PROJECT DESCRIPTION

<u>SITE:</u>

274 SOUTH RIVER ROAD NEW HOPE, PA 18938

RIVERHOUSE AT ODETTE'S

PROJECT SCOPE:

APPROXIMATELY 46,000 SF NEW HOTEL AND CONFERENCE FACILITY. PROGRAM FOR THE HOTEL INCLUDES 34 HOTEL ROOMS; FITNESS ROOM/SPA; BANQUETTE HALL; RESTAURANT WITH BAR; ROOF DECK RESTAURANT/BAR; ASSOCIATED BACK OF HOUSE SPACES; AND GROUND LEVEL PARKING BELOW BUILDING.

APPLICABLE CODES & REGULATORY AGENCIES: INTERNATIONAL BUILDING CODE - 2009

INTERNATIONAL EXISTING BUILDING CODE - 2015

- CHAPTER 11/APPENDIX E OF INTERNATIONAL BUILDING CODE 2015 ICC A117.1 - 2009
- INTERNATIONAL ENERGY CONSERVATION CODE 2009

INTERNATIONAL FIRE CODE - 2009 INTERNATIONAL FUEL/GAS CODE - 2009

INTERNATIONAL MECHANICAL CODE - 2009

NFPA 70 NATIONAL ELECTRIC CODE

CODE REVIEW

A-2/R-1

<u> ICC - IBC 2009</u>

303.1	CLASSIFICATION		SEMBLY 2: RESTAURANT	& BAR				
303.1	CLASSIFICATION	AS	SEMBLY 2: BANQUET HAL					
310.1	CLASSIFICATION	RE	ESIDENTIAL 1: HOTEL	-				
311.3	CLASSIFICATION	LO	LOW-HAZARD STORAGE S-2: PARKING					
CHAPTE	R 4: SPECIAL DETAILED RE	QUIREMENTS BAS	SED ON USE AND	OCCUPANCY				
404.0								
404.2	ATRIUM USE	TH AP	(CEPTION: HE ATRIUM FLOOR PPROVED USE WH PRINKLER SYSTEM	ERE SPACE I	S PROVIDED	WITH AN AUTOMATIC		
404.5	(ATRIUM) SMOKE COM	SM	(CEPTION: MOKE CONTROL IS NLY <i>TWO STORIES</i>		RED FOR ATI	RIUMS THAT CONNECT		
404.6			HALL NOT BE REQU	JIRED TO BE ES ARE ACCO	SEPARATE	ORS OF THE ATRIUM FROM THE ATRIUM R IN THE DESIGN OF		
420.2	SEPARATION WALLS	W/ OC	ALLS SEPARATING	S <i>leeping L</i> Ie same Buil	<i>INITS</i> FROM DING SHAL	BE CONSTRUCTED		
420.3	HORIZONTAL SEPARA	BU FR CC	FLOOR ASSEMBLIES SEPARATING <i>SLEEPING UNITS</i> IN THE SAME BUILDING AND FLOOR ASSEMBLIES SEPARATING <i>SLEEPING UNITS</i> FROM OTHER OCCUPANCIES IN THE SAME BUILDING SHALL BE CONSTRUCTED AS <i>HORIZONTAL ASSEMBLIES</i> IN ACCORDANCE WITH SECT. 712					
CHAPTE	R 5: GENERAL BUILDING H	EIGHTS AND AREA	AS					
503	PROPOSED CONSTRU TYPE	US	BUILDING NO.1 (GRADE LEVEL) USE <u>GROUP S-2</u> : PARKING GARAGE TYPE IA PER SECTION 601					
	NOTE: HEIGHT AND A MODIFICATIONS IN PA PER SECTIONS 504 &	REA ARENTHESIS S	SE <u>GROUP R-1</u> : HO	/IXED-USE BUILDING OTEL ESTAURANT & BAR ANQUET HALL				
	USE GROUP	BUILDING HEI (FEET)		S ABOVE PLANE	BUILDIN PER STC			
	BUILDING 1 S-2	UNLIMITED	D UNLI	MITED	UNLIN	1ITED		
	BUILDING 2 A-2 R-1	65 (85) 65 (85)				46,500) 72,000)		
	ACTUAL BUILDING HE			. ,	,	· ,		
		1						
		BUILDING (FEE		STORIES GRADE F HORIZC BUILD SEPARA	PLANE/ NTAL ING	BUILDING AREA (SF)		
	OVERALL BUILDING	FROM GRADE:	65.7	_				
		MEAN HEIGHT PE ZONING ORDINAN	62.26	5		44,611		
	BUILDING 1 S-2	11.5	5	1		10,807		
	BUILDING 2	2	4		34,002			

			TYF			E OF CO PE II		JCTIC TYPE		TYPE IV	TYP		
NG AS		T (FT)	A UL	B 160	A 65	B 55	A		B 55	HT 65	A 50	B 40	
503 Buildi D Are	GROUP	HEIGHT						DRIE(S EA (A	,		1		
TABLE VABLE HTS AN	S-2	S A	UL UL	11 79,000	5 39,000	3 26,000	4		3 26,000	5 38,500	4 21,000	2 13,500	
TABLE 503 Allowable Building Heights and Areas	A-2	S	UL UL	11 UL	3	20,000 2 9,500	39,0 3 14,0	,	2	38,500 3 15,000	2	1	
	R-1	A S	UL UL	11 UL	15,500 4	9,500 4 16,000	4	,	9,500 4 16,000	4 20,500	11,500 3 12,000	6,000 2 7,000	
		A	UL	UL	24,000	10,000	24,0		10,000	20,500	12,000	7,000	
)4.2	AUTOMATIC SPRINK HEIGHT INCREASE	LER	SYSTE	<i>AU</i> 7 503	<i>OMATIC</i> FOR MAX	SPRINK XIMUM E	LER S BUILDII	YSTE NG HE	M, THE E <i>ight</i> is	DUGHOUT W VALUE SPE S INCREASE ES IS INCRE	CIFIED IN D BY 20 F	EET	
)6.3	AUTOMATIC SPRINK AREA INCREASE	LER	SYSTE	<i>AU1</i> IN T 200	<i>OMATIC</i> ABLE 503	SPRINK 3 IS PER T FOR E	LER S MITTE SUILDIN	YSTE D TO	<i>M</i> , THE BE INC	DUGHOUT W BUILDING A REASED BY MORE THA	REA LIMI [.] AN ADDI	TIONAL	
8.1	MIXED USE AND OCC	CUP	ANCY	CLA BUII BUII APP	SSIFIED DING CO DING OF LICABLE	IN ACCO ONTAINS R PORTI PROVIS	ORDAN S MORI ON TH SIONS	ice w E tha Erof Of si	/ITH SE N ONE SHALL	BE INDIVIDU CTION 302.1 OCCUPANC . COMPLY W 508.2, 508.3	. Where Y group (ITH the	P, THE	
08.3	NON-SEPARATED OC	CCU	PANCIE	S BUII PRC		DR POR	FIONS S SEC	of Bi Tion	JILDING SHALL I	GS THAT CO BE CONSIDE		TH THE	
9.2	SPECIAL PROVISION HORIZONTAL BUILDI SEPARATION ALLOW	NG	CE	BUII Limi Nun	DINGS F	OR THE 5, CONT STORIE	E PURF NUITY S AND	POSE OF F TYPI	of det Ire wa E of co	SEPARATE ERMINING A LLS, LIMITA DNSTRUCTIC <u>MET:</u>	AREA TION OF	_	
				AS						TH A HORIZ JR FIRE-RES			
					HE BUILD IAN ONE	-	-			ITAL ASSEM ANE.	IBLY IS NO) Mori	
					HE BUILE CONSTR			HE H	ORIZON	ITAL ASSEM	IBLY IS OF	TYPE	
					4. SHAFT, STAIRWAY, RAMP AND ESCALATOR ENCLOSURES THROUGH THE HORIZONTAL ASSEMBLY SHALL HAVE NOT LES THAN A 2-HOUR FIRE-RESISTANCE RATING WITH OPENING PROTECTIVES IN ACCORDANCE WITH SECTION 715.4.								LESS
		AS OC	5. THE BUILDING OR BUILDINGS ABOVE THE HORIZONTAL ASSEMBLY SHALL BE PERMITTED TO HAVE MULTIPLE GROUP A OCCUPANCY USES, EACH WITH AN OCCUPANT LOAD OF LESS THAN 300, OR GROUP B, M, R OR S OCCUPANCIES.										
		PF SF AN OC E C E	 6. THE BUILDING BELOW THE HORIZONTAL ASSEMBLY SHALL BE PROTECTED THROUGHOUT BY AN APPROVED AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1, AND SHALL BE PERMITTED TO BE ANY OF THE FOLLOWING OCCUPANCIES: A. Group S-2 parking garage used for the parking and storage of private motor vehicles B. Multiple Group A, each with an occupant load of less than 300 C. Group B D. Group M E. Group R F. Uses incidental to the operation of the building (including entry lobbies, mechanical rooms, storage areas and similar uses 										
				EX BL	CEED TH	HE LIMIT HAVING	S SET THE S	FOR ⁻ MALL	fh in Se Er All(FEET (MM) S ECTION 503 OWABLE HE E	FOR THE		
HAPTER 6	: TYPES OF CONSTRUC	CTIC	N										
				т	YPE I	TYPI	EII	ΤY	PE III	TYPE IV	י ד	YPE V	
OR		NT		A	В	А	В	А	В	HT	A	В	
ш.	PRIMARY STRUCTUR	RAL		3a	2a	1	0	1	0	HT	1	0	
I ABLE 601 ICE RATING REQUIREMENTS ING ELEMENTS (HOURS)	BEARING WALLS: EXTERIOR			3	2	1	0	2	2	2 1/⊔T	1	0	
ig Rec Ig Rec Ients	INTERIOR NONBEARING WALLS	5 &		3a	2a	1	0	1	0	1/HT	1	0	
TABLE 601 RATING RE ELEMENT	PARTITIONS - EXTER					SEE TA	3LE 60	2					
ВЯ	NONBEARING WALLS	२ ८								SEE			

6:	TYPES OF CONSTRUCTION									
		TYPE I		TYPE II		TYPE III		TYPE IV	TYF	ΈV
	BUILDING ELEMENT	А	В	А	В	А	В	HT	A	В
	PRIMARY STRUCTURAL FRAME	3a	2a	1	0	1	0	HT	1	0
	BEARING WALLS: EXTERIOR INTERIOR	3 3a	2 2a	1 1	0 0	2 1	2 0	2 1/HT	1	0 0
	NONBEARING WALLS & PARTITIONS - EXTERIOR	SEE TABLE 602								
	NONBEARING WALLS & PARTITIONS - INTERIOR	0	0	0	0	0	0	SEE SECTION 602.4.6	0	0
	FLOOR CONSTRUCTION & SECONDARY MEMBERS	2	2	1	0	1	0	HT	1	0
	ROOF CONSTRUCTION & SECONDARY MEMBERS	1 ¹ / ₂ b	1b,c	1b,c	0c	1b,c	0	HT	1b,c	0
	CONSTRUCTION CLASSIFICATION	DN BUILDING ELEMENTS REQUIRED TO HAVE A FIRE-RESISTANCE RATING PER TABLE 601 SHALL COMPLY WITH THE PROVISIONS OF SECTION 703.2. TYPE IA & IIA - FULLY SPRINKLERED STRUCTURAL ELEMENTS, EXTERIOR WALLS AND INTERIOR WALLS ARE OF ANY MATERIALS PERMITTED BY THIS CODE.								

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CHAPTER 7: FIRE & SMOKE PROTECTION FEATURES

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707.5	FIRE BARRIERS- CONTINUITY	FIRE BARRIERS SHA FOUNDATION OR FL UNDERSIDE OF THE ABOVE AND SHALL BARRIERS SHALL B SPACES, SUCH AS
707.5.1	FIRE BARRIERS- SUPPORTING CONSTRUCTION	THE SUPPORTING O PROTECTED TO AFI OF THE FIRE BARRI WITHIN A FIRE BAR WITH SECTION 717.
708.1	SHAFT ENCLOSURES	SHAFT ENCLOSURE IN ACCORDANCE W IN ACCORDANCE W
709.3	FIRE PARTITIONS- FIRE RESISTANCE RATING	FIRE PARTITIONS S LESS THAN 1 HOUR
712.3	HORIZONTAL ASSEMBLIES- FIRE RESISTANCE RATING	HORIZONTAL ASSEI SAME BUILDING AN SLEEPING UNITS IN 1-HOUR FIRE-RESIS CONTINUITY)
714.1	FIRE RESISTANT JOINT SYSTEMS	JOINTS INSTALLED WALLS/FLOORS/CE FIRE-RESISTANT JC PASSAGE OF FIRE F REQUIRED FIRE-RE
714.4	EXTERIOR CURTAIN WALL/FLOOR INTERSECTION	SYSTEM SHALL BE ACCORDANCE WITH

CHAPTER 8:	INTERIOR FINISHES					
EILING TS BY			SPRINKLERED	SPRINKLERED		
BLE 803.9 Wall & Ce Equirmen Cupancy	GROUP	EXIT ENCLOSURES AND EXIT PASSAGEWAYS	CORRIDORS	ROOMS AND ENCLOSED SPACES		
T REE S	A-2	В	В	С		
NTERI	B,E,M, R-1	В	С	С		
	S	C	C	С		

CHAPTER 9: FIRE PROTECTION SYSTEMS

	1	1				
903	AUTOMATIC SPRINKLER SYSTEMS	SPRINKLER SYSTEM WITH NFPA 13. CONT SYSTEM AS REQUIRE		JT IN ACCORDANCE EXISTING SPRINKLER		
906	PORTABLE FIRE EXTINGUISHERS	HAZÀRD OCCUPANCY(MODERATE) HAZARD OCCUPANCYHAZÀRD OCCUPANCY2-Ac2-A4-Aa3,000 SF1,500 SF1,000 SF11,250 SF11,250 SF11,250 SF75 FT75 FT75 FTBUILDING SHALL BE EQUIPPED WITH FIRE ALARM AND DETECT				
۲.,		HAZÀRD	(MODERATE) HAZARD	EXTRA (HIGH) HAZARD OCCUPANCY		
ILE 906.3(1) NGUISHERS FOR FIRE HAZARDS	MINIMUM RATED SINGLE EXTINGUISHER	2-Ac	2-A	4-Aa		
TABLE 906.3(1) FIRE EXTINGUISHERS F CLASS A FIRE HAZARD	MAXIMUM FLOOR AREA PER UNIT OF A	3,000 SF	1,500 SF	1,000 SF		
E EXTIN ASS A	MAXIMUM FLOOR AREA FOR EXTINGUISHER	11,250 SF	11,250 SF	11,250 SF		
FIR	MAX TRAVEL DISTANCE TO EXTINGUISHER	75 FT	75 FT	75 FT		
907	FIRE ALARM AND DETECTION SYSTEMS	BUILDING SHALL BE EQUIPPED WITH FIRE ALARM AND DETECT SYSTEM IN ACCORDANCE WITH IBC, IFC & NFPA 72.				

CHAPTER 10): MEANS OF EGRESS			
S	(SEE LIFE SAFETY PLANS)		TOTAL OCCUPANCY	
ANT ANT	00 GRADE		54	
1004. M FLC OWAI CUPA	01 FIRST FLOOR		579	
	02 SECOND FLOOR		71	
TABLE MAXIMU REA ALL PER OC	03 THIRD FLOOR		53	
	04 PENTHOUSE		93	
		TOTAL:	850	

SHALL EXTEND FROM THE TOP OF THE FLOOR/CEILING ASSEMBLY BELOW TO THE THE FLOOR OR ROOF SHEATHING, SLAB OR DECK L BE SECURELY ATTACHED THERETO. SUCH FIRE BE CONTINUOUS THROUGH CONCEALED S THE SPACE ABOVE A SUSPENDED CEILING.

G CONSTRUCTION FOR A FIRE BARRIER SHALL BE AFFORD THE REQUIRED FIRE-RESISTANCE RATING RRIER SUPPORTED. HOLLOW VERTICAL SPACES ARRIER SHALL BE FIREBLOCKED IN ACCORDANCE 17.2 AT EVERY FLOOR LEVEL.

IRES SHALL BE CONSTRUCTED AS FIRE BARRIERS WITH SECTION 707 OR HORIZONTAL ASSEMBLIES WITH SECTION 712, OR BOTH.

S SHALL HAVE A FIRE-RESISTANCE RATING OF NOT UR. (SEE 709.4 FOR CONTINUITY) SEMBLIES SEPARATING DWELLING UNITS IN THE

AND HORIZONTAL ASSEMBLIES SEPARATING S IN THE SAME BUILDING SHALL BE A MINIMUM OF SISTANCE-RATED CONSTRUCTION. (SEE 712.3 FOR

D IN OR BETWEEN FIRE-RESISTANCE-RATED CEILINGS SHALL BE PROTECTED BY AN APPROVED JOINT SYSTEM DESIGNED TO RESIST THE E FOR A TIME PERIOD NOT LESS THAN THE RESISTANCE RATING OF THE CONSTRUCTION.

E SECURELY INSTALLED AND TESTED IN ITH ASTME 2307.

CHAPTER 11	: ACCESSIBILITY						
1106.1	PARKING AND PASSENGER LOADING FACILITIES	 WHERE PARKING IS PROVIDED, ACCESSIBLE PARKING SPACES SHALL BE PROVIDED IN COMPLIANCE WITH TABLE 1106.1, EXCEPT AS REQUIRED BY SECTIONS 1106.2 THROUGH 1106.4. PER TABLE 1106.1; 1-25 TOTAL PARKING SPACES TO BE PROVIDED REQUIRING A MINIMUM OF 1 ACCESSIBILE SPACE (VAN SPACE PER SECTION 1106.5) 1107.6.1.1: ACCESSIBLE UNITS - IN GROUP R-1 OCCUPANCIES, ACCESSIBLE DWELLING UNITS AND SLEEPING UNITS SHALL BE PROVIDED IN ACCORDANCE WITH TABLE 1107.6.1.1. ALL R-1 UNITS ON A SITE SHALL BE CONSIDERED TO DETERMINE THE TOTAL NUMBER OF ACCESSIBLE UNITS. ACCESSIBLE UNITS SHALL BE DISPERSED AMONG THE VARIOUS CLASSES OF UNITS. ROLL-IN SHOWERS PROVIDED IN ACCESSIBLE UNITS SHALL INCLUDE A PERMANENTLY MOUNTED FOLDING SHOWER SEAT. 					
1107	DWELLING UNITS & SLEEPING UNITS						
				I			
TABLE 1107.6.1.1ACCESSIBLEDWELLING UNITS &SLEEPING UNITS	TOTAL NUMBER OF UNITS PROVIDED	MIN. REQ'D # ACCESSIBLE UNITS W/O ROLL- IN SHOWERS	MIN. REQ'D # ACCESSIBLE UNITS W/ ROLL-IN SHOWERS)	TOTAL # OF REQ'D ACCESSIBLE UNITS			
DWE SLEE	26 TO 50	2	0	2			
			•	•			
1109.6	ELEVATORS	-	ORS ON AN ACCESSIBLE MPLY WITH SECTION 30				

CHAPTER	R 12: INTERIOR ENVIRONMENT	
1207.2	AIR-BORNE SOUND	WALLS, PARTITIONS AND FLOOR/CEILING ASSEMBLIES SEPARATING DWELLING UNITS FROM EACH OTHER OR FROM PUBLIC OR SERVICE AREAS SHALL HAVE A SOUND TRANSMISSION CLASS (STC) OF NOT LESS THAN 50 (45 IF FIELD TESTED) FOR AIR- BORNE NOISE WHEN TESTED IN ACCORDANCE WITH ASTM E 90.
1207.3	STRUCTURE-BORNE SOUND	FLOOR/CEILING ASSEMBLIES BETWEEN DWELLING UNITS OR BETWEEN A DWELLING UNIT AND A PUBLIC OR SERVICE AREA WITHIN THE STRUCTURE SHALL HAVE AN IMPACT INSULATION CLASS (IIC) RATING OF NOT LESS THAN 50 (45 IF FIELD TESTED) WHEN TESTED IN ACCORDANCE WITH ASTM E 492.

CHAPTER 30: ELEVATORS AND CONVEYING SYSTEMS

3002.4	HOISTWAY ENCLOSURES	WHERE ELEVATORS ARE PROVIDED IN BUILDINGS FOUR OR MORE
		STORIES ABOVE, OR FOUR OR MORE STORIES BELOW, GRADE
		PLANE, AT LEAST ONE ELEVATOR SHALL BE PROVIDED FOR FIRE
		DEPARTMENT EMERGENCY ACCESS TO ALL FLOORS. THE
		ELEVATOR CAR SHALL BE OF SUCH A SIZE AND ARRANGEMENT TO
		ACCOMMODATE AN AMBULANCE STRETCHER 24 INCHES BY 84
		INCHES (610 MM BY 2134 MM) WITH NOT LESS THAN 5-INCH (127
		MM) RADIUS CORNERS, IN THE HORIZONTAL, OPEN POSITION AND
		SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL FOR
		EMERGENCY MEDICAL SERVICES (STAR OF LIFE). THE SYMBOL
		SHALL NOT BE LESS THAN 3 INCHES (76 MM) HIGH AND SHALL BE
		PLACED INSIDE ON BOTH SIDES OF THE HOISTWAY DOOR FRAME.

INTERNATIONAL PLUMBING CODE

CHAPTER 7: PLUMBING FIXTURES

403.1			PLUMBING FIXTURES SHALL BE PROVIDED FOR THE TYPE OF OCCUPANCY AND IN THE MINIMUM NUMBER SHOWN IN TABLE 403.1								
419.2	SUBSTITUTION FOR WATER CLOSETS		IN EACH BATHROOM OR TOILET ROOM, URINALS SHALL NOT BE SUBSTITUTED FOR MORE THAN 67% OF THE REQUIRED WATER CLOSETS IN ASSMBLY OCCUPANIES. URINALS SHALL NOT BE SUBSTITUTED FOR MORE THAN 50% OF THE REQUIRED OCCUPANCIES IN ALL OTHER OCCUPANCIES.								
	TYPE OF BUILDING	WATE	ER CLOSET	URINAL	LAVATORY		SHOWER	DRINKING	SERV		
IR OF JRES	OCCUPANCY	R	Р		R	Р		FOUNTAIN	SI		
	ASSEMBLY (A-2) 1ST FLR RESTAURANT/BAR LOAD: 247	M: 4	-	2	M: 2		-	**	1		
TABLE 403.1 MINIMUM NUMBER OF PLUMBING FIXTURES	ASSEMBLY (A-2) BANQUET HALL LOAD: 309	W: 4	4 W: 5		W: 2						
	TOTAL: 556										
PLU	ASSEMBLY (A-2) PENTHOUSE PLAN ROOFDECK/LOUNGE LOAD: 93	M: 1 W: 1		1	M: 1 W: 1	M: 1 W: 1		**	1		
	RESIDENTIAL (R-1) HOTEL ROOMS	SLI	PER Eeping Unit		1 P SLEE UN	PING	1 PER SLEEPING UNIT	NA	1 EAC 2ND 8 FLC		

<u>R</u>: REQUIRED <u>P</u>: PROPOSED

** SECTION 410.1 OF INTERNATIONAL PLUMBING CODE. WATER SHALL BE SERVED AT ALL ASSEMBLY SPACES BOTH INSIDE AND OUTSIDE.

