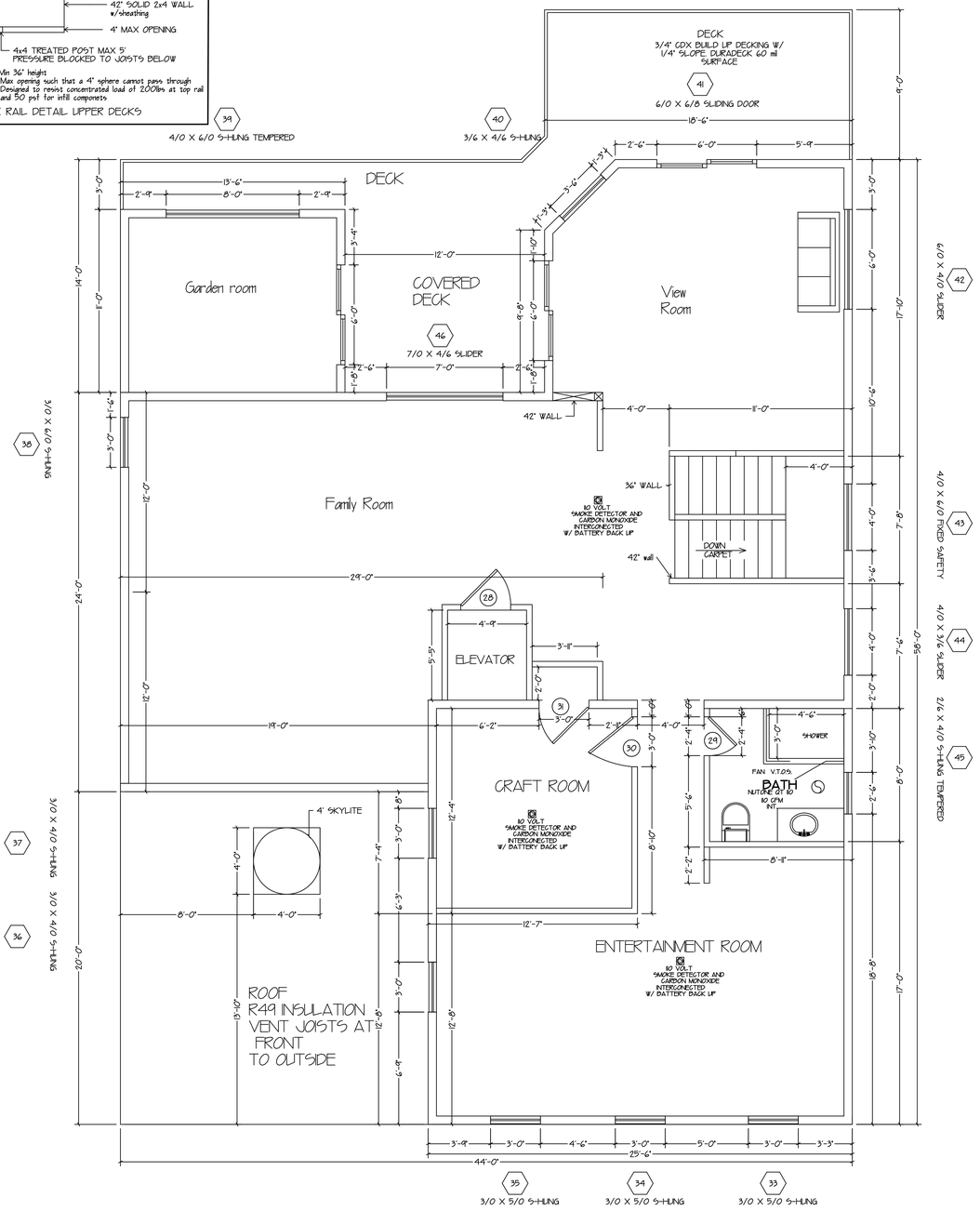
8454
42nd SW

DATE ISSUED
07/06/14

SHEET
5







DOOR SCHEDULE ntrc certified

NUMBER	SIZE	HINGE	MATERIAL	FRAME	NOTES	U Value
28	3-0	R	WOOD	4-5/8"	ELEVATOR	
29	2-4	R	WOOD	4-5/8"		
30	3-0	L	WOOD	4-5/8"		
31	3-0	R	WOOD	6-7/8"		

DOOR FRAMING NOTES:

BIFOLDS, WIDTH + 1-1/4" HEIGHT 82"
REGULAR, WIDTH + 2" HEIGHT 82 1/2"
BYPASS, WIDTH ONLY HEIGHT 82 1/2"
POCKET, WIDTH + 2" HEIGHT 84 1/2"

WINDOW SCHEDULE ntrc certified

NUMBER	SIZE	TYPE	FIN	FRAME	U Value	AREA	NOTES	TOTAL
33,34,35	3/0 x 5/0	S-HUNG	W	Vinyl	.30	15		45
36,37	3/0 x 4/0	S-HUNG	W	Vinyl	.30	12		24
38	3/0 X 6/0	S-HUNG	W	Vinyl	.30	18		18
39	8/0 x 4/0	SLIDER	W	Vinyl	.30	32	SAFETY	32
40	7/0 x 4/6	SLIDER	W	Vinyl	.30	31.5		31.5
41	6/8 x 6/8	DOOR	W	Vinyl	.30	40		40
42	6/0 x 4/0	SLIDER	W	Vinyl	.30	24		24
43	4/0 x 6/0	FIXED	W	Vinyl	.30	24	SAFETY	24
44	4/0 x 3/6	SLIDER	W	Vinyl	.30	14		14
45	2/6 x 4/0	S-HUNG	W	Vinyl	.30	10		10
46	7/0 x 4/6	S-HUNG	W	Vinyl	.30	31.5		31.5

BASE	20
1ST	281.9
2ND	442.4
3RD	262.5
TOTAL	1006.8

Note: Vented windows to provide 4 sq. inches net air flow per SRC M1508.4.5

3RD FLOOR PLAN 1886 SQ. FEET
3RD FLOOR DECKS 411 SQ. FEET

SCALE 1/4" = 1' 0"

DATE REVISED:
12/20/14
01/26/15
ELEV
04/24/15
05/21/15

THIRD FLOOR PLAN
FRAMING PLAN

8454
42nd SW

DATE ISSUED
07/06/14

SHEET
6

EAST ELEVATION

WEST ELEVATION

SCALE 1/4" = 1' 0"

DATE REVISED:
9/27/14
5/05/15

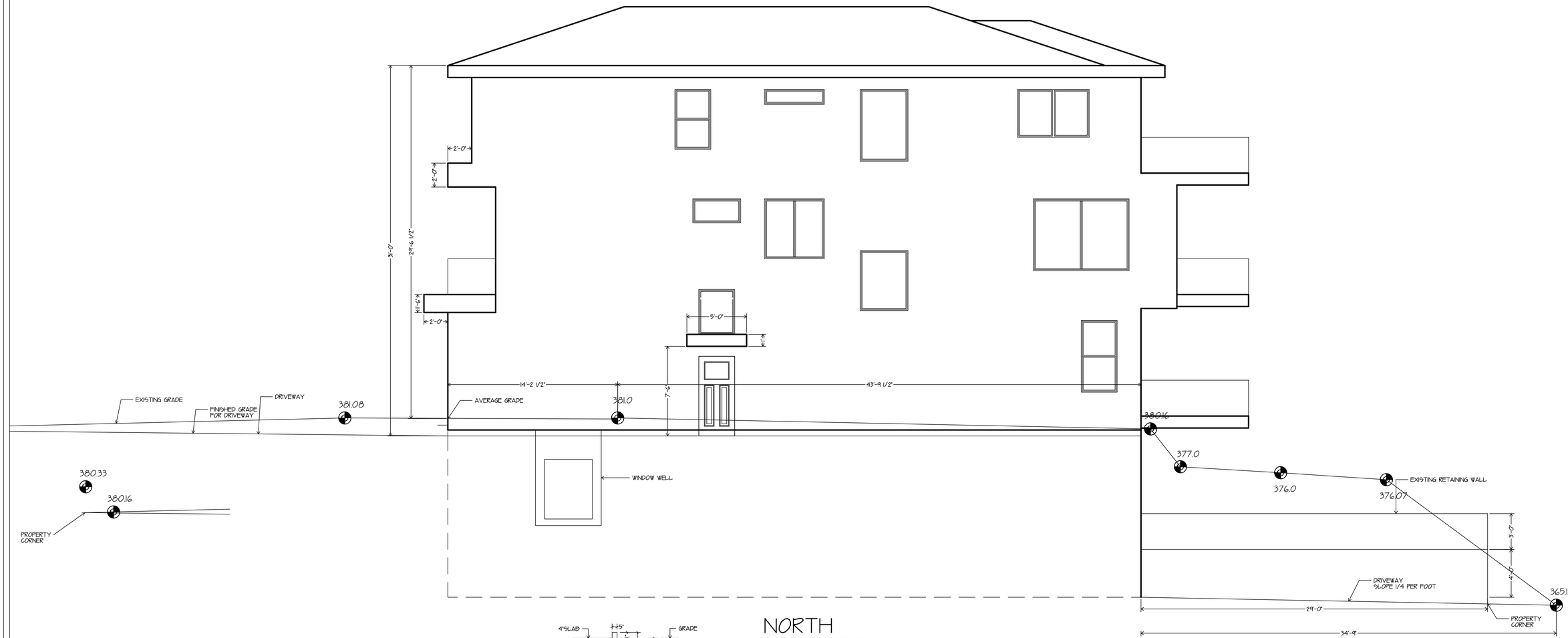
EAST / WEST ELEVATION PLAN

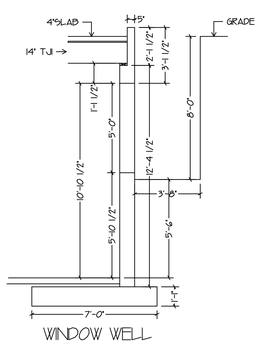
8454
42nd SW

DATE ISSUED
7/4/14

SHEET
7

DATE
REVISED:
7/27/14
7/30/14





WINDOW WELL

NORTH ELEVATION

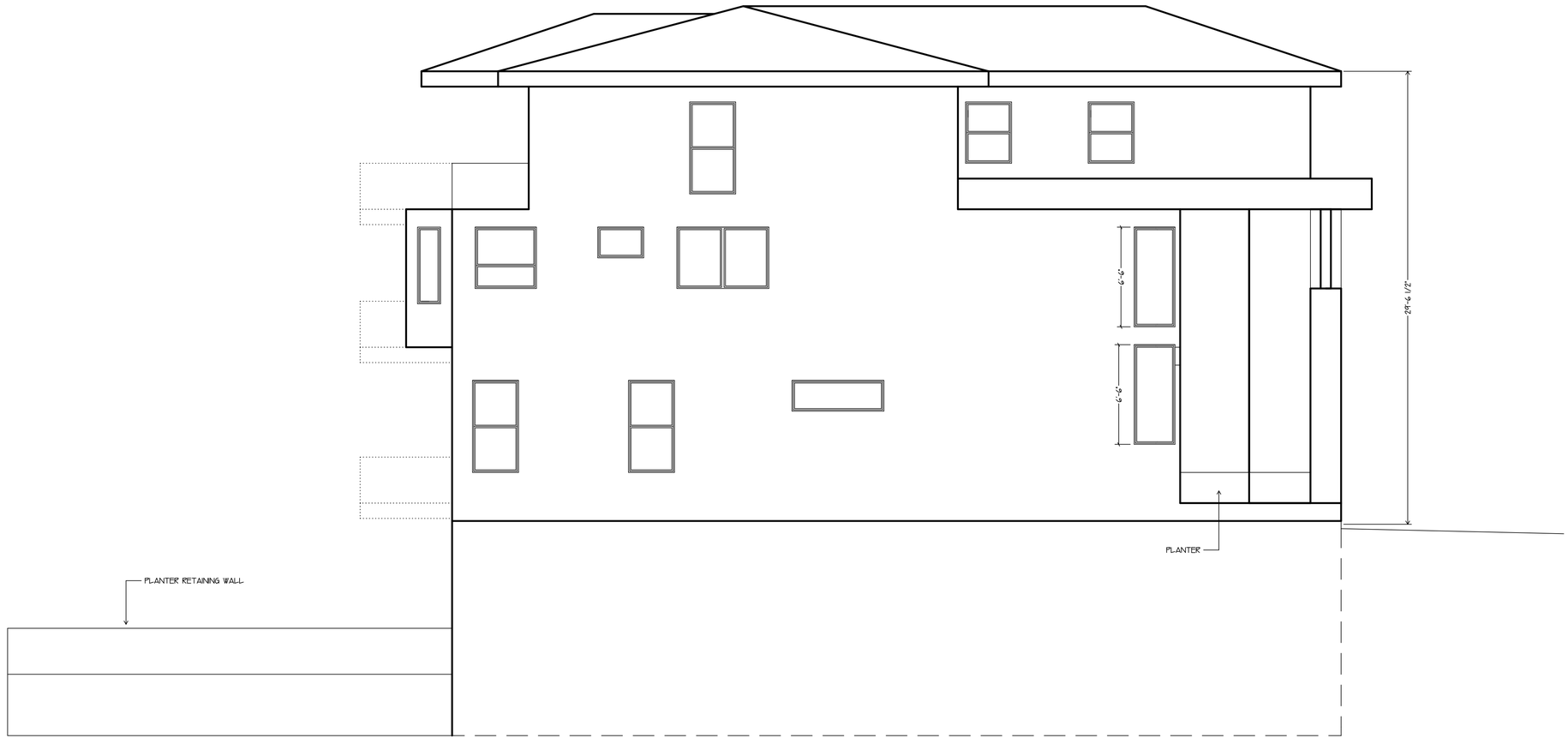
SCALE 1/4" = 1' 0"

NORTH ELEVATION PLAN

84XX
42nd SW

DATE ISSUED
7/4/14

SHEET
8



SOUTH ELEVATION

SCALE 1/4" = 1' 0"

DATE REVISED:
5/05/15

SOUTH ELEVATION PLAN

8454
42nd SW

DATE ISSUED
7/4/14

SHEET
9

GENERAL STRUCTURAL NOTES

1. All materials and workmanship shall conform to the drawings, the 2012 International Building Code and the 2012 International Residential Code.

2. LOADS

Roof Live Load	25 psf
Floor Live Load	40 psf
Wind Load	Basic Wind Speed 110 mph exposure B
Earthquake	Zone D2, Seismic design D,R=6.5
Allowable Soil Bearing	2000 psf (assume Owner to verify)

3. GLUE LAMINATED MEMBERS shall be fabricated in conformance with ANSI A190.1 Standard No. 25-10 and 25-11. Each member shall bear an AITC identification mark and be Douglas Fir combination 24F-V4, Fb = 2,400 psi, FV = 165 psi. Shop drawings and glue laminated members shall be submitted to the structural engineer for review and approval prior to fabrication.

4. Framing lumber shall be graded and marked on conformance with W.C.L.B. standard grading rules for West Coast Lumber No. 16, latest edition. Furnish to the following minimum standards;

Joists and Planks	D.F. Dense No. 2,
Beams, Stringers	D.F. No. 1, fb = 1350 psi, fv = 85 psi
Post & Timbers	D.F. No. 1
Light Framing & Plates	D.F. Standard
Studs	D.F. Stud/Hem-fir stud

5. Wood framing details not shown otherwise shall be constructed to the minimum standards of the 2012 IBC. Minimum nailing, unless otherwise noted, shall conform to the current edition the International Building Code

6. All wood plates and blocking in direct contact with concrete shall be pressure treated with an approved preservative. Provide 2 layers of asphalt impregnated building paper between untreated wood and concrete.

7. Unless shown otherwise on drawings wood plates shall be bolted to foundation walls with 5/8" round bolt at 48" w/ Square washers, on center, imbed at least 7" in concrete. There shall be a minimum of two bolts per piece with one bolt located within 6" from end of each piece.

8. At sawn timber joist areas, provide cross bridging at 8 foot on centers, maximum spacing, and solid blocking at bearing points. Provide double joists under all partitiitions. Provide double joists each side of openings unless detailed otherwise. Provide double studs each side of alll openings unless detailed otherwise.

9. Provide solid blocking for wood columns through floors to supports below.

10. Individual members of built up posts and beams shall be attached with 16d spikes at 12 inches on center staggered unless detailed otherwise.

11. Notations on drawings relating to framing clips, joist hangers, and other connecting devices refer to the catalog numbers of connector manufactured by the Simpson Strong Tie Co., San Leandro, CA. Equivalent devices by other manufacturers may be substituted provided they have ICBO approval for equal load capabilities.

12. FRAMEING Contractor shall provide temporary bracing for the structure and structural components until all final connections have been completed in accordance with the plans.

13. Structural steel including plate and rolled shapes shall conform to ASTM A-36, Fy = 36 ksi. Steel tubing and pipe shall conform to ASTM A 53, Grade B, or A501.

14. All welding shall conform with AISC and AWS Standards and shall be performed by certified welders using E70 XX electrodes.* continuous fillet welds. All welding shall be performed by welders certified in accordance with AWS D1.1 and Washington Association of Building Officials (WABO).

15. BOLTS shall conform to ASTM A307 unless noted otherwise on drawings.

16. Concrete for footings and walls shall attain a 28-day strength of f'c = 2,500 psi (fc = 675 psi). Mix shall contain not less than 5-1/2 94 pound sacks cement per cubic yard of concrete per cubic yard nor more than six gallons of water per 94 pound sack of cement. The Amount shall be 4% - 1% by volume.

17. Reinforcing steel shall conform to ASTM A615 Grade 40, fy = 40,000 psi. Welded wire mesh shall conform to ASTM A185.

18. CONCRETE EXPANSION ANCHORS shall be "Phillips Red Head" as manufactured by ITT Phillips Drill Division, or equal, installed in strict conformance with the manufacturer's published recommendations.

19. Concrete protection (cover) for reinforcing steel shall be as follows:

Footings and other unformed surfaces:	3"
Formed surfaces, exposed to earth, (i.e., walls below ground) or weather:	2"
#5 bars or smaller:	1-1/2"
Column ties, spirals and beam stirrups:	1-1/2"
Slabs and interior face of walls:	3/4"

20. Foundation ventilation shall provide one square foot of net opening for each 150 square feet of floor area. Openings shall be as close to corners as possible and shall provide cross ventilation. The area of the opening shall be approximately equally distributed along the length of at least two opposite sides. The openings shall be covered with corrosion resistant wire mesh with openings of 1/4" in dimension.

21. Attic ventilation shall provide one square foot of net opening for each 150 square feet of roof area.

22. Hot water tank must have a seismic strap.Appliances in garage shall comply with IRC M1307, IMC 303.4 and 304.3 and IBC 1607.7.3

ROOF VENTILATION REQUIREMENT:
Roof Area = 1347 Sq Feet / 150 = 8.98 Sq Feet
Ventilation provided: 9- 14" MILL STEEL ROOF VENT
144 SI NET AREA = 9 Sq feet provided

GENERAL ARCHITECTURAL NOTES

1. Fireblocking, draftstops and firestops shall be provided to cut off all concealed draft openings from vertical to horizontal spaces

2. Entry doors to have minimum 1" throw for deadbolts, view ports centered at eye level. All egress windows to be operable without special tool or knowledge, and lockable from inside.

3. All windows to be double-pane insulated units, Class 32 or better. Glazing in doors and within 18" of floor to be tempered safety glass. Vents in windows to provide 4 sq. inches per code. SMC M1508.4.5

4. Fans in kitchen and baths to be vented to outside. Shower heads to have maximum 2.5 gal. per minute flow.

5. Service water pipes in unheated spaces to be insulated

6., Duct work in unheated spaces to be taped at joints and insulated.

7. All openings in perimeter to be sealed, caulked or weather-stripped per Seattle Energy Code 2012. Tears, joints, laps in vapor barriers to be taped sealed.

8. All flashing to be galvanized and 26 ga. minimum. Return flashing 24" up roof from eaves, valleys and crickets.

9. Provide smoke alarms in sleeping areas and basements per IBC section 310.9 plus all floors. Combination CO2 plus fire outside each bedroom and on each floor

10. Roof, floor and footing drains to be tightlined separately to approved drainage discharge system.

11. Contractor to review documents with Washington State Registered Structural Engineer where required, for approval prior to start of construction.ds

12. A Residential Energy Compliance Certificate complying with SEC 105.4 is required to be completed by a design professional or builder and permanently posted within 3' of the electrical panel prior to final inspection.

13. Duct leakage test results shall be provided to building inspector and home owner prior to final inspection.

14. Building air leakage testing, demonstrating the Specific Leakage Area is < 0.00030 (sect 502.4.5) is required prior to final inspection. The test results shall be posted on the Residential Energy Compliance Certificate (sec 105.4)

15. A signed affidavit documenting the duct leakage test results shall be provided to the building inspector to an approved final inspection.

16. Minimum 75% of all interior luminaries shall be high efficacy luminaries. All exterior lighting shall be high efficacy luminaries.

17. Exterior lighting will be shielded and directed away from residential zoned lots

18. Each dwelling unit is required to be provided with at least one programmable thermostat for the regulation of temperature

19. SEC- TABLE 406.2 - Use option 5b (1.5 credit). See sheet 2

20.Insulation Values Required:

Floors	R30	Ceilings	R49 or R38 adv
Vaulted ceilings	R38	Exterior walls	R21
Below grade int. walls	R21	Below grade ext. walls	R10
Slab on grade	R10	Exterior doors	U.20 max.
Skylights	U.50 max.	Glazing	U.30 max.

ELEVATOR NOTES

1. Private residence elevators shall comply with ASME 17.1 Section 5.3

2. Private residence elevators used in Type A or Type B units shall comply with ICC/ANSI A117.1 - 2009 Section 409

3. Machinery rooms for private residence elevators shall comply with ASME A17.1 Sections 2.1, 2.7, 2.8 and 3.7 SBC 3020.5

4. The installation of pipes, ducts, conduits, wireing, and the storage of materials not required for the operation of the elevator is prohibited in machine rooms and hoistways. SBC 3010.1

5. All new elevators and their installation shall conform with ASME A17.1 as amended in SBC Section 3016, and the spicific requirements of SBC Sections 3017, 3018 and 3019

6., Elevator hoistway enciosures shall be constructed as shaft enciosures with a fire rating of 1 hour. Shaft enciosures shall be constructed as fire barriers in accordance with SBC Section 706 SBC 707.14 and 707.4

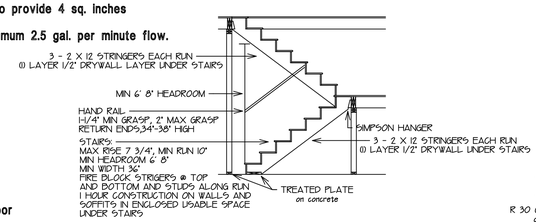
7. Elevator installations shall comply with ASME A17.1 Section 8.4 for seismic considerations. The provisions for Seismic Zone 3 shall apply. SBC 3016.3

8. Elevator controlls and machinery other than driving machines and governors shall be located in a room dedicated exclusively to elevator equipment. Elevator equipment and machine rooms shall be enclosed by fire barriers with a 1 hour rating. SBC 3020.2

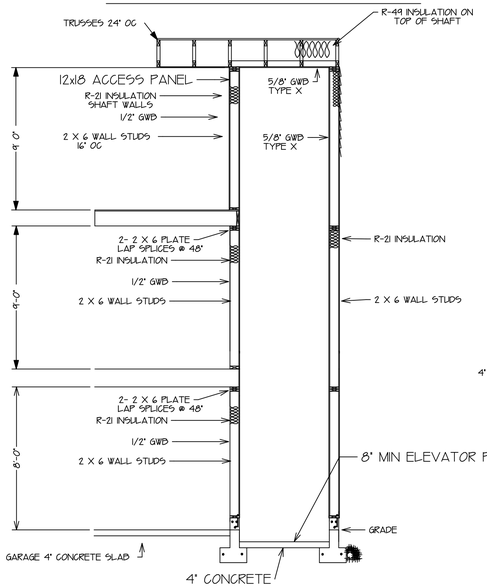
9. Provide working clearances inside the machinery room as specified in SBC Section 3020.5 The width of working space in front of controllers shall be 30" or the width of the controller if greater. The depth of the working space in the direction of access shall be at least 48". Space outside the machine room is permited to be used to provide working clearence required for the front of controllers for rooms containing only elevator controls.

10. Verify all required clearances, wall construction types, and necessary structural support with the elevator manufacturer.

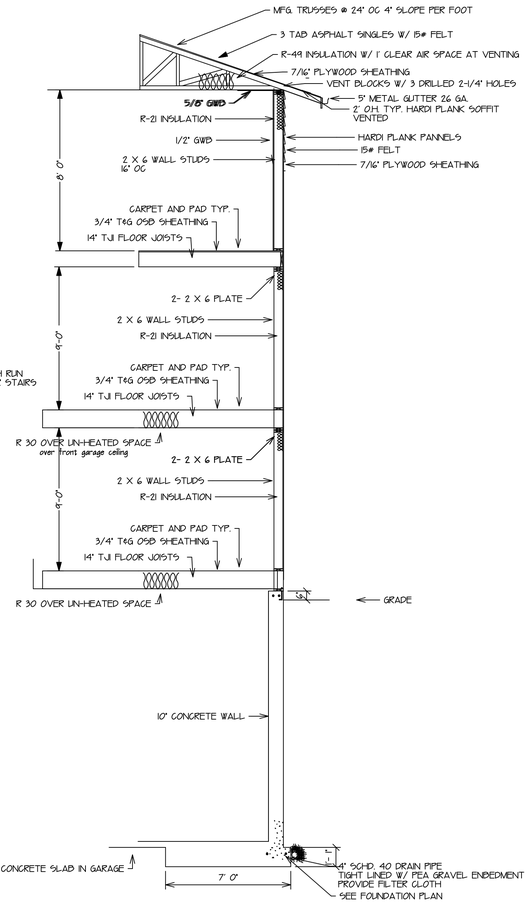
11. Elevator permits will be required prior to elevator installation.



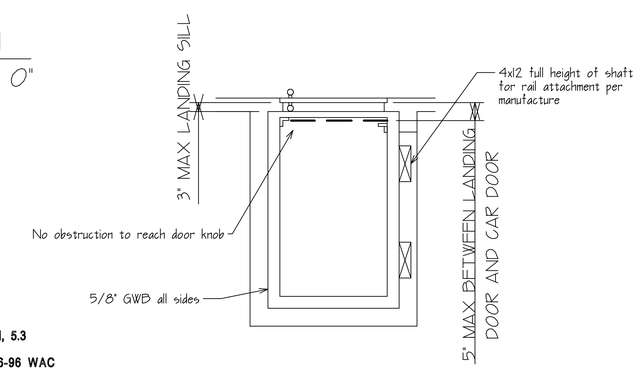
TYPICAL STAIR SECTION



ELEVATOR SECTION
SCALE 1/4" = 1' 0"



SOUTH WALL SECTION
SCALE 1/4" = 1' 0"



ELEVATOR TO COMPLY WITH ASME A17.1, 5.3
SEATTLE BUILDING CODE & SBC 3020.5
SEATLE ELECTRICAL CODE CHAPTER 296-96 WAC
AND ALL ATTACHED NOTES.
ELEVATOR REQUIRES A SEPERATE PERMIT AND INSTALLATION BY A WA. STATE LICENSED ELEVATOR CONTRACTOR.

HOISTWAY DOOR SECTION
SCALE 1/2" = 1' 0"

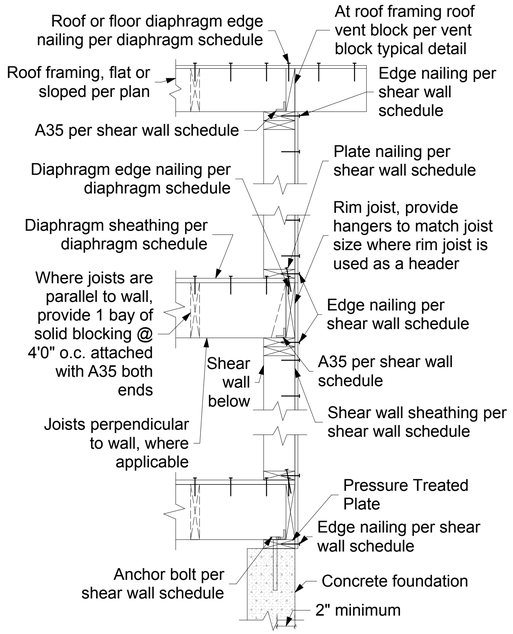
DATE REVISED:
5/5/15

NOTES / DETAILS

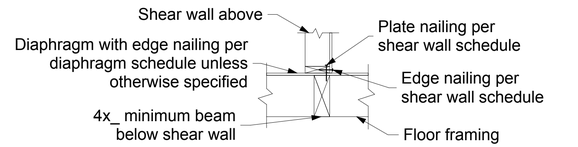
8454 42ND AVE SW

DATE ISSUED
04/20/15

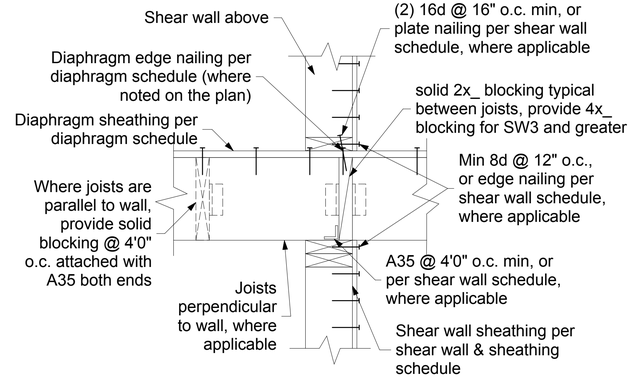
SHEET
10



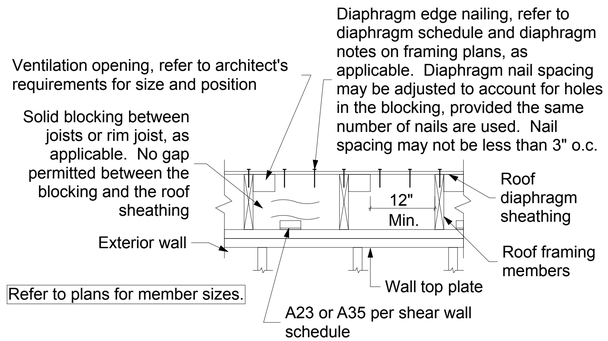
Exterior Shear Wall Framing Typical Detail
1" = 1'-0"



Discontinuous Shear Wall Detail
3/4" = 1'-0"



Interior Shear Wall Standard Detail
1 1/2"= 1'-0"



Roof Ventilation Typical Detail
1" = 1'-0"

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Date:
04/24/15

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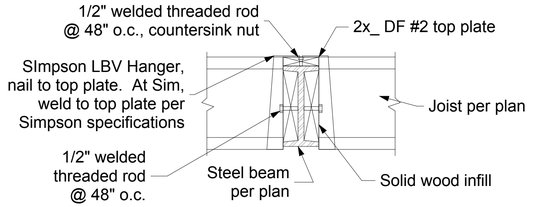
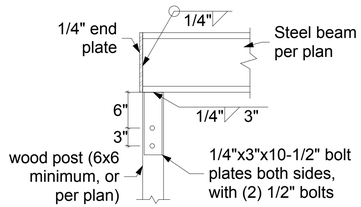
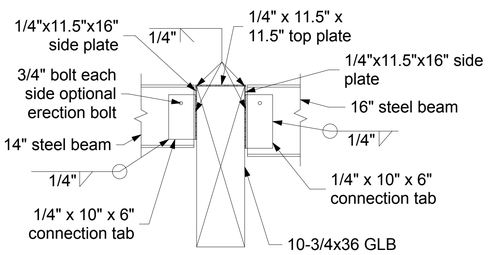
S1



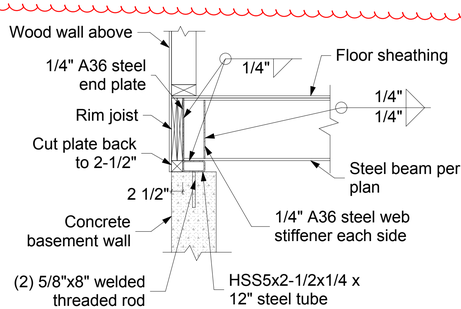
1 Steel Beam Detail
1" = 1'-0"



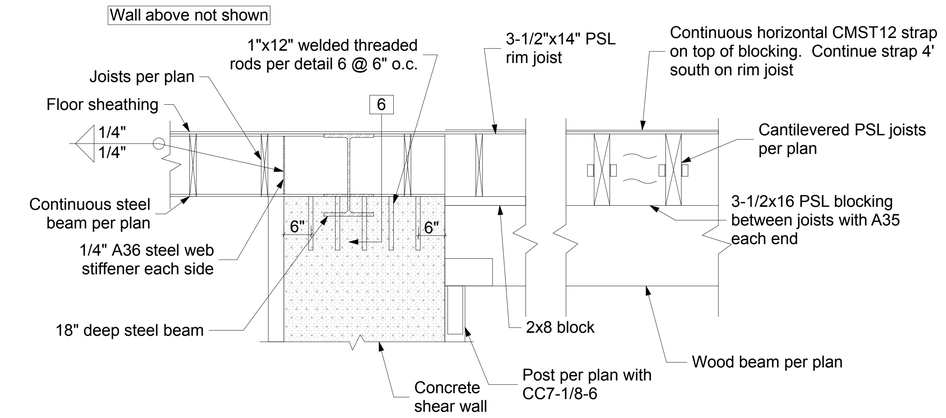
2 Steel Beam to Wood Post Detail
1" = 1'-0"



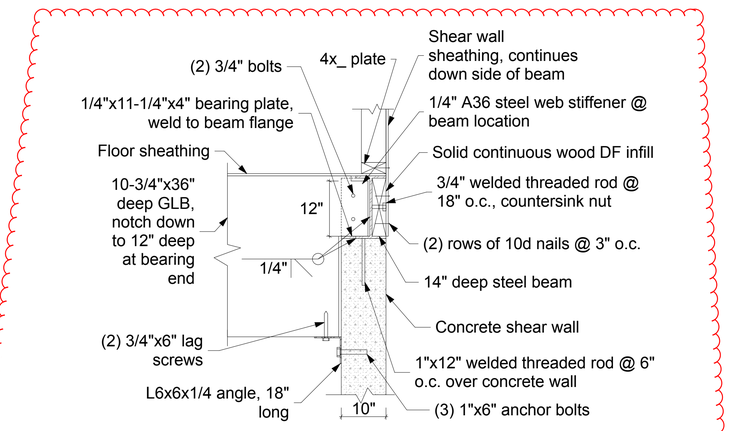
3 Steel Beam Connection Detail
3/4" = 1'-0"



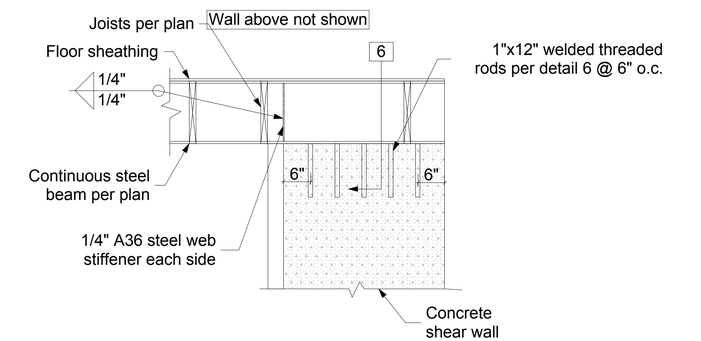
4 Steel Beam to Concrete Detail
3/4" = 1'-0"



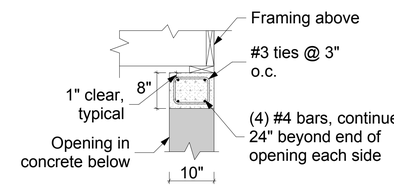
5 Steel Beam to Concrete Detail 2
3/4" = 1'-0"



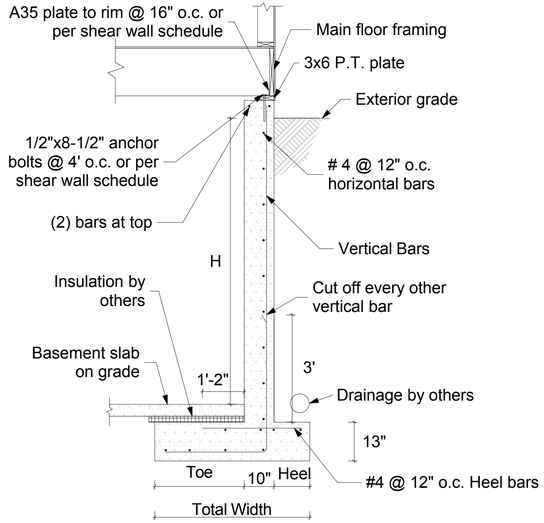
6 Steel Beam to Concrete Detail 3
3/4" = 1'-0"



7 Steel Beam to Concrete Detail 4
3/4" = 1'-0"



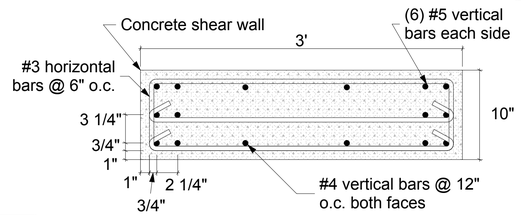
13 Concrete Beam Detail
3/4" = 1'-0"



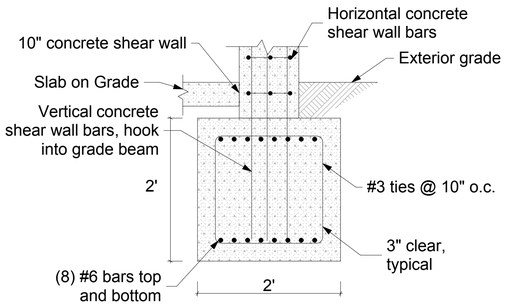
Max H	Toe	Heel	Total Width	Vertical Bars
13.5'	5'	15"	7'1"	#5 @ 4" o.c.
10'	3'	15"	5'1"	#5 @ 9" o.c.
5'	2'	9"	3'7"	#4 @ 9" o.c.

8 Basement Wall Detail
1/2" = 1'-0"

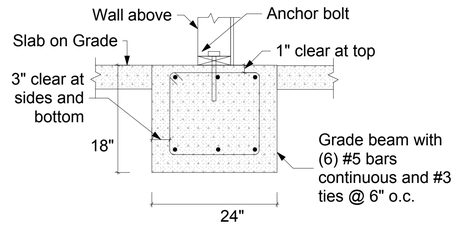
9 Special Reinforced Concrete Wall Detail
1/2" = 1'-0"



10 Special Reinforced Concrete Wall Detail 2
1 1/2"= 1'-0"



11 Grade beam detail
1" = 1'-0"



12 Interior Grade beam detail
1" = 1'-0"

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Revisions:

Date: **04/24/15**

Sheet: **S2**

JOHN S. APOLIS — STATE OF WASHINGTON — 23434 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

Structural Notes:

Applicable Codes and Standards:

2012 Seattle Building Code (SBC) and other applicable local building codes.
ASCE/SEI 07-10 - "Minimum Design Loads for Buildings and Other Structures"
2012 NDS for wood structures.
National Forest Products Association - "National Design Specification for Wood Construction".
American Wood Preservers Bureau - AWPB Standards for Pressure Treated Material.
American Concrete Institute - ACI 315, ACI 318, ACI 301, ACI 307.
American Institute of Steel Construction - "Specification for the Design, Fabrication, and Erection of Structural Steel."
American Welding Society - AWS Structural Welding Code.

Structural design shall be in accordance with the latest edition of above codes and standards. Contractor shall comply with the latest edition of all applicable codes and standards.

Special Inspections:

Special Inspections are required for:
Concrete reinforcement
Structural Steel Erection

Design Loads:

Live load: roof 25 psf (snow)
floors 40 psf floor live load
Wind load: Basic wind speed 110 mph, exposure B, KzT=2.0
Building Category: Enclosed, Wind Important Factor Iw = 1.0
Refer to calculation page L1 for design wind forces.
Internal pressure 5 psf, Components and cladding design per 1609.6.1.2

Seismic loading per SBC Sections 1603 and 1613 through 1622, Site Class D.
The basic structural type is a bearing wall system with light framed walls with shear panels. Rw = 6.5 (wood structural panels), soil type D.
Seismic importance factor 1.0, Seismic Use Group I
Design and Analysis by Simplified Design Procedure
Peak Ground Accelerations (PGA) based on USGS Hazards Program, by lat/long.
PGA 1 sec = .546 PGA .2 sec = 1.571
Seismic base shear = 0.161 * Dead Load

Foundations:

Soil parameters (assumed): Vertical allowable soil pressure: 2,000 psf
All soil conditions are to be field verified during construction. Footings shall bear on firm natural soils or on structural fill placed over firm natural soils, and inspected in place. Footings shall extend 18 inches minimum below adjacent exterior finished grade and shall extend 12 inches minimum below existing interior grade unless otherwise noted on plans. Structural fill shall be placed in 12-inch maximum horizontal lifts (loose thickness) and compacted to 90 percent of maximum dry density in accordance with ASTM D-1557. Imported structural fill shall be granular material containing no more than 5 percent fines, passing no. 200 sieve. Structural fill in place shall be tested by a licensed soil engineer or approved by the building inspector.

Cast in Place Concrete:

Concrete shall attain a minimum compressive strength of 2,500 psi at 28 days (5-½ sack mix). An alternate mix provided by the concrete supplier and pre-approved by the building department is acceptable. Reinforcing steel shall conform to ASTM A-615, Grade 40 (Fy=40,000 psi) for all bars except retaining wall vertical bars, which shall be Grade 60 (Fy=60,000 psi). Provide all wall and footing horizontal bars with 2'-0" x 2'-0" corner bars of the same size at all corners and wall intersections. Minimum lap splice 32 bar diameters for Grade 40 bars, and 48 bar diameters for Grade 60 bars.

Concrete protection for reinforcement shall be:

Concrete exposed to earth or weather	1.5" (#5 & smaller)
Concrete cast against earth	3"
Slabs, walls, joists	0.75"

Structural steel:

Plates and shapes, ASTM A36, Fy=36 ksi, specified section ASTM A995, Fy= 50ksi. Structural Steel Tube (HSS) per ASTM A500, Fy=46 ksi.

Bolts:

Bolts which are used in connections of steel beams to other steel beams or to the concrete supporting structure shall conform to ASTM A325. Anchor bolts shall conform to F1554. All other bolts shall conform to ASTM A307.

Welding:

Use E70xx electrodes for welding. All fillet welds shall be 3/16" or equal to minimum thickness of member being welded, whichever is greater, unless otherwise shown. All welding shall conform to the provisions of AWS and shall be performed by welders certified in accordance with AWS and WABO.

Lumber:

All sill plates and other wood framing which is in contact with concrete or masonry must be pressure treated. For anchor bolts connecting wood sill plates to concrete or masonry, provide galvanized steel washers on top of the sill, minimum size 3" x 3" x 1/4" thick.

Where toenails are used for stud wall construction, a minimum of (2) toenails at top and bottom of each stud shall be provided. Toenails shall be 16d nails driven at approximately a 45 degree angle, with a minimum of 1-1/2" of the nail shank shall be embedded in both the stud and the plate. End nails driven through the plate and into the stud end grain are not permitted. Simpson A34 clips at top and bottom of each stud are permitted where correct toenailing is not provided.

Where LVLs are specified with a thickness greater than 1-3/4", the beam may be built up out of multiple 1-3/4" LVL beams connected per truss-joist TJ-9000 specifier's guide.

Unless noted otherwise, the following grades and species shall be used for structural lumber:

2x joists	Hem-Fir #2
2x, 3x, and 4x studs	DF/L standard for plywood or WSP shear walls Hem-Fir standard for other walls
4x and 6x beams	DF-L #1
Microllam LVL lumber	LVL 1.9E, Fb = 2600 psi, Fv = 285 psi (minimums)
Parallam lumber	2.0 WS, Fb = 2900 psi, Fv = 290 psi (minimums)
Glu-lam lumber	24F-V4 or 24F-V8 as applicable

Plywood Thickness, Grade, and Nailing:

Install plywood sheets with face grain perpendicular to framing. Stagger joints in adjacent sheets. If not otherwise noted, use nailing schedule, Table 2304.9.1 of the SBC.

Manufactured Roof Trusses:

Manufactured Trusses specified on the plans are prefabricated products manufactured by a truss manufacturer. The contractor shall submit shop drawings and stamped structural design calculations for review. Truss design and shop drawings shall include location and weight of all equipment being supported by these trusses.

Manufactured Floor Joists:

Floor joists specified on the plans are prefabricated products manufactured by the Weyerhaeuser Corporation. The contractor shall submit shop drawings and stamped structural design calculations for review. Joist design and shop drawings shall include location and weight of all equipment being supported by these joists. Other suppliers may be used, upon approval by the engineer of record.

Metal Framing Connectors:

Unless otherwise noted: Metal framing connectors shall be manufactured by the Simpson company, or approved equal. Unless noted otherwise, use U-series joist hangers to match joist size (e.g., U210 for 2x10 joist). Provide H1 or H2.5 hurricane ties, or other connectors with similar capacity, at every other roof joist, and H6 or H7 at ends of roof beams and girder trusses. Where supported by wood posts, wood beams shall be connected to the tops of the posts using Simpson AC, PC or PCC post caps, and to the bottoms of the posts bearing on wood framing using Simpson AC connectors. Where supported by perpendicular beams, wood beams shall be connected by HU-series face mount beam hangers. Provide Simpson PB post bases to connect posts to concrete foundations.

DRAG STRUT NOTE DS

DS denotes a horizontal Simpson CMSTC16 drag strut connector strap, minimuim 8 feet long, and centered between the structural items being connected, either wood beams or shear wall top plates. The strap may be installed either on top of the plywood floor diaphragm, or connecting a beam or joist to wall top plates, as applicable and feasible.

If desired, it is acceptable to rout a channel up to 1/8" deep in the 3/4" T&G plywood floor sheathing, to provide a flush surface.

Where no joists occur below the strap, provide 3-1/2" wide by 3-1/2" deep (minimum) solid wood blocking in the floor framing, below the strap, for nailing. The blocking should be attached to the perpendicular joists with Simpson A35 framing anchors at both ends of each block.

Refer to The latest edition of the Simpson Catalog for required nailing and other requirements.

Note "TSW" (Truss Connection to Shear Wall)

TSW At parallel trusses, denotes that one typical roof truss shall be located directly over the indicated shear wall, and that the bottom chord of that roof truss shall be connected to the top plate of the shear wall below with Simpson A35 connectors per the shear wall schedule.

Additionally, the truss top chord shall receive roof diaphragm edge nailing from the roof sheathing.

Both ends of the indicated trusses shall be connected to a double stud in the shear wall below, using a Simpson H6 or H7 connector. Provide two rows of shear wall edge nailing through the shear wall plywood sheathing into the double studs.

Truss spacing may need to be adjusted, or additional trusses provided, to assure that a truss is located over each indicated shear wall.

At perpendicular trusses, 2x4 walls sheathed per SW1 shall be constructed over the shear wall below between the trusses. These walls shall be connected to the shear wall below with A35 connectors per the shear wall schedule, and to the roof sheathing with diaphragm edge nailing.

Provide vertical CS16 straps at each end of each wall section to the shear wall studs below.

Hold Down Notes

Convention for showing shear walls and hold downs: Shear walls are shown on the framing plan for the floor above. (For example, first floor shear walls will be shown on the second floor framing plan, and the shear walls for the topmost floor will be shown on the roof framing plan.) Hold downs are located at the bottom of that shear wall, and connect the end of the shear wall to wall framing or a structural beam located in the floor below the shear wall. Contact the engineer of record for clarification if needed.

Hold downs for each floor must be continuously connected to hold downs on the floor below (or to other intermediate wood framing where so indicated), until they are finally connected to the concrete foundation.

Hold downs shall be installed so as to be as far apart as is reasonable. Hold downs may be located on either the near side or the far side of the post or double stud to which they are attached. In no case shall a hold down bolt be located farther than 6" from the end of the shear wall, except with prior written approval of the engineer. Refer to the latest edition of the Simpson Catalog for details.

Where multiple studs are called out at a hold down, nail studs together with (2) 16d nails at 8" o.c. or 1/4" x 3" Simpson SDS Screws at 12" o.c.

CS or 2CS denotes a vertically oriented strap hold down consisting of one or two Simpson CS16 vertical strap ties, connecting the end stud of the shear wall indicated to new or existing studs in the wall framing below, or to a wood beam supporting the shear wall, where applicable.

HDUx denotes a Simpson HDU(2,4,5,8,or 11)-SDS2.5 hold down. For hold down bolts at new concrete foundations, use the following bolts:

For HDU2,4,5: 5/8" diameter A307 threaded steel rod may be used, which shall be embedded into the concrete wall 8"
For HDU8: SB7/8x24 anchor bolt may be used with 18" of embedment into the concrete wall.
For HDU11, 14: SB1x30 anchor bolt may be used with 24"

Where the specified anchor is not long enough to reach the required embedment, a rod coupler may be used with matching threaded rod to extend the hold down bolt.

Where PAB anchors are called out on the plans, they must be installed in the center of the grade beam with 12" of embedment into the grade beam.

CMSTC16 denotes a vertically oriented CMSTC16 strap hold down, as above.

CMST14 denotes a vertically oriented CMST14 strap hold down, as above.

CMST12 denotes a vertically oriented CMST12 strap hold down, as above.

HDQ8 denotes a new Simpson HDQ8-SDS2.5 hold down. See HDU8 above.

Contact the engineer of record prior to proceeding if any of these requirements are not met, or if the installation of the hold downs results in any visible damage to the existing foundation.

SHEAR WALL SCHEDULE

(Lumber for shear walls is HF#2 or better, unless otherwise noted.)

Type	Material	Edge Nailing	Field Nailing	A.B. Size/Spacing	Plate Nailing	Plates	A23 Spacing	Shear Capacity
SW1	15/32" WSP one side	8d @ 6"	8d @ 12"	1/2"Ø @ 48"	(2) 16d @ 9"	2x_	24"	230 plf
SW2	15/32" WSP one side	8d @ 4"	8d @ 12"	1/2"Ø @ 32"	(2) 16d @ 6"	2x_	16"	350 plf
SW3	15/32" WSP one side	10d @ 3"	10d @ 12"	5/8"Ø @ 24"	(2) 16d @ 4"	3x_	12"	550 plf
SW3X	15/32" WSP one side	10d @ 2"	10d @ 12"	5/8"Ø @ 24"	5/8"Ø x 8" Lag @ 24"	3x_	9"	710 plf
SW4	15/32" WSP two sides	8d @ 4"	8d @ 12"	5/8"Ø @ 24"	5/8"Ø x 8" Lag @ 24"	3x_	10"	700 plf
SW5	15/32" WSP two sides	8d @ 3"	8d @ 12"	5/8"Ø @ 16"	5/8"Ø x 8" Lag @ 16"	3x_	8"	910 plf
SW6	15/32" WSP two sides	10d @ 3"	10d @ 12"	5/8"Ø @ 16"	5/8"Ø x 8" Lag @ 16"	3x_	6"	1110 plf
SW7	15/32" WSP two sides	10d @ 2"	10d @ 12"	3/4"Ø @ 16"	3/4"Ø x 8" Lag @ 16"	3x_	4"	1430 plf

For shear wall callouts on the Structural Framing Plans: SW x (y') denotes a shear wall type "x" with a minimum length of "y" feet.

- For SW3 and greater: studs, plates, and blocking where two WSP panels abut shall have a minimum 3" nominal thickness. Double 2x_ members may be used for studs if the members are connected by plate nailing. Note 10d nails at WSP panel edges.
- For shear walls with 2 layers of sheathing: Both layers of the sheathing may be installed on the same side of the shear wall, provided the joints between sheathing panels for the two layers are offset. End studs, studs at panel joints, and top and bottom plates must be 3x_ or thicker lumber. Nails should be staggered evenly in rows so that no two nails are closer than 1-1/2" apart. Top and bottom plates may be 2x_ lumber if the sheathing extends up or down past the plates to a continuous rim joist, and is nailed there.
- "WSP" refers to "Wood Structural Panel", either plywood or other wood materials.
- Provide double stud minimum at both ends of all shear walls.
- At the roof or top level of any shear wall, "A23 spacing", and all other relevant connector specifications, apply to assemblies at both the top and bottom of the shear wall. At lower levels, apply to the bottom of the wall only.
- Provide floor diaphragm edge nailing per diaphragm schedule through floor plywood into blocking, parallel joist framing, or top plates (whichever applies) of all shear walls.
- Provide 3x_ plates, and 4x_ rim joists, minimum, where lag screws are specified for plate nailing.
- Where shear wall edge nails are spaced closer than 3" o.c., or spaced 3" o.c. with 10d nails, foundation sill plates and all framing members receiving edge nailing from abutting panels shall not be less than a single 3x_ member.
- Where panels are applied on the same face of a wall and nail spacing is less than 6 inches o.c. on either side, panel joints shall be offset horizontally and vertically to fall on different framing members, or all framing supporting panel edges shall consist of 3 inch nominal or thicker members and the position of nails on each side shall be staggered vertically.
- Provide 4x_ or double 2x_ framing where A23 angles are used on both sides of one piece of wood.
- Where a shear wall terminates above the foundation level (no shear wall below), provide minimum 4x_ blocking or double joist framing (as applicable) below the shear wall."&" Plate nailing per this schedule shall be nailed into this blocking at the bottom of the shear wall.
- Shear wall nails shall be placed no closer than 3/8" from a panel edge or perpendicular face of stud.
- Maximum spacing between nails shall not exceed 12".
- Shear wall nailing shall be common or galvanized box nails, unless lag screws are noted. Galvanized nails shall not be hot dipped or tumbled.
- Lag screw plate connectors shall penetrate 3.5" minimum, and plates or beams receiving lag screws shall have a minimum width of 3.5".
- Where hold downs are specified, the shear wall bolt shall be located within 6 inches of the end of the shear wall, unless otherwise approved by the engineer of record. Minimum end studs shall be as specified in the most recent Simpson catalog.
- Shear wall edge nailing through shear wall sheathing shall be provided into all studs attached to a hold down.
- Minimum depth of embedment for shear wall anchor bolts shall be as specified in IBC Table 1911.2.
- Plate nails shall be nailed into a solid wood rim joist.
- 2x_ plates may be substited for 3x_ plates if panels are nailed with edge nailing directly to the rim joist.
- Where 3x_ plates are used, (2) 20d common nails must be used instead of (2) 16d common nails to connect studs to the bottom plate.
- Where Roof ventilation is required over a shear wall, see roof ventilation detail.

Diaphragm Schedule

(Lumber for diaphragm construction is HF#2 or better, unless otherwise noted.)

Type	Material	Edge Nailing	Field Nailing	Edge Blocking	Remarks
Roof	15/32" CDX 24/0	8d @ 6" o.c.	8d @ 12" o.c.	no	Minimum Standard
Floor	23/32" CDX 48/24	8d @ 6" o.c.	8d @ 12" o.c.	no	Minimum Standard

- "WSP" refers to "Wood Structural Panel", either plywood or other wood materials.
- Rim joists at exterior walls shall be continuous for tension. At rim joist splice locations, provide (2) CS16 horizontal straps, minimum 24" long, centered on the splice.
- Where roof or floor framing is cantilevered over an exterior wall below, provide solid blocking with Diaphragm edge nailing between joists.
- This is the minimum required diaphragm construction. Where otherwise noted on the plans, additional blocking or nailing may be required.

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Revisions:

Date: 04/24/15

Sheet: S3