SOUTH JORDAN

City of South Jordan

Building and Safety Division

Certificate of Occupancy

This certificate issued pursuant to the requirements of Section109 of the Uniform Building Code certifying that at the time of issuance this structure was in compliance with the various ordinances of the City regulating building construction or use for the following address.

Building Address: **2084 LAWRENCE CIR W, Apt. (9580 S)**

Project Number: **2012-15890**

Permits: 43964 Garage/Storage/Barn 5/16/2013

Contractor Name: **GAVIN WENZEL**

Contractor Address **2084 LAWRENCE CIRCLE SOUTH JORDAN UT 84095**

Description: **DETACHED GARAGE WITH GUEST HOUSE ABOVE**
465 SF UNFINISHED STORAGE AREA
****CONTRACTOR CHANGED FROM OWNER/BUILDER TO NEXUS DEVELOPMENT 6/27/14****
CO ISSUED 7/17/2015

Occupancy Type: **SF Residential**

Const. Type: **Type V B**

Square Feet:

APN: **2710105005**

Tract Number:

Lot Number:

Date: **7/17/2015**

Approved By: _____

Building Official

This Certificate shall be posted in a conspicuous place on the premises and shall not be removed except by the Building Official.

Building Project Inspection History Report

City of South Jordan
Building Division
1600 W Towne Center Drive
South Jordan, UT 84065
801-254-3742
http://www.southjordancity.org

Project #: 2012-15890

Address: 2084 LAWRENCE CIR W, Apt. (9580 S)

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CO ISSUED 7/17/2015

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
159730	43964	*	Hardy, Jim	Building	9/26/2013	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Footing/Ufer Ground	9/26/2013	12:00 AM	Reschedule / Correction	- provide plot plan to confirm setbacks.

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
159823	43964	*	Hardy, Jim	Building	9/27/2013	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Foundation/Ufer Ground	9/27/2013	12:00 AM	None / Approved	
re-footing	9/27/2013	12:00 AM	None / Approved	setbacks per contractor string line.

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
160861	43964	*	Hardy, Jim	Building	10/16/2013	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Ground Plumbing	10/16/2013	12:00 AM	None / Approved	

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
161100	43964	*	Vreeken, Kent	Building	10/22/2013	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Ground Gasline	10/22/2013	12:00 AM	Reschedule / Correction	will need to pressure test gasline - ok to cover

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
161384	43964	*	*, Andrew	Building	10/25/2013	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Gas Line	10/25/2013	12:00 AM	Reschedule / Not Ready	
Re-Ground Gasline	10/25/2013	12:00 AM	Reschedule / Correction	1- Test under ground gas line min 1/3rd of gauge

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
172646	43964	*	Day, Cory	Building	6/23/2014	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Shearwall	6/23/2014	12:00 AM	None / Partial Approval	homeowner/builder will complete and check nailing in holdown straps and nailing touch up in shear as required no reinspection required, homeowner will double check

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
172643	43964	*	Day, Cory	Building	6/24/2014	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Stucco	6/24/2014	12:00 AM	None / Cancelled	cancelled by contractor

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
172783	43964	*	*, Andrew	Building	6/26/2014	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Stucco	6/26/2014	12:00 AM	Reschedule / Correction	** Stucco/stone ** 1- Seal all edges of drip flashing 2- Install electrical for lights outside East side man doors 3- Seal exposed wood at furnace vents 4- Seal A/C line set 5- Repair reverse flashing at bottom corners of North windows

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
172847	43964	*	Day, Cory	Building	6/27/2014	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Four-Way (Frame, elec, mech, plumb, sheathing)	6/27/2014	12:00 AM	Reschedule / Correction	retro anchor bolts frame in mechanical closet frame in b-vent clearances and chase strap top plate under top of stairs nailplates as required throughout check with engineer for bearing 2 ply truss on beam fireblock tub complete interior electrical for (2) exterior lights provide truss specs
Re-Stucco	6/27/2014	12:00 AM	None / Partial Approval	homeowner confirmed all issues completed spot checked by inspector (most covered already)

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
173197	43964	*	*, Andrew	Building	7/8/2014	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Insulation	7/8/2014	12:00 AM	Reschedule / Correction	1- Seal all top plate and floor penetrations 2- Min R-8 on heat runs and return air trunks in unconditioned spaces 3- Complete insulation on exterior wall cavities 4- Call for 5/8" X garage lid fastening when ready
Re-Four Way	7/8/2014	12:00 AM	Reschedule / Correction	1- Complete A14SB roof truss spec 2- Install 2x6 strong back on floor trusses 10' OC

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
173460	43964	*	Day, Cory	Building	7/14/2014	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Re-Four Way	7/14/2014	12:00 AM	Reschedule / Correction	Call when 5/8" lid type x ready Call when shower pan test ready
Re-Insulation	7/14/2014	12:00 AM	None / Approved	

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
178264	43964	*	Day, Cory	Building	10/30/2014	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Re-Four Way	10/30/2014	12:00 AM	Reschedule / Correction	call for shower pan
Sheetrock	10/30/2014	12:00 AM	None / Approved	

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
189386	43964	*	*, Andrew	Building	7/6/2015	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Final Building	7/6/2015	12:00 AM	Reschedule / Correction	1- Provide solid surface landings outside man doors 2- Provide and maintain 30" X 36" working space for A/C disconnect 3- Install A/C unit and verify model numbers and breaker size 4- Paint gas line 5- No vented soffit within 3' of exhaust fan 6- Seal exterior penetrations 7- Install missing plug and switch covers 8- Provide furnace start up calks 9- Provide 1" B vent clearance 10- Provide and maintain 30" X 36" working space for sub-panel 11- ID all breakers in sub-panel 12- Complete electrical in mechanical closet 13- Handrail needs to terminate into wall 14- Guard upper part of stairs 15- Temper window within 24" of door 16- Weather strip attic access cover 17- Complete floor coverings 18- Kitchen island plugs cannot be under 6" over hang 19- Complete kitchen GFCI plugs and test 20- Install kitchen plumbing fixtures 21- Install and secure dishwasher 22- Anti tip range
Re-Four Way	7/6/2015	12:00 AM	None / Approved	

Inspection

Schedule ID	Permit ID	Insp Sched Desc	Inspector	Group	Date	Time
190032	43984	*	Day, Cory	Building	7/17/2015	12:00 AM

Tasks

Inspection Type	Date	Time	Tasks / Results	Comments
Re-Final Building	7/17/2015	12:00 AM	None / Approved	

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Permit #	43964
Project #	2012-15890
Permit Cat.	Building Permit
Permit Type	Garage/Storage/Barn
Issue Date	5/16/2013

Construction Permit

Address	Assessors Parcel No.	Tract Parcel Map Number	Lot Number
2084 LAWRENCE CIR W, Apt. (9580 S)	2710105005		

Description of work.

DETACHED GARAGE WITH GUEST HOUSE

Building Value	Occupancy	Contruction	Units	Sprinkler	Square Feet	Garage Sq. Ft.
$112,000.00	SF Residential	Type V B	1	False	1500.00	

Current Owners	Address	Telephone	Email
GAVIN WENZEL	2084 LAWRENCE CIRCLE SOUTH JORDAN UT 84095	801-333-8686	X@X.COM
Contractor	**Address**	**Telephone**	**Email**
* OWNER BUILDER	UT	000-0000	X@X.COM
Lic. Information		Exp. Date:	
Applicant	**Address**	**Telephone**	**Email**
* OWNER BUILDER	UT	000-0000	X@X.COM
Lic. Information		Exp. Date:	

Fees

Fee Group	Fee Type Desc	Unit Cost	Quantity	Fee Amount	Payment Amount	Balance
Garage/Storage/Outbuilding				$1,976.57	$1,976.57	$0.00
	PLUMB: WaterHeater	13.50	1.00	$13.50	$13.50	$0.00
	State Fee	.01	1,482.59	$14.83	$14.83	$0.00
	BLDG Add/Alter PME Plan Check	.15	198.80	$29.82	$29.82	$0.00
	MECH: Furnace/Air Conditioner	16.00	2.00	$32.00	$32.00	$0.00
	PLUMB: Drain	10.55	6.00	$63.30	$63.30	$0.00
	ELEC: Finished SF	.06	1,500.00	$90.00	$90.00	$0.00
	BLDG Add/Alter Plan Check	.35	1,283.79	$449.33	$449.33	$0.00
	Valuation	.00	.00	$1,283.79	$1,283.79	$0.00
Totals				**$1,976.57**	**$1,976.57**	**$0.00**

Receipt Summary

Receipt ID	Payment	Type	Paid By	LOGINID	Date Time
11030	$1,976.57	Credit Card	WENZEL INC/GAVIN WENZEL	sruark	5/16/2013 1:34 PM
Totals	**$1,976.57**				

Print Form

BUILDING PERMIT APPLICATION

BECOMES PERMIT WHEN SIGNED

Plan # 8303

SOUTH JORDAN CITY

*Date of Application	Date Work Starts	Receipt No.	Date Issued	Permit Number
8-8-12		15890		125000.00

*Proposed Use of Structure: Detatched Garage & Guest house

BUILDING FEE SCHEDULE — Valuation $ 112,000-

*Bldg. Address: 2084 Lawrence Circle, South Jordan

*Address Certificate No. | Assessors Parcel No.

*Lot # | * Block | * Subd. Name & Number: Lawrence Estates

* Property Location | ☐ *If metes and bounds see instructions

* Total Property Area - In Acres or Sq. Ft. | Total Bldg. Site Area Used

*Owner of Property: Gavin Wenzel | Phone: 801-333-8686

*Mailing Address: 2084 Lawrence Circle | City - Zip: S Jordan 84095

*Business Name Address | Business Lic. No. | Phone

*Architect or Engineer: Techni-Graphics Services | Phone

*General Contractor: Owner Builder | Phone: 801-333-8686

*Business Address - City - Zip | * State Lic. No. | * City/Co. Lic. No.

*Electrical Contractor | Phone

*Business Address - City - Zip | * State Lic. No. | * City/Co. Lic. No.

*Plumbing Contractor | Phone

*Business Address - City - Zip | * State Lic. No. | * City/Co. Lic. No.

*Mechanical Contractor | Phone

*Business Address - City - Zip | * State Lic. No. | * City/Co. Lic. No.

*Previous Usage of Land or Structure (Past 3 yrs.)

*Dwell. Units Now on Lot | * Assessory Bldgs. Now on Lot

*Type of Improvement / Kind of Const.
☐ Sign ☐ Build ☐ Remodel ☐ Addition
☐ Repair ☐ Move ☐ Convert Use ☐ Demolish

* No. of off-street parking spaces: Covered | Uncovered

SUB-CHECK | Zone: R-1.8 | Zone Approved By

Disapproved / Approved ____ Date ____ Sub-Ck. By ____

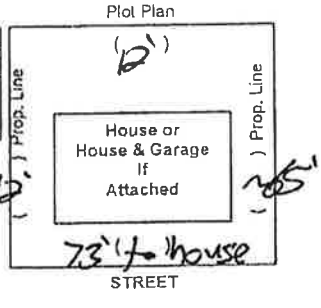
Minimum Setbacks In Feet

Front	Side	Side	Rear
6' to house	12*	12*	12*

* At max height of 25'

Indicate Street If Corner Lot

Plot Plan



Note: 24 Hours notice is required for all Inspections

Square Ft. of Building	1085	Building Fees	
☐ Finish Basement	~~unfinish storage 465~~	Plan Check Fees	
Carport sq. ft.		Electrical Fees	~~300~~ 152
Garage sq. ft.	1500	Plumbing Fees	6+1
Type of Bldg.	VB	Occ. Group R-3	Mechanical Fees 2
No. of Bldgs.	1	R. Value Walls	Roof
No. of Stories	2	R19	R38
No. of Bedrooms	1		Subtotal
No. of Dwellings	1		Water
Type of Construction ☑ Frame ☐ Brick Var. ☐ Brick ☐ Block ☐ Concrete ☐ Steel			Sewer
Max. Occ. Load			Storm Sewer
Fire Sprinkler ☐ Yes ☑ No			Moving or Demo.
			Temporary Conn.
			Re-Inspection
			State Fee
		Total	1976.57

Special Approvals	Required	Received	Approved
Board of Adjustment			
Health Dept.			
Fire Dept.			
Soil Report			
Water or Well Permit			
Traffic Engineer			
Flood Control			
Sewer or Septic Tank			
City Engineer (off site)			
Gas			

Comments:

South Jordan Bldg. Dept

Land Use Cert.

Electrical Dept. AUG 09 2012

HiBack C.G & S.

Other RECEIVED

Bond Required ☐ Yes ☐ No Amount

This application does not become a permit until signed below.

Plan Chk. OK by [signature] 5/14/2013

Signature of Approval | Date

This permit becomes null and void if work or construction authorized is not commenced within 180 days, or if construction or work is suspended or abandoned for a period of 180 days at anytime after work is commenced. I hereby certify that I have read and examined this application and know the same to be true and correct. All provisions of laws and ordinances governing this type of work will be complied with whether specified herein or not the granting of a permit does not presume to give authority to violate or cancel the provisions of any other state or local law regulating construction or the performance of construction and that I make this statement under penalty of perjury.

* ____ Signature or Contractor or Authorized Agent | Date

* ____ Signature of Owner (If Owner) | Date

PLANNING DEPT. USE

Census Tract	Traffic Zone	Coordinate Ident. No.

New S.L.U. Code No. | Old S.L.U. Code No.

Certificate of Occupancy

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Contractor	**Address**	**Telephone**	**Email**
* NEXUS DEVELOPMENT	245 S ORANGE ST SALT LAKE CITY UT 84104	801-604-0118	X@X.COM
Lic. Information	4745985-5501	Exp. Date:	
Applicant	**Address**	**Telephone**	**Email**
GAVIN WENZEL	2084 LAWRENCE CIRCLE SOUTH JORDAN UT 84095	801-333-8686	X@X.COM
Lic. Information		Exp. Date:	

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BUILDING PERMIT APPLICATION

BECOMES PERMIT WHEN SIGNED

= Must Fill In

Date of App	City Project #	City Plan #	Permit #	Value	
* Proposed Use of Structure: Garage		Square Ft. Above Grade			
* Building Address: 2084 west Lawrence Circle		Rough Basement		Electrical	$
Email Address: db.Darrington2@gmail.com		Finished Basement		Plumbing	$
Lot # / Subdivision Name & Number		Porch		Mech	$
Parcel #		Garage		Fire	$
Total Property Area - In Acre or Sq. Footage	Total Building Site Area Used	Dwelling		Solar	$
Owner of Property	Phone	Stories		SUB	$
Mailing Address	City / Zip	Type Construction		ENCR	$
Business Name Address		Occ. Group			
	Fire Sprinklers Required ☐ Yes ☐ No	Max Occ. Load		Total	$
Architect or Engineer: WILLIAM YORK	Phone: Lic #176378				

* General Contractor: Nexus Development	
Address: 245 South Orange Street Salt Lake City	
License: B100 4745985-5501	Phone: 801-604-0118
* Mechanical: Airsource Heating & Air	
Address: 1374 E 2280 N Lehi, Utah 84043	
License: 6832330-5501	Phone: 801-694-9990
* Plumbing: Hillcrest Plumbing	
Address: 3544 west Artistic Circle South Jordan	
License: 84-243625-5501	Phone: 801-255-3403
* Electrical: Francis & Sons Electric	
Address: 8578 North Eagle mountain Crest Road	
License: 308592-5501	Phone: 801-550-3328

06/27/2014

PERMIT CHANGED FROM GAVIN WENZEL TO NEXUS DEVELOPMENT

Landscape Inspection Require Yes ☐ No ☐

Signature of Approval: _____ Date: _____

IMPORTANT NOTICE

Many areas in South Jordan have ground water problems due to a seasonally high (fluctuating) water table. Issuance of this permit does not constitute representation by the city that building at any specified evaluations will solve ground water problems. Solution of these problems is the sole responsibility of the permit applicant and property owner.

Due to the natural conditions and slope of the ground in most areas of South Jordan City, surface water may occasionally enter adjacent properties. Issuance of this permit does not constitute representation by the city that building at a specified elevation will solve surface water problems. Property owners are solely responsible for solving surface water problems.

This permit becomes null and void if work or construction authorized not commenced within 180 days, or so if construction or work is suspended or abandoned for a period of 180 days at anytime after work is commenced. I hereby certify that I have read and examined this application and know the same to be true and correct. All provisions of laws and ordinances governing this type of work will be complied with whether specified herein or not the granting of a permit does not presume to give authority to violate or cancel the provisions of any other state or local law regulating construction or the performance of construction and that I make this statement under penalty of perjury.

Signature of Contractor / Owner / Authorized Agent: _____ Date: _____

SUB-CHECK	ZONE	ZONE APPROVED BY

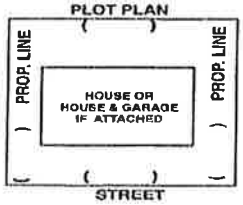
DISAPPROVED / APPROVED _____ DATE

SUB-CHECK BY: _____

MINIMUM SETBACKS IN FEET

FRONT	SIDE	SIDE	REAR

PLOT PLAN



INDICATE NORTH

NOTE: 24 HOUR NOTICE REQUIRED FOR ALL INSPECTIONS

COMMENTS:

VERIFIED COMPLETE SUBMITTAL

_____

Plan: Gavin Wenzel Garage
Date: 9 Nov 2012
Location: 2084 Lawernce Cir.

Seismic Calculations

Loading Summary

Floor Dead Load (psf)	10	Seismic Zone	E
Floor Live Load(psf)	40		
Walls (Ext)(psf)	20	Roof LL(psf)	40
Walls (Int)(psf)	10	Roof DL(psf)	15
Roof Dead Load(psf)	15		
Roof Slope	4 /12		
Exterior	combination		

Snow Load Reduction		Seismic Paramaters		
Slope	18.43	V=Cs*W/1.4		
Snow	40.00	Fa=	1	
Pitch over 20		R=	6.5	table 1617.6
Rs		Ss=	1.772	
Reduction		Sms=	1.77	eq 16-16
L.L.- Reduction	40.00	Sds=	1.18	eq 16-18
Total Load	55.00	Cs=	0.218	per eq. 16-49
		Adj. Factor	1.4	
		Cs=	0.1556	

Roof	Length	W(psf)	Lb/ft	Width	W(lb)
	30	23	690	50	52992
roof wall					9600
	Total Mass Tributary to Roof Levels =				62592
	Shear (V)(lbs) Roof Levels =				9741
Floor 2	Length	W(psf)	lb/ft	Width	W(lb)
	48	10	480	48	-3492
wall height	10				16000
	Total Mass Tributary to Floor 2=				12508
	Shear (V)(lbs) Floor Levels =				1947
Floor 1	Length	W(psf)	lb/ft	Width	W(lb)
	30	10	300	50	15000
wall height	8				8000
	Total Mass Tributary to Floor 1=				23000
	Shear (V)(lbs) Floor Levels =				3579

Floor 1 Lateral Force	0
Floor 2 Lateral Force	1947
Roof Lateral Force	9741
Total Seismic Mass =	98100
Total Lateral Force =	11687

Seismic Force Distribution

*** Roof Sections ***	H(x)	W(x) kip	W(x)H(x)	% Force	Total Sheer F
Roof	23.5	63	1471	91.45%	10,687678
Floor 1	1.0	0	0	0.00%	11,687395
Floor 2	10.0	13	138	8.55%	11,687395
	Totals	75	1609	1	
V/sum(Wi*Hi) =	0.00727	Total Shear (lbs) =		11687	

Basement Sheer Wall	F(total)	Length	
Total Load (kips)	11.7		Shear Wall Load (plf)
right side	5.8	10	Not Applicable
left side	5.8	10	Not Applicable
front	5.8	10	Not Applicable
back	5.8	10	Not Applicable

Floor 1 Sheer Wall	F(total)	Length	
Total Load (kips)	11.7		Shear Wall Load (plf)
right side	5.8	36	162
left side	5.8	80	117
front	5.8	20	292
back	5.8	22	266

Floor 2 Sheer Wall	F(total)	Length	
Total Load (kips)	10.7		Shear Wall Load (plf)
right side	5.3	34	157
left side	5.3	37	144
front	5.3	21	254
back	5.3	23	232

Shear Wall Critical Lengths	Wall DL	Floor DL	Roof DL	DL (plf)	critical l (ft)
Front	440	50	110	400	13
Back	440	50	110	400	12
Right	360	750	825	1289	2
Left	360	750	825	1289	2

Calculate Uplift , Force Req'd to Prevent OT (lbs)					
Panel Length (ft)	2	3	4	6	8
Front	4460	4061	3661	2862	2063
Back	3982	3582	3183	2384	1584
Right	344	-944	-2233	-4810	-7388
Left	-474	-1762	-3051	-5629	-8206

Plan: **Gavin Wenzel Garage**
Date: **9 Nov 2012**
Location: **2084 Lawernce Clr.**

Wind Loading Calculations using Main Windforce-Resisting System (MWFRS)
Longitudinal Direction

Wind Design Coefficients
P=wind load*exp coeff*Iw
P=Design Pressure
Horizontal Wind Load (from table 1609.6.2.1(1)
Wall Load (psf)=
end zone (A) 16.1
interior zone (C) 10.7
Roof Load (psf)=
end zone (B) -5.4
interior zone (D) -3.0
Vertical Wind Load (from table 1609.6.2.1(1)
Roof Load (psf)=
end zone windward (E) -15.4
end zone leeward (F) -10.1
interior zone windward (G) -10.7
interior zone leeward (H) -10.7

Exposure Coefficient (from table 1609.6.2.1(4) 1.29
Iw=Importance Factor (from table 1604.5) 1.0

Wind Speed = **90** Roof Height 5.00
Exposure **C** Wall Height 21
Truss Span **30**

Roof Slope = 4 /12
Roof Angle (deg)= 18.43 Sine = 0.3162

P=wind load*exp coeff*Iw		Minimum Pressure Adjusted
horizontal wall interior	13.80	13.80
horizontal wall end zone	20.77	20.77
horizontal roof interior	-3.87	10.00
horizontal roof end zone	-6.97	10.00
vertical end zone windward	-19.87	0.00
vertical end zone leeward	-13.03	0.00
vertical interior zone windward	-13.80	0.00
vertical interior zone leeward	-13.80	0.00

4*Hmean 9.4
1*base 3

End Zone Width (ft) 3 2nd storyEnd Zone Width (ft) 3
Interior Zone Width (ft) 44 2nd StoryInterior Zone Width (ft) 42

Gable Roof Load		**Width**	**Height**	**Wind Load**	**Force (lbs)**
	End	3	1.0	20.77	61
	Interior	44	2.01	13.80	1816
				Sum =	1877.58

Hip Roof Load		Area	**Wind Load**	**Force (lbs)**
	End	250	10.00	2500
	Interior	0	10.00	0
			Total	2500

Wall Load		**Width**	**Height**	**Wind Load**	**Force (lb/ft)**	2nd Stor Force (lb/
	End	3	1.0	20.77	125	124.61
	Interior	44	1.00	13.80	607	579.73
				Sum =	731.946	704.34

Vertical Force		**Width**	**length**	**Wind Load**	**Force (lbs)**
	end zone windward	3	13.50	FALSE	0
	leeward	3	13.50	FALSE	0
	interior zone windward	44	13.50	FALSE	0
	leeward	44	13.50	FALSE	0

Floor 2 Diaphragm Shear **Shear Wall Loads (plf)**
Total Shear (lbs) 9543
Front Wall Length 21 227
Back Wall Length 23 207

Floor 1 Diaphragm Shear **Shear Wall Loads (plf)**
Total Shear (lbs) 15675
Front Wall Length 20 392
Back Wall Length 22 356

basement Diaphragm Shear **Shear Wall Loads (plf)**
Total Shear (lbs) 16407
Front Wall Length 10 Not Applicable
Back Wall Length 10 Not Applicable

Critical Wall Length (ft)=
Front Wall Dead Load (plf)= 400 Total 10162
Front Wall Critical Length (ft)= 10 Total (plf) 64
Back Wall Dead Load (plf)= 400
Back Wall Critical Length (ft)= 10

Calculate Uplift , Force Req'd to Prevent OT (lbs)

Panel Length (ft)	2	3	4	6	8	10	12
Front	2015	1847	1679	1343	1007	671	335
Back	1801	1633	1465	1129	793	457	121

Plan: **Gavin Wenzel Garage**
Date: **9 Nov 2012**
Location: **2084 Lawernce Cir.**

Wind Loading Calculations using Main Windforce-Resisting System (MWFRS)
Transverse Direction

Wind Design Coefficients
P=wind load*exp coeff*Iw
P=Design Pressure
Horizontal Wind Load (from table 1609.6.2.1(1)

Wall Load (psf)=	
end zone (A)	16.1
interior zone (C)	10.7
Roof Load (psf)=	
end zone (B)	-5.4
interior zone (D)	-3.0

Vertical Wind Load (from table 1609.6.2.1(1)

Roof Load (psf)=	
end zone windward (E)	-15.4
end zone leeward (F)	-10.1
interior zone windward (G)	-10.7
interior zone leeward (H)	-10.7

Exposure Coefficient (from table 1609.6.2.1(4) 1.29
Iw=Importance Factor (from table 1604.5) 1.0

Wind Speed = 90 Roof Height 5
Exposure C Wall Height 21
Truss Span 30

Roof Slope = 4 /12
Roof Angle (deg)= 18.43 Sine = 0.3162

P=wind load*exp coeff*Iw		Minimum Pressure Adjusted
horizontal wall interior	13.80	13.80
horizontal wall end zone	20.77	20.77
horizontal roof interior	-3.87	10.00
horizontal roof end zone	-6.97	10.00
vertical end zone windward	-19.87	0.00
vertical end zone leeward	-13.03	0.00
vertical interior zone windward	-13.80	0.00
vertical interior zone leeward	-13.80	0.00

End Zone Width (ft) 3 2nd storyEnd Zone Width (ft) 3
Interior Zone Width (ft) 24 2nd StoryInterior Zone Width (ft) 42

Gable Roof Load		**Width**	**Height**	**Wind Load**	**Force (lbs)**
	End	3	1.0	20.77	61
	Interior	24	2.01	13.80	991
				Sum =	1051.934

		Area			
Hip Roof Load	End	150		10.00	1500
	Interior	0		10.00	0
				Total	1500

Wall Load		**Width**	**Height**	**Wind Load**	**Force (lbs)**	2nd Story
	End	3	1.0	20.77	125	124.614
	Interior	24	1.00	13.80	331	579.726
				Sum =	455.886	704.34

Vertical Force		**Width**	**length**	**Wind Load**	**Force (lbs)**
end zone	windward	3	43.50	FALSE	0
	leeward	3	43.50	FALSE	0
interior zone	windward	24	43.50	FALSE	0
	leeward	24	43.50	FALSE	0

Floor 2 Diaphragm Shear **Shear Wall Loads (plf)**

Total Shear (lbs)	8543	
Left Wall Length	37	115
Right Wall Length	34	126

Floor 1 Diaphragm Shear **Shear Wall Loads (plf)**

Total Shear (lbs)	9706	
Left Wall Length	50	97
Right Wall Length	36	135

basement Diaphragm Shear **Shear Wall Loads (plf)**

Total Shear (lbs)	10162	
Left Wall Length	10	Not Applicable
Right Wall Length	10	Not Applicable

Critical Wall Length (ft)=

Left Wall Dead Load (plf)=	1289	Total	16407
Left Wall Critical Length (ft)=	1	Total (plf)	86
Right Wall Dead Load (plf)=	1289		
Right Wall Critical Length (ft)=	1		

Calculate Uplift , Force Req'd to Prevent OT (lbs)

Panel Length (ft)	2	3	4	6	8	10	12
Front	-620	-1221	-1822	-3026	-4227	-5429	-6632
Back	-394	-995	-1596	-2798	-4001	-5203	-6405

WENZEL GARAGE – Electrical load calcs

1050SQ FT =3150VA

2-SMALL APPLIANCE BRANCH CIRCUITS=3000VA

LAUNDRY CIRCUIT=1500VA

TOTAL=7650VA

FIRST 3000VA AT 100%= 3000VA

REMAINDER AT 35%=1627VA

DRYER=5500VA

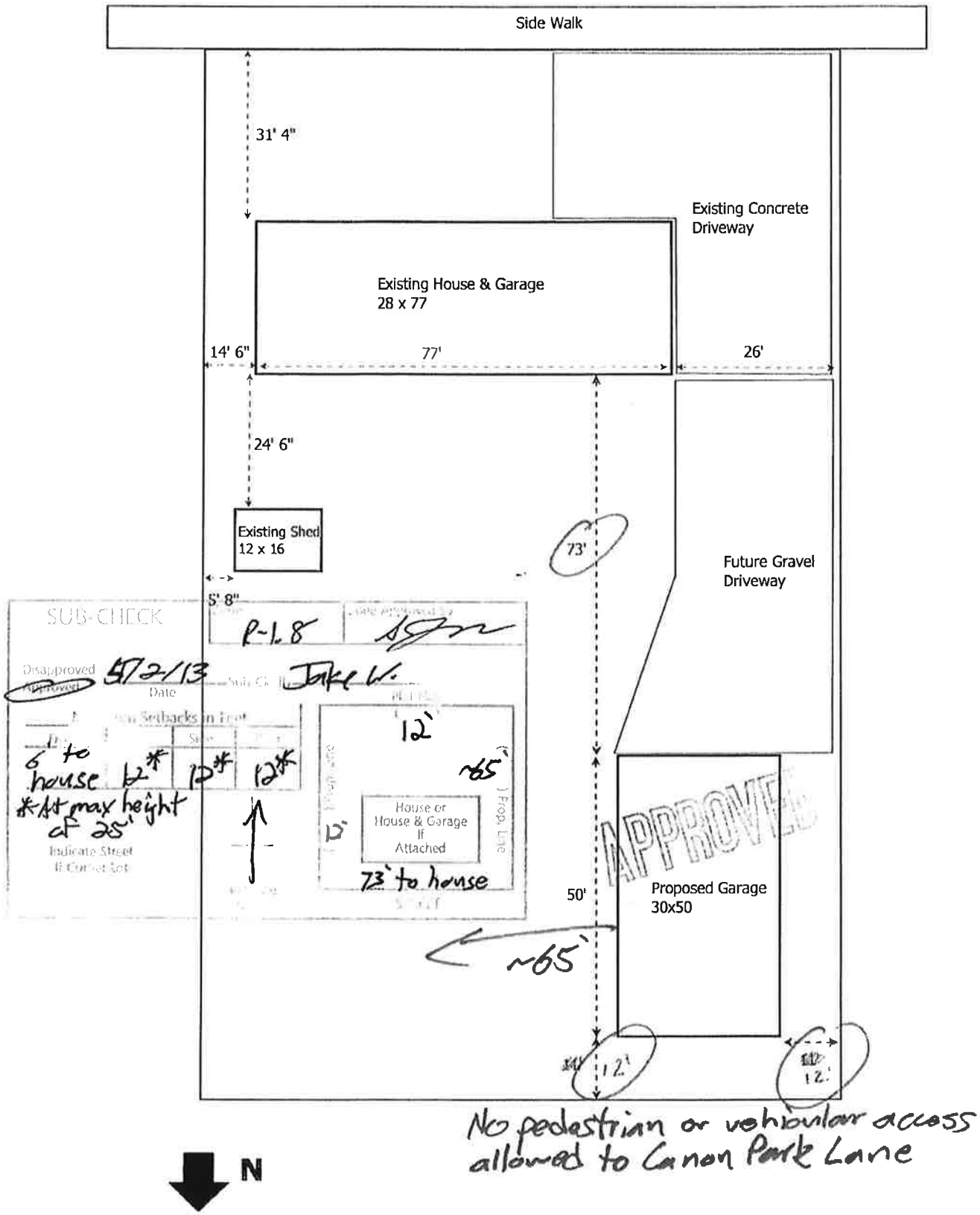
RANGE=9600VA

A/C=5500VA

TOTAL=22227VA

22227VA/240V=92 AMPS

100 AMP SERVICE WILL BE PROVIDED



Property Address: 2084 Lawrence Circle, South Jordan, UT 84095

20/2-15890 43964

York Engineering Inc
2329 West Spring Hollow Rd.
Morgan, Utah 84050
(801) 876-3501

Date: 7 July 2014

South Jordan Building Department
Attn: Inspection

Subject: Girder Support, Gavin Wenzel Garage

The purpose of this letter is to provide my approval on the following on the Gavin Wenzel Garage located 2084 Lawernce Circle, South Jordan Utah. The roof may be changed to a hip package on the front and back. The girder truss set in 8' from the rear and front walls may be supported by the (2) 2x6 top plates without any studs directly below the girder provided that the wall is framed with 2x6 studs max 16" o.c. RB-2 (2) 2x10's may also support the girder truss

Please feel free to call with any questions or Concerns.

Respectfully Yours;
York Engineering Inc.

Kelby M. York, P.E.

DEPARTMENT OF COMMERCE
Division of Occupational and
Professional Licensing
160 East 300 South, Fourth Floor
PO Box 146741
Salt Lake City UT 84114-6741
(801) 530-6628

OWNER/BUILDER CERTIFICATION and AGREEMENT TO COMPLY WITH THE CONSTRUCTION TRADES LICENSING ACT

Name of owner/builder: Gavin Wenzel

Address: 2084 Lawrence Circle

City, State, ZIP: South Jordan, UT 84095

LOCATION OF CONSTRUCTION SITE

Address: 2084 Lawrence Circle

City, State, ZIP: South Jordan, UT 84095

Subdivision Name: _____ Lot No. _____

CERTIFICATION

I, Gavin Wenzel, certify under penalty of perjury that the following statements are true and correct and are based upon my understanding of the Utah Construction Trades Licensing Act:

1. I am the sole owner of the property and construction project at the above described location; the project described is the only residential structure I have built this year; I have not built more than tree residential structures in the past five years.

2. The improvements being placed on the property are intended to be used and will be used for my personal, non-commercial, non-public use.

3. I understand that work performed on the project must be performed by the following:

   a. **myself as the sole property owner; or**
   b. **a licensed contractor; or**
   c. **my employee(s) for whom I have worker's compensation insurance coverage, for whom I withhold and pay all required payroll taxes, and with respect to whom I comply with all other applicable employee/employer laws; or**
   d. **any other person working under my supervision as owner/builder to whom no compensation or only token compensation is paid; and**

4. I understand that if I retain the services of an unlicensed contractor or compensate an unlicensed person, other than token compensation, or other than as an employee for wages, to perform construction services for which licensure is required, I may be guilty of a class A misdemeanor and may be additionally subject to an administrative fine in the maximum of $2,000 for each day I violate the law.

Dated this 8 Day of August 20 12

_____
Signature of owner/builder

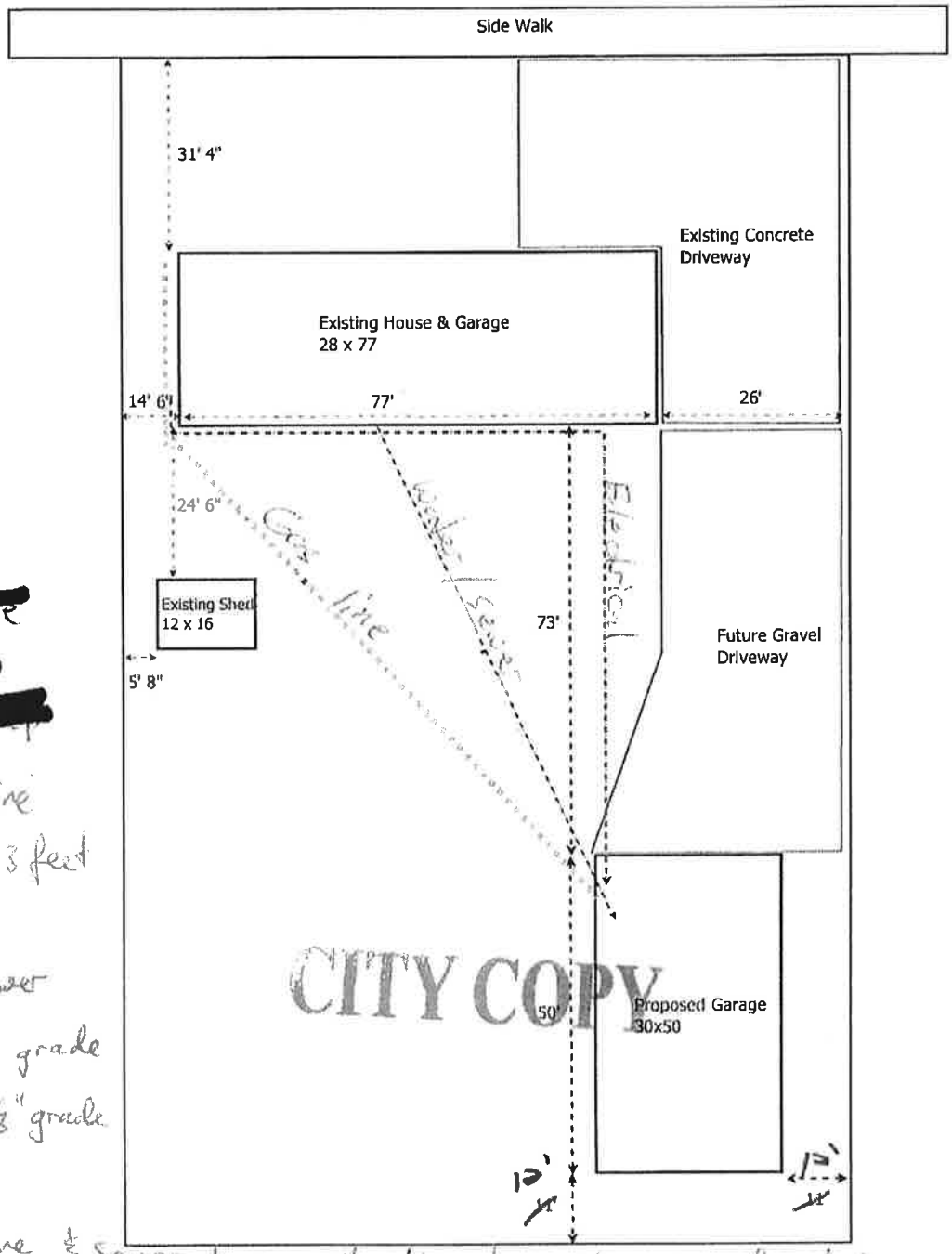
Subscribed and sworn before me this _____ day of _____ 20 ____, in the county of _____ State of Utah.

_____
Notary Public

Plan: **Gavin Wenzel Garage**
Date: **9 Nov 2012**
Location: **2084 Lawernce Cir.**

Sawn Lumber	FB-2	FB-3	FB-4	FB-5	RB-1	RB-2
Load Parameters						
Floor Live Load(psf)	40	40	40	40	40	40
Floor Total Load(psf)	50	50	50	50	50	50
Floor 1 Span(ft)	**2**	**30**	**30**	**2**	**0**	**0**
Total Floor Load(plf)	50	750	750	50	0	0
Wall Height (ft)	10	10	10	14	4	0
Wall Weight (psf)	20	20	20	20	20	20
Wall Load(plf)	**200**	**200**	**200**	**280**	**80**	**0**
Roof LL (psf)	40	40	40	40	40	40
Total Roof Load(psf)	55	55	55	55	55	55
Roof Span(ft)	**3**	**30**	**30**	**3**	**4**	**30**
Total Roof Load(plf)	83	825	825	83	110	825
Beam Weight (plf)	4.4	8.3	5.6	4.4	4.4	5.6
Live Load (plf)	100	1200	1200	100	80	600
Total Load (plf)	337	1783	1781	417	194	831
Reactions & Moment						
Duration Increase	1	1	1	1	1	1
Beam Span(ft)	**3**	**4**	**3**	**4**	**4**	**4**
Reaction 1 (lb)	505	3567	2671	834	389	1661
Reaction 2 (lb)	505	3567	2671	834	389	1661
Max Moment FtLb	379	3567	2003	834	389	1661
Max Shear Lb	505	3567	2671	834	389	1661
Determine Beam Size						
Depth Estimate (in)	**7.25**	**9.25**	**9.25**	**7.25**	**7.25**	**9.25**
Width Estimate (in)	**3**	**4.5**	**3**	**3**	**3**	**3**
CF =	1.20	1.20	1.10	1.20	1.20	1.10
Area =	21.75	41.63	27.75	21.75	21.75	27.75
Momemt of Inertia I =	95	297	198	95	95	198
Maximum Bend Stress =	173	667	562	381	177	466
Allowable bend Stress	1020	1020	935	1020	1020	935
Factor Of Safety =	**5.89**	**1.53**	**1.66**	**2.68**	**5.75**	**2.01**
Allowable Sheer Stress	180	180	165	180	180	165
Max Shear Cap (lbs) =	2610	4995	3053	2610	2610	3053
Factor Of Safety =	**5.17**	**1.40**	**1.14**	**3.13**	**6.71**	**1.84**
Bearing Required =	0.42	1.96	2.20	0.69	0.32	1.37
E (psi)	1300000	1300000	1300000	1300000	1300000	1300000
Deflection LL (in)	0.00	0.02	0.01	0.00	0.00	0.01
LLoad Def. Limit L/	360	360	360	360	360	360
Allowable Deflection (in)	0.10	0.13	0.10	0.13	0.13	0.13
LL Deflection F/S	**67.96**	**7.44**	**11.76**	**28.67**	**35.84**	**9.92**
Deflection TL (in)	0.00	0.03	0.01	0.02	0.01	0.02
TLoad Def. Limit L/	240	240	240	240	240	240
Allowable Deflection (in)	0.15	0.2	0.15	0.2	0.2	0.2
TL Deflection F/S	**30.26**	**7.51**	**11.89**	**10.32**	**22.13**	**10.75**
Selection	2: 2 x 8	3: 2 x 10	2: 2 x 10	2: 2 x 8	2: 2 x 8	2: 2 x 10

Plan:	**Gavin Wen**
Date:	**9 Nov 201**
Location:	**2084 Lawe**
LVL Beam	FB-1
Load Parameters	
Floor LL (psf)	40
Total Floor Load(psf)	50
Floor Span (ft)	**1**
Total Floor Load (plf)	25
Wall Height (ft)	12
Wall Weight (psf)	20
Wall Load (plf)	**240**
Roof LL (psf)	40
Total Roof Load (psf)	55
Roof Span (ft)	**3**
Roof Load (plf)	83
Beam Weight (plf)	14.2
Live Load (plf)	80
Total Load (plf)	362
Reactions & Moment	
Duration Increase	1
Beam Span(ft)	**18**
Reaction 1 (lb)	3255
Reaction 2 (lb)	3255
Max Moment FtLb	14649
Max Shear Lb	3255
Max Shear Stress (psi)	66
Determine Size	
Depth Estimate (in)	**14.00**
Width Estimate (in)	**3.5**
Cross Area (in^2)	49
Allowable Bending Stress =	2546
Allowable Moment =	24258
Momemt of Inertia I =	800
Factor Of Safety =	**1.66**
Allowable Sheer Stress (psi)=	285
Allowable Sheer Force (lb)=	9310
Factor Of Safety =	**2.86**
Bearing Required =	1.24
E (psi)	1900000
Deflection LL (in)	0.12
LLoad Def. Limit L/	360
Allowable Deflection (in)	0.60
LL Deflection F/S	**4.83**
Deflection TL (in)	0.56
TLoad Def. Limit L/	240
Allowable Deflection (in)	0.90
TL Deflection F/S	**1.60**
Selection	2: 14"



[redacted]

2. Water line
1" poly 3 feet deep

3. Drain/Sewer
3" @ 1/4" grade
or 4" @ 1/8" grade

* Water line & Sewer line will tie in through foundation in Mechanical Room

Property Address: 2084 Lawrence Circle, South Jordan, UT 84095

2084 Lawrence Cir.

South Jordan Meter and Distribution Pipe Sizing

Static Pressure: 102

W.S.F.U: 30.8

Max. Development Length: 150

Elevation above source: 18', -9psi

Pressure reducing valve: 80% of static

Equipment loss: -5psi

102 PSI x 0.8 = 81.6

81.6 PSI - 14 psi = 67.6

TABLE P2903.7

Meter Size = 3/4" Or 1"

Required Distribution pipe size = 1 1/4" 1"

W.S.F.U. TABLE P2903.6	Quantity	Combined	Total
Bathtub	1	1.4	1.4
Clothes Washer			
Dishwasher	2	2.5	5
Hose Bib			
Kitchen Sink			
Lavatory			
Laundry tub			
Shower Stall			
Water Closet	4	3.6	14.4
Full Bath Group			
Half Bath Group	3		7.5
Kitchen Group	1		2.5
Laundry Group			
TOTAL W.S.F.U.			30.8

RES*check* Software Version 4.3.1
Compliance Certificate

CITY COPY

Project Title: Black Rock Homes

Energy Code:	**2006 IECC**
Location:	**West Jordan, Utah**
Construction Type:	**Single Family**
Building Orientation:	**Bldg. faces 180 deg. from North**
Conditioned Floor Area:	**1500 ft2**
Glazing Area Percentage:	**10%**
Heating Degree Days:	**5799**
Climate Zone:	**5**

Construction Site:

Owner/Agent:
Black Rock Homes

Designer/Contractor:
Black Rock Homes

Compliance: Passes on equipment performance

Compliance: **2.4% Better Than Code**

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Glazing or Door U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss	1500	38.0	0.0		45
Wall 1: Wood Frame, 16" o.c. Orientation: Front	240	19.0	0.0		11
Wall 2: Wood Frame, 16" o.c. Orientation: Right Side	350	19.0	0.0		18
Wall 3: Wood Frame, 16" o.c. Orientation: Back	240	19.0	0.0		12
Wall 4: Wood Frame, 16" o.c. Orientation: Left Side	350	19.0	0.0		21
Window 1: Vinyl Frame:Double Pane with Low-E SHGC: 0.33 Orientation: Front	40			0.350	14
Window 2: Vinyl Frame:Double Pane with Low-E SHGC: 0.33 Orientation: Right Side	44			0.350	15
Window 3: Vinyl Frame:Double Pane with Low-E SHGC: 0.33 Orientation: Back	36			0.350	13
Door 1: Solid Orientation: Front	20			0.330	7
Floor 1: All-Wood Joist/Truss:Over Unconditioned Space	1500	19.0	0.0		71
Furnace 1: Forced Hot Air 90 AFUE					
Air Conditioner 1: Electric Central Air 13 SEER					

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2006 IECC requirements in RES*check* Version 4.3.1 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Gavin Wenzel — Name - Title

Signature

4-22-13 — Date

RES*check* Software Version 4.3.1
Inspection Checklist

Ceilings:

☐ Ceiling 1: Flat Ceiling or Scissor Truss, R-38.0 cavity insulation
Comments: _____

Above-Grade Walls:

☐ Wall 1: Wood Frame, 16" o.c., R-19.0 cavity insulation
Comments: _____

☐ Wall 2: Wood Frame, 16" o.c., R-19.0 cavity insulation
Comments: _____

☐ Wall 3: Wood Frame, 16" o.c., R-19.0 cavity insulation
Comments: _____

☐ Wall 4: Wood Frame, 16" o.c., R-19.0 cavity insulation
Comments: _____

Windows:

☐ Window 1: Vinyl Frame:Double Pane with Low-E, U-factor: 0.350
For windows without labeled U-factors, describe features:
#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No
Comments: _____

☐ Window 2: Vinyl Frame:Double Pane with Low-E, U-factor: 0.350
For windows without labeled U-factors, describe features:
#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No
Comments: _____

☐ Window 3: Vinyl Frame:Double Pane with Low-E, U-factor: 0.350
For windows without labeled U-factors, describe features:
#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No
Comments: _____

Note: Up to 15 sq.ft. of glazed fenestration per dwelling is exempt from U-factor and SHGC requirements.

Doors:

☐ Door 1: Solid, U-factor: 0.330
Comments: _____

Floors:

☐ Floor 1: All-Wood Joist/Truss:Over Unconditioned Space, R-19.0 cavity insulation
Comments: _____
Floor insulation is installed in permanent contact with the underside of the subfloor decking.

Heating and Cooling Equipment:

☐ Furnace 1: Forced Hot Air: 90 AFUE or higher
Make and Model Number: _____

☐ Air Conditioner 1: Electric Central Air: 13 SEER or higher
Make and Model Number: _____

Air Leakage:

☐ Joints, penetrations, and all other such openings in the building envelope that are sources of air leakage are sealed.

☐ Recessed lights are either 1) Type IC rated with enclosures sealed/gasketed against leaks to the ceiling, or 2) Type IC rated and ASTM E283 labeled, or 3) installed inside an air-tight assembly with a 0.5" clearance from combustible materials and a 3" clearance from insulation.

Sunrooms:

☐ Sunrooms that are thermally isolated from the building envelope have a maximum fenestration U-factor of 0.50 and the maximum skylight U-factor of 0.75. New windows and doors separating the sunroom from conditioned space meet the building thermal envelope requirements.

Vapor Retarder:

☐ Vapor retarder is installed on the warm-in-winter side of all non-vented framed ceilings, walls, and floors; or it has been determined that moisture or its freezing will not damage the materials; or other approved means to avoid condensation are provided.

Comments: _____

Materials Identification and Installation:

☐ Materials and equipment are installed in accordance with the manufacturer's installation instructions.

☐ Insulation is installed in substantial contact with the surface being insulated and in a manner that achieves the rated R-value.

☐ Materials and equipment are identified so that compliance can be determined.

☐ Manufacturer manuals for all installed heating and cooling equipment and service water heating equipment have been provided.

☐ Insulation R-values, glazing U-factors, and heating equipment efficiency are clearly marked on the building plans or specifications.

Duct Insulation:

☐ Ducts in unconditioned spaces or outside the building are insulated to at least R-8.

☐ Ducts in floor trusses above unconditioned spaces or above the outdoors are insulated to at least R-6.

Duct Construction:

☐ Air handlers, filter boxes, and duct connections to flanges of air distribution system equipment or sheet metal fittings are sealed and mechanically fastened.

☐ All joints, seams, and connections are made substantially airtight with tapes, gasketing, mastics (adhesives) or other approved closure systems. Tapes and mastics are rated UL 181A or UL 181B.

☐ Building framing cavities are not used as supply ducts.

☐ Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.

☐ Additional requirements for tape sealing and metal duct crimping are included by an inspection for compliance with the International Mechanical Code.

Temperature Controls:

☐ Thermostats exist for each separate HVAC system. A manual or automatic means to partially restrict or shut off the heating and/or cooling input to each zone or floor is provided.

Heating and Cooling Equipment Sizing:

☐ Additional requirements for equipment sizing are included by an inspection for compliance with the International Residential Code.

Circulating Service Hot Water Systems:

☐ Circulating service hot water pipes are insulated to R-2.

☐ Circulating service hot water systems include an automatic or accessible manual switch to turn off the circulating pump when the system is not in use.

Heating and Cooling Piping Insulation:

☐ HVAC piping conveying fluids above 105 degrees F or chilled fluids below 55 degrees F are insulated to R-2.

Certificate:

☐ A permanent certificate is provided on or in the electrical distribution panel listing the predominant insulation R-values; window U-factors; type and efficiency of space-conditioning and water heating equipment.

NOTES TO FIELD: (Building Department Use Only)

2006 IECC Energy Efficiency Certificate

Insulation Rating	R-Value	
Ceiling / Roof	38.00	
Wall	19.00	
Floor / Foundation	19.00	
Ductwork (unconditioned spaces):	_____	
Glass & Door Rating	**U-Factor**	**SHGC**
Window	0.35	0.33
Door	0.33	NA
Heating & Cooling Equipment	**Efficiency**	
Forced Hot Air Furnace	90 AFUE	
Electric Central Air Conditioner	13 SEER	
Water Heater:_____	_____	

Name: _____ Date: _____

Comments:

JOB QUOTE

DATE 04/24/13

STOCK Components

3860 South 1580 West
Salt Lake City, UT 84119
801-973-7020

ORDERED BY	MIKE WAGNER	QUOTE #	Q340870
ORDER DATE	/ /	CUSTOMER ACCT #	41156
DELIVERY DATE	/ /	CUSTOMER PO #	
DATE OF INVOICE	/ /	INVOICE #	
		TERMS	
LUMBER YARD SALES	MIKE WAGNER	SALES REP	MIKE
CONTACT'S PHONE #	(801) 973-7020	SALES AREA	OGDEN

SOLD TO
SBS#1156 CASH SALE
3860 SOUTH 1580 WEST
SALT LAKE CITY, UT 84119
(801) 973-7020

SHIP TO
WENZEL GARAGE
2084 LAWRENCE CIR
SOUTH JORDAN, UT

JOB NAME: GAVIN WENZEL LOT # SUBDIV:
MODEL: GARAGE TAG: JOB CATEGORY: CAT-1

DELIVERY INSTRUCTIONS:
FLOORS AND ROOF TO BE DELIVERED TOGETHER

SPECIAL INSTRUCTIONS:
30-10-00-05 90/C

OVERHANG INFO		HEEL HEIGHT	00-04-03	REQ. LAYOUTS	REQ. ENGINEERING		BY	DATE
END CUT	RETURN			NONE	NONE	QUOTE	2MS	04/24/13
SQUARE	NO	GABLE STUDS	0 IN. OC			LAYOUT		/ /
						CUTTING		/ /

ROOF TRUSSES

LOADING INFORMATION: TCLL-TCDL-BCLL-BCDL 30.0,10.0,0.0,7.0 | BTRESS INCR. 1.16

ROOF TRUSS SPACING: 24.0 IN. O.C. (TYP.)

PROFILE	QTY	PITCH		TYPE	BASE	O/A	LUMBER		OVERHANG		CANTILEVER		STUB			
	PLY	TOP	BOT	ID	SPAN	SPAN	TOP	BOT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT		
	24	4.00	0.00	GABLE A1	30-00-00	30-00-00	2 X 4	2 X 4	01-00-00	01-00-00						
	2	4.00	0.00	GABLE AG	30-00-00	30-00-00	2 X 4	2 X 4	01-00-00	01-00-00						

FLOOR TRUSSES

LOADING INFORMATION: TCLL-TCDL-BCLL-BCDL 40.0,10.0,0.0,5.0 | STRESS INCR. 1.00

FLOOR TRUSS SPACING: 24.0 IN. O.C. (TYP.)

FLOOR PROFILE	QTY	DEPTH	BASE	O/A	END TYPE		INT BEARING		CANTILEVER		STUB				
	PLY	ID	SPAN	SPAN	LEFT	RIGHT	SIZE	LOCATION	LEFT	RIGHT	LEFT	RIGHT			
	28	01-06-00 F	30-00-00	30-00-00											
	9	01-06-00 F1	25-06-08	25-06-08											
	2	01-06-00 FG	30-00-00	30-00-00											

This quotation is furnished for estimate purposes only and should be examined carefully. We agree to furnish the above listed items at the quantities specified. All dimensions and quantities are to be verified by the contractor or owner.

Quote good for 30 days

ACCEPTED BY BUYER

PURCHASER:

BY: TITLE:

ADDRESS:

PHONE: DATE:

SUB-TOTAL	$5,999.00
SALES TAX 6.850%	$410.93
GRAND TOTAL	$6,409.93

HANGER PRICING NOT INCLUDED

CITY COPY

Job	Truss	Truss Type	Qty	Ply	
Q340870	A1	GABLE	24	1	Job Reference (optional)

Stock Components, Salt Lake City UT, 84119

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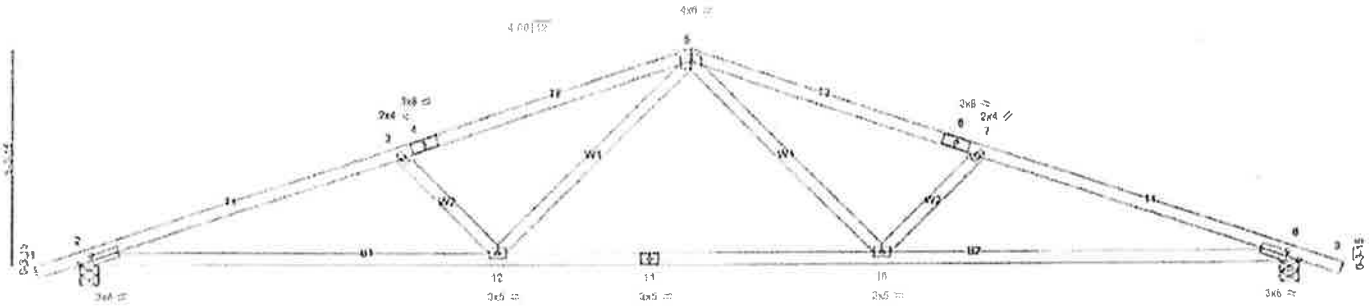

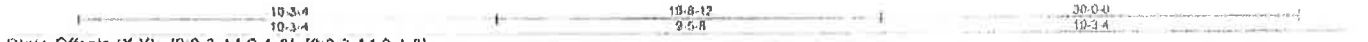

Plate Offsets (X,Y): [2:0-3-14,0-1-8], [8:0-3-14,0-1-8]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plates Increase	1.15	TC	0.99	Vert(LL)	-0.26	2-12	>999	240	MT20	197/144
TCDL	10.0	Lumber Increase	1.15	BC	0.96	Vert(TL)	-0.64	2-12	>555	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.39	Horz(TL)	0.14	8	n/a	n/a		
BCDL	7.0	Code IRC2009/TPI2007		(Matrix)		Wind(LL)	0.12	2-12	>999	360	Weight: 110 lb	FT = 20%

LUMBER
TOP CHORD 2x4 DF No.2 *Except*
T1: 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 DF No.2
WEBS 2x4 DF Stud/Std

BRACING
TOP CHORD Sheathed
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (lb/size) 2=1490/0-5-8 (min. 0-1-9), 8=1490/0-5-8 (min. 0-1-9)
Max Horz 2=64(LC 5)
Max Uplift2=-176(LC 3), 8=-176(LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-3360/324, 3-4=-2892/256, 4-5=-2875/283, 5-6=-2875/284, 6-7=-2892/256, 7-8=-3360/324, 8-9=0/25
BOT CHORD 2-12=-287/3092, 11-12=-116/2055, 10-11=-116/2055, 8-10=-240/3092
WEBS 3-12=-675/166, 5-12=-87/893, 5-10=-87/893, 7-10=-675/168

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-05; 90mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (low-rise); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 176 lb uplift at joint 2 and 176 lb uplift at joint 8.
5) This truss is designed in accordance with the 2009 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
6) "Semi-rigid pitchbreaks with fixed heels" Member end fixity model was used in the analysis and design of this truss.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	
Q340870	AG	GABLE	2	1	Job Reference (optional)

Stock Components, Salt Lake City UT 84119

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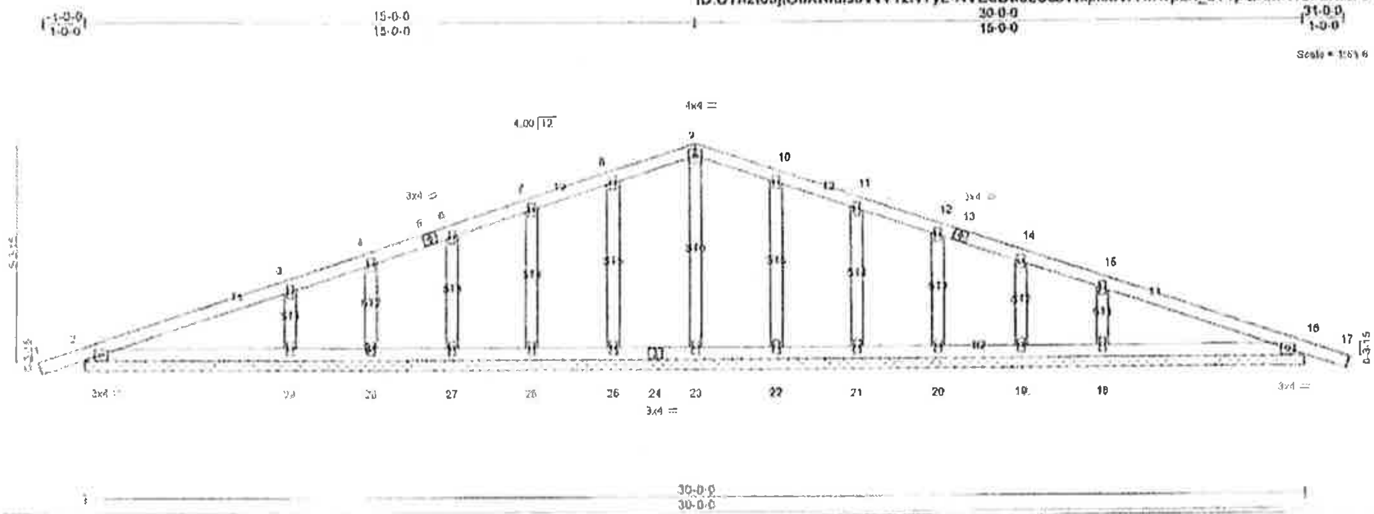


LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plates Increase	1.15	TC	0.28	Vert(LL)	0.01	17	n/r	180	MT20	220/195
TCDL	10.0	Lumber Increase	1.15	BC	0.14	Vert(TL)	0.03	17	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horz(TL)	0.00	16	n/a	n/a		
BCDL	7.0	Code IRC2009/TPI2007		(Matrix)							Weight: 131 lb	FT = 20%

LUMBER
TOP CHORD 2x4 DF No.2
BOT CHORD 2x4 DF No.2
WEBS 2x4 DF Stud/Std
OTHERS 2x4 DF Stud/Std

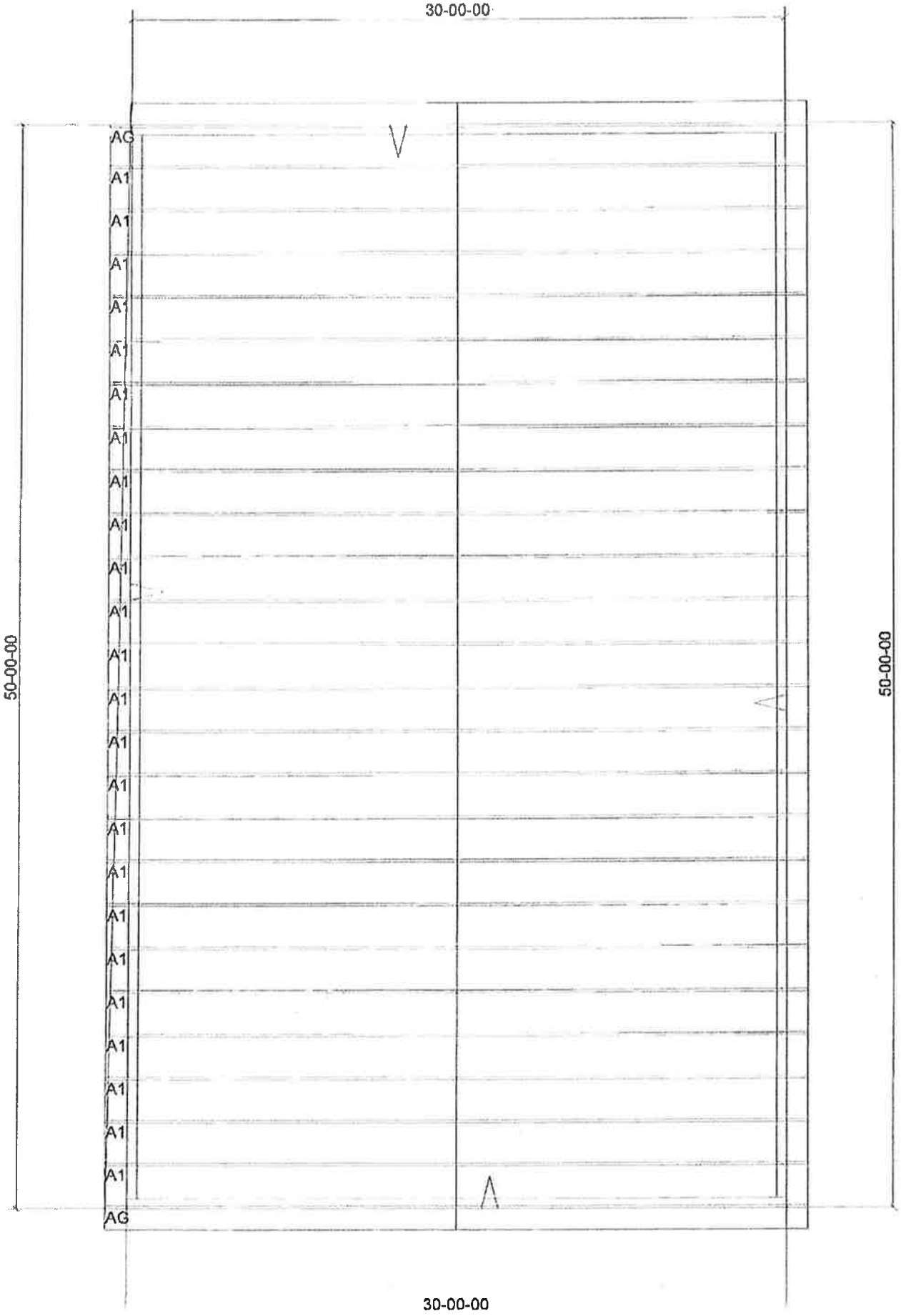
BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=288/30-0-0 (min. 0-3-3), 16=288/30-0-0 (min. 0-3-3), 23=168/30-0-0 (min. 0-3-3), 25=199/30-0-0 (min. 0-3-3), 26=178/30-0-0 (min. 0-3-3), 27=222/30-0-0 (min. 0-3-3), 28=50/30-0-0 (min. 0-3-3), 29=473/30-0-0 (min. 0-3-3), 22=199/30-0-0 (min. 0-3-3), 21=178/30-0-0 (min. 0-3-3), 20=222/30-0-0 (min. 0-3-3), 19=50/30-0-0 (min. 0-3-3), 18=473/30-0-0 (min. 0-3-3)
Max Horz 2=64(LC 5)
Max Uplift2=-49(LC 3), 16=-56(LC 4), 25=-30(LC 5), 26=-28(LC 3), 27=-32(LC 5), 28=-12(LC 3), 29=-65(LC 5), 22=-29(LC 6), 21=-28(LC 4), 20=-32(LC 6), 19=-12(LC 4), 18=-64(LC 6)
Max Grav 2=288(LC 1), 16=288(LC 1), 23=168(LC 1), 25=202(LC 7), 26=178(LC 1), 27=222(LC 7), 28=50(LC 1), 29=473(LC 7), 22=202(LC 8), 21=178(LC 1), 20=222(LC 8), 19=50(LC 1), 18=473(LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-69/62, 3-4=-58/57, 4-5=-22/63, 5-6=0/67, 6-7=-35/80, 7-8=-32/93, 8-9=-35/107, 9-10=-35/105, 10-11=-32/85, 11-12=-35/64, 12-13=0/43, 13-14=-22/38, 14-15=-58/29, 15-16=-69/62, 16-17=0/24
BOT CHORD 2-29=0/57, 28-29=0/57, 27-28=0/57, 26-27=0/57, 25-26=0/57, 24-25=0/57, 23-24=0/57, 22-23=0/57, 21-22=0/57, 20-21=0/57, 19-20=0/57, 18-19=0/57, 16-18=0/57
WEBS 9-23=-140/0, 8-25=-173/42, 7-26=-153/40, 6-27=-183/45, 4-28=-63/20, 3-29=-368/86, 10-22=-173/41, 11-21=-153/40, 12-20=-183/45, 14-19=-63/20, 15-18=-368/86

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-05; 90mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp C; enclosed; MWFRS (low-rise); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 2, 56 lb uplift at joint 16, 30 lb uplift at joint 25, 28 lb uplift at joint 26, 32 lb uplift at joint 27, 12 lb uplift at joint 28, 65 lb uplift at joint 29, 29 lb uplift at joint 22, 28 lb uplift at joint 21, 32 lb uplift at joint 20, 12 lb uplift at joint 19 and 64 lb uplift at joint 18.
9) This truss is designed in accordance with the 2009 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) "Semi-rigid pitchbreaks with fixed heels" Member end fixity model was used in the analysis and design of this truss.

LOAD CASE(S) Standard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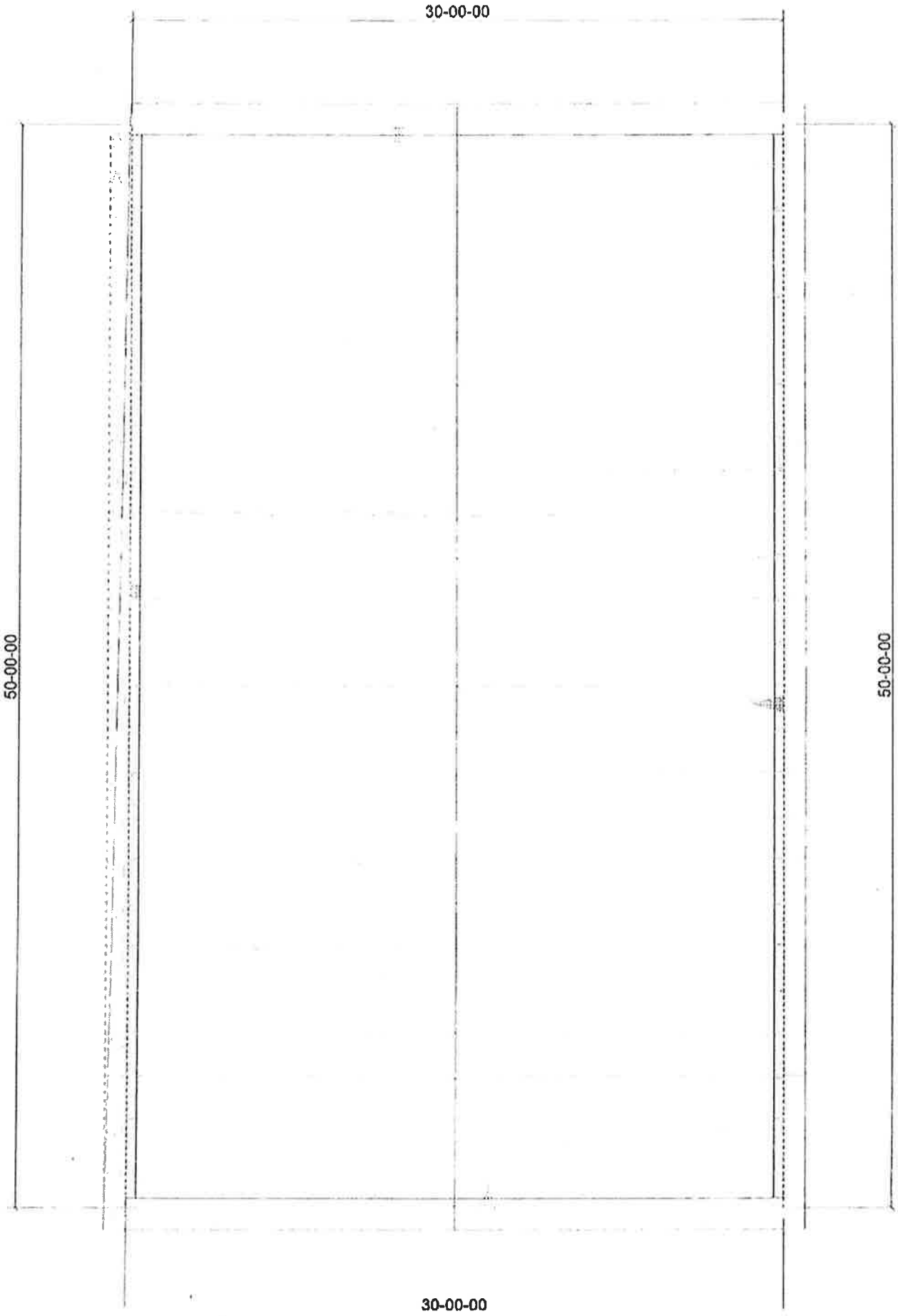
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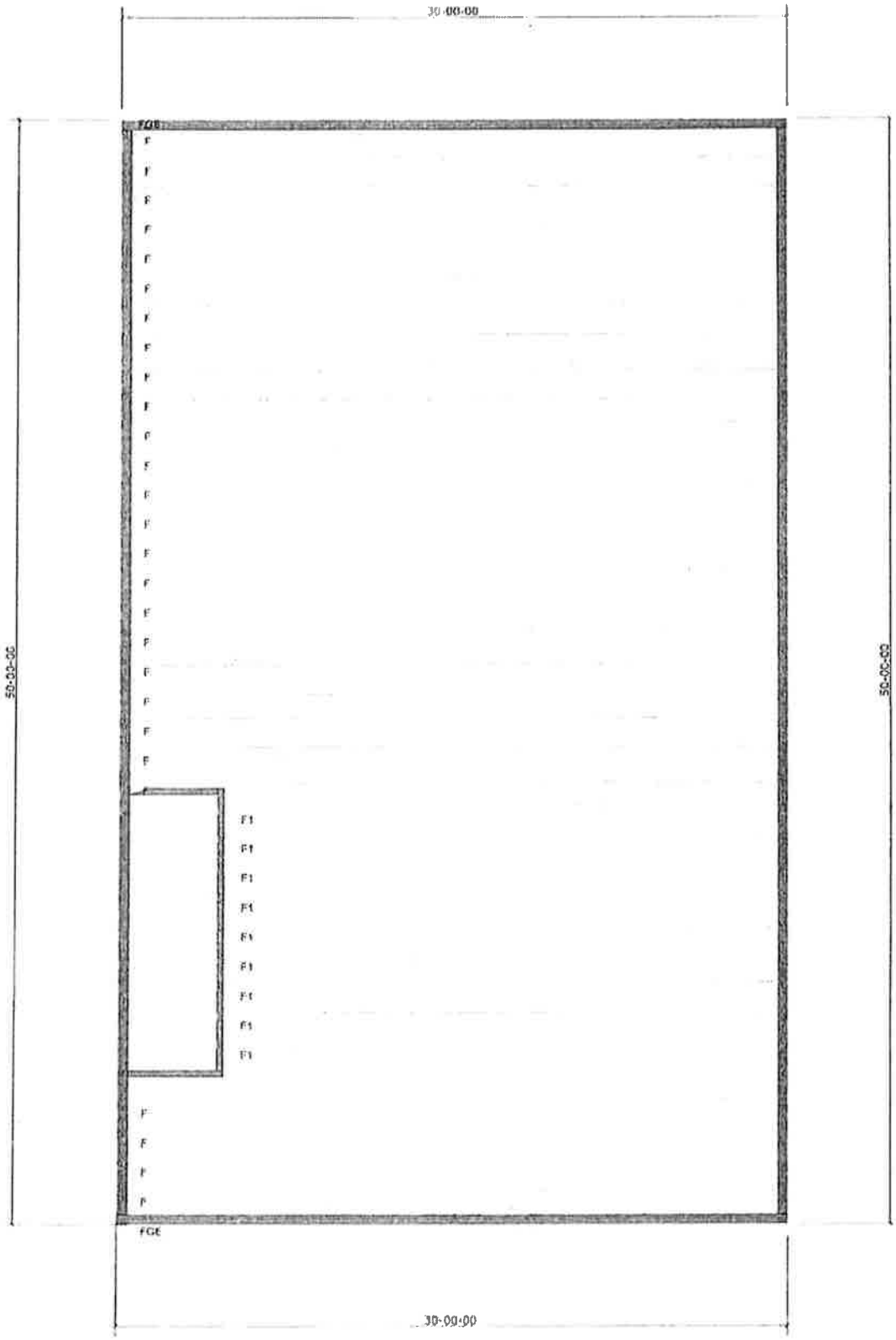
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FGE
F
F1
50-00-00
30-00-00

Job	Truss	Truss Type	Qty	Ply	
Q340870	F	FLOOR	28	1	Job Reference (optional)

Stock Components, Salt Lake City UT, 84119

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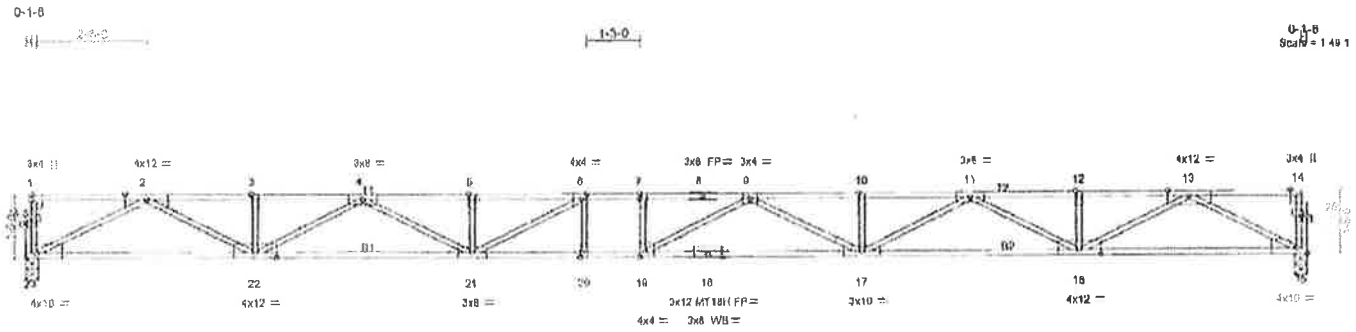

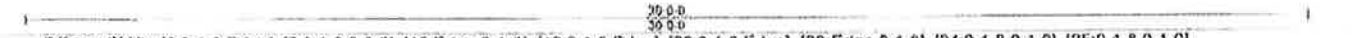

Plate Offsets (X,Y): [6:0-1-8,Edge], [7:0-1-8,0-0-0], [15:Edge,0-1-8], [19:0-1-8,Edge], [20:0-1-8,Edge], [23:Edge,0-1-8], [24:0-1-8,0-1-0], [25:0-1-8,0-1-0]

LOADING (psf)		SPACING	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plates Increase	1.00	TC	0.93	Vert(LL)	-0.89	17-19	>400	360	MT20	197/144
TCDL	10.0	Lumber Increase	1.00	BC	0.86	Vert(TL)	-1.42	17-19	>251	240	MT18H	197/144
BCLL	0.0	Rep Stress Incr	NO	WB	0.87	Horz(TL)	0.17	15	n/a	n/a		
BCDL	5.0	Code IRC2009/TPI2007		(Matrix)							Weight: 126 lb	FT = 20%F, 20%E

LUMBER
TOP CHORD 2x4 SPF 1650F 1.5E(flat)
BOT CHORD 2x4 SPF 2100F 1.8E(flat)
WEBS 2x4 DF Stud/Std(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 23=1087/0-3-8 (min. 0-1-8), 15=1087/0-3-8 (min. 0-1-8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 23-24=-69/0, 1-24=-69/0, 15-25=-69/0, 14-25=-69/0, 1-2=-3/0, 2-3=-3426/0, 3-4=-3426/0, 4-5=-5352/0, 5-6=-5352/0, 6-7=-5855/0, 7-8=-5855/0, 8-9=-5855/0, 9-10=-5366/0, 10-11=-5366/0, 11-12=-3422/0, 12-13=-3422/0, 13-14=-3/0
BOT CHORD 22-23=0/1918, 21-22=0/4555, 20-21=0/5855, 19-20=0/5855, 18-19=0/5801, 17-18=0/5801, 16-17=0/4560, 15-16=0/1917
WEBS 13-15=-2160/0, 2-23=-2162/0, 13-16=0/1709, 2-22=0/1711, 12-16=-161/0, 3-22=-165/0, 11-16=-1291/0, 4-22=-1282/0, 11-17=0/915, 4-21=0/904, 10-17=-158/0, 5-21=-204/24, 9-17=-515/0, 6-21=-873/59, 9-19=-338/498, 6-20=-85/171, 7-19=-134/47

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) This truss is designed in accordance with the 2009 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
5) "Semi-rigid pitchbreaks with fixed heels" Member end fixity model was used in the analysis and design of this truss.
6) Required 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	
Q340870	F1	FLOOR	9	1	Job Reference (optional)

Stock Components, Salt Lake City UT 84119

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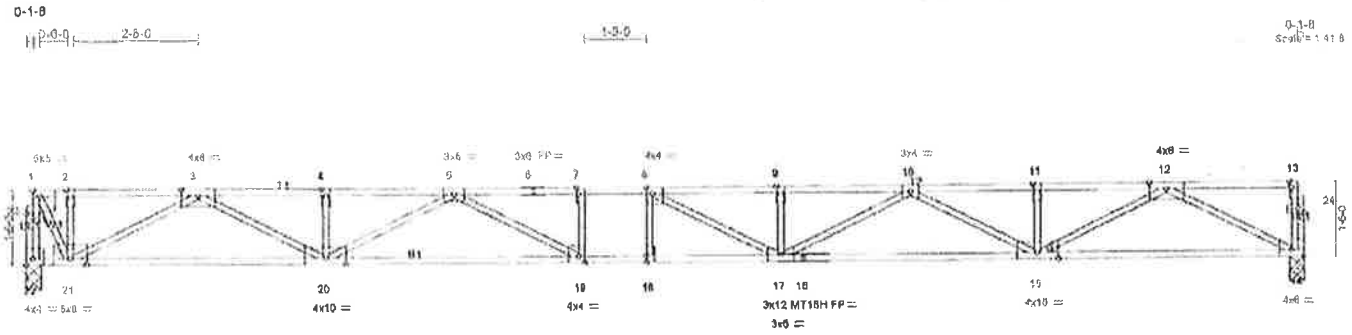

25-6-8

25-6-8

Plate Offsets (X,Y): [1:Edge,0-1-8], [7:0-1-8,Edge], [8:0-1-8,Edge], [13:0-1-8,Edge], [14:Edge,0-1-8], [18:0-1-8,0-0-0], [19:0-1-8,Edge], [22:Edge,0-1-8], [23:0-1-8,0-1-0], [24:0-1-8,0-1-0]

LOADING (psf)		SPACING	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plates Increase	1.00	TC	0.81	Vert(LL)	-0.50	17-18	>604	360	MT20	197/144
TCDL	10.0	Lumber Increase	1.00	BC	0.95	Vert(TL)	-0.78	17-18	>389	240	MT18H	197/144
BCLL	0.0	Rep Stress Incr	NO	WB	0.69	Horz(TL)	0.12	14	n/a	n/a		
BCDL	5.0	Code IRC2009/TPI2007		(Matrix)							Weight: 118 lb	FT = 20%F, 20%E

LUMBER
TOP CHORD 2x4 DF No.2(flat)
BOT CHORD 2x4 DF No.2(flat) *Except*
B1: 2x4 SPF 1650F 1.5E(flat)
WEBS 2x4 DF Stud/Std(flat)

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-6-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 22=923/0-3-8 (min. 0-1-8), 14=923/0-3-8 (min. 0-1-8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 22-23=-941/0, 1-23=-940/0, 14-24=-69/0, 13-24=-69/0, 1-2=-510/0, 2-3=-510/0, 3-4=-3060/0, 4-5=-3060/0, 5-6=-4233/0, 6-7=-4233/0, 7-8=-4233/0, 8-9=-4151/0, 9-10=-4151/0, 10-11=-2810/0, 11-12=-2810/0, 12-13=-3/0
BOT CHORD 21-22=0/43, 20-21=0/1946, 19-20=0/3798, 18-19=0/4233, 17-18=0/4233, 16-17=0/3635, 15-16=0/3635, 14-15=0/1605
WEBS 12-14=-1809/0, 1-21=0/1071, 12-15=0/1368, 2-21=-153/0, 11-15=-168/0, 3-21=-1630/0, 10-15=-936/0, 3-20=0/1265, 10-17=0/586, 4-20=-172/0, 9-17=-226/0, 5-20=-837/0, 8-17=-474/283, 5-19=0/706, 7-19=-206/0, 8-18=-117/73

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) This truss is designed in accordance with the 2009 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
5) "Semi-rigid pitchbreaks with fixed heels" Member end fixity model was used in the analysis and design of this truss.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	
Q340870	FG	GABLE	2	1	Job Reference (optional)

Stock Components, Salt Lake City UT 84119

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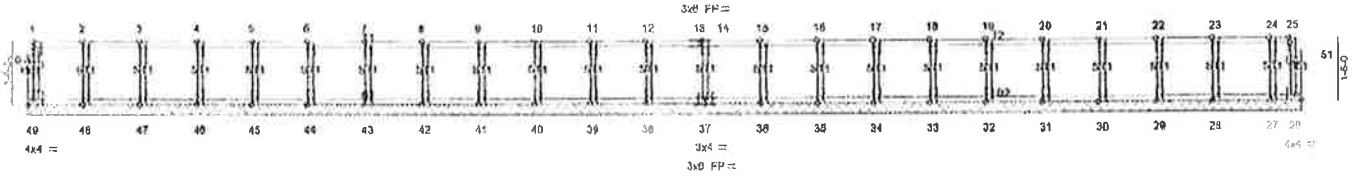


Plate Offsets (X,Y): [25:0-1-8,Edge], [26:Edge,0-1-8], [49:Edge,0-1-8], [50:0-1-8,0-1-0], [51:0-1-8,0-1-0]

LOADING (psf)		SPACING	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plates Increase	1.00	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	220/195
TCDL	10.0	Lumber Increase	1.00	BC	0.01	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.02	Horz(TL)	0.00	26	n/a	n/a		
BCDL	5.0	Code IRC2009/TPI2007		(Matrix)							Weight: 124 lb	FT = 20%F, 20%E

LUMBER
TOP CHORD 2x4 DF No.2(flat)
BOT CHORD 2x4 DF No.2(flat)
WEBS 2x4 DF Stud/Std(flat)
OTHERS 2x4 DF Stud/Std(flat)

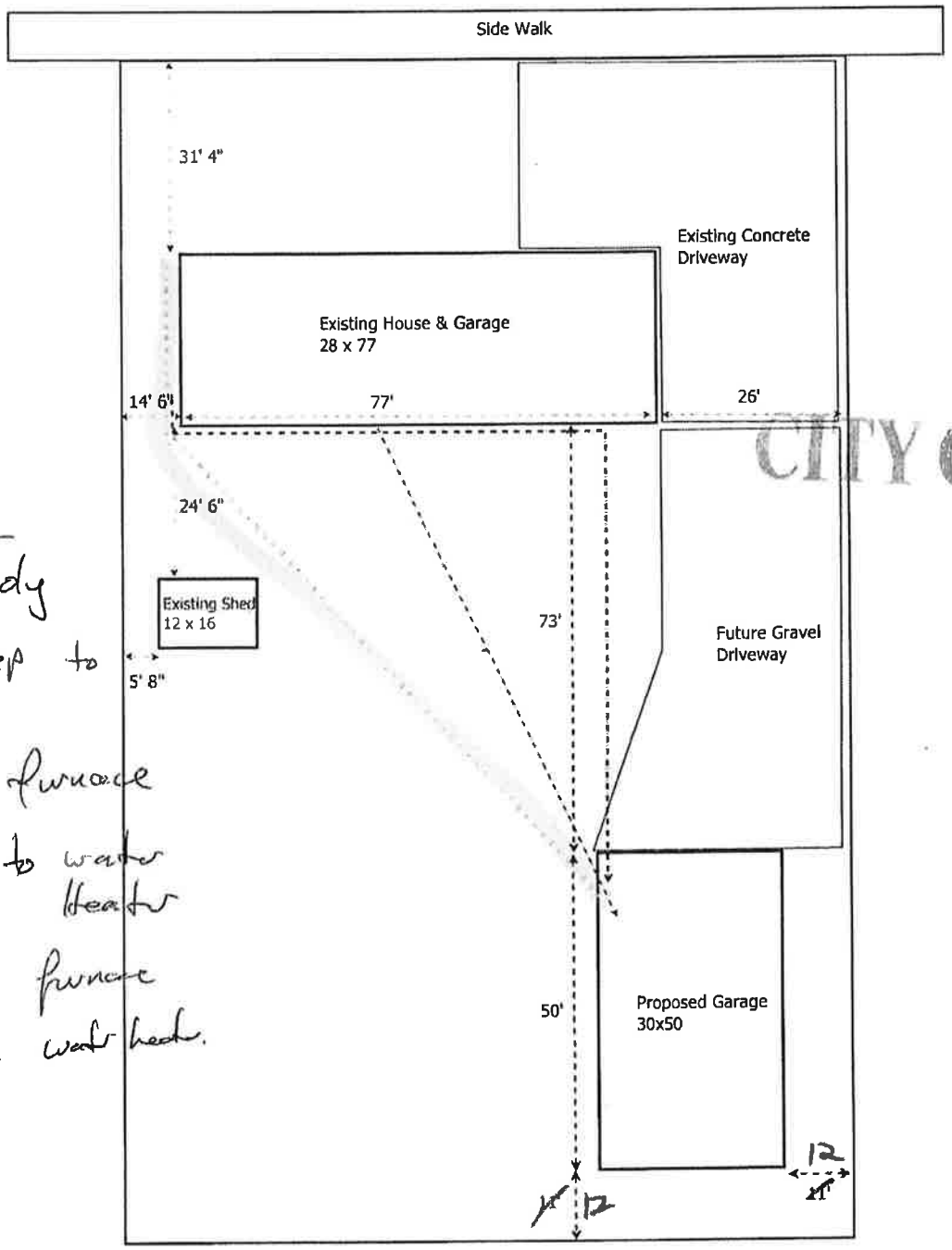
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 49=35/30-0-0 (min. 0-1-8), 26=10/30-0-0 (min. 0-1-8), 48=99/30-0-0 (min. 0-1-8), 47=98/30-0-0 (min. 0-1-8), 46=98/30-0-0 (min. 0-1-8), 45=98/30-0-0 (min. 0-1-8), 44=98/30-0-0 (min. 0-1-8), 43=98/30-0-0 (min. 0-1-8), 42=98/30-0-0 (min. 0-1-8), 41=98/30-0-0 (min. 0-1-8), 40=98/30-0-0 (min. 0-1-8), 39=97/30-0-0 (min. 0-1-8), 38=100/30-0-0 (min. 0-1-8), 37=100/30-0-0 (min. 0-1-8), 36=97/30-0-0 (min. 0-1-8), 35=98/30-0-0 (min. 0-1-8), 34=98/30-0-0 (min. 0-1-8), 33=98/30-0-0 (min. 0-1-8), 32=98/30-0-0 (min. 0-1-8), 31=98/30-0-0 (min. 0-1-8), 30=98/30-0-0 (min. 0-1-8), 29=97/30-0-0 (min. 0-1-8), 28=102/30-0-0 (min. 0-1-8), 27=71/30-0-0 (min. 0-1-8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 49-50=-32/0, 1-50=-32/0, 26-51=-6/0, 25-51=-5/0, 1-2=-3/0, 2-3=-3/0, 3-4=-3/0, 4-5=-3/0, 5-6=-3/0, 6-7=-3/0, 7-8=-3/0, 8-9=-3/0, 9-10=-3/0, 10-11=-3/0, 11-12=-3/0, 12-13=-3/0, 13-14=-3/0, 14-15=-3/0, 15-16=-3/0, 16-17=-3/0, 17-18=-3/0, 18-19=-3/0, 19-20=-3/0, 20-21=-3/0, 21-22=-3/0, 22-23=-3/0, 23-24=-3/0, 24-25=-3/0
BOT CHORD 48-49=0/3, 47-48=0/3, 46-47=0/3, 45-46=0/3, 44-45=0/3, 43-44=0/3, 42-43=0/3, 41-42=0/3, 40-41=0/3, 39-40=0/3, 38-39=0/3, 37-38=0/3, 36-37=0/3, 35-36=0/3, 34-35=0/3, 33-34=0/3, 32-33=0/3, 31-32=0/3, 30-31=0/3, 29-30=0/3, 28-29=0/3, 27-28=0/3, 26-27=0/3
WEBS 2-48=-88/0, 3-47=-89/0, 4-46=-89/0, 5-45=-89/0, 6-44=-89/0, 7-43=-89/0, 8-42=-89/0, 9-41=-89/0, 10-40=-89/0, 11-39=-88/0, 12-38=-91/0, 14-37=-91/0, 15-36=-88/0, 16-35=-89/0, 17-34=-89/0, 18-33=-89/0, 19-32=-89/0, 20-31=-89/0, 21-30=-89/0, 22-29=-88/0, 23-28=-93/0, 24-27=-68/0

NOTES
1) All plates are 2x4 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) This truss is designed in accordance with the 2009 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
6) "Semi-rigid pitchbreaks with fixed heels" Member end fixity model was used in the analysis and design of this truss.
7) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard



Gas Line

1¼ inch pdy

2 feet deep to Garage

1 inch to furnace

¾ inch to water heater

80,000 BTU furnace

40,000 BTU water heater.

N

Property Address: 2084 Lawrence Circle, South Jordan, UT 84095

SALT LAKE COUNTY RECORDER

Attention: These data are updated once a year when tax assessments are generated (April or May). Please check Mainframe screens for more up-to-date information.

Residential Information

Parcel Number: **27101050050000**

Building Style: RAMBLER/RANCH

Exterior Wall Type: BRICK

Raised Roof: YES

Roofing: ASPHALT SHINGLES

Number of Stories: 1.0

Upper Floor Area: 0 sq. ft.

Main Floor Area: 1560 sq. ft.

Basement Area: 1526 sq. ft.

Finished Basement Area: 560 sq. ft.

Finished Attic Area: 0 sq. ft.

Overall Grade:

Finished Basement Grade: FAIR

Overall Condition: AVERAGE

Maintenance: MINIMUM

Liveability: AVERAGE

Visual Appeal: AVERAGE

Conformity: EQUALLY IMPROVED

Year Built: 1981

Effective Year Built: 1988

Total Rooms: 11

Number of Bedrooms: 4

Number of Kitchens: 1

Primary Kitchen Quality: S

Full Baths: 1

3/4 Baths: 1

Half Baths: 1

Primary Bath Quality: S

Heating Type: PRIMARY CENTRAL

Central Air Conditioning:

Finished Fireplaces: 1

Metal Fireplaces: 0

Carport Area: 0 sq. ft.

Carport Capacity: 0

Attached Garage Area: 630 sq. ft.

Built-In Garage Area: 0 sq. ft.

Basement Garage Area: 0 sq. ft.

Load Short Form
Entire House

Job:
Date: Sep 19, 2012
By:

Project Information

For:

CITY COPY

Design Information

	Htg	Clg
Outside db (°F)	20	92
Inside db (°F)	70	75
Design TD (°F)	50	17
Daily range	-	M
Inside humidity (%)	30	50
Moisture difference (gr/lb)	21	41

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

HEATING EQUIPMENT

Make	Bryant
Trade	BRYANT
Model	915SA30040S14
AHRI ref	5039415

Efficiency	95.5 AFUE	
Heating input	40000	MBtuh
Heating output	39000	Btuh
Temperature rise	47	°F
Actual air flow	747	cfm
Air flow factor	0.036	cfm/Btuh
Static pressure	0.56	in H2O
Space thermostat		

COOLING EQUIPMENT

Make	Bryant
Trade	LEGACY RNC 13 PURON AC
Cond	113ANC024-B
Coil	CAP**2417A**+CVMAAR036105
AHRI ref	5016121

Efficiency	11.7 EER, 14 SEER	
Sensible cooling	15680	Btuh
Latent cooling	6720	Btuh
Total cooling	22400	Btuh
Actual air flow	747	cfm
Air flow factor	0.069	cfm/Btuh
Static pressure	0.56	in H2O
Load sensible heat ratio	0.80	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
bed 1	168	978	320	35	22
bed 2	192	5564	2572	199	176
Great room	674	6898	4394	247	302
bath 1	45	803	554	29	38
M Bath	45	803	554	29	38
M suite	279	5139	2259	184	155
M closset	90	675	234	24	16
Entire House d	1493	20860	10887	747	747
Other equip loads		0	0		
Equip. @ 0.97 RSM			10550		
Latent cooling			2773		
TOTALS	1493	20860	13322	747	747

Calculations approved by ACCA to meet all requirements of Manual J 7th Ed.

Loads for Multiple Orientations
Entire House

Job:
Date: Sep 19, 2012
By:

Project Information

For:

Design Conditions

Location:
Washington R. Reagan AP, DC, US
Elevation: 10 ft
Latitude: 39°N

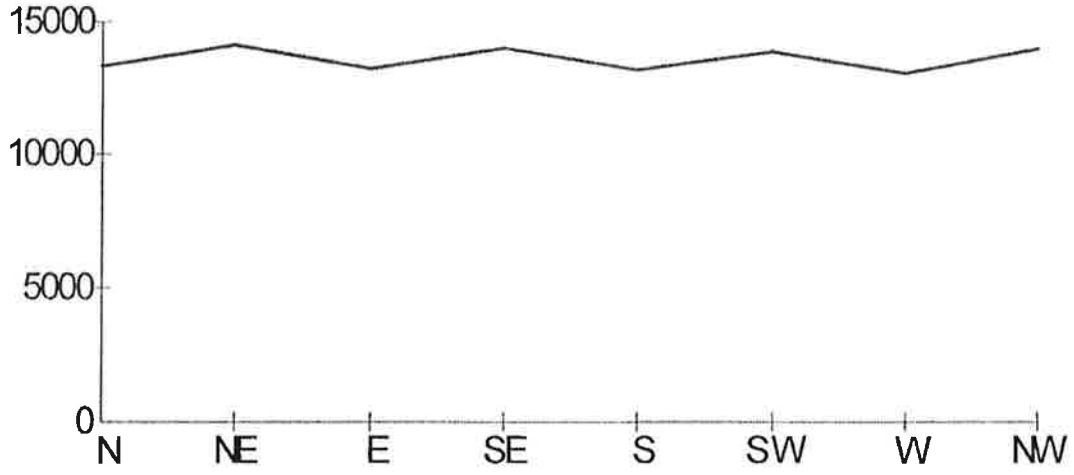
Outdoor:	Heating	Cooling
Dry bulb (°F)	20	92
Daily range (°F)	-	16 (M)
Wet bulb (°F)	-	75
Wind speed (mph)	15.0	7.5

Indoor:	Heating	Cooling
Indoor temperature (°F)	70	75
Design TD (°F)	50	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	20.6	41.0

Infiltration:

Front Door	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Sensible Load (Btuh)	10550	11347	10451	11231	10404	11080	10262	11196
Latent Load (Btuh)	2773	2773	2773	2773	2773	2773	2773	2773
Total Load (Btuh)	13322	14120	13223	14003	13177	13852	13034	13969
Heating AVF (cfm)	747	747	747	747	747	747	747	747
Cooling AVF (cfm)	747	747	747	747	747	747	747	747

Building Orientation Cooling Load



Current Orientation: Front Door faces North
Highest Cooling Load: Front Door faces Northeast

Calculations approved by ACCA to meet all requirements of Manual J 7th Ed.

Building Analysis
Entire House

Job:
Date: Sep 19, 2012
By:

Project Information

For:

Design Conditions

Location:
Washington R. Reagan AP, DC, US
Elevation: 10 ft
Latitude: 39°N

Outdoor:	Heating	Cooling
Dry bulb (°F)	20	92
Daily range (°F)	-	16 (M)
Wet bulb (°F)	-	75
Wind speed (mph)	15.0	7.5

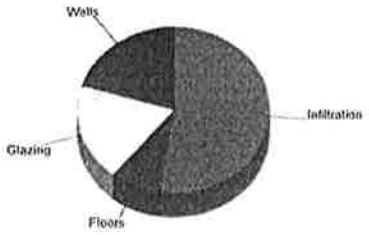
Indoor:	Heating	Cooling
Indoor temperature (°F)	70	75
Design TD (°F)	50	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	20.6	41.0

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

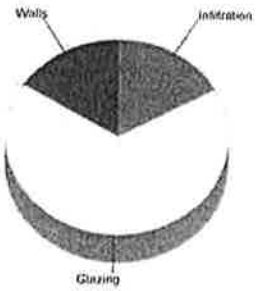
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.7	4247	20.4
Glazing	27.4	3924	18.8
Doors	0	0	0
Ceilings	0	0	0
Floors	1.2	1784	8.6
Infiltration	76.3	10905	52.3
Ducts		0	0
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	
Total		**20860**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.5	1748	16.1
Glazing	51.0	7289	66.9
Doors	0	0	0
Ceilings	0	0	0
Floors	0	0	0
Infiltration	12.9	1850	17.0
Ducts		0	0
Ventilation		0	0
Internal gains		0	0
Blower		0	0
Adjustments		0	
Total		**10887**	**100.0**



Latent Cooling Load = 2773 Btuh
Overall U-value = 0.085 Btuh/ft²-°F

WARNING: window to floor area ratio = 9.6% - less than 10%.

Component Constructions
Entire House

Job:
Date: Sep 19, 2012
By:

Project Information

For:

Design Conditions

Location:
Washington R. Reagan AP, DC, US
Elevation: 10 ft
Latitude: 39°N

Outdoor:	Heating	Cooling
Dry bulb (°F)	20	92
Daily range (°F)	-	16 (M)
Wet bulb (°F)	-	75
Wind speed (mph)	15.0	7.5

Indoor:	Heating	Cooling
Indoor temperature (°F)	70	75
Design TD (°F)	50	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	20.6	41.0

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
12E3: Frm wall, stucco ext, 1/2" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm		1137	0.075	14.8	3.74	4247	1.54	1748
Partitions								
(none)								
Windows								
3A0: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" thk; clear	n	30	0.551	0	27.4	823	21.8	653
	e	43	0.551	0	27.4	1180	70.8	3043
	s	40	0.551	0	27.4	1098	36.8	1470
	w	30	0.551	0	27.4	823	70.8	2123
	all	143	0.551	0	27.4	3924	51.0	7289
Doors								
(none)								
Ceilings								
(none)								
Floors								
19I0: Flr floor, frm flr, 10" thkns, carpet flr fnsh, r-2 ext ins, r-19 cav ins, tight crwl ovr, r-11 wall insul		1493	0.048	19.0	1.20	1784	0	0

Calculation Procedures A, B, C, D
Entire House

Job:
Date: Sep 19, 2012
By:

Procedure A - Winter Infiltration HTM Calculation*

1.	Winter infiltration AVF									
	1.00	ach	x	11944	ft³	x	0.0167	=	199	cfm
2.	Winter infiltration load									
	1.1	x 199	cfm	x	50	°F	Winter TD =		10905	Btuh
3.	Winter infiltration HTM									
	10905	Btuh	/	143	ft²		Total window and door area =		76.3	Btuh/ft²

Procedure B - Summer Infiltration HTM Calculation

1.	Summer infiltration AVF									
	0.50	ach	x	11944	ft³	x	0.0167	=	100	cfm
2.	Summer infiltration load									
	1.1	x 100	cfm	x	17	°F	Summer TD =		1850	Btuh
3.	Summer infiltration HTM									
	1850	Btuh	/	143	ft²		Total window and door area =		12.9	Btuh/ft²

Procedure C - Latent Infiltration Gain

0.68	x41	gr/lb	moist.diff.	x	100 cfm	=	2773 Btuh

Procedure D - Equipment Sizing Loads

1.	Sensible sizing load							
	Sensible ventilation load							
	1.1 x	0 cfm	vent.	x	17 °F	Summer TD	=	0 Btuh
	Sensible load for structure (Line 19)						+	10887 Btuh
	Vent + structure + other equip loads						=	10887 Btuh
	Rating and temperature swing multiplier						x	0.97
	Equipment sizing load - sensible						=	10550 Btuh
2.	Latent sizing load							
	Latent ventilation load							
	0.68 x	0 cfm	vent.	x	41 gr/lb	moist.diff.	=	0 Btuh
	Internal loads =	230 Btuh		x	0	people	+	0 Btuh
	Infiltration load from Procedure C						+	2773 Btuh
	Equipment sizing load - latent						=	2773 Btuh

* Construction quality: Average
Fireplace construction: Average Number of fireplaces: 0

Calculations approved by ACCA to meet all requirements of Manual J 7th Ed.

Project Summary
Entire House

Job:
Date: Sep 19, 2012
By:

Project Information

For:

Notes:

Design Information

Weather: Washington R. Reagan AP, DC, US

Winter Design Conditions

Outside db	20	°F
Inside db	70	°F
Design TD	50	°F

Summer Design Conditions

Outside db	92	°F
Inside db	75	°F
Design TD	17	°F
Daily range	M	
Relative humidity	50	%
Moisture difference	41	gr/lb

Heating Summary

Structure	20860	Btuh
Ducts	0	Btuh
Central vent (0 cfm)	0	Btuh
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	20860	Btuh

Sensible Cooling Equipment Load Sizing

Structure	10887	Btuh
Ducts	0	Btuh
Central vent (0 cfm)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.97	
Equipment sensible load	10550	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	1493	1493
Volume (ft³)	11944	11944
Air changes/hour	1.00	0.50
Equiv. AVF (cfm)	199	100

Latent Cooling Equipment Load Sizing

Structure	2773	Btuh
Ducts	0	Btuh
Central vent (0 cfm)	0	Btuh
Equipment latent load	2773	Btuh
Equipment total load	13322	Btuh
Req. total capacity at 0.70 SHR	1.3	ton

Heating Equipment Summary

Make	Bryant
Trade	BRYANT
Model	915SA30040S14
AHRI ref	5039415

Efficiency	95.5	AFUE
Heating input	40000	MBtuh
Heating output	39000	Btuh
Temperature rise	47	°F
Actual air flow	747	cfm
Air flow factor	0.036	cfm/Btuh
Static pressure	0.56	in H2O
Space thermostat		

Cooling Equipment Summary

Make	Bryant
Trade	LEGACY RNC 13 PURON AC
Cond	113ANC024-B
Coil	CAP**2417A**+CVMAAR036105
AHRI ref	5016121

Efficiency	11.7 EER, 14 SEER	
Sensible cooling	15680	Btuh
Latent cooling	6720	Btuh
Total cooling	22400	Btuh
Actual air flow	747	cfm
Air flow factor	0.069	cfm/Btuh
Static pressure	0.56	in H2O
Load sensible heat ratio	0.80	

Calculations approved by ACCA to meet all requirements of Manual J 7th Ed.

Right-J® Worksheet
Entire House

Job:
Date: Sep 19, 2012
By:

	MANUAL J: 7th Ed.																	
1	Name of room					Entire House			bed 1			bed 2			Great room		
2	Length of exposed wall					160.0 ft			26.0 ft			28.0 ft			50.0 ft		
3	Room dimensions								14.0 x 12.0 ft			16.0 x 12.0 ft			1.0 x 674.0 ft		
4	Ceilings	Condit. Option				8.0 ft		d	8.0 ft	heat/cool		8.0 ft	heat/cool		8.0 ft	heat/cool	
	TYPE OF EXPOSURE		CST NO.	HTM Htg	HTM Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg
5	Gross Exposed walls and partitions	a	12E3	3.7	1.5	1280	****	****	208	****	****	224	****	****	400	****	****
		b		0	0		****	****		****	****		****	****		****	****
		c		0	0		****	****		****	****		****	****		****	****
		d		0	0		****	****		****	****		****	****		****	****
		e		0	0		****	****		****	****		****	****		****	****
		f		0	0		****	****		****	****		****	****		****	****
6	Windows and glass doors Heating	a	3A0	27.4	**	143	3924	****	0	0	****	45	1235	****	46	1262	****
		b		0	**	0	0	****	0	0	****	0	0	****	0	0	****
		c		0	**	0	0	****	0	0	****	0	0	****	0	0	****
		d		0	**	0	0	****	0	0	****	0	0	****	0	0	****
		e		0	**	0	0	****	0	0	****	0	0	****	0	0	****
		f		0	**	0	0	****	0	0	****	0	0	****	0	0	****
7	Windows and glass doors Cooling	North			21.8	30	****	653	0	****	0	30	****	653	0	****	0
		NE/NW			0	0	****	0	0	****	0	0	****	0	0	****	0
		E/W			70.8	73	****	5165	0	****	0	15	****	1061	46	****	3255
		SE/SW			0	0	****	0	0	****	0	0	****	0	0	****	0
		South			36.8	40	****	1470	0	****	0	0	****	0	0	****	0
		Horz			0	0	****	0	0	****	0	0	****	0	0	****	0
8	Other doors	a		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		b		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Net exposed walls and partitions	a	12E3	3.7	1.5	1137	4247	1748	208	777	320	179	669	275	354	1322	544
		b		0	0		0	0		0	0		0	0		0	0
		c		0	0		0	0		0	0		0	0		0	0
		d		0	0		0	0		0	0		0	0		0	0
		e		0	0		0	0		0	0		0	0		0	0
		f		0	0		0	0		0	0		0	0		0	0
10	Ceilings	a		0	0		0	0		0	0		0	0		0	0
		b		0	0		0	0		0	0		0	0		0	0
		c		0	0		0	0		0	0		0	0		0	0
		d		0	0		0	0		0	0		0	0		0	0
		e		0	0		0	0		0	0		0	0		0	0
		f		0	0		0	0		0	0		0	0		0	0
11	Floors (Note: room perimeter is displ. for slab floors)	a	19I0	1.2	0	1493	1784	0	168	201	0	192	229	0	674	806	0
		b		0	0		0	0		0	0		0	0		0	0
		c		0	0		0	0		0	0		0	0		0	0
		d		0	0		0	0		0	0		0	0		0	0
		e		0	0		0	0		0	0		0	0		0	0
		f		0	0		0	0		0	0		0	0		0	0
12	Infiltration Ventilation	a		76.3	12.9	143	10905 0	1850 0	0	0 0	0 0	45	3432 0	582 0	46	3508 0	595 0
13	Subtotal loss=6+8..+11+12					****	20860	****	****	978	****	****	5564	****	****	6898	****
	Less external heating					****	0	****	****	0	****	****	0	****	****	0	****
	Less transfer					****	0	****	****	0	****	****	0	****	****	0	****
	Heating redistribution					****	0	****	****	0	****	****	0	****	****	0	****
14	Duct loss					0%	0	****	0%	0	****	0%	0	****	0%	0	****
15	Total loss = 13+14					****	20860	****	****	978	****	****	5564	****	****	6898	****
16	Int. gains: People @				300	0	****	0	0	****	0	0	****	0	0	****	0
	Appl. @				1200	0	****	0	0	****	0	0	****	0	0	****	0
17	Subtot RSH gain=7+8..+12+16					****	****	10887	****	****	320	****	****	2572	****	****	4394
	Less external cooling					****	****	0	****	****	0	****	****	0	****	****	0
	Less transfer					****	****	0	****	****	0	****	****	0	****	****	0
	Cooling redistribution					****	****	0	****	****	0	****	****	0	****	****	0
18	Duct gain					0%	****	0	0%	****	0	0%	****	0	0%	****	0
19	Total RSH gain=(17+18)*PLF					1.00	****	10887	1.00	****	320	1.00	****	2572	1.00	****	4394
20	Air required (cfm)						747	747		35	22		199	176		247	302

Calculations approved by ACCA to meet all requirements of Manual J 7th Ed.

Right-J® Worksheet
Entire House

Job:
Date: Sep 19, 2012
By:

MANUAL J: 7th Ed.

						bath 1			M Bath			M suite			M closset		
1	Name of room																
2	Length of exposed wall					5.0 ft			5.0 ft			27.0 ft			19.0 ft		
3	Room dimensions					9.0 x 5.0 ft			9.0 x 5.0 ft			1.0 x 279.0 ft			9.0 x 10.0 ft		
4	Ceilings	Condit.	Option			8.0 ft | heat/cool			8.0 ft | heat/cool			8.0 ft | heat/cool			8.0 ft | heat/cool		
	TYPE OF EXPOSURE		CST NO.	HTM Htg	HTM Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg
5	Gross	a	12E3	3.7	1.5	40	****	****	40	****	****	216	****	****	152	****	****
	Exposed	b		0	0	!!!!!	****	****	!!!!!	****	****	!!!!!	****	****	!!!!!	****	****
	walls and	c		0	0	!!!!!	****	****	!!!!!	****	****	!!!!!	****	****	!!!!!	****	****
	partitions	d		0	0	!!!!!	****	****	!!!!!	****	****	!!!!!	****	****	!!!!!	****	****
		e		0	0	!!!!!	****	****	!!!!!	****	****	!!!!!	****	****	!!!!!	****	****
		f		0	0	!!!!!	****	****	!!!!!	****	****	!!!!!	****	****	!!!!!	****	****
6	Windows and	a	3A0	27.4	**	6	165	****	6	165	****	40	1098	****	0	0	****
	glass doors	b		0	**	0	0	****	0	0	****	0	0	****	0	0	****
	Heating	c		0	**	0	0	****	0	0	****	0	0	****	0	0	****
		d		0	**	0	0	****	0	0	****	0	0	****	0	0	****
		e		0	**	0	0	****	0	0	****	0	0	****	0	0	****
		f		0	**	0	0	****	0	0	****	0	0	****	0	0	****
7	Windows and		North		21.8	0	****	0	0	****	0	0	****	0	0	****	0
	glass doors		NE/NW		0	0	****	0	0	****	0	0	****	0	0	****	0
	Cooling		E/W		70.8	6	****	425	6	****	425	0	****	0	0	****	0
			SE/SW		0	0	****	0	0	****	0	0	****	0	0	****	0
			South		36.8	0	****	0	0	****	0	40	****	1470	0	****	0
			Horz		0	0	****	0	0	****	0	0	****	0	0	****	0
8	Other doors	a		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		b		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Net	a	12E3	3.7	1.5	34	127	52	34	127	52	176	657	271	152	568	234
	exposed	b		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
	walls and	c		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
	partitions	d		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
		e		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
		f		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
10	Ceilings	a		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
		b		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
		c		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
		d		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
		e		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
		f		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
11	Floors	a	19I0	1.2	0	45	54	0	45	54	0	279	333	0	90	108	0
	(Note: room	b		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
	perimeter	c		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
	is displ.	d		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
	for slab	e		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
	floors)	f		0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0	!!!!!	0	0
12	Infiltration	a		76.3	12.9	6	458	78	6	458	78	40	3050	518	0	0	0
	Ventilation						0	0		0	0		0	0		0	0
13	Subtotal loss=6+8..+11+12					****	803	****	****	803	****	****	5139	****	****	675	****
	Less external heating					****	0	****	****	0	****	****	0	****	****	0	****
	Less transfer					****	0	****	****	0	****	****	0	****	****	0	****
	Heating redistribution					****	0	****	****	0	****	****	0	****	****	0	****
14	Duct loss					0%	0	****	0%	0	****	0%	0	****	0%	0	****
15	Total loss = 13+14					****	803	****	****	803	****	****	5139	****	****	675	****
16	Int. gains: People @				300	0	****	0	0	****	0	0	****	0	0	****	0
	Appl. @				1200	0	****	0	0	****	0	0	****	0	0	****	0
17	Subtot RSH gain=7+8..+12+16					****	****	554	****	****	554	****	****	2259	****	****	234
	Less external cooling					****	****	0	****	****	0	****	****	0	****	****	0
	Less transfer					****	****	0	****	****	0	****	****	0	****	****	0
	Cooling redistribution					****	****	0	****	****	0	****	****	0	****	****	0
18	Duct gain					0%	****	0	0%	****	0	0%	****	0	0%	****	0
19	Total RSH gain=(17+18)*PLF					1.00	****	554	1.00	****	554	1.00	****	2259	1.00	****	234
20	Air required (cfm)						29	38		29	38		184	155		24	16

Calculations approved by ACCA to meet all requirements of Manual J 7th Ed.

Window Data

Job:
Date: Sep 19, 2012
By:

WNDW	SKY	ORI	GLAZ	LOWE	STRM	SHAD	NGLZ	INCL	SHCO	OVRX	OVRY	WHGT	CHTM	WNAR	SHAR
bed 2															
3A0	n	n	c	n	n	n	2	90.0	1.0	0.0	0.0	4.0	21.8	30.0	0.0
3A0	n	e	c	n	n	n	2	90.0	1.0	0.0	0.0	4.0	70.8	15.0	0.0
Great room															
3A0	n	e	c	n	n	n	2	90.0	1.0	0.0	0.0	4.0	70.8	16.0	0.0
3A0	n	w	c	n	n	n	2	90.0	1.0	0.0	0.0	4.0	70.8	30.0	0.0
bath 1															
3A0	n	e	c	n	n	n	2	90.0	1.0	0.0	0.0	4.0	70.8	6.0	0.0
M Bath															
3A0	n	e	c	n	n	n	2	90.0	1.0	0.0	0.0	4.0	70.8	6.0	0.0
M suite															
3A0	n	s	c	n	n	n	2	90.0	1.0	0.0	0.0	4.0	36.8	40.0	0.0

Manual S Compliance Report
Entire House

Job:
Date: Sep 19, 2012
By:

Project Information

For:

Cooling Equipment

Design Conditions

Outdoor design DB:	91.9°F	Sensible gain:	10887	Btuh	Entering coil DB:	75.0°F
Outdoor design WB:	75.3°F	Latent gain:	2773	Btuh	Entering coil WB:	62.5°F
Indoor design DB:	75.0°F	Total gain:	13660	Btuh		
Indoor RH:	50%	Estimated airflow:	471	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split AC				
Manufacturer:	Bryant		Model:	113ANC024-B+CAP**2417A**+CVMAAR036105	
Actual airflow:	747	cfm			
Sensible capacity:	0	Btuh	0% of load		
Latent capacity:	0	Btuh	0% of load		
Total capacity:	0	Btuh	0% of load	SHR:	0%

Heating Equipment

Design Conditions

Outdoor design DB:	20.2°F	Heat loss:	20860	Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Gas furnace					
Manufacturer:	Bryant		Model:	915SA30040S14		
Actual airflow:	747	cfm				
Output capacity:	39000	Btuh	187% of load		Temp. rise:	50 °F

The above equipment was selected in accordance with ACCA Manual S.

DHW Report
Entire House

Job:
Date: Sep 19, 2012
By:

Project Information

For:

Design Criteria

Occupants	
Age	Number
0-5	0
6-13	2
14-59	2
60+	0

Not occupied during the day	
Dishwasher	
Clothes washer	
Additional use (gpd)	0
Setpoint (°F)	120
Daily use (gpd)	61

Gas conventional (40 gal, 0.60 EF)

Manufacturer	
Trade name	
Model	
AHRI ref. number	
Tank size (gal)	40
Energy factor	0.60
Input (MBtuh)	0.0
1st hour (gal)	60
Recovery eff. (%)	77

Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

Form RPER 1 15 Mar 09

Header Information

Contractor:

Mechanical license:

Building plan #:

Home address (Street or Lot#, Block, Subdivision): , Entire House

REQUIRED ATTACHMENTS	ATTACHED
Manual J1 Form (and supporting worksheets):	Yes ☐ No ☐
or MJ1AE Form* (and supporting worksheets):	Yes ☐ No ☐
OEM performance data (heating, cooling, blower):	Yes ☐ No ☐
Manual D Friction Rate Worksheet:	Yes ☐ No ☐
Duct distribution sketch:	Yes ☐ No ☐

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature:	20	°F
Indoor temperature:	70	°F
Total heat loss:	20860	Btuh

Summer Design Conditions

Outdoor temperature:	92	°F
Indoor temperature:	75	°F
Grains difference:	41 gr/lb @ 50% RH	
Sensible heat gain:	10887	Btuh
Latent heat gain:	2773	Btuh
Total heat gain:	13660	Btuh

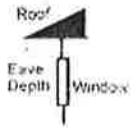
Building Construction Information

Building

Orientation: (North, East, West, South, Northeast, Northwest, Southeast, Southwest)	Front Door faces North
Number of bedrooms:	0
Conditioned floor area:	1493 ft²
Number of occupants:	0

Windows

Eave overhang depth:	0 ft
Internal shade: (Blinds, drapes, etc.)	none
Number of skylights:	0



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: (Furnace, Heat pump, Boiler, etc.)	Gas furnace
Model:	Bryant 915SA30040S14+
Heating output capacity: (Heat pumps - capacity at winter design outdoor conditions)	39000 Btuh
Aux. heating output capacity:	0 Btuh

Cooling Equipment Data

Equipment type: (Air Conditioner, Heat pump, etc.)	Split AC
Model:	Bryant 113ANC024-B
Total cooling capacity:	0 Btuh
Sensible cooling capacity:	0 Btuh
Latent cooling capacity:	0 Btuh

Blower Data

Heating cfm:	747
Cooling cfm:	747
Static pressure: (Fan's rated external static pressure for design airflow)	0.56 in H2O

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow:	747 cfm	Longest supply duct:	250 ft	Duct Materials Used	
Equipment design ESP:	0.56 in H2O	Longest return duct:	96 ft	Trunk duct:	Sheet metal
Total device pressure losses:	0 in H2O	**Total effective length (TEL):**	346 ft		
Available static pressure (ASP):	0.56 in H2O	**Friction rate:** (Friction Rate = ASP ÷ (TEL x 100))	0.162 in/100ft	Branch duct:	Sheet metal

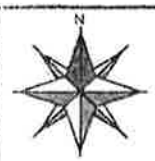
I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

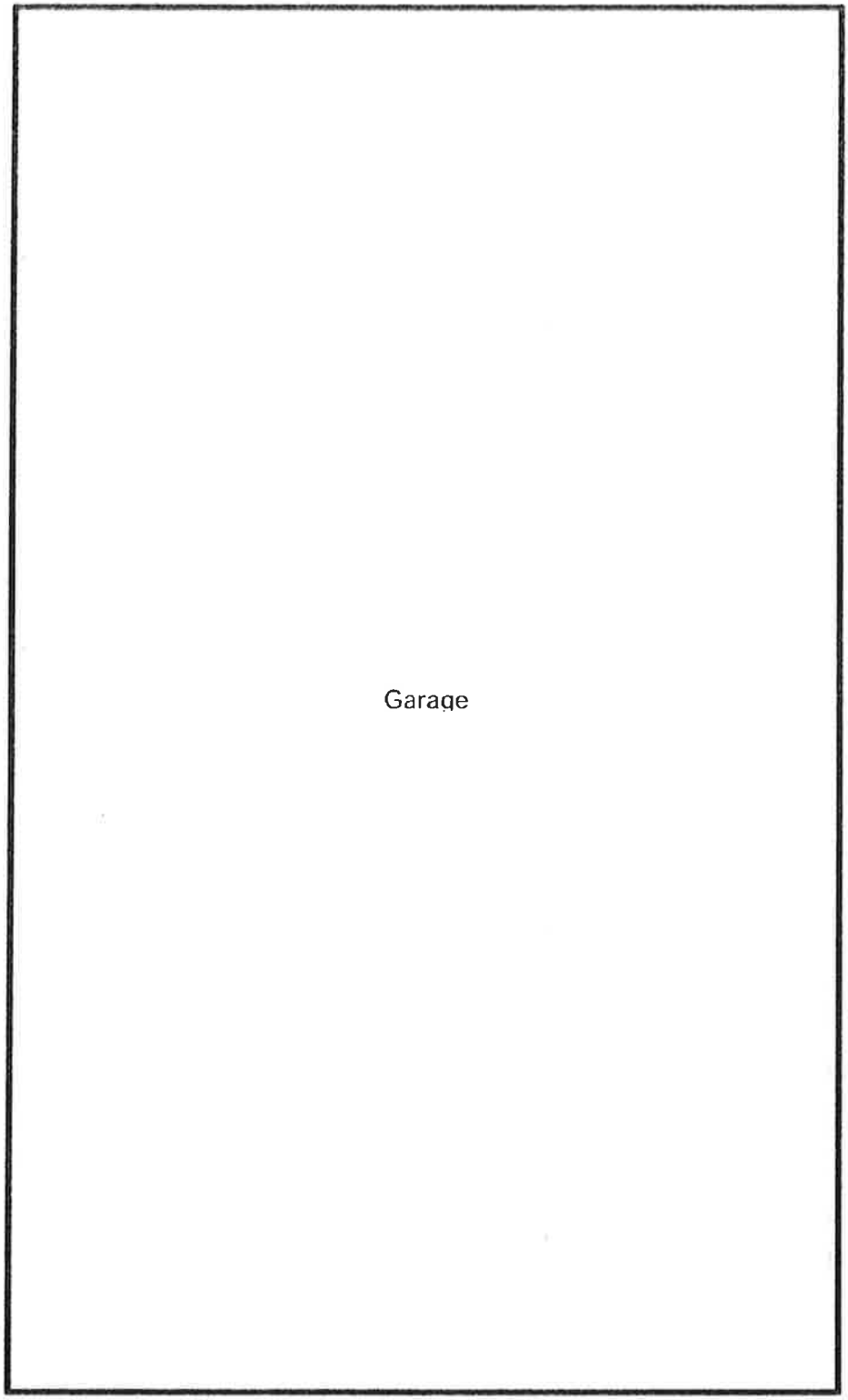
Contractor's signature: _____ Date: _____

Reserved for County, Town Municipality or Authority having jurisdiction use.

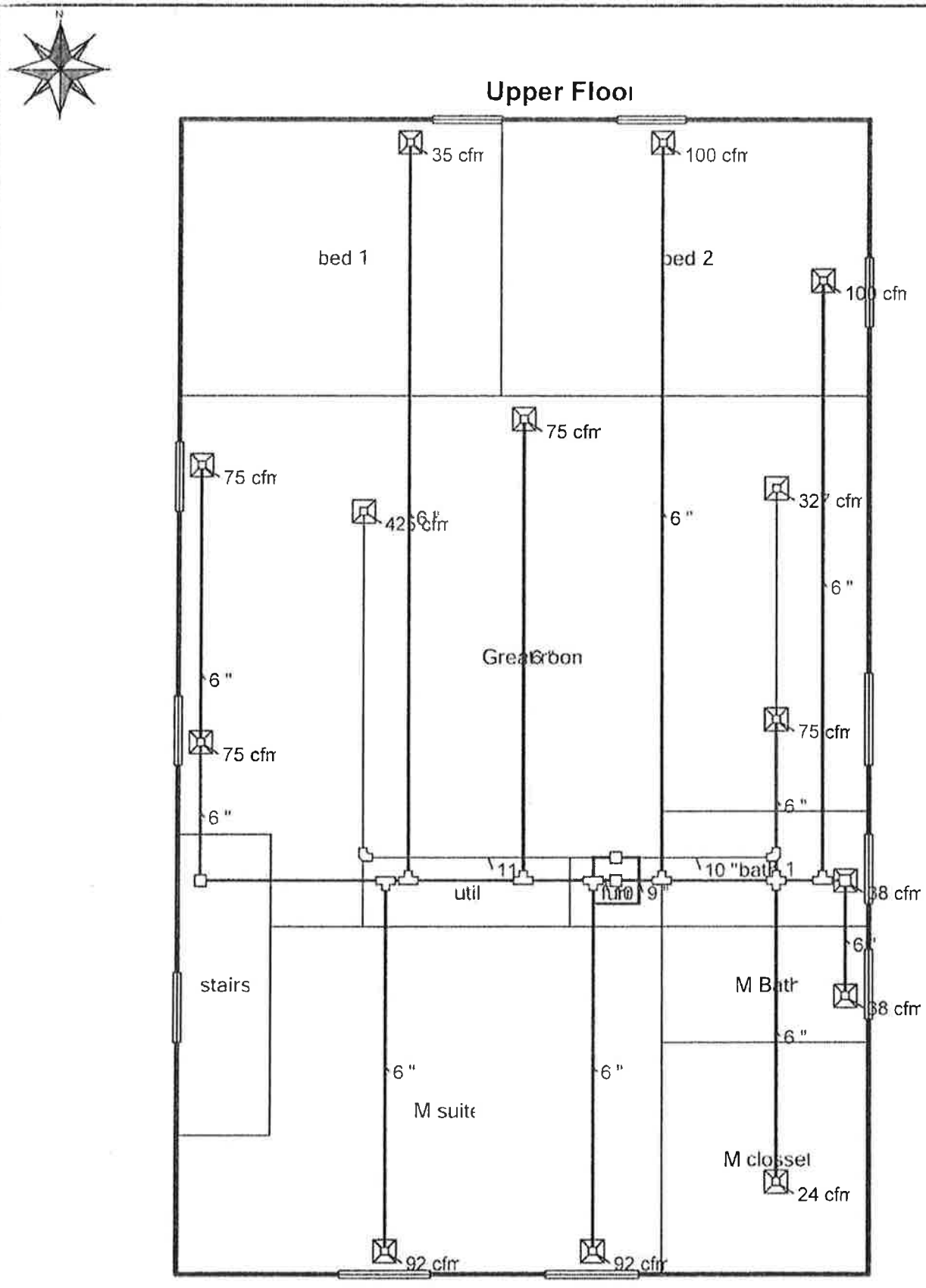
*Home qualifies for MJ1AE Form based on Abridged Edition Checklist



Main Level



Job #: **Performed for:**		Scale: 1 : 73 Page 1 Right-Suite® Universal 2012 12.1.06 RSU08323 2013-May-13 12:34:10 ...ghtsoft HVAC\AutoSave\WENZEL.ru



Job #: **Performed for:**		Scale: 1 : 73 Page 2 Right-Suite® Universal 2012 12.1.06 RSU08323 2013-May-13 12:34:10 ...ghtsoft HVAC\AutoSave\WENZEL.ru

Duct System Summary
Entire House

Job:
Date: Sep 19, 2012
By:

Project Information

For:

	Heating	Cooling
External static pressure	0.56 in H2O	0.56 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.56 in H2O	0.56 in H2O
Supply / return available pressure	0.40 / 0.16 in H2O	0.40 / 0.16 in H2O
Lowest friction rate	0.162 in/100ft	0.162 in/100ft
Actual air flow	747 cfm	747 cfm
Total effective length (TEL)	346 ft	

Supply Branch Detail Table

Name		Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Great room	c	1099	62	75	0.244	6.0	0x 0	ShMt	36.0	130.0	st2
Great room-A	c	1099	62	75	0.220	6.0	0x 0	ShMt	24.0	160.0	st2
Great room-B	c	1099	62	75	0.247	6.0	0x 0	ShMt	14.0	150.0	st1
Great room-C	c	1099	62	75	0.263	6.0	0x 0	ShMt	24.0	130.0	st2
M Bath	c	554	29	38	0.162	6.0	0x 0	ShMt	15.0	235.0	st1
M closset	h	675	24	16	0.238	6.0	0x 0	ShMt	20.0	150.0	st1
M suite-A	h	2569	92	77	0.222	6.0	0x 0	ShMt	17.0	165.0	st2
M suite-B	h	2569	92	77	0.244	6.0	0x 0	ShMt	26.0	140.0	st2
bath 1	c	554	29	38	0	0	0x 0	ShMt	0	0	
bed 1	h	978	35	22	0.212	6.0	0x 0	ShMt	41.0	150.0	st2
bed 2	h	2782	100	88	0.209	6.0	0x 0	ShMt	34.0	160.0	st1
bed 2-A	h	2782	100	88	0.176	6.0	0x 0	ShMt	35.0	195.0	st1

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1	Peak AVF	314	306	0.162	711	9.0	0 x 0	ShtMetl	
st2	Peak AVF	404	403	0.212	741	10.0	0 x 0	ShtMetl	

Return Branch Detail Table

Name	Grill Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb2	0x 0	327	322	93.0	0.167	600	10.0	0x 0		ShMt	
rb1	0x 0	420	425	96.0	0.162	643	11.0	0x 0		ShMt	

Structural Calculations 19 Nov 2012

For: Techni-Graphic Services Inc.
Owner: Wenzel Residence
Plan #: Gavin Wenzel Garage
Location: 2084 Lawerence Circle
From: York Engineering Inc.
2329 W. Spring Hollow Rd.
Morgan, Utah 84050 (801) 876-3501

ENGINEERING

Design Criteria 2009 IRC:
Roof Load;
Live Load (PSF) 30
Dead Load (PSF) 15
Floor Load;
Live Load (PSF) 40
Dead Load (PSF) 10
Seismic Zone: D
Wind Speed: 90 mph (110 mph 3 second gust) Exposure: C or
100 mph (120 mph 3 second gust) Exposure: B

PROFESSIONAL STRUCTURAL ENGINEER
WILLIAM MAX YORK
No. 176376
11/19/12
STATE OF UTAH

Material Properties & Assumptions
Concrete (fc'): 2500 psi(found.) to 4000 psi (susp. slab)
Concrete Reinforcement: ASTM A615 Grade 60 & Grade 40
Site Conditions: Dry & Stable granular based, 1500 PSF Bearing Capacity, Granular Based Backfill (KH=35 pcf),Slope not to exceed 20%, Setback from slopes is minimum of 25'
Dimensional Lumber: Hem or Doug Fir #2 & BTR
Steel: ASTM A36

Use Simpson straps and tie downs, and meet nailing, reinforcement and other structural requirements as noted on the drawing and within the pages of this document. These structural calculations are based on conditions and assumptions listed above. If the conditions listed herein are not met or are different it shall be brought to the attention of the engineer. Roof Truss and beam system to be engineered by the supplier. This engineering assumes that the building site is dry and stable, a high water table or adverse soils such as plastic clays, fills etc. could cause future flooding, settlement, site instability, or other adverse conditions. Verification of and liability for the soil bearing pressure, site stability, and all other site conditions, including site engineering as required, is the responsibility of others. These calculations and engineering are for the new building structure only and do not provide any engineering analysis of or liability/warranty for the non-structural portions of the building, or the site itself. York Engineering Inc. assumes the responsibility of the Structural Engineer of Record on the project but does not assume the role of the "Registered Design Professional in Responsible Charge" as defined in the IBC. The purpose of these calculations and engineering is to help reduce structural damage and loss of life due to seismic activity and/or high wind conditions. The contractor shall verify all conditions, dimensions and structural details of the drawing.

The following general requirements shall be followed during construction:

1. Contractor to verify all dimensions, spans, & conditions and notify engineer of any errors, omissions, or discrepancies prior to construction.
2. Use Simpson A35 ties each cantilevered joist to sill or top plate.
3. Use Simpson H1 or equiv. ties each end of each truss.
5. Foundation reinforcement as per Utah State Amendment
6. Use 2: #4 bars continuous for all footings
   2: # 4 bars each side of openings & 2 # 4 bars top & bottom extend 36" beyond opening
8. Use ½" x 10" J bolts 32" O.C. all foundation walls
9. If discrepancies are found, the more stringent specification shall be followed.
10. All multiple beams and headers to be nailed using 16d two rows 12" O.C.
11. Contractor shall assure that all materials are used per manufactures recommendations.
12. Site engineering and liability shall be provided by the owner/builder as required.
13. Connect beams & headers over 6 ft., to trimmers with appropriate connectors/hangers.
14. Contractor shall assure that footings are properly drained and that soil is dry and that footings rest on undisturbed native soil below local frost depth and that building horizontal clearance from footings to adjacent slopes be a minimum of 25 feet and that the intent of IRC section R403.1.7.2 is met. If set back requirements of R403.1.7.2 can not be met then contact engineer for further design requirements.
15. The contractor shall conform with all building codes and practices as per the 2009 IRC.
16. Use balloon framing method when connecting floors in split level designs.
17. Nail all shear walls to floor joist using 2: 16d 16" O.C. Add additional floor joist as reqd.
18. Provide joist and rafter hangers as per manufacturers specifications.
19. Foundation steps shall not exceed 4 feet or ½ the horizontal distance between steps. Horz. re-bar shall be 12" O.C. through step downs and extend 48" either side of step
20. If garage return walls are less than 32" wide then extend headers across return walls with 2 king studs on either end extending from the top of the header to the bottom plate or install (2) MST 36 straps each end of header extend across wing walls.
21. Use a minimum of 2-9 ½" LVLs for all headers carrying girder loads.
22. Allow foundation 14 days to cure prior to backfill
23. Use 1 1/8" wide timberstrand or equiv. for all rim joist
24. Provide solid blocking through structure down to footing for all load paths.
25. Builder shall follow all recommendations found in all applicable Geotechnical reports.
26. Stacking of two sill plates is permitted with 5/8" J-bolts through both plates. Stacking more than two plates is not permitted without special engineering

Plan: **Gavin Wenzel Garage**
Date: **9 Nov 2012**
Location: **2084 Lawernce Cir.**

Footing Calculations	back	front	left	right	interior
Concrete Specs					
Density (pcf)	150	150	150	150	150
Strength (psi)	2500	2500	2500	2500	2500
Clear Cover Thickness (in)	3	3	3	3	3
Foundation					
Overall Height (ft)	3.50	3.50	3.50	3.50	0.08
Height (in)	**42**	**42**	**42**	**42**	**1**
Wall Thickness (ft)	0.67	0.67	0.67	0.67	0.67
Thickness (in)	**8**	**8**	**8**	**8**	**8**
Weight (kips/lft)	0.35	0.35	0.35	0.35	0.01
Footing Specs					
Width (ft)	1.67	1.67	1.67	1.67	1.33
Width (in)	**20**	**20**	**20**	**20**	**16**
Height (ft)	0.83	0.83	0.83	0.83	0.83
Height (in)	**10**	**10**	**10**	**10**	**10**
Weight (kips/lft)	0.21	0.21	0.21	0.21	0.17
Area per lft	1.67	1.67	1.67	1.67	1.33
Soil Specs					
Density (pcf)	125	125	125	125	125
Soil Pressure (psf)	1500	1500	1500	1500	1500
Weight (kips/lft)	0.22	0.22	0.22	0.22	0.00
Building Loads					
Roof span	**4**	**4**	**30**	**30**	**0**
Roof (kips/lft)	0.11	0.11	0.83	0.83	0.00
Wall Height (ft)	**22**	**22**	**18**	**18**	**18**
Wall Load (kips/lft)	0.44	0.44	0.36	0.36	0.27
Floor span	**2**	**2**	**30**	**30**	**28**
Floor Loads (kips/lft)	0.05	0.05	0.75	0.75	0.70
Total (kips.lft)	0.60	0.60	1.94	1.94	0.97
Calculations					
Total Weight on Soil (kips)	1.16	1.16	2.49	2.49	1.15
Soil Load (ksf)	0.70	0.70	1.50	1.50	0.86
Required Footing Width (in)	**20**	**20**	**20**	**20**	**16**
Required Footing Depth (in)	10	10	10	10	10

Jake Warner

From:	Mark Seethaler
Sent:	Tuesday, July 15, 2014 9:26 AM
To:	Gary Whatcott; Brad Klavano; Ty Montalvo; Don Tingey; Ryan Loose; Jake Warner; Greg Schindler
Cc:	CITY_COUNCIL_EMAIL
Subject:	FW: Lawrence Circle Building Review
Follow Up Flag:	Follow up
Flag Status:	Flagged

Gentlemen -

Thank you for your research and report on the many allegations concerning this building permitting, construction, inspection, and code compliance. I visited with Gavin Wenzel on the phone last evening and effectively agreed that he would move off the warpath relative to turning in neighbors for their various and sundry misdeeds and that I would advise that our city disregard the few inches of height has a technical violation that would not be pursued. Of course, I do not make the rules for the city that feel that this sort of gentlemen's agreement not to stir the pot and create a code or in this neighborhood is the best policy for the city as we all discussed in our meeting yesterday.

I meant to send this to you last evening that simply forgot. So here you be.

Thanks to all for your integrity, hard work, and willingness to bring the facts forward as always.

Sincerely,
Mark Seethaler

From: Mark Seethaler [mailto:mark4sjc@gmail.com]
Sent: Tuesday, July 15, 2014 12:55 AM
To: mark4sjc@gmail.com
Subject: Lawrence Circle Building Review

Dear Lawrence Circle-area Neighbors –

I met with our city manager, engineer, planner, building inspector, and assistant attorney until after 6:00pm this evening reviewing each of the allegations that surfaced surrounding the construction of a garage and accessory living unit at 2084 Lawrence Circle.

- Bottom Line: Our city professionals have reviewed each claim and concluded that there is no legal basis to cause Mr. Wenzel to remove or significantly modify his building.
- Further: There appears to be many technical violations of code within the general neighborhood.
- Observation: The neighborhood CC&Rs have not been applied to building up and down the street making neighborhood interpretation and enforcement in any one particular case problematic.
- Practice – City elected and professional leadership prefers less government over more government; less intrusion into individual lives; and less disruption of 'peaceful enjoyment' otherwise resulting from aggressive code enforcement. Other than issues that affect welfare, safety and health of our residents, the city has no desire to go door to door to ensure that all construction requiring a permit was properly permitted, that every out building meets current code, etc. This would only trigger an environment of hostility between city and neighborhoods, and between neighboring homeowners. Besides: it is a real challenge to review work performed years ago, under a different set of rules, and sometimes having been performed by earlier homeowners.

Which brings us to the current and to the future.

First the current, by way of allegations:

- The structure is too large. By code, the garage structure is permitted to be 25' high, and not to exceed the footprint of the primary dwelling. The garage measures 30X50 (1,500 square feet) and the principal residence is 1,560 (plus garage, totaling about 1,950). In addition, the accessary living unit is permitted to be up to 35% of the principal dwelling unit. 35% of 3,080 would be 1,080 square feet, while the 2nd floor guesthouse measures 957 square feet.
- Similar look and style. Not regarding your heretofore unenforced CC&Rs, the city Planning Commission applied their discretion to the rule of 'compatible with the exterior of the primary dwelling'. Color changes were required and the homeowner intends to match the brick on the house for a wainscot on the building.
- False statement of compliance with neighborhood CC&Rs. The homeowner signed a statement indicating that the building 'complies with all ordinances' further representing that his attorney had given him the legal advice regarding compliance with the CC&Rs. Ultimately, the only final determination of this issue is through the judgment of a court.
- Improper sewer hookup. It is permitted to hook an outbuilding to the main home lateral sewer line. Hook-up fees to the sewer district are on an escalating scale In the event there is more than a sink and toilet on this line.
- Built on top of a 4" pressurized water line. The homeowner's building is 12-feet from the north property line and the water line is 4' from the north property line (within the 10-foot drainage and utility easement). However, an aerial view of the neighborhood indicates that many other property owner structures are, in fact resting over this pressurized water line.
- Illegal renters. City code permits only one accessary rental unit per single-family home. This structure's approval as such is conditioned on permanently removing the door to the basement of his current home – thus disqualifying it as an accessary apartment. However, renting itself is governed by more than accessary living unit designations.
- Roof pitch is not in compliance. The roof pitch of 5X12 is consistent with the requirement of the primary structure.
- Improper finish with rooms being framed on the main level. A city planning manager visited this site today and the only main-floor framing was the stairway enclosure and a utility room. Certainly the city ordinance for accessory living units permits "periodic inspections may be required to determine compliance, as may be deemed appropriate by city staff."
- Inspections have been lax and the building has not been constructed per code. To date 15 inspections are logged by the city – more than would typically be required by such a structure. City records reflect compliance and/or correction to compliance. The engineering specifications did not call for straps between floors, and the structure is being built according to those accepted plans and specifications.
- Technical violation. The structure has been determined to be a few inches above height requirements. However, those requirements specify a measurement 'from grade' which does not always lend itself to precision. So, the city could technically require the homeowner to replace his roof tresses with a style that removes the peak in favor of a flat surface in the top-most area to lower the peak by a few inches. While this does not seem to be a solution that would enrich the lives of all neighboring residents, if we want 'justice and fairness' that requirement could be pursued by the city. As this would be the first volley in what will certainly rise to the level of a neighborhood code war (with no real winners), my view is to live and let live – or accuse and be accused.

The future –

I am sponsoring Ordinance 2014-12 during tomorrow evening's City Council meeting which will temporarily restrict accessory buildings in all residential zones. During this (maximum 6 month) restriction, buildings higher than 16-feet and requiring a building permit will be unable to be passed through the Planning Commission without a review and public hearing by the City Council. In addition, code changes will be considered, and noticing practices will be revised. That's what we can do and what we will do to improve the situation where the 'normal' application of existing code results in a legal but out-of-place structure.

If you have read to this point, I thank you and encourage you efforts to reestablish the neighborliness that has contributed to your years of enjoyment.

Sincerely,

Mark Seethaler, CPA
City of South Jordan
City Council | District 1
www.mark4sjc.com

SOUTH JORDAN
Deep roots. Family values.

Gavin Wenzel — Detached Garage - C — 2084 Lawrence Circle

RESIDENTIAL PLAN REVIEW

APPLICATION		Comments
~~Address to Match Site Plan~~	2084 Lawrence Circle South Jordan	
~~Owner/Builder~~	Gavin Wenzel.	
	~~Release Document~~ yes	
~~Contractor~~	Owner Builder	
	Licenses #	
~~Architect/Engineer~~	Techni Graphic Inc -	
	Verify if any	
~~Single Family Dwelling~~		
~~Multi-family~~		
~~Town house~~		
~~Row House~~		
✓ Detached Garage	with living 1/4 share.	
~~Attached Garage~~		
~~Utility Shed~~		
~~Agriculture/Barn~~		
~~Swimming Pool~~		
~~Fence over 6'~~		
~~Orientation from North~~	180°	
✓ Setbacks		
	~~Under 5' from Property line 1hr fire rated construction is required with 25% open able space allowed. At 3' no openings allowed. Projections 1hr fire rated from the soffit area~~	
~~Res-Check~~		
	Verify Current code being used 2006	
	Verify orientation of front of house/North 180°	
	insulation R-values	
	~~Roofs~~ R-38	
	~~Walls~~ R-19	
	~~Basements~~ —	
	~~Crawl Spaces~~ —	
	~~Cantilevers~~ —	
	~~Rim joist~~ R-19	
	~~Floors~~ R-19	
	~~Ducts~~ R-8 & R-6	
	~~Plumbing~~ P-2	
	~~Conditioned Space~~ R-19	
	~~Unconditioned Space~~ —	

Equipment - Performance. 90% furnace.

Gas line Diagram
- Verify Size 1 1/4
- Distance 45'
- Convert BTU's to CFH 135
- Verify/Correct

Water line Criteria
- Size of System 3/4" Meter 1" Main
- W.S.F.U 308 @ 15# W/ 67.6 PSI
- Verify/Correct

Manuel J and D
- Heat loss Calc's Yes
- Required CFM to Rooms Yes
- Size of System 40K @ 95.5
- Trunk lines R-8 or R-6
- Return air R-8 R-6
- Distribution ducts As Seen
- Compressor size 2 TON
- Must match Res-Check values

Engineering packe
- Wet Stamped
- Match Plans Stamp Yes
- Address match
- Lot Specific

Electrical Load Calc's
- Calculated Demand 100 Amp Service - 92 Amps total demand
- Wire sizes for feeders #2 Set Al - #6 cu Gnd
- Panel Schedules Yes 100 Amp min

Title page
- Match all Documents
- Verify Engineers stamp Matches
- Verify plot plan and lot matches address

General notes
- To reflect current code edition 2009

Footing/foundation
- Sizes 20x40
- Continuous Yes
- Spot footings No
- Re-steel requirements
- Size 5
- Quantity 2 Cont. Vert @ 24" OC - Horz @ 3 total.
- Lintels
- Bond Beams
- Openings
- Decks

Anchors
- Hold downs STHD
- J-Bolts 1/2" x 10"
- Washers 3 x 3 x 1/4

Connections
- Sill plates 32" OC.

Framing

~~Basement/Crawl Space~~ Slab on Grade

~~Check point loads~~

~~Bearing walls~~

~~Shear walls~~

~~Compute finished square footage~~

~~Compute unfinished square footage~~

~~Verify location of~~

Mechanical Room in Garage

~~Identify Appliances (Gas)~~ Firm WH.

~~Drains/Plumbing~~

~~Sub-Panel/Access~~

~~Exhaust Fans~~

~~Smoke detector~~

~~Carbon monoxide detector~~

~~Stair way size and landings~~

~~Bedroom~~

~~Egress windows/doors~~

~~Egress ladders~~

~~Outside entrance~~

~~Frost Protection/Footing~~

~~Floors~~

~~Transfer of Shear Blocking~~ Yes

~~Size of joists~~ Per Truss Manufacturer Stock

~~TJI, BCI and Nominal Lumber~~

~~Attachment Schedule~~

~~Sole plate~~ 16d@12" OC

~~Floor to Floor Straps & Anchors~~

~~Connection to Beams/Headers~~

~~Walls~~

~~Shear walls~~ SW-Typ - SW-1

~~Nailing schedule~~ 6" 4" 12" field

~~Type~~ 8d Common

~~Fire-rated construction~~

~~Stairway Protection 1/2" on underside~~

~~Garage speration min of 1/2"~~

~~Town house party walls~~

~~Exterior with in 5' of Property~~

~~Soffit Projection 1 hr rated~~

	Trusses		
		Manufacturer Spec's	
		Overbuild	
			Special connectors
			Fire blocking
			Penetrations
			Fire walls and Assemblies
	Stairs		
		Treads and risers	
			8" riser max. 10min treads
		Guards and Hand rails	
			4" sphere on balusters on level ground. 43/8" on stair rise 6" on triangle space on treads/riser
Electrical			
	Basement		
		Bedroom outlets	Tamper resistant outlets
		Smoke Detectors	Arch fault
		Carbon Monoxide Detectors	
		Stairways and landings	
		Grounding #8	
			Conduit Protection
		Grounding #6	
			Framing protection
		Sub-Panel location	
			Access/Work space 30"x36"
		Bathrooms	
			EFGI protect on outlets
			Outlet with in 36" of sinks
			Exhaust Fan/Terminate Outside
	Main, Upper Floor		
		Bedroom outlets	Tamper Resistant
			Arch Fault
		Smoke Detectors	
		Carbon Monoxide Detectors	
			Arch Fault, wired together
		Bathrooms	
			EFGI protect on outlets
			Outlet with in 36" of sinks
			Exhaust Fan/Terminate Outside
		Kitchen	
			GFCI all outlets on counter top and all outlet to be with n 4' and at least 1 outlet on island space
			Sec.E3802.6 IRC code
		Laundry Room/with sink	
			GFCI protection with in 6' of sink

Exterior

GFCI protection
1 in the front 1 in back with
in use weather protection for
personnel and equipment

Garage

GFCI protection

Mechanical

Verify Res-Check, Manuel J an D

Duct sizes
Gas line Size 1"
Furnace Size 40K
Combustion Air Size 5
Vent and connector size and 5
location and Protection in attic
Fire stop chases

Elevation

Address the Outside EPS system

Brick, Stucco, Siding Rock etc.

Grade

5% out to 10'
2% fall to property line

Ventilation

All Attic spaces to be ventilated
1/150 or 1/300 if 50% at soffit area

Address the Outside EPS system

6" High numbers

Windows

Sizes

Egress

Basement 5.7SQ FT
Main Floor 5.0 SQ FT
Upper Floors 5.7 SQ FT

4% of Room light

Fire Rated Assemblies
Exterior Walls
Soffits