MAINE MEDICAL CENTER
VISITOR GARAGE EXPANSION

Maine Medical Center
MaineHealth

PERKINS+WILL

ISSUED FOR PERMIT MARCH 29, 2018

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4401
STATE OF MAINE

9/29/2017 12:09:43 PM
152182-MMC-Visitor Parking Garage Expansion-V2017_detached.rvt

DRAWING LIST

SHEET NUMBER	SHEET NAME
01 - GENERAL	
G00-00	COVER SHEET
G00-01	DRAWING LIST
G01-01	CODE COMPLIANCE PLANS (SL5-SL2)
G01-02	CODE COMPLIANCE PLANS (SL1-L3)
G02-01	CODE COMPLIANCE ELEVATIONS
04 - ARCHITECTURE	
A00-01	GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
A01-00	SITE PLAN & SITE SECTIONS
A01-01	ARCHITECTURAL SITE PLAN
A04-01	DEMOLITION PLAN & SECTION
A10-10	FLOOR PLAN - GROUND FLOOR
A10-20	FLOOR PLAN - FIRST FLOOR
A10-30	FLOOR PLAN - SECOND FLOOR
A10-40	FLOOR PLAN - THIRD FLOOR
A10-60	PV ARRAY ALTERNATE #1
A12-20	REFLECTED CEILING PLAN - TYPICAL
A20-10	NORTH ELEVATION
A20-20	WEST ELEVATION
A20-30	SOUTH ELEVATION
A20-40	EAST ELEVATION
A21-01	BUILDING SECTIONS
A41-01	STAIR TOWER ENLARGED PLANS & RCP
A41-02	EAST STAIR ENLARGED PLANS
A41-03	EAST STAIR ENLARGED SECTIONS AND DETAILS
A45-01	METAL PANEL DETAILS
A45-02	METAL PANEL TYPES
A45-03	METAL RAILING DETAILS
A45-04	TYPICAL METAL RAILING TYPES
A45-05	PRECAST SPANDREL DETAILS
A45-06	TYPICAL PRECAST CONCRETE SPANDREL TYPES
A45-07	TYPICAL PRECAST CONCRETE SPANDREL TYPES
A45-08	FALL PROTECTION DETAILS
A45-09	FALL PROTECTION TYPES
A45-10	FALL PROTECTION TYPES
A61-01	DOOR & FINISH SCHEDULES, PARTITION TYPES
07 - STRUCTURAL	
S00-01	GENERAL NOTES, SYMBOLS & ABBREVIATIONS
S00-02	STRUCTURAL TESTS AND INSPECTIONS
S00-10	TYPICAL PRECAST CONCRETE DETAILS
S00-20	TYPICAL STEEL DETAILS
S00-31	COMPONENT AND CLADDING WIND LOADS
S10-10	FLOOR PLAN - GROUND LEVEL
S10-20	FLOOR PLAN - LEVEL 1 AND 2
S10-30	FLOOR PLAN - LEVEL 3
S20-10	NORTH ELEVATION
S20-20	WEST ELEVATION
S20-30	SOUTH ELEVATION
S20-40	EAST ELEVATION
S21-10	BUILDING SECTION
S21-20	BUILDING SECTION
S30-10	EAST STAIR TOWER ELEVATIONS
S40-10	PRECAST DETAILS
S40-11	PRECAST DETAILS
S40-12	PRECAST INTERFACE DETAILS
S40-20	STEEL DETAILS
SD10-10	STRUCTURAL DEMOLITION PLAN - GROUND LEVEL
SD20-10	ELEVATIONS
SD21-10	BUILDING SECTIONS
08 - FIRE PROTECTION	
F00-01	FIRE PROTECTION GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
F00-10	FIRE PROTECTION DETAILS
F10-10	FIRE PROTECTION FLOOR PLAN - BASEMENT & GROUND FLOORS
F10-20	FIRE PROTECTION FLOOR PLAN - FIRST & SECOND FLOORS
F10-30	FIRE PROTECTION FLOOR PLAN - ROOF
F20-01	FIRE PROTECTION RISER DIAGRAM
FA00-01	FIRE ALARM GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
FA10-10	FIRE ALARM FLOOR PLAN - GROUND & FIRST FLOORS
FA10-20	FIRE ALARM FLOOR PLAN - SECOND & THIRD FLOOR
FA20-01	FIRE ALARM EXISTING SINGLE LINE DIAGRAM
09 - PLUMBING	
P00-01	PLUMBING GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
P00-10	NOT USED
P00-20	PLUMBING DETAILS
P10-10	PLUMBING FLOOR PLAN - GROUND & FIRST FLOOR
P10-20	PLUMBING FLOOR PLAN - SECOND & THIRD FLOOR
P10-30	NOT USED
P20-01	PLUMBING RISER DIAGRAM
10 - MECHANICAL	
M00-01	MECHANICAL GENERAL NOTES, SYMBOLS AND ABBREVATIONS
M00-10	MECHANICAL SCHEDULES & DETAILS
M11-10	MECHANICAL PARTIAL PLAN - STAIRWELL DEMOLITION & NEW WORK
M11-20	NOT USED
11 - ELECTRICAL	
E00-01	ELECTRICAL GENERAL NOTES, SYMBOLS AND ABBREVATIONS
E00-10	ELECTRICAL SCHEDULES
E00-20	ELECTRICAL DETAILS
E04-10	ELECTRICAL DEMOLITION PLAN -GROUND FLOOR
E10-10	ELECTRICAL LIGHTING & POWER PLAN - GROUND & FIRST FLOORS
E10-20	ELECTRICAL LIGHTING & POWER PLAN - SECOND & THIRD FLOOR
E10-30	ELECTRICAL LIGHTING & POWER PLAN - ROOF
E11-10	ELECTRICAL PARTIAL FLOOR PLANS
E20-01	ELECTRICAL SINGLE LINE DIAGRAM
12 - TELECOMMUNICATION	
T00-01	COMMUNICATIONS GENERAL NOTES, SYMBOLS AND ABBREVATIONS
T00-10	COMMUNICATIONS DETAILS
T00-11	COMMUNICATIONS DETAILS
T00-12	COMMUNICATIONS DETAILS
T10-10	COMMUNICATIONS FLOOR PLAN - GROUND & FIRST FLOORS
T10-20	COMMUNICATIONS FLOOR PLAN - SECOND & THIRD FLOORS
T20-01	COMMUNICATIONS PART PLAN & ELEVATION VIEW - SECOND FLOOR
T30-01	COMMUNICATIONS SINGLE LINE DIAGRAM
T40-01	NOT USED
16 - SECURITY	
SC00-01	SECURITY GENERAL NOTES, SYMBOLS AND ABBREVATIONS
SC00-10	SECURITY DETAILS
SC10-10	SECURITY FLOOR PLAN - GROUND & FIRST FLOORS
SC10-20	SECURITY FLOOR PLAN - LEVEL SECOND & THIRD
SC20-01	SECURITY RISER DIAGRAM

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41 Seyon Street, Building 1, Suite 500,
Waltham MA 02453

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99 Bedford Street, 2nd Floor, Boston MA 02111

CONSTRUCTION MANAGER
Turner Construction
2 Seaport Lane, Suite 200, Boston MA 02210

ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

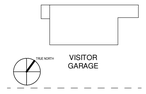
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4491
STATE OF MAINE

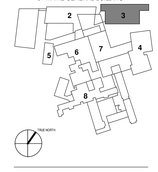
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
2	ADDENDUM #2	01.09.18
1	ADDENDUM #1	12.05.17

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

DRAWING LIST

SHEET NUMBER

G00-01

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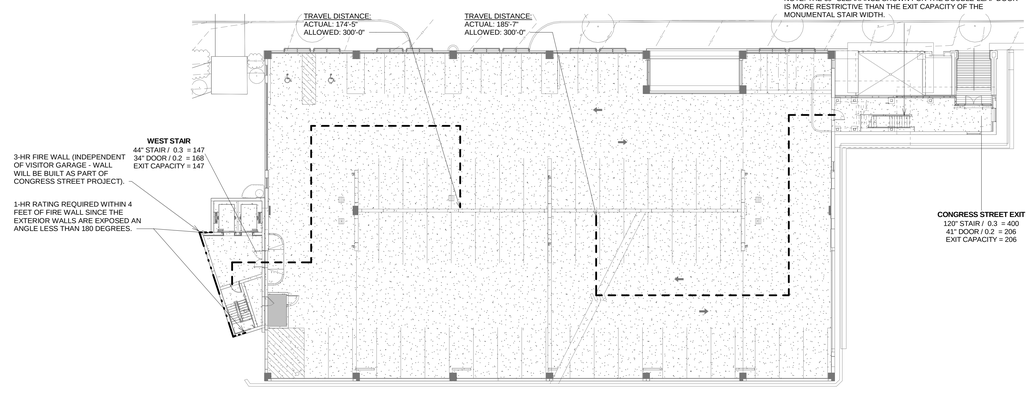
OCCUPANT LOAD SUB-LEVEL 2				
	USE	FLOOR AREA	FLOOR AREA PER OCCUPANT (SF / OCC)	OCCUPANT LOAD
	PARKING GARAGE	26066 SF	200	131
		26066 SF		131

EXIT CAPACITY SUB-LEVEL 2							
EXIT	STAIR WIDTH	STAIR EXIT ALLOWANCE (IN / PERSON)	STAIR CAPACITY (PERSONS)	DOOR WIDTH	DOOR EXIT ALLOWANCE (IN / PERSON)	DOOR CAPACITY (PERSONS)	EXIT CAPACITY (PERSONS)
EAST STAIR	57"	0.3	188	41"	0.2	206	188
WEST STAIR	44"	0.3	147	34"	0.2	168	147
							335

5 SUB-LEVEL 2
SCALE: 1" = 20'-0"

OCCUPANT LOAD SUB-LEVEL 5				
	USE	FLOOR AREA	FLOOR AREA PER OCCUPANT (SF / OCC)	OCCUPANT LOAD
	PARKING GARAGE	26395 SF	200	132
	STORAGE / UTILITIES	84 SF	300	1
		26479 SF		133

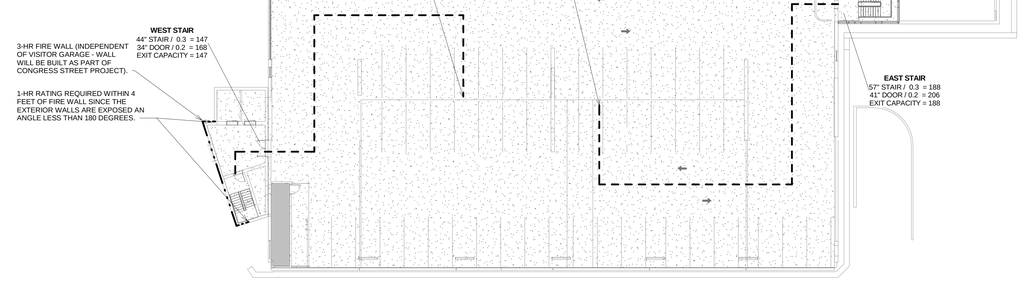
EXIT CAPACITY SUB-LEVEL 5							
EXIT	STAIR WIDTH	STAIR EXIT ALLOWANCE (IN / PERSON)	STAIR CAPACITY (PERSONS)	DOOR WIDTH	DOOR EXIT ALLOWANCE (IN / PERSON)	DOOR CAPACITY (PERSONS)	EXIT CAPACITY (PERSONS)
CONGRESS STREET EXIT	120"	0.3	400	41"	0.2	206	206
WEST STAIR	44"	0.3	147	34"	0.2	168	147
							353



2 SUB-LEVEL 5
SCALE: 1" = 20'-0"

OCCUPANT LOAD SUB-LEVEL 3				
	USE	FLOOR AREA	FLOOR AREA PER OCCUPANT (SF / OCC)	OCCUPANT LOAD
	PARKING GARAGE	25845 SF	200	130
	STORAGE / UTILITIES	217 SF	300	1
		26062 SF		131

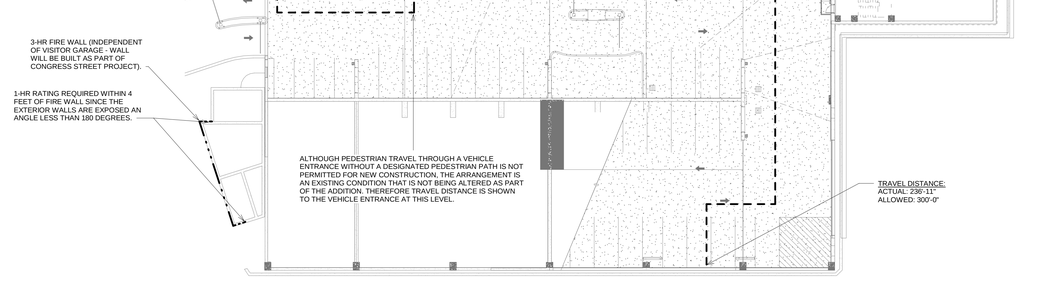
EXIT CAPACITY SUB-LEVEL 3							
EXIT	STAIR WIDTH	STAIR EXIT ALLOWANCE (IN / PERSON)	STAIR CAPACITY (PERSONS)	DOOR WIDTH	DOOR EXIT ALLOWANCE (IN / PERSON)	DOOR CAPACITY (PERSONS)	EXIT CAPACITY (PERSONS)
EAST STAIR	57"	0.3	188	41"	0.2	206	188
WEST STAIR	44"	0.3	147	34"	0.2	168	147
							335



4 SUB-LEVEL 3
SCALE: 1" = 20'-0"

OCCUPANT LOAD SUB-LEVEL 6				
	USE	FLOOR AREA	FLOOR AREA PER OCCUPANT (SF / OCC)	OCCUPANT LOAD
	PARKING GARAGE	16432 SF	200	83
		16432 SF		83

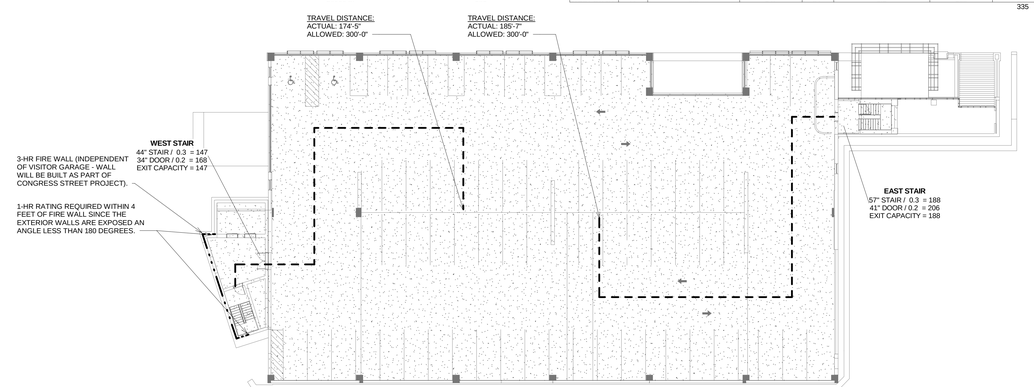
NOTE: EXIT CAPACITY IS NOT SHOWN FOR SUB-LEVEL 6 SINCE THERE ARE NO DIRECT PEDESTRIAN EXITS FROM THIS LEVEL. HOWEVER, EXIT ACCESS IS PROVIDED TO THE SUB-LEVEL 5 EXITS AS WELL AS VIA THE EXISTING VEHICLE ENTRANCE. THE CAPACITY OF THE SUB-LEVEL 5 EXITS IS SUFFICIENT FOR THE SUB-LEVEL 6 OCCUPANT LOAD. THIS ARRANGEMENT IS AN EXISTING CONDITION THAT IS NOT BEING ALTERED BY THE PROPOSED ADDITION.



1 SUB-LEVEL 6
SCALE: 1" = 20'-0"

OCCUPANT LOAD SUB-LEVEL 4				
	USE	FLOOR AREA	FLOOR AREA PER OCCUPANT (SF / OCC)	OCCUPANT LOAD
	PARKING GARAGE	26066 SF	200	131
		26066 SF		131

EXIT CAPACITY SUB-LEVEL 4							
EXIT	STAIR WIDTH	STAIR EXIT ALLOWANCE (IN / PERSON)	STAIR CAPACITY (PERSONS)	DOOR WIDTH	DOOR EXIT ALLOWANCE (IN / PERSON)	DOOR CAPACITY (PERSONS)	EXIT CAPACITY (PERSONS)
EAST STAIR	57"	0.3	188	41"	0.2	206	188
WEST STAIR	44"	0.3	147	34"	0.2	168	147
							335



3 SUB-LEVEL 4
SCALE: 1" = 20'-0"

LEGEND		
LINE TYPE	DESIGNATION	
	EXIT ACCESS TRAVEL DISTANCE	ACTUAL / ALLOWED
	COMMON PATH OF TRAVEL	
	DEAD END CORRIDOR	
	1-HR EXTERIOR WALL	
	3-HR FIRE WALL	

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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

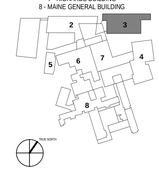
STATE OF MAINE · PETER J. REILLY · NO. 12356 · LICENSED PROFESSIONAL ENGINEER · 03.29.2018

KEY PLANS

PROJECT KEY PLAN

OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHAROS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	B150311-000
Drawn	MRS
Checked	CMA
Approved	CMA

TITLE

CODE COMPLIANCE PLANS (SL6-SL2)

SHEET NUMBER

G01-01

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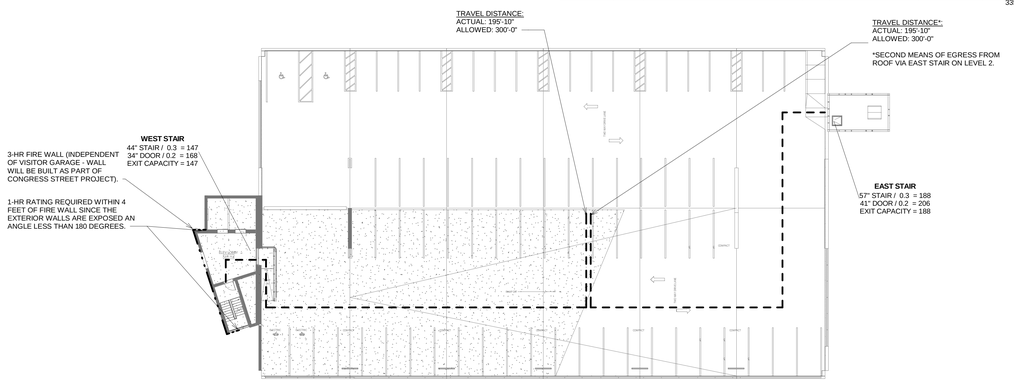
OCCUPANT LOAD LEVEL 3 (ROOF)			
USE	FLOOR AREA	FLOOR AREA PER OCCUPANT (SF / OCC)	OCCUPANT LOAD
PARKING GARAGE	8475 SF	200	43
	8475 SF		43

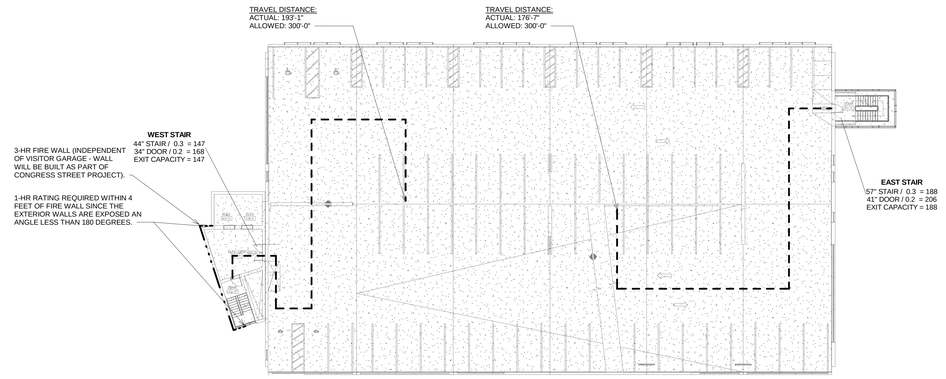
EXIT CAPACITY LEVEL 3 (ROOF)							
EXIT	STAIR WIDTH	STAIR EXIT ALLOWANCE (IN / PERSON)	STAIR CAPACITY (PERSONS)	DOOR WIDTH	DOOR EXIT ALLOWANCE (IN / PERSON)	DOOR CAPACITY (PERSONS)	EXIT CAPACITY (PERSONS)
EAST STAIR	57"	0.3	188	41"	0.2	206	188
WEST STAIR	44"	0.3	147	34"	0.2	168	147
							335



6 (ROOF) LEVEL 3
SCALE: 1" = 20'-0"

OCCUPANT LOAD GROUND			
USE	FLOOR AREA	FLOOR AREA PER OCCUPANT (SF / OCC)	OCCUPANT LOAD
PARKING GARAGE	26598 SF	200	133
	26598 SF		133

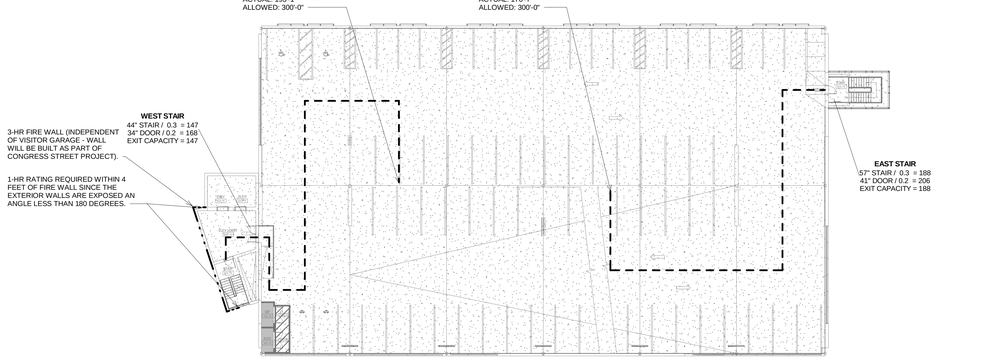
EXIT CAPACITY GROUND							
EXIT	STAIR WIDTH	STAIR EXIT ALLOWANCE (IN / PERSON)	STAIR CAPACITY (PERSONS)	DOOR WIDTH	DOOR EXIT ALLOWANCE (IN / PERSON)	DOOR CAPACITY (PERSONS)	EXIT CAPACITY (PERSONS)
EAST STAIR	57"	0.3	188	41"	0.2	206	188
WEST STAIR	44"	0.3	147	34"	0.2	168	147
							335



3 GROUND LEVEL
SCALE: 1" = 20'-0"

OCCUPANT LOAD LEVEL 2			
USE	FLOOR AREA	FLOOR AREA PER OCCUPANT (SF / OCC)	OCCUPANT LOAD
PARKING GARAGE	26516 SF	200	133
STORAGE / UTILITIES	81 SF	300	1
	26598 SF		134

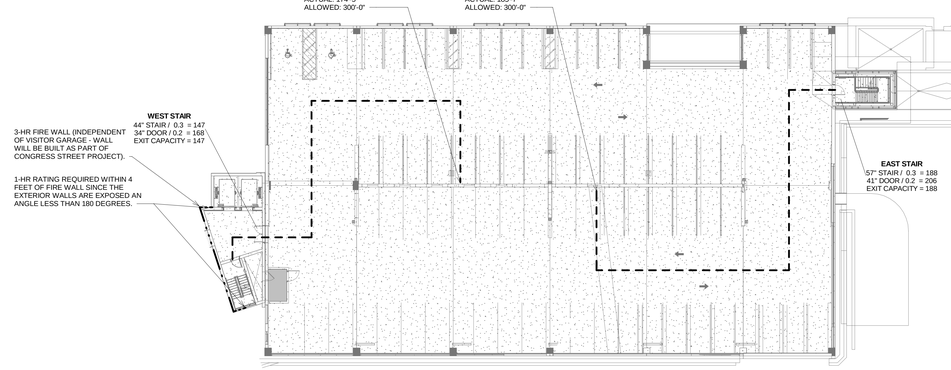
EXIT CAPACITY LEVEL 2							
EXIT	STAIR WIDTH	STAIR EXIT ALLOWANCE (IN / PERSON)	STAIR CAPACITY (PERSONS)	DOOR WIDTH	DOOR EXIT ALLOWANCE (IN / PERSON)	DOOR CAPACITY (PERSONS)	EXIT CAPACITY (PERSONS)
EAST STAIR	57"	0.3	188	41"	0.2	206	188
WEST STAIR	44"	0.3	147	34"	0.2	168	147
							335



5 LEVEL 2
SCALE: 1" = 20'-0"

OCCUPANT LOAD BASEMENT			
USE	FLOOR AREA	FLOOR AREA PER OCCUPANT (SF / OCC)	OCCUPANT LOAD
PARKING GARAGE	25982 SF	200	130
STORAGE / UTILITIES	84 SF	300	1
	26066 SF		131

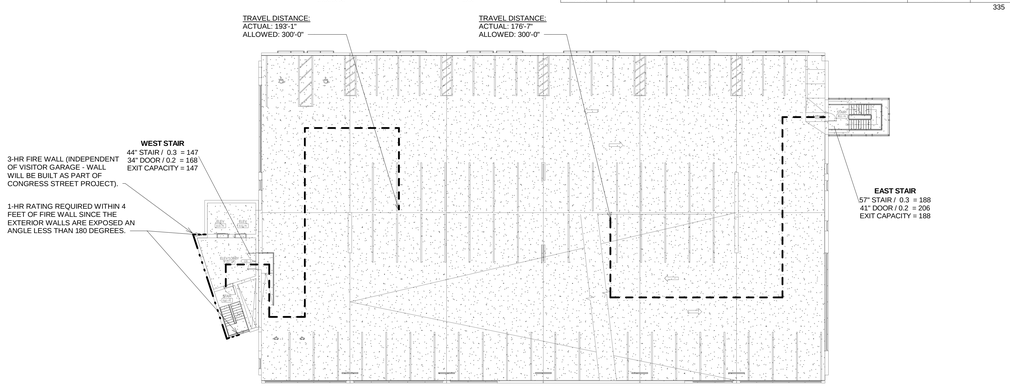
EXIT CAPACITY BASEMENT							
EXIT	STAIR WIDTH	STAIR EXIT ALLOWANCE (IN / PERSON)	STAIR CAPACITY (PERSONS)	DOOR WIDTH	DOOR EXIT ALLOWANCE (IN / PERSON)	DOOR CAPACITY (PERSONS)	EXIT CAPACITY (PERSONS)
EAST STAIR	57"	0.3	188	41"	0.2	206	188
WEST STAIR	44"	0.3	147	34"	0.2	168	147
							335



2 BASEMENT LEVEL
SCALE: 1" = 20'-0"

OCCUPANT LOAD LEVEL 1			
USE	FLOOR AREA	FLOOR AREA PER OCCUPANT (SF / OCC)	OCCUPANT LOAD
PARKING GARAGE	26598 SF	200	133
	26598 SF		133

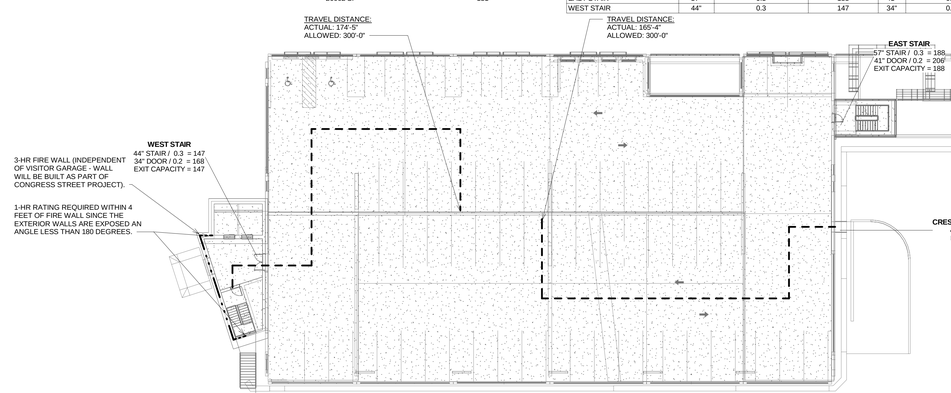
EXIT CAPACITY LEVEL 1							
EXIT	STAIR WIDTH	STAIR EXIT ALLOWANCE (IN / PERSON)	STAIR CAPACITY (PERSONS)	DOOR WIDTH	DOOR EXIT ALLOWANCE (IN / PERSON)	DOOR CAPACITY (PERSONS)	EXIT CAPACITY (PERSONS)
EAST STAIR	57"	0.3	188	41"	0.2	206	188
WEST STAIR	44"	0.3	147	34"	0.2	168	147
							335



4 LEVEL 1
SCALE: 1" = 20'-0"

OCCUPANT LOAD SUB-LEVEL 1			
USE	FLOOR AREA	FLOOR AREA PER OCCUPANT (SF / OCC)	OCCUPANT LOAD
PARKING GARAGE	26062 SF	200	131
	26062 SF		131

EXIT CAPACITY SUB-LEVEL 1							
EXIT	STAIR WIDTH	STAIR EXIT ALLOWANCE (IN / PERSON)	STAIR CAPACITY (PERSONS)	DOOR WIDTH	DOOR EXIT ALLOWANCE (IN / PERSON)	DOOR CAPACITY (PERSONS)	EXIT CAPACITY (PERSONS)
CRESCENT STREET WALKWAY				46"	0.2	230	230
EAST STAIR	57"	0.3	188	41"	0.2	206	188
WEST STAIR	44"	0.3	147	34"	0.2	168	147
							565



1 SUB-LEVEL 1
SCALE: 1" = 20'-0"

LEGEND		
LINE TYPE	DESIGNATION	
	EXIT ACCESS TRAVEL DISTANCE	ACTUAL / ALLOWED
	COMMON PATH OF TRAVEL	
	DEAD END CORRIDOR	
	1-HR EXTERIOR WALL	
	3-HR FIRE WALL	

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ELEVATOR CONSULTANT
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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

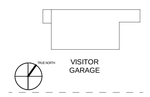
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

STATE OF MAINE
PETER J. REILLY
NO. 12356
REGISTERED PROFESSIONAL ENGINEER
LICENSED

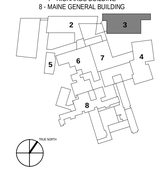
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	B150311-000
Drawn	MRS
Checked	CMA
Approved	CMA

TITLE

CODE COMPLIANCE PLANS (SL1-L3)

SHEET NUMBER

G01-02

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TIER	ELEVATION	WALL AREA (SF)	OPENING AREA (SF)	PERCENT OPENINGS PER IBC	WALL PERIMETER (FT)	OPENINGS PER LF OF PERIMETER (SF / FT) PER NFPA 101	PERCENT OF PERIMETER WITH AT LEAST 1.4 SF/LF OPEN PER NFPA 101
(10) LEVEL 2	EAST	1189	634.01	53%	123.00	5.15	100%
	NORTH	1926	1061.12	55%	212.50	4.99	
	SOUTH	2055	1085.37	53%	212.50	5.11	
	WEST	1187	351.57	30%	123.00	2.86	
	TOTAL	**6357**	**3132.07**	**49%**	**671.00**	**4.67**	
(9) LEVEL 1	EAST	1190	258	22%	123.00	2.09	100%
	NORTH	2054	617.5	30%	212.50	2.91	
	SOUTH	2055	953.34	46%	212.50	4.49	
	WEST	1187	224	19%	123.00	1.82	
	TOTAL	**6486**	**2052**	**32%**	**671.00**	**3.06**	
(8) GROUND	EAST	1190	258	22%	123.00	2.09	100%
	NORTH	2054	617.5	30%	212.50	2.91	
	SOUTH	2054	982.48	48%	212.50	4.62	
	WEST	1187	228	19%	123.00	1.85	
	TOTAL	**6485**	**2085**	**32%**	**671.00**	**3.11**	
(7) BASEMENT	EAST	1190	243	20%	123.00	1.97	100%
	NORTH	2355	787.83	33%	242.50	3.25	
	SOUTH	2087	914.16	44%	212.50	4.30	
	WEST	1187	212	18%	123.00	1.72	
	TOTAL	**6819**	**2157**	**32%**	**701.00**	**3.08**	
(6) SUB-LEVEL 1	EAST	1190	273.64	23%	123.00	2.22	100%
	NORTH	2528	1110.83	44%	242.50	4.58	
	SOUTH	2085	940.82	45%	212.50	4.43	
	WEST	1223	227.33	19%	123.00	1.85	
	TOTAL	**7026**	**2552.62**	**36%**	**701.00**	**3.64**	
(5) SUB-LEVEL 2	EAST	1226	55.11	4%	123.00	0.45	52%
	NORTH	2280	1110.83	49%	242.50	4.58	
	SOUTH	2000	13.91	1%	212.50	0.07	
	WEST	1148	222.14	19%	123.00	1.81	
	TOTAL	**6654**	**1401.99**	**21%**	**701.00**	**2.00**	
(4) SUB-LEVEL 3	EAST	1148	23.49	2%	123.00	0.19	52%
	NORTH	2263	1110.83	49%	242.50	4.58	
	SOUTH	1983	0	0%	212.50	0.00	
	WEST	1148	207.53	18%	123.00	1.69	
	TOTAL	**6542**	**1341.85**	**21%**	**701.00**	**1.91**	
(3) SUB-LEVEL 4	EAST	1148	15.5	1%	123.00	0.13	52%
	NORTH	2263	1110.83	49%	242.50	4.58	
	SOUTH	1983	0	0%	212.50	0.00	
	WEST	1148	213.62	19%	123.00	1.74	
	TOTAL	**6542**	**1339.95**	**20%**	**701.00**	**1.91**	
(2) SUB-LEVEL 5	EAST	1148	9.94	1%	123.00	0.08	52%
	NORTH	2263	1037.68	46%	242.50	4.28	
	SOUTH	1983	0	0%	212.50	0.00	
	WEST	1148	263.51	23%	123.00	1.69	
	TOTAL	**6542**	**1311.13**	**20%**	**701.00**	**1.79**	
(1) SUB-LEVEL 6	EAST	1340	0	0%	123.00	0.00	50%
	NORTH	2811	917.28	33%	226.92	4.04	
	SOUTH	1038	0	0%	168.83	0.00	
	WEST	914	421.99	46%	60.08	7.02	
	TOTAL	**6103**	**1339.27**	**22%**	**578.83**	**2.31**	

NOTES:
(1) IBC 406.5.2 REQUIRES THE EXTERIOR WALLS ON EACH TIER TO BE AT LEAST 20% OPEN. ALL OF THE TIERS COMPLY WITH THESE REQUIREMENTS AS INDICATED IN THE TABLE ABOVE.

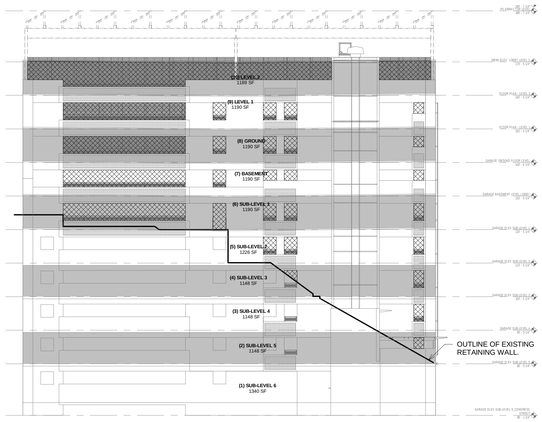
(2) SECTION 3.3.254.6 OF NFPA 101 REQUIRES THE EXTERIOR WALLS OF EACH TIER TO HAVE AN OPENING AREA OF AT LEAST 1.4 SF PER LINEAR FOOT OF EXTERIOR PERIMETER. SUCH OPENINGS MUST BE DISTRIBUTED OVER AT LEAST 40% OF THE BUILDING PERIMETER. ALL OF THE TIERS COMPLY WITH THESE REQUIREMENTS AS INDICATED IN THE TABLE ABOVE.

6 PERCENT OPENING SUMMARY
SCALE: NONE

LEGEND
EXTERIOR OPENING

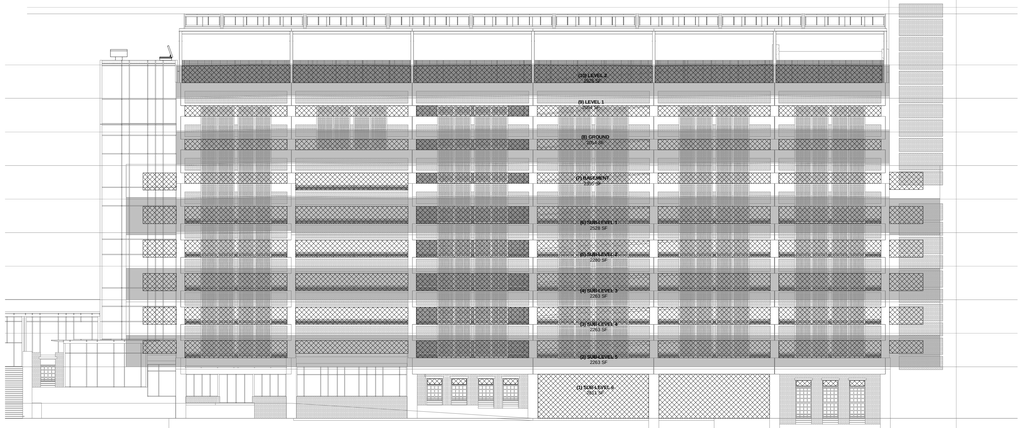
NOTE: SUB-LEVEL 5 THROUGH THE BASEMENT LEVEL HAVE ADDITIONAL OPENINGS ON THE NORTH ELEVATION DUE TO A CUT-BACK IN THE BUILDING FOOTPRINT AT THESE LEVELS. THIS CUT-BACK IS NOT VISIBLE ON THE NORTH ELEVATION DUE TO THE BUILDING GEOMETRY. THE ADDITIONAL EXTERIOR WALL AREA AND OPENING AREA AT THESE LEVELS IS SHOWN ON THE PLAN BELOW.

3 CUT-BACK ON SUB-LEVEL 5 THROUGH BASEMENT
SCALE: NONE



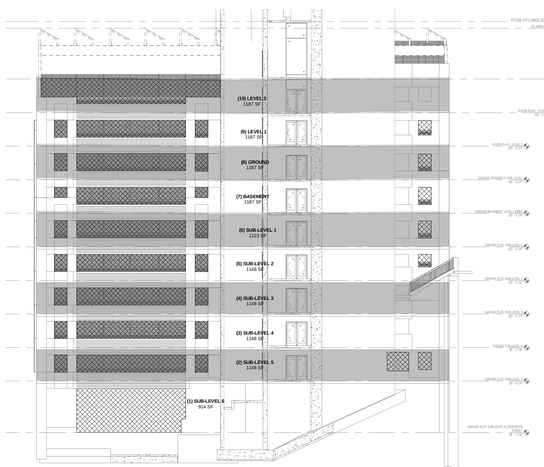
5 EAST ELEVATION
SCALE: 1/16" = 1'-0"

PERCENT OPENINGS - EAST ELEVATION			
REGION	TOTAL WALL AREA	OPENING AREA	PERCENT OPENINGS
(10) LEVEL 2	1189 SF	634 SF	53%
(9) LEVEL 1	1190 SF	258 SF	22%
(8) GROUND	1190 SF	258 SF	22%
(7) BASEMENT	1190 SF	243 SF	20%
(6) SUB-LEVEL 1	1190 SF	274 SF	23%
(5) SUB-LEVEL 2	1226 SF	55 SF	4%
(4) SUB-LEVEL 3	1148 SF	23 SF	2%
(3) SUB-LEVEL 4	1148 SF	16 SF	1%
(2) SUB-LEVEL 5	1148 SF	10 SF	1%
(1) SUB-LEVEL 6	1340 SF	0 SF	0%



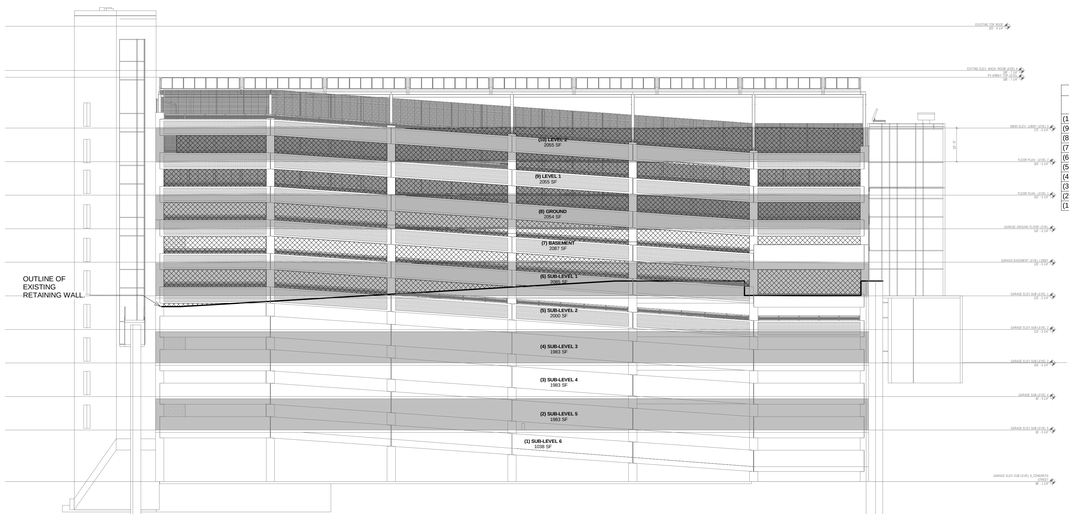
2 NORTH ELEVATION
SCALE: 1/16" = 1'-0"

PERCENT OPENINGS - NORTH ELEVATION			
REGION	TOTAL WALL AREA	OPENING AREA	PERCENT OPENINGS
(10) LEVEL 2	1926 SF	1061 SF	55%
(9) LEVEL 1	2054 SF	618 SF	30%
(8) GROUND	2054 SF	618 SF	30%
(7) BASEMENT	2355 SF	788 SF	33%
(6) SUB-LEVEL 1	2528 SF	1111 SF	44%
(5) SUB-LEVEL 2	2280 SF	1111 SF	49%
(4) SUB-LEVEL 3	2263 SF	1111 SF	49%
(3) SUB-LEVEL 4	2263 SF	1111 SF	49%
(2) SUB-LEVEL 5	2263 SF	1038 SF	46%
(1) SUB-LEVEL 6	2811 SF	917 SF	33%



4 WEST ELEVATION
SCALE: 1/16" = 1'-0"

PERCENT OPENINGS - WEST ELEVATION			
REGION	TOTAL WALL AREA	OPENING AREA	PERCENT OPENINGS
(10) LEVEL 2	1187 SF	352 SF	30%
(9) LEVEL 1	1187 SF	224 SF	19%
(8) GROUND	1187 SF	228 SF	19%
(7) BASEMENT	1187 SF	212 SF	18%
(6) SUB-LEVEL 1	1223 SF	227 SF	19%
(5) SUB-LEVEL 2	1148 SF	221 SF	19%
(4) SUB-LEVEL 3	1148 SF	208 SF	18%
(3) SUB-LEVEL 4	1148 SF	214 SF	19%
(2) SUB-LEVEL 5	1148 SF	264 SF	23%
(1) SUB-LEVEL 6	914 SF	422 SF	46%



1 SOUTH ELEVATION
SCALE: 1/16" = 1'-0"

PERCENT OPENINGS - SOUTH ELEVATION			
REGION	TOTAL WALL AREA	OPENING AREA	PERCENT OPENINGS
(10) LEVEL 2	2055 SF	1085 SF	53%
(9) LEVEL 1	2055 SF	953 SF	46%
(8) GROUND	2054 SF	982 SF	48%
(7) BASEMENT	2087 SF	914 SF	44%
(6) SUB-LEVEL 1	2085 SF	941 SF	45%
(5) SUB-LEVEL 2	2000 SF	14 SF	1%
(4) SUB-LEVEL 3	1983 SF	0 SF	0%
(3) SUB-LEVEL 4	1983 SF	0 SF	0%
(2) SUB-LEVEL 5	1983 SF	0 SF	0%
(1) SUB-LEVEL 6	1038 SF	0 SF	0%

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South Portland ME 04106

STRUCTURAL ENG/ BUILDING ENVELOPE CONSULTANT
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Waltham MA 02453

MEP/FP ENGINEER/ CODE
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COST ESTIMATOR
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3 Baldwin Green Common, Suite 202, Woburn MA 01801

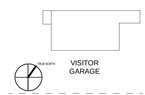
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

STATE OF MAINE
PETER J. REILLY
NO. 12356
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
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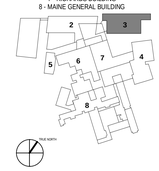

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Job Number	B150311-000
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Checked	CMA
Approved	CMA

TITLE

CODE COMPLIANCE ELEVATIONS

SHEET NUMBER

G02-01

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GENERAL PROJECT NOTES

1. NOTES APPEAR ON VARIOUS DRAWINGS FOR DIFFERENT SYSTEMS AND MATERIALS. REVIEW ALL SHEETS AND APPLY NOTES TO RELATED BUILDING COMPONENTS.

2. REFER TO COMPLETE SET OF ISSUED CONTRACT DOCUMENTS FOR APPLICABLE NOTES, ABBREVIATIONS, AND SYMBOLS.

3. WHERE MATERIALS ARE APPLIED TO, OR ARE IN DIRECT CONTACT WITH WORK INSTALLED BY ANOTHER SUBCONTRACTOR, COMMENCEMENT OF WORK IMPLIES ACCEPTANCE OF THE SUBSTRATE AS SUITABLE FOR THE APPLICATION INTENDED.

4. ISOLATE DISSIMILAR METALS TO PREVENT GALVANIC CORROSION.

5. PARTITION TYPES, FIRE RESISTIVE RATINGS, AND ACOUSTICAL RATINGS INDICATED FOR A PARTITION ARE TO BE CONTINUOUS FOR THE FULL LENGTH AND HEIGHT OF THAT PARTITION.

6. PENETRATIONS IN RATED WALL, FLOOR, CEILING AND ROOF ASSEMBLIES SHALL BE SEALED WITH A RATED PENETRATION SEALANT SYSTEM MEETING OR EXCEEDING THE REQUIRED FIRE RESISTIVE RATING OF THAT ASSEMBLY.

7. MAINTAIN THE FIRE RESISTIVE RATING OF CONSTRUCTION AROUND AND BEHIND CABINETS, ELECTRICAL PANELS, JUNCTION BOXES AND OTHER DEVICES OR EQUIPMENT RECESSED INTO RATED ASSEMBLIES.

8. INSTALL CONTINUOUS PERIMETER FIRE SAFING AT RATED FLOORS AND ROOFS AND COORDINATE THE INSTALLATION WITH THE EXTERIOR WALL. FIRE RATING OF SAFING SYSTEM SHALL MATCH FIRE RATING OF FLOOR AND/OR ROOF ASSEMBLY.

9. DO NOT SCALE THE DRAWING. IF DIMENSIONS ARE IN QUESTION OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE CONTINUING. DIGITAL FILES CAN BE USED TO OBTAIN DIMENSIONS SUBJECT TO ARCHITECT'S APPROVAL.

10. PRIOR TO COMMENCEMENT OF RELATED WORK: REVIEW, MEASURE, AND CONFIRM DIMENSIONS AND UTILITY CONNECTIONS OF OWNER PROVIDED EQUIPMENT AND FURNISHINGS. COORDINATE WITH THE OWNER ON DELIVERY AND INSTALLATION OF OWNER FURNISHED / CONTRACTOR INSTALLED (OF/CI) EQUIPMENT. MINIMUM REQUIRED OPENINGS AND ACCESSIBLE ROUTES TO THE INSTALLATION AREA SHALL BE COORDINATED WITH THE SUPPLIER.

11. INSTALL STIFFENERS, BRACING, BACKING PLATES AND/OR BLOCKING AS REQUIRED FOR SECURE INSTALLATION OF WALL AND CEILING MOUNTED ITEMS INCLUDING, BUT NOT LIMITED TO, TOILET PARTITIONS, DOORS AND WALL-MOUNTED DOOR HARDWARE, HANDRAILS, WALL-MOUNTED CASEWORK, ARTWORK, OPERABLE PARTITIONS, DEMOUNTABLE PARTITIONS, GLAZINGS, MISCELLANEOUS FURNISHINGS AND EQUIPMENT, MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT. WOOD BLOCKINGS, IF USED, SHALL BE FIRE RETARDANT AND MOISTURE TREATED. PROVIDE DELAGATED DESIGN FOR STRUCTURAL SUSPENSION SYSTEMS.

12. COORDINATE ALL BASE AND HOUSEKEEPING PADS WITH MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT. COORDINATE EXACT SIZE AND PLACEMENT OF EQUIPMENT BASE AND HOUSEKEEPING PADS WITH EQUIPMENT TO BE PROVIDED.

13. LOCATE ACCESS PANELS AS INDICATED ON DRAWINGS. FOR ACCESS PANELS NOT SHOWN, BUT REQUIRED BY PROVISIONS OF THE CONTRACT DOCUMENTS, LOCATE PANELS IN ACCORDANCE WITH APPLICABLE CODES. ACCESS PANELS SHALL BE LOCATED AS REQUIRED TO ACCESS ALL ELECTRICAL AND MECHANICAL EQUIPMENT REQUIRING NORMAL MAINTENANCE OR OPERATION INCLUDING, BUT NOT LIMITED TO, CONSTANT AIR OR VARIABLE AIR VOLUME BOXES. REHEAT COILS, VALVES, FANS, BALANCING DAMPERS, FIRE DAMPERS, SMOKE DAMPERS, FIRE/SMOKE DETECTORS, CLEAN OUTS, JUNCTION BOXES, BUS DUCTS, TRANSFORMERS, AND BATTERIES. CO-LOCATE ITEMS TO MINIMIZE THE NEED FOR ACCESS PANELS. SUBMIT PROPOSED LOCATIONS TO THE ARCHITECT FOR REVIEW AND ACCEPTANCE PRIOR TO INSTALLATION.

14. IN BUILDINGS TO BE OCCUPIED DURING CONSTRUCTION; DO NOT OBSTRUCT ACCESS TO EXISTING EXITS, OR REDUCE THE WIDTH OF EGRESS PATHS.

15. PENETRATIONS IN EXTERIOR BUILDING AIR/VAPOR BARRIERS ARE NOT ALLOWED. CONTRACTOR SHALL VERIFY LOCATION OF EXTERIOR AIR/VAPOR BARRIERS PRIOR TO WORK ON EXTERIOR WALLS. EXTERIOR WALLS WITH AIR/VAPOR BARRIERS LOCATED ON THE INTERIOR SIDE OF STUD FRAMING SHALL NOT BE MODIFIED, INCLUDING MODIFICATIONS INDICATED FOR ELECTRICAL DEVICES AND/OR BLOCKING, WITHOUT PRIOR APPROVAL OF THE ARCHITECT.

16. FULLY LAY OUT STRUCTURAL GRIDS, WALL, AND WALL OPENINGS WITHIN CONSTRUCTION AREA PRIOR TO START OF PARTITION INSTALLATION. VERIFY THAT DIMENSIONS ARE CONSISTENT WITH REQUIREMENTS INDICATED IN THE DRAWINGS. REPORT ANY CONFLICTS OR DIMENSIONAL INCONSISTENCIES TO THE ARCHITECT PRIOR TO INSTALLATION.

17. FINISH FLOOR ELEVATIONS ARE TO TOP OF CONCRETE OR UNFINISHED FLOOR UNLESS NOTED OTHERWISE.

18. FLATTEN FLOORS THAT EXCEED 1/4" VARIANCE IN A 10'-0" RADIUS.

19. CAULK AT JUNCTURE OF INTERIOR FACES OF DOOR FRAMES, VIEW WINDOW FRAMES, EXTERIOR WINDOW FRAMES, AND CABINET WORK WITH ADJACENT MATERIALS.

20. COORDINATE LOCATION OF ALL CEILING MOUNTED DEVICES INCLUDING, BUT NOT LIMITED TO, DIFFUSERS, SPEAKERS, SPRINKLER HEADS, DETECTORS, ACCESS PANELS, AV EQUIPMENT, AND LIGHTING. REPORT ANY CONFLICTS TO THE ARCHITECT PRIOR TO INSTALLATION.

21. EXIT SIGNS AND SMOKE DETECTORS LOCATED IN CEILINGS SHALL BE POSITIONED AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. EXIT SIGNS SHALL TYPICALLY BE CENTERED IN CORRIDORS AND LOCATED ABOVE DOORWAYS A DISTANCE OF 1'-0" FROM THE WALL TO THE CENTER OF THE FIXTURE UNLESS NOTED OTHERWISE.

22. GANG MULTIPLE SWITCHES TOGETHER INTO ONE BOX WITH A SINGLE COVER PLATE WHENEVER POSSIBLE. MULTIPLE SWITCHES, WHICH CANNOT BE GANGED TOGETHER IN THE SAME BOX, SHALL BE LOCATED AS CLOSE TOGETHER AS POSSIBLE AND MOUNTED AT THE SAME HEIGHT. DEVICES WITH VARYING HEIGHT REQUIREMENTS MOUNTED ON COLUMNS OR ADJACENT TO DOORS SHALL BE STACKED VERTICALLY ALONG THEIR CENTERLINES.

23. PRIOR TO CORE DRILLING EXISTING FLOORS FOR NEW PLUMBING AND/OR ELECTRICAL DEVICES, ALL LOCATIONS MUST BE APPROVED WITH ARCHITECT AND BUILDING MANAGEMENT.

24. DO NOT INSTALL OUTLET OR JUNCTION BOXES BACK-TO-BACK ON OPPOSITE SIDES OF THE WALL. BOXES MUST BE SEPARATED BY A STUD.

25. ACOUSTICALLY SEAL ALL THROUGH-FLOOR ELECTRICAL DEVICES AND WALL MOUNTED JUNCTION BOXES WITH AN ACOUSTIC SEALANT OR PUTTY PAD AS REQUIRED TO MAINTAIN INDICATED STC RATINGS.

26. ACCESSORIES SUCH AS GRAB BARS, TOWEL BARS, PAPER DISPENSERS AND SOAP DISHES INSTALLED WITHIN 2'-0" OF A URINAL, WATER CLOSET, SINK OR LAVATORY SHALL BE MOISTURE SEALED.

27. DO NOT HANG (SUPPORT) ANY ITEMS DIRECTLY FROM METAL ROOF DECK WHERE IT OCCURS. IT IS ACCEPTABLE TO ATTACH, ITEMS SUCH AS CEILING SYSTEM WIRE HANGERS FROM JOISTS AND/ OR BEAMS. IF NO JOIST OR BEAM IS AVAILABLE PROVIDE SUPPLEMENTAL STEEL FRAMING AS NECESSARY TO DISTRIBUTE LOADS TO SURROUNDING STRUCTURE.

28. SEALANTS EXPOSED TO VIEW SHALL BE CUSTOM COLOR AS SELECTED BY THE ARCHITECT.

29. COORDINATE LOCATION AND COMPATIBILITY OF SEALANTS WITH ADJACENT WORK, INCLUDING MATERIALS AND OTHER CONTIGUOUS SEALANTS.

30. ALL EXTERIOR STEEL HANDRAILS, GUARDRAILS, AND BOLLARDS SHALL BE GALVANIZED AND PAINTED UNLESS OTHERWISE NOTED.

ABBREVIATIONS

NOTE 1: ABBREVIATIONS WHEN USED IN COMPOSITION MAY INCLUDE PERIODS FOR CLARIFICATION
NOTE 2: ABBREVIATIONS MAY BE DIFFERENT WHEN A PART OF A LEGEND

A/C	AIR CONDITIONING(ED)
ACC	ACCESSIBLE
ACST	ACOUSTICAL( )
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES
ADJ	ADJUSTABLE/ ADJACENT
AFC	ABOVE FINISHED COUNTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGGR	AGGREGATE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZE(D)
APC	ACOUSTICAL PANEL CEILING
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL), ARCHITECT
ASPH	ASPHALT
ATC	ACOUSTICAL TILE CEILING
AUTO	AUTOMATIC
AWT	ACOUSTICAL WALL TREATMENT
B/	BOTTOM OF
B/B	BACK TO BACK
BC	BACK OF CURB
BD	BOARD
BITUM	BITUMINOUS
BLDG	BUILDING
BM	BEAM/ BENCHMARK
BOT/	BOTTOM OF
BSMT	BASEMENT
BUR	BUILT-UP ROOFING
CAB	CABINET
CB	CATCH BASIN
C/C	CENTER TO CENTER
CCTV	CLOSED CIRCUIT TELEVISION
CEM	CEMENT
CF/CI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED, OWNER INSTALLED
CFM	CUBIC FEET PER MINUTE
CFMF	COLD-FORMED METAL FRAMING
CG	CORNER GUARD
CI	CAST IRON, CURB INLET
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CLRM	CLASSROOM
cm	CENTIMETER
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COMM	COMMUNICATION
CONC	CONCRETE
CONF	CONFERENCE
CONT	CONTINUOUS
COORD	COORDINATE
CORR	CORRIDOR
CP	CARPET
CPT	CARPET TILES
CT	CERAMIC TILE
CTR	CENTER/CONTOUR
CU	CUBIC
CUH	CABINET UNIT HEATER
CUST	CUSTODIAN
CW	COLD WATER-PIPING/ CHEMICAL WASTELINE
D	DEEP, DEPTH, PENNY (NAIL)
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLISH, DEMOLITION
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DIA	DIAMETER (EXTERIOR)
DIAG	DIAGONAL
DIFF	DIFFUSER/ DIFFERENCE
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DL	DEAD LOAD
DR	DOOR/ DRAIN
DS	DOWNSPOUT
DW	DISHWASHER
DWG	DRAWING
E	EAST
EA	EACH
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR
EMER	EMERGENCY
EMER SHR	EMERGENCY SHOWER
ENCL	ENCLOSURE
ENGR	ENGINEER
ENTR	ENTRANCE
EO	ELECTRIC OUTLET
EOS	EDGE OF SLAB
EP	ELECTRICAL PANEL
EQ	EQUAL
EQUIP	EQUIPMENT
ETC	ET CETERA
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR, EXTERNAL
F/	FACE OF
F/F	FACE TO FACE
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDCC	FIRE DEPARTMENT CONNECTION CABINET
FDTN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FACE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FIN	FINISH(ED)
FF EL	FINISHED FLOOR ELEVATION
FLR	FLOOR
FLUOR	FLUORESCENT
FO	FINISHED OPENING
FOC	FACE OF CURB
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF SLAB/ FACE OF STUD
FP	FIRE PROTECTION/ FIREPROOF
FRMG	FRAMING
FRTW	FIRE RETARDANT TREATED WOOD
FT	FOOT (FEET)/ FIRE TREATED
FTG	FOOTING
FURG	FURRING
FURN	FURNISH, FURNITURE
FUT	FUTURE
FV	FIELD VERIFY
GA	GAGE
GALV	GALVANIZED
GEN	GENERAL
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS
GL BLK	GLASS BLOCK
GLU LAM	GLUED LAMINATED WOOD
GR LN	GRADE LINE
GRFL	GROUND FLOOR
GSB	GYPSUM SHEATHING BOARD
GT	GREASE TRAP
GWB	GYPSUM WALL BOARD
GYP BD	GYPSUM BOARD
GYP PLAS	GYPSUM PLASTER
H	HIGH
HB	HOSE BIBB
HC	HOLLOW CORE
HDW	HARDWARE
HDWD	HARDWOOD
HM	HOLLOW METAL
HO	HOLD OPEN
HORIZ	HORIZONTAL
HPT	HIGH POINT
HS	HEAT STRENGTHENED
HSKPG	HOUSEKEEPING
HT	HEIGHT
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HW	HOT WATER
ID	INSIDE DIAMETER
INCAND	INCANDESCENT
INCL	INCLUDE(D), INCLUDING
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
JAN	JANITOR
JAN CLO	JANITOR'S CLOSET
KIT	KITCHEN
L	LONG, LENGTH
LAB	LABORATORY
LAM	LAMINATE(D)
LAU	LAUNDRY
LAV	LAVATORY
LB	POUND(S)
LF	LINEAR FOOT, (FEET)
LH	LEFT HAND
LIB	LIBRARY
LKR	LOCKER
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LOC	LOCATION
LPT	LOW POINT
LT	LIGHT
LTG	LIGHTING
LVR	LOUVER
m	METER
MACH	MACHINE
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MEMB	MEMBRANE
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE
MHO	MAGNETIC HOLD OPEN
MIN	MINIMUM
MISC	MISCELLANEOUS
MKR BD	MARKER BOARD
mm	MILLIMETER
MO	MASONRY OPENING
MTG	MEETING
MTL	METAL
MULL	MULLION
N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O/O	OUT TO OUT
OC	ON CENTER
OCC	OCCUPY, OCCUPANT
OD	OUTSIDE DIAMETER
OF/CI	OWNER FURNISHED, CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED, OWNER INSTALLED
OFF	OFFICE
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
PA	PUBLIC ADDRESS
PAR	PARAPET, PARALLEL
PCC	PRE-CAST CONCRETE
PERF	PERFORATED
PERP	PERPENDICULAR
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLBG	PLUMBING
PLYWD	PLYWOOD
PNT	PAINT
POL	POLISHED
PR	PAIR
PREFAB	PREFABRICATE(D)
PREFIN	PREFINISHED
PRELIM	PRELIMINARY
PROJ	PROJECT
PROP	PROPERTY
PS	PULL STATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT/ PRESSURE TREATED
PTD	PAPER TOWEL DISPENSER
PTN	PARTITION
PTS	PNEUMATIC TUBE SYSTEM
PVC	POLYVINYL CHLORIDE
PVG	PAVING
QT	QUARRY TILE
QTY	QUANTITY
R	THERMAL RESISTANCE, RADIUS, RISER
RB	RUBBER BASE
RC	REINFORCED CONCRETE
RCP	REFLECTED CEILING PLAN
RCPTN	RECEPTION
RD	ROOF DRAIN
REC	RECESSED
REF	REFERENCE, REFRIGERATOR
REINF	REINFORCE, REINFORCING
REQ(D)	REQUIRE, REQUIRED
RESIL	RESILIENT
REV	REVISION
RF	RESILIENT FLOORING
RH	RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RTF	RUBBER TILE FLOOR
RVL	REVEAL
S	SOUTH
SAN	SANITARY
SC	SOLID CORE
SCHED	SCHEDULE
SECT	SECTION
SF	SQUARE FOOT/(FEET)
SGL	SINGLE
SHR	SHOWER
SHT	SHEET
SIM	SIMILAR
SJ	SLIP JOINT, SCORED JOINT
SPEC	SPECIFICATION
SPKR	SPEAKER
SQ	SQUARE
SS	SERVICE SINK
SST	STAINLESS STEEL
STA	STATION
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SYS	SYSTEM
SYMM	SYMMETRICAL
T	TREAD
T/	TOP OF
TA	TOILET ACCESSORY
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TEL	TELEPHONE
TEMP	TEMPORARY
TER	TERRAZZO
THK	THICK
TI	TENANT IMPROVEMENT
TLT	TOILET
TO_	TOP OF _____
TOPO	TOPOGRAPHY, TOPOGRAPHIC
TRTD	TREATED
TS	TUBE STEEL
TV	TELEVISION
TYP	TYPICAL
U	HEAT TRANSFER COEFFICIENT
UH	UNIT HEATER
UL	UNDERWRITER'S LABORATORIES
UNEX	UNEXCAVATED
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
VB	VINYL BASE
VENT	VENTILATION
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VNR	VENEER
VOL	VOLUME
VWC	VINYL WALL COVERING
W	WEST
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WG	WALL GUARD
WH	WATER HEATER
WI	WROUGHT IRON
WP	WORKING POINT
WSCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
X	BY
YD	YARD
YR	YEAR
_A	AIR

HEALTHCARE ABBREVIATIONS

ANESTH	ANESTHESIOLOGY
ANGIO	ANGIOGRAPHY
BL	BED LOCATOR
BP	BED PAN HOLDER
BW	BLANKET WARMER
CARDIO	CARDIOLOGY
CATH	CATHETERIZATION
CC	CUBICAL CURTAIN TRACK
CDBL	CODE BLUE
CG	CORNER GUARD
CHT	CHANGE TABLE
CLN	CLEAN
CO2	CARBON DIOXIDE
CODE	CODE CART
CS	CLINICAL SINK
CT	COMPUTERIZED TOMOGRAPHY
CLN UTL	CLEAN UTILITY
CVICU	CARDIOVASCULAR INTENSIVE CARE UNIT
CYSTO	CYSTOSCOPY
DCT	DIAPER CHANGE TABLE
DIW	DEIONIZED WATER
DK RM	DARK ROOM
DR	DRESSING ROOM
DW	DISTILLED WATER
DWTR	DUMBWAITER
ED	EMERGENCY DEPARTMENT
ENDO	ENDOSCOPY
ER	EMERGENCY ROOM
EWS	EYE WASH STATION
EXAM	EXAMINATION
GYN	GYNECOLOGY
HC	HEALTH CARE
HDWL	HEADWALL
HTHW	HIGH TEMPERATURE HOT WATER
HOSP	HOSPITAL
ICCU	INTENSIVE CARDIAC CARE UNIT
ICU	INTENSIVE CARE UNIT
INF	INFANT
IP	IN-PATIENT
ISOL	ISOLATION
IV	INTRAVENOUS
LAB	LABORATORY
LC	LAUNDRY CHUTE
LDR	LABOR/DELIVERY/RECOVERY
LDRP	LABOR/DELIVERY/RECOVERY/ POST PARTUM
LG	LOUNGE
LIN	LINEN
LL	LEAD LINED
LTC	LONG TERM CARE
MAG	MAGNET(IC)
MAMMO	MAMMOGRAPHY
MC	MEDICINE CABINET
MED	MEDICINE/ MEDICATION
MED EQUIP	MEDICAL EQUIPMENT
MICU	MEDICAL INTENSIVE CARE UNIT
MON	MONITOR
MRI	MAGNETIC RESONANCE IMAGING
N2	NITROGEN
N2O	NITROUS OXIDE
NARC	NARCOTICS
NC	NURSE CALL
NEURO	NEUROLOGY
NICU	NEONATAL INTENSIVE CARE UNIT
NS	NURSE STATION
NUC	NUCLEAR
NUR	NURSE(RY)
O2	OXYGEN
OB	OBSTETRICS
OP	OUT PATIENT
OR	OPERATING ROOM
ORTHO	ORTHOPEDICS
OTO	OTOSCOPE/OPTHALMOSCOPE
PACU	POST ANESTHESIA CARE UNIT
PAT	PATIENT
PATH	PATHOLOGY
PEDS	PEDIATRIC(S)
PET	POSITION EMISSION TOMOGRAPHY
PHAR	PHARMACY
PROC	PROCEDURE
PT STA	PNEUMATIC TUBE STATION
R/F	RAD FLUORO
RADIOL	RADIOLOGY
RECOV	RECOVERY ROOM
REG	REGISTRATION
RF	RADIO FREQUENCY
RMW	REGULATED MEDICAL WASTE
RM	
SECL RM	SECLUSION ROOM
SHARPS	SHARPS CONTAINER
SEAT	SHOWER SEAT
SICU	SURGICAL INTENSIVE CARE UNIT
SNF	SKILLED NURSING FACILITY
SPU	SPECIMAN PASS THROUGH UNIT
SPHYG	SPHYGMOMANOMETER
STER	STERILIZER
SU	SOILED UTILITY
SUCT	SUCTION
SURG	SURGICAL
TELEM	TELEMETRY
TREAT	TREATMENT
TV BRK	TELEVISION MOUNTING BRACKET
VAC	VACUUM LINE
VAC CTR	VACUUM CONTAINER
VAC SL	VACUUM SLIDE
WAGE	WASTE ANESTHETIC GAS EVACUATION
WP	WALL PROTECTION
XR	X RAY

MATERIALS

- SOIL - COMPACTED
- SOIL - UNDISTURBED
- POROUS FILL - COURSE (CRUSHED STONE)
- POROUS FILL - MEDIUM (GRAVEL)
- POROUS FILL - FINE (SAND)
- BITUMINOUS PAVING (ASPHALT)
- CONCRETE - CAST IN PLACE
- CONCRETE - LIGHTWEIGHT (TOPPING)
- TERRAZZO
- STONE - CUT
- STONE - CAST
- MASONRY - BRICK
- MASONRY - GLAZED BRICK
- MASONRY - CONCRETE MASONRY UNIT (CMU)
- MASONRY - GLAZED OR GROUND FACED CMU
- MASONRY - STRUCTURAL CLAY TILE
- METAL - STEEL
- METAL - ALUMINUM
- METAL - ORNAMENTAL
- CONTINUOUS WOOD FRAMING
- DISCONTINUOUS WOOD BLOCKING OR SHIM
- WOOD - FINISH WOODWORK
- WOOD - PLYWOOD
- WOOD - PARTICLE BOARD
- WOOD - FLOORING
- GYPSUM WALLBOARD
- GYPSUM WALLBOARD - LEAD LINED
- WATERPROOFING OR AIR/VAPOR BARRIER
- RIGID INSULATION
- BATT INSULATION
- SPRAY-ON FIREPROOFING
- PLASTER STUCCO W/ METAL LATH
- RESILIENT FLOORING
- CARPETING
- INSULATED GLAZING
- MONOLITHIC GLASS
- GLASS BLOCK
- ACOUSTICAL CEILING PANEL
- BACKER ROD AND SEALANT

PARTITION & DOOR NOTES

1. PARTITIONS LOCATED BY DIMENSION STRING ARE DIMENTIONED TO THE UNFISINISHED FACE OF THE WALL UNLESS NOTED OTHERWISE.

2. PARTITIONS NOT DIMENSIONED ARE GENERALLY LOCATED BY ONE OF THE FOLLOWING CRITERIA:

2.1 CENTER LINE - CENTER OF PARTITION ALIGNS WITH THE CENTER OF GIRDLINE OR OBJECT CENTERLINE (SUCH AS A COLUMN OR WINDOW MULLION).

2.2 ALIGN - LOCATE PARTITION FLUSH WITH FACE OF ANOTHER PARTITION OR ANOTHER SURFACE AS INDICATED.

2.3 SPECIFICALLY MAINTAIN DIMENSIONS NOTED AS "MINIMUM" OR "CLEAR"

3. DOOR OPENINGS ARE DIMENTIONED TO CENTERLINE OF OPEING. IF NOT DIMENSIONED, THE HINGE SIDE OF DOOE SHALL BE SPACED 4" (INCLUDING THE JAMB FROM THE ADJACENT WALL.

SYMBOLS LEGEND

SHEET NUMBER

A10-01

SHEET NUMBER
SHEET GROUP
DISCIPLINE CODE

NORTH ARROW

TRUE NORTH

GRAPHIC SCALE

0 2' 4' 8'
SCALE: 1" = 4'-0"

COLUMN SYMBOL & GRID LINES

1 2 A 0

HEXAGON GRID HEAD USED FOR EXISTING GRID LINES

VERTICAL ELEVATION

LEVEL 2
118'-6"

SPOT ELEVATION

LEVEL 2
118'-6"

DATUM POINT

118'-6"

MATCH LINE

MATCHLINE
SEE 1 / A101
SHEET NUMBER ON WHICH CONTINUATION IS FOUND

BREAK LINE

DRAWING TITLE

1A DRAWING
1/4" = 1'-0"
PLAN OR DETAIL DESIGNATION
TITLE
SCALE

KEY NOTE

00 00 00 00
TEXT

PLAN NOTE

P10

ROOM NAME & NUMBER TAG

NAME
A101A

DOOR NUMBER TAG

NEW DOOR & FRAME
EXISTING DOOR & FRAME

WINDOW TYPE TAGS

11 INTERIOR WINDOW TAG (NUMERIC)
A EXTERIOR WINDOW TAG (ALPHA)
A1 LOUVER TYPE IDENTIFIER (ALPHA AND NUMERIC)

BUILDING SECTION TAG

SECTION DESIGNATION
1 SIM
A101
LINE MAY NOT BE CONTINUOUS
SHEET NUMBER

DETAIL OR WALL SECTION TAG

SECTION DESIGNATION
1 SIM
A101
SHEET NUMBER

PARTIAL PLAN & DETAIL TAG

PLAN OR DETAIL DESIGNATION
1 SIM
A101
SHEET NUMBER

EXTERIOR ELEVATION TAG

ELEVATION DESIGNATION
00
A01-00
SHEET NUMBER

INTERIOR ELEVATION TAG

19 SIM
ELEVATION DESIGNATION
SIM 19
A01-00
19 SIM
19 SIM
SHEET NUMBER

DRAWING REVISIONS

REVISION NUMBER
3

AREA OUT OF SCOPE

CONTROL JOINT

CJ

EXPANSION JOINT

EJ

FLOOR DRAIN

TOILET ACCESSORY TAG

TA1

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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion

22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT ROBERT A. BROWN No. 4431 STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN

VISITOR GARAGE

OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

SHEET NUMBER

A00-01

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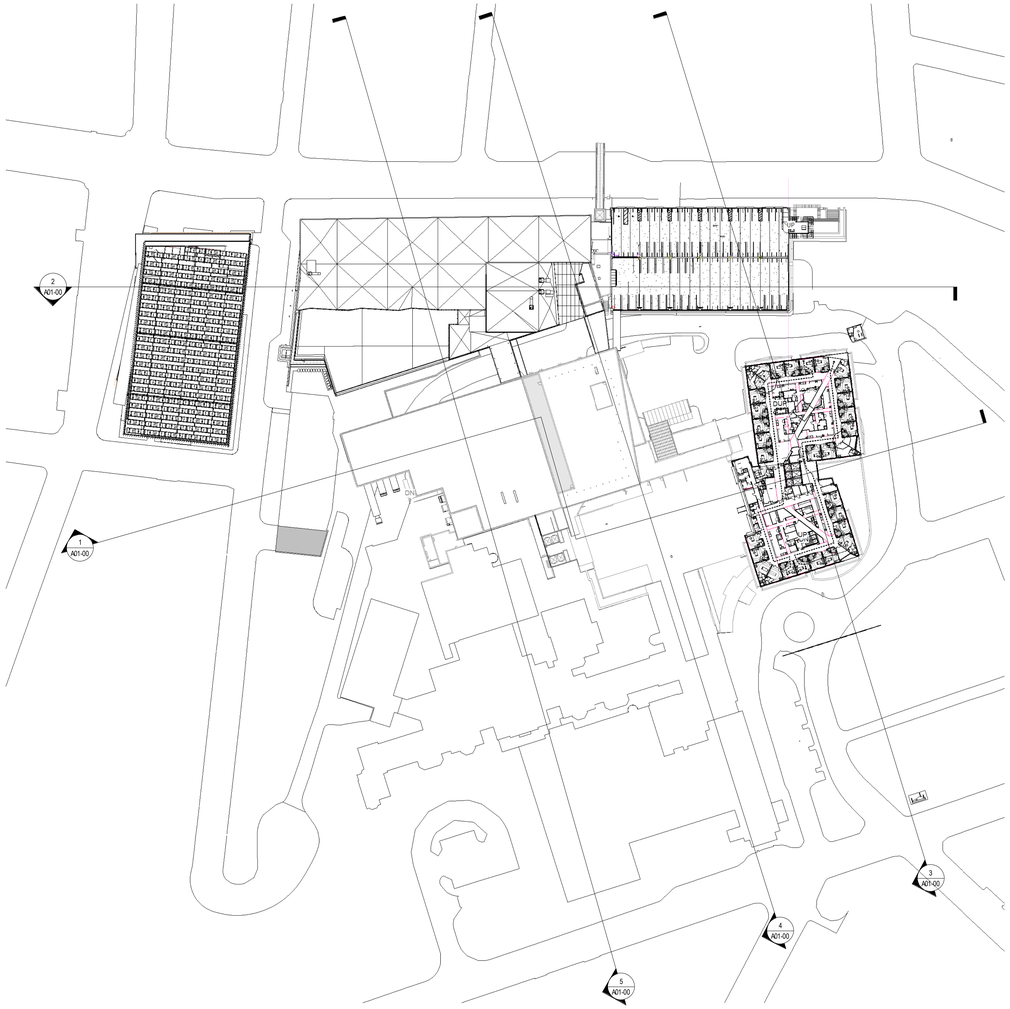
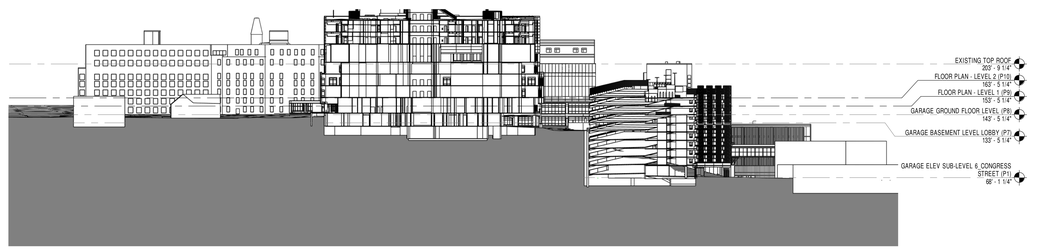
CAMPUS SITE PLAN

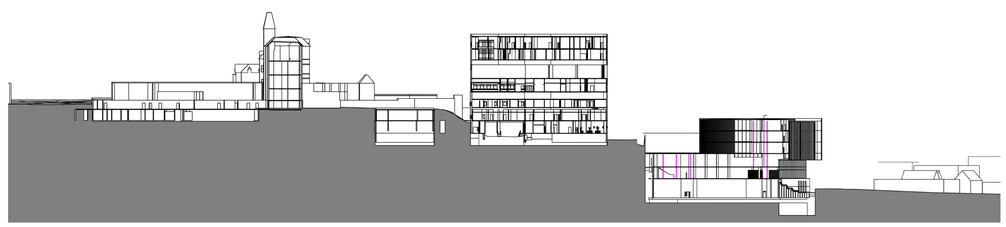
1 - NOT USED
2 - CONGRESS STREET BUILDING
3 - VISITOR'S GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
8 - RICHARD'S BUILDING
9 - EMERGENCY SERVICE BUILDING
10 - MAINE GENERAL BUILDING (MGB)
11 - DANA CENTER
12 - PAVILIONS



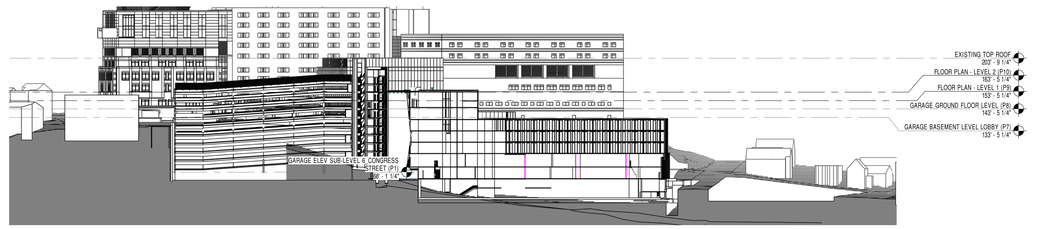
6 SITE PLAN - DIAGRAM
1/64" = 1'-0"



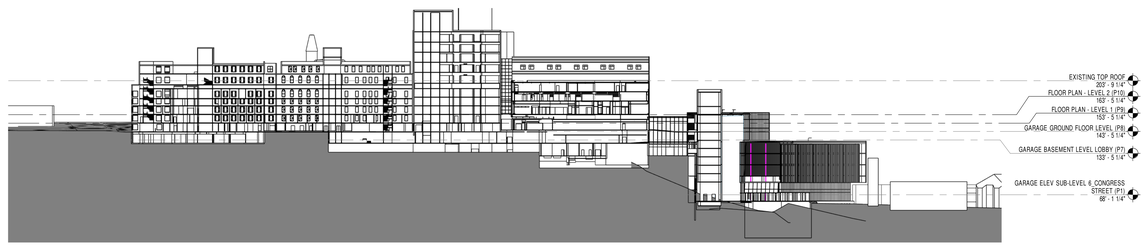
3 SECTION C
1/64" = 1'-0"



5 SECTION A
1/64" = 1'-0"



2 SECTION D
1/64" = 1'-0"



4 SECTION B
1/64" = 1'-0"

1 SECTION E
1/64" = 1'-0"

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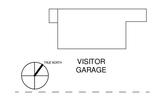
LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
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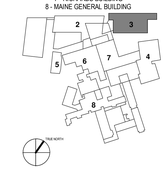

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SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

SITE PLAN & SITE SECTIONS

SHEET NUMBER

A01-00

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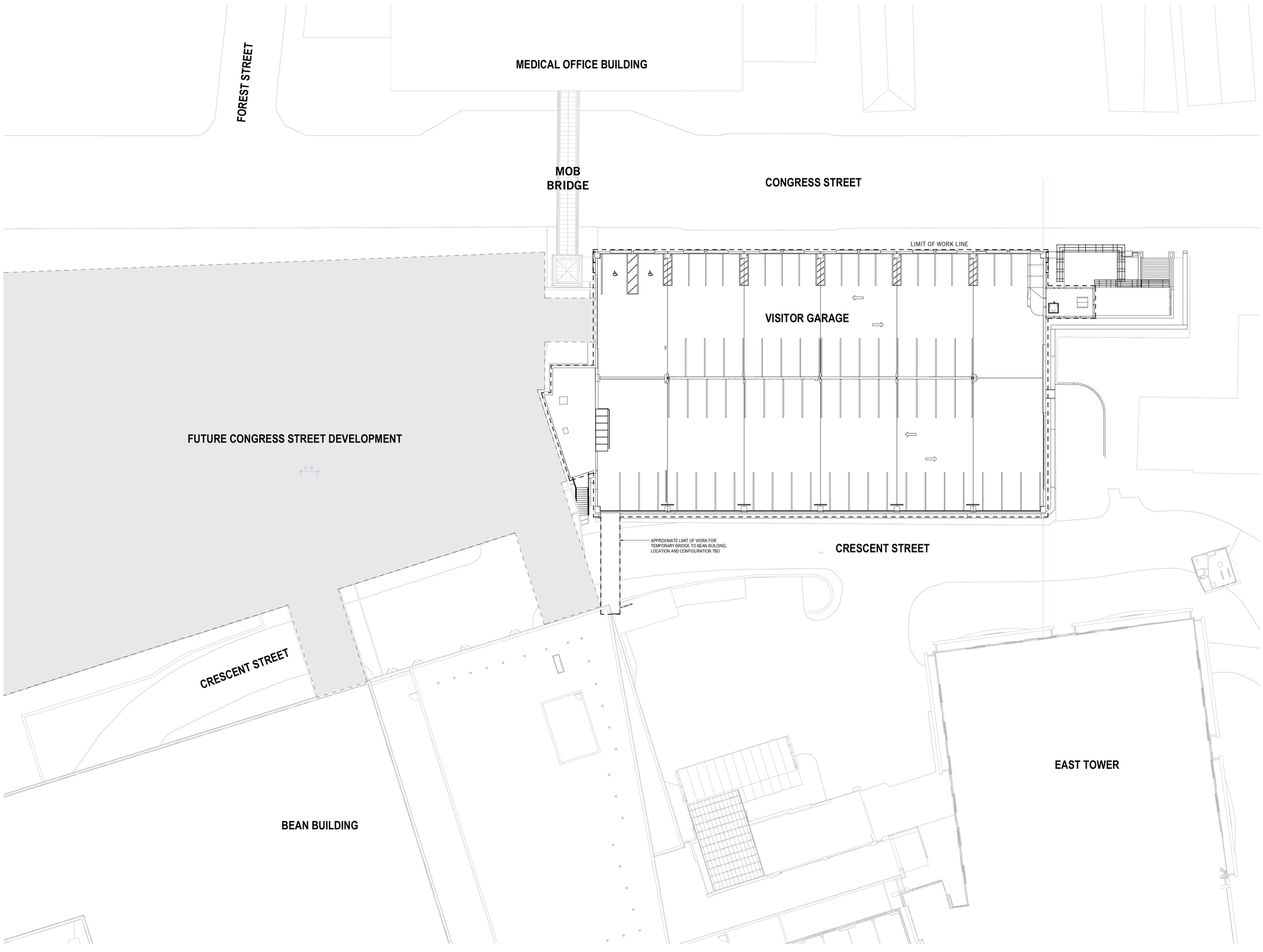

1 SITE PLAN
1/16" = 1'-0"

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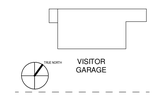
Portland ME 04102

LICENSED ARCHITECT ROBERT A. BROWN No. 4431 STATE OF MAINE

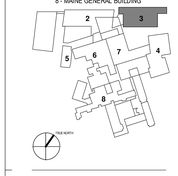
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

ARCHITECTURAL SITE PLAN

SHEET NUMBER

A01-01

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3/20/2018 3:19:46 PM
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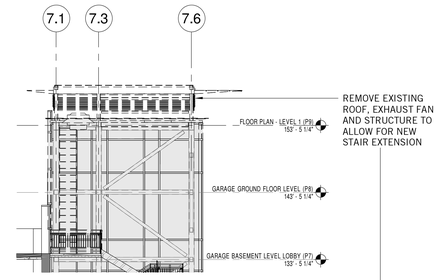
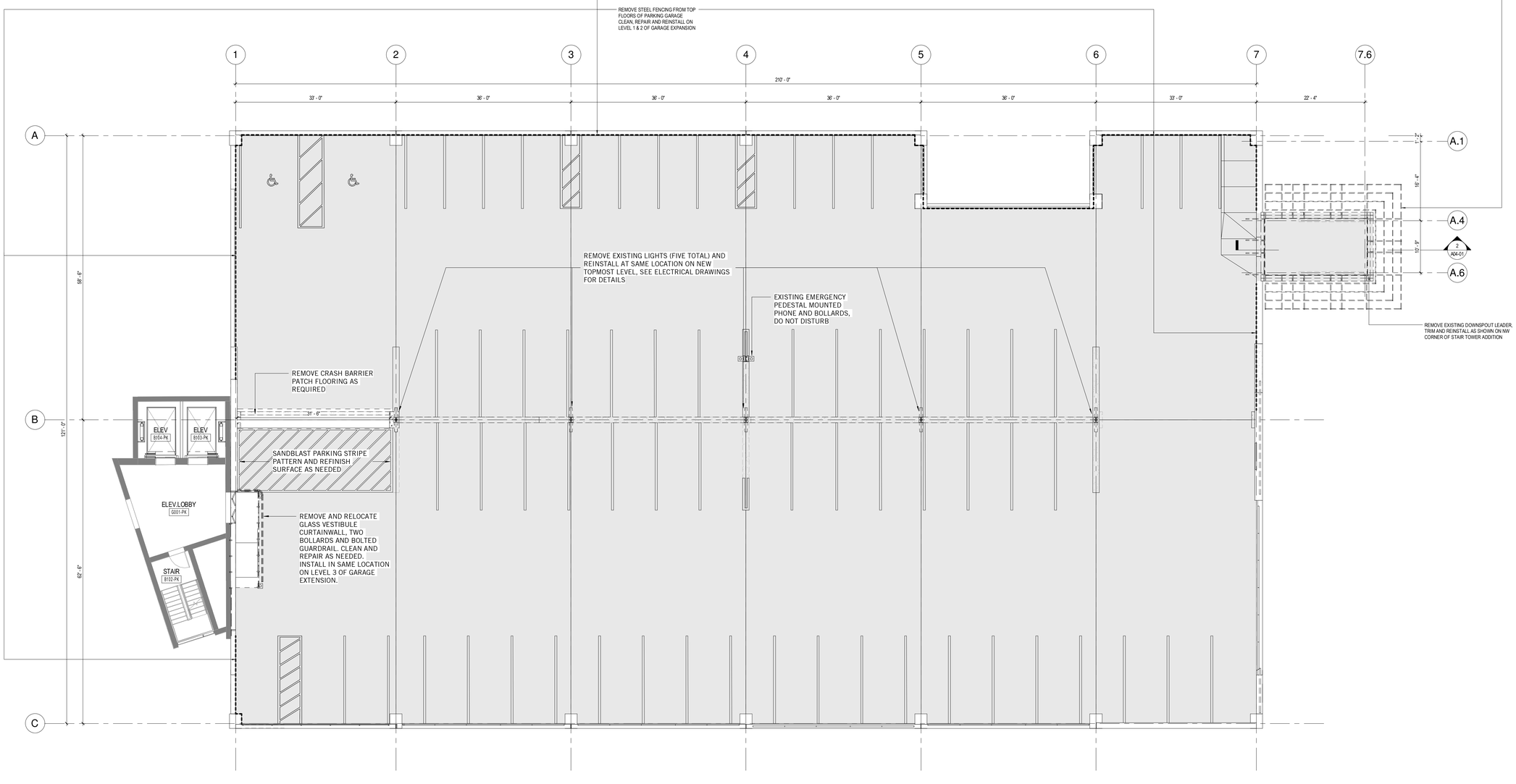
DEMOLITION PLAN LEGEND

- EXISTING PARTITION TO REMAIN
- EXISTING PARTITION TO BE DEMOLISHED
- EXISTING DOOR AND FRAME TO REMAIN
- EXISTING DOOR AND FRAME TO BE DEMOLISHED



2 STAIR TOWER SECTION
1/8" = 1'-0"



1 BASEMENT / GROUND FLOOR DEMOLITION PLAN
1/8" = 1'-0"

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MaineHealth

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Portland ME 04102

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South Portland ME 04106

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VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN

OVERALL KEY PLAN

1 - NOT USED
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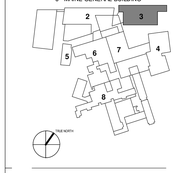
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

DEMOLITION PLAN & SECTION

SHEET NUMBER

A04-01

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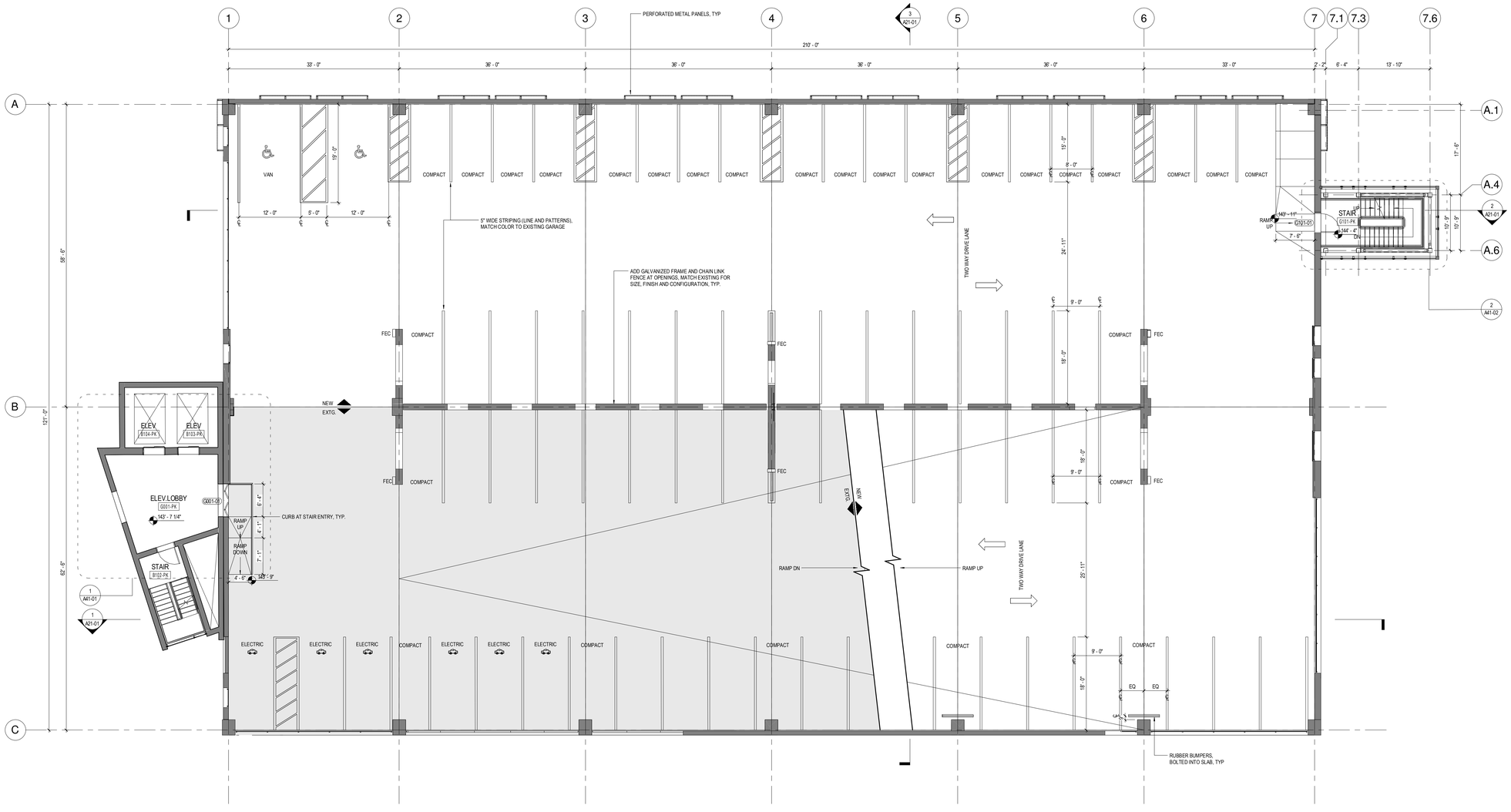

1 GARAGE GROUND FLOOR LEVEL (EXISTING & NEW)
1/8" = 1'-0"

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VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

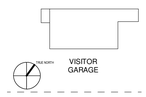
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT ROBERT A. BROWN No. 4431 COMMONWEALTH OF MASSACHUSETTS

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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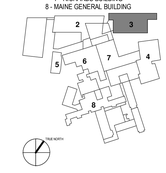

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
2	ADDENDUM #2	01.09.18
1	ADDENDUM #1	12.05.17

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

FLOOR PLAN - GROUND FLOOR

SHEET NUMBER

A10-10

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3/29/2018 3:20:00 PM
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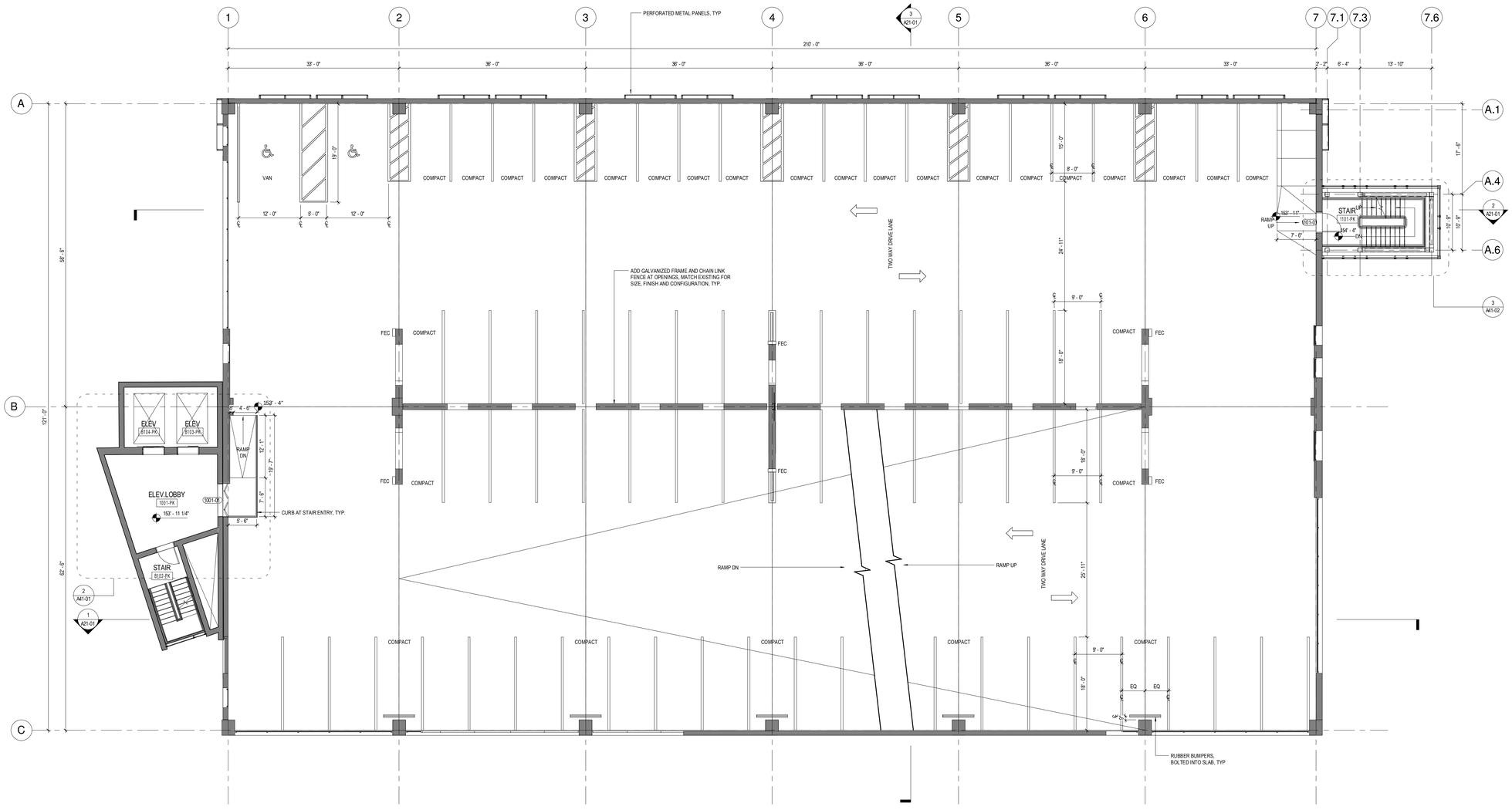

1 FLOOR PLAN - LEVEL 1 (NEW)

1/8" = 1'-0"

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VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

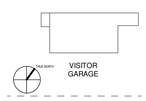
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
COMMONWEALTH OF MASSACHUSETTS

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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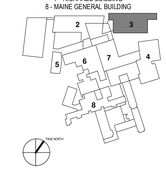

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SEPTEMBER 29, 2017

NO	ISSUE	DATE
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2	ADDENDUM #2	01.09.18
1	ADDENDUM #1	12.05.17

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

FLOOR PLAN - FIRST FLOOR

SHEET NUMBER

A10-20

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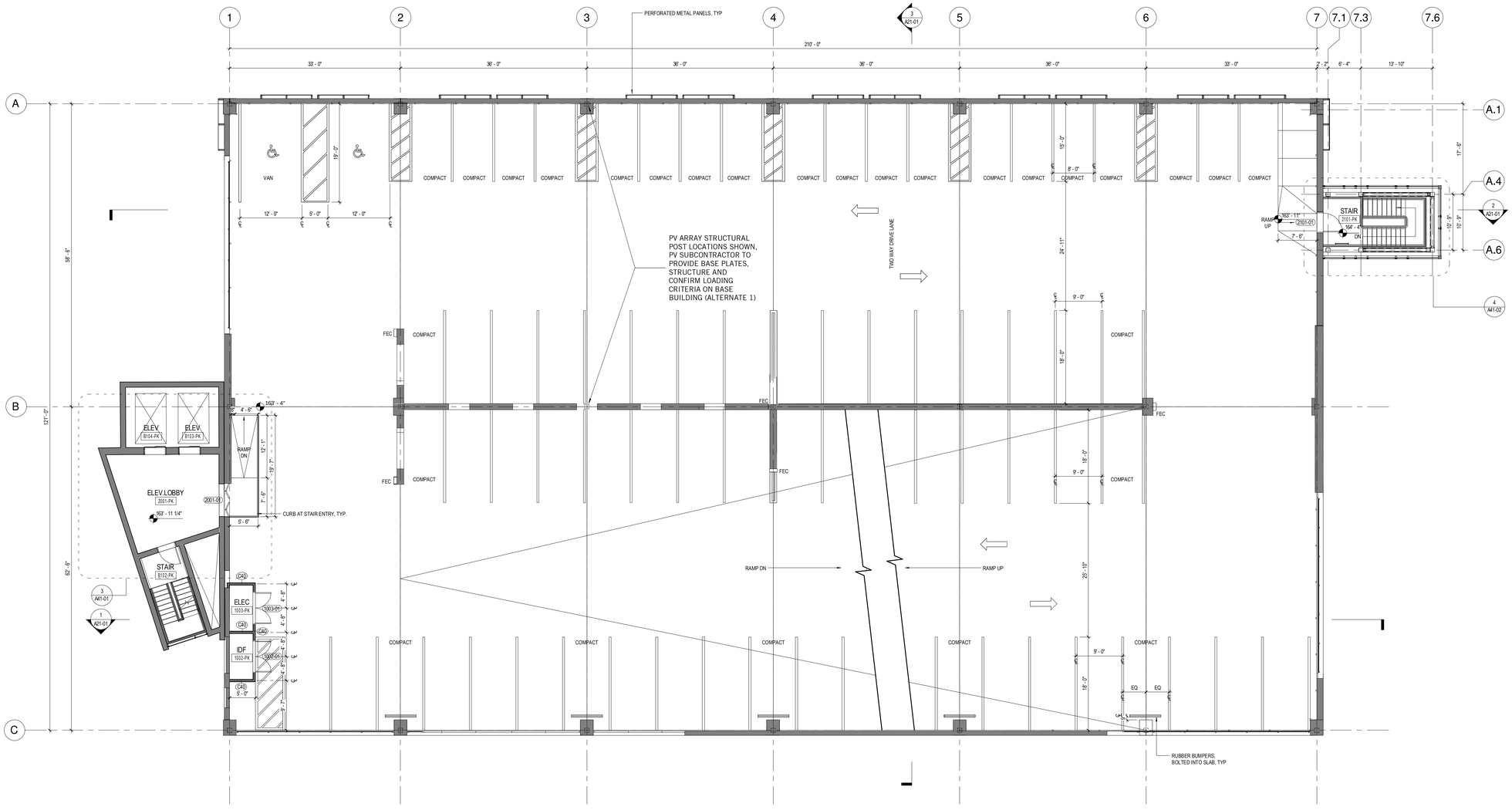

1 FLOOR PLAN - LEVEL 2 (NEW)

1/8" = 1'-0"

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VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

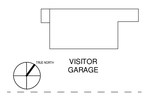
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
COMMONWEALTH OF MASSACHUSETTS

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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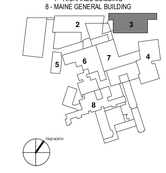

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SEPTEMBER 29, 2017

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2	ADDENDUM #2	01.09.18
1	ADDENDUM #1	12.05.17

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

FLOOR PLAN - SECOND FLOOR

SHEET NUMBER

A10-30

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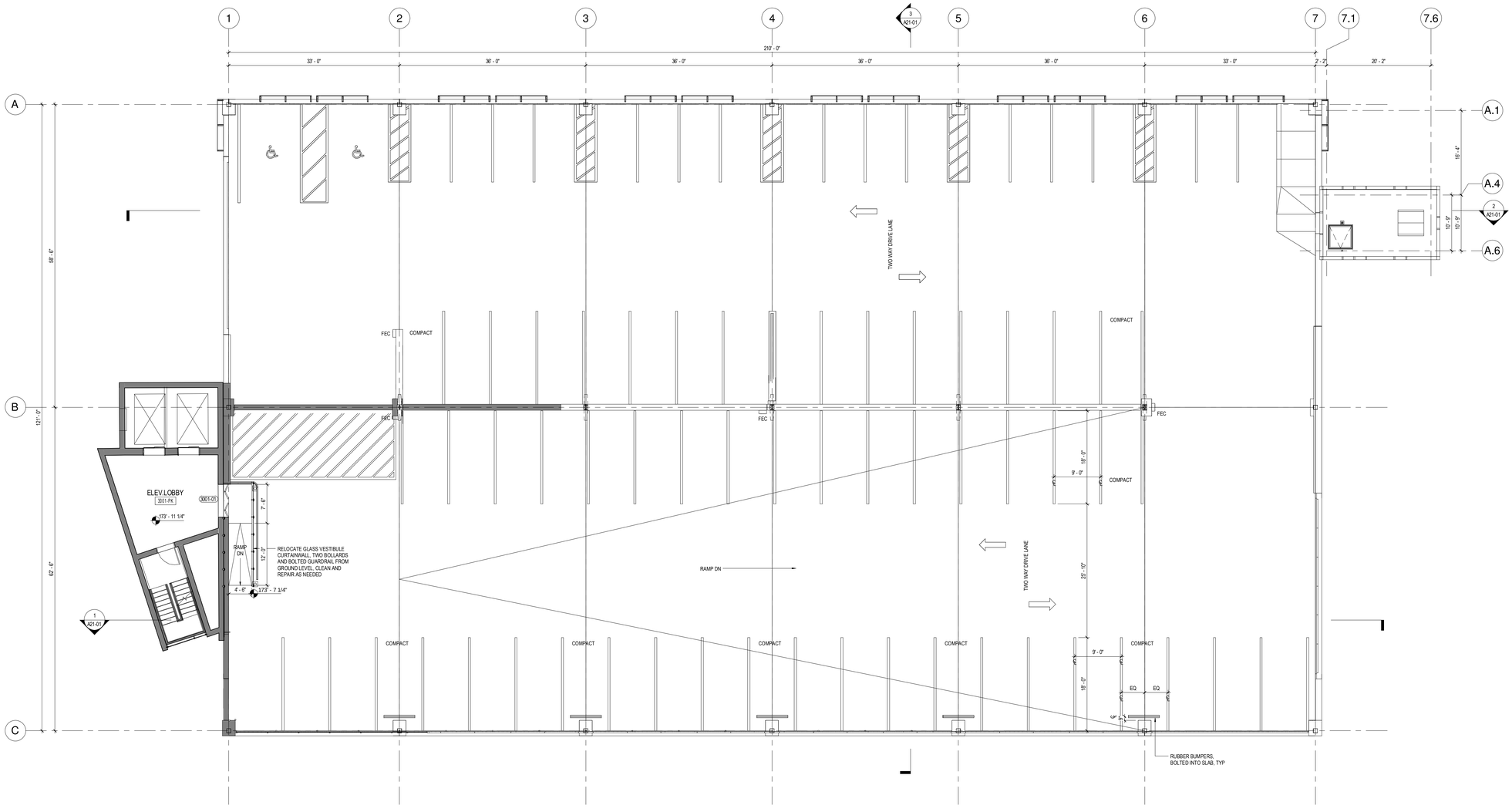

1 FLOOR PLAN - LEVEL 3 (NEW)
1/8" = 1'-0"

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101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

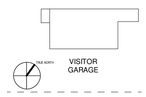
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
COMMONWEALTH OF MASSACHUSETTS

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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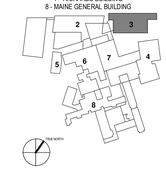

CONSTRUCTION DOCUMENT SET
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2	ADDENDUM #2	01.09.18
1	ADDENDUM #1	12.05.17

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

FLOOR PLAN - THIRD FLOOR

SHEET NUMBER

A10-40

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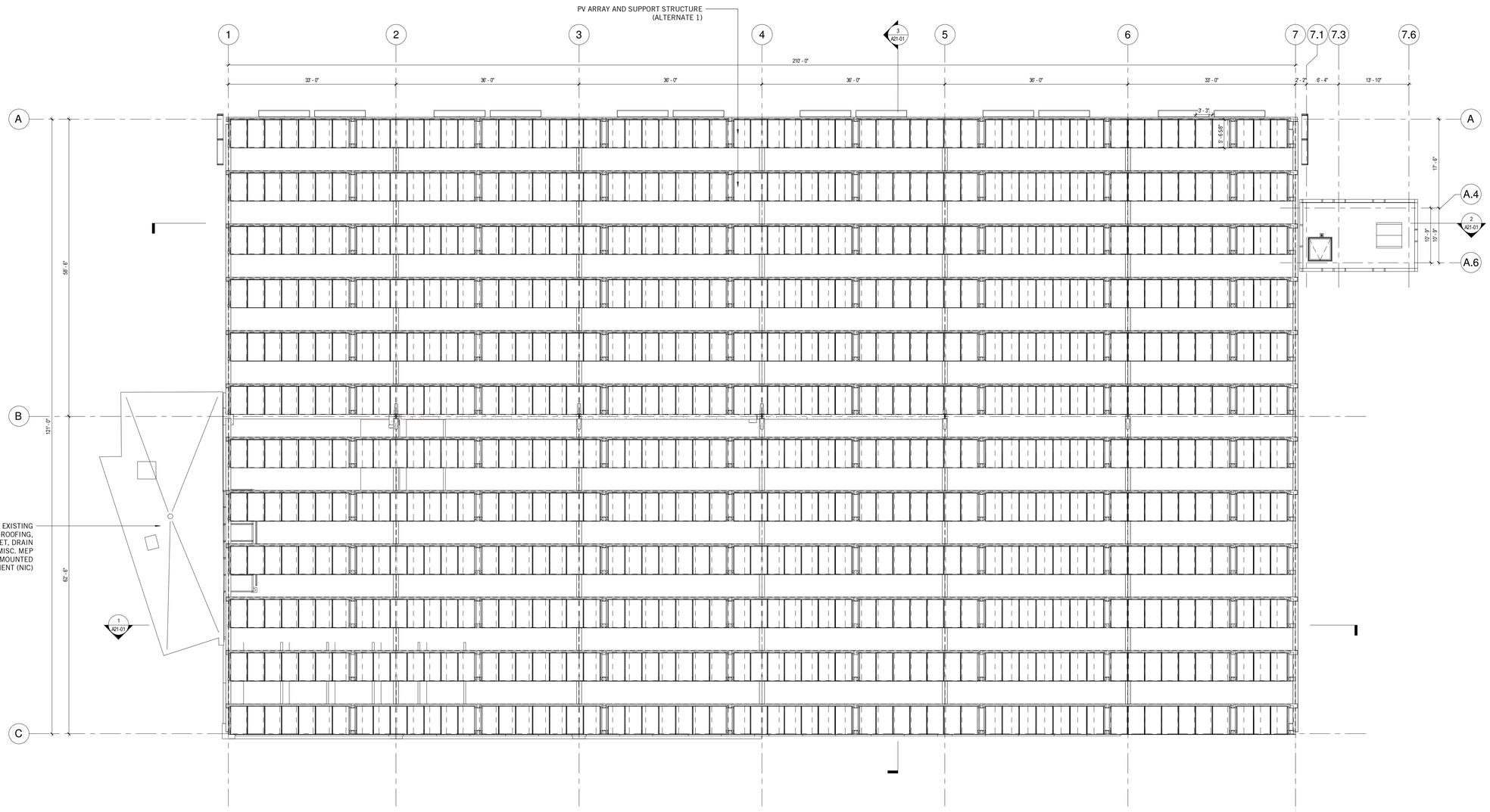

1 ROOF PLAN (ALTERNATE #1)
1/8" = 1'-0"

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02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

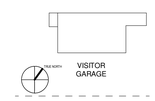
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
COMMONWEALTH OF MASSACHUSETTS

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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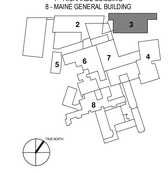

CONSTRUCTION DOCUMENT SET
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	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

PV ARRAY ALTERNATE #1

SHEET NUMBER

A10-50

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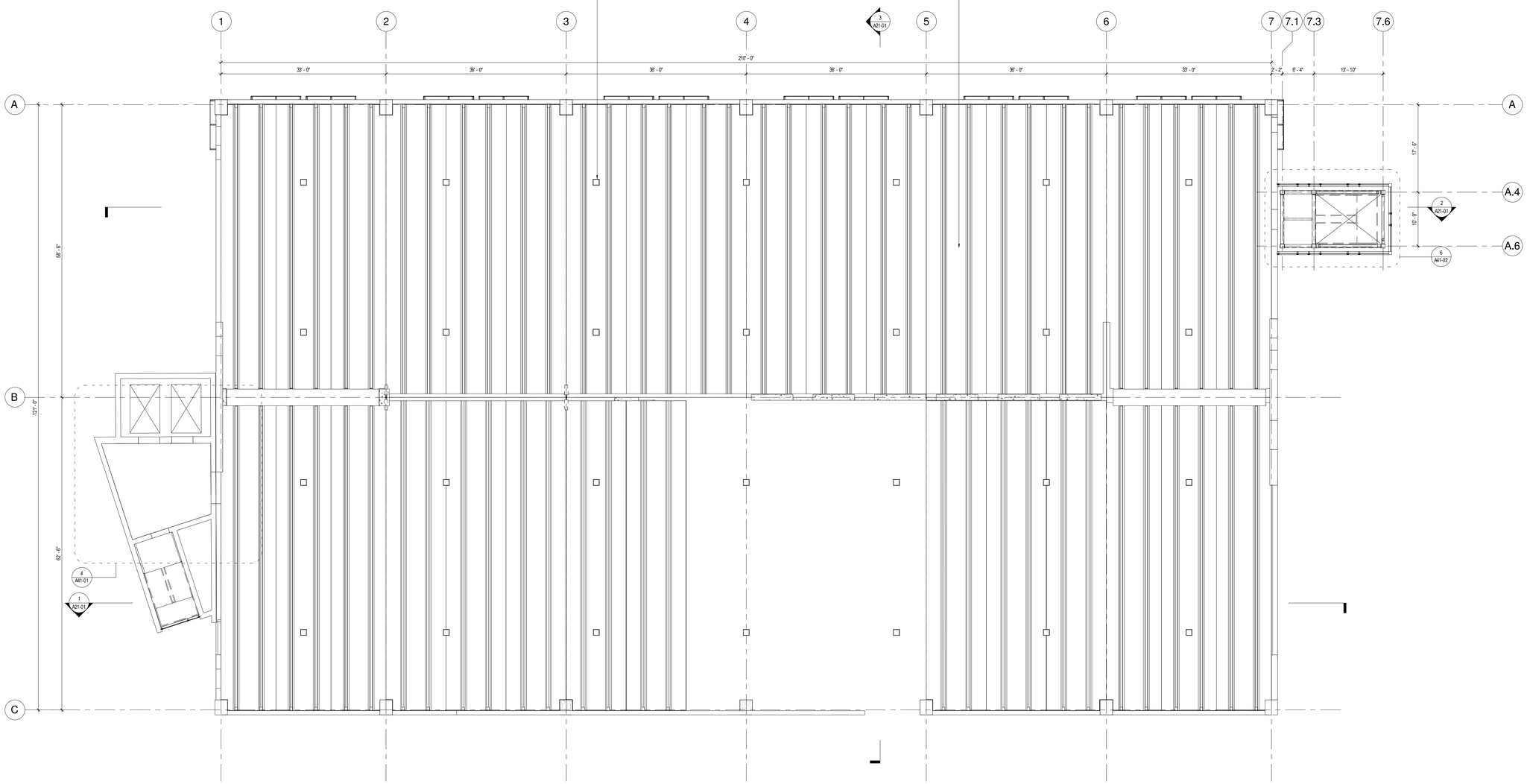

1 REFLECTED CEILING PLAN - TYPICAL (NEW LEVEL)
1/8" = 1'-0"

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MaineHealth

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VDA (Van Deusen & Associates)
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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

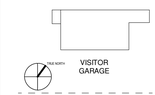
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4491
REGISTERED

KEY PLANS

PROJECT KEY PLAN



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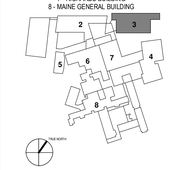

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NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

REFLECTED CEILING PLAN - TYPICAL

SHEET NUMBER

A12-20

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3/29/2018 3:20:37 PM
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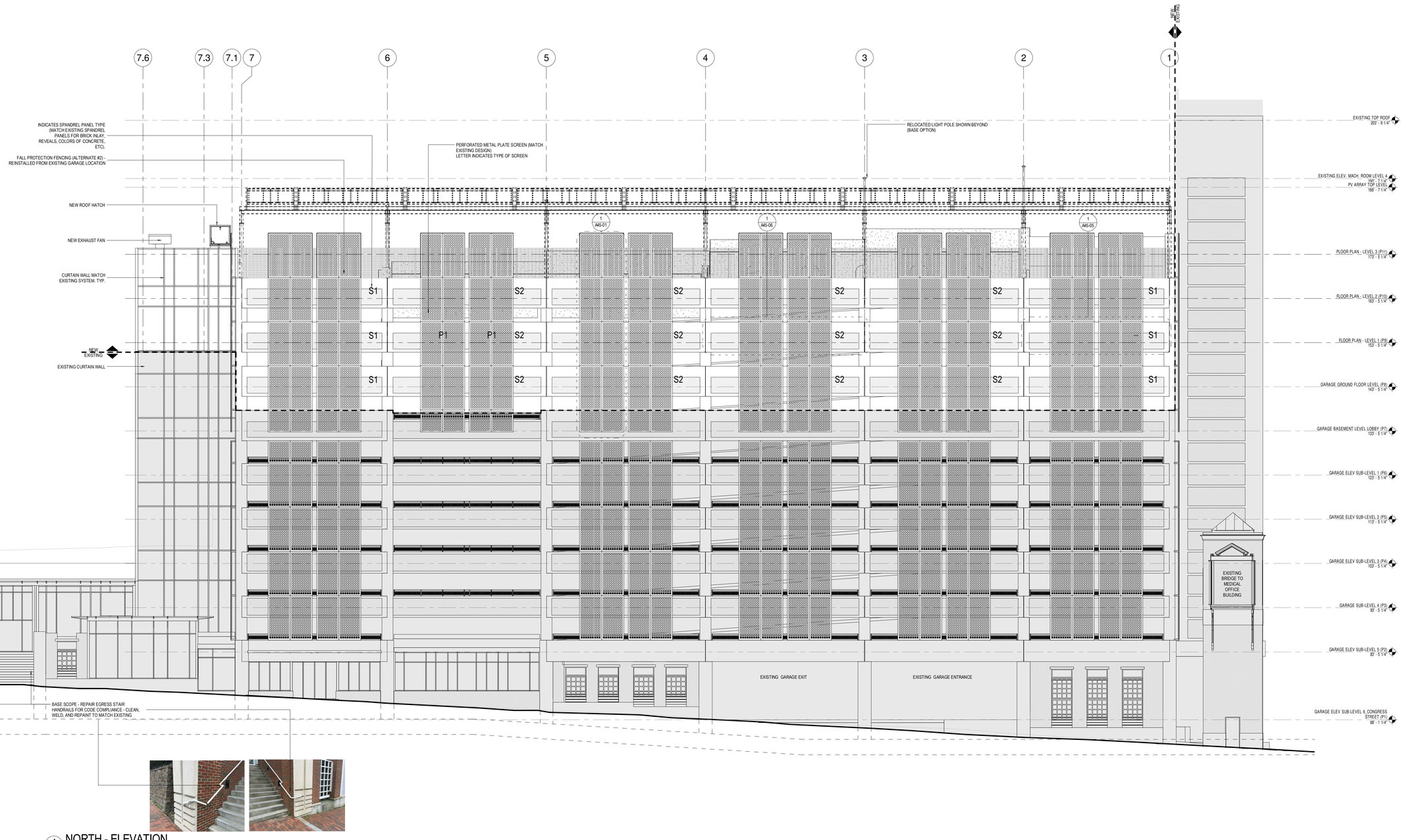
ELEVATION LEGEND

F - FALL PROTECTION FENCING

P - PERFORATED METAL PANELS (SQUARE HOLES), NORTH AND WEST ELEVATIONS

R - MESH AND CHANNEL METAL RAILINGS (MOUNTED ON PRECAST SPANDRELS)

S - PRECAST CONCRETE SPANDREL PANELS



1 NORTH - ELEVATION
1/8" = 1'-0"

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CLIENT

Maine Medical Center
MaineHealth

22 Bramhall Street
Portland ME 04102

CONSULTANTS

CIVIL/ LANDSCAPE ARCHITECT
Sebago Technics
75 John Roberts Road, Suite 1A
South Portland ME 04106

STRUCTURAL ENG/ BUILDING ENVELOPE CONSULTANT
Simpson Gumpertz & Heger Inc.
41 Seyon Street, Building 1, Suite 500,
Waltham MA 02453

MEP/FP ENGINEER/ CODE
AKF Group LLC
99 Bedford Street, 2nd Floor, Boston MA 02111

CONSTRUCTION MANAGER
Turner Construction
2 Seaport Lane, Suite 200, Boston MA 02210

ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

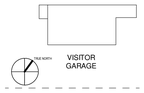
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
STATE OF MAINE
REGISTERED

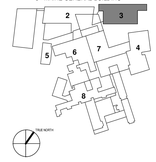
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
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Approved	JK

TITLE

NORTH ELEVATION

SHEET NUMBER

A20-10

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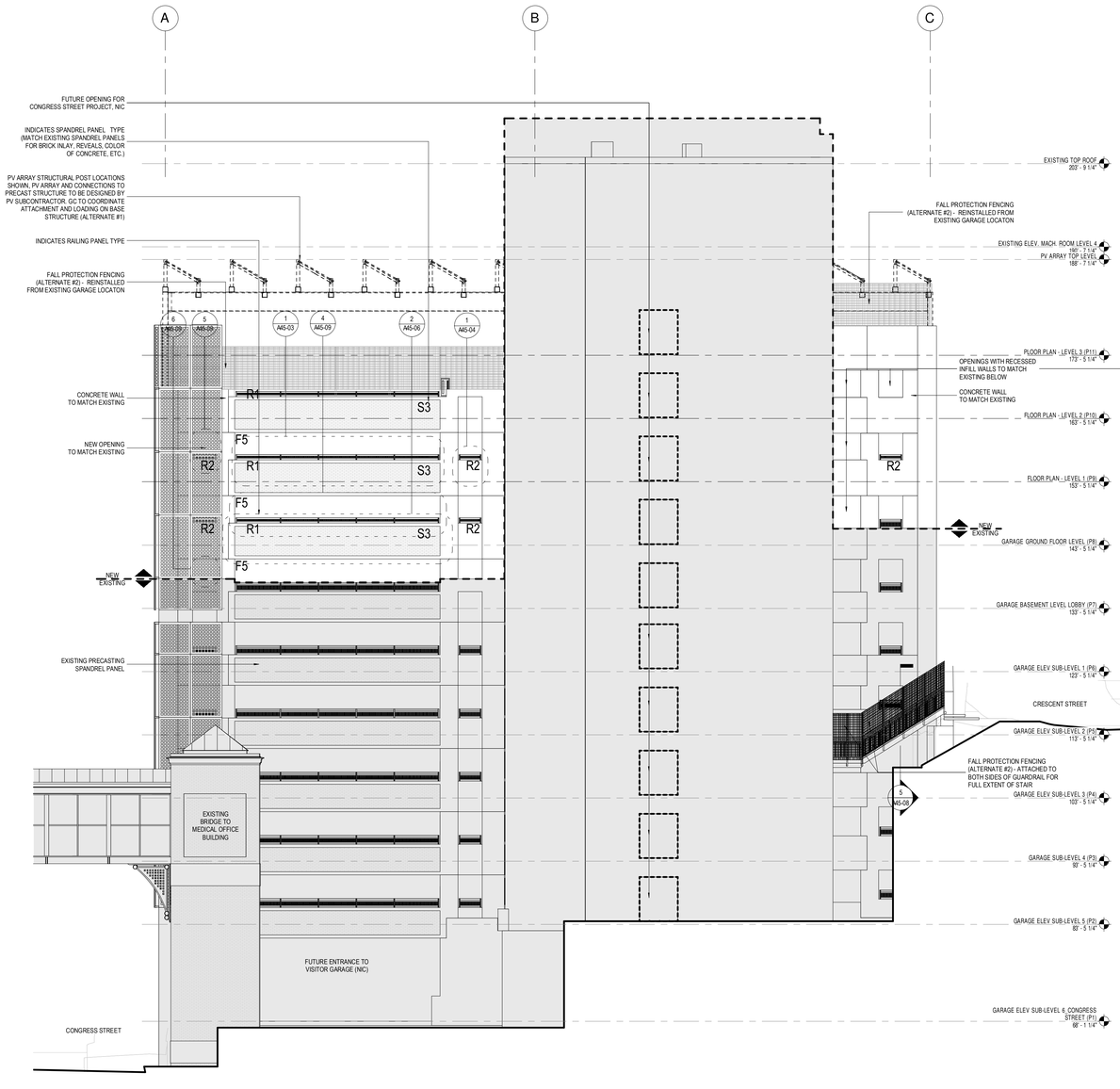
ELEVATION LEGEND

F - FALL PROTECTION FENCING

P - PERFORATED METAL PANELS (SQUARE HOLES), NORTH AND WEST ELEVATIONS

R - MESH AND CHANNEL METAL RAILINGS (MOUNTED ON PRECAST SPANDRELS)

S - PRECAST CONCRETE SPANDREL PANELS



1 WEST - ELEVATION
1/8" = 1'-0"

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PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
REGISTERED
STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN

OVERALL KEY PLAN

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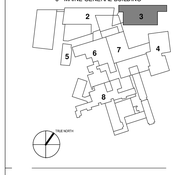
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
1	ADDENDUM #1	12.05.17

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

WEST ELEVATION

SHEET NUMBER

A20-20

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ELEVATION LEGEND

F - FALL PROTECTION FENCING

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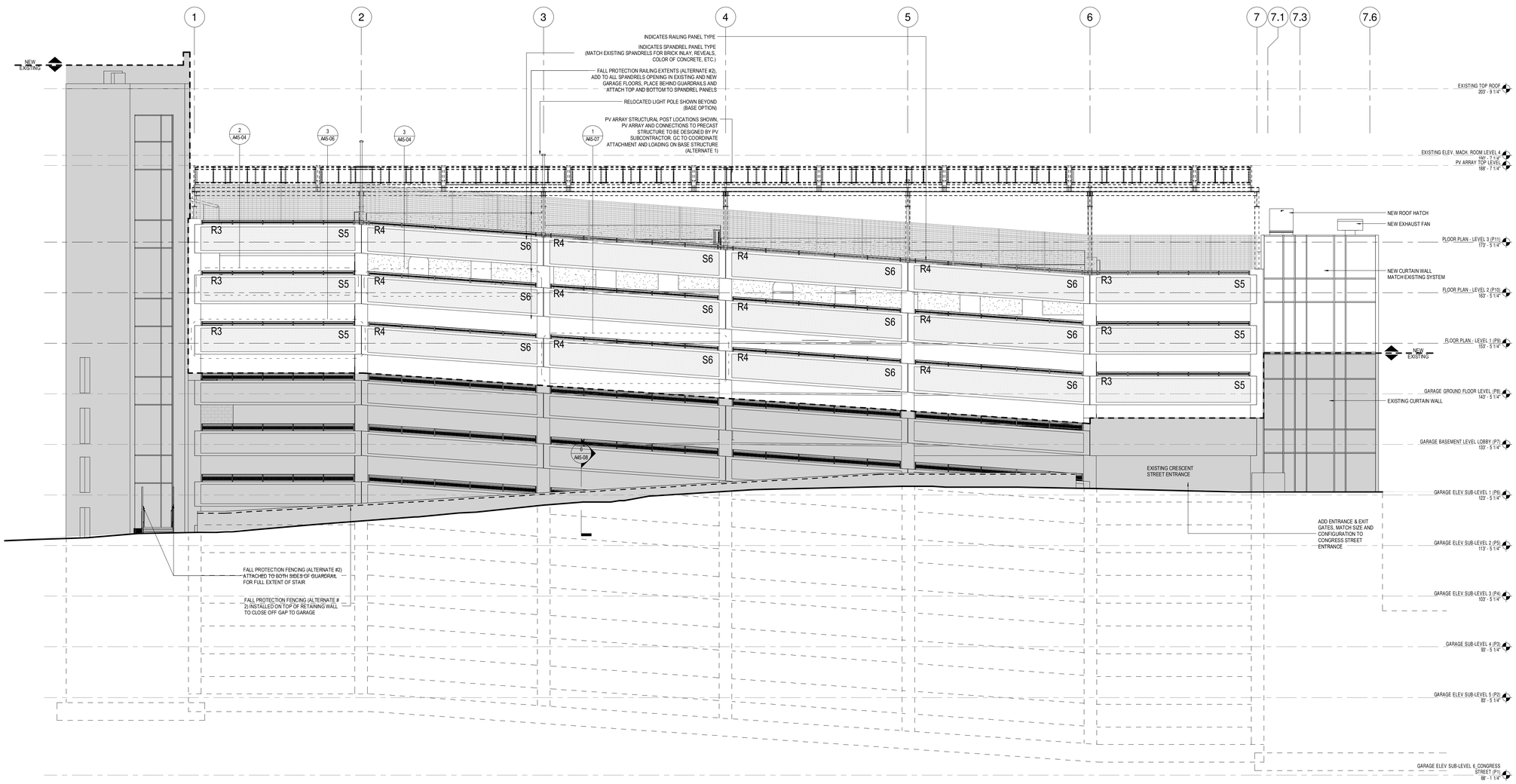

1 SOUTH - ELEVATION
1/8" = 1'-0"

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CLIENT

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CONSULTANTS

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VDA (Van Deusen & Associates)
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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

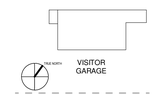
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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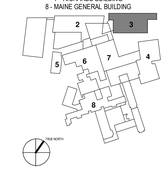

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

SOUTH ELEVATION

SHEET NUMBER

A20-30

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ELEVATION LEGEND

F - FALL PROTECTION FENCING

P - PERFORATED METAL PANELS (SQUARE HOLES), NORTH AND WEST ELEVATIONS

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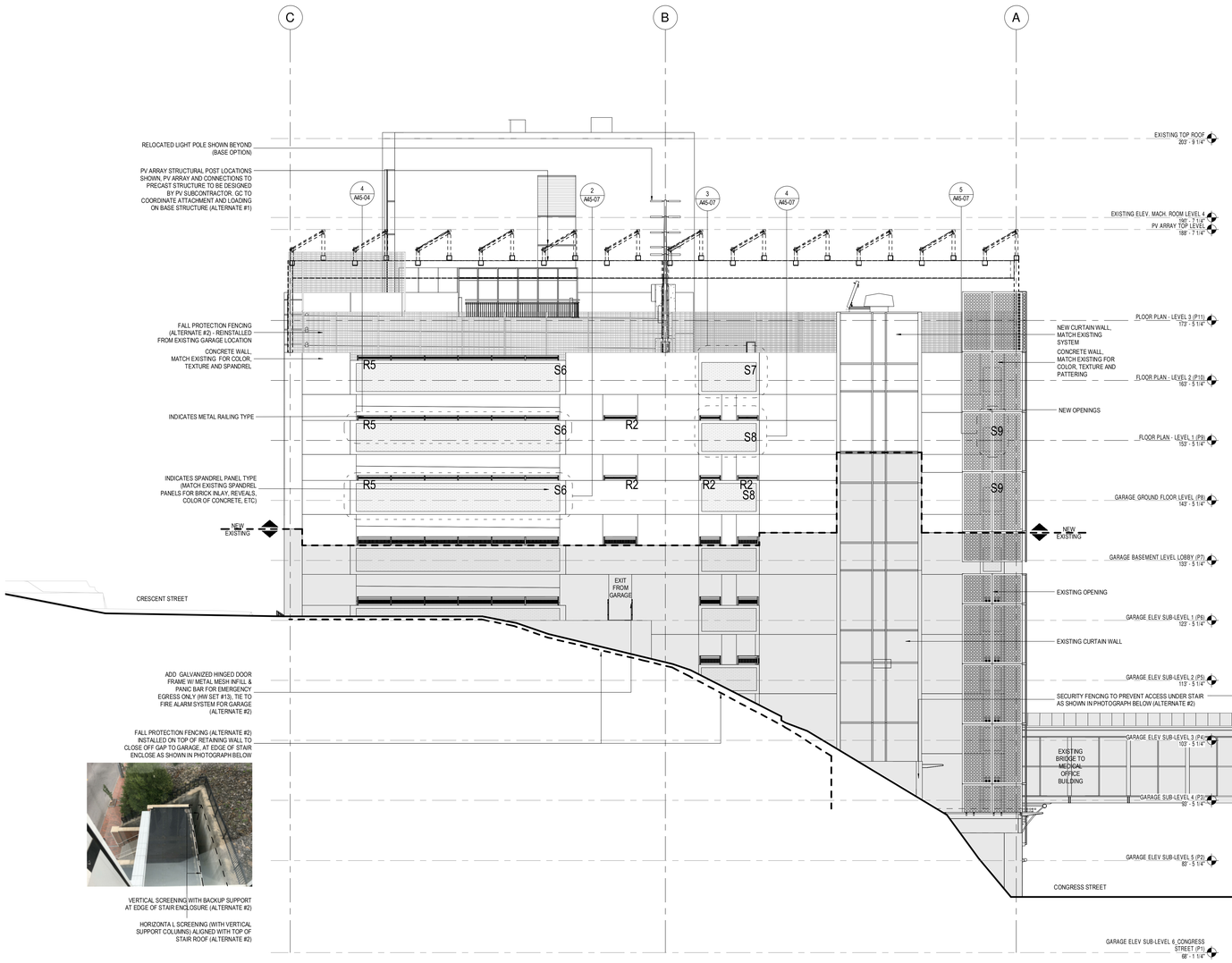

1 EAST - ELEVATION
1/8" = 1'-0"

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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

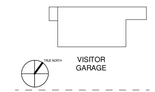
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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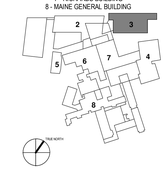

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

EAST ELEVATION

SHEET NUMBER

A20-40

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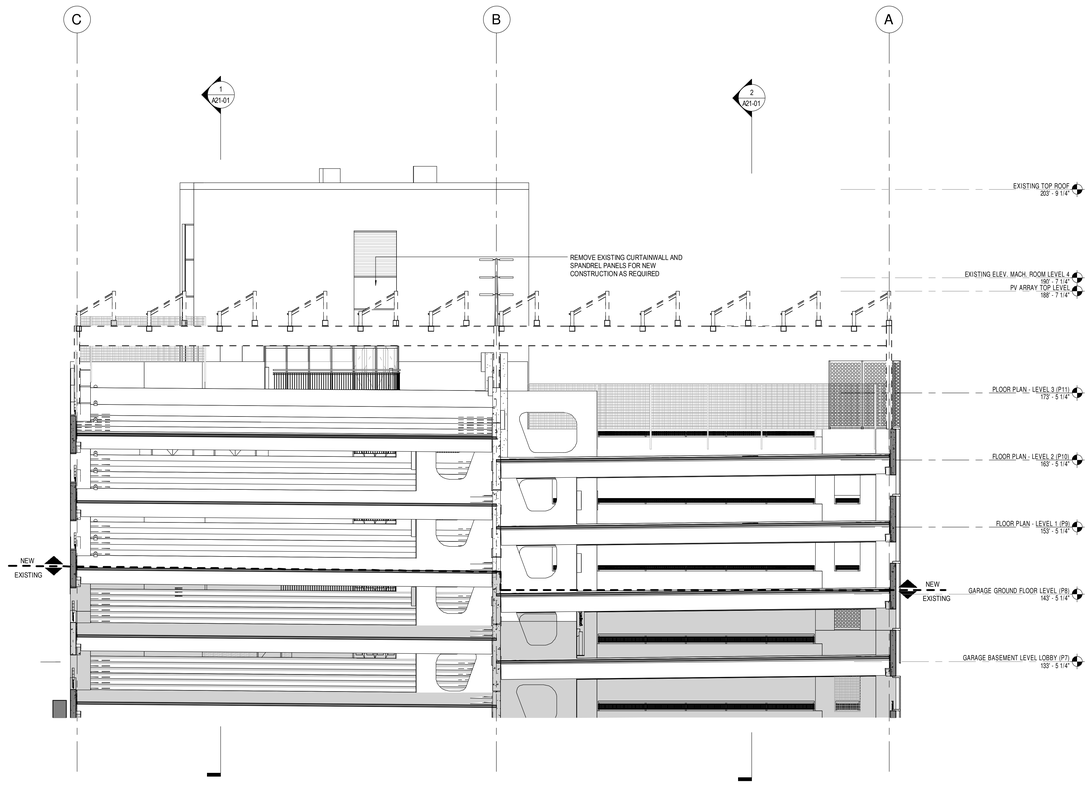
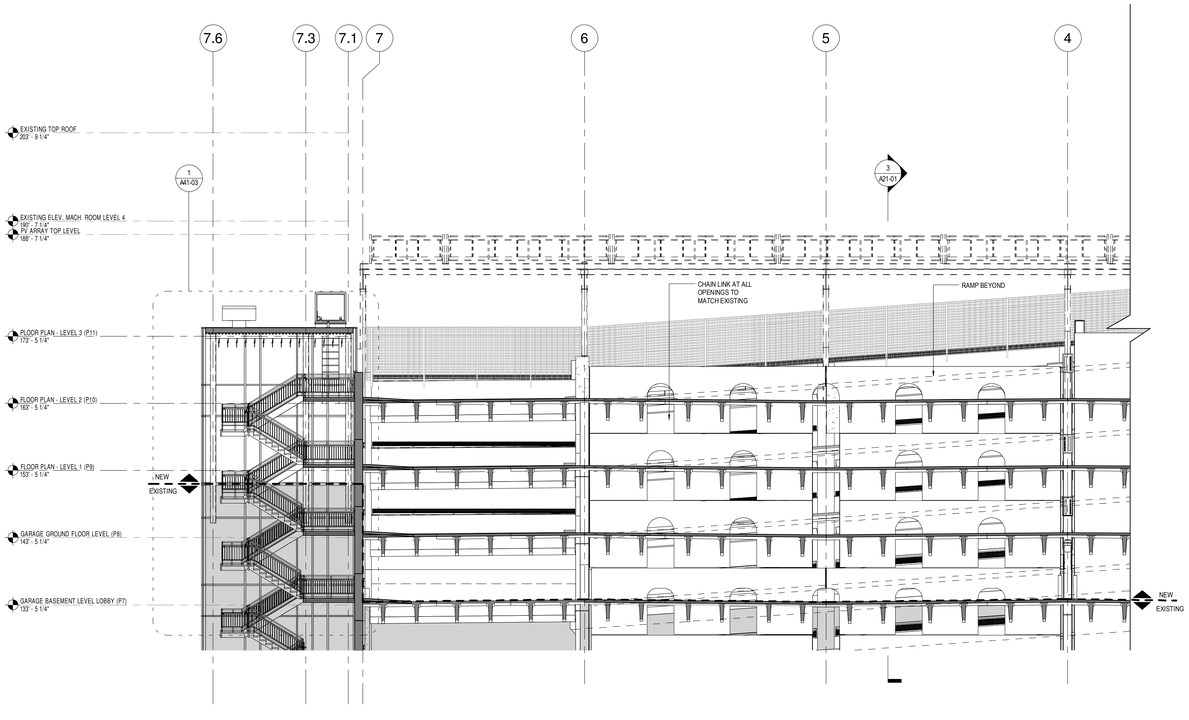
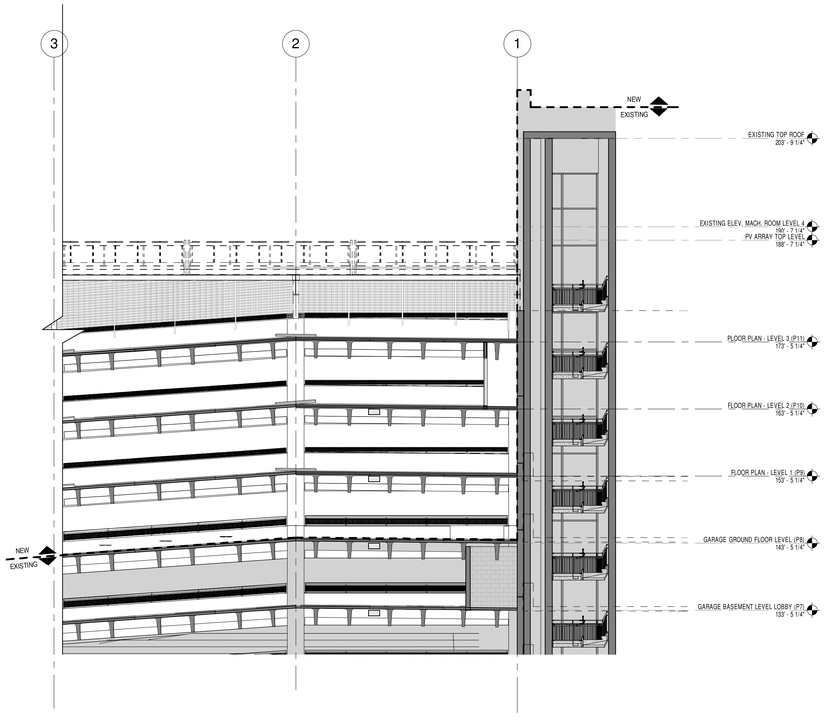


3 SECTION NORTH/SOUTH
1/8" = 1'-0"



2 SECTION EAST/WEST THROUGH FLOOR
1/8" = 1'-0"



1 SECTION EAST/WEST THROUGH RAMP
1/8" = 1'-0"

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CLIENT

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CONSULTANTS

CIVIL / LANDSCAPE ARCHITECT
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VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
STATE OF MAINE
REGISTERED

KEY PLANS

PROJECT KEY PLAN

OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
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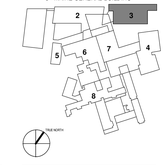
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

BUILDING SECTIONS

SHEET NUMBER

A21-01

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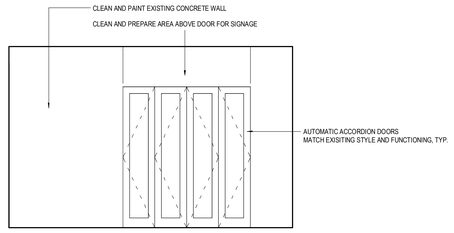
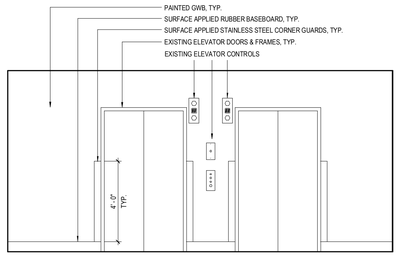
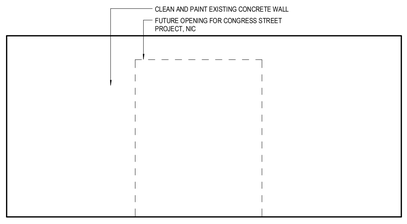


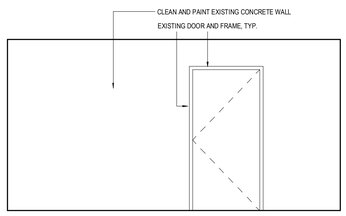
8 ELEVATOR LOBBY EAST (LEVELS 1, 2 & 3 - NEW)
3/8" = 1'-0"



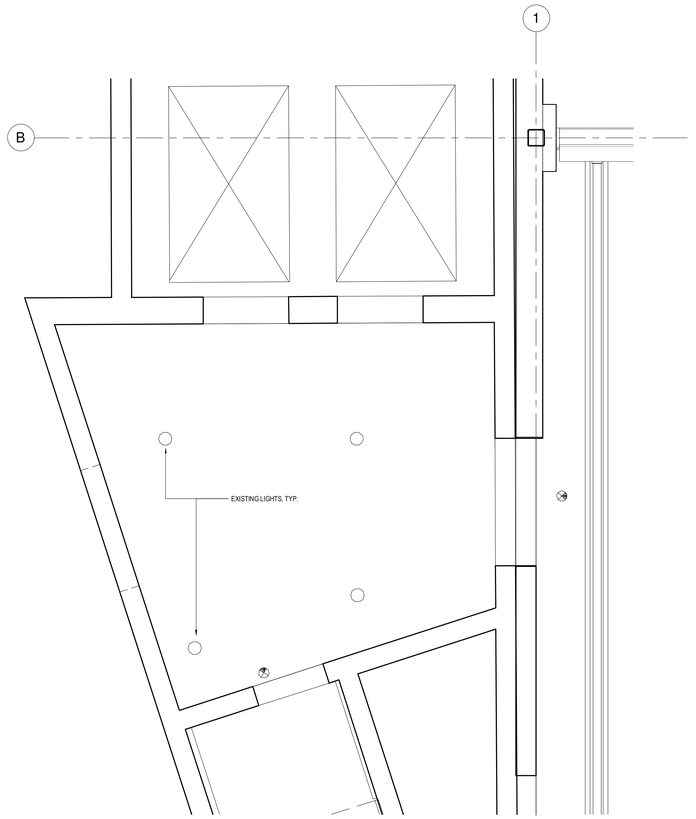
7 ELEVATOR LOBBY NORTH (LEVELS 1, 2 & 3 - NEW)
3/8" = 1'-0"



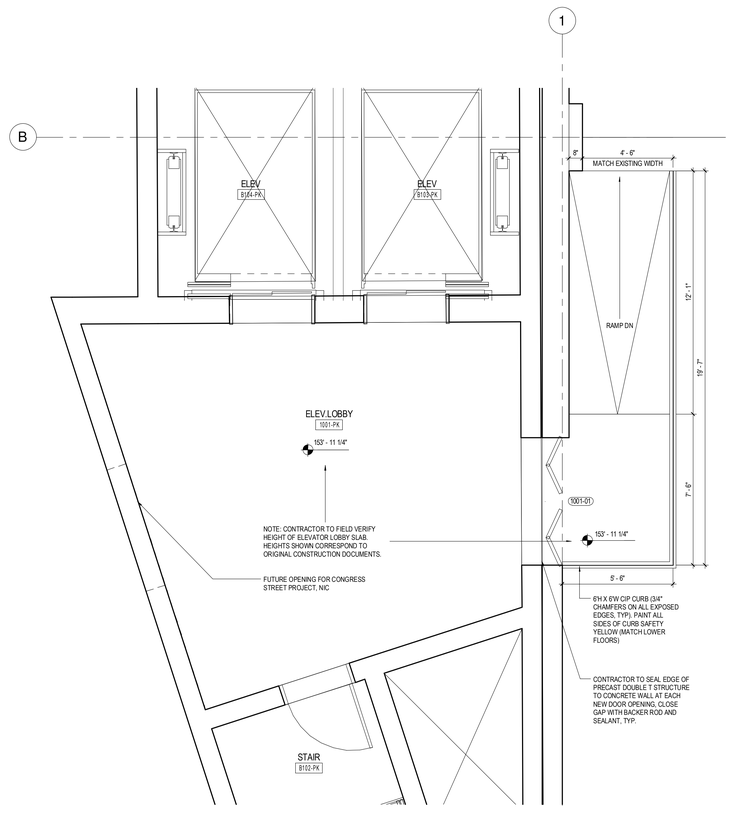
6 ELEVATOR LOBBY WEST(LEVELS 1, 2 & 3 - NEW)
3/8" = 1'-0"



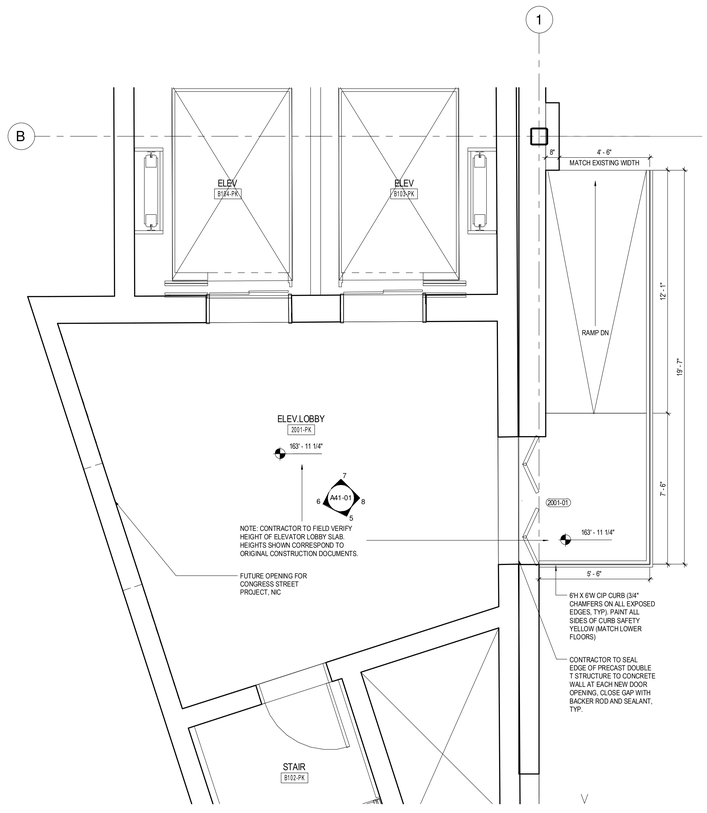
5 ELEVATOR LOBBY SOUTH(LEVELS 1, 2 & 3 - NEW)
3/8" = 1'-0"



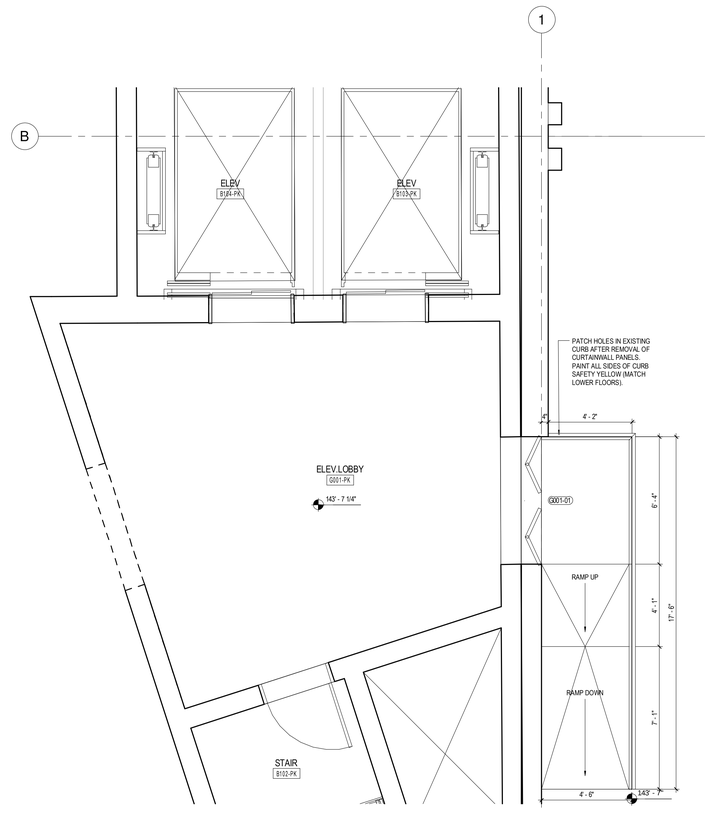
4 REFLECTED CEILING PLAN - TYPICAL
3/8" = 1'-0"



2 GARAGE STAIR TOWER FLOOR PLAN - LEVEL 1 (NEW)
3/8" = 1'-0"



3 GARAGE STAIR TOWER FLOOR PLAN - LEVEL 2 (NEW)
3/8" = 1'-0"



1 GARAGE STAIR TOWER GROUND FLOOR PLAN (EXISTING)
3/8" = 1'-0"

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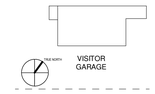
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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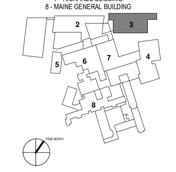

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
2	ADDENDUM #2	01.09.18

Job Number	152182.000
Drawn	TEAM
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Approved	JK

TITLE

STAIR TOWER ENLARGED PLANS & RCP

SHEET NUMBER

A41-01

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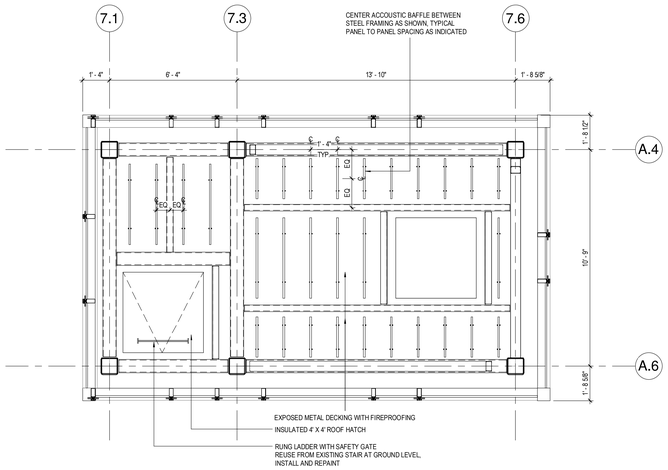
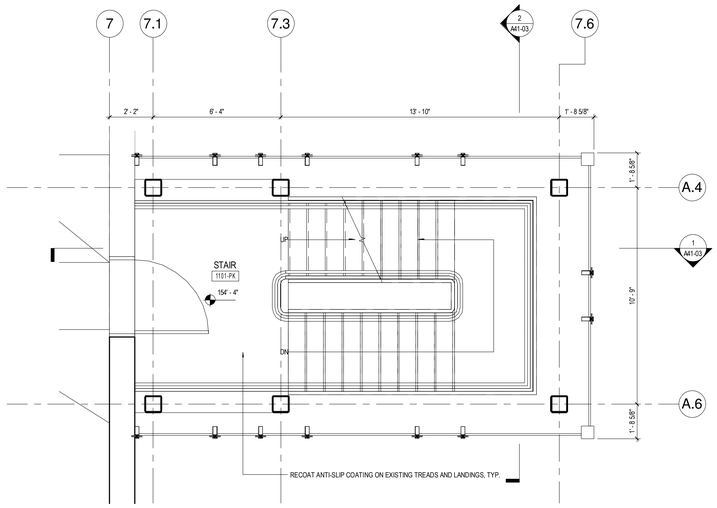
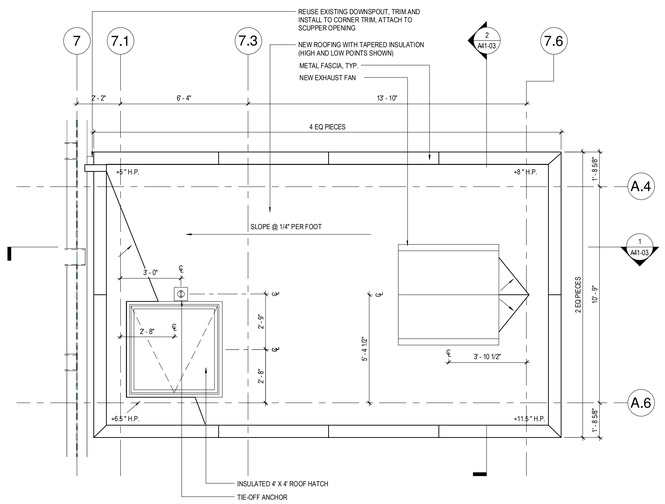


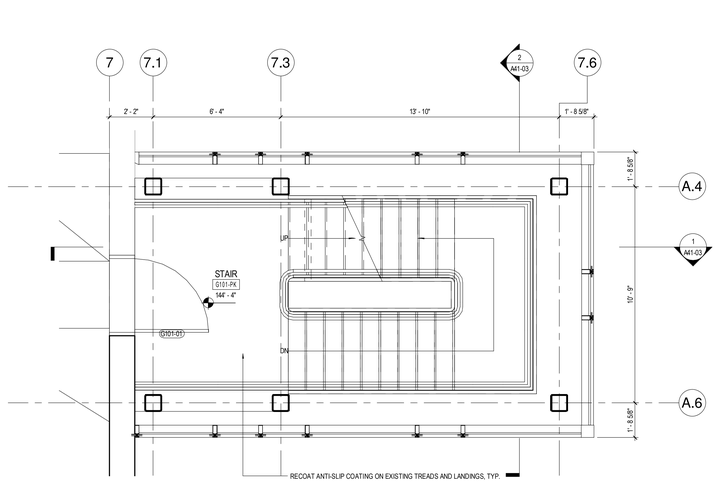
6 EAST STAIR REFLECTED CEILING PLAN DETAIL - LEVEL 2 (NEW)
3/8" = 1'-0"



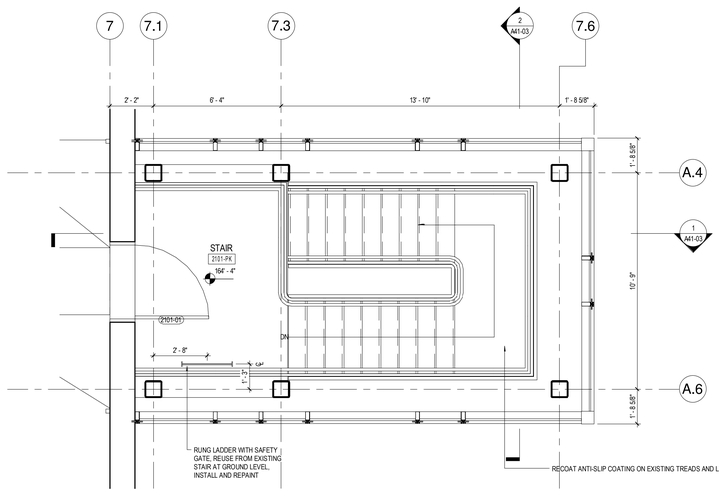
3 EAST STAIR PLAN DETAIL - LEVEL 1 (NEW)
3/8" = 1'-0"



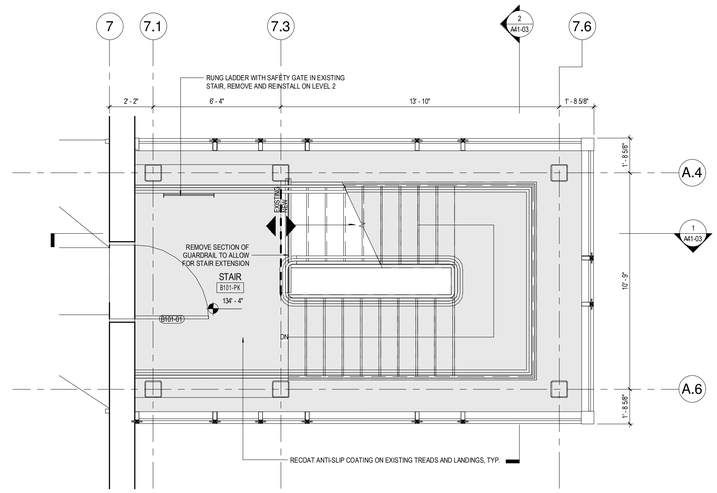
5 EAST STAIR PLAN DETAIL - ROOF (NEW)
3/8" = 1'-0"



2 EAST STAIR PLAN DETAIL - GROUND FLOOR LEVEL (NEW)
3/8" = 1'-0"



4 EAST STAIR PLAN DETAIL - LEVEL 2 (NEW)
3/8" = 1'-0"



1 EAST STAIR PLAN DETAIL - BASEMENT FLOOR LEVEL (EXISTING / NEW)
3/8" = 1'-0"

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VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

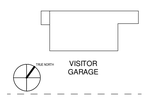
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4401
REGISTERED

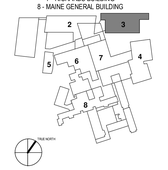
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
2	ADDENDUM #2	01.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

EAST STAIR ENLARGED PLANS

SHEET NUMBER

A41-02

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3/29/2018 3:25:59 PM
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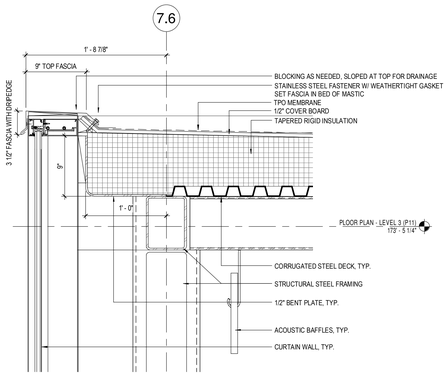
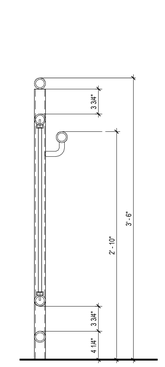
GENERAL NOTE FOR VISITOR GARAGE EAST STAIR

FOR EAST STAIR TOWER CURTAIN WALL, MATCH EXISTING CONDITIONS AS FOLLOWS:

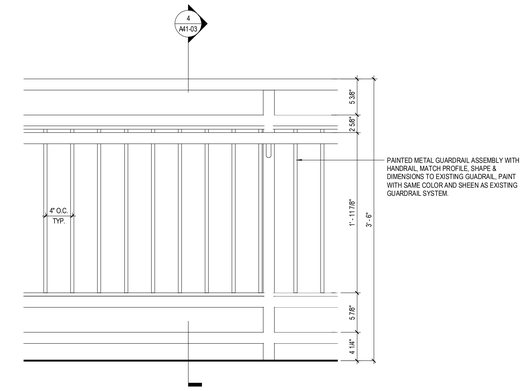
MATCH PROFILE OF CURTAIN WALL MULLIONS (USE SAME MANUFACTURER IF POSSIBLE)
MATCH INSULATED GLASS UNIT (USE SAME MANUFACTURER IF POSSIBLE)
MATCH CORNER TRIM CONDITIONS TO EXISTING
MATCH STRUCTURAL CLIPS AND LOCATIONS EXISTING
MATCH LOCATION OF VERTICAL MULLIONS
MATCH FIREPROOFING OF STEEL STRUCTURE TO EXISTING CONSTRUCTION
(1 HR RATING ON METAL DECK FM I-75, 1 HR RATING ON STEEL FRAMING WITH INTUMESCENT PAINT UL DES X615 & N601) 2
RECOAT ENTIRE STAIR (TREADS AND LANDINGS WITH ANTI-SLIP COATING) INCLUDING NEW EXTENSION



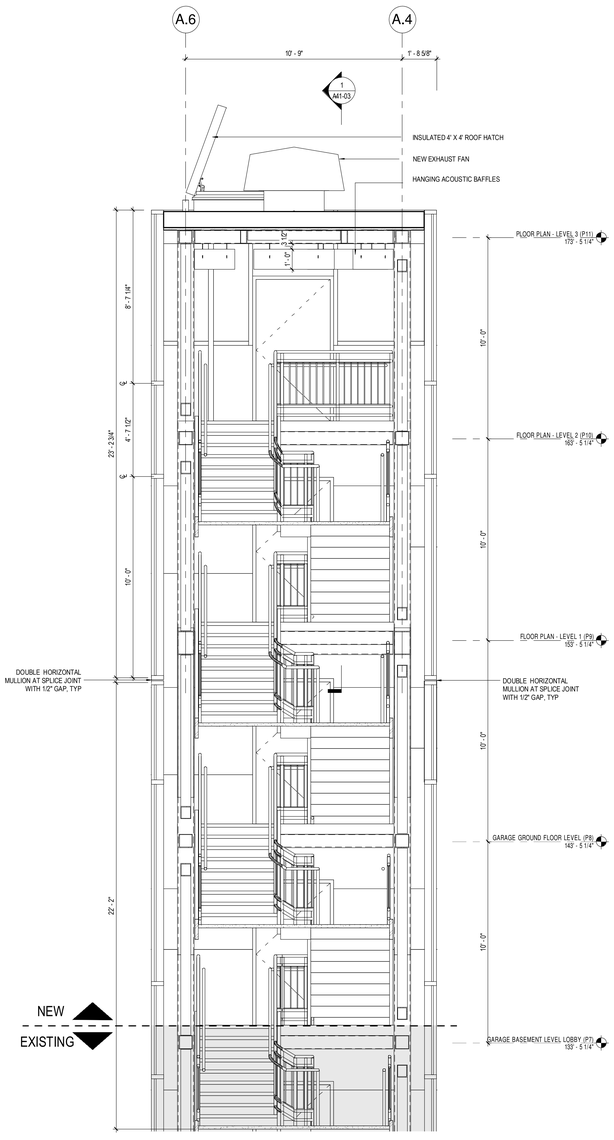
5 ROOF FASCIA DETAIL
1 1/2" = 1'-0"



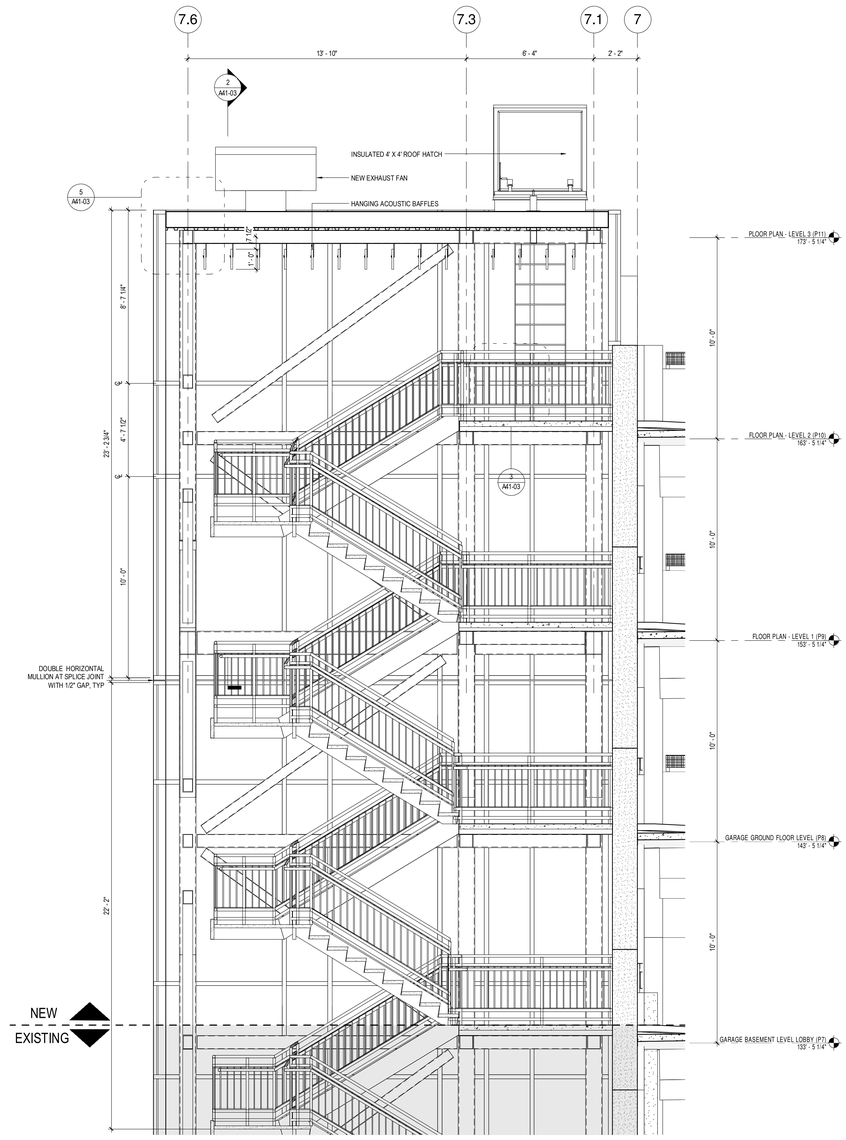
4 HANDRAIL SECTION
1 1/2" = 1'-0"



3 TYPICAL HANDRAIL ELEVATION
1 1/2" = 1'-0"



2 EAST STAIR N-S SECTION
3/8" = 1'-0"



1 EAST STAIR E-W SECTION
3/8" = 1'-0"

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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

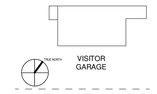
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT ROBERT A. BROWN No. 4431 STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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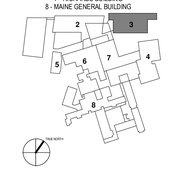
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
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Approved	JK

TITLE

EAST STAIR ENLARGED SECTIONS AND DETAILS

SHEET NUMBER

A41-03

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3/29/2018 3:26:16 PM
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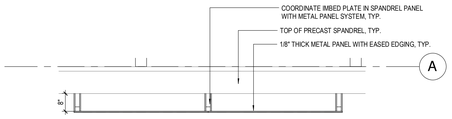
METAL RAILING & SPANDREL LEGEND

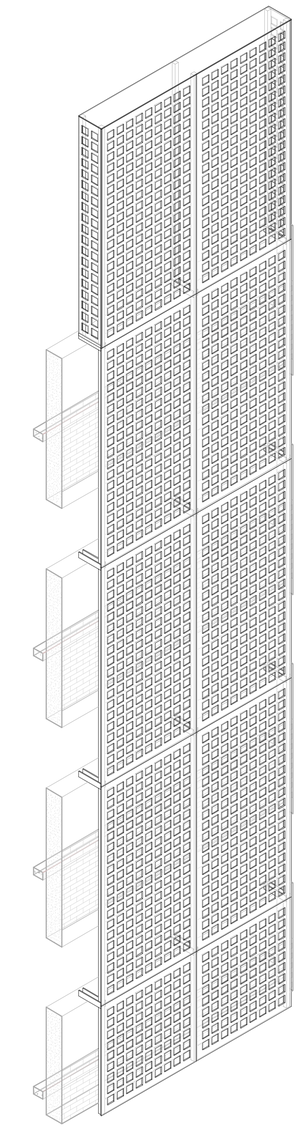
MATCH ALL ASPECTS OF METAL RAILINGS & PRECAST SPANDREL INCLUDING:

COLOR, SHEEN, FINISH, ATTACHMENT DETAILS, HARDWARE ETC.

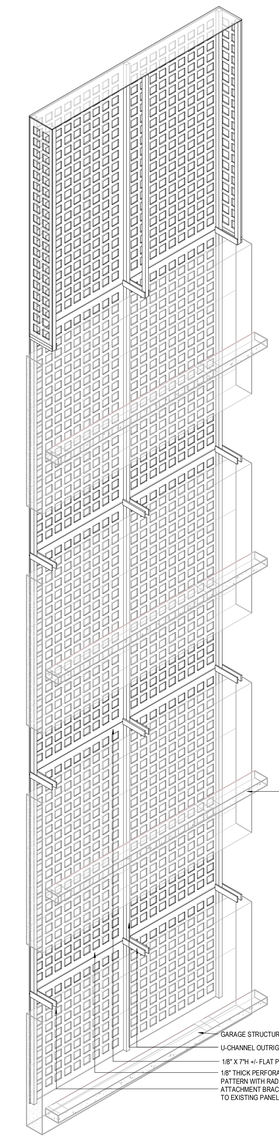
FIELD VERIFY ANY DETAILS NOT LISTED AND DUPLICATE



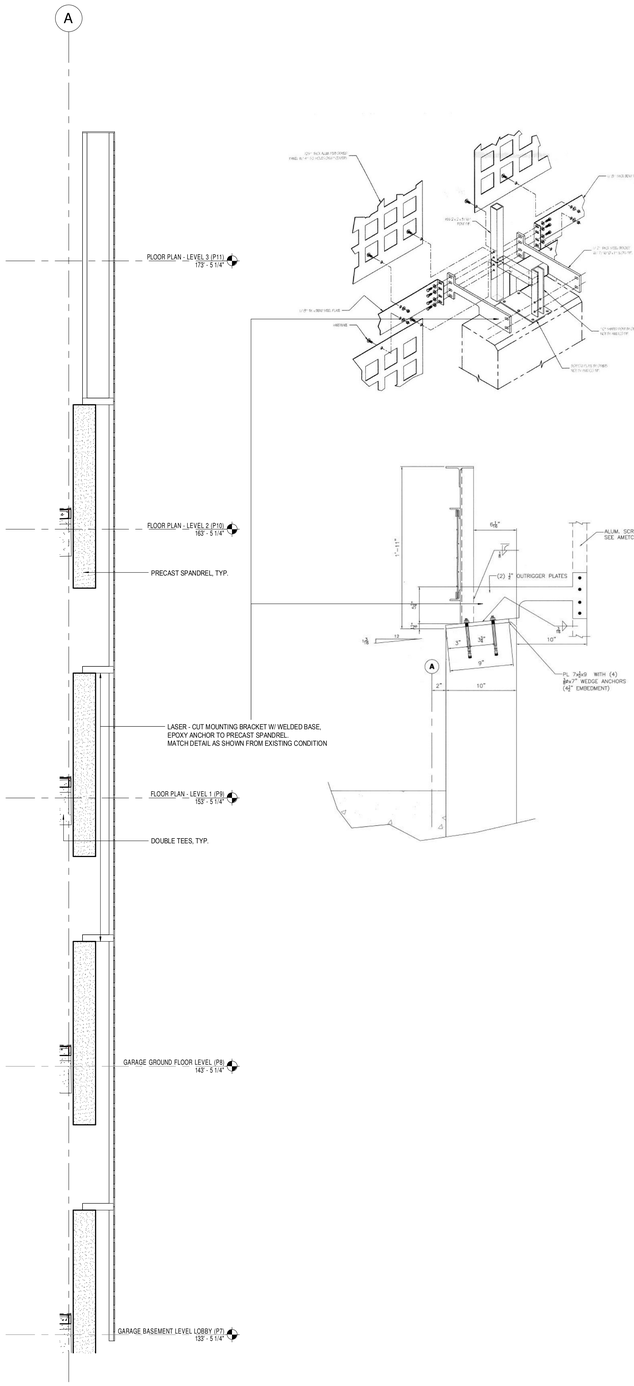
2 METAL PANEL - PLAN DETAIL
1/2" = 1'-0"



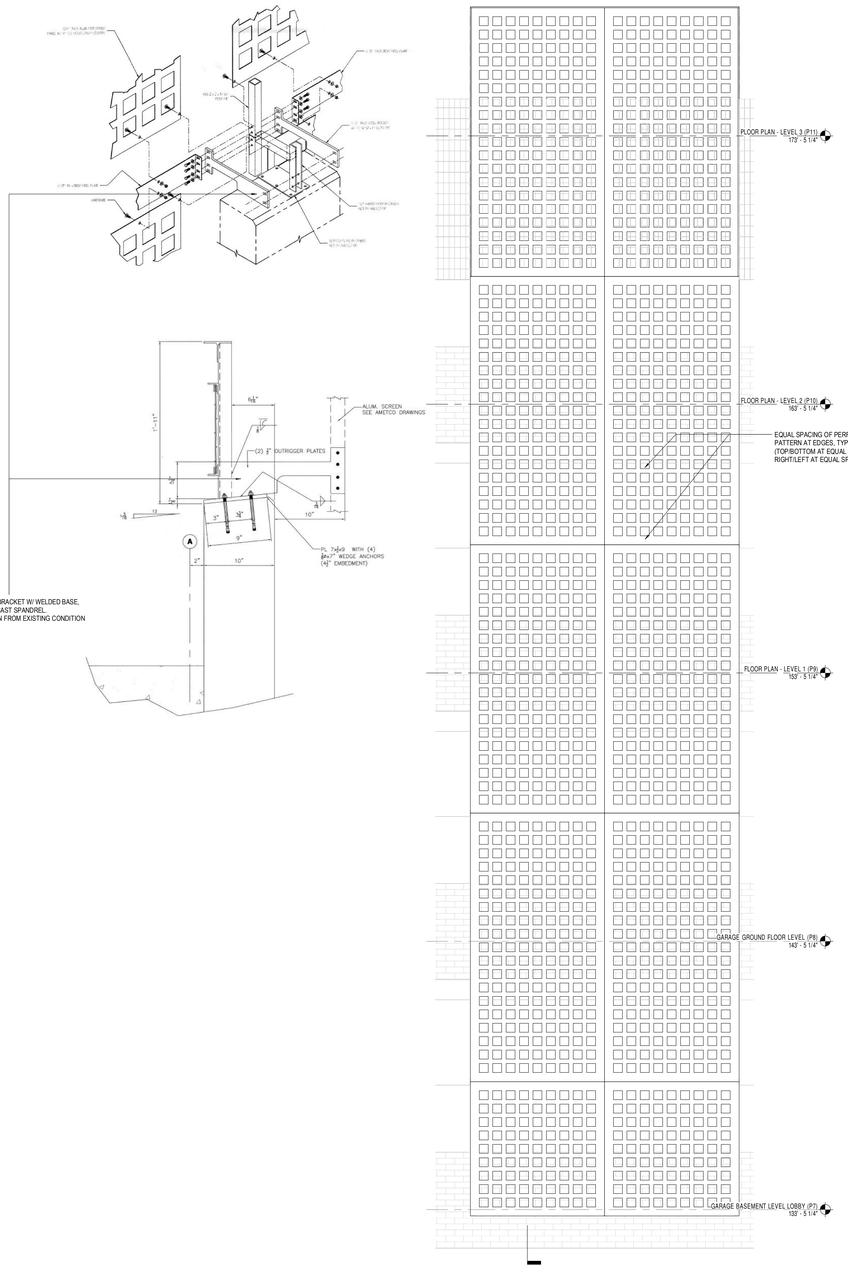
6 METAL PANEL (P1) EXTERIOR AXONOMETRIC



5 METAL PANEL (P1) INTERIOR AXONOMETRIC



3 METAL PANEL SECTION
1/2" = 1'-0"



1 METAL PANEL EXTERIOR ELEVATION
1/2" = 1'-0"

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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

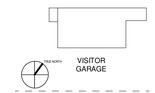
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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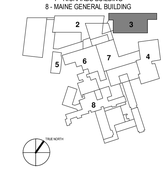

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

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Job Number	152182.000
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TITLE

METAL PANEL DETAILS

SHEET NUMBER

A45-01

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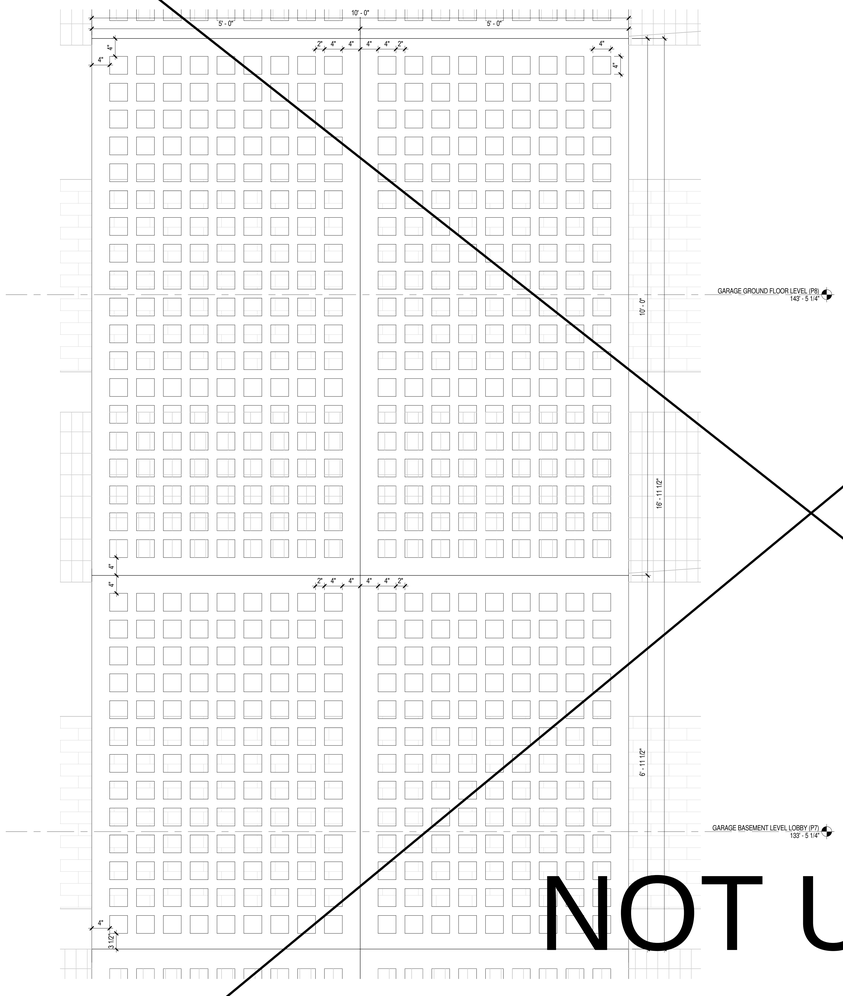
METAL RAILING & SPANDREL LEGEND

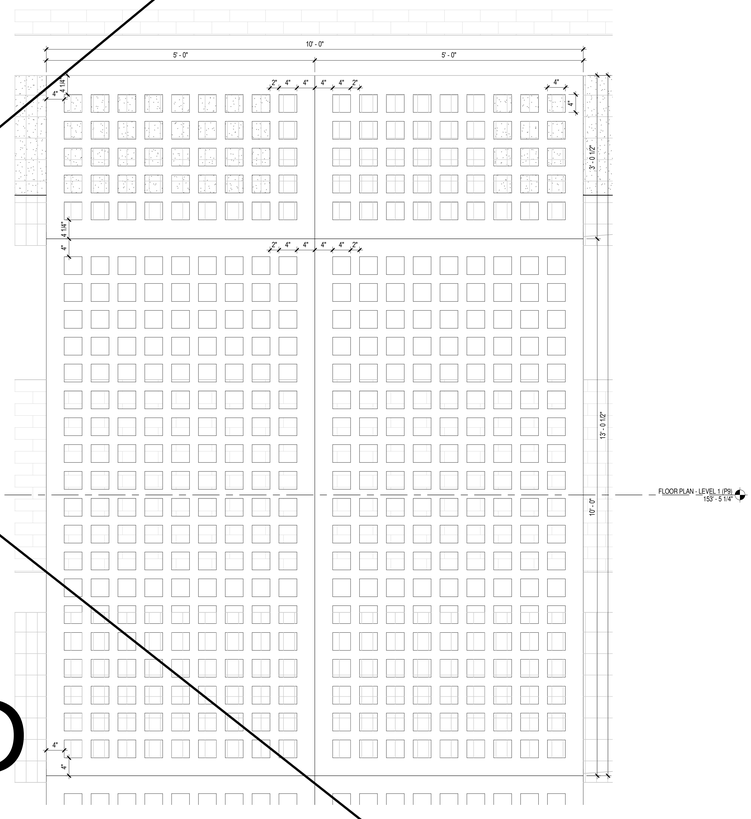
MATCH ALL ASPECTS OF METAL RAILINGS & PRECAST SPANDREL INCLUDING:

COLOR, SHEEN, FINISH, ATTACHMENT DETAILS, HARDWARE ETC.

FIELD VERIFY ANY DETAILS NOT LISTED AND DUPLICATE



2 METAL PANEL TYPE P3
1" = 1'-0"



1 METAL PANEL TYPE P2
1" = 1'-0"

NOT USED

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PROJECT TITLE

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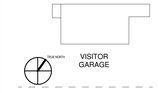
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
REGISTERED

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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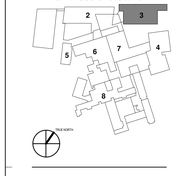

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	PERMIT SET	03.09.18

Job Number	152182.000
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Approved	JK

TITLE

METAL PANEL TYPES

SHEET NUMBER

A45-02

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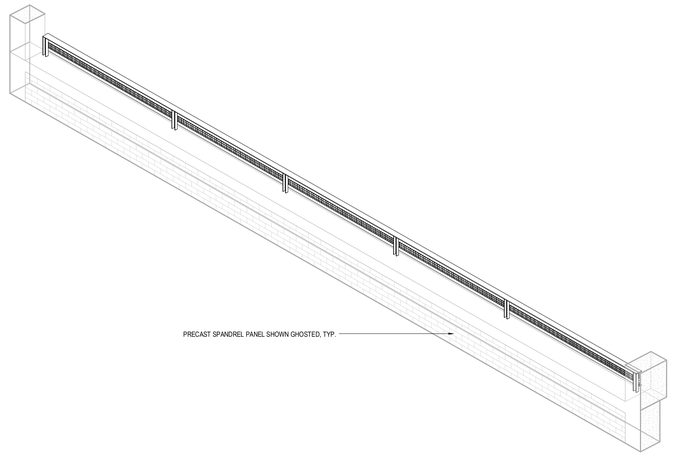
METAL RAILING & SPANDREL LEGEND

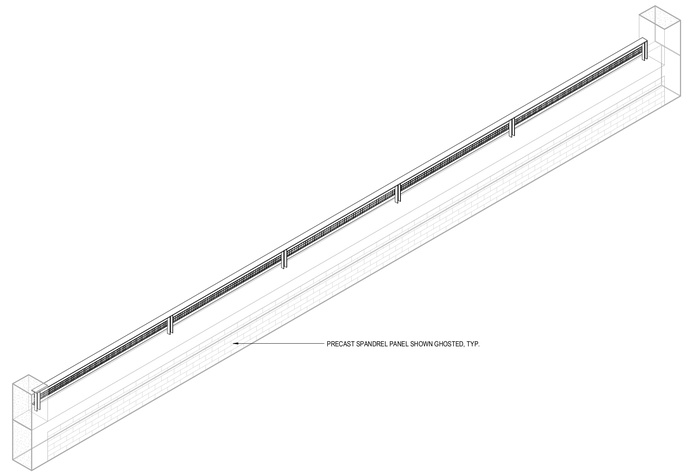
MATCH ALL ASPECTS OF METAL RAILINGS & PRECAST SPANDREL INCLUDING:

COLOR, SHEEN, FINISH, ATTACHMENT DETAILS, HARDWARE ETC.

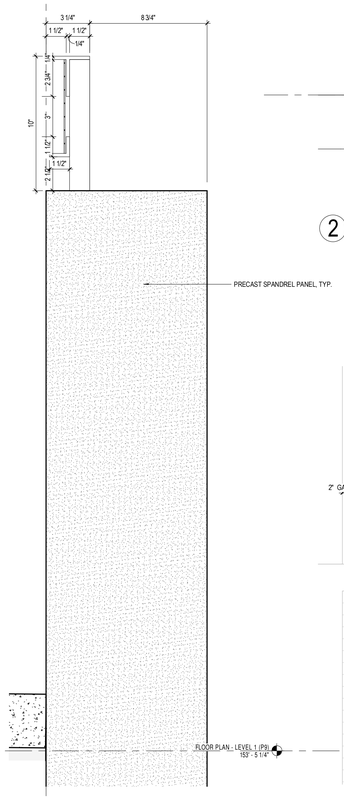
FIELD VERIFY ANY DETAILS NOT LISTED AND DUPLICATE



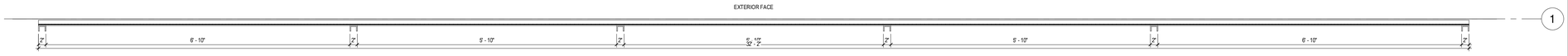
4 METAL RAILING (R1) EXTERIOR AXONOMETRIC



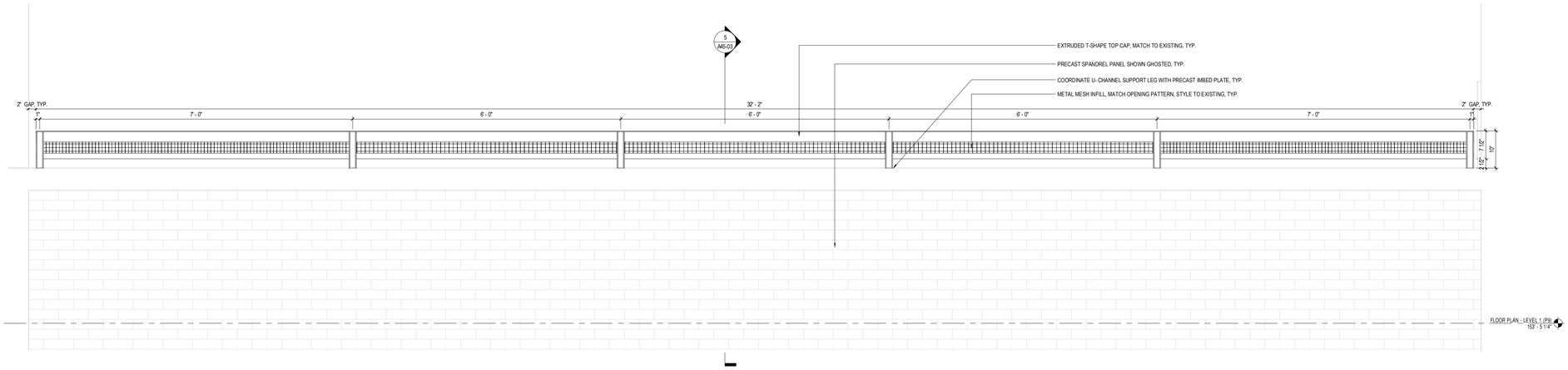
3 METAL RAILING (R1) INTERIOR AXONOMETRIC



5 METAL RAILING (R1) SECTION
3" = 1'-0"



2 METAL RAILING (R1) PLAN
1" = 1'-0"



1 METAIL RAILING (R1) ELEVATION
1" = 1'-0"

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2 Seaport Lane, Suite 200, Boston MA 02210

ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

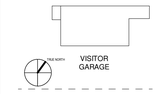
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4401
REGISTERED
STATE OF MAINE

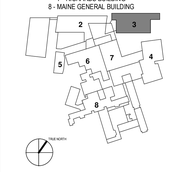
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

METAL RAILING DETAILS

SHEET NUMBER

A45-03

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3/29/2018 3:43:54 PM
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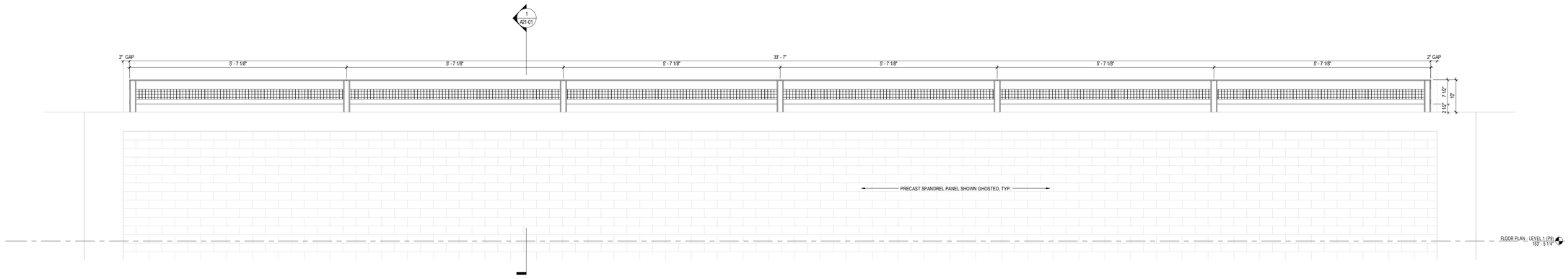
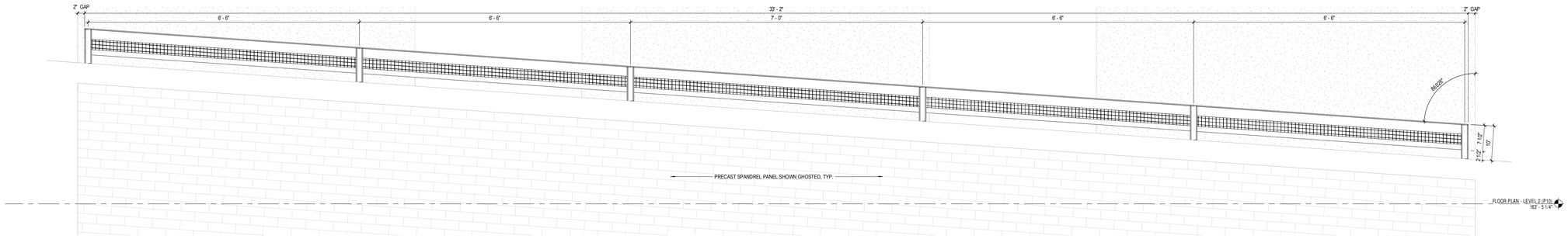
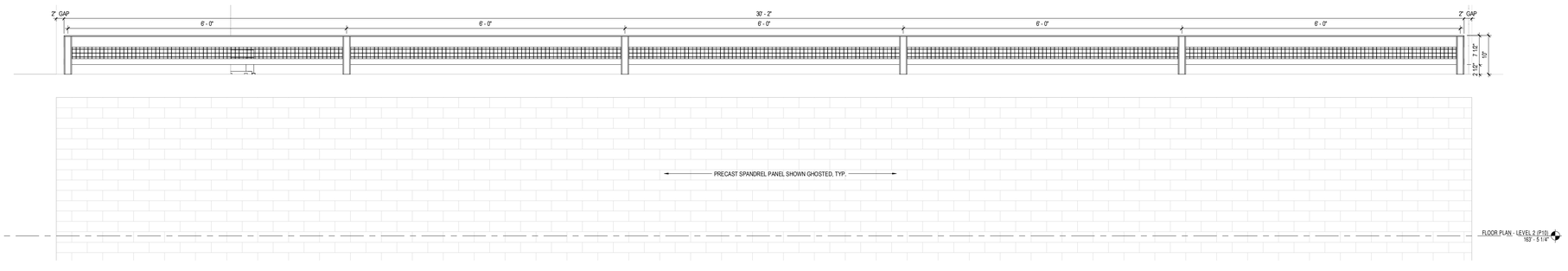


4 METAL RAILING (RS) ELEVATION
1" = 1'-0"

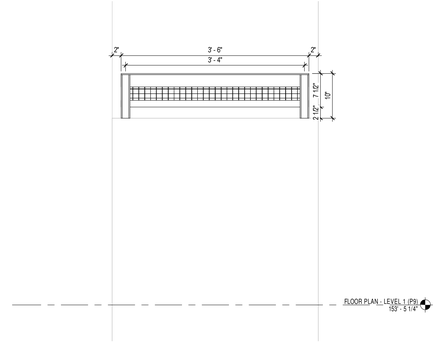


3 METAL RAILING (R4) ELEVATION
1" = 1'-0"



2 METAL RAILING (R3) ELEVATION
1" = 1'-0"

METAL RAILING & SPANDREL LEGEND
MATCH ALL ASPECTS OF METAL RAILINGS & PRECAST SPANDREL INCLUDING:
COLOR, SHEEN, FINISH, ATTACHMENT DETAILS, HARDWARE ETC.
FIELD VERIFY ANY DETAILS NOT LISTED AND DUPLICATE



1 METAL RAILING (R2) ELEVATION
1" = 1'-0"

PERKINS + WILL
225 Franklin Street, Suite 1100
Boston, MA 02110
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1.617.478.0321
www.perkinswill.com

CLIENT

Maine Medical Center
MaineHealth

22 Bramhall Street
Portland ME 04102

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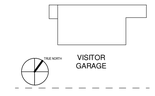
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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6 - BEAN BUILDING
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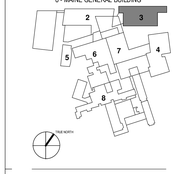
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

TYPICAL METAL RAILING TYPES

SHEET NUMBER

A45-04

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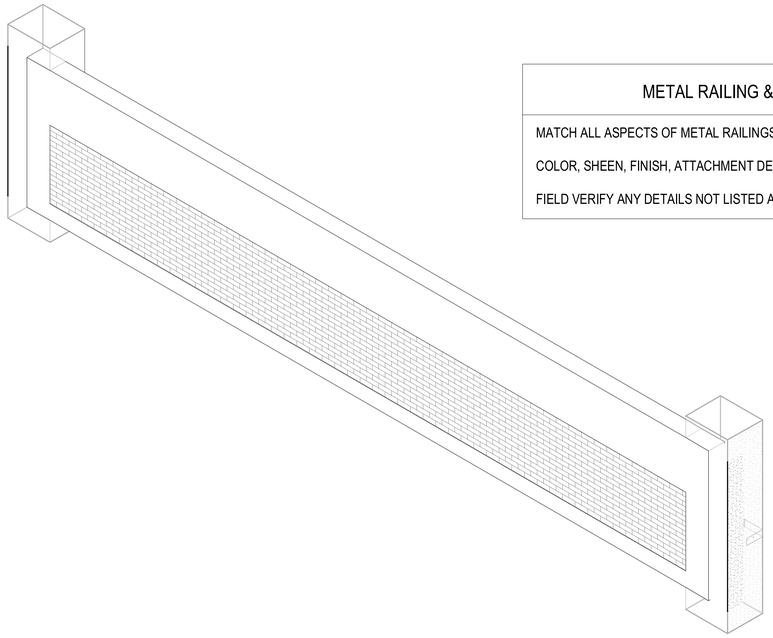
3/29/2018 3:44:00 PM
C:\temp\152182.MMC-Visitor Parking Garage Expansion V2017_TangC.rvt

METAL RAILING & SPANDREL LEGEND

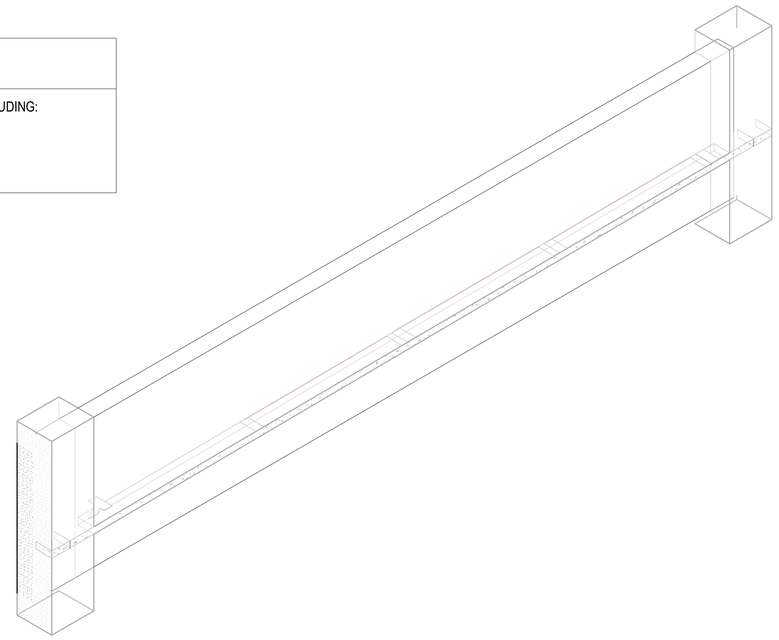
MATCH ALL ASPECTS OF METAL RAILINGS & PRECAST SPANDREL INCLUDING:

COLOR, SHEEN, FINISH, ATTACHMENT DETAILS, HARDWARE ETC.

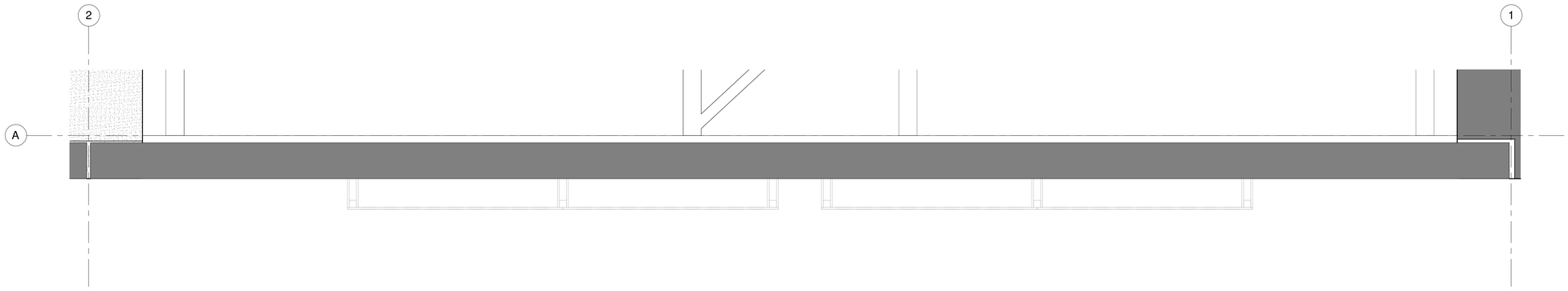
FIELD VERIFY ANY DETAILS NOT LISTED AND DUPLICATE



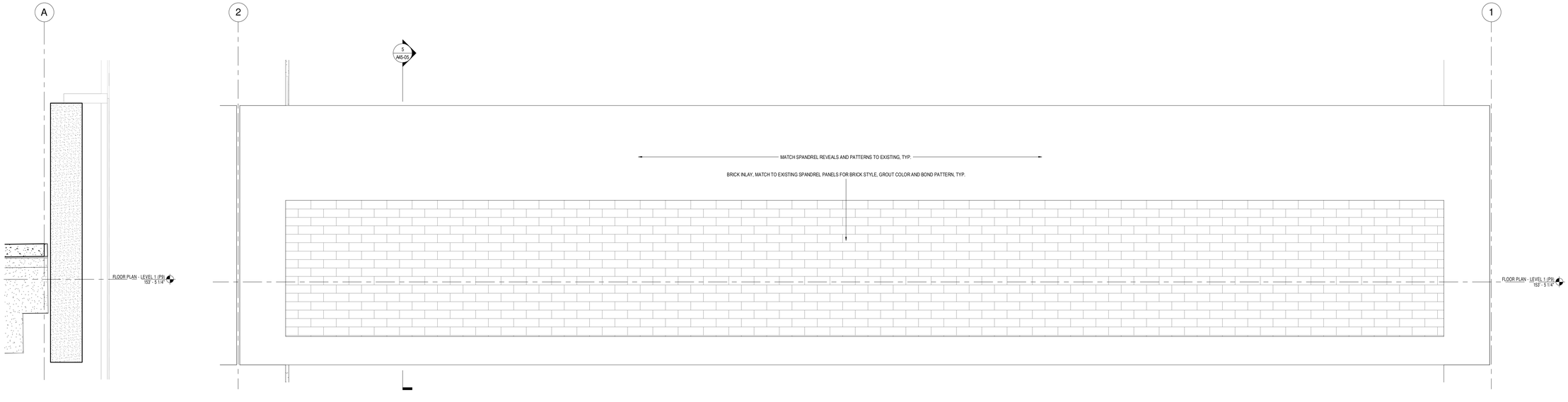
4 PRECAST SPANDREL (S1) EXTERIOR AXONOMETRIC



3 PRECAST SPANDREL (S1) INTERIOR AXONOMETRIC



2 PRECAST SPANDREL (S1) PLAN
1" = 1'-0"



5 PRECAST SPANDREL (S1) SECTION
1" = 1'-0"

1 PRECAST SPANDREL (S1) ELEVATION
1" = 1'-0"

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COST ESTIMATOR
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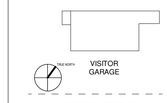
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4491
STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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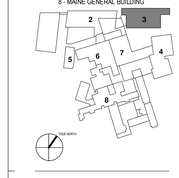

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

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Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

PRECAST SPANDREL DETAILS

SHEET NUMBER

A45-05

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3/29/2018 3:44:08 PM
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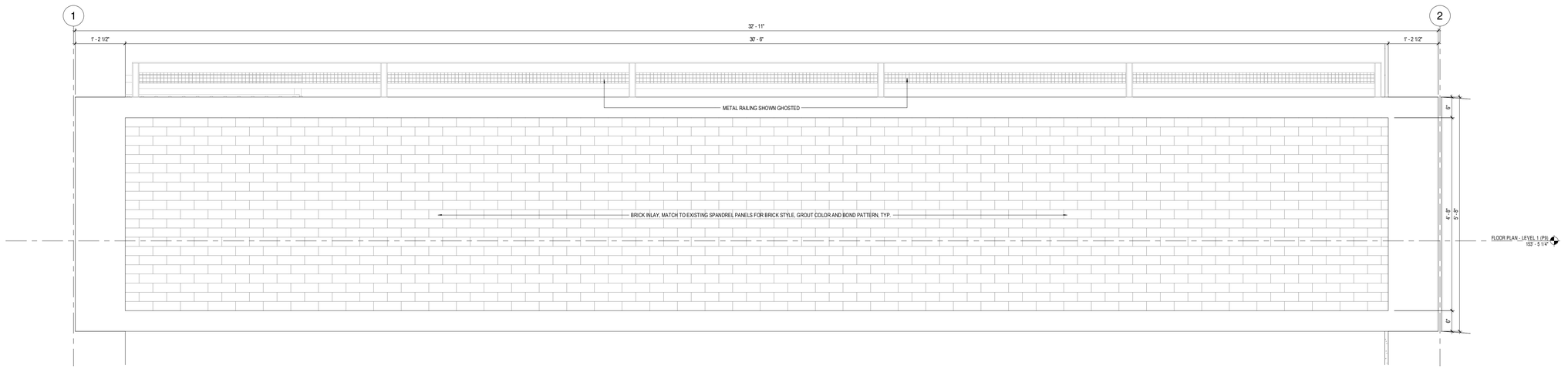
METAL RAILING & SPANDREL LEGEND

MATCH ALL ASPECTS OF METAL RAILINGS & PRECAST SPANDREL INCLUDING:

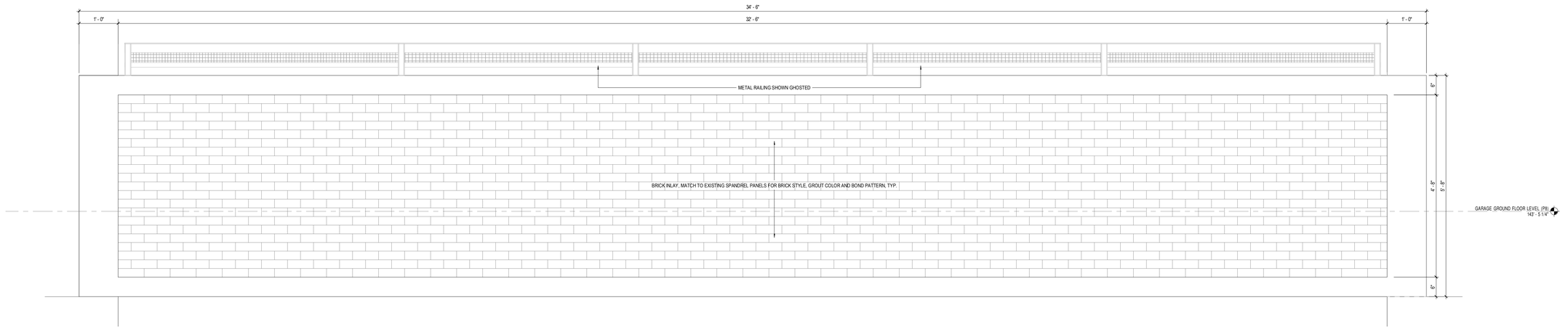
COLOR, SHEEN, FINISH, ATTACHMENT DETAILS, HARDWARE ETC.

FIELD VERIFY ANY DETAILS NOT LISTED AND DUPLICATE



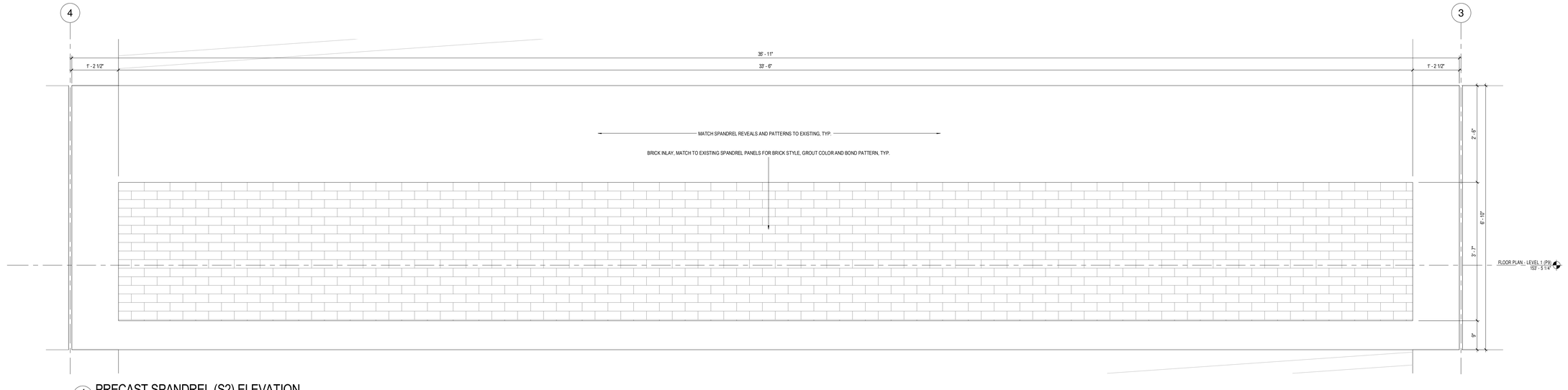
3 PRECAST SPANDREL (S4) ELEVATION

1" = 1'-0"



2 PRECAST SPANDREL (S3) ELEVATION

1" = 1'-0"



1 PRECAST SPANDREL (S2) ELEVATION

1" = 1'-0"

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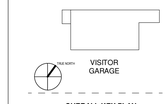
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4491
STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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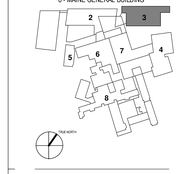

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

TYPICAL PRECAST CONCRETE SPANDREL TYPES

SHEET NUMBER

A45-06

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3/29/2018 3:44:17 PM
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METAL RAILING & SPANDREL LEGEND

MATCH ALL ASPECTS OF METAL RAILINGS & PRECAST SPANDREL INCLUDING:

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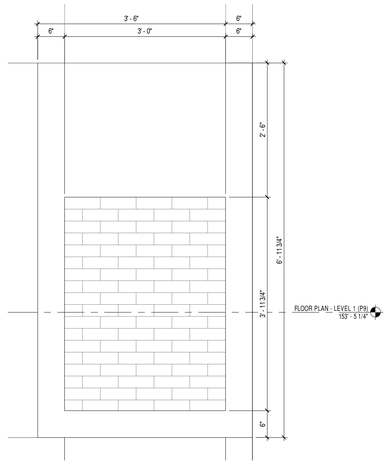
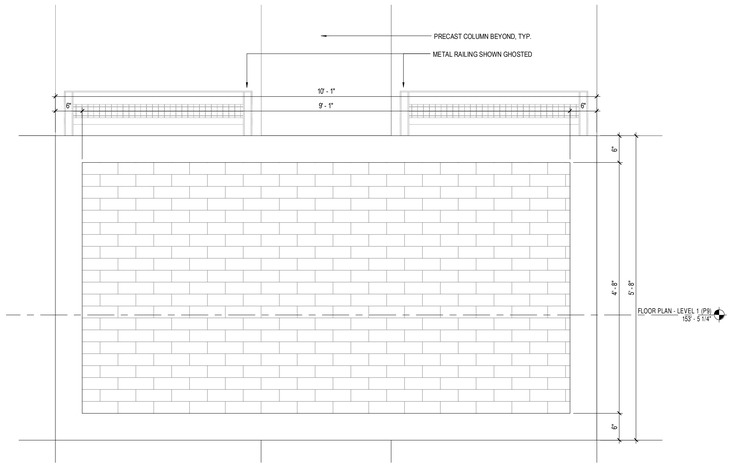
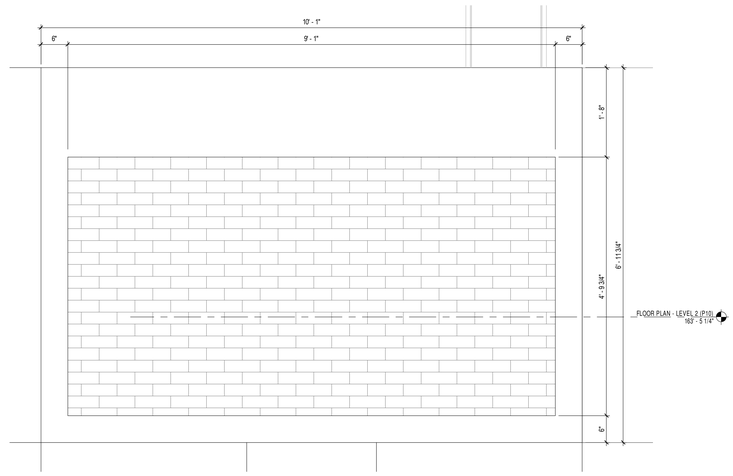
FIELD VERIFY ANY DETAILS NOT LISTED AND DUPLICATE



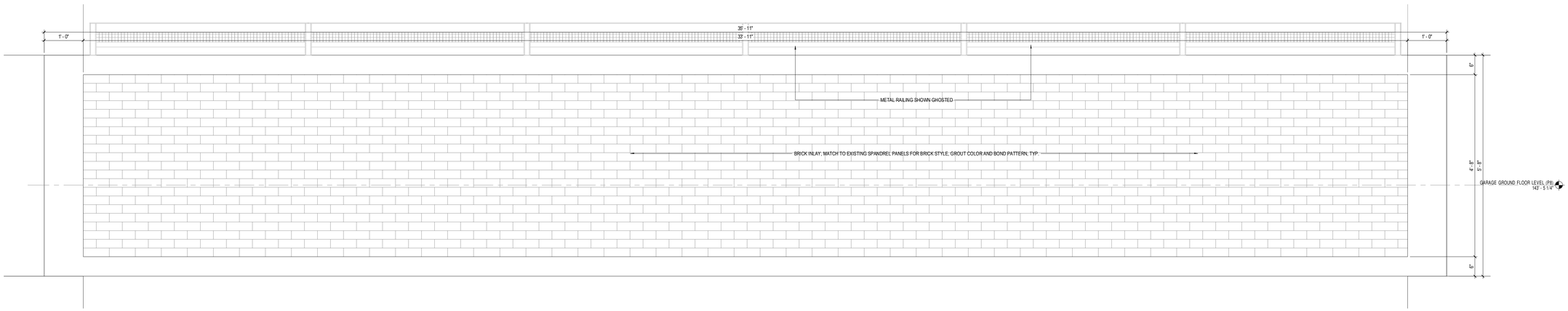
5 PRECAST SPANDREL (S9) ELEVATION
1" = 1'-0"



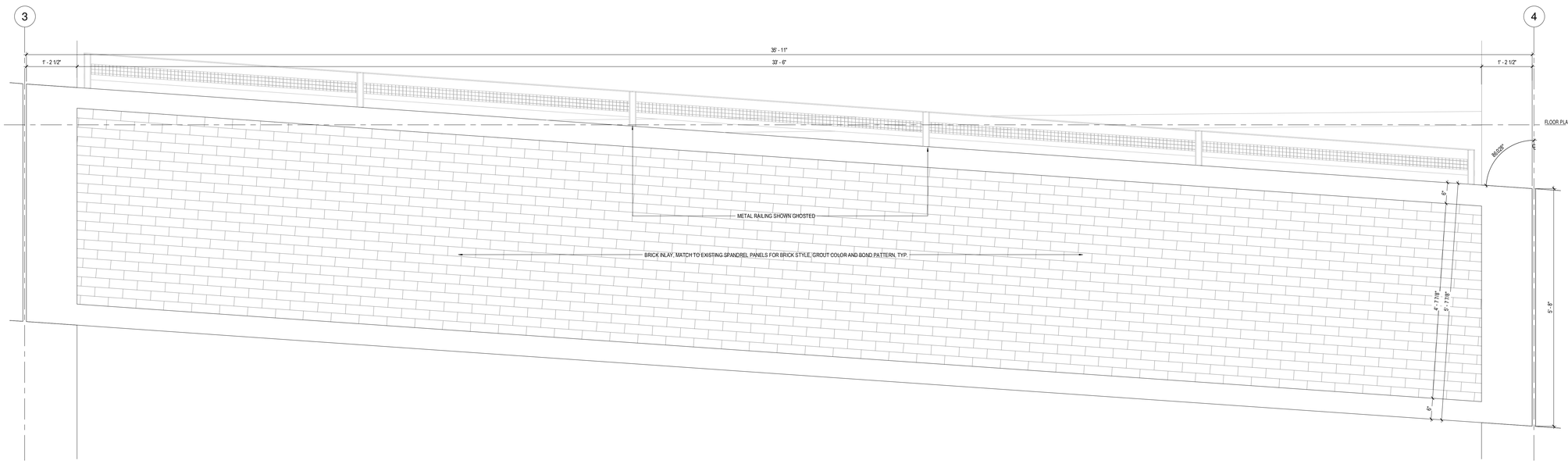
4 PRECAST SPANDREL (S8) ELEVATION
1" = 1'-0"



3 PRECAST CONCRETE SPANDREL (S7) ELEVATION
1" = 1'-0"



2 PRECAST SPANDREL (S6) ELEVATION
1" = 1'-0"



1 PRECAST SPANDREL (S5) ELEVATION
1" = 1'-0"

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PROJECT TITLE

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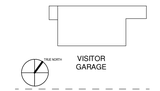
LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
REGISTERED

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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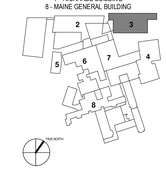

CONSTRUCTION DOCUMENT SET
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Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

TYPICAL PRECAST CONCRETE SPANDREL TYPES

SHEET NUMBER

A45-07

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3/29/2018 3:44:22 PM
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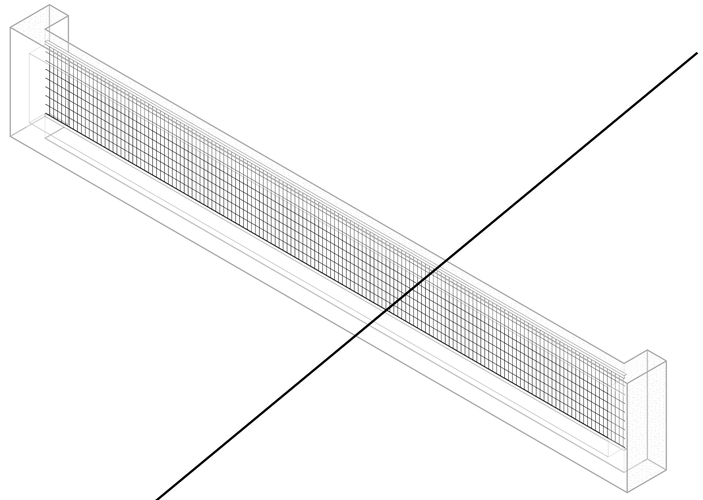
METAL RAILING & SPANDREL LEGEND

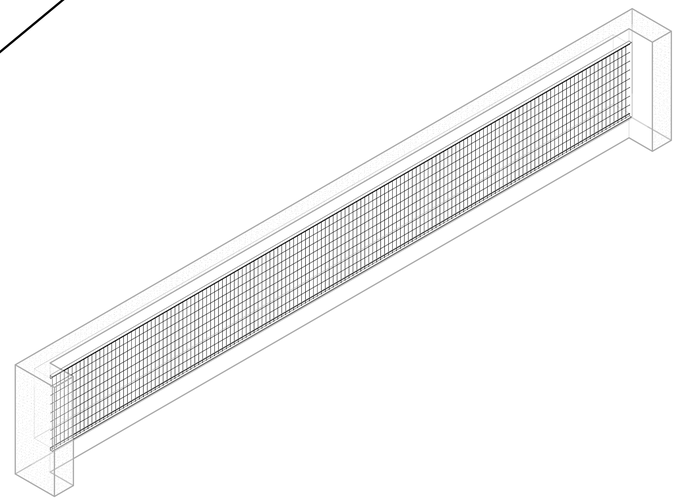
MATCH ALL ASPECTS OF METAL RAILINGS & PRECAST SPANDREL INCLUDING:

COLOR, SHEEN, FINISH, ATTACHMENT DETAILS, HARDWARE ETC.

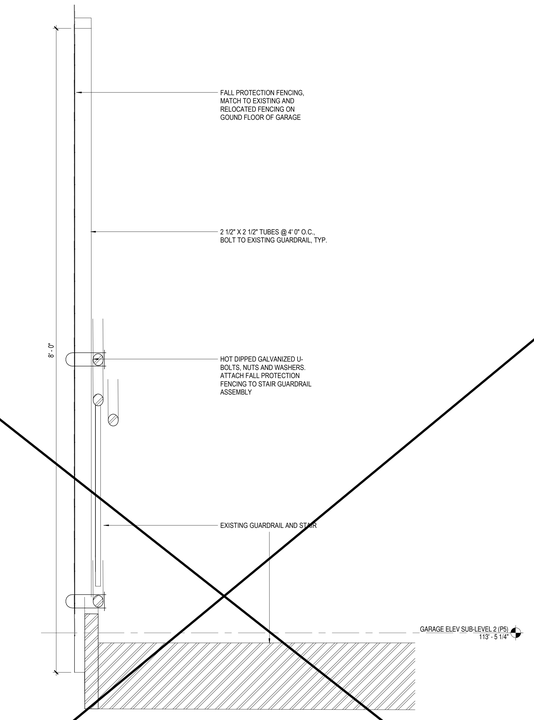
FIELD VERIFY ANY DETAILS NOT LISTED AND DUPLICATE



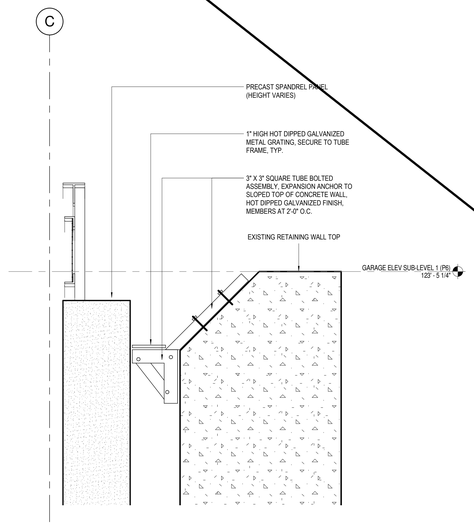
4 FALL PROTECTION (F1) EXTERIOR AXONOMETRIC



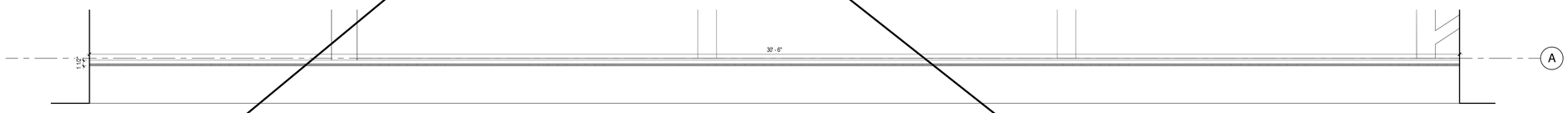
3 FALL PROTECTION (F1) INTERIOR AXONOMETRIC



5 FALL PROTECTION FENCING AT CRESCENT ST. EGRESS STAIR
1 1/2" = 1'-0"

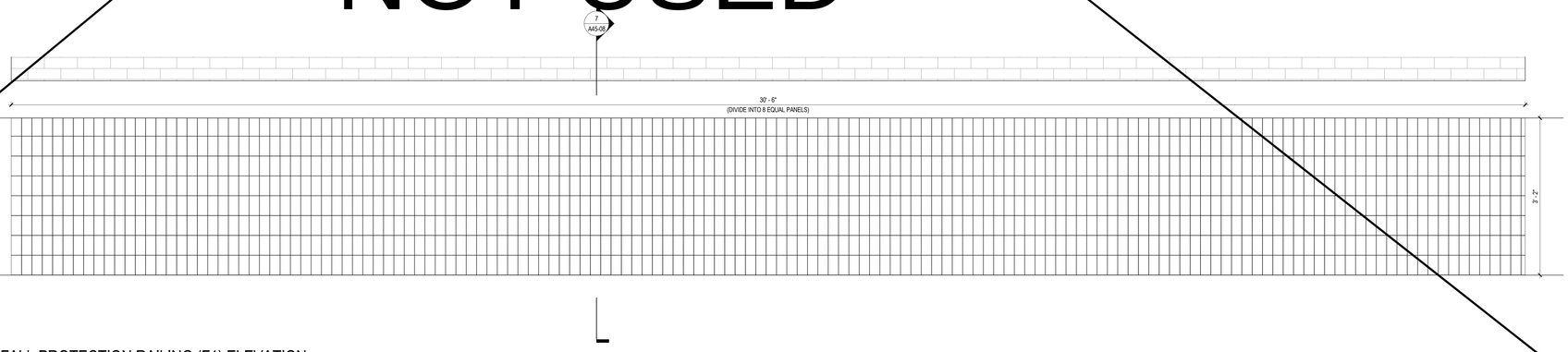


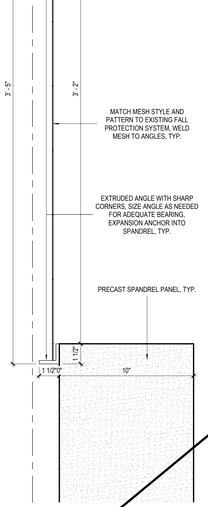
6 FALL PROTECTION AT GARAGE RETAINING WALL
1 1/2" = 1'-0"



2 FALL PROTECTION RAILING (F1) PLAN
1" = 1'-0"

NOT USED





7 FALL PROTECTION RAILING (F1) SECTION
3" = 1'-0"

1 FALL PROTECTION RAILING (F1) ELEVATION
1" = 1'-0"

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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

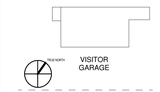
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
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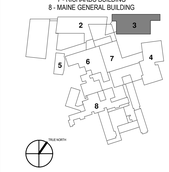
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	TEAM
Checked	DS/RS
Approved	JK

TITLE

FALL PROTECTION DETAILS

SHEET NUMBER

A45-08

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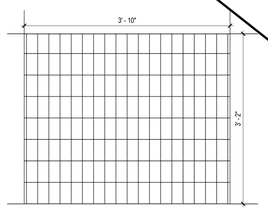
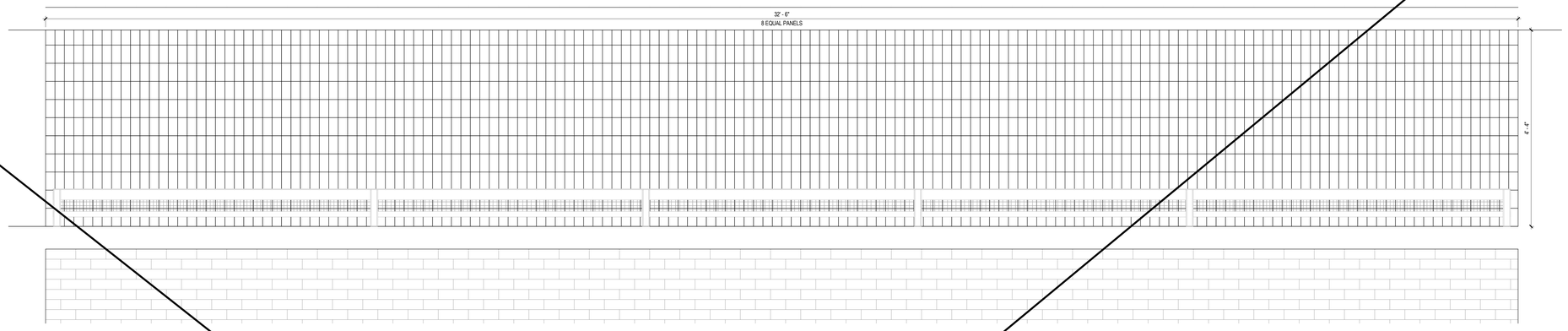
METAL RAILING & SPANDREL LEGEND

MATCH ALL ASPECTS OF METAL RAILINGS & PRECAST SPANDREL INCLUDING:

COLOR, SHEEN, FINISH, ATTACHMENT DETAILS, HARDWARE ETC.

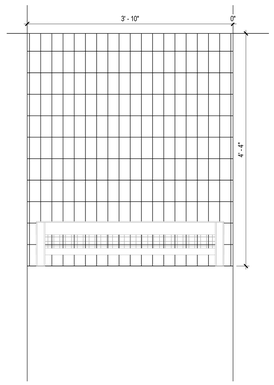
FIELD VERIFY ANY DETAILS NOT LISTED AND DUPLICATE

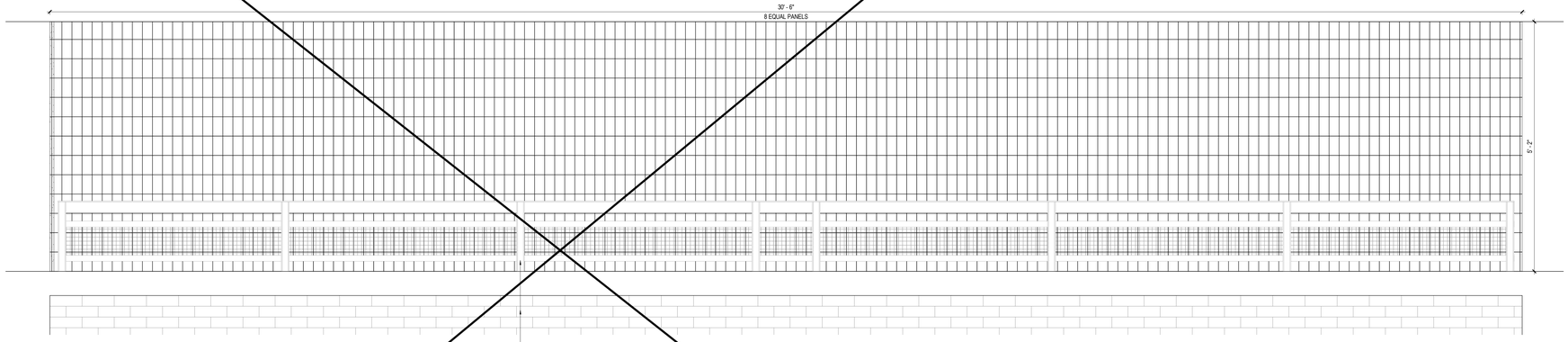




6 FALL PROTECTION (F7) ELEVATION
1" = 1'-0"

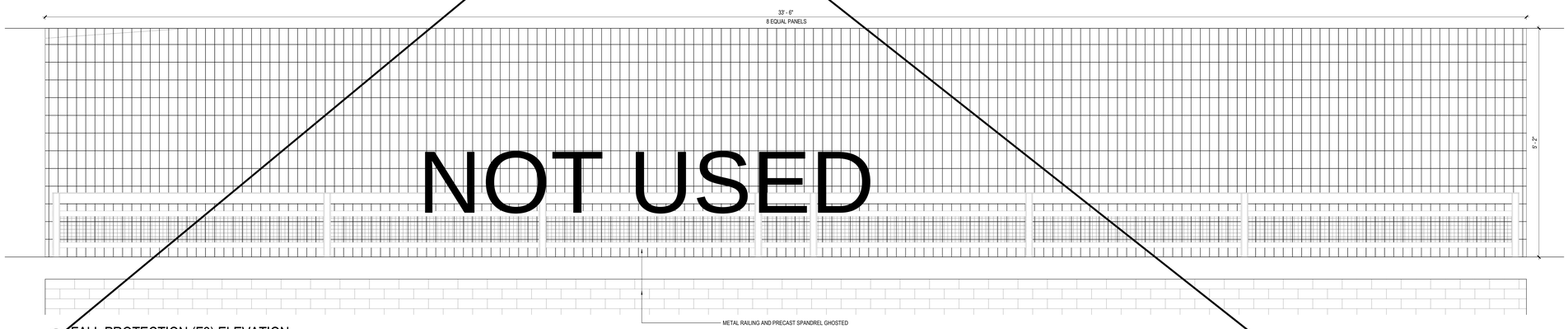
4 FALL PROTECTION (F5) ELEVATION
1" = 1'-0"





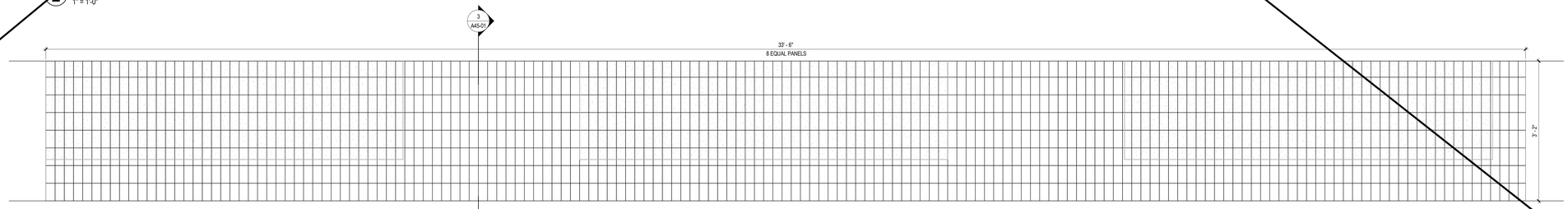
5 FALL PROTECTION (F6) ELEVATION
1" = 1'-0"

3 FALL PROTECTION (F4) ELEVATION
1" = 1'-0"



NOT USED

2 FALL PROTECTION (F3) ELEVATION
1" = 1'-0"



1 FALL PROTECTION (F2) ELEVATION
1" = 1'-0"

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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

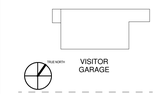
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4491
STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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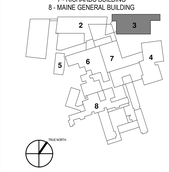

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

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Drawn	TEAM
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Approved	JK

TITLE

FALL PROTECTION TYPES

SHEET NUMBER

A45-09

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METAL RAILING & SPANDREL LEGEND

MATCH ALL ASPECTS OF METAL RAILINGS & PRECAST SPANDREL INCLUDING:

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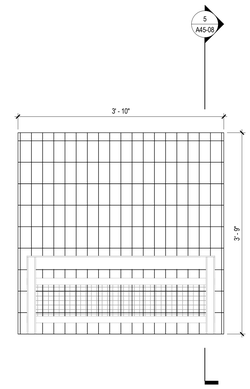
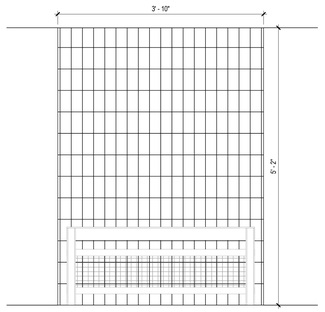
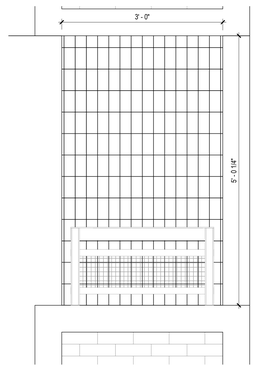
FIELD VERIFY ANY DETAILS NOT LISTED AND DUPLICATE



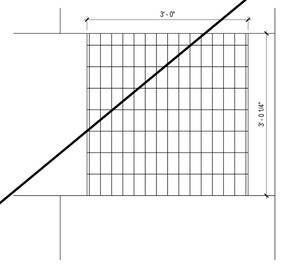
7 FALL PROTECTION (F14) ELEVATION
1" = 1'-0"



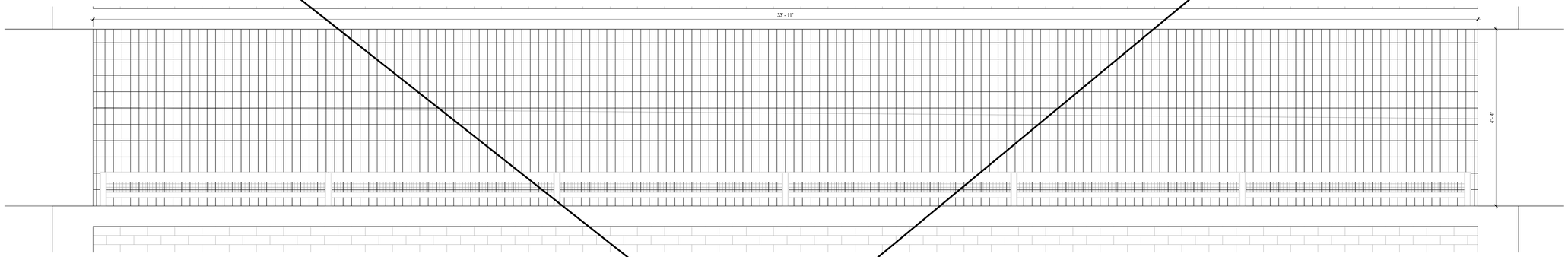
6 FALL PROTECTION (F13) ELEVATION
1" = 1'-0"



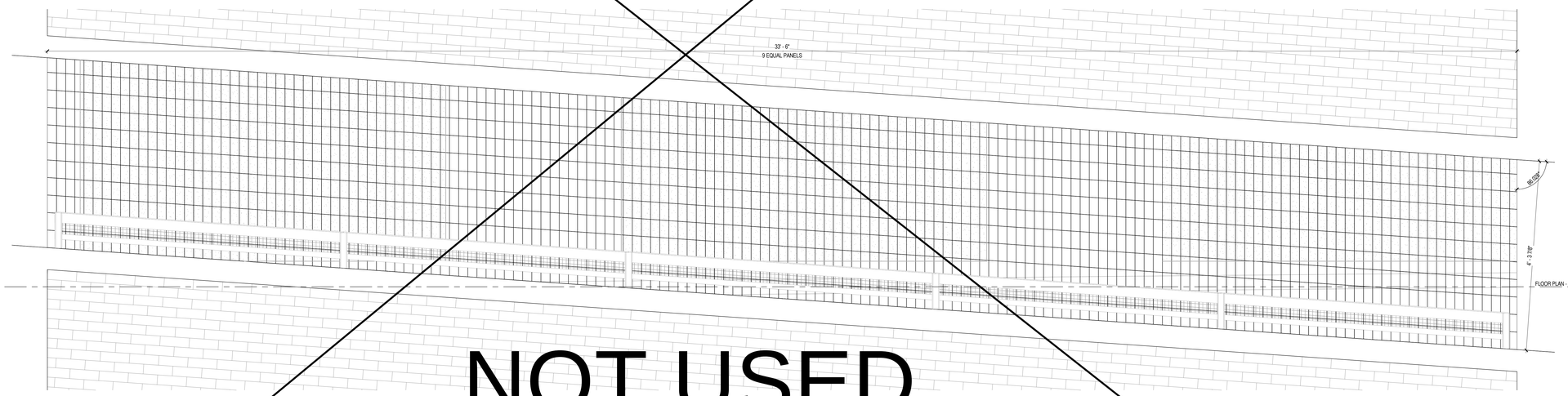
5 FALL PROTECTION (F12) ELEVATION
1" = 1'-0"



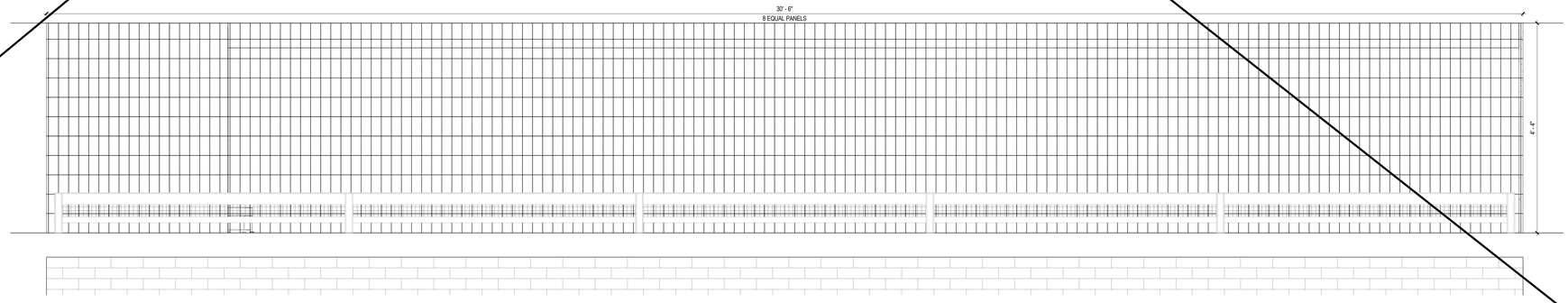
4 FALL PROTECTION (F11) ELEVATION
1" = 1'-0"



3 FALL PROTECTION (F10) ELEVATION
1" = 1'-0"



2 FALL PROTECTION (F9) ELEVATION
1" = 1'-0"



1 FALL PROTECTION (F8) ELEVATION
1" = 1'-0"

NOT USED

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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

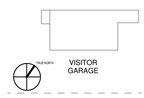
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

LICENSED ARCHITECT
ROBERT A. BROWN
No. 4481
STATE OF MAINE

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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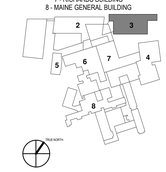
6 - SEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
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	PERMIT SET	03.09.18

Job Number	152182.000
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Approved	JK

TITLE

FALL PROTECTION TYPES

SHEET NUMBER

A45-10

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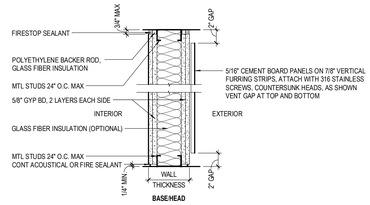
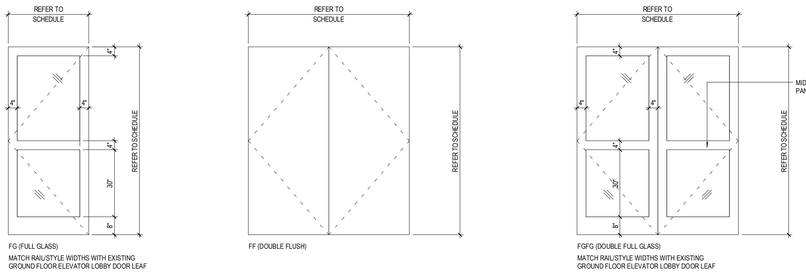


2 HOUR PARTITON TO CONCRETE SLAB (UL U419)

1 WALL PARTITION TYPES
1 1/2" = 1'-0"



2 DOOR TYPE ELEVATIONS
1/2" = 1'-0"

DOOR SCHEDULE

OPENINGS					DOOR			FRAME								
TAG	RM NUM	RM NAME	WIDTH	HEIGHT	TYPE	MTL	FIN	TYPE	MTL	FIN	JAMB	HEAD	SILL	HDWR	FIRE RATING	REMARKS
1001-01	1001-PK	ELEV. LOBBY	6' 0"	7' 0"	GLGL	GL	PTD	AL	AL	PTD	AL	AL	-	HARDWARE SET #2		
2001-01	2001-PK	ELEV. LOBBY	6' 0"	7' 0"	GLGL	GL	PTD	AL	AL	PTD	AL	AL	-	HARDWARE SET #2		
3001-01	3001-PK	ELEV. LOBBY	6' 0"	7' 0"	GLGL	GL	PTD	AL	AL	PTD	AL	AL	-	HARDWARE SET #2		
G001-01	G001-PK	ELEV. LOBBY	6' 0"	7' 0"	GLGL	GL	PTD	AL	AL	PTD	AL	AL	-	EXISTING		
1003-01	1003-PK	ELEC	6' 0"	7' 0"	FF	HM	GALV	HM	HM	GALV	HM	HM	-	HARDWARE SET #12		GALVANIZED DOOR AND FRAME
1002-01	1002-PK	IDF	6' 0"	7' 0"	FF	HM	GALV	HM	HM	GALV	HM	HM	-	HARDWARE SET #11	90 MIN	GALVANIZED DOOR AND FRAME
1101-01	1101-PK	STAIR	4' 0"	7' 0"	FG	AL	PT	AL	AL	PT	AL	AL	-	HARDWARE SET #1		
2101-01	2101-PK	STAIR	4' 0"	7' 0"	FG	AL	PT	AL	AL	PT	AL	AL	-	HARDWARE SET #1		
B101-01	B101-PK	STAIR	4' 0"	7' 0"	FG	AL	PT	AL	AL	PT	AL	AL	-	EXISTING		
G101-01	G101-PK	STAIR	4' 0"	7' 0"	FG	AL	PT	AL	AL	PT	AL	AL	-	HARDWARE SET #1		

FINISH SCHEDULE

ROOM NUMBER	ROOM	CEILING FINISH	WALL FINISH	FLOOR FINISH
1003-PK	ELEC	EXPOSED	PAINTED	EXPOSED CONC. FLOOR
1001-PK	ELEV.LOBBY	PAINTED (EXPOSED)	PAINTED	TANDUS BROADLOOM (GRAMMA II 444025 FLINT 02595)
1101-PK	STAIR	EXPOSED	CURTAINWALL	EXPOSED CONC. FLOOR
1003-PK	ELEC	EXPOSED	PAINTED	ANTI STATIC TILES (NORAPLAN SENTICA ED 6521)
2001-PK	ELEV.LOBBY	PAINTED (EXPOSED)	PAINTED	TANDUS BROADLOOM (GRAMMA II 444025 FLINT 02595)
2101-PK	STAIR	EXPOSED	CURTAINWALL	EXPOSED CONC. FLOOR
3001-PK	ELEV.LOBBY	PAINTED (EXPOSED)	PAINTED	TANDUS BROADLOOM (GRAMMA II 444025 FLINT 02595)

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PROJECT TITLE

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LICENSED ARCHITECT
ROBERT A. BROWN
No. 4431
STATE OF MAINE

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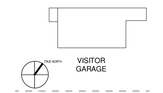
PROJECT KEY PLAN



OVERALL KEY PLAN

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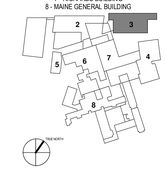

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
3	ADDENDUM #3	02.27.18

Job Number	152182.000
Drawn	TEAM
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Approved	JK

TITLE

DOOR & FINISH SCHEDULES, PARTITION TYPES

SHEET NUMBER

A61-01

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PART 1 - GENERAL NOTES AND DESIGN CRITERIA

1. GENERAL
   A. The structural contract documents included herein are for the new construction of additional floors on the existing Visitor Garage located at Maine Medical Center in Portland, ME. The Engineer of Record (Simpson Gumpertz & Heger Inc.) understands that Maine Medical Center has engaged a third-party consultant to review and repair some damaged connections in the existing Visitor Garage. These structural contract documents assume that any damaged connections are repaired so that their load-carrying capacities meet or exceed the capacities of the original connections.
   B. Refer to project specifications for detailed requirements for material and workmanship.
   C. Unless otherwise noted, details, sections and notes contained in the structural contract documents shall be considered typical for all similar conditions even if not explicitly referenced.
   D. Deficient work and/or work not in conformance with the contract documents shall be repaired at the contractor's expense. The contractor shall compensate the client for services arising from deficient work, review of modifications/contractor substitution, or expediting of submittals.
   E. Cost of investigation and/or redesign incurred by the Engineer of Record due to contractor errors will be at the contractor's expense.
   F. The contractor shall submit a single dimensioned and coordinated drawing for each level showing the locations of all sleeves and openings required by all trades prior to initiating any work.
   G. Loads imposed on the base building structure and temporary conditions intended to accommodate construction means and methods are not explicitly considered in this design. The contractor shall advise the Engineer of Record regarding construction loads and temporary conditions imposed on the building structure and shall compensate the Engineer of Record for reviewing these conditions.
   H. The Contractor is advised that the Engineer of Record has not evaluated any of the existing structures for the impact of temporary loads due to construction access or equipment. Evaluation of the existing structures to support construction equipment and materials is the responsibility of the Contractor.

2. ELEVATIONS AND DIMENSIONS
   A. All dimensions, elevations and conditions shall be verified in the field by the contractors and any discrepancies shall be brought to the attention of the Engineer of Record for clarification before proceeding with the affected part of the work. Dimensions and elevations noted in the contract documents as (±) and all field conditions shall be verified in the field (VIF) by the contractors prior to the submissions of shop drawings. Upon receipt of shop drawings, the engineer has the right to assume that all field dimensions, elevations and conditions have been verified by the contractors and that the shop drawings accurately reflect such verifications unless stated otherwise on the shop drawings.

3. BUILDING CODE AND REFERENCE STANDARDS
   A. Maine Uniform Building Code
   B. International Building Code 2015 (IBC)
   C. ASCE/SEI 7-10, Minimum Design Loads for Buildings and Other Structures

4. DESIGN LOADS
   A. Dead Loads:
      1. All permanent stationary construction including mechanical equipment and their weights where noted on the structural drawings.
      2. Superimposed on all driving surfaces 5 psf
      3. Photovoltaic array on roof (applied to columns and affected walls only) 15 psf

   B. Live Loads (uniform/concentrated)
      Where appropriate, these loads have been reduced in accordance with Section 1607.10 of the Building Code.
      1. Parking garage floors (Passenger cars only) 40 psf / 3000lb
      2. Stairs and elevator lobbies 100 psf
      3. Hung corridors and pedestrian connectors 100 psf
      4. Corridors above the first floor and support areas 80 psf
      5. Parking garage roof Roof snow load plus parking
      6. Precomposite construction live load 20 psf
      7. Crash barrier load (applied 2'-3" from garage finished floor) 6000lb

   C. Live Load Reduction: Where permitted, the live loads above have been reduced in accordance with Section 1607.10 of the Building Code.

   D. Roof Snow Load Parameters
      Where appropriate, drifting snow loads have been considered in accordance with ASCE/SEI 7-10.

      Parking Garage:
      1. Ground Snow Load, P_g 60 psf
      2. Flat Roof Snow Load, P_f 51 psf
      3. Snow Exposure Factor, C_e 1.0
      4. Snow Load Importance Factor, I_s 1.0
      5. Thermal Factor, C_t 1.2

      East Stair Tower:
      1. Ground Snow Load, P_g 60 psf
      2. Flat Roof Snow Load, P_f 42 psf
      3. Snow Exposure Factor, C_e 0.9
      4. Snow Load Importance Factor, I_s 1.0
      5. Thermal Factor, C_t 1.1

   E. Wind Load Parameters
      1. Basic Design Wind Speed (3 second gust), V_{3s} 120 mph (Risk Category II)
      2. Wind Speed for Lateral Drift Calculations, V 100 mph
      3. Wind Exposure B
      4. Internal Pressure Coefficient 0.00 (Parking Garage)
         ±0.18 (East Stair Tower)
      5. Base shear
         A. East-West 340 kips
         B. North-South 690 kips
      6. Design Wind Pressure: Components and Cladding: Refer to drawing S00-31.

   F. Seismic Load Parameters
      1. Seismic Importance Factor, I_e 1.00
      2. Spectral Response Acceleration, S_s 0.242
      3. Spectral Response Acceleration, S_1 0.078
      4. Site Class D
      5. Spectral Response Coefficient, S_{ds} 0.258
      6. Spectral Response Coefficient, S_{d1} 0.125
      7. Seismic Design Category B
      8. Building Period, T
         A. East-West Direction 0.705 sec
         B. North-South Direction 0.705 sec
      9. Design Base Shear, V
         A. East-West Direction 1,500 kips
         B. North-South Direction 1,200 kips
      10. Seismic Response Coefficient, C_s
         A. East-West Direction 0.044
         B. North-South Direction 0.035
      11. Seismic Force Resisting System
         A. Precast Parking Garage
            a. East-West Direction — Intermediate Precast Shear Walls (Load Bearing), R = 4.0; C_D = 4.0
            b. North-South Direction — Intermediate Precast Shear Walls (Non - Load Bearing), R = 5.0; C_D = 4.5
         B. Stair North East Corner
            a. Steel Systems Not Specifically Detailed for Seismic Resistance, R = 3.0; C_D = 3.0
      12. Analysis Procedure: Equivalent Lateral Force

   G. Seismic Load Parameters for Non-Structural Components - To be designed by specialty structural engineers retained by the Contractor.
      1. Component Importance Factor, I_p varies by component
      2. Component Amplification Factor, a_p varies by component
      3. Component Response Modification Factor, R_p varies by component
      4. Horizontal Design Force, F_p varies by component

5. LATERAL LOAD RESISTING SYSTEM
   A. All lateral load resistance and stability of the completed garage structure is provided by concrete shear walls in the north-south direction, and bearing concrete shear walls in the east-west direction. Lateral load resistance and stability of the stair tower is provided by braced frames. See plan sheets for locations, and see lateral system elevation sheets for shear wall and braced frame elevations.
   B. The contractor is responsible for ensuring the temporary lateral stability of the structure while the structure is under construction, before all pieces are in-place and all connections are made.

6. BEAM DEFLECTION CRITERIA (VERTICAL)
   A. Composite Steel Beams
      1. Post-Composite Live Load Deflection span/360
      2. Post-Composite Total Superimposed Load Deflection span/240
      3. Post-Composite Total Superimposed Load Deflection, Supporting Curtain Wall — lesser of span/360 or 0.375 in.
      4. Net Total Deflection 1 in.

   B. Non-Composite Steel Beams
      1. Live Load Deflection span/360
      2. Total Superimposed Load Deflection span/240
      3. Total Superimposed Load Deflection, Supporting Curtain Wall — lesser of span/360 or 0.375 in.
      4. Net Total Deflection 1 in.

PART 2 - CAST-IN-PLACE CONCRETE

1. CONCRETE MIX PROPERTIES:

Element	Density (pcf)	Strength (psi / days)	Max w/cm	Air Content
Interior Lightweight Slabs on Metal Deck, Pads, and Curbs	110 ± 3%	4,000 / 28	0.45	0% (as mixed)
Metal Pan Stair Fill	145 ± 3%	3,000 / 28	0.45	0% (as mixed)
All Other Concrete	145 ± 3%	4,000 / 28	0.45	0% (as mixed)

   A. Portland Cement: ASTM C150, Type I or Type II.
   B. Admixtures: See project specifications for permissible admixtures.
   C. Supplementary cementitious materials: Refer to specifications for minimum and maximum replacement rates for each class of concrete.

2. STEEL REINFORCEMENT
   A. ASTM A615 Grade 60, deformed.
   B. ASTM A706, deformed where rebar is indicated to be welded.
   C. Do not tack or spot-weld reinforcing bars.
   D. ASTM 1064 for welded-wire reinforcement. Use flat sheets only (no rolls).
   E. ASTM A955, deformed, Grade 60 where rebar is indicated to be stainless steel.

3. REINFORCEMENT AT OPENINGS
   A. UON, provide 2 - #6 at each side of all openings in walls and slabs and extend 2 ft 6 in. beyond the opening or as detailed, except vertical bars at sides of openings in walls are to extend from floor to floor.
   B. Bars may be moved aside at small openings or sleeves, but do not cut or omit.

4. SPLICING OF REINFORCEMENT
   A. As shown on the typical details.
   B. Tie bars together at laps.

5. MINIMUM REINFORCEMENT
   A. In slabs, provide at least 0.0018 times the area of concrete in each direction.

6. REINFORCEMENT SHOP DRAWINGS
   A. Submit for approval, complete bending and placing details of all reinforcement including welded wire reinforcement, indicating position of splices.
   B. Include accessory drawings.

7. SPECIFIED CONCRETE CLEAR COVER
   A. Concrete on metal deck top 3/4 in.
   B. Cast-in-place concrete washes in parking garage 1-1/2 in.

8. POST-INSTALLED ANCHORS
   A. Expansion Anchors: Hilti Kwik Bolt TZ or approved equal.
      1. Install per Hilti installation recommendations.
      2. Provide standard depth of embedment as listed by Hilti, UON.
      3. Provide Galvanized or Stainless Steel anchors and hardware in all exterior applications.
   B. Adhesive Anchors: Hilti HIT HY 200 Injection Adhesive Anchors or approved equal.
      1. Install per Hilti installation recommendations.
      2. Provide standard depth of embedment as listed by Hilti, UON.
      3. Do not use in an overhead application.
      4. Provide Galvanized or Stainless Steel anchors and hardware in all exterior applications.

9. EXISTING SURFACE TREATMENT
   A. Roughen all existing concrete surfaces common with new concrete to amplitude of 1/4 in.
   B. Existing concrete shall also be considered concrete on this job at construction joints or where a secondary pour is required.

10. HOUSEKEEPING PADS AND CURBS
   A. Pads and curbs may be shown on plan in certain instances for reference only. See Architectural and Mechanical Drawings and Specifications and coordinate with equipment manufacturer's requirements and location.
   B. Provide the same concrete as base slab, UON.

11. STANDARD SPECIFICATIONS
   A. CRSI Manual of Standard Practice
   B. ACI 318-14 - Building Code Requirements for Structural Concrete
   C. Follow the latest recommendations and specifications of the American Concrete Institute:
      ACI 301 - Specifications for Structural Concrete
      ACI 302 - Concrete Floor and Slab Construction
      ACI 304 - Guide for Measuring, Mixing, Transporting and Placing Concrete
      ACI 305 - Hot Weather Concreting
      ACI 306 - Cold Weather Concreting
      ACI 308 - Guide to Curing Concrete
      ACI 315 - ACI Detailing Manual
      ACI 347 - Guide to Formwork for Concrete

12. STRUCTURAL TESTING AND INSPECTIONS
   A. Absolutely no concrete is to be placed prior to rebar being inspected and approved.
   B. Refer to program of structural tests and special inspections on drawing S00-02.

13. CURING COMPOUNDS
   A. All curing compounds must be approved by the SER and Architect. See specifications for requirements. Curing compounds shall not be used on flatwork.

14. CORE-DRILLED AND SAW-CUT OPENINGS IN CONCRETE CONSTRUCTION
   A. To the greatest extent possible, openings for plumbing, fire protection, electrical conduits, and mechanical ductwork in concrete walls and slabs shall be coordinated prior to construction; these openings shall be sleeved. A certain amount of core-drilling and saw-cutting may be required. The contractor shall submit a core request form to the SER for review and approval prior to making any cuts or cores. The SER will carry out such reviews as the SER's schedule permits. At a minimum, all cut and core requests must include: the reason for the cut or core; an overall photograph of the area to be cut or cored indicating the project North direction and other nearby openings; and a plan (for slabs) or an elevation (for walls) showing the size and dimensions of the cut or core with respect to column lines and floor levels. The SER will not review requests without all of this information. A request for approval of a cut or core does not guarantee that the SER will approve the cut or core.

15. EDGE OF SLAB
   A. Refer to architectural edge of slab plans for extents and locations of slab edges, house keeping pads, and curbs not otherwise shown on drawings.

PART 3 - STRUCTURAL STEEL

1. STRUCTURAL SHAPES
   A. Wide Flange Shapes ASTM A992 (Fy = 50 ksi)
   B. Square and Rectangular Hollow Structural Sections ASTM A500, Gr. B (Fy = 46 ksi) or ASTM A1085 (Fy = 50 ksi)
   C. Round Hollow Structural Sections ASTM A500, Gr. B (Fy = 42 ksi)
   D. Angles ASTM A36, UON (Fy = 36 ksi)
   E. Channels ASTM A36, UON (Fy = 36 ksi)
   F. Plate ASTM A36, UON (Fy = 36 ksi)
   G. Pipe ASTM A53, Type E or S, Grade B

2. BOLTED CONNECTIONS
   A. ASTM A325 Typ, unless noted as ASTM A490.

3. WELDING ELECTRODES
   A. Conform to AWS Specifications for electrodes based on welding process and the type and grade of steel. E70XX electrodes (MIN.) for all welds.
   B. See project specifications for additional requirements for beam-column and column splice welds in moment frames.

4. FABRICATION
   A. Shop fabricate to greatest extent possible by welding including beam stiffeners, column caps and bases, holes and connections.
   B. Submit complete shop drawings from field dimensions for the Architect's approval of all structural steel prior to fabrication.

5. ERECTION
   A. Provide anchor rods, steel wedges, threaded screws or shims to support and plumb all columns.
   B. Provide bearing plates and wall anchors or anchor rods for all beams resting on concrete and all other necessary connecting hardware.
   C. Do not field cut or field modify any structural steel without prior written approval by SER for each specific case.

6. PAINT
   A. Shop prime all steel not encased in concrete or not fireproofed.
   B. See Architectural Drawings and Specifications for finish coat requirements.
   C. Coatings on members with slip critical connections shall satisfy the requirements of a Class A faying surface.

7. HOT-DIP GALVANIZING
   A. All steel, including but not limited to structural members, connection materials and misc. metals, that is exposed to the exterior elements (weather) shall be hot-dip galvanized. All field welds, or areas where hot-dip galvanizing is damaged, shall be touched-up with a zinc-rich paint ("cold galvanizing") after steel is completely installed.
   B. Plug weld vent holes after galvanizing.
   C. Seal weld all seams not otherwise welded.

8. FRAMING
   A. Beams are equally spaced, UON.
   B. Cantilevered beams are same size as back span, UON.
   C. Bolt patterns shown on details illustrate the concept of the connection and do not necessarily show the actual number and arrangement of the bolts in the connection, unless specifically detailed.

9. STANDARD SPECIFICATIONS AND REFERENCE STANDARDS
   A. AISC 360-10 Specification for Structural Steel Buildings
   B. AWS D1.1-10 Structural Welding Code - Steel
   C. RCSC Specification for Structural Joints Using High Strength Bolts, 2009

10. STRUCTURAL TESTS AND INSPECTIONS
   A. Structural tests and inspections are required for this project. Refer to the program of structural tests and inspections on drawing S00-02.

PART 4 - STEEL DECK AND SHEAR STUDS

1. STEEL DECK
   A. Provide steel deck made from galvanized steel with minimum yield strength of 40 ksi.
   B. See Drawings and Specifications for gauge and profile.
   C. Provide sheet metal pour stops with thickness based on SDI criteria (SDI Publication # 31); 14 gauge min. thickness.
   D. All steel deck and supporting members are sized and spaced assuming at least a two span condition for the metal deck. The steel deck supplier, installer, and general contractor shall coordinate installation and shoring requirements for single span deck.
   E. All steel deck is assumed unshored. Provide additional concrete as necessary to account for deck deflection and achieve a flat surface.

2. HEADED STUDS
   A. Provide headed type studs which conform to ASTM A108 Grade 1015 or 1020 cold finished carbon steel.
   B. Provide 3/4 in. diameter by 4-1/2 in. long studs, UON.
   C. See the drawings for number and locations of studs.
   D. Space studs uniformly along length of beam, UON.
   E. Provide a minimum of 1 in. from the edge of any stud and the face of concrete, a metal deck rib or similar discontinuity.
   F. Where composite steel beams on drawings do not show a shear stud designation, provide the following minimum number of shear studs:
      1. Beams designated as part of lateral force-resisting system: 1 stud per foot
      2. All other beams: 1 stud per 2 feet

3. STANDARD SPECIFICATIONS
   A. AISC 360-10 - Specification for Structural Steel Buildings Part 16, Chapter I.
   B. AISI S100-12 - North American Specification for the Design of Cold-Formed Structural Steel Members.
   C. SDI C1.0-10 - Standard for Composite Steel Floor Deck
   D. AWS D1.3-08 - Structural Welding Code - Sheet Steel
   E. AWS D1.1-15 - Structural Welding Code - Steel

4. STRUCTURAL TESTS AND INSPECTIONS
   A. Structural tests and inspections are required for this project. Refer to the program of structural tests and inspections on drawing S00-02.

PART 5 - STRUCTURAL PRECAST CONCRETE

1. QUALITY
   A. Structural precast concrete work shall conform to the quality standards of PCI and to the structural design standards of ACI 318. Precast units shall be manufactured at a plant certified for their work by the PCI Plant Certification Program.

2. MATERIAL PROPERTIES

Element	Density (pcf)	Strength (psi / days)	Max. w/cm	Air Content
Double Tees and Spandrels	145 ± 3%	5,000 / 28	0.40	6% ±1.0%
Columns and Shear Walls	145 ± 3%	6,000 / 28	0.40	6% ±1.0%

   A. Normal weight aggregate: ASTM C33, with maximum size of 3/4 in.
   B. Prestressing Wire: Low relaxation wire strand, ASTM A416, Grade 270
   C. Reinforcing Steel: Deformed bar, ASTM A615, Grade 60. Welded bars shall conform to ASTM A706.
   D. Welded Wire Reinforcement: ASTM A185
   E. Steel Embedments and Connections: Stainless steel or ASTM A36, hot dip galvanized (ASTM A153). For galvanized embedments, mask weld lines prior to galvanizing.
   F. Grout Between Bearing Surfaces: Approved non-shrink, premixed grout with a compressive strength of 8,000 psi at 3 days.
   G. Bearing Pads: Approved elastomeric pads or approved material.
   H. Anchor Bolts: A307
   I. Admixtures: an approved water reducing agent or super-plasticizer is permitted for reaching desired compressive strengths and maintaining workability. Use an ASTM C260 air entraining admixture for all precast concrete subjected to freeze-thaw conditions. Use corrosion-inhibiting admixture for all driving surfaces in parking garage.

3. GENERAL
   A. The edges of floor elements shall be prepared by the precast manufacturer to receive the approved joint sealant system.
   B. The precast contractor shall furnish and install all precast concrete elements, all connecting and supporting hardware, grout, and other work required to provide functional precast concrete systems.
   C. Precast elements shall be handled in a manner so as to prevent cracks, chips, spalls, or other deformities during all phases of manufacture, shipping, and erection. Provide additional reinforcing if required by handling procedures. Defective or damaged elements will be replaced by the precast contractor, or repaired by the precast contractor if permitted by the engineer. Store precast items at precast plant or on the job site, prior to erection, so as to prevent damage from moisture, freezing, or discoloration.
   D. The precast contractor will clean all surfaces of the precast concrete work as necessary to remove any dirt or stains after erection is complete. Remove all weld stains. Touch up galvanized steel connections that have been welded with zinc-rich paint. Paint shall be MPI #18, MPI #19, or SSPC-Paint 20 formulated in accordance with ASTM A780.
   E. Unless otherwise noted on the contract documents, manufacturing tolerances shall comply with PCI MNL-116, MNL-117, and MNL-135.
   F. Erection tolerances shall comply with Article 10 of PCI MNL-135.
   G. Curing: comply with the latest recommendations and specifications of the American Concrete Institute (ACI) cited under "cast-in-place concrete" and the recommendations of the precast concrete institute (PCI).
   H. Submit for designer's approval complete shop drawings and structural design calculations for all precast concrete work, including any inserts for hoisting. Include accessory drawings. Fabrication of precast items shall not begin until shop drawings and design calculations have been reviewed and approved by the engineer of record (EOR). Structural design calculations shall be stamped and signed by a professional engineer registered in the State of Maine.
   I. The contractor shall submit to the engineer for approval:
      1. Erection Drawings
      2. Production Drawings
      3. Structural Design Calculations
      4. Test Results of Quality Control Tests
      5. Field Defect and Repair Reports
   J. Use 8000 psi (min.) non-shrink grout under all precast concrete shear walls & columns to ensure uniform contact with members below, typ.uon.
   K. Bearing pads shall be used as needed for spandrel beam, double tee and shear wall connections according to requirements in specifications. Submit bearing pad product information for review and approval by the Engineer of Record (EOR) prior to use.
   L. Use NMB splice sleeve system for all vertical connections between precast members and CIP foundation walls. Dowel sleeves must be vacuumed completely free of all material prior to filling with high-strength grout. Grouting of dowel sleeves shall be conducted under continuous special inspection by owner's testing lab.
   M. Color shall be natural, unpigmented gray concrete.
   N. Texture on exterior surfaces shall be as indicated on the architectural drawings, structural drawings, and specifications. The precast manufacturer and construction manager shall ensure that all exterior surfaces are uniform, absent of any defects, and will accept the specified architectural finish.
   O. Use stainless steel (ASTM A666) for all precast connections unless otherwise noted in the drawings. Use galvanized steel (ASTM A123) for all other connection accessories and assemblies.
   P. Maximum final differential top elevations between any two adjacent horizontal surfaces shall not exceed 1/4 in.
   Q. All embedded items in the cast-in-place concrete required by the precaster shall be supplied by the precaster.
   R. Precast fabricator shall submit, for review and approval by the EOR, an engineered erection plan, stamped and signed by a professional engineer registered in the State of Maine. Erection will not begin until engineered erection plan has been approved.

4. STRUCTURAL TESTS AND INSPECTIONS
   A. Structural tests and inspections are required for this project. Refer to the program of structural tests and inspections on drawing S00-02.

SYMBOL LEGEND

- STANDARD BEAM CONNECTION
- DIRECTION OF DECK OR SLAB SPAN
- Pu = FACTORED AXIAL FORCE ON MEMBER (KIPS)
- Vu = FACTORED SHEAR FORCE ON MEMBER (KIPS)
- Mu = FACTORED MOMENT ON MEMBER (KIP - FEET)
- ℄ = CENTERLINE
- (#) = NUMBER OF HEADED SHEAR STUDS
- NEW PRECAST CONCRETE
- EXISTING PRECAST CONCRETE
- NEW CAST IN PLACE CONCRETE
- EXISTING CAST IN PLACE CONCRETE
- SLAB OR ROOF DECK OPENING

ABBREVIATIONS

&	And	IBC	International Building Code	V OR VERT.	Vertical
@	At	ICC	International Code Council	VEF	Vertical Each Face
AB	Anchor Bolt	IN. OR "	Inch, Inches	VIF, ±	Verify in Field
ACI	American Concrete Institute	INT.	Interior	VIF	Vertical Inside Face
ADDTL.	Additional	INV.	Inverted	VOF	Vertical Outside Face
AESS	Architectural Exposed Structural Steel	INFO.	Information	W/	With
AISC	American Institute of Steel Construction	JT	Joist	W/O	Without
ALT.	Alternate	K	Kips (1000 Pounds)	WP	Work Point
APPROX.	Approximate	KSI	Kips per Square Inch	WHS	Welded Headed Stud
ARCH.	Architect	KSF	Kips per Square Foot	WTS	Welded Threaded Stud
ASD	Allowable Strength Design			WWR	Welded Wire Reinf.
ASTM	American Society for Testing and Materials	LBS OR #	Pounds		
AWS	American Welding Society	LL	Live Load		
		LW	Lightweight		
BLK'G	Blocking	LWC	Lightweight Concrete		
BM	Beam	LRFD	Load & Resistance Factor Design		
B OR BOT.	Bottom	LLH	Long Leg Horizontal		
BRG.	Bearing	LLV	Long Leg Vertical		
BS	Both Sides	LP	Low Point		
BTWN.	Between	LSH	Long Side Horizontal		
		LONG.	Longitudinal		
C	Camber	LTWT.	Lightweight		
C.C.	Center to Center				
CJ	Control Joint	MAX.	Maximum		
CIP	Cast-in-place	MATL.	Material		
℄ OR CL	Center Line	MECH.	Mechanical		
CLG.	Ceiling	MFR	Manufacturer		
CLR.	Clear	MIL	0.001 Inch		
CMU	Concrete Masonry Unit	MIN.	Minimum		
COL.	Column	MISC.	Miscellaneous		
CONC.	Concrete				
CONN.	Connection	NF	Near Face		
CONT.	Continuous	(N)	New		
CJP	Complete Joint Penetration	NWC	Normal Weight Concrete		
CSK.	Countersink	NO. #	Number		
CTBR.	Counterbore	NS	Near Side		
CTR.	Center	NTS	Not to Scale		
CTRD.	Centered	NWT.	Normal Weight		
DBA	Dowel Bar Anchor	OC	On Center		
DBL.	Double	OD	Outside Diameter		
DC	Demand Critical (Weld)	OH	Opposite Hand		
DET., DTL.	Detail	OPNG	Opening		
DIA., Ø	Diameter	OPP	Opposite		
DIAG.	Diagonal				
DL	Dead Load	PCI	Precast Concrete Institute		
DN	Down	PAF	Powder-Actuated Fasteners		
DO	Ditto	PART.	Partial		
DSA	Division of the State Architect	PCS	Pieces		
		PCF	Pounds per Cubic Foot		
DWLS	Dowels	PL	Plate		
DWG(S).	Drawing(s)	PP	Partial Penetration		
		PSF	Pounds per Square Foot		
(E)	Existing	PSI	Pounds per Square Inch		
EA.	Each	PW	Puddle Weld		
EE	Each End	PC	Precast		
EF	Each Face				
ES	Each Side	RAD.	Radius		
EW	Each Way	RD	Roof Drain		
EXP. BOLT	Expansion Bolt	REINF.	Reinforcing		
EJ	Expansion Joint	REF.	Reference		
EXT.	Exterior	REM.	Remainder		
ELEV., EL.	Elevation	REQ.	Required		
EMB.,EMBED.	Embedment	RO	Rough Opening		
EOD	Edge of Deck	RND.	Round		
EOR	Engineer of Record	R.R.	Remove & Replace		
EOS	Edge of Slab				
EP	Embed Plate	S.A.D.	See Architectural Drawings		
EQ.	Equal	SC	Shear Connector or Slip Critical Bolt		
EQUIP.	Equipment	SCHED.	Schedule		
FDN	Foundation	SDI	Steel Deck Institute		
FIN. FL.	Finish Floor	SECT.	Section		
F.G.	Finish Grade	SER	Structural Engineer of Record		
FIN.	Finish				
FL.	Floor	SHT	Sheet		
FD	Floor Drain	SIM.	Similar		
FRMG.	Framing	SLV	Short Leg Vertical		
FRP	Fiber Reinforced Polymer	S.M.D.	See Mechanical Drawings		
FS	Far Side	SOG	Slab-on-Grade		
FT OR '	Foot, Feet	SP	Sump Pit		
FTG.	Footing	SPA.	Spaces		
FP	Full Penetration Weld	SQ.	Square		
		SR	Stud Rail		
GA	Gauge	SS	Stainless Steel		
GALV.	Galvanized	STAGG'D.,STG.	Staggered		
G.C.	General Contractor	STD	Standard		
GENL	General	STIFF.	Stiffener		
GR.	Grade	STL	Steel		
GB	Grade Beam	STR.	Structural		
		SUP	Support		
HP	High Point	SYMM.,SYM.	Symmetrical		
HS	High Strength				
HDG	Hot-dip Galvanized	T	Top		
HEF	Horizontal Each Face	T&B	Top and Bottom		
HIF	Horizontal Inside Face	TOC	Top of Concrete		
HOF	Horizontal Outside Face	TOD	Top of Deck		
H OR HORIZ.	Horizontal	TOS	Top of Steel		
HSB	High Strength Bolt	TOT	Top of Topping		
HSS	Hollow Structural Section	TOW	Top of Wall		
HT.	Height	TYP.	Typical		
		UON	Unless Otherwise Noted		

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CONSULTANTS

CIVIL/ LANDSCAPE ARCHITECT
Sebago Technics
75 John Roberts Road, Suite 1A,
South Portland ME 04106

STRUCTURAL ENG/ BUILDING ENVELOPE CONSULTANT
Simpson Gumpertz & Heger Inc.
41 Seyon Street, Building 1, Suite 500,
Waltham MA 02453

MEP/FP ENGINEER/ CODE
AKF Group LLC
99 Bedford Street, 2nd Floor, Boston MA 02111

CONSTRUCTION MANAGER
Turner Construction
2 Seaport Lane, Suite 200, Boston MA 02210

ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02210

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

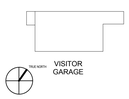
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

STATE OF MAINE — JOHN H. THOMSEN IV — No. 11120 — LICENSED PROFESSIONAL ENGINEER — 3-29-2018

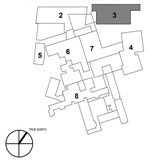
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	NWS
Checked	BMT
Approved	JHT

TITLE

GENERAL NOTES, SYMBOLS & ABBREVIATIONS

SHEET NUMBER

S00-01

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STATEMENT OF SPECIAL INSPECTIONS

LOCATION	Portland, Maine
OWNER	Maine Medical Center
DESIGN PROFESSIONAL IN CHARGE	John H. Thomsen IV, P.E.

This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the 2015 International Building Code (IBC 2015). It includes a schedule of Special Inspection services applicable to this project as well as the name of the Special Inspection coordinator and the identity of other approved agencies to be retained for conducting these inspections and tests. This Statement of Special Inspections encompasses the following disciplines: STRUCTURAL. The Special Inspection Coordinator shall keep records of all inspections and shall furnish inspection reports to the Building Official and the Registered Design Professional in Responsible Charge (RDP). Discovered discrepancies shall be brought to the immediate attention of the contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the RDP. The Special Inspection program does not relieve the contractor of his or her responsibilities for quality assurance.

Interim reports shall be submitted to the Building Official and the RDP.

A Final Report of Special Inspections documenting completion of all required Special Inspections, testing, and correction of any discrepancies noted in the inspections shall be submitted by the Special Inspection Coordinator prior to issuance of a Certificate of Use and Occupancy.

Job site safety and means and methods of construction are solely the responsibility of the contractor.

Interim reports shall be submitted monthly.

SCHEDULE OF INSPECTION AND TESTING AGENCIES

SPECIAL INSPECTION AGENCIES	FIRM	ADDRESS	TELEPHONE #
Special Inspection Coordinator	TBD	TBD	TBD
Inspector	TBD	TBD	TBD

Note: The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent in accordance with Section 1704.1 the 2015 International Building Code (IBC 2015) and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official prior to commencing work.

STATEMENT OF CONTRACTOR'S RESPONSIBILITY

In accordance with IBC 2015 Section 1704.4, each contractor responsible for the construction or fabrication of a main wind-force resisting system or a seismic-force-resisting system or a wind- or seismic-resisting component listed in the statement of special inspections above must submit a Statement of Responsibility to the Structural Engineer of Record, the building official and the owner prior to commencement of work on the system. The contractor's statement of responsibility shall contain acknowledgement of awareness of the special requirements contained in the statement of special inspections.

QUALIFICATIONS OF INSPECTORS AND TESTING TECHNICIANS

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided.

Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the Agency Number on the Schedule.

PE/SE	Structural Engineer – a licensed PE specializing in the design of building structures
PE/GE	Geotechnical Engineer – a licensed PE specializing in soil mechanics and foundations
EIT	Engineer-In-Training – a graduate engineer who has passed the Fundamentals of Engineering examination
	AMERICAN CONCRETE INSTITUTE (ACI) CERTIFICATION
ACI-CFTT	Concrete Field Testing Technician – Grade 1
ACI-CCSI	Concrete Construction Special Inspector
ACI-LTT	Laboratory Testing Technician – Grade 1&2
ACI-STT	Strength Testing Technician
	AMERICAN WELDING SOCIETY (AWS) CERTIFICATION
AWS-CWI	Certified Welding Inspector
AWS/AISC-SSI	Certified Structural Steel Inspector
	INTERNATIONAL CODE COUNCIL (ICC) CERTIFICATION
ICC-SMSI	Structural Masonry Special Inspector
ICC-SWSI	Structural Steel and Welding Special Inspector
ICC-SFSI	Spray-Applied Fireproofing Special Inspector
ICC-PCSI	Prestressed Concrete Special Inspector
ICC-RCSI	Reinforced Concrete Special Inspector
	NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET)
NICET-CT	Concrete Technician – Levels I, II, III & IV
NICET-ST	Soils Technician - Levels I, II, III & IV
NICET-GET	Geotechnical Engineering Technician - Levels I, II, III & IV

PRECAST CONCRETE CONSTRUCTION - IBC 2015 SECTION 1705.3 / ACI 318-14 SECTION 26.13

ITEM	AGENCY	INSPECTION FREQUENCY	SCOPE
PLANT CERTIFICATION/QUALITY CONTROL PROCEDURES	ICC-RCSI	PERIODIC	Review plant quality control procedures.
		PERIODIC	Inspect plant storage and handling procedures.
		PERIODIC	Confirm that approved submittals are in the plant and are being used for fabrication.
		PERIODIC	Review welder's certifications.
		PERIODIC	Monitor finished product for structural defects (cracks).
FORMWORK GEOMETRY	ICC-RCSI	PERIODIC	Inspect form sizes, geometry, and finishes per the Contract Documents.
REINFORCEMENT INSTALLATION	ICC-RCSII/ICC-PCSI	PERIODIC	Inspect location, size, condition, cover, and placement of all reinforcement (including prestressing tendons if applicable), reinforcement supports, inserts, and accessories for conformance to approved shop drawings and to Contract Documents.
		PERIODIC	Inspect placement of all reinforcement for compliance with ACI 318 Sections 25.2, 25.3, 26.6.1 - 26.6.3 and ACI 301 Section 3.3.
REINFORCING STEEL WELDING	ICC-RCSI	PERIODIC	Verify weldability of reinforcing steel other than ASTM A706 per IBC 1705.3.
		PERIODIC	Inspect reinforcing steel resisting flexural and axial forces in intermediate and special moment frames and boundary elements of special reinforced concrete shear walls and shear reinforcement.
BOLTS AND EMBEDDED ITEMS IN CONCRETE EXPOSED TO TENSION AND SHEAR	ICC-RCSI	PERIODIC	Inspect interface connections including end and edge doweling.
		PERIODIC	Inspect embedments for proper location and embedment length.
MIX DESIGN	ICC-RCSI	PERIODIC	Review for conformance to ACI 318 and Contract Documents.
		PERIODIC	Inspect for proper mix proportions and mix technique per ACI 318 Chapter 19 and Sections 26.4.3 and 26.4.4.
MATERIAL CERTIFICATION	ICC-RCSI	PERIODIC	Review in field all materials, manufacturer's certifications, mill reports, etc., for conformance to Contract Documents.
MATERIALS CERTIFICATION RECORDS	ICC-RCSI	PERIODIC	Maintain records of all material certificates, mill reports of all concrete mix constituent materials, and reports of steel reinforcement.
SAMPLING OF FRESH CONCRETE AND EVALUATION OF CONCRETE STRENGTH	ICC-RCSI	PERIODIC	Collect and test concrete samples per ACI 318 Section 26.12 but not fewer than three cylinders for each day's pour. As a minimum, perform compression tests on two cylinders at twenty-eight days.
		PERIODIC	Measure slump (ASTM C143), temperature (ASTM C1064), weight (ASTM C138 for normal-weight and C567 for lightweight), and air content (ASTM C173 for normal-weight and C231 for lightweight) for all concrete sampled for strength. For pumped concrete, measure at point of deposit.
CONCRETE PLACEMENT	ICC-RCSI	CONTINUOUS	Inspect concrete placement procedures for conformance to ACI 318, Sections 26.5.2, and Contract Documents.
CURING AND PROTECTION	ICC-RCSI	CONTINUOUS	Inspect for maintenance of specified curing temperatures and techniques per ACI 318 Sections 26.5.3, 26.5.4, and 26.5.5, and Contract Documents.
EVALUATION OF CONCRETE STRENGTH	ICC-RCSI	CONTINUOUS	Test for conformance to specifications in accordance with ACI 318 Section 26.12 and IBC Section 1908.10.
PRESTRESSING OPERATIONS	ICC-PCSI	CONTINUOUS	Verify that prestressing forces in tendons are in conformance to Contract Documents.
ASSEMBLED/ERECTED PRECAST ELEMENTS	ICC-RCSI	CONTINUOUS	Inspect for compliance with SER approved submittals and Contract Documents.
		CONTINUOUS	Review site storage and handling procedures for consistency with design of precast elements.
		CONTINUOUS	Verify that SER approved erection drawings are on site and are being used for erection.
		CONTINUOUS	Verify that SER approved erection procedures are being followed. Review welder's certifications.
ERECTION AND CONNECTIONS FOR PRECAST ELEMENTS	ICC-RCSI	CONTINUOUS	Inspect shimming, bearing, bolting, and welding of connections.
ADHESIVE DOWELS	ICC-RCSI	CONTINUOUS	Verify that existing reinforcing steel is not cut when drilling holes for dowels or anchors.
		CONTINUOUS	Inspect holes prior to installation of adhesive to verify that holes are free of dust and prepared in accordance with the manufacturer's instructions and have the embedment depth indicated on the Contract Documents.
		CONTINUOUS	Verify that adhesive material is in accordance with the Contract Documents.
		CONTINUOUS	Verify that the material is stored, mixed, and injected in accordance with the manufacturer's instructions.
		CONTINUOUS	Verify that the dowel or anchor materials, lengths, diameters, embedments, and finishes are in accordance with the Contract Documents.
EXPANSION ANCHORS	ICC-SWSI	PERIODIC	Verify that existing reinforcing steel is not cut when drilling holes for anchors.
		PERIODIC	Verify that existing reinforcing steel is not cut when drilling holes for anchors. Inspect installation. Verify manufacturer, type, diameter, material, markings, seating of washer, embedment and torque of anchors are in accordance with the Contract Documents.

CAST-IN-PLACE CONCRETE-IBC 2015 SECTION 1705.3

ITEM	AGENCY	INSPECTION FREQUENCY	SCOPE
FORMWORK GEOMETRY	ACI-CCSI/ICC-RCSI	PERIODIC	Inspect formwork for shape, location, dimensions, and finishes of the concrete member being formed and for conformance to the Contract Documents and ACI 301 Section 2 and ACI 318 Sections 6.1, 6.3, and 6.4.
MIX DESIGN	ACI-CCSI/ICC-RCSI	CONTINUOUS	Review concrete batch tickets and verify compliance with approved mix design. Verify that water added at the site does not exceed that allowed by the mix design.
MATERIAL CERTIFICATION	ACI-CCSI	PERIODIC	Review in-plant all materials, manufacturer's certifications, and mill reports for conformance to Contract Documents.
		PERIODIC	Maintain records of all material certificates and mill reports of all concrete mix constituent materials and steel reinforcement
REINFORCEMENT INSTALLATION	ACI-CCSI/ICC-RCSI	Inspect placement of all reinforcement for compliance with ACI 318 Sections 7.3, 7.4, 7.5, 7.6, and 7.7 and ACI 301 Section 3.3. Inspect size, spacing, cover, positioning, and grade of reinforcing steel for compliance with the Contract Documents. Verify that bars are adequately tied and supported on chairs or bolsters. Inspect bar laps and mechanical splices. Verify that reinforcing bars are free of form oil or other deleterious materials. Inspection frequency as noted:	
		PERIODIC	For slabs-on-grade, foundations, and walls
		PERIODIC	Inspect inserts and accessories.
WELDING OF REINFORCING	ACI-CCSI/ICC-RCSI	PERIODIC	Visually inspect all reinforcing steel welds. Verify weldability of reinforcing steel. Inspect preheating of steel when required. Verify that the reinforcing steel is ASTM A706 material.
BATCHING PLANT	ACI-CCSI/ICC-RCSI	PERIODIC	Review plant quality control procedures for material storage and handling to ensure compliance with ACI 301 Sections 4.1.3, 7.1, and 7.2.
		PERIODIC	Review that plant procedures for establishing mix design strength to ensure compliance with ACI 301 Sections 4.1 and 4.2 and with ACI 318 Sections 5.1, 5.2, 5.3, 5.4, and 5.8.
		PERIODIC	Inspect plant to ensure compliance of mix constituents with the requirements of ACI 318 Chapter 3 and ACI 301 Sections 4.2 and 7.2.
		PERIODIC	Inspect that mixing and ready-mix equipment and vehicles comply with ACI 318 Sections 5.7 and 5.8 and with ASTM C 94.
		PERIODIC	Maintain records of all ready-mix truck contents and dispatch times.
ANCHOR RODS	ACI-CCSI/ICC-RCSI	CONTINUOUS	Inspect size, grade, positioning, and embedment of anchor rods for conformance to Contract Documents prior to concrete placement.
		PERIODIC	Inspect concrete placement and consolidation around anchors.
CONCRETE PLACEMENT	ACI-CCSI/ICC-RCSI	CONTINUOUS	Inspect placement of concrete. Verify that concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.
		CONTINUOUS	Prior to allowing ready-mix trucks to deposit concrete, review batch-plant ticket to verify concrete mix compliance with project specifications, temperature, batching time, and number of mixing drum revolutions. Reject concrete that has been mixed for more than 90 min. or 300 drum revolutions.
		CONTINUOUS	Maintain records correlating concrete batching information with location of placement in the finished work. Inspect all concrete placements for compliance with ACI 318 Section 5.9 and 5.10; and ACI 301 Sections 5 and 7.3.
		CONTINUOUS	Inspect for conformance to all approved hot- and cold-weather concrete placement procedures.
SAMPLING AND TESTING OF CONCRETE	ACI-CFTT/ACI-STT	CONTINUOUS	Collect and test concrete samples per ACI 318 Section 5.6 (minimum of four cylinders for each 150 cu yd of concrete or 5,000 sq ft of slab or wall area placed), but not fewer than four cylinders for each day's pour.
		CONTINUOUS	Measure slump (ASTM C143), temperature (ASTM C1064), weight, (ASTM C138), and air content (ASTM C173) for all concrete sampled for strength. For pumped concrete, measure at point of deposit.
CURING AND PROTECTION	ACI-CCSI/ICC-RCSI	CONTINUOUS	Inspect all placements for conformance to Contract Documents, ACI 318 Sections 5.11, 5.12, and 5.13 and to curing and protection procedures approved by SER:.
IN SITU CONCRETE STRENGTH	ACI-CCSI/ICC-RCSI	PERIODIC	Verify in situ concrete strength prior to removal of shores and forms from beams and structural slabs in accordance with ACI 318 Section 6.2.
LABORATORY EVALUATION OF CONCRETE STRENGTH	ACI-LTT	CONTINUOUS	Test for conformance to specifications in accordance with ACI 318 Section 5.6. As a minimum, perform compression tests on one cylinder at seven days and two cylinders at twenty-eight days.
ADHESIVE DOWELS	ACI-CCSI/ICC-RCSI	CONTINUOUS	Verify that existing reinforcing steel is not cut when drilling holes for dowels or anchors.
		CONTINUOUS	Inspect holes prior to installation of adhesive to verify that holes are free of dust and prepared in accordance with the manufacturer's instructions and have the embedment depth indicated on the Contract Documents.
		CONTINUOUS	Verify that adhesive material is in accordance with the Contract Documents. Verify that the material is stored, mixed, and injected in accordance with the manufacturer's instructions.
		CONTINUOUS	Verify that the dowel or anchor materials, lengths, diameters, embedments, and finishes are in accordance with the Contract Documents.
EXPANSION ANCHORS	ICC-SMSI	PERIODIC	Verify that existing reinforcing steel is not cut when drilling holes for anchors
		PERIODIC	Inspect installation. Verify manufacturer, type, diameter, material, markings, seating of washer, embedment and torque of anchors are in accordance with the Contract Documents.
VAPOR BARRIER	ACI-CCSI/ICC-RCSI	PERIODIC	Inspect installation of subgrade vapor retarder for compliance with manufacturer's approved installation procedures and with Contract Documents.

WELDING NOTES FOR CONNECTING TO EXISTING STEEL CONSTRUCTION

THE GENERAL CONTRACTOR SHALL VERIFY THE ACCEPTABILITY OF EXISTING STEEL CONSTRUCTION TO ACCEPT WELDING AS PER THE FOLLOWING NOTES:

1. SAMPLE EXISTING STEEL BY TAKING STEEL FILINGS, CORING OR CUTTING FROM 3 COLUMNS AND 6 BEAMS EVENLY DISTRIBUTED THROUGHOUT THE EXISTING BUILDING. NOTE: EXISTING STEEL SECTIONS TO BE DISCARDED ARE THE PREFERABLE LOCATION FOR SAMPLING.
2. TEST THE STEEL SAMPLES TO DETERMINE THE CHEMICAL PROPERTIES FOR WELDABILITY.
3. DETERMINE WELDABILITY BY DETERMINING THE CARBON EQUIVALENT. SUBMIT TO SER FOR REVIEW THE LABORATORY ANALYSIS REPORT LISTING THE QUANTITIES OF EACH ELEMENT.
4. PREPARE A WELDING PROCEDURE SPECIFICATION PER AWS D1.1 . THIS SHALL INCLUDE FILLER METAL PROPERTIES, ELECTRODE TYPES, AND PREHEAT REQUIREMENTS, IF ANY.
5. PROVIDE STEEL YIELD STRENGTH TEST RESULTS

STRUCTURAL STEEL - IBC 2015 SECTION 1705.2, AISC 360-10 PART 16, CHAPTER N

ITEM	AGENCY	INSPECTION FREQUENCY	SCOPE
FABRICATOR CERTIFICATION / QUALITY CONTROL PROCEDURES	AWS/AISC-SSI/ICC-SWSI	PERIODIC	Inspect fabrication and fabricated steel during two separate plant visits scheduled at beginning of fabrication and at approx. 80% complete, or as directed by the RDP
		PERIODIC	Review plant quality control procedures.
		PERIODIC	Inspect plant storage and handling procedures.
		PERIODIC	Confirm that approved submittals are in the plant and are being used for fabrication.
		PERIODIC	Review welder's certifications.
		PERIODIC	File welder certifications and any other quality assurance documentation as required by the building department.
		PERIODIC	Review prequalification test report for the shop coat of paint applied to slip critical connections to comply with Class A or B per RCSC Specification as required.
		NOTE: The foregoing certification requirements will be waived if the structural steel fabricator is certified by the American Institute of Steel Construction's Quality Certification Program for Structural Steel Fabricators and the fabricator submits evidence of this certification.	
MATERIAL CERTIFICATION	AWS/AISC-SSI/ICC-SWSI	PERIODIC	Review mill test reports, certificates, and identification markings of all structural steel, bolts, nuts, and washers for compliance with the ASTM Specifications required by the Contract Documents and by AISC LRFD Specification Section A3.
		PERIODIC	Inspect certificates of weld filler material for compliance with the AWS Specifications required by the Contract Documents and by AISC LRFD Specification Section A3.
BOLTING	AWS/AISC-SSI/ICC-SWSI	PERIODIC	Prior to releasing containers of fastener assembly components for incorporation into the work, verify bolt, nut, and washer diameters and material grades for compliance with the Contract Documents requirements.
		PERIODIC	Inspect a random sample of at least 25% of all bolts in bearing-type, snug-tightened connections. Verify that the plies of the connection are in firm contact.
		AS NOTED	Observe and report the method used to achieve bolt tension. Inspect a random sample of at least 25% of all bolts in pretensioned connections. All inspections shall be made per the RCSC Specification. The required quantities of bolts to be inspected may be modified at the discretion of the SER. Inspection of pretensioning using twist-off-type bolts or turn-of-the-nut method with match-marking shall be periodic. Inspection of pretensioning using the calibrated wrench method or turn-of-the-nut method without match marking shall be continuous.
		PERIODIC	For bolts to be pretensioned, prior to the start of work field test no fewer than three complete fastener assemblies of each combination of diameter, length, grade, and lot with a tension calibrator. Testing shall follow the procedure to be used in the work. Verify that the pretensioning method develops a pretension that is equal to or greater than 1.05 times the pretension specified in Table 8.1 of the RCSC bolt specification. The number of tests required may be increased at the discretion of the SER or inspector.
		CONTINUOUS	Inspect wrench calibration procedures on daily basis (if applicable).
WELDING	AWS-CWI/ASNT	PERIODIC	Perform weld inspections and tests per Chapter 6 of AWS D1.1.
		PERIODIC	Perform visual inspections of all welds for conformance with the contract documents and erection drawings with the applicable visual inspection requirements of AWS D1.1. Verify size and length of fillet welds. Inspect pre-heat, post-heat and surface preparation between passes. Review with SER scope of visual inspection as work progresses.
		FREQUENCY OF TESTING BY ULTRASONIC OR MAGNETIC PARTICLE TESTING METHODS OF OTHER WELDS AS FOLLOWS:	
		PERIODIC	5% of partial penetration groove welds
		CONTINUOUS	10% of all other welds including deck and floor plate welds
		CONTINUOUS	100% of all complete joint penetration walls, multi-pass fillet welds, and single-pass fillet welds greater than 5/16 in.
		CONTINUOUS	100% of all remade welds
		TBD	Additional inspection as determined by inspector and/or SER if defects are revealed
STRUCTURAL FRAMING, DETAILS AND ASSEMBLIES	AWS/AISC-SSI/ICC-SWSI	PERIODIC	Inspect member sizes, milled surfaces, and installation and connection details for compliance with approved shop drawings and with Contract Documents.
		PERIODIC	Verify columns are plumb within AISC tolerances.
		PERIODIC	Verify columns and beams have correct piece marks and are located and oriented per appropriate drawings.
METAL DECK	AWS/AISC-SSI/ICC-SWSI	PERIODIC	Review mill reports for all deck material delivered to the site.
		PERIODIC	Verify gauge, width, and type (profile) of deck for conformance to approved shop drawings and with Contract Documents.
		PERIODIC	Verify welder certifications.
		PERIODIC	Inspect placement for proper installation of approved screws, puddle welds, other mechanical fasteners (if any), and accessories for compliance with SDI, AWS D1.3, and the Contract Documents.
		PERIODIC	Inspect placement of deck reinforcement at openings and other discontinuities for compliance with approved shop drawings and with Contract Documents.
		PERIODIC	Inspect repair of damaged galvanized finish for compliance with Contract Documents.
FIELD-INSTALLED SHEAR CONNECTORS	AWS/AISC-SSI/ICC-SWSI	CONTINUOUS	Inspect shear connectors per AWS D1.1 Chapter 7.
		CONTINUOUS	Daily Preproduction Testing: per AWS D1.1 Section 7.7 except that five studs are to be tested and that the studs are to be capable of bending 45° from vertical without weld failure.
		CONTINUOUS	Verify location, diameter, and quantity of connectors. Verify that the installation is in compliance with AWS D1.1 Chapter 7. Verify that the ferrules are removed.
		CONTINUOUS	Inspection of production stud: Ring test all shear connectors with a 3 lb hammer. Bend test a minimum of two studs at one-third points along each beam to 45° using a hammer. If a failure occurs, every stud on the structural member is to be tested. Retest all studs that are replaced.

REFERENCES

CODE/STANDARD	TITLE
ACI 301-10	Standard Specifications for Structural Concrete.
ACI 318-14	Building Code Requirements for Structural Concrete
AISC 360-10	Specification for Structural Steel Buildings
ASTM A6-14	Specification for General Requirements for Rolled Steel Plates, Shapes, Sheet Piling, and Bars for Structural Use.
ASTM A568-14	Specification for Steel Sheet, Carbon and High-Strength, Low-Alloy, Hot-Rolled and Cold Rolled, General Requirements For
ASTM C31-12	Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C94-14b	Specification for Ready-Mixed Concrete
ASTM C109-13	Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2 in. or 50 mm Cube Specimens)
ASTM C138-14	Test Method for Unit Weight, Yield and Air Content (Gravimetric) of Concrete
ASTM C143-12	Test Method for Slump of Hydraulic Cement Concrete.
ASTM C172-14a	Practice for Sampling Freshly Mixed Concrete
ASTM C173-14	Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
ASTM C231-14	Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C567-14	Test Method for Unit Weight of Structural Lightweight Concrete
ASTM C1064-12	Test Method for Temperature of Freshly Mixed Portland Cement Concrete
ASTM C1090-10	Test Method for Measuring Changes in Height of Cylindrical Specimens from Hydraulic Cement Grout
ASTM C1314-14	Test Method for Constructing and Testing Masonry Prisms Used to Determine Compliance with Specified Compressive Strength of Masonry
AWS D1.1-2010	Structural Welding Code – Steel
APPLICABLE BUILDING CODE	International Building Code 2015
RCSC-2009	Specification for Structural Joints Using High Strength Bolts

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CLIENT

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CONSULTANTS

CIVIL/ LANDSCAPE ARCHITECT
Sebago Technics
75 John Roberts Road, Suite 1A
South Portland ME 04106

STRUCTURAL ENG/ BUILDING ENVELOPE CONSULTANT
Simpson Gumpertz & Heger Inc.
41 Seyon Street, Building 1, Suite 500,
Waltham MA 02453

MEP/FP ENGINEER/ CODE
AKF Group LLC
99 Bedford Street, 2nd Floor, Boston MA 02111

CONSTRUCTION MANAGER
Turner Construction
2 Seaport Lane, Suite 200, Boston MA 02210

ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

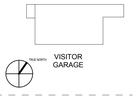
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

STATE OF MAINE
JOHN H. THOMSEN IV
No. 11120
LICENSED PROFESSIONAL ENGINEER
3-27-2018

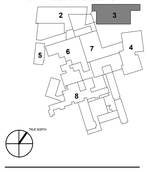
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	KAK
Checked	BMT
Approved	JHT

TITLE

STRUCTURAL TESTS AND INSPECTIONS

SHEET NUMBER

S00-02

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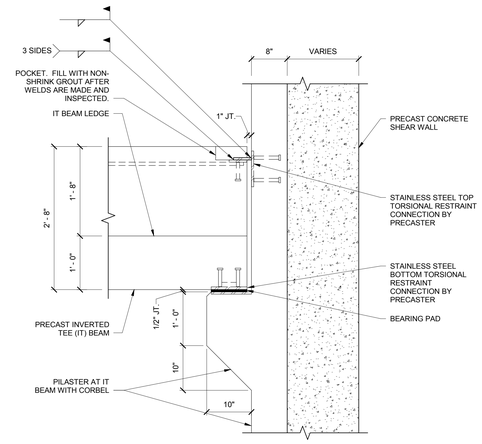
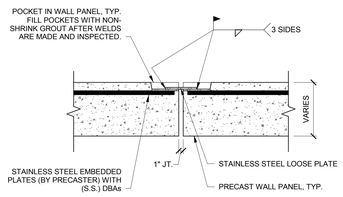
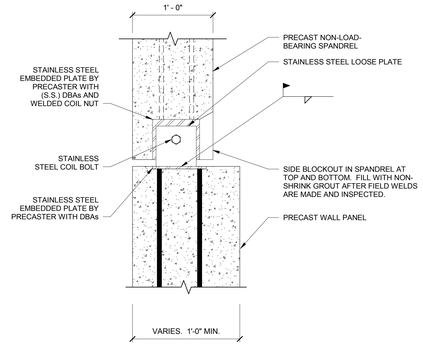


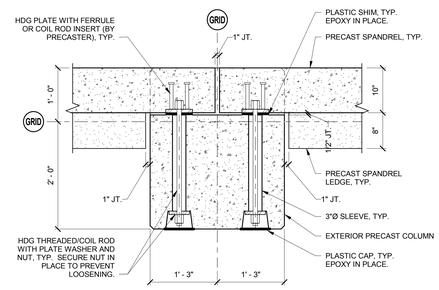
15 TYPICAL PRECAST IT AT SHEARWALL
1" = 1'-0"



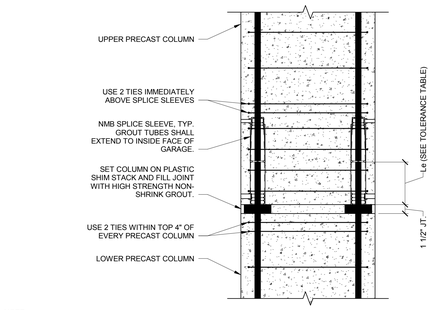
14 TYPICAL PRECAST WALL AT WALL
1" = 1'-0"



13 TYPICAL PRECAST SPANDREL AT WALL
1 1/2" = 1'-0"



12 TYPICAL SPANDREL AT EXTERIOR COLUMN
1" = 1'-0"



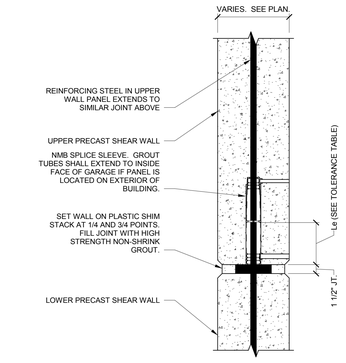
NOTE:
DETAIL IS ALSO APPLICABLE TO PILASTERS AND BOUNDARY ELEMENTS WITHIN PRECAST SHEAR WALLS.

11 TYPICAL PRECAST COLUMN SPLICE
1" = 1'-0"

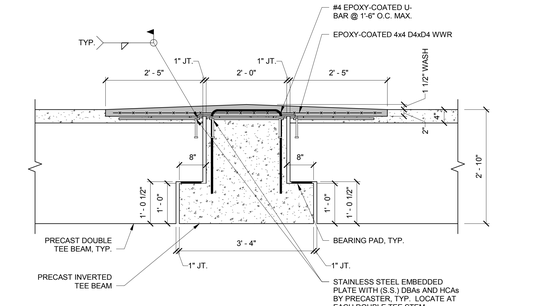
TOLERANCE TABLE - NMB SPLICE SLEEVE DIMENSIONS

NMB SPLICE SLEEVE SIZE	NOMINAL BAR DIAMETER (IN.)	INSIDE DIAMETER OF SPLICE SLEEVE (IN.)	EMBEDMENT LENGTH OF FIELD DOWEL INTO SPLICE SLEEVE (IN.), Le
5U-X	0.625	1.26	4.53 ± 0.39
6U-X	0.750	1.42	5.32 ± 0.39
7U-X	0.875	1.73	6.11 ± 0.39
8U-X	1.000	1.89	6.99 ± 0.49
9U-X	1.129	2.01	7.88 ± 0.47
10U-X	1.270	2.16	8.66 ± 0.47
11U-X	1.410	2.32	9.45 ± 0.47
SNX-11	1.410	2.32	8.86 ± 0.59
A11W	1.410	2.60	8.96 ± 0.69

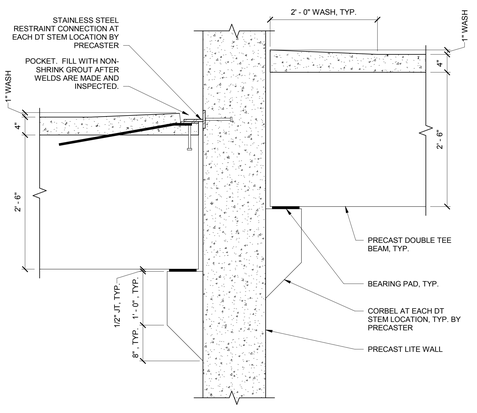
NOTES:
1. NMB SPLICE SLEEVE SIZE SHALL MATCH VERTICAL REINFORCEMENT SIZE IN LOWER CONNECTING ELEMENT.
2. PRECAST FABRICATOR MAY UPSIZE NMB SPLICE SLEEVE BY UP TO TWO BAR SIZES TO INCREASE FIELD TOLERANCES.
3. PRECAST FABRICATOR MAY ELECT TO USE SMALLER DIAMETER TIES AT A TIGHTER SPACING WHERE TIES ENCLOSE NMB SPLICE SLEEVES.



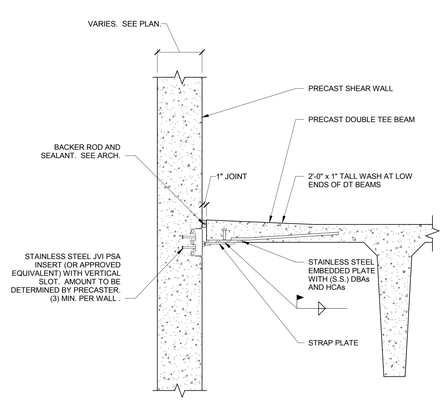
10 TYPICAL PRECAST SHEARWALL SPLICE
1" = 1'-0"



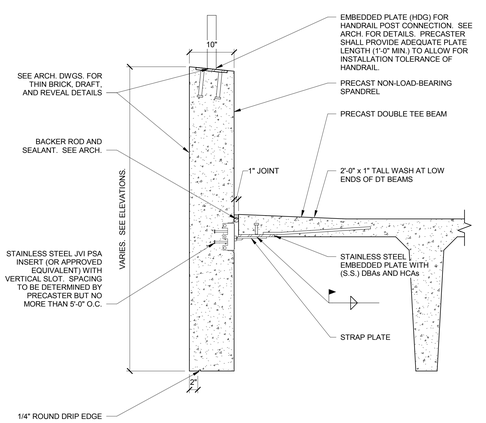
9 TYPICAL PRECAST DOUBLE TEE AT INVERTED TEE BEAM
3/4" = 1'-0"



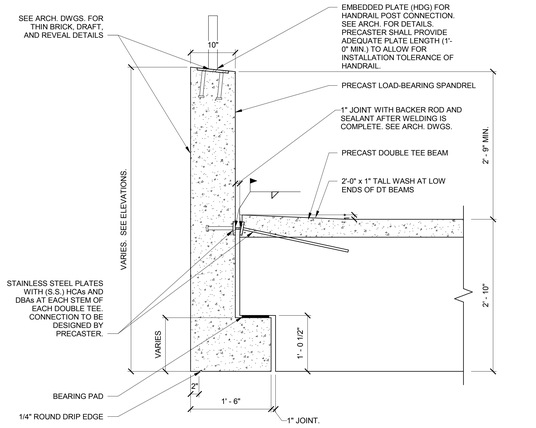
8 TYPICAL PRECAST DOUBLE TEE AT LITE WALL
1" = 1'-0"



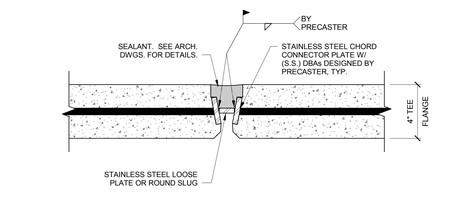
7 TYPICAL PRECAST DOUBLE TEE AT SHEAR WALL
1" = 1'-0"



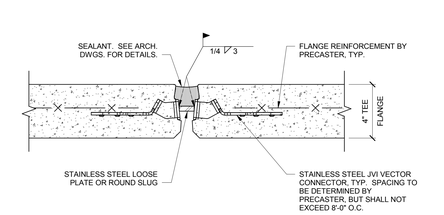
6 TYPICAL PRECAST DOUBLE TEE AT NON-LOAD-BEARING SPANDREL
1" = 1'-0"



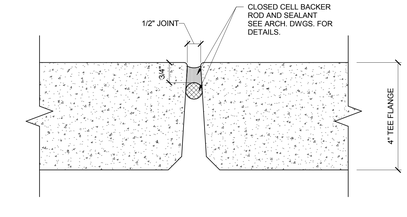
5 TYPICAL PRECAST DOUBLE TEE AT LOAD-BEARING SPANDREL
1" = 1'-0"



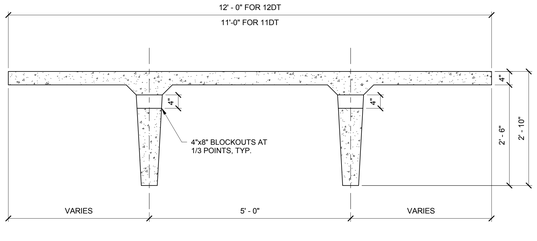
4 DOUBLE TEE FLANGE CHORD CONNECTION
3" = 1'-0"



3 DOUBLE TEE FLANGE SHEAR CONNECTION
3" = 1'-0"



2 TYPICAL TEE TO TEE JOINT
6" = 1'-0"



1 TYPICAL PRECAST DOUBLE TEE SECTION
3/4" = 1'-0"

PERKINS + WILL
225 Franklin Street, Suite 1100
Boston, MA 02110
t 617.478.0300
f 617.478.0321
www.perkinswill.com

CLIENT

Maine Medical Center
MaineHealth

22 Bramhall Street
Portland, ME 04102

CONSULTANTS

CIVIL/ LANDSCAPE ARCHITECT
Sebago Technics
75 John Roberts Road, Suite 1A,
South Portland,ME 04106

STRUCTURAL ENGI BUILDING ENVELOPE CONSULTANT
Simpson Gumpertz & Heger Inc.
41 Seyon Street, Building 1, Suite 500,
Waltham MA 02453

MEPFP ENGINEER/ CODE
AKF Group LLC
99 Bedford Street, 2nd Floor, Boston MA 02111

CONSTRUCTION MANAGER
Turner Construction
2 Seaport Lane, Suite 200, Boston MA 02210

ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

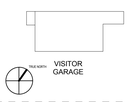
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

STATE OF MAINE
JOHN H. THOMSEN IV
No. 11120
LICENSED PROFESSIONAL ENGINEER
3-27-2018

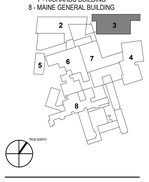
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	NWS
Checked	BMT
Approved	JHT

TITLE

TYPICAL PRECAST CONCRETE DETAILS

SHEET NUMBER

S00-10

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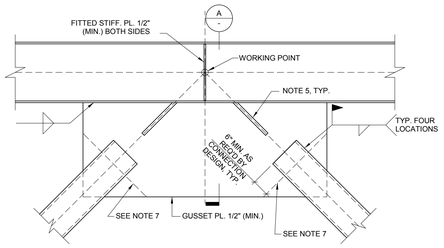
3/29/2018 10:11:50 AM
I:\BOS\Projects\2015\150093.00-MMC\2Drawings\Working_Set_Revit\LOCAL USERS\NWS\nshuman\r152182-MMC-VISITOR.GARAGE-v2017 - STRUCT_NWSnshuman.rvt

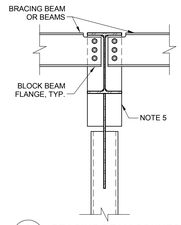
BEAM SHEAR REACTION TABLE (UON)			
BEAM SIZE	VERTICAL FACTORED (LOAD) REACTION (KIPS) (SEE NOTE 1)	MINIMUM NUMBER OF BOLTS (SEE NOTE 6)	HORIZONTAL FACTORED TENSILE FORCE (KIPS) (SEE NOTE 7)
HSS 8x4	8	2	10
HSS 8x6 & HSS 8x8	15	2	10
HSS 14x6 & HSS 14x10	20	3	14

NOTES:
1. LOADS IN THIS TABLE HAVE BEEN FACTORED IN ACCORDANCE WITH SECTION 2.3 OF ASCE 7-10.
2. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.
3. BEAM REACTIONS SHOWN ON PLAN TAKE PRECEDENT OVER THOSE SHOWN IN THIS TABLE. FOR THOSE SHOWN ON PLAN, PROVIDE A HORIZONTAL FACTORED TENSILE FORCE EQUAL TO 2/3 THE VERTICAL FACTORED LOAD UON. VERTICAL AND HORIZONTAL LOADS NEED NOT BE ASSUMED TO ACT CONCURRENTLY.
4. SEE DETAILS AND SECTIONS FOR BEAMS REQUIRING FULL DEPTH SHEAR CONNECTIONS.
5. FIELD WELDED CONNECTIONS MAY BE USED IN LIEU OF BOLTED CONNECTIONS AT CONTRACTOR'S OPTION. HOWEVER, SHOP DRAWINGS FOR ALL FIELD WELDED CONNECTIONS MUST BE SUBMITTED AND APPROVED BY THE EOR PRIOR TO BEGINNING FABRICATION.
6. USE 3/4" Ø A325N BOLTS (MIN).
7. FOR COMPLIANCE WITH STRUCTURAL INTEGRITY REQUIREMENTS OF 2015 IBC 1615.3.2.2, CONNECTIONS SHALL HAVE MINIMUM HORIZONTAL AXIAL TENSILE STRENGTH INDICATED. VERTICAL REACTION AND HORIZONTAL TENSILE FORCE NEED NOT ACT CONCURRENTLY.
8. DRAG FORCES (P_u) SHOWN ON PLAN ARE CONCURRENT WITH THE LARGER OF THE VERTICAL FACTORED LOAD SHOWN IN TABLE OR ON PLAN (V_u).

13 BEAM SHEAR REACTION TABLE
3/4" = 1'-0"

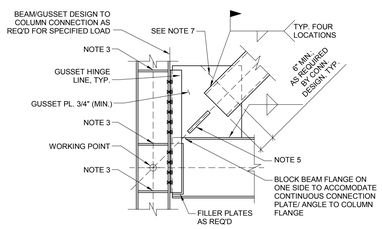


BRACE-BEAM CONNECTION

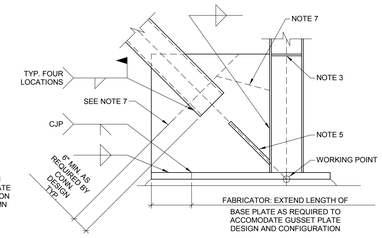


A BRACING BEAM CONNECTION
NTS

DETAIL NOTES:
1. THE DETAILS SHOW THE DESIRED CONFIGURATION TO BE INCORPORATED IN THE FABRICATOR'S DESIGN. FABRICATOR'S DESIGN AND DETAILING TO FOLLOW PROJECT PLANS, SPECIFICATIONS, AND DESIGN FORCES INDICATED ON THE DRAWINGS.
2. PROVIDE DECK SUPPORT ANGLES, SHIM PLATES, AND FILLER PLATES AS REQUIRED. THESE ITEMS ARE NOT SHOWN FOR CLARITY.
3. ADD FITTED STIFFENERS (1/2" THICK MIN.) BOTH SIDES OF COLUMN WHERE THERE ARE BRACES ON BOTH SIDES OF COLUMN AND THERE IS A TRANSFER FORCE BETWEEN THEM INDICATED ON THE DRAWINGS.
4. BOLTS AT CONNECTION TO COLUMN: A325, MINIMUM DIAMETER = 1", SLIP CRITICAL ON OVERSIZE HOLES, UON.
5. ADD STIFFENERS ON EACH SIDE OF GUSSET IF AND AS REQUIRED BY WHITMORE SECTION CALCULATIONS. RECONFIGURE CONNECTIONS TO COLUMN AS REQUIRED BY STIFFENERS.
6. CONNECTIONS TO COLUMN WEBS HAVE SIMILAR CONFIGURATIONS. REINFORCE COLUMN WEB AS REQUIRED BY THE CONNECTION FORCES.
7. GUSSET PLATES ARE SHOWN WITH VERTICAL AND HORIZONTAL EDGES. ANGLED CUTS MAY BE PROVIDED AT FABRICATOR'S DISCRETION OR IF REQUIRED BY THE GENERAL CONTRACTORS COORDINATION WITH OTHER TRADES.
8. SLAB CONSTRUCTION NOT SHOWN FOR CLARITY.
9. BEAMS AND COLUMNS COULD ALSO BE HSS MEMBERS.

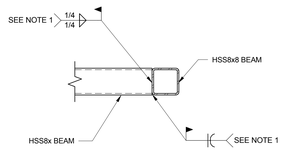


BRACE-BEAM COLUMN CONNECTION



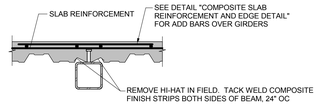
BRACE-COLUMN BASE CONNECTION

12 BRACED FRAME CONNECTION DETAILS
3/4" = 1'-0"



NOTES:
1. SHOP WELD AT CONTRACTOR'S OPTION

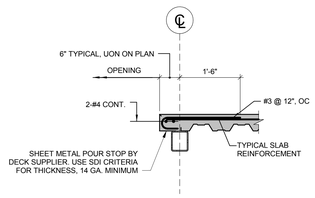
11 TYP. HSS BEAM TO BEAM SHEAR CONN.
3/4" = 1'-0"



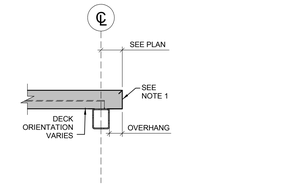
GAP	FINISH STRIP GAUGE
0 TO 4"	20
4" TO 7"	16
7" TO 9"	14

NOTES:
1. DETAIL APPLIES ONLY TO BEAMS WITH STUDS, AND TO ALL GIRDERS.
2. DETAIL APPLIES TO SKEW BEAMS AS REQUIRED FOR STUD PLACEMENT

10 STEEL DECK PARALLEL TO STEEL SUPPORT
3/4" = 1'-0"



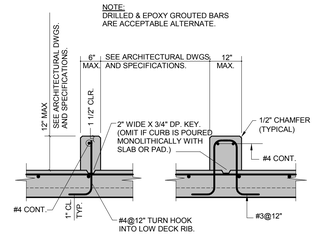
9 SLAB EDGE AT FLOOR OPENINGS



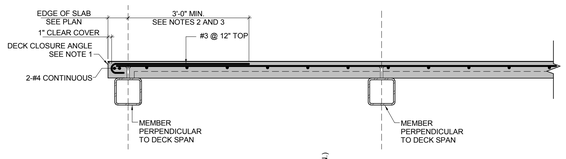
OVERHANG LESS THAN 0'-10"

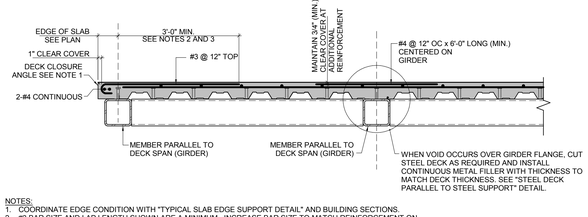
NOTES:
1. UON, PLACE GALVANIZED SHEET METAL POUR STOPS. USE SDI CRITERIA (SDI PUBLICATION #29) FOR THICKNESS, USE 14 GA. MIN.

8 TYPICAL SLAB EDGE SUPPORT DETAIL



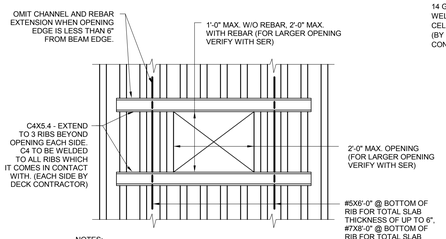
7 CONCRETE CURB ON COMPOSITE SLAB





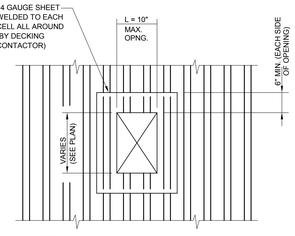
NOTES:
1. COORDINATE EDGE CONDITION WITH "TYPICAL SLAB EDGE SUPPORT DETAIL" AND BUILDING SECTIONS.
2. #3 BAR SIZE AND LAP LENGTH SHOWN ARE A MINIMUM. INCREASE BAR SIZE TO MATCH REINFORCEMENT ON PLAN AND ADJUST LAP LENGTH PER TYPICAL DETAILS.
3. TYPICAL SLAB BARS MAY BE HOOKED. IN THIS CASE ADDITIONAL #3 AT EDGE OF SLAB ARE NOT REQUIRED.
4. GIRDERS ARE DEFINED AS BEAMS FRAMING TO COLUMNS AND/OR SUPPORTING BEAMS LARGER THAN W8.

6 COMPOSITE SLAB REINFORCEMENT AND EDGE CONDITION DETAIL



NOTES:
1. NO REINFORCEMENT REQUIRED FOR HOLES 6" Ø OR LESS.
2. PROVIDE POUR STOP AT ALL OPENINGS.
3. SHORING OF DECK IS AN ACCEPTABLE ALTERNATIVE TO REINFORCEMENT CHANNELS AND SHEET METAL SHOWN FOR DECK CUT BEFORE CONCRETE IS POURED.
4. DETAIL DOES NOT APPLY FOR SINGLE SPAN FRAMING. FOR THESE CONDITIONS ADD SUB FRAMING, INCREASE GAUGE OF DECK, OR SUBMIT PREFERRED SCHEME TO SER FOR REVIEW AND APPROVAL.

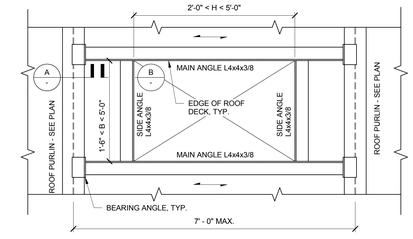
FOR OPENINGS 10" TO 2'-0" PERPENDICULAR TO DECK

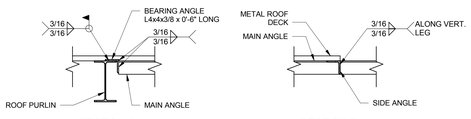


NOTES:
1. NO REINFORCEMENT WHERE "L" IS 6". OR LESS.
2. SPACE OPENINGS NO CLOSER TOGETHER THAN LARGER OF 2L OR 12".

FOR OPENINGS UP TO 10" PERPENDICULAR TO DECK

3 COMPOSITE FLOOR DECK REINFORCING AT OPENINGS



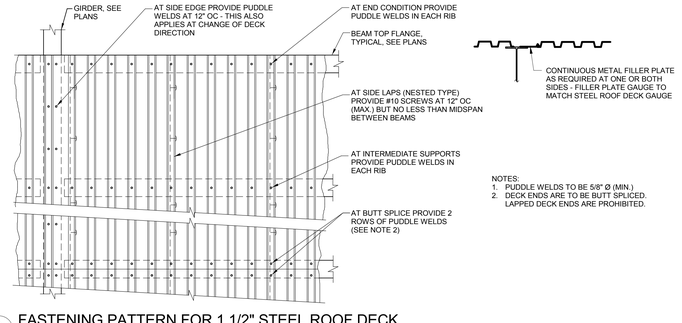


SECTION A

SECTION B

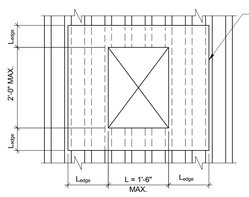
NOTES:
1. ADVISE SER IF OPENING EXCEEDS DIMENSION LIMITS SHOWN.
2. ROOF DECK MUST BE FASTENED TO SUBFRAMING ANGLES AS SHOWN IN TYPICAL ROOF DECK FASTENING DETAIL.
3. TOPS OF MAIN AND SIDE ANGLES ARE FLUSH WITH TOP OF ROOF STEEL.
4. SUBFRAMING IS DESIGNED FOR EQUIVALENT 100 PSF LIVE LOAD AND NET 30 PSF WIND SUCTION.
5. CONTRACTOR MAY ELECT TO OMIT BEARING ANGLES AND COPE VERTICAL LEG OF MAIN ANGLES SUCH THAT THEY BEAR AT LEAST 4" ON TOP FLANGE OF ROOF PURLINS.
6. CONTRACTOR MAY ELECT TO FABRICATE ANGLE FRAMES IN FIELD.

5 SUBFRAMING FOR ROOF OPENING LARGER THAN 1'-0" x 1'-6"



NOTES:
1. PUDDLE WELDS TO BE 5/8" Ø (MIN.)
2. DECK ENDS ARE TO BE BUTT SPLICED. LAPPED DECK ENDS ARE PROHIBITED.

2 FASTENING PATTERN FOR 1 1/2" STEEL ROOF DECK



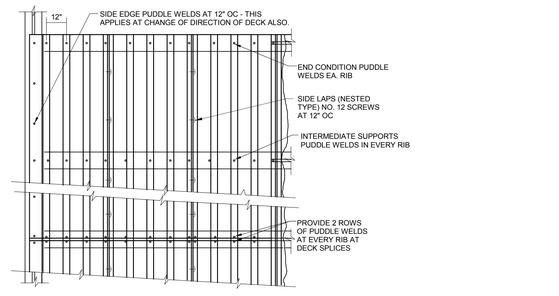
NOTE: NO REINFORCEMENT NEEDED WHERE "L" IS 6 INCHES OR LESS.

FOR OPENINGS UP TO 1'-6" PERPENDICULAR TO DECK

PARAMETERS FOR DECK CUT			
DEPTH OF DECK	DECK GAUGE	REINFORCEMENT SHEET THICKNESS	MAX. CLEAR SPAN OF DECK
1 1/2 "	20	13 GA.	5'-0"
	18	12 GA.	6'-0"
	16	12 GA.	7'-0"
3"	20	12 GA.	7'-0"
	18	1/8" OR 10 GA.	8'-0"
	16	18" OR 10 GA.	9'-0"

NOTES:
1. L_{edge} = 1'-0" MIN.
2. DETAIL DOES NOT APPLY TO OPENINGS SHOWN ON PLAN WITH STEEL SUBFRAMING.
3. FOR OPENINGS CUT IN THE FIELD, NOT SHOWN ON PLAN, AND EXCEEDING THE MAXIMUM SPAN LIMITS, ADD SUBFRAMING PER TYPICAL DETAILS.
4. DETAIL APPLIES TO OPENINGS SPACED NO CLOSER THAN 5'-0" CLEAR IN DIRECTION TRANSVERSE TO DECK RIBS AND NO CLOSER THAN 10'-0" CLEAR IN DIRECTION PARALLEL TO RIBS.
5. REVIEW SPECIFIC CONDITIONS WITH SER THAT MIGHT ALLOW MODIFICATIONS TO THE SPECIFIED PARAMETERS OF THE DETAIL.

4 ROOF DECK OPENING REINFORCEMENT



NOTES:
1. USE NESTED SIDE LAPS.
2. PUDDLE WELDS 5/8" Ø MIN.

1 FASTENING PATTERN FOR COMPOSITE METAL FLOOR DECK

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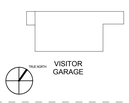
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

STATE OF MAINE
JOHN H. THOMSEN IV
No. 11120
LICENSED PROFESSIONAL ENGINEER
5-21-2018

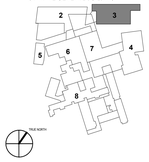
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



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SEPTEMBER 29, 2017

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TITLE

TYPICAL STEEL DETAILS

SHEET NUMBER

S00-20

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ZONE KEY:

ZONE 1

ZONE 2

ZONE 3

ZONE 4

ZONE 5

a = 3'-0" TYP.

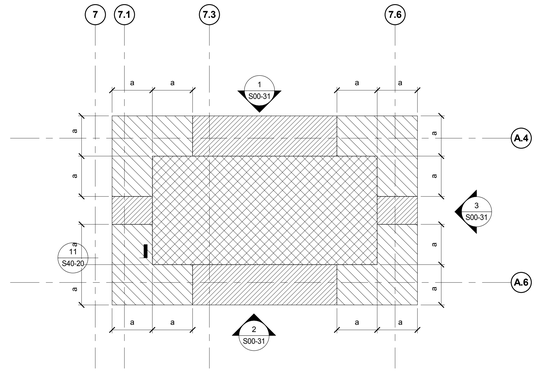
COMPONENTS AND CLADDING PRESSURE AND SUCTION NOTES:
1. COMPONENT AND CLADDING WIND CRITERIA IS BASED ON FM GLOBAL REQUIREMENTS FOR THE PROJECT REFERENCED IN "FM GLOBAL PROPERTY LOSS PREVENTION DATA SHEETS 1-28 - WIND DESIGN"
2. WIND LOAD PARAMETERS:
   A. BASIC STRENGTH DESIGN WIND SPEED (3 SECOND GUST), V_{asd} — 130 MPH (RISK CATEGORY IV)
   B. WIND EXPOSURE — C
   C. INTERNAL PRESSURE COEFFICIENT — ±0.18
3. WIND PRESSURES AND SUCTIONS SHOWN HERE ARE FOR STRENGTH DESIGN.
4. FOR DEFLECTION DESIGN, IN ACCORDANCE WITH IBC 2015 TABLE 1604.3, STRENGTH DESIGN WIND PRESSURES AND SUCTIONS MAY BE SCALED BY 0.42.
5. WIND PRESSURES AND SUCTIONS ON COMPONENTS AND CLADDING ELEMENTS WITH AFFECTIVE AREAS OTHER THAN SHOWN HERE MAY NOT BE LINEARLY INTERPOLATED FROM THE VALUES SHOWN HERE. FOR AFFECTIVE AREAS BETWEEN THOSE SHOWN, USE THE HIGHER PRESSURE VALUE. SEE ASCE7-10 FOR ADDITIONAL INFORMATION.

TABLE R1 - EAST STAIR TOWER ROOF PRESSURES

	ZONE 1		ZONE 2		ZONE 3	
AREA	SUCTION (PSF)	PRESSURE (PSF)	SUCTION (PSF)	PRESSURE (PSF)	SUCTION (PSF)	PRESSURE (PSF)
≤10 SF	-86.5	19.2	-135.8	19.2	-185.1	19.2
60 SF	-74	19.2	-118.2	19.2	-162.5	19.2
100 SF	-70.4	19.2	-113.2	19.2	-156.1	19.2

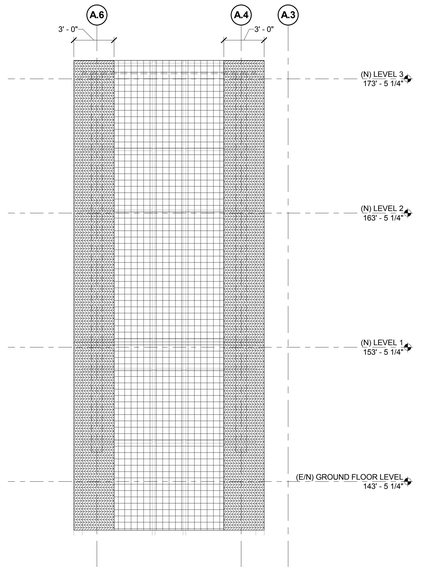
TABLE A - EAST STAIR TOWER WALL PRESSURES

	HEIGHT ABOVE GRADE	ZONE 4						ZONE 5					
		PRESSURE (PSF)			SUCTION (PSF)			PRESSURE (PSF)			SUCTION (PSF)		
LEVEL	z (FT)	≤ 20 SF	60 SF	100 SF	≤ 20 SF	60 SF	100 SF	≤ 20 SF	60 SF	100 SF	≤ 20 SF	60 SF	100 SF
ROOF	91	59.1	53.5	50.9	-59.1	-55.4	-53.7	59.1	53.5	50.9	-108.4	-93.5	-86.5
(N) LEVEL 2	80	57.8	52.4	49.8	-59.1	-55.4	-53.7	57.8	52.4	49.8	-108.4	-93.5	-86.5
(N) LEVEL 1	70	56.5	51.2	48.7	-59.1	-55.4	-53.7	56.5	51.2	48.7	-108.4	-93.5	-86.5
(E)/(N) GROUND	60	55.0	49.9	47.5	-59.1	-55.4	-53.7	55.0	49.9	47.5	-108.4	-93.5	-86.5

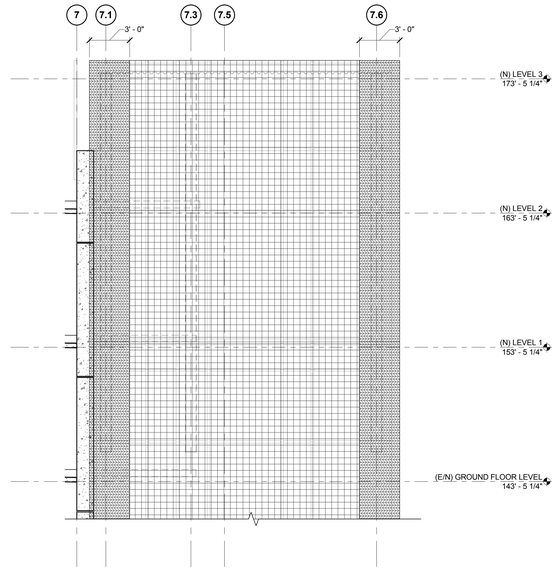


PLAN NOTES:
1. SEE TABLE R1 FOR ROOF WIND PRESSURES AND SUCTION.

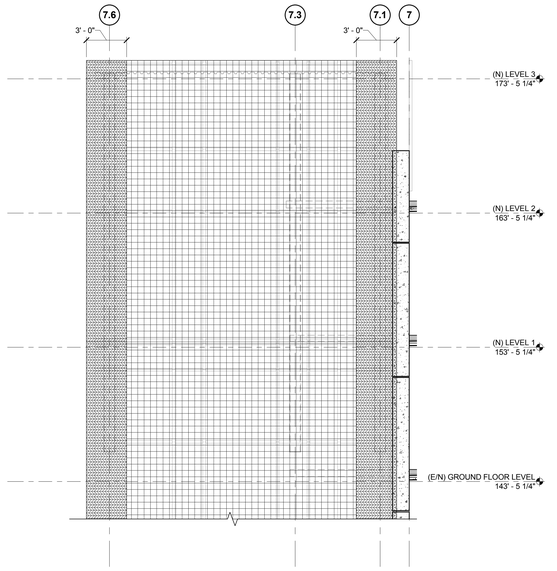
4 EAST STAIR TOWER ROOF
1/4" = 1'-0"



3 EAST STAIR TOWER EAST ELEVATION
1/4" = 1'-0"



2 EAST STAIR TOWER SOUTH ELEVATION
1/4" = 1'-0"



1 EAST STAIR TOWER NORTH ELEVATION
1/4" = 1'-0"

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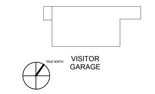
3-21-2018

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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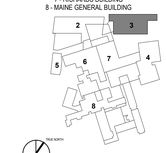

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COMPONENT AND CLADDING WIND LOADS

SHEET NUMBER

S00-31

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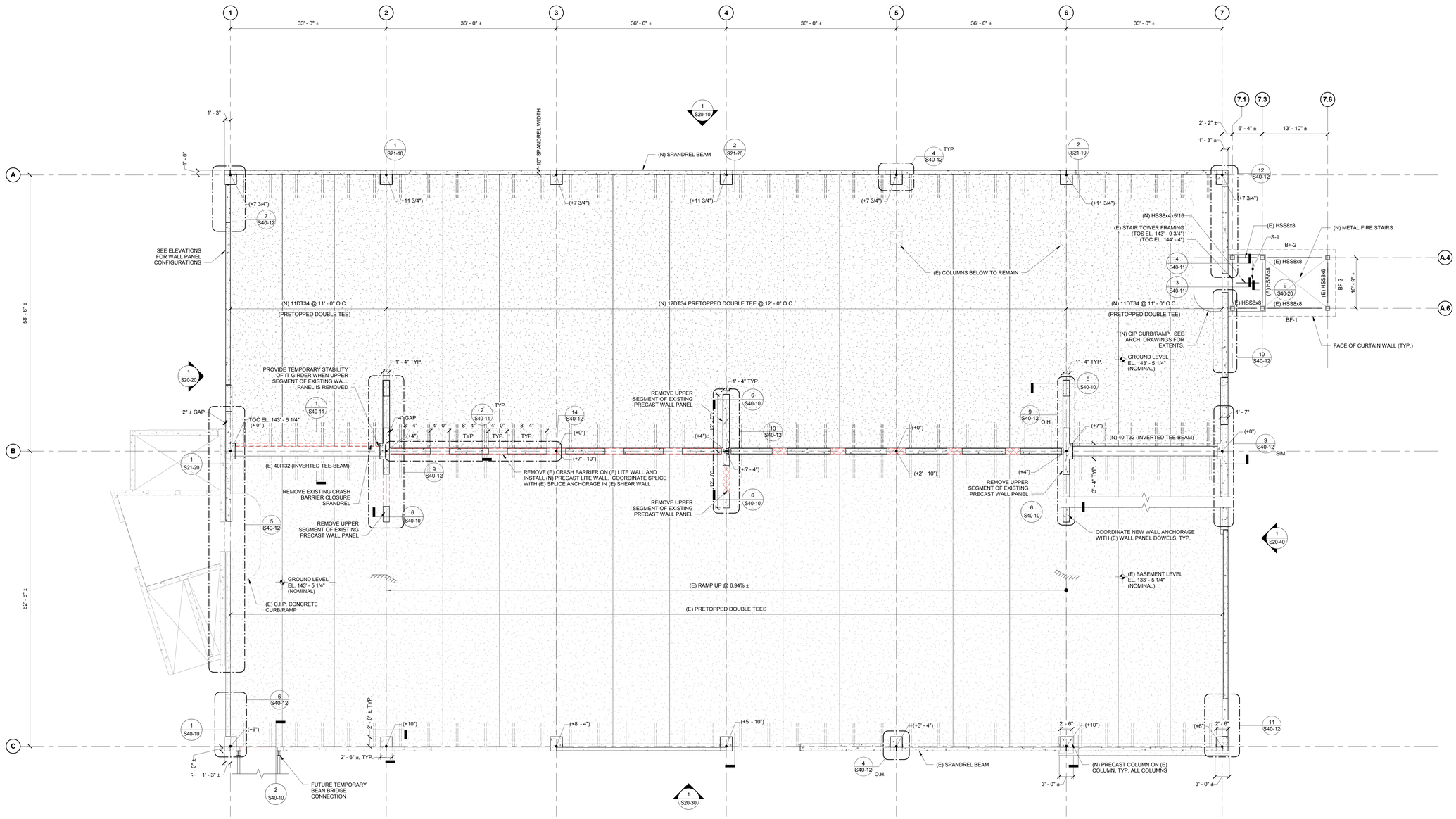
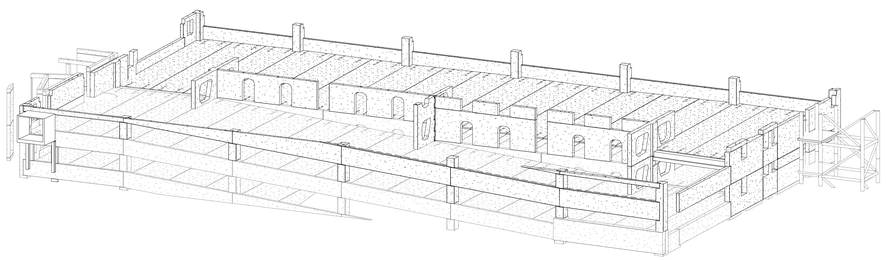


NEW AND EXISTING CONSTRUCTION - PRECAST CONCRETE - GROUND LEVEL FLOOR PLAN (EXISTING GARAGE ROOF)

1/8" = 1'-0"



ISOMETRIC VIEW - GROUND LEVEL

SLAB NOTE S-1

3 1/4" THICK LIGHTWEIGHT CONCRETE SLAB ON 3" DEEP 20 GA. COMPOSITE METAL DECK (TOTAL DEPTH = 6 1/4"), REINFORCE WITH #3 @ 15" OC EACH WAY.

NOTES:

1. NOMINAL GARAGE FLOOR TOC ELEVATIONS, TO BE FIELD VERIFIED BY CONTRACTOR:

(E) SUB-LEVEL 6:	VARIES
(E) SUB-LEVEL 5:	83' - 5 1/4"
(E) SUB-LEVEL 4:	93' - 5 1/4"
(E) SUB-LEVEL 3:	103' - 5 1/4"
(E) SUB-LEVEL 2:	113' - 5 1/4"
(E) SUB-LEVEL 1:	123' - 5 1/4"
(E) BASEMENT LEVEL:	133' - 5 1/4"
(E/N) GROUND FLOOR LEVEL:	143' - 5 1/4"
(N) FUTURE 1ST FLOOR LEVEL:	153' - 5 1/4"
(N) FUTURE 2ND FLOOR LEVEL:	163' - 5 1/4"
(N) FUTURE 3RD FLOOR / ROOF LEVEL:	173' - 5 1/4"

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PROJECT TITLE

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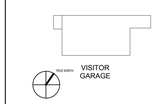
No. 11120
LICENSED PROFESSIONAL ENGINEER
3-21-2018

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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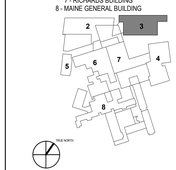

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TITLE

FLOOR PLAN - GROUND LEVEL

SHEET NUMBER

S10-10

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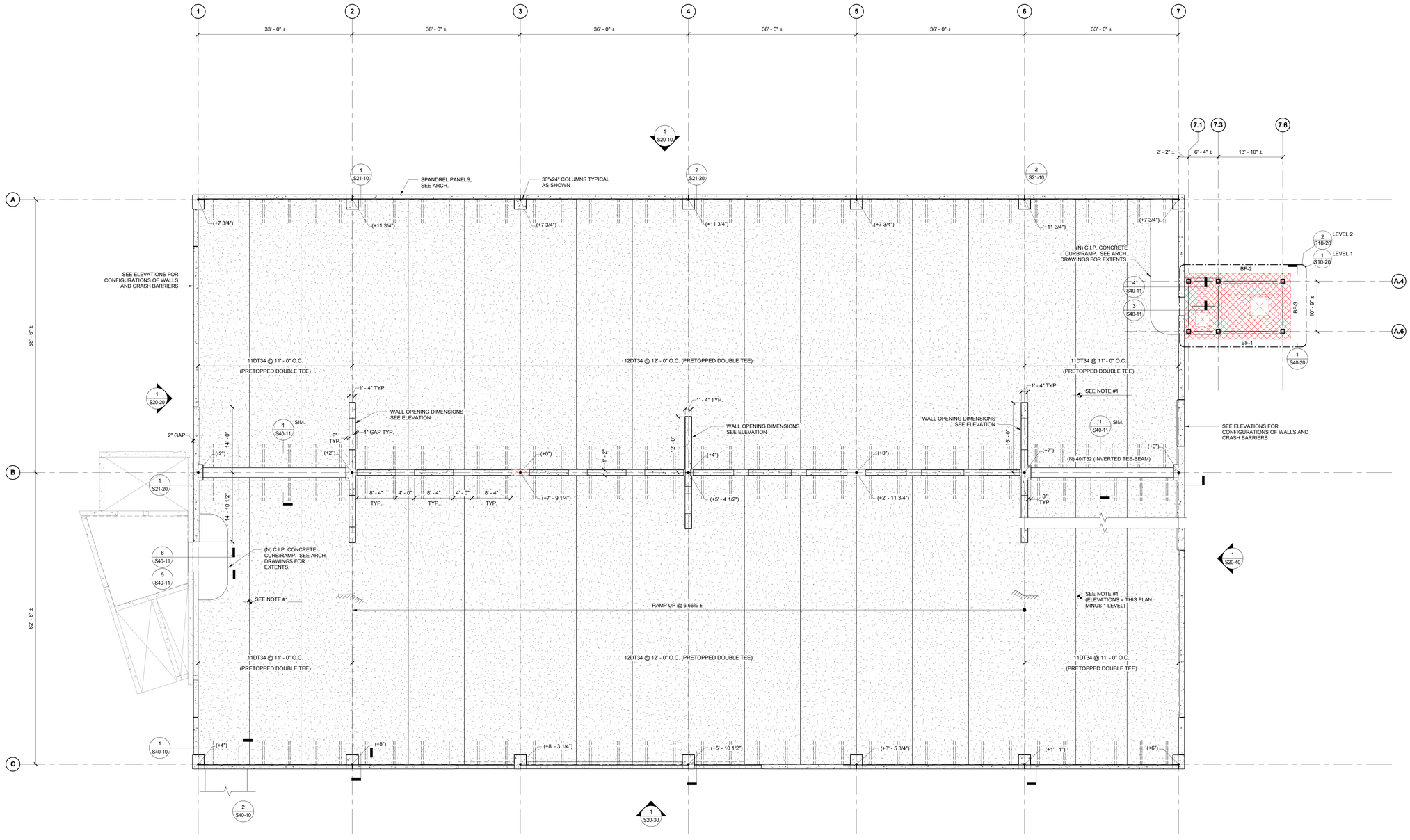
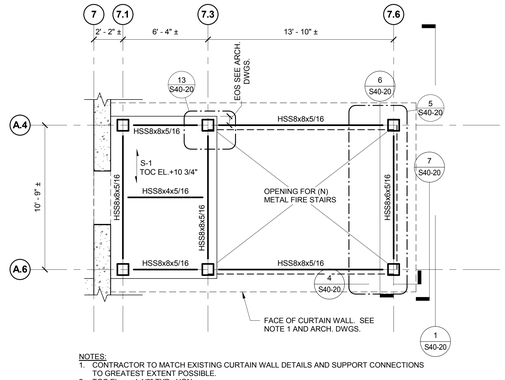


NEW CONSTRUCTION - PRECAST CONCRETE - 1ST AND 2ND LEVELS

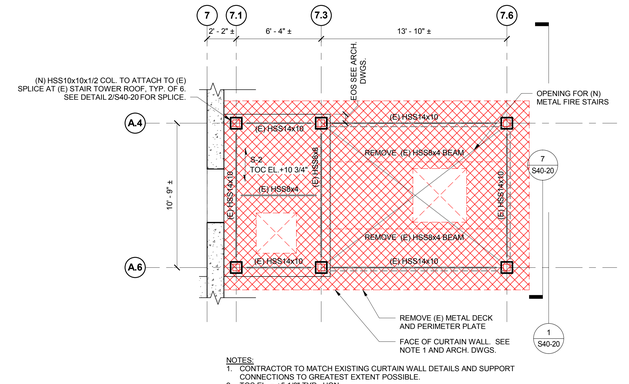
1/8" = 1'-0"



NOTES:
1. CONTRACTOR TO MATCH EXISTING CURTAIN WALL DETAILS AND SUPPORT CONNECTIONS TO GREATEST EXTENT POSSIBLE.
2. TOC EL. = +4 1/2" TYP., UON.

2 EAST STAIR TOWER LEVEL 2 PART PLAN

1/4" = 1'-0"



NOTES:
1. CONTRACTOR TO MATCH EXISTING CURTAIN WALL DETAILS AND SUPPORT CONNECTIONS TO GREATEST EXTENT POSSIBLE.
2. TOS EL. = +5 1/2" TYP., UON.

1 EAST STAIR TOWER LEVEL 1 PART PLAN

1/4" = 1'-0"

SLAB NOTE S-1

3 1/4" THICK LIGHTWEIGHT CONCRETE SLAB ON 3" DEEP 20 GA. COMPOSITE METAL DECK (TOTAL DEPTH = 6 1/4"), REINFORCE WITH #3 @ 15" OC EACH WAY.

SLAB NOTE S-2

3 1/4" THICK LIGHTWEIGHT CONCRETE SLAB ON 2" DEEP 20 GA. COMPOSITE METAL DECK (TOTAL DEPTH = 5 1/4"), REINFORCE WITH #3 @ 15" OC EACH WAY.

NOTES:

1. NOMINAL GARAGE FLOOR TOC ELEVATIONS, TO BE FIELD VERIFIED BY CONTRACTOR:

(E) SUB-LEVEL 6:	VARIES
(E) SUB-LEVEL 5:	83' - 5 1/4"
(E) SUB-LEVEL 4:	93' - 5 1/4"
(E) SUB-LEVEL 3:	103' - 5 1/4"
(E) SUB-LEVEL 2:	113' - 5 1/4"
(E) SUB-LEVEL 1:	123' - 5 1/4"
(E) BASEMENT LEVEL:	133' - 5 1/4"
(E/N) GROUND FLOOR LEVEL:	143' - 5 1/4"
(N) FUTURE 1ST FLOOR LEVEL:	153' - 5 1/4"
(N) FUTURE 2ND FLOOR LEVEL:	163' - 5 1/4"
(N) FUTURE 3RD FLOOR / ROOF LEVEL:	173' - 5 1/4"

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PROJECT KEY PLAN

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TITLE

FLOOR PLAN - LEVEL 1 AND 2

SHEET NUMBER

S10-20

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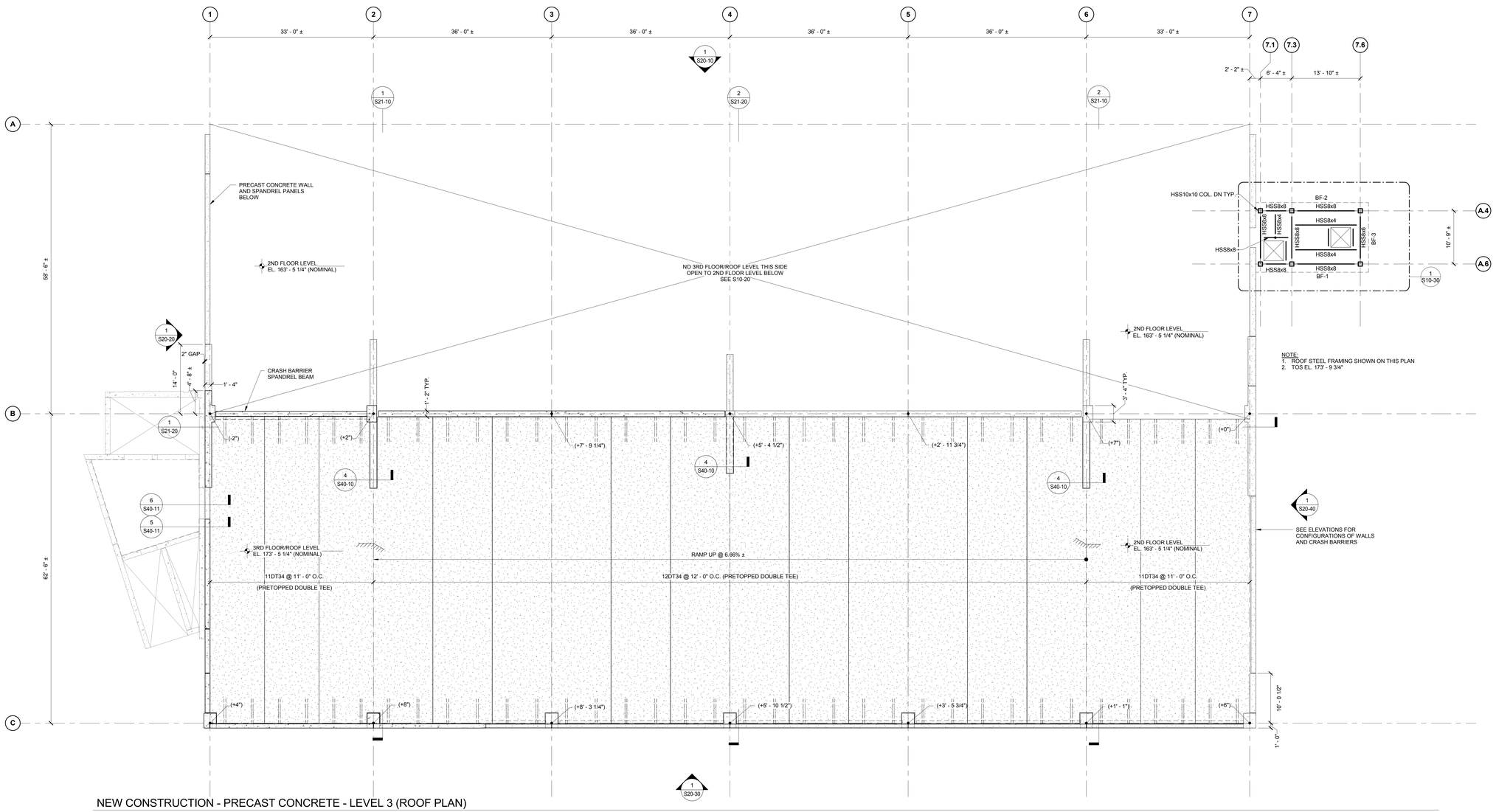
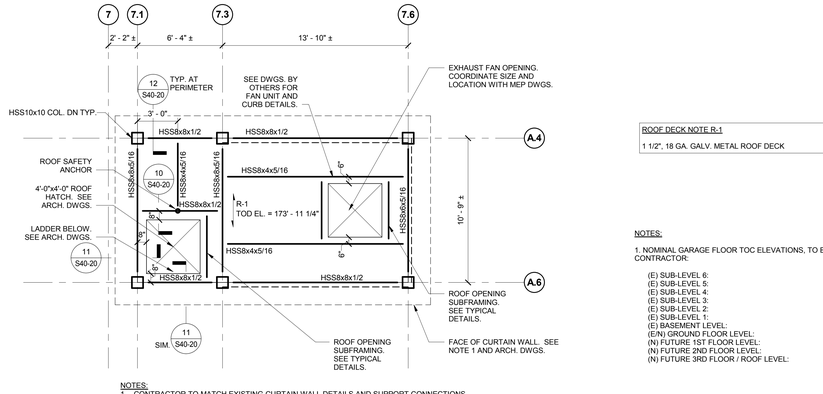


NEW CONSTRUCTION - PRECAST CONCRETE - LEVEL 3 (ROOF PLAN)

1/8" = 1'-0"



NOTES:
1. CONTRACTOR TO MATCH EXISTING CURTAIN WALL DETAILS AND SUPPORT CONNECTIONS TO GREATEST EXTENT POSSIBLE.
2. TOC EL. = +4 1/2" TYP., UON.

1 EAST STAIR TOWER ROOF PART PLAN

1/4" = 1'-0"

ROOF DECK NOTE R-1

1 1/2", 18 GA. GALV. METAL ROOF DECK

NOTES:

1. NOMINAL GARAGE FLOOR TOC ELEVATIONS, TO BE FIELD VERIFIED BY CONTRACTOR:

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Maine Medical Center
MaineHealth

22 Bramhall Street
Portland, ME 04102

CONSULTANTS

CIVIL/ LANDSCAPE ARCHITECT
Sebago Technics
75 John Roberts Road, Suite 1A,
South Portland ME 04106

STRUCTURAL ENG/ BUILDING ENVELOPE CONSULTANT
Simpson Gumpertz & Heger Inc.
41 Seyon Street, Building 1, Suite 500,
Waltham MA 02453

MEP/FP ENGINEER/ CODE
AKF Group LLC
99 Bedford Street, 2nd Floor, Boston MA 02111

CONSTRUCTION MANAGER
Turner Construction
2 Seaport Lane, Suite 200, Boston MA 02210

ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

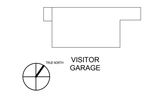
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

STATE OF MAINE
JOHN H. THOMSEN IV
No. 11120
LICENSED PROFESSIONAL ENGINEER
3-21-2018

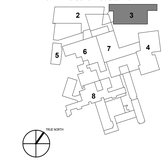
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	NWS
Checked	BMT
Approved	JHT

TITLE

FLOOR PLAN - LEVEL 3

SHEET NUMBER

S10-30

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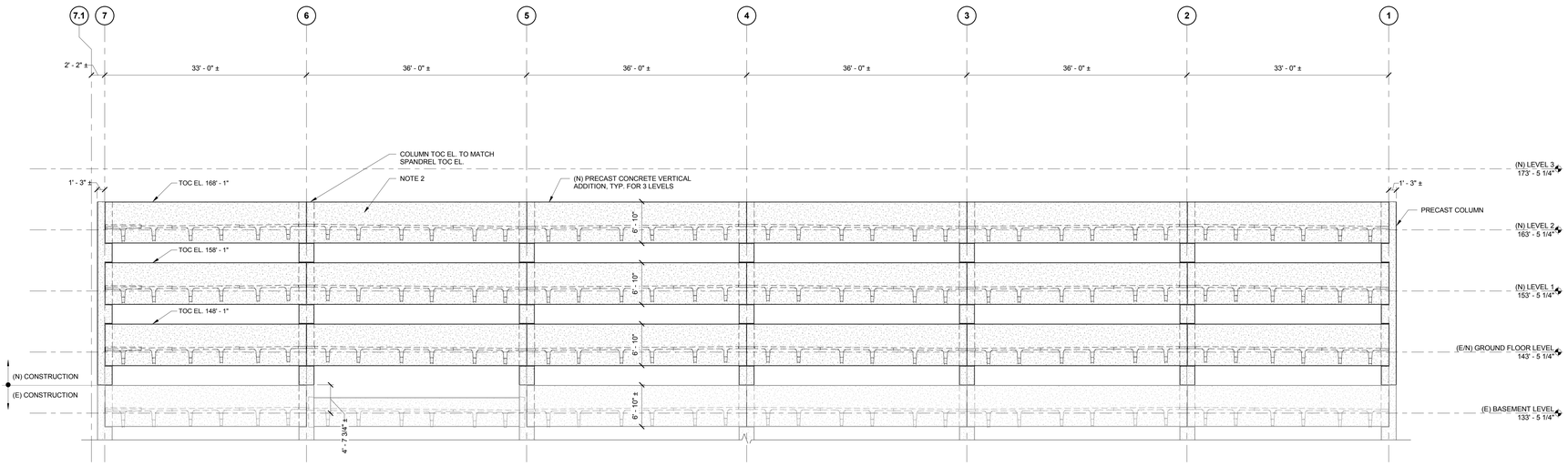

NOTES:
1. DEMOLISH/SAWCUT PORTION OF EXISTING WALL PANEL AS INDICATED.
2. SEE ARCHITECTURAL DRAWINGS FOR THIN BRICK AND REVEALS IN PRECAST ELEMENTS.
3. SEE ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.

1 NORTH WALL ELEVATION - GRID LINE "A"

1/8" = 1'-0"

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PROJECT TITLE

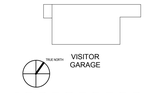
Visitor Garage Expansion

22 Bramhall Street
Portland, ME 04102

STATE OF MAINE
JOHN H. THOMSEN IV
No. 11120
LICENSED PROFESSIONAL ENGINEER
3-27-2018

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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7 - RICHARDS BUILDING
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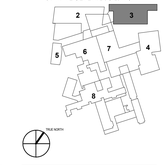

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

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	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	NWS
Checked	BMT
Approved	JHT

TITLE

NORTH ELEVATION

SHEET NUMBER

S20-10

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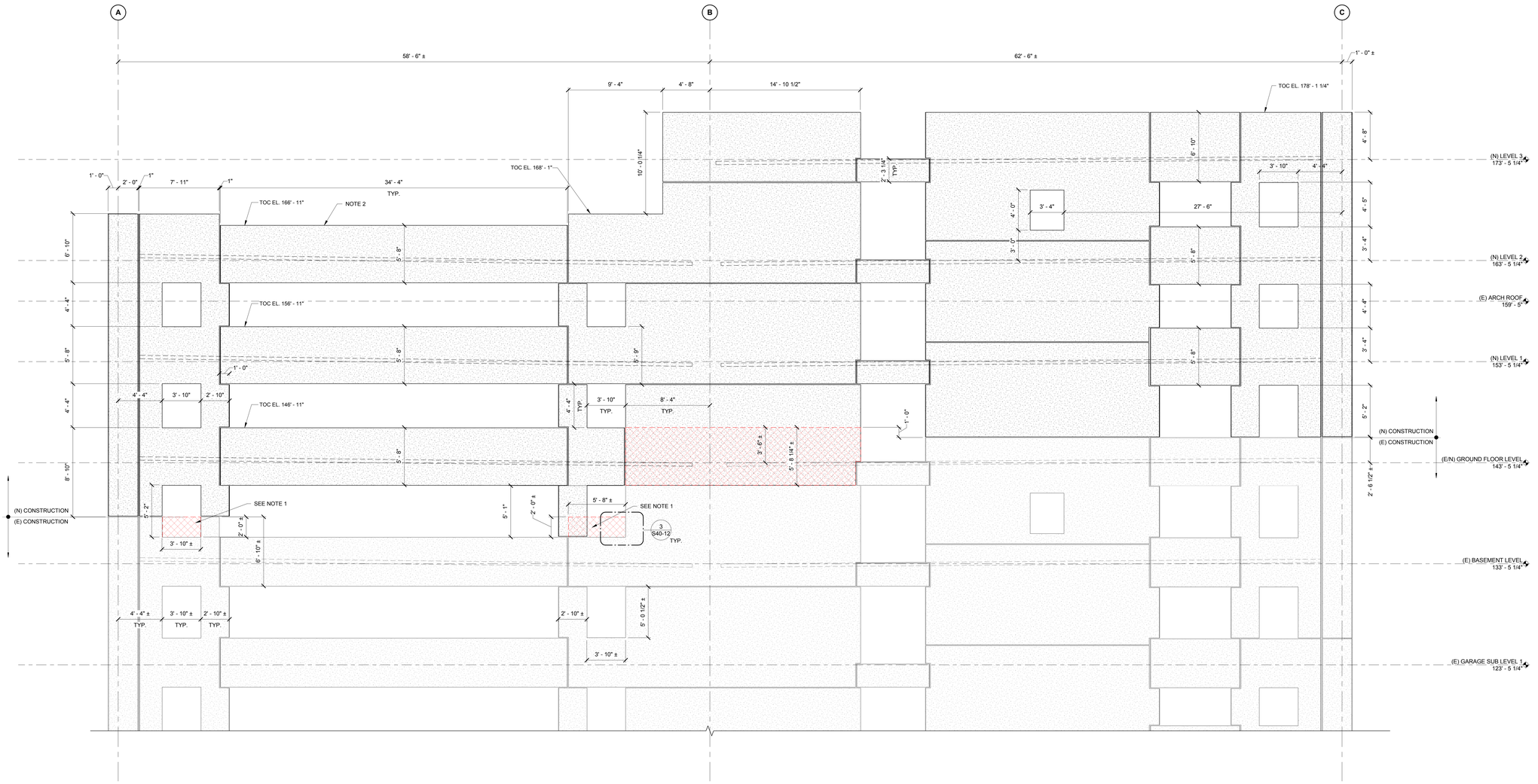

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1. DEMOLISH/SAWCUT PORTION OF EXISTING WALL PANEL AS INDICATED.
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1 WEST WALL ELEVATION - GRID LINE "1"
1/4" = 1'-0"

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VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA
02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

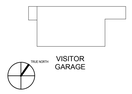
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

STATE OF MAINE
JOHN H. THOMSEN IV
No. 11120
LICENSED
PROFESSIONAL ENGINEER
3-27-2018

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
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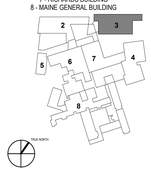

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

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Job Number	152182.000
Drawn	NWS
Checked	BMT
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TITLE

WEST ELEVATION

SHEET NUMBER

S20-20

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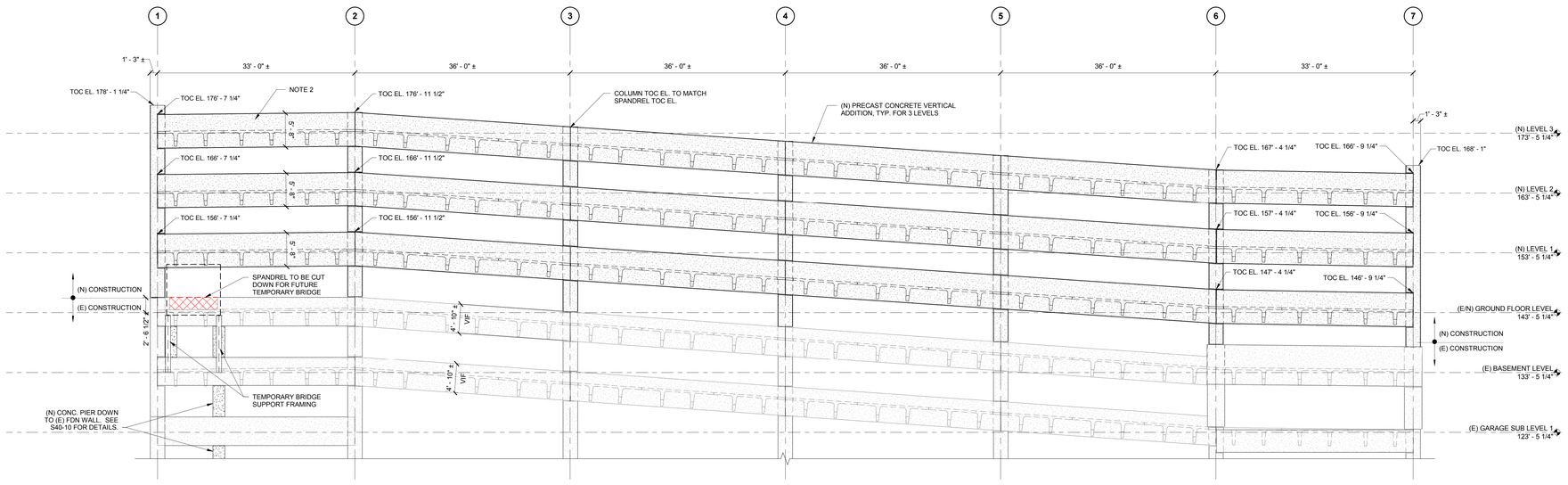

NOTES:
1. DEMOLISH/SAWCUT PORTION OF EXISTING WALL PANEL AS INDICATED.
2. SEE ARCHITECTURAL DRAWINGS FOR THIN BRICK AND REVEALS IN PRECAST ELEMENTS.
3. SEE ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.

1 SOUTH WALL ELEVATION - GRID LINE "C"

1/8" = 1'-0"

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CLIENT

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Portland, ME 04102

CONSULTANTS

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Waltham MA 02453

MEP/FP ENGINEER/ CODE
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CONSTRUCTION MANAGER
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ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

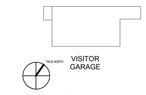
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

STATE OF MAINE
JOHN H. THOMSEN IV
No. 11120
LICENSED PROFESSIONAL ENGINEER
3-27-2018

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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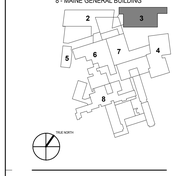

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

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	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	NWS
Checked	BMT
Approved	JHT

TITLE

SOUTH ELEVATION

SHEET NUMBER

S20-30

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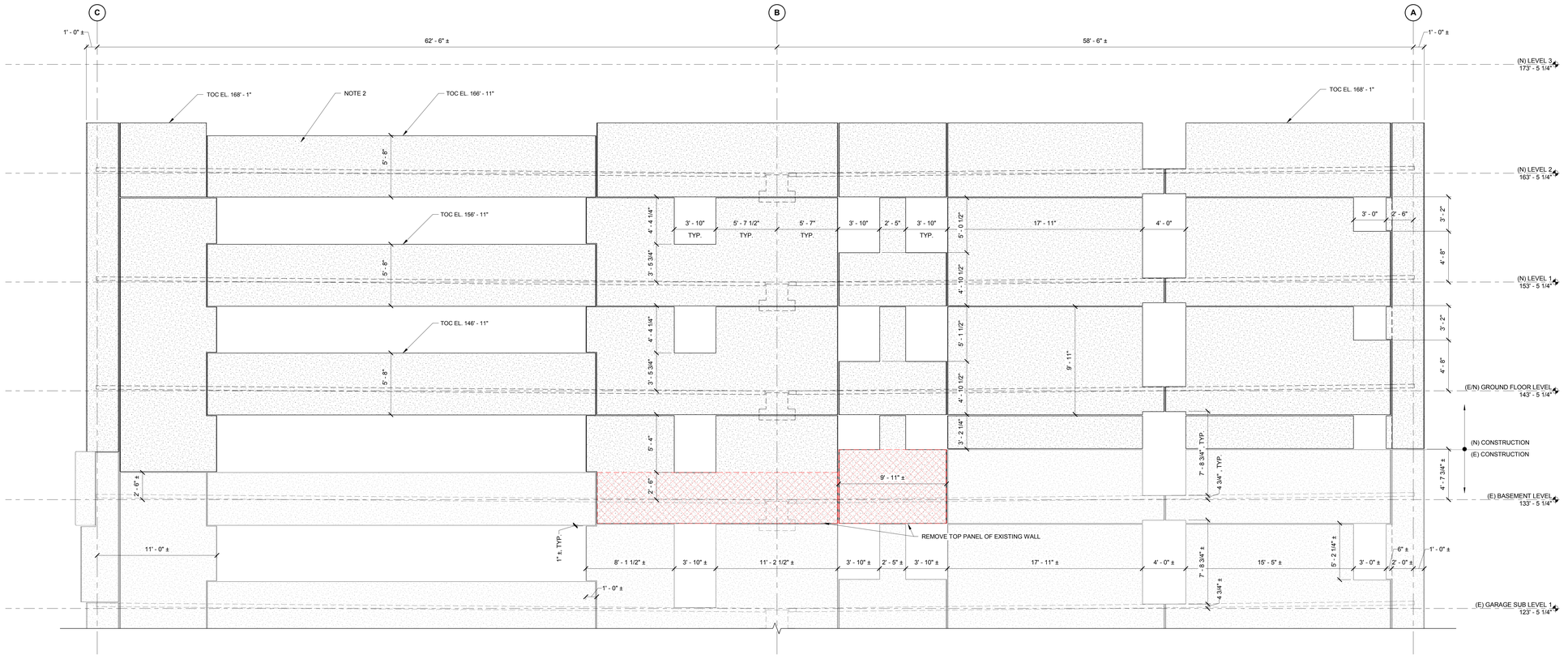

NOTES:
1. DEMOLISH/SAWCUT PORTION OF EXISTING WALL PANEL AS INDICATED.
2. SEE ARCHITECTURAL DRAWINGS FOR THIN BRICK AND REVEALS IN PRECAST ELEMENTS.
3. SEE ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.

1 EAST WALL ELEVATION - GRID LINE "7"

1/4" = 1'-0"

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CLIENT

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Portland, ME 04102

CONSULTANTS

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Sebago Technics
75 John Roberts Road, Suite 1A,
South Portland ME 04106

STRUCTURAL ENG/ BUILDING ENVELOPE CONSULTANT
Simpson Gumpertz & Heger Inc.
41 Seyon Street, Building 1, Suite 500,
Waltham MA 02453

MEP/FP ENGINEER/ CODE
AKF Group LLC
99 Bedford Street, 2nd Floor, Boston MA 02111

CONSTRUCTION MANAGER
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ELEVATOR CONSULTANT
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101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

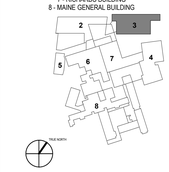
STATE OF MAINE
JOHN H. THOMSEN IV
No. 11120
LICENSED PROFESSIONAL ENGINEER
3-29-2018

KEY PLANS

PROJECT KEY PLAN

OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



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Job Number	152182.000
Drawn	NWS
Checked	BMT
Approved	JHT

TITLE

EAST ELEVATION

SHEET NUMBER

S20-40

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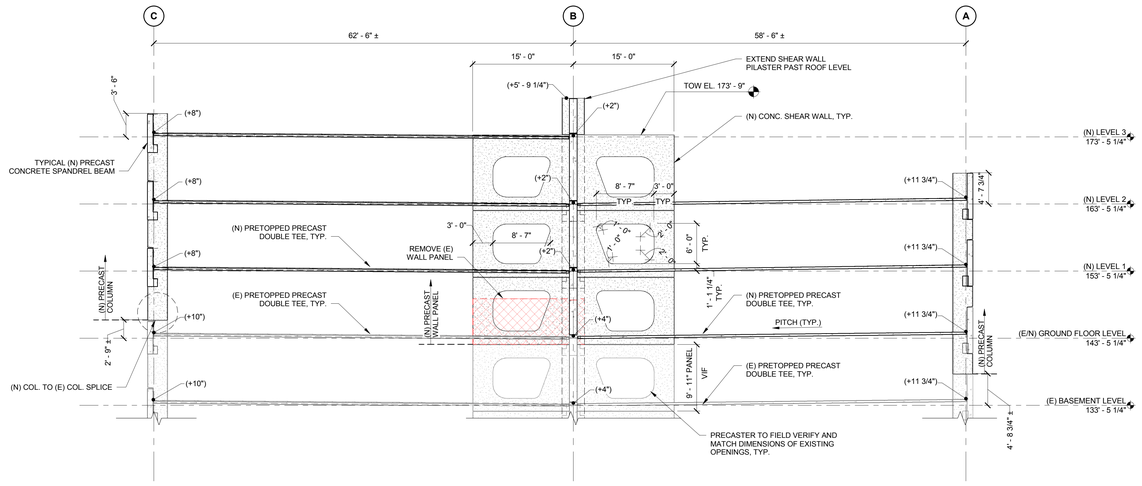
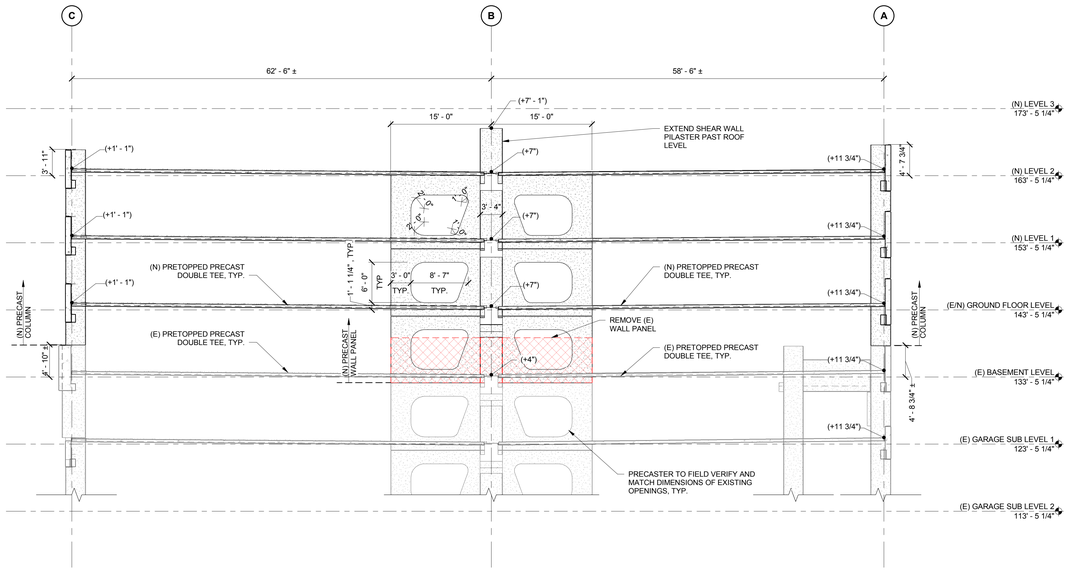


1 WALL ELEVATION - GRID LINE "2"
1/8" = 1'-0"



2 WALL ELEVATION - GRID LINE "6"
1/8" = 1'-0"

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CLIENT

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COST ESTIMATOR
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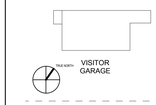
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

STATE OF MAINE
JOHN H. THOMSEN IV
No. 11120
LICENSED PROFESSIONAL ENGINEER
5-21-2018

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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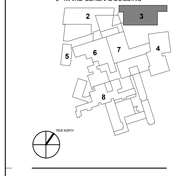

CONSTRUCTION DOCUMENT SET
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	PERMIT SET	03.29.18
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Job Number	152182.000
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Approved	JHT

TITLE

BUILDING SECTION

SHEET NUMBER

S21-10

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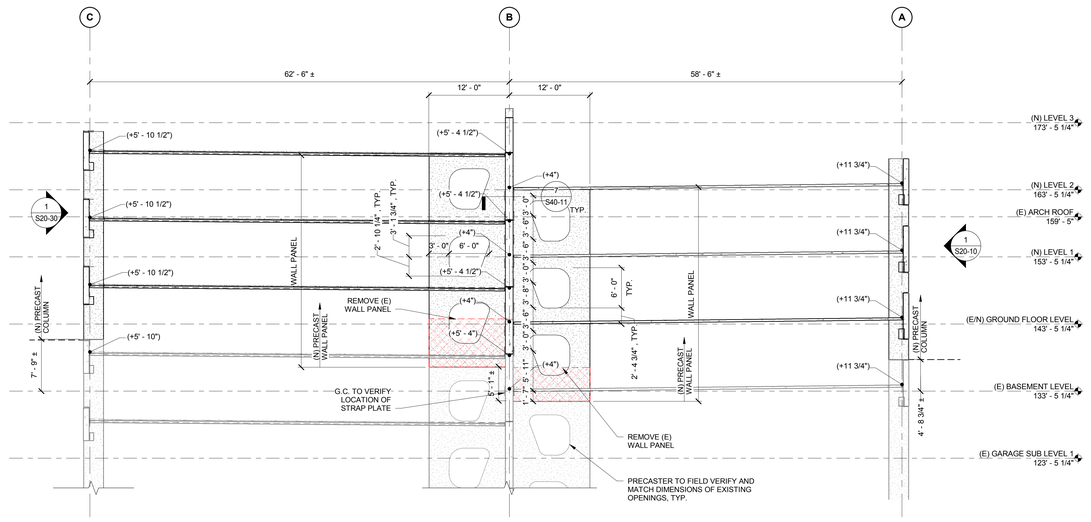
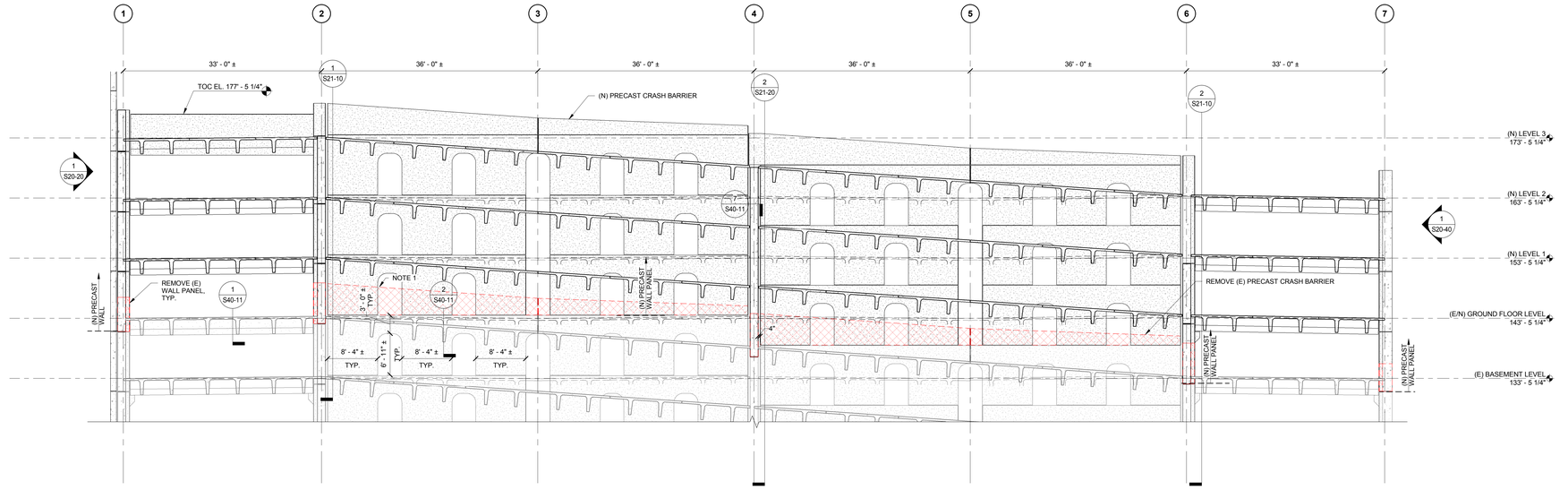


2 WALL ELEVATION - GRID LINE "4"
1/8" = 1'-0"



NOTES:
1. REMOVE EXISTING PRECAST CRASH BARRIER AT TOP OF LITE WALL.

1 WALL ELEVATION - GRID LINE "B"
1/8" = 1'-0"

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STATE OF MAINE
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No. 11120
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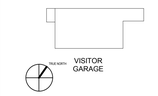
3-21-2018

KEY PLANS

PROJECT KEY PLAN



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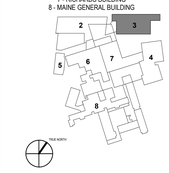

CONSTRUCTION DOCUMENT SET
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TITLE

BUILDING SECTION

SHEET NUMBER

S21-20

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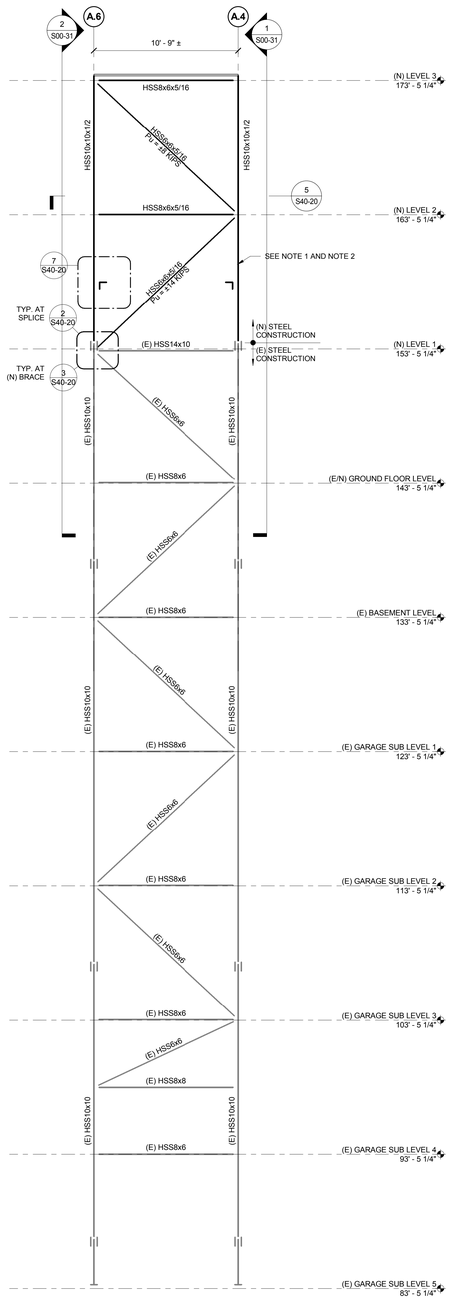
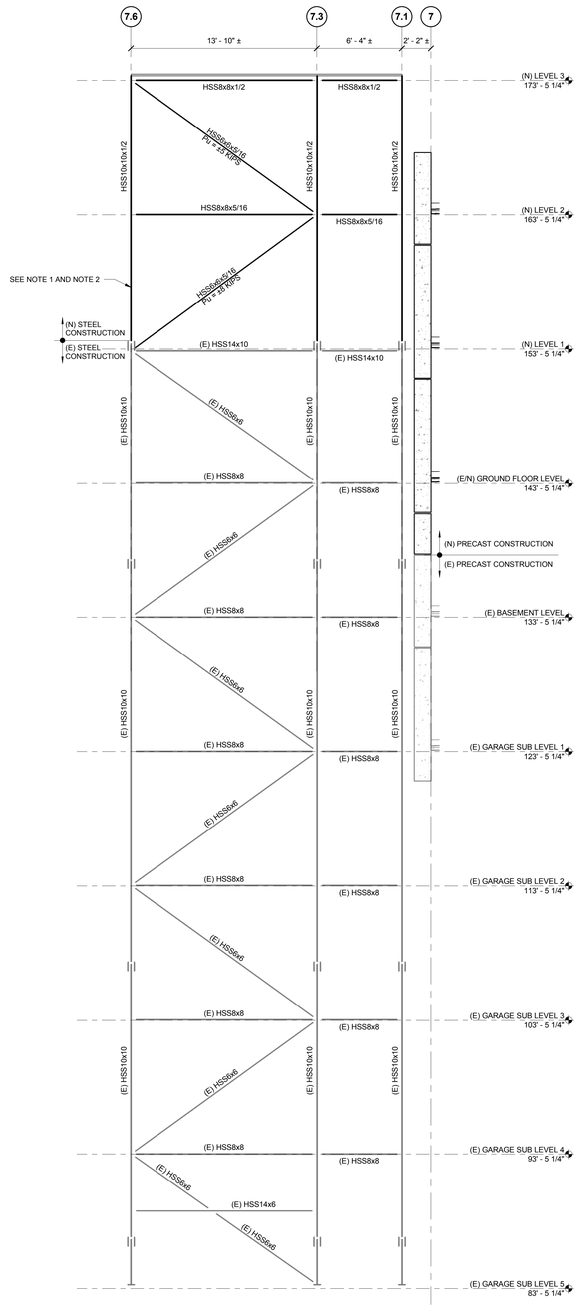


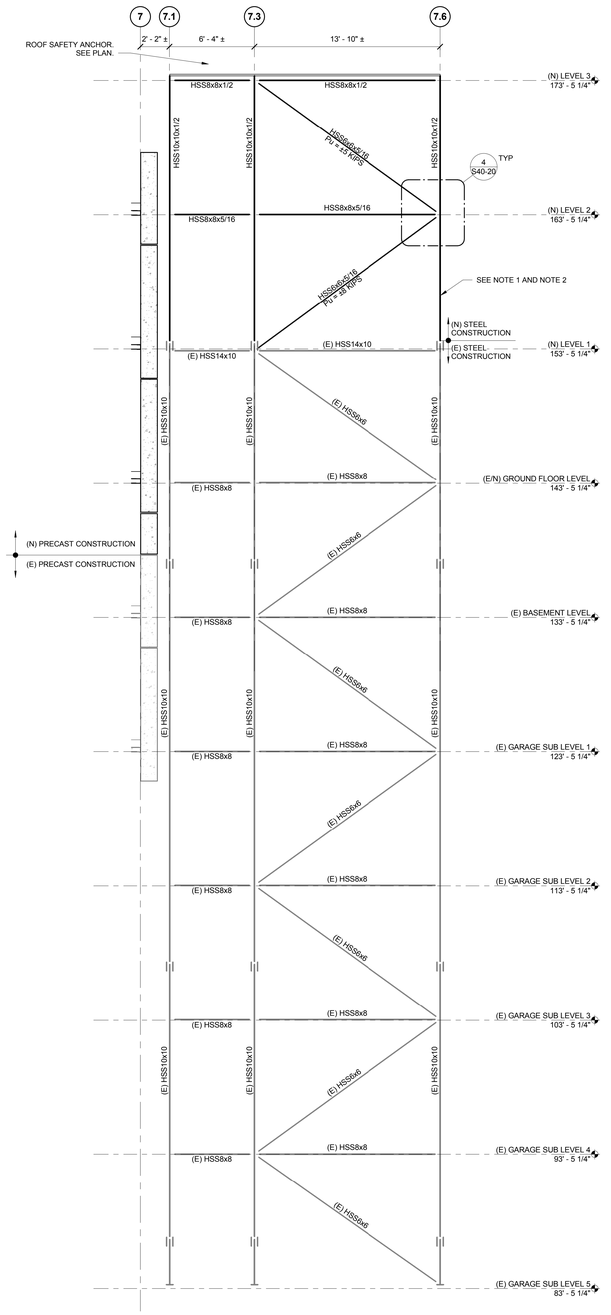
NOTES:
1. CONTRACTOR TO PROVIDE TEMPORARY COLUMN BRACING FOR STABILITY DURING ERECTION.
2. RECOMMEND SHOP FABRICATING STAIR FRAME TO GREATEST EXTENT POSSIBLE.

3 BF-3
1/4" = 1'-0"



NOTES:
1. CONTRACTOR TO PROVIDE TEMPORARY COLUMN BRACING FOR STABILITY DURING ERECTION.
2. RECOMMEND SHOP FABRICATING STAIR FRAME TO GREATEST EXTENT POSSIBLE.

2 BF-2
1/4" = 1'-0"



NOTES:
1. CONTRACTOR TO PROVIDE TEMPORARY COLUMN BRACING FOR STABILITY DURING ERECTION.
2. RECOMMEND SHOP FABRICATING STAIR FRAME TO GREATEST EXTENT POSSIBLE.

1 BF-1
1/4" = 1'-0"

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ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

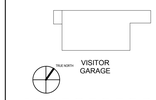
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

STATE OF MAINE
JOHN H. THOMSEN IV
No. 11120
LICENSED PROFESSIONAL ENGINEER
5-21-2018

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
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3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
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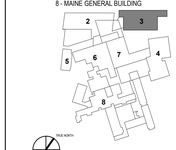

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	KAK
Checked	BMT
Approved	JHT

TITLE

EAST STAIR TOWER ELEVATIONS

SHEET NUMBER

S30-10

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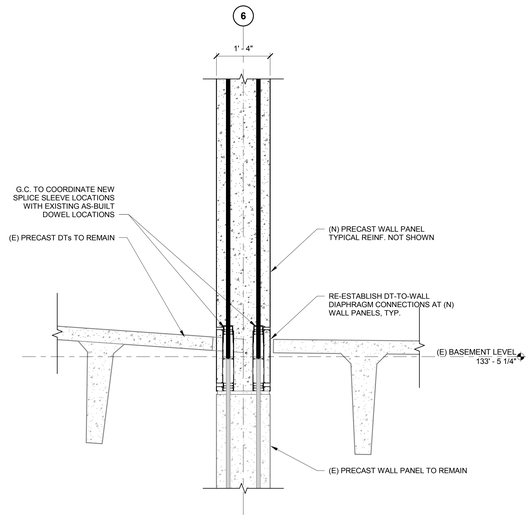
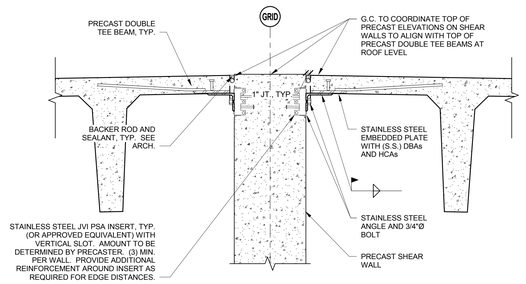
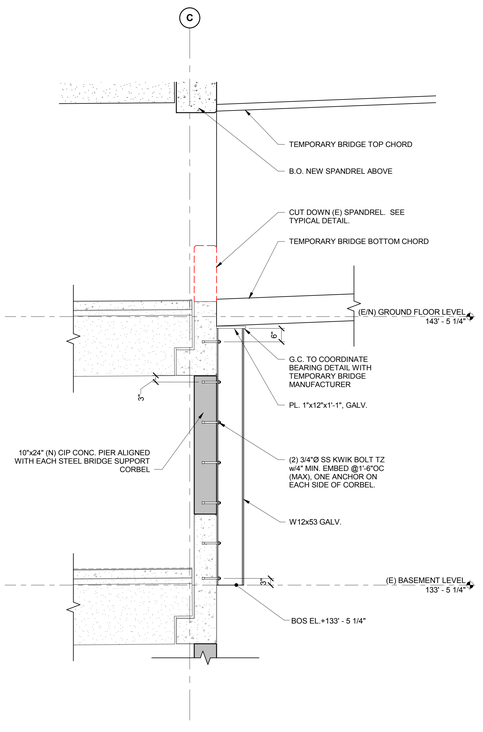


6 (N) PRECAST WALL PANEL ON (E) PRECAST WALL PANEL
3/4" = 1'-0"

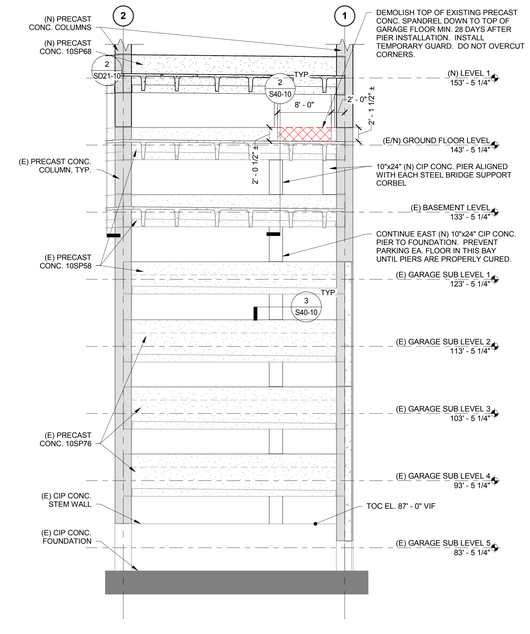
5 NOT USED
3/4" = 1'-0"



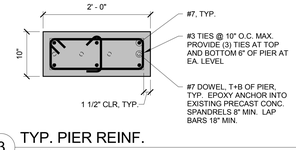
4 TYPICAL INTERIOR SHEAR WALL DETAIL AT NEW ROOF
1" = 1'-0"



2 TEMPORARY BEAN BRIDGE SUPPORT
1/2" = 1'-0"



1 PARTIAL ELEVATION AT FUTURE TEMPORARY BEAN CONNECTOR
1/8" = 1'-0"



3 TYP. PIER REINF.
1" = 1'-0"

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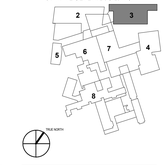

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	PERMIT SET	03.09.18

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Drawn	NWS
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TITLE

PRECAST DETAILS

SHEET NUMBER

S40-10

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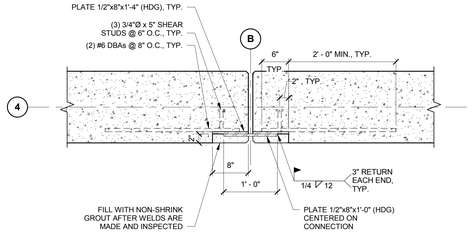
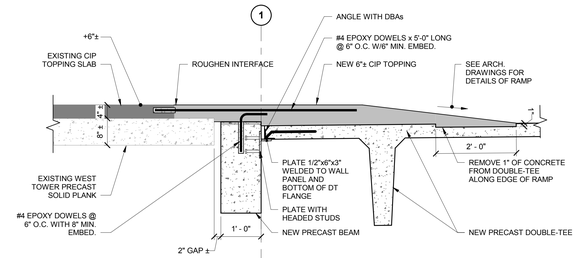
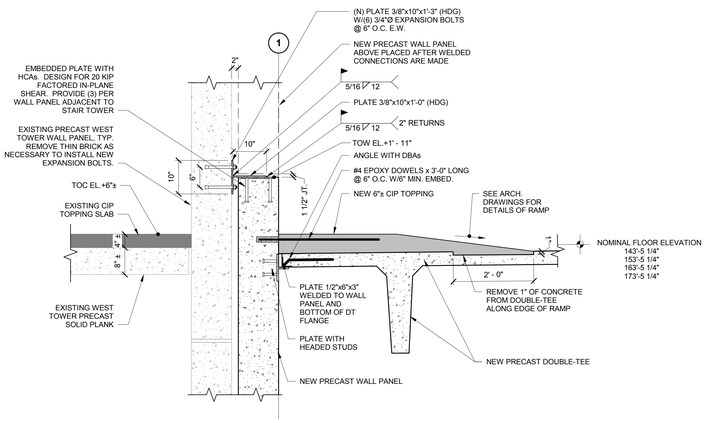


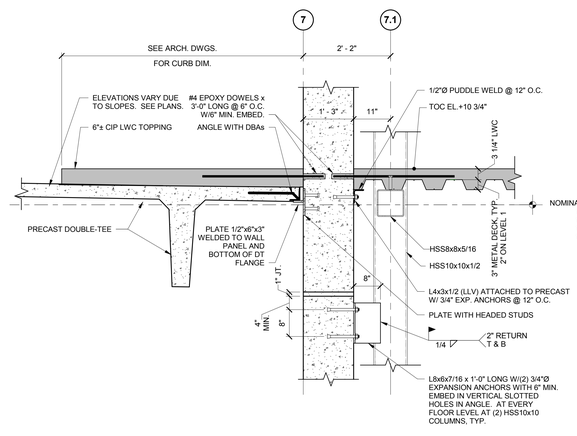
7 SHEAR WALL TIE CONNECTION
1" = 1'-0"



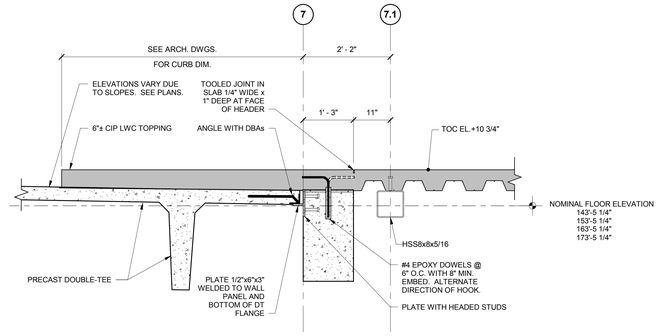
6 SECTION THRU DOOR OPENING BETWEEN WEST STAIR TOWER AND GARAGE
3/4" = 1'-0"



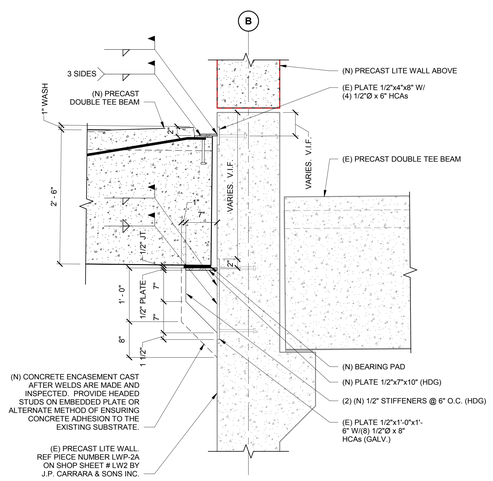
5 SECTION BETWEEN WEST STAIR TOWER AND GARAGE
3/4" = 1'-0"



4 SECTION BETWEEN EAST STAIR AND GARAGE
3/4" = 1'-0"

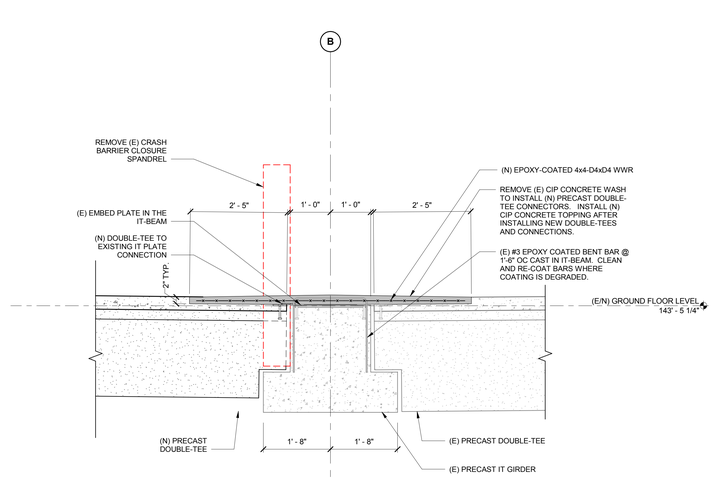


3 SECTION THRU DOOR OPENING BETWEEN EAST STAIR AND GARAGE
3/4" = 1'-0"



NOTE:
PRECASTER SHALL BE RESPONSIBLE FOR FINAL DESIGN OF NEW CONNECTIONS.

2 DOUBLE TEE AT EXISTING LITE WALL
1" = 1'-0"



1 SECTION AT NEW DOUBLE TEE TO EXISTING INVERTED T-BEAM
3/4" = 1'-0"

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TITLE

PRECAST DETAILS

SHEET NUMBER

S40-11

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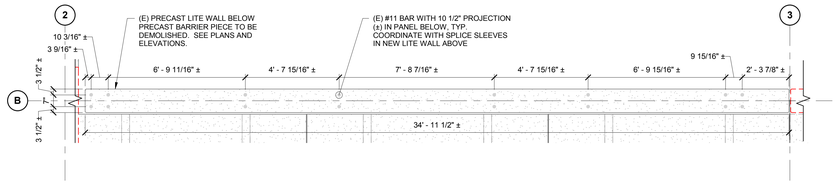
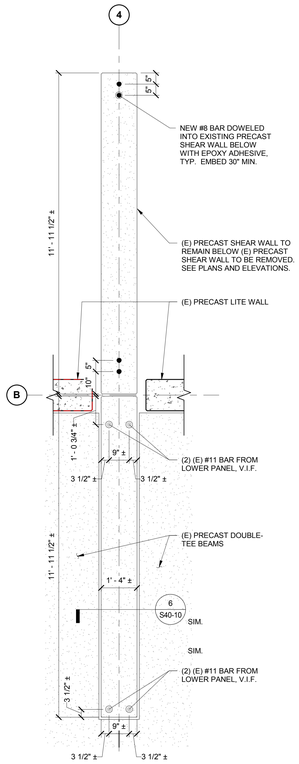
GENERAL NOTE FOR INTERFACE DETAILS:

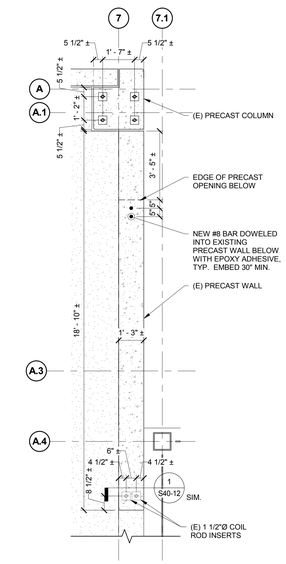
THE DETAILS SHOWN ON THIS DRAWING, ALONG WITH THE INFORMATION AND DIMENSIONS IN EACH DETAIL, ARE DRAWN USING PRECAST PIECE TICKETS FOR THE EXISTING PARKING GARAGE, PHOTOGRAPHS, AND FIELD VISITS. SOME INFORMATION COULD NOT BE ACCURATELY VERIFIED. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL THE INFORMATION NECESSARY TO INTERFACE NEW PRECAST COMPONENTS TO THE EXISTING GARAGE. THE CONTRACTOR SHALL VERIFY THIS INFORMATION WITH AMPLE TIME TO ALLOW THE PRECASTER TO MAKE ADJUSTMENTS, AS NEEDED, TO CALCULATIONS AND PIECE DESIGNS PRIOR TO THE SHOP DRAWING PHASE.



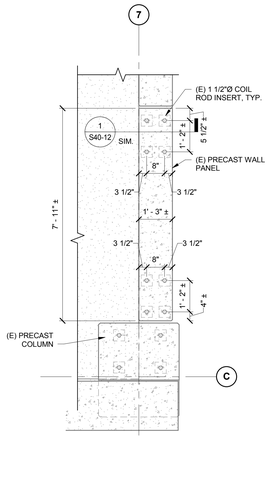
14 INTERFACE AT TYPICAL LITE WALL
3/8" = 1'-0"



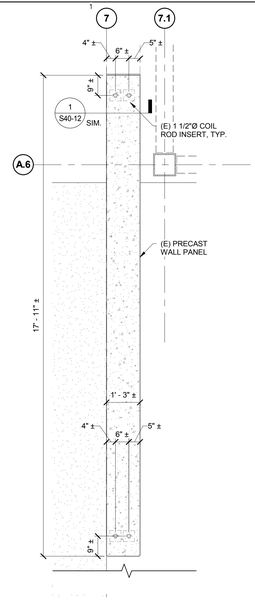
13 INTERFACE DETAIL AT B/4
1/2" = 1'-0"



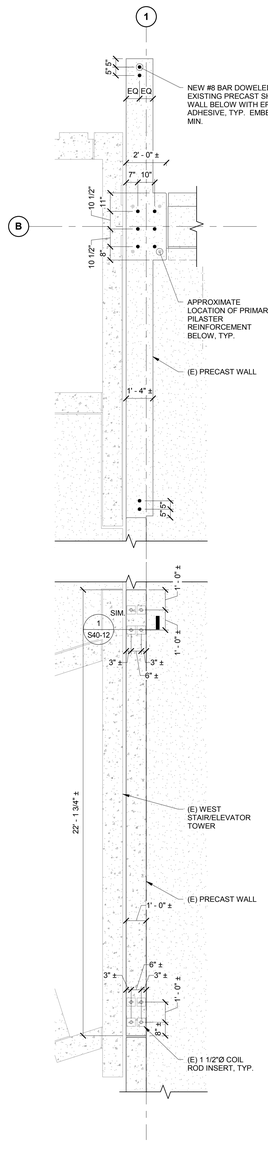
12 INTERFACE DETAIL AT A/7
3/8" = 1'-0"



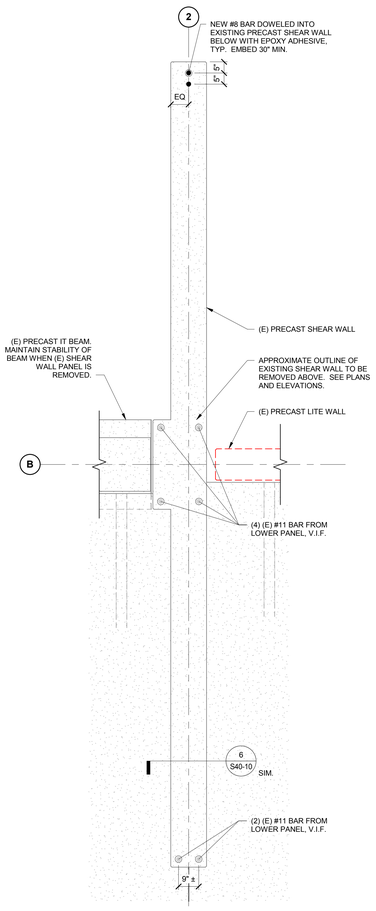
11 INTERFACE DETAIL AT C/7
1/2" = 1'-0"



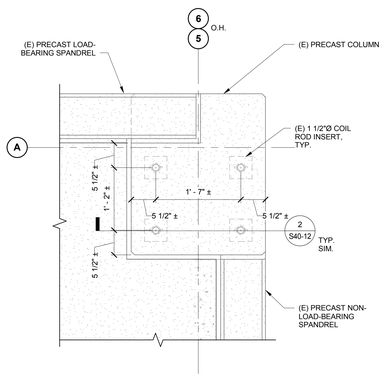
10 INTERFACE DETAIL AT A.6/7
1/2" = 1'-0"



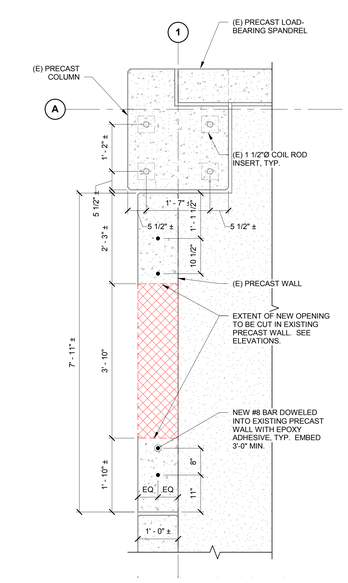
5 INTERFACE DETAIL AT B/1
3/8" = 1'-0"



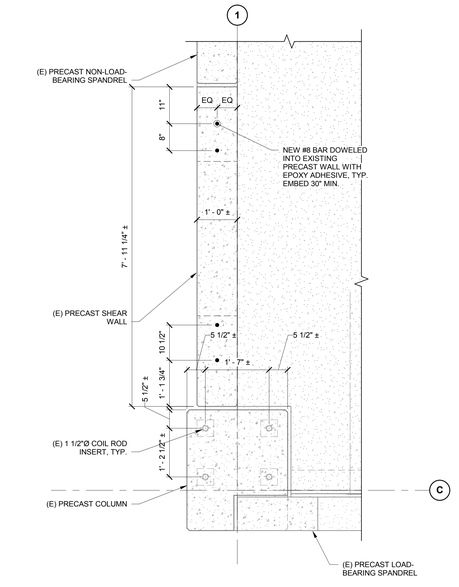
9 INTERFACE DETAIL AT B/2
1/2" = 1'-0"



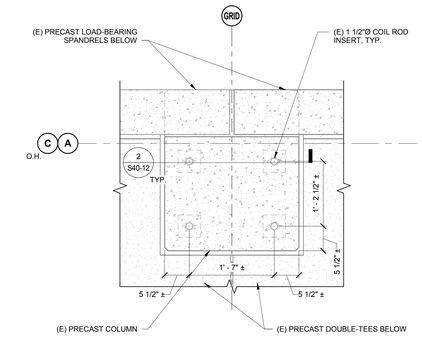
8 INTERFACE DETAIL AT A/5
1" = 1'-0"



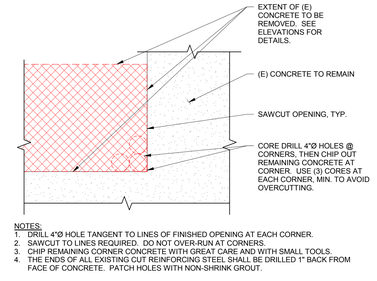
7 INTERFACE DETAIL AT A/1
3/4" = 1'-0"



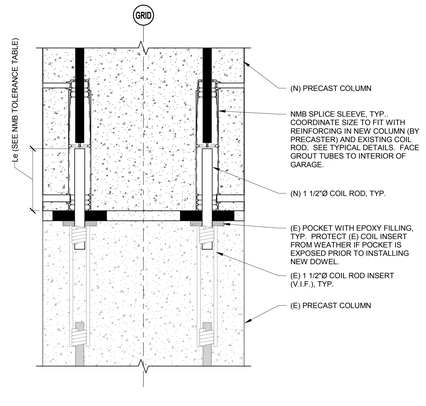
6 INTERFACE DETAIL AT C/1
3/4" = 1'-0"



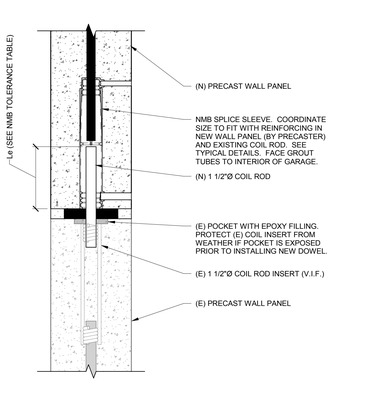
4 INTERFACE DETAIL AT TYPICAL EXTERIOR COLUMN
1" = 1'-0"



3 TYPICAL CUT OPENING DETAIL
1" = 1'-0"



2 SECTION AT NEW TO EXISTING COLUMN
1 1/2" = 1'-0"



1 TYPICAL SECTION AT NEW TO EXISTING WALL
1 1/2" = 1'-0"

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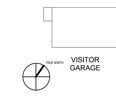
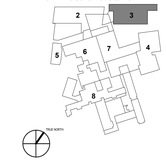
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	NWS
Checked	BMT
Approved	JHT

TITLE

PRECAST INTERFACE DETAILS

SHEET NUMBER

S40-12

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3/29/2018 10:12:39 AM
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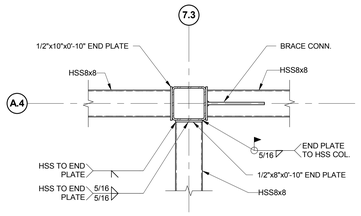
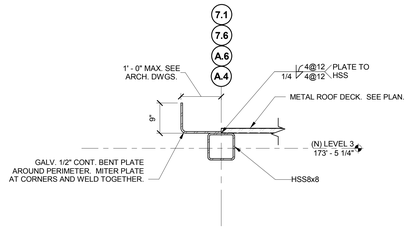
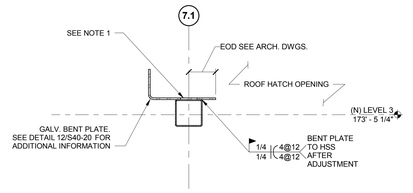


NOTES:
1. SEE DETAILS 5/S40-20 AND 6/S40-20 FOR BALANCE OF INFORMATION NOT SHOWN.

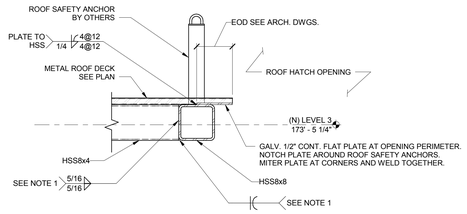
13 PLAN DETAIL: EAST STAIR TOWER BEAM TO COLUMN CONN.
3/4" = 1'-0"



12 SECTION: TYPICAL ROOF EDGE DETAIL
3/4" = 1'-0"

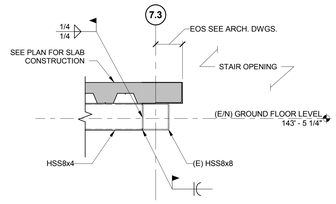


11 SECTION: ROOF EDGE DETAIL AT HATCH OPENING
3/4" = 1'-0"

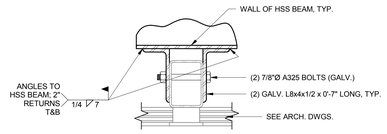


NOTES:
1. FIELD WELD AT CONTRACTOR'S OPTION.

10 SECTION: CONNECTION AT ROOF SAFETY ANCHOR
1" = 1'-0"

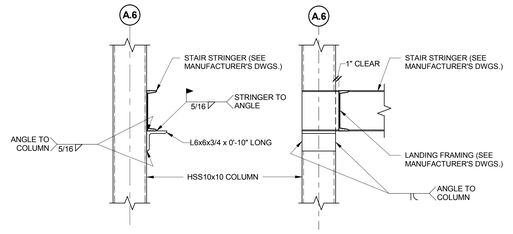


9 (N) HSS BEAM TO (E) HSS BEAM
3/4" = 1'-0"



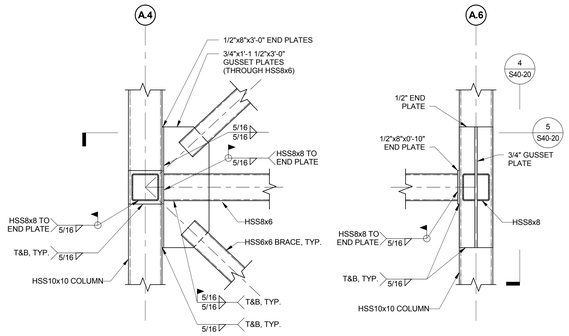
NOTES:
1. L8x4 CURTAIN WALL SUPPORT CLIP ANGLES SHALL BE COORDINATED WITH APPROVED CURTAIN WALL SHOP DRAWINGS PRIOR TO FIELD WELDING TO HSS BEAMS.
2. CONTRACTOR TO MATCH EXISTING CURTAIN WALL DETAILS AND SUPPORT CONNECTIONS TO GREATEST EXTENT POSSIBLE.

8 PLAN DETAIL: EXTERIOR CURTAIN WALL SUPPORT AT EAST TOWER
1 1/2" = 1'-0"



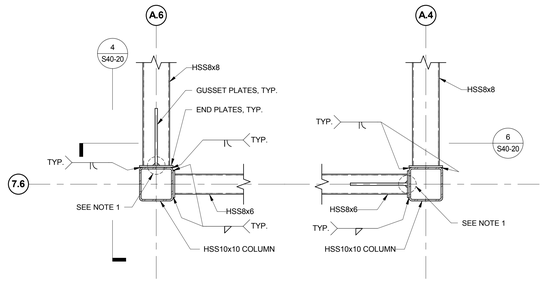
NOTES:
1. BRACE NOT SHOWN FOR CLARITY.
2. CONTRACTOR SHALL FRAME AND DETAIL STAIR TO MATCH EXISTING STAIR TOWER FRAMING.

7 EAST STAIR STRINGER TO INTERMEDIATE LANDING
3/4" = 1'-0"



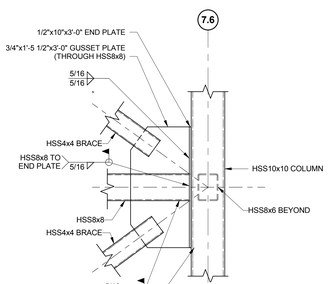
NOTES:
1. SEE TYPICAL DETAILS S00-20 FOR BRACE CONNECTION TO GUSSET PLATE.

6 SECTION: STAIR BRACE CONNECTION
3/4" = 1'-0"



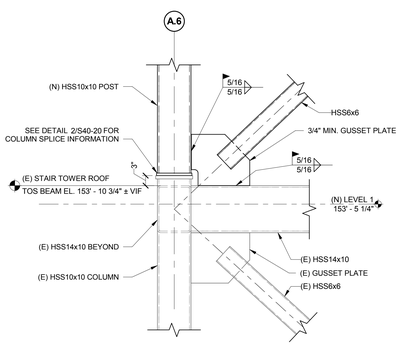
NOTES:
1. MITER ENDS OF SLOTS FOR CLEARANCE OF GUSSET/END PLATE WELD DURING INSTALLATION OF HSS BEAMS.
2. HSS BRACES CONNECTED TO GUSSETS NOT SHOWN FOR CLARITY.
3. SEE TYPICAL DETAILS S00-20 FOR BRACE CONNECTION TO GUSSET PLATE.

5 PART PLAN: STAIR BRACE CONNECTION
3/4" = 1'-0"



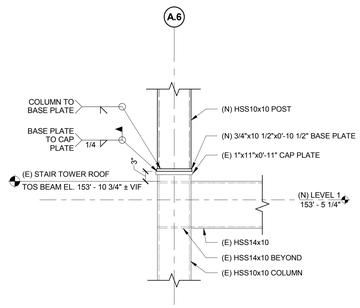
NOTES:
1. SEE TYPICAL DETAILS S00-20 FOR BRACE CONNECTION TO GUSSET PLATE.

4 SECTION: STAIR BRACE CONNECTION
3/4" = 1'-0"



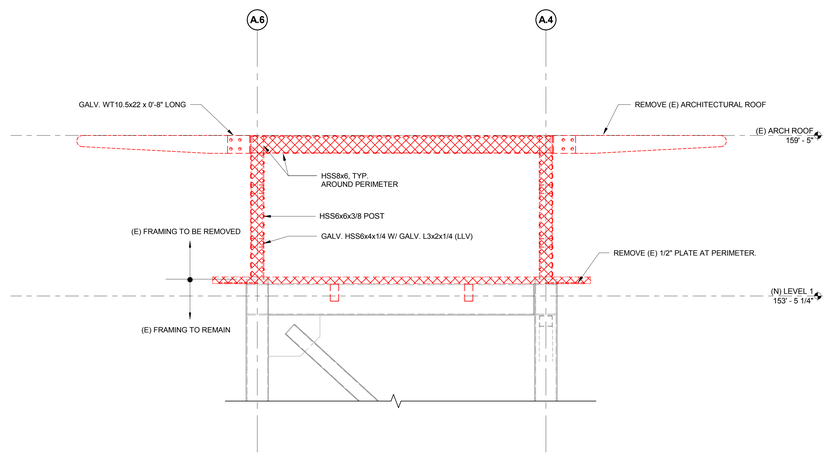
NOTES:
1. HSS BRACE NOT SHOWN FOR CLARITY.
2. CONTRACTOR TO PROVIDE TEMPORARY COLUMN BRACING FOR STABILITY DURING ERECTION.
3. SEE TYPICAL DETAILS S00-20 FOR BRACE CONNECTION TO GUSSET PLATE.

3 DETAIL: TYPICAL (N) BRACE TO (E) BEAM AT LEVEL 1
3/4" = 1'-0"



NOTES:
1. HSS BRACE NOT SHOWN FOR CLARITY.
2. CONTRACTOR TO PROVIDE TEMPORARY COLUMN BRACING FOR STABILITY DURING ERECTION.

2 DETAIL: TYPICAL COLUMN SPLICE AT LEVEL 1
3/4" = 1'-0"



1 ELEVATION: (E) VESTIBULE ROOF DEMOLITION
1/2" = 1'-0"

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ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

STATE OF MAINE
JOHN H. THOMSEN IV
No. 11120
LICENSED PROFESSIONAL ENGINEER
3-21-2018

KEY PLANS

PROJECT KEY PLAN

OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
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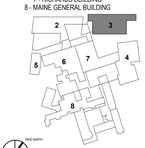
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18

Job Number	152182.000
Drawn	KAK
Checked	BMT
Approved	JHT

TITLE

STEEL DETAILS

SHEET NUMBER

S40-20

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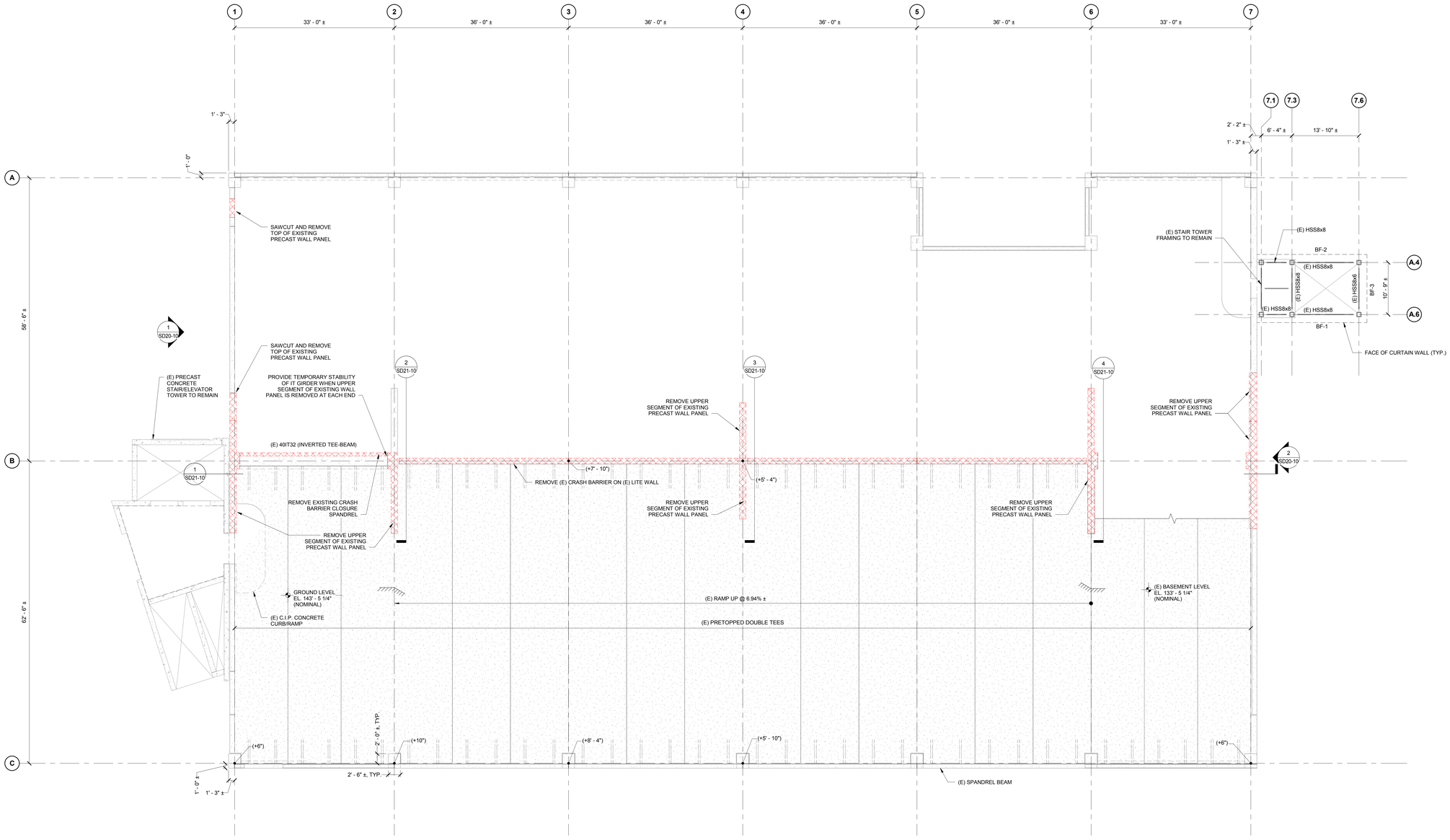

EXISTING CONSTRUCTION - PRECAST CONCRETE - GROUND LEVEL FLOOR PLAN (EXISTING GARAGE ROOF)

GENERAL STRUCTURAL DEMOLITION NOTES

1. THE DEMOLITION SHOWN IN THIS SET IS TO ALLOW FOR THE ERECTION OF A VERTICAL ADDITION TO THE EXISTING STRUCTURE.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY STABILITY OF THE STRUCTURE DURING THE DEMOLITION PROCESS. THE CONTRACTOR SHALL MAINTAIN THE STABILITY UNTIL NEW PIECES ARE INSTALLED THAT RESTORE CONNECTIONS DISCONNECTED DURING THE DEMOLITION PROCESS.
3. THE CONTRACTOR SHALL GRIND ALL EXISTING WELDS TO BE DISCONNECTED. CONNECTION PLATES IN PIECES TO REMAIN THAT WILL BE UTILIZED IN FUTURE BUILD-OUT SHALL NOT BE DAMAGED.

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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

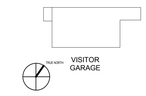
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

STATE OF MAINE
JOHN H. THONSEN
No. 11120
REGISTERED PROFESSIONAL ENGINEER
3-2-2018

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
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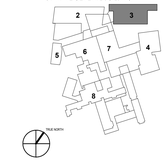
8 - MAINE GENERAL BUILDING



DEMOLITION SET
MARCH 2, 2018

NO	ISSUE	DATE

Job Number	152182.000
Drawn	NWS
Checked	BMT
Approved	JHT

TITLE

STRUCTURAL DEMOLITION PLAN - GROUND LEVEL

SHEET NUMBER

SD10-10

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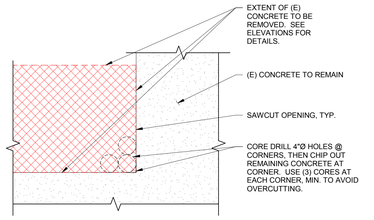
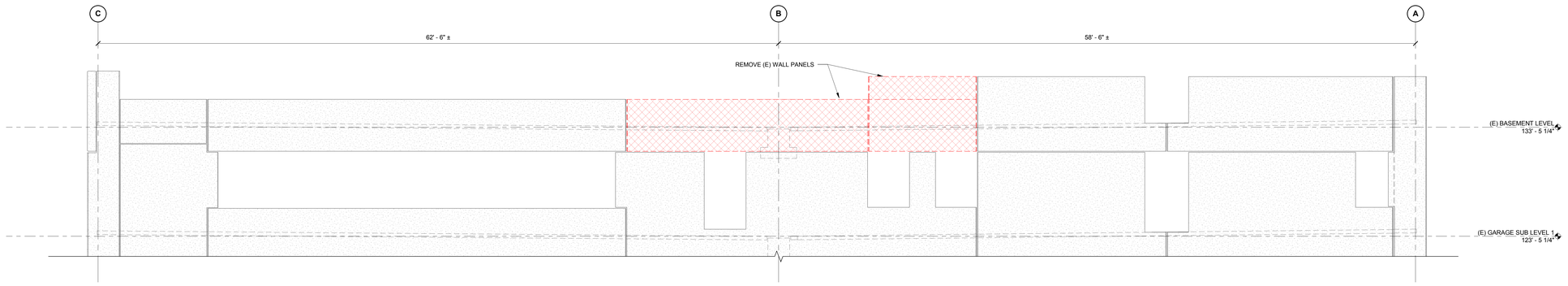


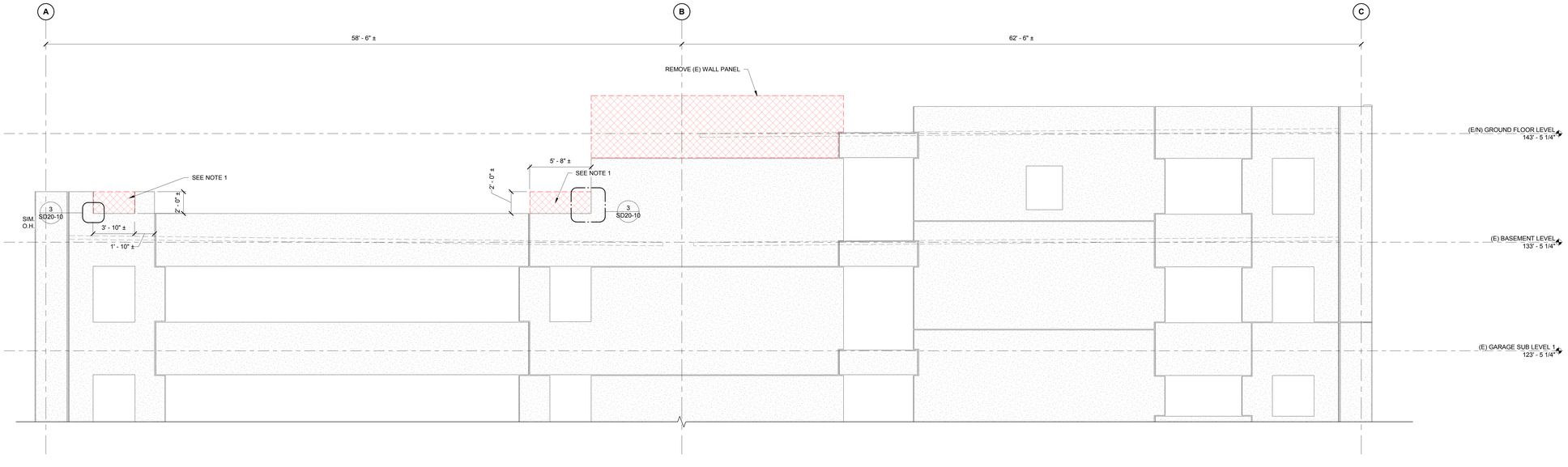
NOTES:
1. DRILL 4"Ø HOLE TANGENT TO LINES OF FINISHED OPENING AT EACH CORNER.
2. SAWCUT TO LINES REQUIRED. DO NOT OVER-RUN AT CORNERS.
3. CHIP REMAINING CORNER CONCRETE WITH GREAT CARE AND WITH SMALL TOOLS.
4. THE ENDS OF ALL EXISTING CUT REINFORCING STEEL SHALL BE DRILLED 1" BACK FROM FACE OF CONCRETE. PATCH HOLES WITH NON-SHRINK GROUT.

3 TYPICAL CUT OPENING DETAIL
1" = 1'-0"



NOTES:
1. DEMOLISH/SAWCUT PORTION OF EXISTING WALL PANEL AS INDICATED.

2 EAST WALL DEMOLITION ELEVATION - GRID LINE "7"
1/4" = 1'-0"



NOTES:
1. DEMOLISH/SAWCUT PORTION OF EXISTING WALL PANEL AS INDICATED.

1 WEST WALL DEMOLITION ELEVATION - GRID LINE "1"
1/4" = 1'-0"

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COST ESTIMATOR
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3 Baldwin Green Common, Suite 202, Woburn MA 01801

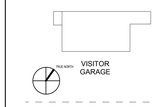
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

STATE OF MAINE — JOHN H. THONSEN — No. 11120 — LICENSED PROFESSIONAL ENGINEER — 3-2-2018

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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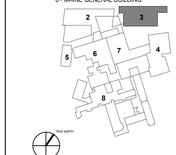

DEMOLITION SET
MARCH 2, 2018

NO	ISSUE	DATE

Job Number	152182.000
Drawn	NWS
Checked	BMT
Approved	JHT

TITLE

ELEVATIONS

SHEET NUMBER

SD20-10

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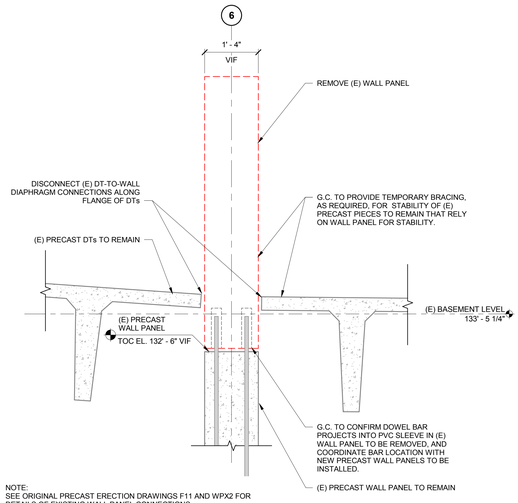
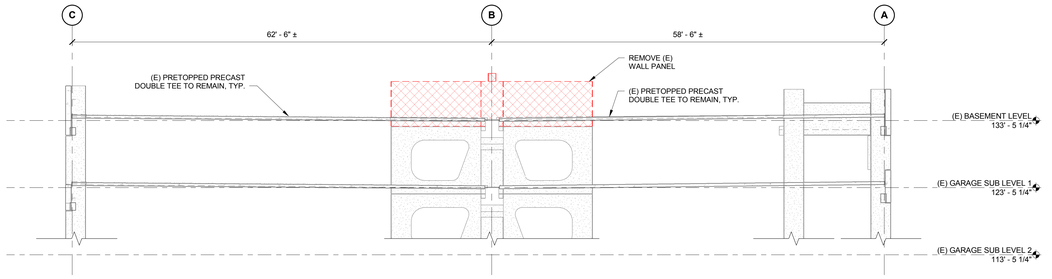
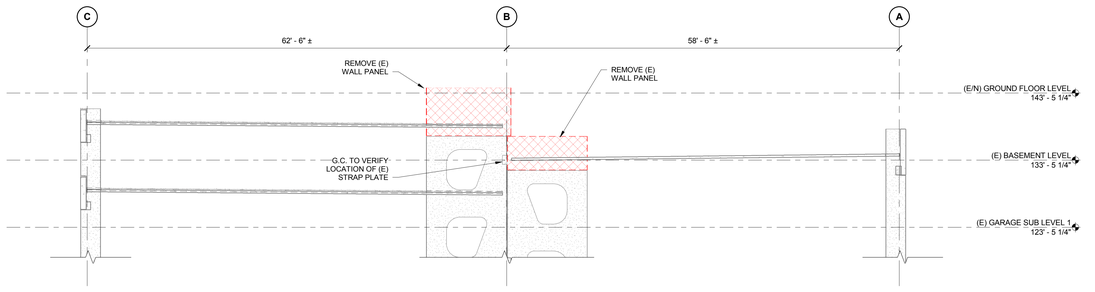


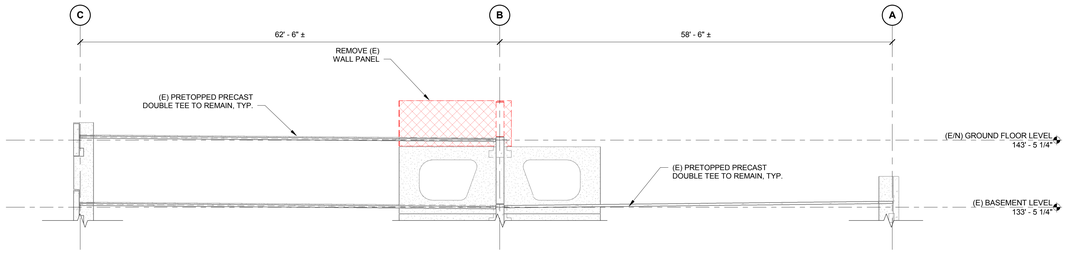
5 (E) PRECAST WALL PANEL TO BE REMOVED
3/4" = 1'-0"



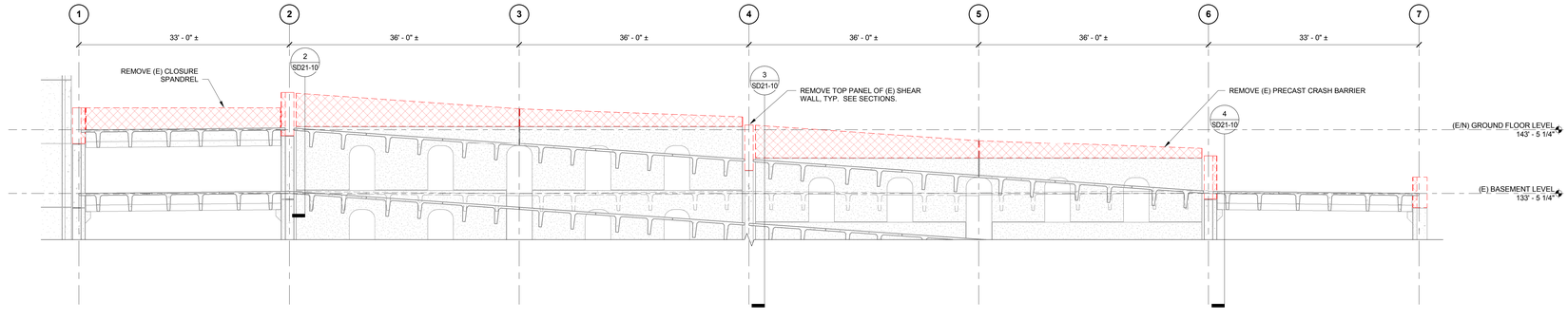
4 WALL DEMOLITION ELEVATION - GRID LINE 6
1/8" = 1'-0"



3 WALL DEMOLITION ELEVATION - GRID LINE 4
1/8" = 1'-0"



2 WALL DEMOLITION ELEVATION - GRID LINE 2
1/8" = 1'-0"



1 WALL DEMOLITION ELEVATION - GRID LINE B
1/8" = 1'-0"

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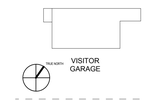
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland, ME 04102

STATE OF MAINE
JOHN H. THONSEN IV
No. 11120
LICENSED PROFESSIONAL ENGINEER
3-2-2018

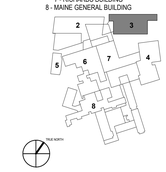
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



DEMOLITION SET
MARCH 2, 2018

NO	ISSUE	DATE

Job Number	152182.000
Drawn	NWS
Checked	BMT
Approved	JHT

TITLE

BUILDING SECTIONS

SHEET NUMBER

SD21-10

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FIRE PROTECTION SYMBOL LIST

BASIC

- FIRE STANDPIPE PIPING (STANDALONE)
- SPRINKLER PIPING
- DSP — DRY SPRINKLER PIPING
- PA — PRE-ACTION SPRINKLER PIPING
- DR — DRAIN PIPING
- PIPING BELOW SLAB
- EXISTING PIPING
- EXISTING WORK TO BE REMOVED
- HEAT TRACE / FREEZE PROTECTION CABLE & INSULATION
- SLOPED CHANGE IN PIPE ELEVATION
- BOTTOM PIPE CONNECTION
- TOP PIPE CONNECTION
- SIDE CONNECTION
- PIPE DOWN/DROP
- PIPE RISE/UP
- PIPE SLOPE
- VALVE IN VERTICAL
- UNION
- REDUCER
- WATER PROOF SLEEVE
- SLEEVE
- FE-X — FIRE EXTINGUISHER
  - A - WATER
  - B - DRY CHEMICAL
  - C - GASEOUS (CO2 OR HALON 1211 - SEE SPEC.)
- FE-X — FIRE EXTINGUISHER IN CABINET
- FIRE HOSE VALVE
- FIRE HOSE VALVE IN CABINET
- FIRE HOSE VALVE w/HOSE IN CABINET
- FE-X — FIRE HOSE VALVE w/FIRE EXTINGUISHER
- ROOF MANIFOLD (3-WAY)
- SPRINKLER CONTROL VALVE ASSEMBLY
- VALVE ASSEMBLY
  - AC - ALARM CHECK
  - DR - DRY PIPE
  - PA - PRE ACTION
- CONNECT TO EXISTING
- DISCONNECT FROM EXISTING
- FIRE DEPARTMENT SIAMESE CONNECTION (WALL MOUNTED)
- EXISTING FIRE HYDRANT
- NEW FIRE HYDRANT
- TEMPERATURE AND PRESSURE RELIEF VALVE
- PLUG VALVE
- MIXING VALVE
- RELIEF VALVE
- BALL VALVE
- GATE VALVE
- GLOBE VALVE
- OUTSIDE SCREW & YOKE (OS & Y) VALVE
- CHECK VALVE
- PRESSURE REDUCING VALVE (PRV)
- SOLENOID VALVE
- FLOAT VALVE
- Y STRAINER w/BLOW-OFF VALVE
- RPDA — REDUCED PRESSURE DETECTOR ASSEMBLY
- DCDA — DOUBLE CHECK DETECTOR ASSEMBLY
- HYDRAULIC REF. POINTS # = ELEMENT, # = NODE
- TAMPER SWITCH
- WATERFLOW SWITCH
- PRESSURE GAUGE w/GAUGE COCK
- RISER DESIGNATION:
  - X = RISER SERVICE, # = RISER NUMBER
- EXTEND EXISTING SPRINKLER PIPING TO NEW SPRINKLER HEAD

FIRE PROTECTION ABBREVIATIONS

ABD	AUTOMATIC BALL DRIP
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
ATS	AUTOMATIC TRANSFER SWITCH
BOP	BOTTOM OF PIPE
CFM	CUBIC FEET PER MINUTE
CV	CHECK VALVE
DIA	DIAMETER
DN	DOWN (PENETRATES FLOOR SLAB)
DR	DRAIN
(E)	EXISTING
(ER)	EXISTING TO BE REMOVED
(ERR)	EXISTING TO BE REMOVED & RELOCATED
FD	FLOOR DRAIN
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FHV	FIRE HOSE VALVE
FHVC	FIRE HOSE VALVE CABINET
FL	FLOOR
FP	FIRE PUMP
FSP	FIRE STANDPIPE
FT	FEET
GAL	GALLONS
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GV	GATE VALVE
HD	HEAT DETECTOR
ID	INSIDE DIAMETER
IN	INCH
JP	JOCKEY PUMP
MAX	MAXIMUM
MIN	MINIMUM
NC	NORMALLY CLOSE
NIC	NOT IN THIS CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH (GAUGE)
PSIA	POUNDS PER SQUARE INCH (ABSOLUTE)
(RE)	RELOCATED EXISTING
(RRO)	EXISTING TO REMOVED AND RETURN TO OWNER
SD	SMOKE DETECTOR
SPNR	SPRINKLER
TOP	TOP OF PIPE
TS	TAMPER SWITCH
UON	UNLESS OTHERWISE NOTED
UP	UP (PENETRATES FLOOR SLAB)
WFS	WATER FLOW SWITCH
Z	ZONE

FIRE PROTECTION GENERAL NOTES

Key Name — General Notes_Fire Protection

1. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL FIRE PROTECTION DRAWINGS.
2. ALL WORK IS NEW UNLESS OTHERWISE NOTED.
3. ALL FIRE PROTECTION WORK SHALL BE IN ACCORDANCE WITH THE CURRENT FIRE PROTECTION CODE AND ALL APPLICABLE LOCAL CODES AND DRAWINGS.
4. ALL PIPE FITTINGS, PIPE HANGERS, AUTOMATIC CONTROL VALVES AND MANUAL CONTROL VALVES SHALL BE UL LISTED AND BEAR FACTORY MUTUAL APPROVAL AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
5. ALL EXPOSED PIPE, FITTINGS, HANGERS AND SUPPLEMENTARY STEEL SHALL BE PAINTED.
6. ENDS OF ALL CROSS MAINS SHALL BE PROVIDED WITH THREADED FLUSHING CONNECTION NO MORE THAN 2 INCHES IN DIAMETER.
7. PROVIDE AUXILIARY DRAINS FOR ALL PIPING IN OPEN TRAPPED SECTIONS.
8. PROVIDE TEST CONNECTIONS AT HIGHEST POINT OF MAIN PORTION OF EACH SPRINKLER SYSTEM, WITH 1" PIPE AND VALVE. TEST PIPE SHALL BE CONNECTED TO SPRINKLER PIPE AT LEAST 1-1/4" IN SIZE AND SHALL DISCHARGE OUTSIDE BUILDING OR THROUGH 1/2" SMOOTH BORE BRASS OUTLET, WHERE IT CAN BE EASILY SEEN.
9. COORDINATE ALL PIPE PENETRATIONS AND CORING WITH STRUCTURAL ENGINEER AND IN ACCORDANCE WITH DIVISION 01.
10. REFER TO ARCHITECTURAL DRAWINGS FOR ALL CEILING RELATED WORK.
11. COORDINATE ALL NEW FIRE PROTECTION WORK WITH ALL EXISTING AND/OR NEW DUCTWORK, PIPING AND UTILITIES OF ANY SYSTEMS. DRAWINGS ARE DIAGRAMMATIC AND SHOW THE INTENT OF THE DESIGN. REROUTE ANY PIPING AROUND EXISTING AND/OR NEW SYSTEMS INCLUDING ALL REQUIRED FITTINGS AND SUPPORTS TO MAKE THE INSTALLATION OF THE PIPING AND SPRINKLER HEADS POSSIBLE. RESEAL ANY FIRE AND/OR SMOKE RATED PENETRATIONS THAT HAVE BEEN AFFECTED AS A RESULT OF THE MODIFICATION.
12. ALL COMPONENTS USED IN FIRE PROTECTION SYSTEMS SHALL BE IN ACCORDANCE WITH THE OWNER'S GUIDELINES, STANDARDS AND SPECIFICATIONS.

FIRE PROTECTION DRAWING LIST

DRAWING No.	DRAWING TITLE
F00-01	FIRE PROTECTION GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
F00-10	FIRE PROTECTION DETAILS
F10-10	FIRE PROTECTION FLOOR PLAN - BASEMENT & GROUND FLOORS
F10-20	FIRE PROTECTION FLOOR PLAN - FIRST & SECOND FLOORS
F10-30	FIRE PROTECTION FLOOR PLAN - THIRD FLOOR
F20-01	FIRE PROTECTION RISER DIAGRAM

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VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02210

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

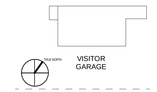
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

COMMONWEALTH OF MASSACHUSETTS — PETER J. REILLY — FIRE PROTECTION — No. 47859 — REGISTERED PROFESSIONAL ENGINEER

KEY PLANS

PROJECT KEY PLAN



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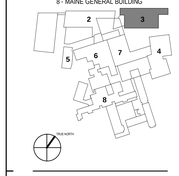

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SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	DTM
Checked	PJR
Approved	PJR

TITLE

FIRE PROTECTION GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

SHEET NUMBER

F00-01

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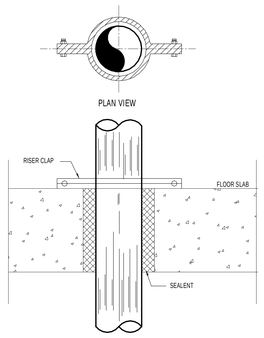

1 PIPE SLEVE THROUGH FLOOR SLAB
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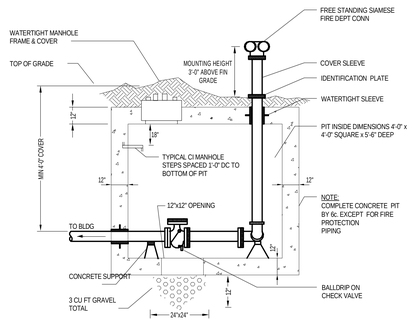

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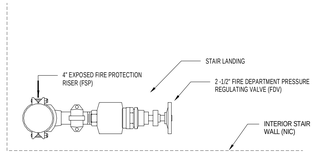
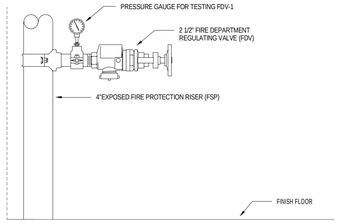


PLAN



ELEVATION

3 EXPOSED FIRE PROTECTION RISER WITH FDV
SCALE:NTS

NOTE:
1. FIRE PROTECTION RISER LOCATION WILL VARY, FIRE PROTECTION SUB-CONTRACTOR SHALL REFER TO FLOOR PLANS FOR LOCATION OF RISERS AND COORDINATE IN FIELD EXACT DIMENSIONS.

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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

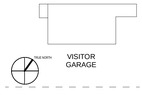
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

COMMONWEALTH OF MASSACHUSETTS
PETER J. PREILLY
FIRE PROTECTION
No. 47828
REGISTERED
PROFESSIONAL ENGINEER

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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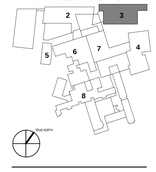

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
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Job Number	B150311-000
Drawn	DTM
Checked	PJR
Approved	PJR

TITLE

FIRE PROTECTION DETAILS

SHEET NUMBER

F00-10

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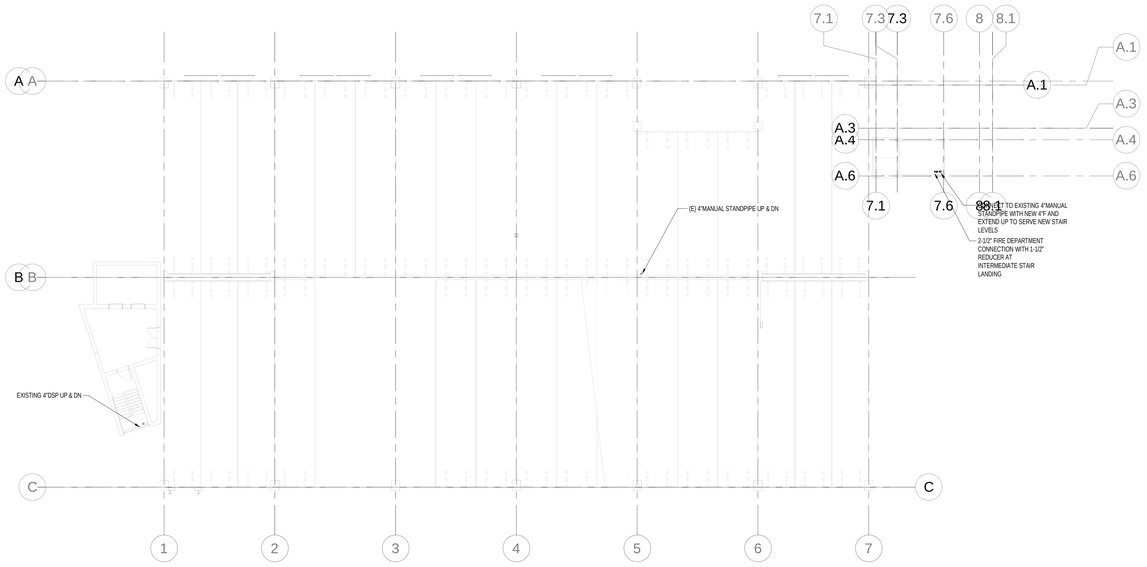

2 GARAGE BASEMENT LOBBY LEVEL
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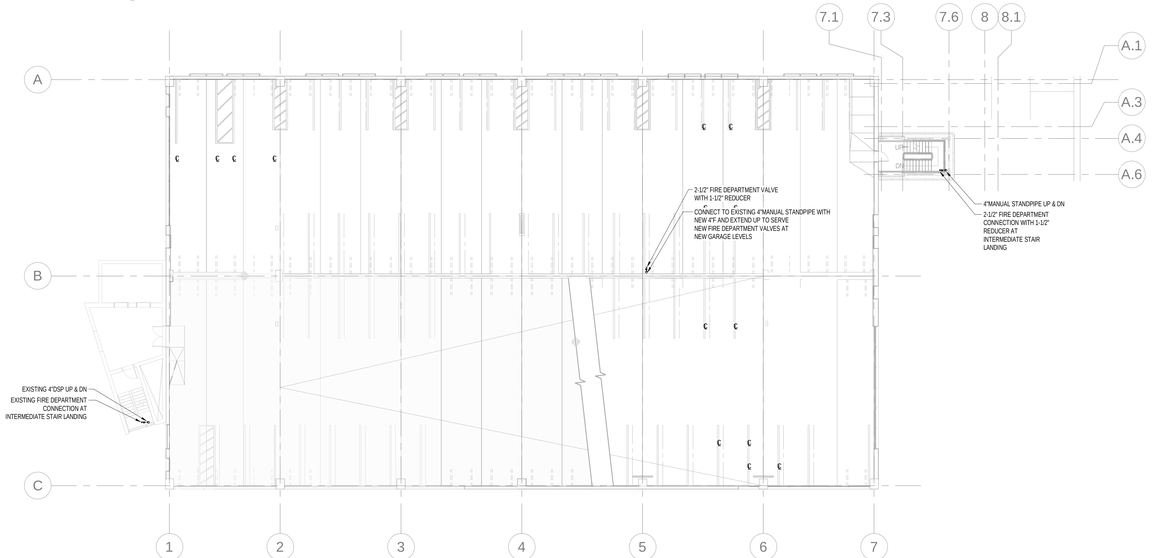

1 GROUND LEVEL
SCALE: 1/16" = 1'-0"

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3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

STATE OF MAINE
PETER J. REILLY
NO. 12356
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

PROJECT KEY PLAN

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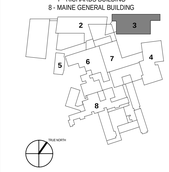

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Approved	PJR

TITLE

FIRE PROTECTION FLOOR PLAN - BASEMENT & _GROUND FLOORS

SHEET NUMBER

F10-10

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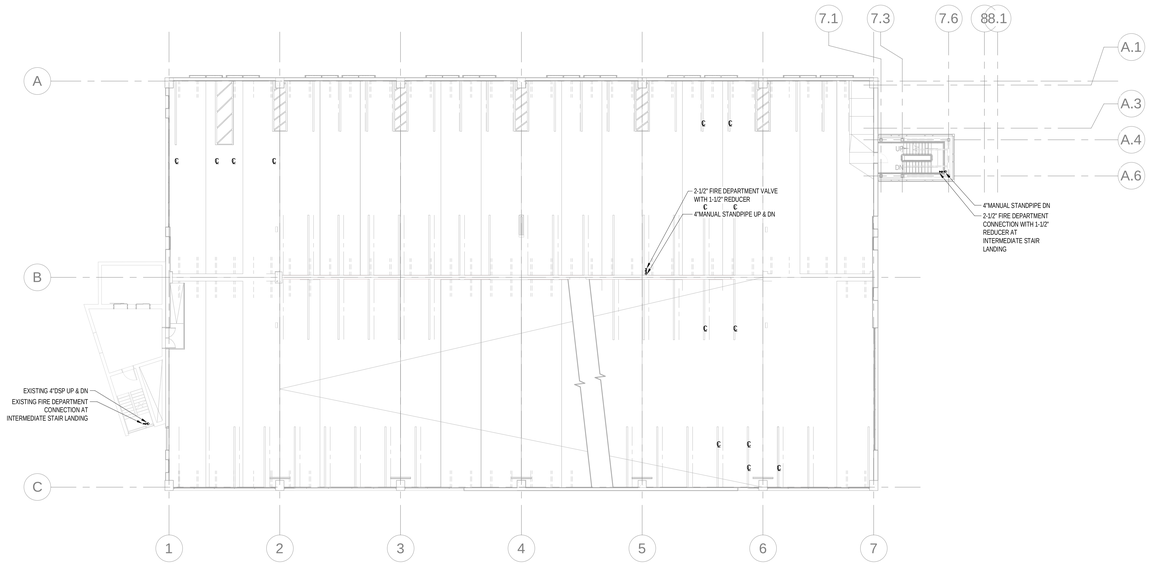

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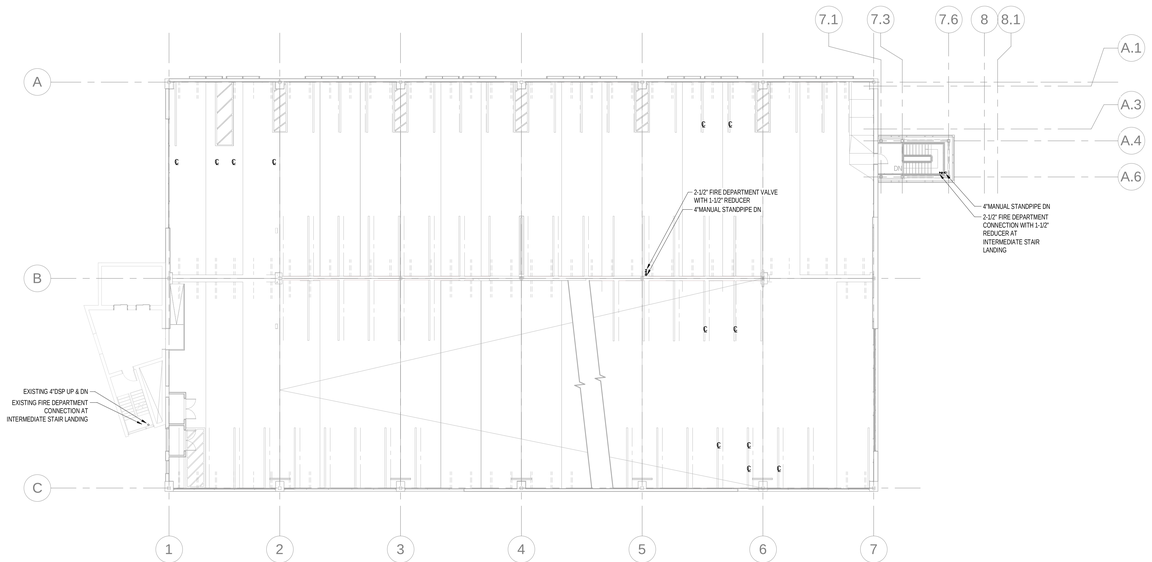

1 LEVEL 2
SCALE: 1/16" = 1'-0"

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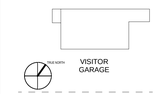
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

STATE OF MAINE
PETER J. REILLY
NO. 12356
LICENSED PROFESSIONAL ENGINEER
REGISTERED

KEY PLANS

PROJECT KEY PLAN



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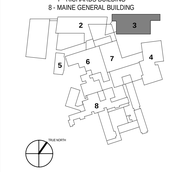

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TITLE

FIRE PROTECTION FLOOR PLAN - FIRST & SECOND FLOORS

SHEET NUMBER

F10-20

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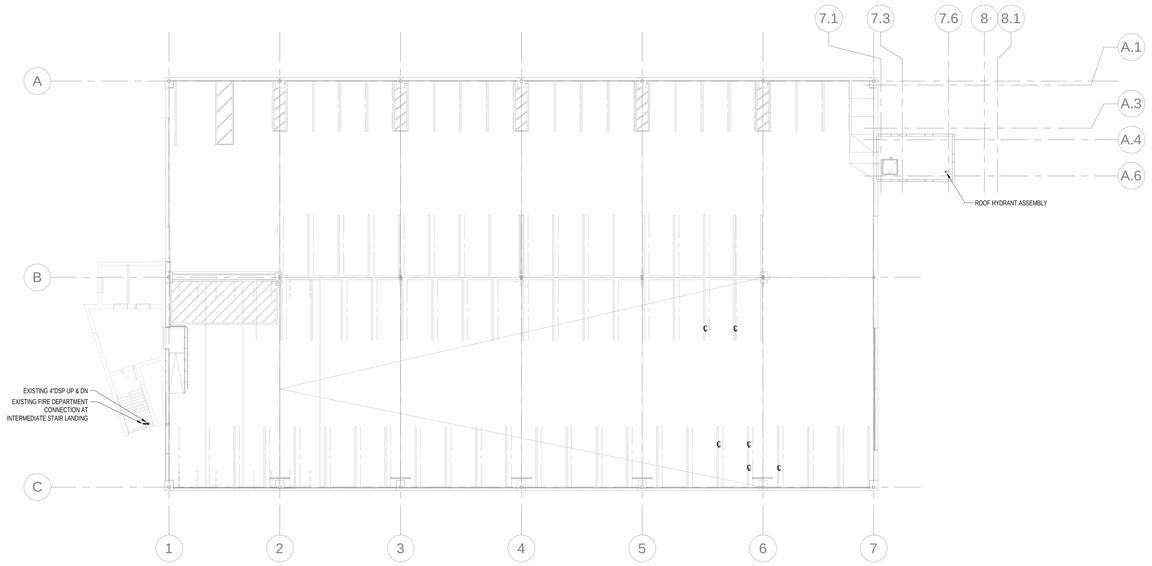

1 LEVEL 3
SCALE: 1/16" = 1'-0"

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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

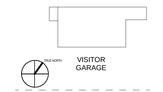
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

STATE OF MAINE
PETER J. REILLY
NO. 12356
LICENSED PROFESSIONAL ENGINEER

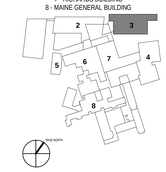
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	DTM
Checked	PJR
Approved	PJR

TITLE

FIRE PROTECTION FLOOR PLAN - THIRD FLOOR

SHEET NUMBER

F10-30

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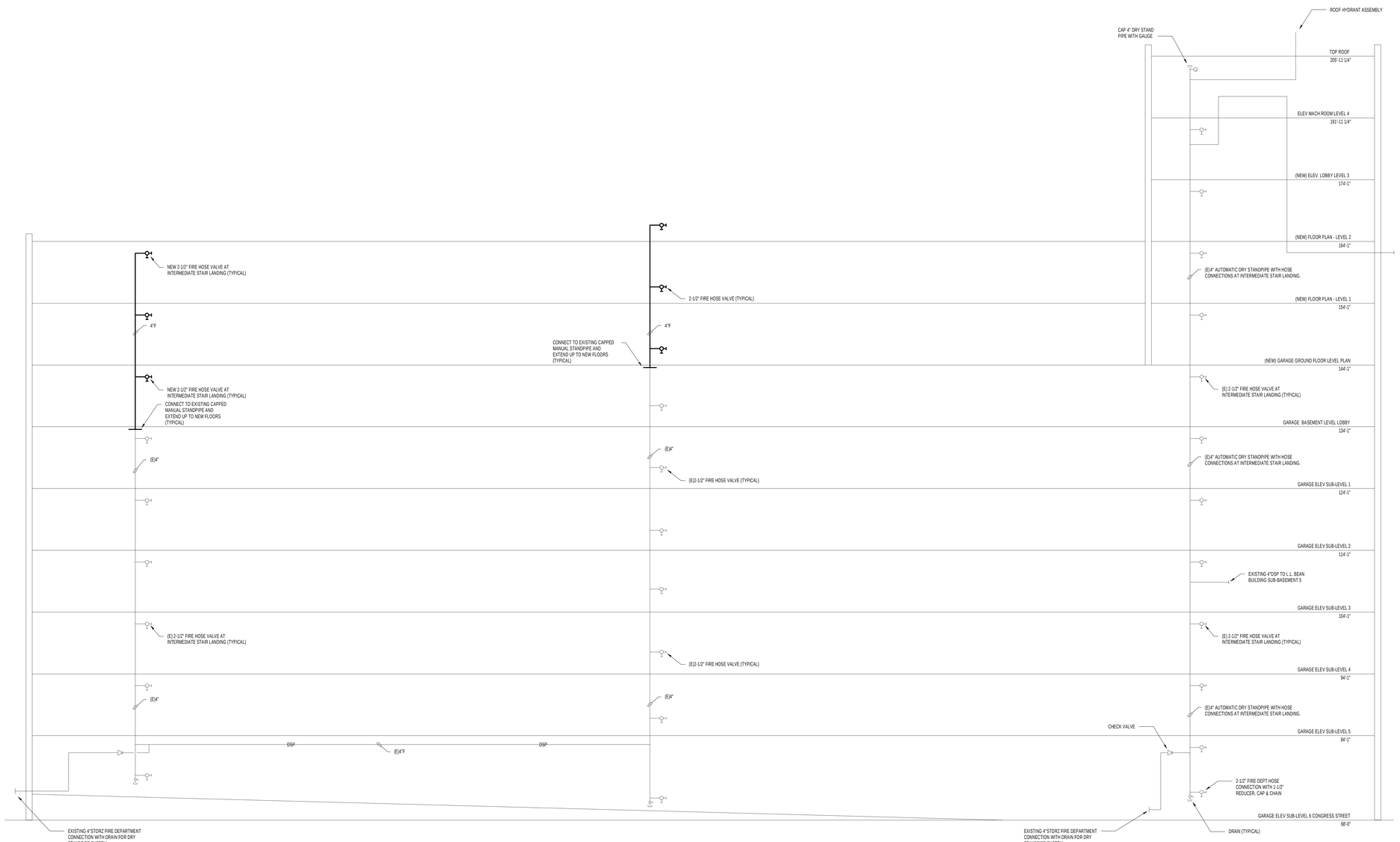

1 FIRE PROTECTION RISER DIAGRAM

SCALE: NTS

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03/29/2018

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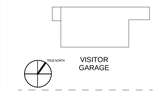
PROJECT KEY PLAN



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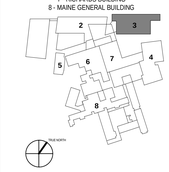

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FIRE PROTECTION RISER DIAGRAM

SHEET NUMBER

F20-01

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FIRE ALARM SYMBOLS LIST

CONTROL UNITS (PANELS) SYMBOLS

FACP	FIRE ALARM CONTROL PANEL
DGP	FIRE ALARM DATA GATHERING PANEL
TPRN	FIRE ALARM TRANSPONDER # = TRANSPONDER NUMBER
FAA	FIRE ALARM ANNUNCIATOR
NAC	NOTIFICATION CIRCUIT POWER BOOSTER PANEL
FATC	FIRE ALARM TERMINAL CABINET
BATT	BATTERY CABINET
EVAC	VOICE EVACUATION CONTROL UNIT
MIC	REMOTE VOICE EVACUATION MICROPHONE
GAP	GRAPHIC ANNUNCIATOR PANEL
UPS	UNINTERRUPTIBLE POWER SUPPLY
CRT	CRT
PRN	PRINTER
ECU	EMERGENCY COMMUNICATIONS CONTROL UNIT
FSCP XX	FIRE SUPPRESSION CONTROL PANEL, 'XX' DENOTES SUPPRESSION TYPE: PA = PRE-ACTION HL = HALON CA = CLEAN AGENT GAS
FSCU XX	FIRE SUPPRESSION CONTROL UNIT, 'XX' DENOTES SUPPRESSION TYPE: PA = PRE-ACTION HL = HALON CA = CLEAN AGENT GAS
AMP	AMPLIFIER RACK
ACU	AUTONOMOUS CONTROL UNIT
ESF	ELEVATOR STATUS/RECAL
DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER
PP	POST-FIRE SMOKE PURGE PANEL
SAP	SPRINKLER ALARM PANEL
SCP	FIREFIGHTER'S SMOKE CONTROL PANEL

SIGNAL INITIATING DEVICES & ACTIVATION SWITCHES SYMBOLS

XX	MANUAL STATION - PULL STATION/FIRE ALARM BOX, 'XX' DENOTES TYPE: CO2 = CARBON DIOXIDE DC = DRY CHEMICAL HL = HALON F = FIRE ALARM FO = FOAM WC = WET CHEMICAL CA = CLEAN AGENT WM = WATER MIST DL = DELUGE FIRE SPRINKLER PRE = PREACTION
XX	ABORT SWITCH, 'XX' DENOTES TYPE: CO2 = CARBON DIOXIDE DC = DRY CHEMICAL HL = HALON F = FIRE ALARM FO = FOAM WC = WET CHEMICAL CA = CLEAN AGENT WM = WATER MIST DL = DELUGE FIRE SPRINKLER PRE = PREACTION
	HEAT DETECTOR/SENSOR (THERMAL DETECTION) ORIENTATION NOT TO BE CHANGED
XX	HEAT DETECTOR/SENSOR, 'XX' DENOTES TYPE: RF = COMBINATION RATE OF RISE/FIXED TEMPERATURE RC = RATE COMPENSATION F = FIXED TEMPERATURE R = RATE OF RISE ONLY
	HEAT DETECTOR - LINE TYPE
XX	SMOKE DETECTOR/SENSOR, 'XX' DENOTES TYPE: AS = AIR SAMPLING P = PHOTOELECTRIC I = IONIZATION R = RELAY BASE SS = SINGLE STATION SB = SOUNDER BASE ID = IN DUCT
XX	SMOKE/HEAT DETECTOR/SENSOR COMBINATION
BT	SMOKE DETECTOR/SENSOR - BEAM TRANSMITTER
BR	SMOKE DETECTOR/SENSOR - BEAM RECEIVER
	SMOKE DETECTION/SENSOR FOR DUCT
XX	GAS DETECTOR/SENSOR, 'XX' DENOTES TYPE: CO = CARBON MONOXIDE CO2 = CARBON DIOXIDE HCL = HYDROGEN CHLORIDE CH4 = METHANE
UV	FLAME DETECTOR, 'XX' DENOTES TYPE: UV = ULTRAVIOLET IR = NFRARED UVIR = COMBINATION ULTRAVIOLET/INFRARED VR = VISIBLE RADIATION
WF	FLOW DETECTOR/SWITCH
PS	PRESSURE DETECTOR/SWITCH
VS	VALVE SUPERVISORY SWITCH
S XX	LEVEL DETECTOR/SWITCH, 'XX' DENOTES TYPE: HI = HIGH LO = LOW
HT	HIGH TEMPERATURE SWITCH
LT	LOW TEMPERATURE SWITCH
AIM	ADDRESSABLE INPUT MODULE
AOM	ADDRESSABLE OUTPUT MODULE
AIO #	ADDRESSABLE INPUT/OUTPUT MODULE # DENOTES NUMBER OF INPUTS AND OUTPUTS
R	NON-ADDRESSABLE OUTPUT RELAY
M FSD	FIRE SMOKE DAMPER

NOTIFICATION APPLIANCES SYMBOLS

XX	NOTIFICATION APPLIANCE SUBSCRIPTS ('XX') WP = WEATHERPROOF WG = WIRE GUARD H = HIGH AUDIBLE SETTING L = LOW AUDIBLE SETTING C = CEILING MOUNT nW = WATTAGE SETTING (n = SPEAKER TAP) P = PENDENT SL = SIGNAL LIGHT RI = REMOTE INDICATOR
C H	HORN ONLY C = CEILING MOUNT
C S	SPEAKER ONLY C = CEILING MOUNT
BS	BELL - SINGLE STROKE
T	BELL - TROUBLE
G	GONG
CD	VISIBLE ONLY (STROBE) - WALL MOUNT CD = CANDELA RATING/SETTING
CD	VISIBLE ONLY (STROBE) - CEILING MOUNT CD = CANDELA RATING/SETTING
CD C	COMBINATION HORN/VISIBLE CD = CANDELA RATING/SETTING C = CEILING MOUNT
CD C	COMBINATION SPEAKER/VISIBLE CD = CANDELA RATING/SETTING C = CEILING MOUNT
RI	REMOTE INDICATOR - WALL MOUNT
RTS	REMOTE ALARM INDICATING AND TEST SWITCH
RI	REMOTE INDICATOR - CEILING MOUNT

RELATED EQUIPMENT

DH	DOOR HOLDER
DCL	DOOR CLOSER
DCL	INTEGRATED SMOKE SENSOR AND DOOR CLOSER
	END OF LINE RESISTOR
X	FIRE SERVICE OR EMERGENCY PHONE STATION STATION, 'X' DENOTES TYPE: J = JACK H = HANDSET A = ACCESSIBLE
ISO	ISOLATOR MODULE (STYLE 6 OR 7 FAULT PROTECTION)
J	JUNCTION BOX
	AIR SAMPLING DETECTOR PIPING (E.G. VESDA)

POWER SYMBOLS

J	CEILING MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT CONNECTION
J H	FLUSH WALL MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT CONNECTION
J	FLUSH FLOOR MOUNTED JUNCTION BOX
	PULLBOX
	DROP CORD RECEPTACLE
P	POWER POLE
PS	SPECIAL POWER POLE
P	JUNCTION BOX FOR CONNECTION TO POWER POLES MOUNTED ABOVE HUNG CEILING
	EXISTING CONDUIT TO BE REMOVED
	EXISTING CONDUIT/EQUIPMENT TO REMAIN
	NEW CONCEALED CONDUIT
	NEW EXPOSED CONDUIT
	NEW UNDERGROUND/IN SLAB CONDUIT
	NEW EMERGENCY CONDUIT
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	CONDUIT STUB-UP WITH FLEXIBLE EQUIPMENT CONNECTION
	FLEXIBLE EQUIPMENT CONNECTION
	CAPPED CONDUIT

FIRE ALARM DRAWING LIST

DRAWING No.	DRAWING TITLE
FA00-01	FIRE ALARM GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
FA10-10	FIRE ALARM FLOOR PLAN - GROUND & FIRST FLOORS
FA10-20	FIRE ALARM FLOOR PLAN - SECOND & THIRD FLOOR
FA20-01	FIRE ALARM EXISTING SINGLE LINE DIAGRAM

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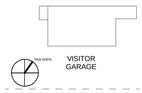
STATE OF MAINE
MARK F. RATTENBURY
No. 9122
ELECTRICAL
PROFESSIONAL ENGINEER

KEY PLANS

PROJECT KEY PLAN



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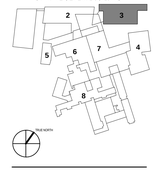

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Approved	MR

TITLE

FIRE ALARM GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

SHEET NUMBER

FA00-01

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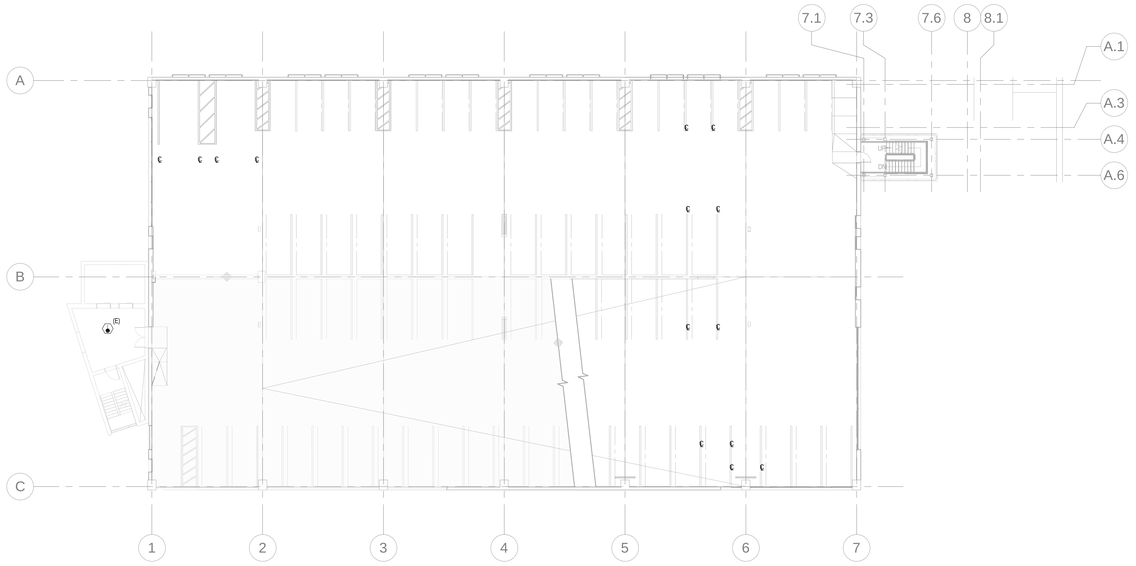
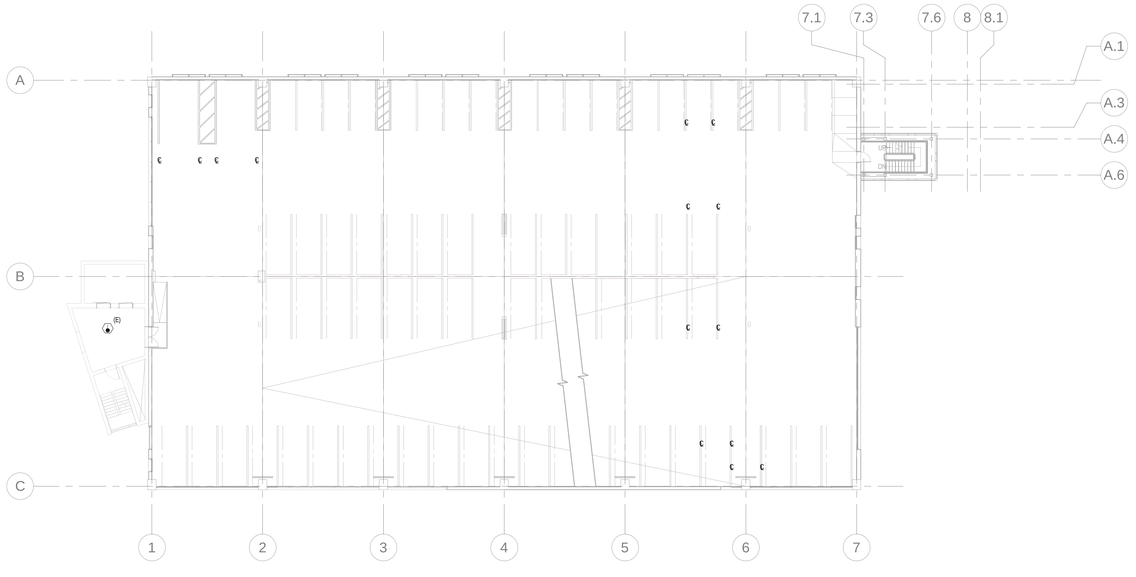


2 GROUND LEVEL FIRE ALARM PLAN
SCALE: 1/16" = 1'-0"



1 LEVEL 1 FIRE ALARM PLAN
SCALE: 1/16" = 1'-0"

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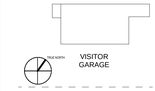

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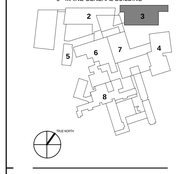

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FIRE ALARM FLOOR PLAN - GROUND & FIRST FLOORS

SHEET NUMBER

FA10-10

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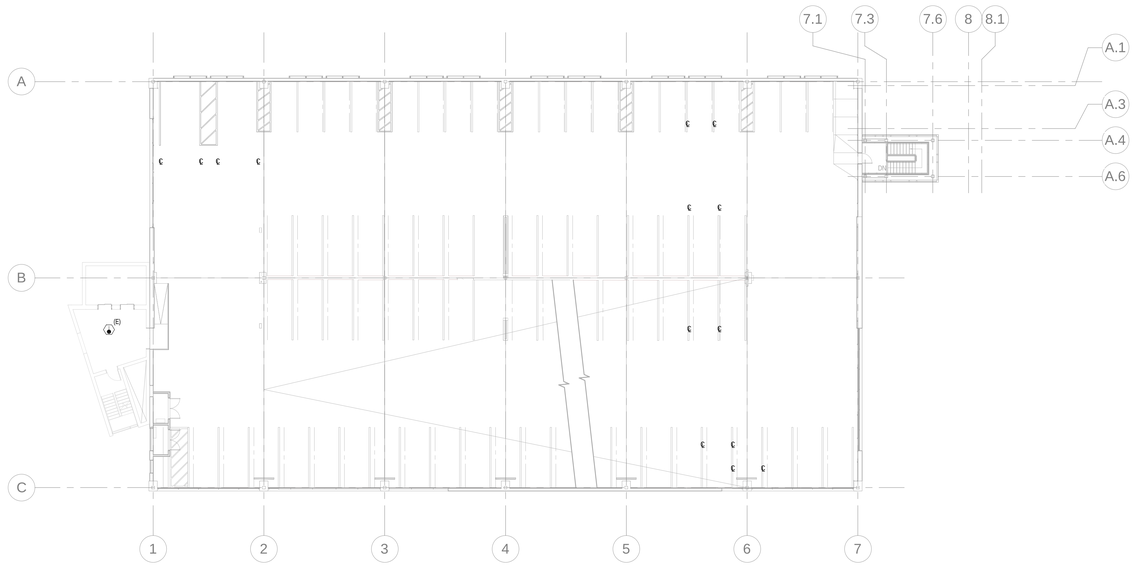
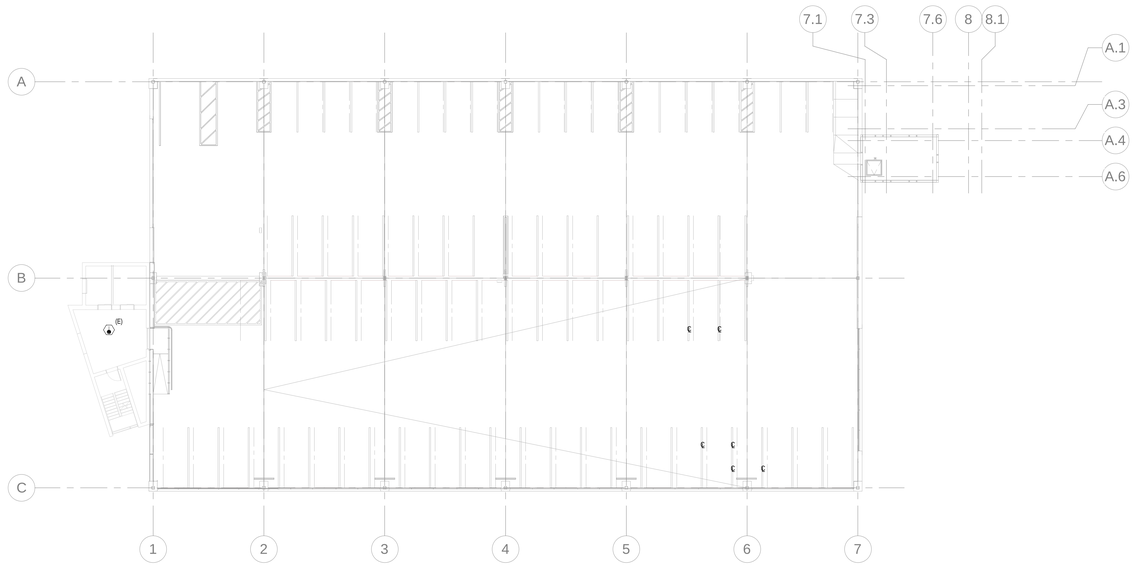


2 LEVEL 2 FIRE ALARM PLAN
SCALE: 1/16" = 1'-0"



1 LEVEL 3 FIRE ALARM PLAN
SCALE: 1/16" = 1'-0"

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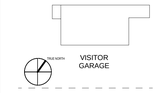

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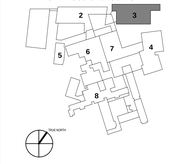

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FIRE ALARM FLOOR PLAN - SECOND & THIRD FLOOR

SHEET NUMBER

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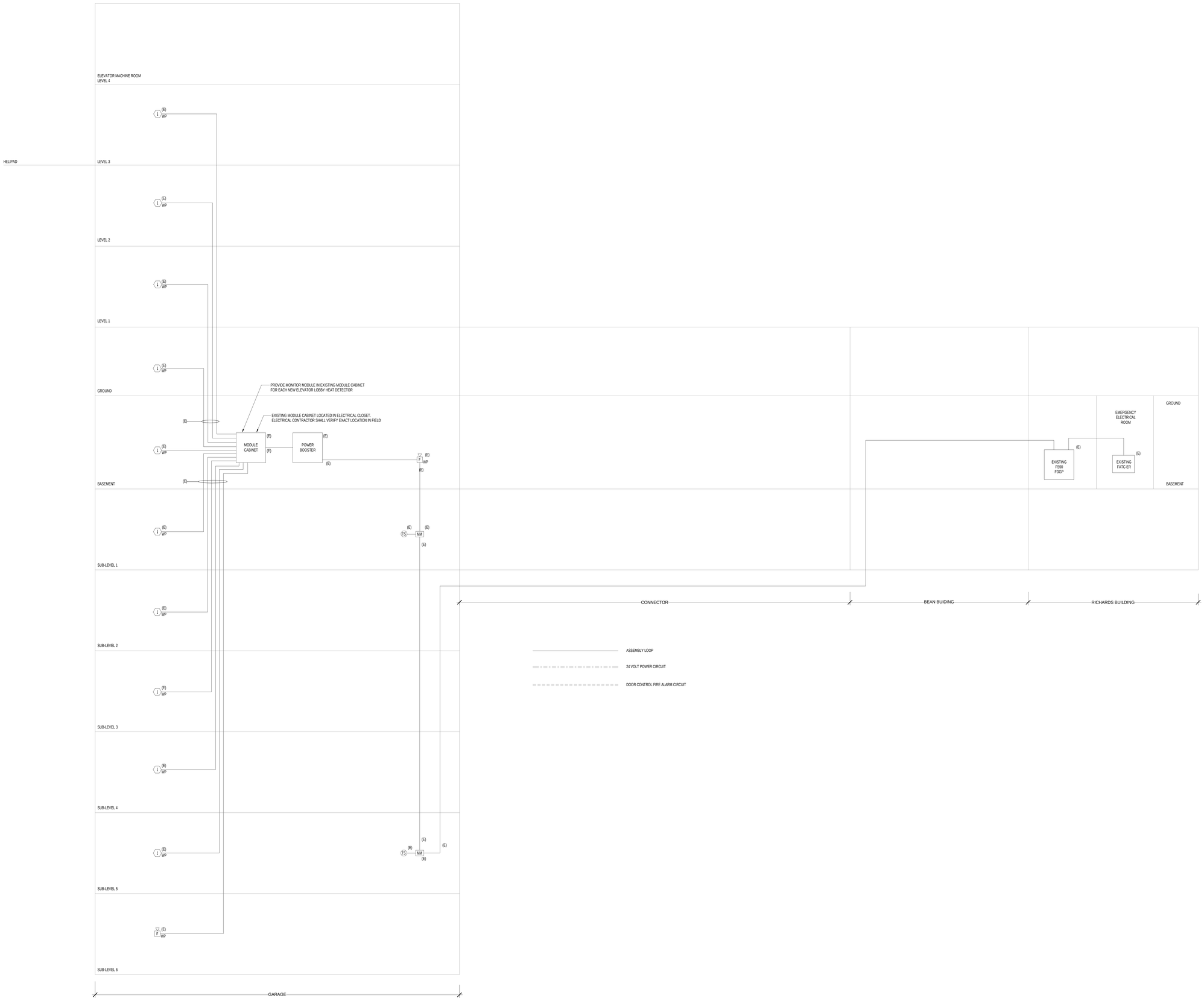

1 EXISTING FIRE ALARM RISER DIAGRAM
SCALE: NONE

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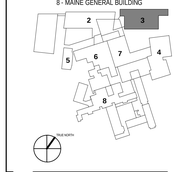

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	PERMIT SET	03.09.18
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	BC
Checked	JAM
Approved	MR

TITLE

FIRE ALARM EXISTING SINGLE LINE DIAGRAM

SHEET NUMBER

FA20-01

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PLUMBING SYMBOL LIST

BASIC

- EXISTING PIPING
- EXISTING PIPING TO BE REMOVED
- PIPING TO BE ABANDONED
- NEW SOIL, WASTE OR SANITARY PIPING
- VENT PIPING (SANITARY)
- PIPING BELOW SLAB
- DOMESTIC COLD WATER PIPING
- DOMESTIC HOT WATER PIPING (120°)
- DOMESTIC HOT WATER CIRCULATION PIPING
- PIPING w/FREEZE PROTECTION CABLE & INSULATION
- ARROW INDICATES DIRECTION OF FLOW
- CA — COMPRESSED AIR PIPING
- G — GAS PIPING
- EJ — EJECTOR DISCHARGE PIPING
- IW — INDIRECT WASTE PIPING
- PD — PUMP DISCHARGE PIPING
- SD — SUMP PUMP DISCHARGE PIPING
- ST — STORM WATER DRAINAGE PIPING
- T — TEMPERED WATER PIPING
- DISCONNECT FROM EXISTING
- CONNECT TO EXISTING
- SHOCK/WATER HAMMER ARRESTOR
- FLEXIBLE CONNECTION
- EXPANSION LOOP SIZE (X, (H), (L))
- HOSE BIBB
- WALL HYDRANT
- FRESH AIR INLET
- CLEAN OUT/PLUGGED OUTLET
- CAPPED OUTLET
- CLEAN-OUT DECK PLATE
- P-TRAP
- VACUUM BREAKER
- BOTTOM PIPE CONNECTION
- TOP PIPE CONNECTION
- SIDE CONNECTION
- PIPE DOWN/DROP
- PIPE RISE/UP
- PIPE SLOPE
- VALVE IN VERTICAL
- UNION
- REDUCER
- WATER PROOF SLEEVE
- SLEEVE
- PRESSURE GAUGE w/GAUGE COCK
- TEMPERATURE GAUGE
- FLOOR DRAIN
- ROOF DRAIN
- PUMP
- WATER METER (M)
- ABD — AUTOMATIC BALL DRIP
- VENT THRU ROOF
- TRAP
- TAMPER SWITCH (T)
- PRESSURE SWITCH w/GAUGE COCK (PS)
- WATERFLOW SWITCH (F)
- TEMPERATURE AND PRESSURE RELIEF VALVE
- BACKWATER VALVE
- PLUG VALVE
- MIXING VALVE
- RELIEF VALVE
- BALL VALVE
- LS — BALL VALVE w/LOCK SHIELD
- GATE VALVE
- GLOBE VALVE
- OUTSIDE SCREW & YOKE (OS & Y) VALVE
- CHECK VALVE
- PRESSURE REDUCING VALVE (PRV)
- SOLENOID VALVE
- FLOAT VALVE
- BALANCING VALVE
- Y STRAINER w/BLOW-OFF VALVE
- BPA — BACKFLOW PREVENTER ASSEMBLY
- RPZ — REDUCED PRESSURE ZONE BACKFLOW PREVENTER ASSEMBLY
- RPDA — REDUCED PRESSURE DETECTOR ASSEMBLY
- DCV — DOUBLE CHECK VALVE ASSEMBLY
- DCDA — DOUBLE CHECK DETECTOR ASSEMBLY
- BVA — BALANCING VALVE ASSEMBLY
- RISER DESIGNATION (X / #): X = RISER SERVICE; # = RISER NUMBER

PLUMBING ABBREVIATIONS

AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
BLDG	BUILDING
BOP	BOTTOM OF PIPE
CLG	CEILING
CM	COFFEE MAKER
CO	CLEANOUT
CODP	CLEANOUT DECK PLATE
CONN	CONNECT
CONT	CONTINUATION
CV	CHECK VALVE
CVO	CAPPED AND VALVED OUTLET
CW	COLD WATER
DIA	DIAMETER
DN	DOWN (PENETRATES FLOOR SLAB)
DR	DRAIN
DWG	DRAWING
EJ DIS	EJECTOR DISCHARGE
EQC	ELECTRIC WATER COOLER
(E)	EXISTING
(ER)	EXISTING TO BE REMOVED
(ERR)	EXISTING TO BE REMOVED & RELOCATED
EL	ELEVATION
FAI	FRESH AIR INLET
FD	FLOOR DRAIN
FL	FLOOR
FL H	FLOOR HYDRANT
FT	FEET
FU	FIXTURE UNIT
GAL	GALLONS
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HCLG	HUNG CEILING
HW	HOT WATER
HWR	HOT WATER RETURN
ID	INSIDE DIAMETER
IN	INCH
IW	INDIRECT WASTE
JS	JANITOR'S SINK
LAV	LAVATORY
MAP	MEDICAL GAS ALARM PANEL
MAX	MAXIMUM
MIN	MINIMUM
MR	MOP RECEPTOR
NC	NORMALLY CLOSED
NIC	NOT IN THIS CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
PD	PLUMBING CONTRACTOR
PD	PUMP DISCHARGE
PO	PLUGGED OUTLET
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH (GAUGE)
(RE)	RELOCATED EXISTING
(RRO)	EXISTING TO BE REMOVED AND RETURN TO OWNER
RD	ROOF DRAIN
SA	SHOCK ABSORBER
SAN	SANITARY
SD	SUMP PUMP DISCHARGE
SH	SHOWER
SK	SINK
SQ FT	SQUARE FOOT
ST	STORM
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UP	UP (PENETRATES FLOOR SLAB)
UR	URINAL
V	VENT
VB	VACUUM BREAKER
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT
ZCVB	ZONE CONTROL VALVE BOX

PLUMBING GENERAL NOTES

Key Name: General Notes_Plumbing

1. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL PLUMBING DRAWINGS.
2. ALL WORK IS NEW UNLESS OTHERWISE NOTED.
3. DRAWINGS ARE DIAGRAMMATIC: DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD.
4. NEITHER ACCURACY NOR COMPLETION OF UTILITY LOCATIONS SHOWN ON DRAWINGS IS GUARANTEED. DETERMINE EXACT LOCATIONS OF EXISTING UTILITY IN FIELD, WHETHER OR NOT SHOWN ON DRAWINGS. EXERCISE CAUTION AND IDENTIFY LOCATIONS OF UNMARKED UTILITY LINES AS NECESSARY TO PERFORM WORK OF THIS SECTION.
5. ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE CURRENT PLUMBING CODE AND ALL APPLICABLE LOCAL CODES AND DRAWINGS.
6. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES, INCLUDING (BUT NOT LIMITED TO), ELECTRICAL, HVAC PROCESS PIPING, SPRINKLER, PLUMBING STRUCTURAL AND GENERAL ARCHITECTURE.
7. ANY INTERFERENCE SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND THE OWNER'S REPRESENTATIVE, AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
8. NO WORK SHALL BE INSTALLED IN VIOLATION OF ANY GOVERNING CODES. ANY WORK SHOWN ON THE DRAWINGS WHICH IS IN VIOLATION OF SUCH CODES SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND THE OWNER'S REPRESENTATIVE AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
9. MANUFACTURER'S MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
10. PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS' RECOMMENDATIONS.
11. TOPS OF ALL FLOOR DRAINS SHALL BE SET FLUSH WITH FINISHED FLOOR. ALL PIPING ABOVE GRADE SHALL BE PROPERLY SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE.
12. CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL PLUMBING EQUIPMENT WITH THE ELECTRICAL DRAWINGS AND SHALL FURNISH EQUIPMENT WIRED FOR THE VOLTAGES SHOWN HEREIN.
13. ALL SLEEVES THROUGH CONCRETE FLOORS AND ALL CORE DRILLING OF CONCRETE FLOORS AND WALLS SHALL BE BY THIS CONTRACTOR.
14. SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERENCES WITH FIRE-PROOFING WORK.
15. COORDINATE ROOF PENETRATIONS WITH WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS.
16. STRUCTURAL WELDING SHALL BE 1/4-INCH FILLET UNLESS REQUIRED OTHERWISE.
17. VERIFY EXACT SIZES, LOCATIONS, INVERTS AND ELEVATIONS PRIOR TO RUNNING ANY PIPING. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ALL FIXTURES AND EQUIPMENT.
18. PIPING SHALL NOT RUN OVER ELECTRICAL PANELS AND SHALL BE COORDINATED WITH WORK OF OTHER TRADES.

PLUMBING DRAWING LIST

DRAWING No.	DRAWING TITLE
P00-01	PLUMBING GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
P00-20	PLUMBING DETAILS AND SCHEDULES
P10-10	PLUMBING FLOOR PLAN - GROUND & FIRST FLOORS
P10-20	PLUMBING FLOOR PLAN - SECOND & THIRD FLOOR
P20-01	PLUMBING RISER DIAGRAM

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VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02210

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

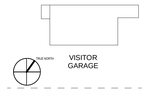
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

COMMONWEALTH OF MASSACHUSETTS — PETER J. REILLY — FIRE PROTECTION — No. 47858 — REGISTERED PROFESSIONAL ENGINEER

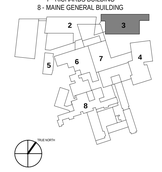
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	DTM
Checked	PJR
Approved	PJR

TITLE

PLUMBING GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

SHEET NUMBER

P00-01

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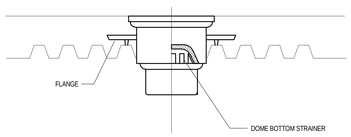
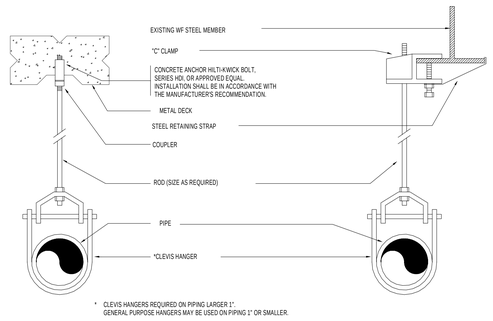
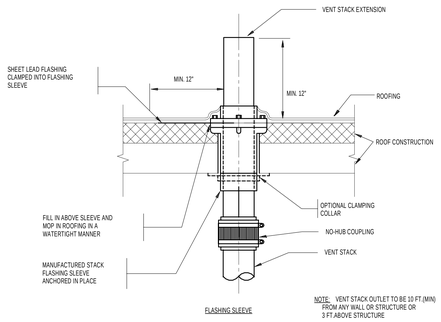


4 GARAGE DRAIN
SCALE:NTS

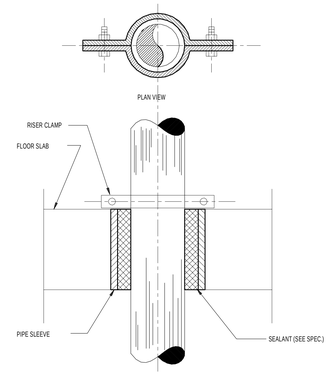


* CLEVIS HANGERS REQUIRED ON PIPING LARGER 1". GENERAL PURPOSE HANGERS MAY BE USED ON PIPING 1" OR SMALLER.

3 TYPICAL HANGER DETAIL
SCALE:NTS



2 VENT THROUGH ROOF
SCALE:NTS



1 PIPE SLEVE THROUGHT FLOOR SLAB
SCALE:NTS

DRAIN SCHEDULE

LABEL	TYPE	BASIS OF DESIGN MFG.	BASIS OF DESIGN MODEL #	DRAIN BODY	STRAINER	STRAINER SIZE	OUTLET	REMARKS
GD-1	GARAGE DRAIN	JAY R SMITH	2614-OBS	DUCO-CAST IRON	CAST IRON	18" DIAMETER	4"	WITH DOME BOTTOM STRAINER (PER DETAIL)

NOTES:

1. ALL FLOOR DRAINS IN FINISHED AREAS SHALL BE LOCATED AS PER THE ARCHITECTURAL DRAWINGS.
2. ALL FLOOR DRAINS IN MECHANICAL EQUIPMENT ROOMS, BOILER ROOMS, FAN ROOMS ETC SHALL BE LOCATED IN COORDINATION WITH THE MECHANICAL CONTRACTOR.
3. THE CONTRACTOR SHALL VERIFY THE COMPATIBILITY OF THE DRAINS WITH THE APPROVED OR WATER PROOFING SYSTEMS PRIOR TO SUBMITTING SHOP DRAWINGS.
4. THE TOP OF CURVE OF ALL FLOOR DRAINS SHALL BE FLUSH WITH THE ADJACENT FINISHED FLOOR.
5. REFER TO DRAWINGS.

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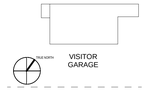
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

STATE OF MAINE
PETER J. REILLY
NO. 12356
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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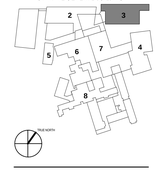

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
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1	ADDENDUM #1	12.05.17
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Checked	PJR
Approved	PJR

TITLE

PLUMBING DETAILS AND SCHEDULES

SHEET NUMBER

P00-20

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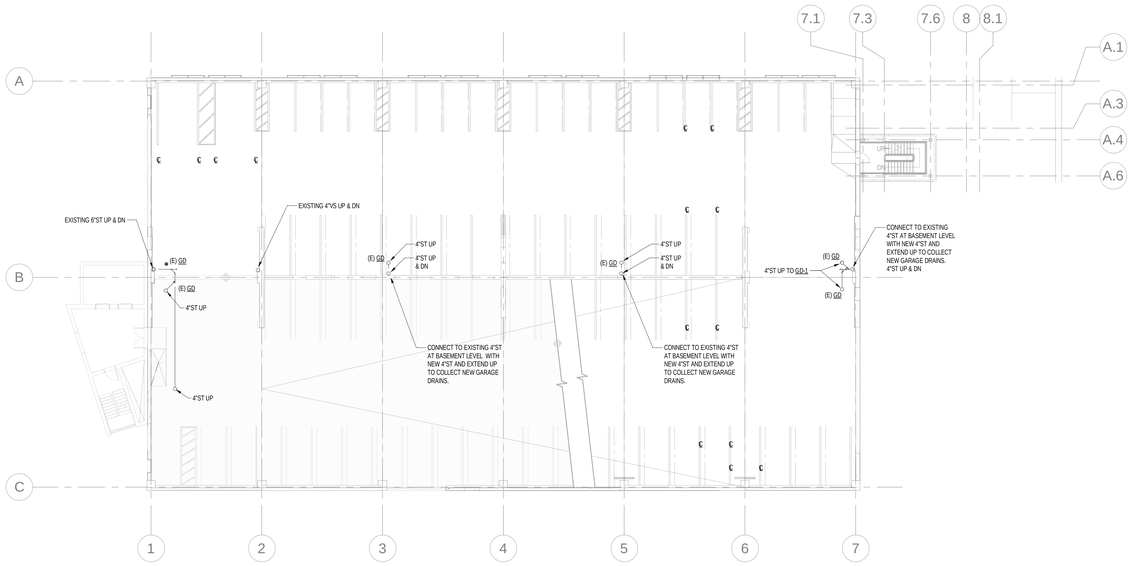
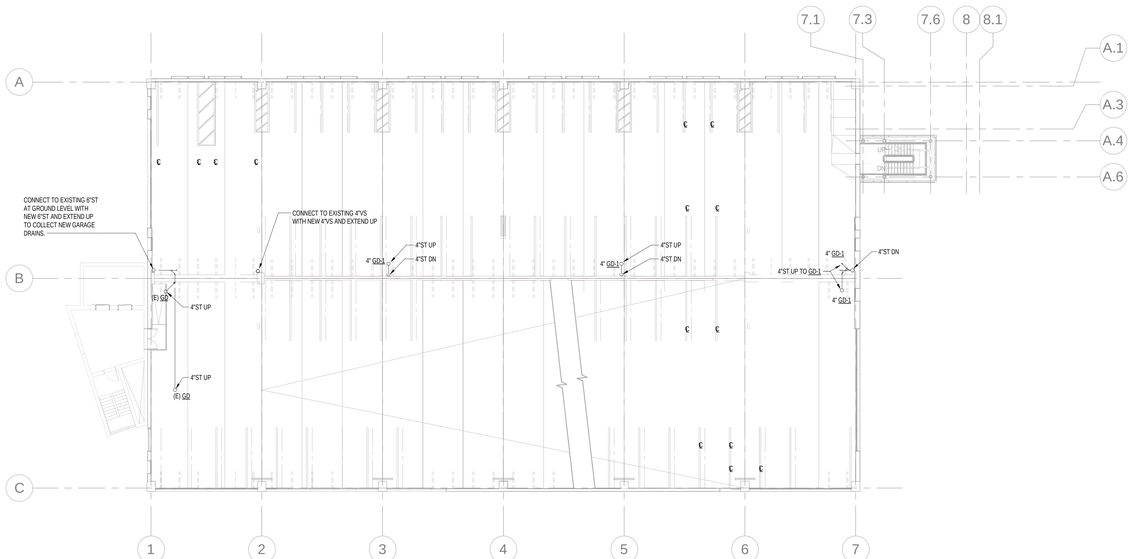


2 GROUND LEVEL
SCALE: 1/16" = 1'-0"



1 LEVEL 1
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STATE OF MAINE
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NO. 12356
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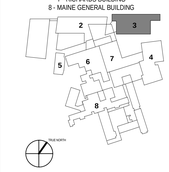

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TITLE

PLUMBING FLOOR PLAN - GROUND & FIRST FLOORS

SHEET NUMBER

P10-10

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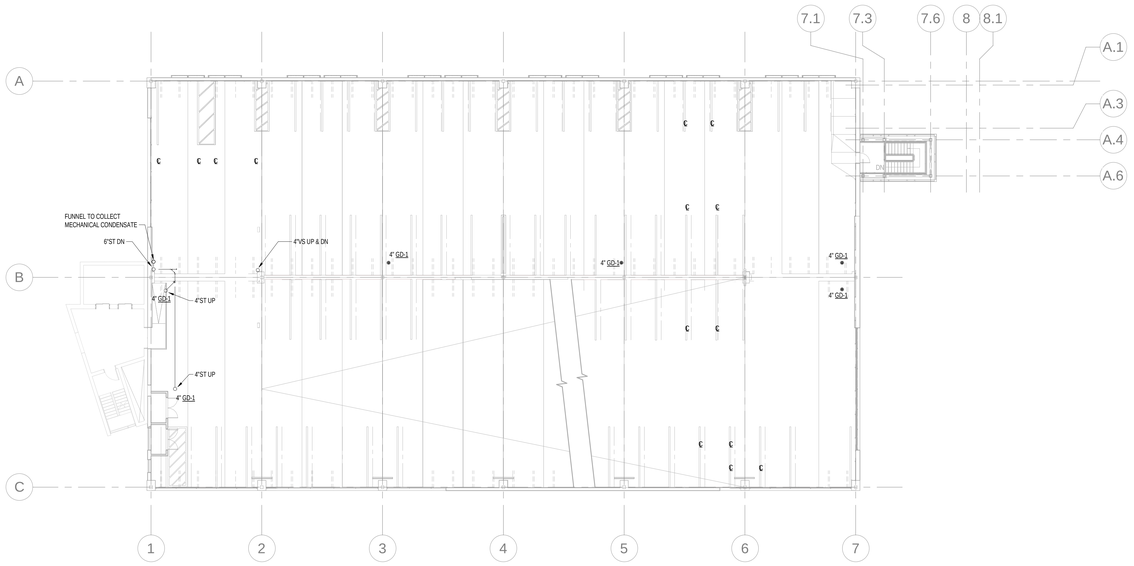

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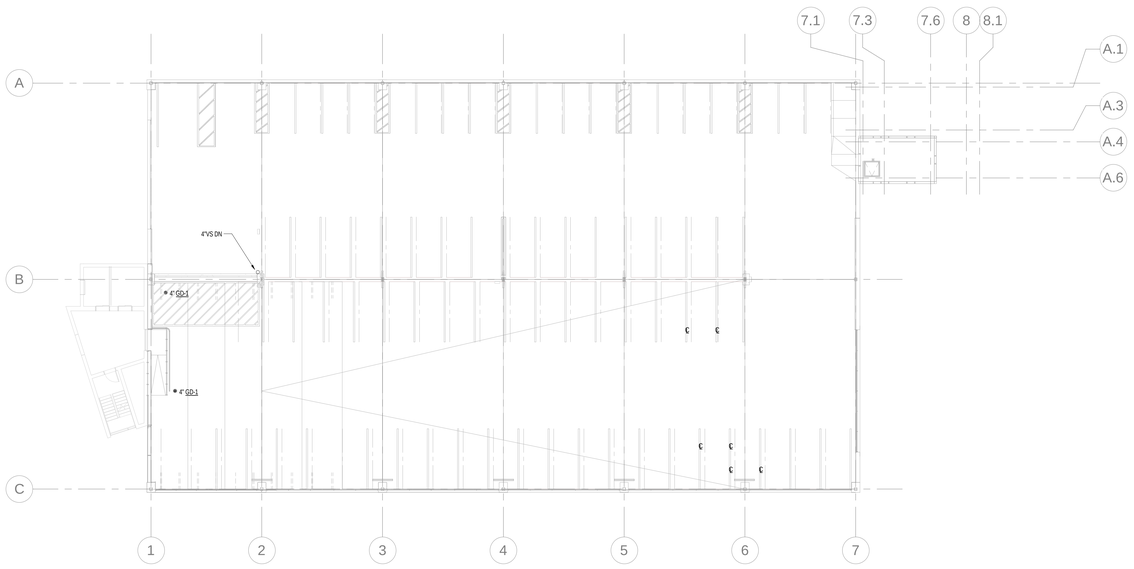

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STATE OF MAINE
PETER J. REILLY
NO. 12356
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

PROJECT KEY PLAN

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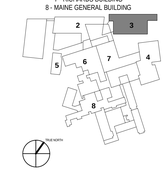

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TITLE

PLUMBING FLOOR PLAN - SECOND & THIRD FLOOR

SHEET NUMBER

P10-20

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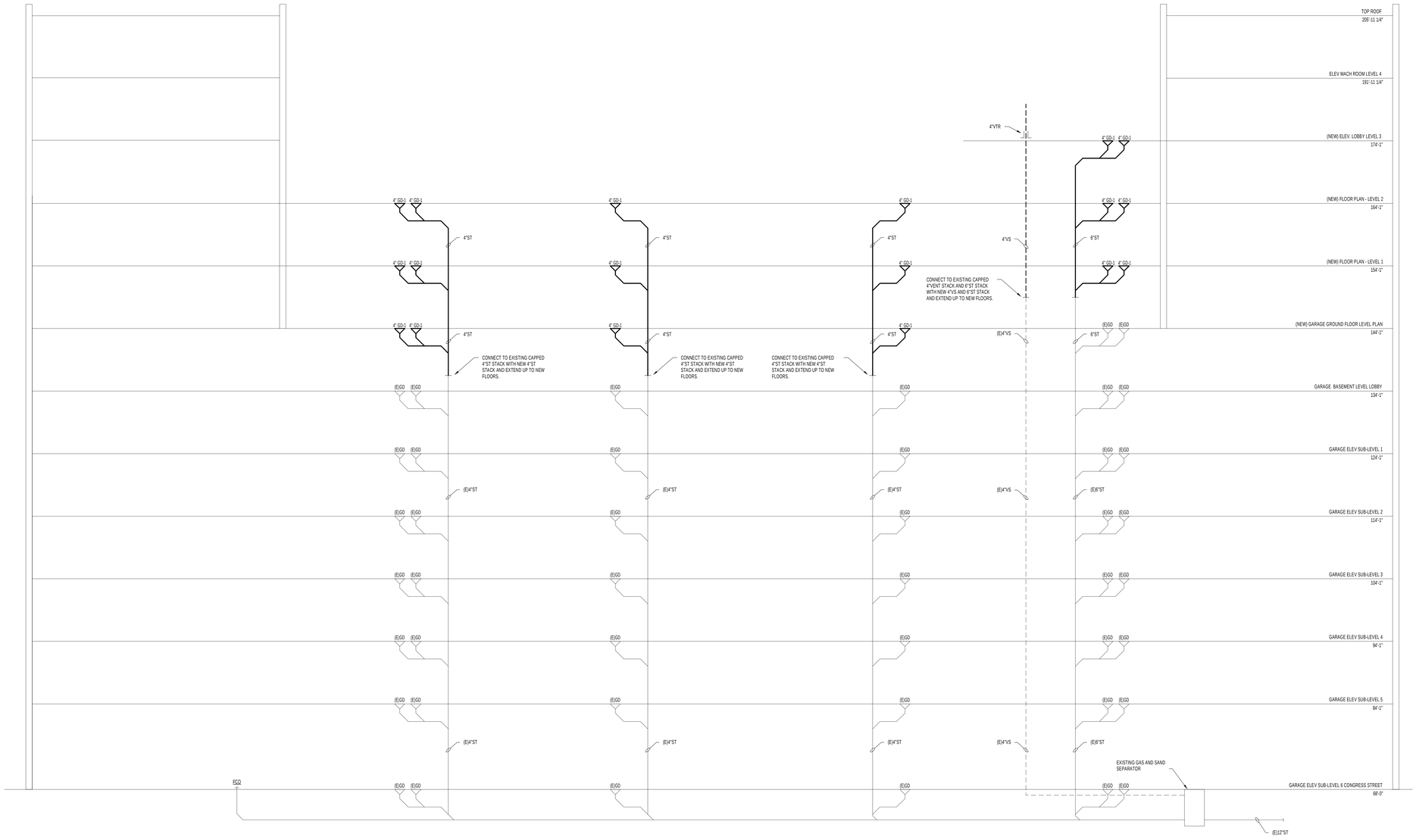

1 PLUMBING RISER DIAGRAM

SCALE: NONE

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CONSTRUCTION MANAGER
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ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

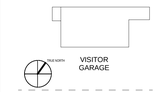
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

STATE OF MAINE
PETER J. REILLY
NO. 12356
LICENSED PROFESSIONAL ENGINEER

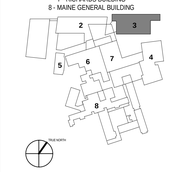
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	DTM
Checked	PJR
Approved	PJR

TITLE

PLUMBING RISER DIAGRAM

SHEET NUMBER

P20-01

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MECHANICAL SYMBOL LIST

HVAC DUCTWORK

- SINGLE LINE DUCTWORK OR EQUIPMENT - NEW
- SINGLE LINE DUCTWORK OR EQUIPMENT - EXISTING
- EXISTING DUCTWORK TO BE REMOVED
- DUCTWORK WITH ACOUSTIC LINING
- DUCTWORK UNDER POSITIVE PRESSURE (SUPPLY AIR OR FAN DISCHARGE)
- DUCTWORK UNDER NEGATIVE PRESSURE (RETURN OR OUTSIDE AIR)
- DUCTWORK UNDER NEGATIVE PRESSURE (EXHAUST AIR)
- VD — VOLUME DAMPER
- FD — FIRE DAMPER AND ACCESS DOOR
- BDD — BACKDRAFT DAMPER
- AUTOMATIC DAMPER
- SD — AUTOMATIC SMOKE DAMPER
- FSD — COMBINATION SMOKE AND FIRE DAMPER WITH ACCESS DOOR
- R — RISE IN DUCTWORK (IN DIRECTION OF AIR FLOW)
- D — DROP IN DUCTWORK (IN DIRECTION OF AIR FLOW)
- CL — CENTERLINE
- # OR CFM — CUBIC FEET PER MINUTE
- Ø — DIAMETER
- □ — SQUARE FEET
- OVAL DUCTWORK
- CD-A 400 CFM — TYPE A CEILING DIFFUSER 400 CFM SUPPLY AIR
- 12x12 CD 400 CFM — RECTANGULAR CEILING DIFFUSER WITH 12"x12" NECK 400 CFM SUPPLY AIR
- CR-A 400 CFM, CE-A 400 CFM — TYPE A CEILING RETURN GRILLE/CEILING EXHAUST GRILLE, 400 CFM RETURN/EXHAUST AIR
- 10x8 CR 300 CFM, 10x8 CE 300 CFM — 10"x8" CEILING RETURN GRILLE/CEILING EXHAUST GRILLE, 300 CFM RETURN/EXHUAST AIR
- RECTANGULAR DIFFUSER WITH BLANKING PLATE
- 10x8 TRS 150 CFM — 10"x8" TOP REGISTER, 150 CFM SUPPLY AIR
- 10x8 TGR 150 CFM — 10"x8" TOP REGISTER (TOP GRILLE) 150 CFM RETURN AIR
- 10x8 BGE 150 CFM — 10"x8" BOTTOM REGISTER (BOTTOM GRILLE) 150 CFM EXHAUST AIR
- VANED ELBOW (SEE DETAIL)
- VANED ELBOW (SEE DETAIL) OR RADIUS ELBOW
- FLEXIBLE DUCT
- SLOTTED LINEAR DIFFUSER WITH PLENUM
- DUCT FLEXIBLE CONNECTION
- VERTICAL DUCT DROP (IN DIRECTION OF AIR FLOW)
- VERTICAL DUCT RISE (IN DIRECTION OF AIR FLOW)
- VAV-A — VARIABLE AIR VOLUME BOX TYPE A
- VAV-A — VARIABLE AIR VOLUME BOX, TYPE A, WITH REHEAT COIL
- VAV-A — VARIABLE AIR VOLUME BOX, TYPE A, WITH SOUND ATTENUATOR AND REHEAT COIL
- T — THERMOSTAT
- H — HUMIDISTAT
- SD — SMOKE DETECTOR
- H — HUMIDIFIER
- UC — RISE IN DUCTWORK (IN DIRECTION OF AIR FLOW)

HVAC EQUIPMENT DESIGNATIONS

XXX-XX-XX
- EQUIPMENT TAG NUMBER
- FLOOR DESIGNATION
- EQUIPMENT DESIGNATION

ACU-2-3
- UNIT NUMBER 3
- SECOND FLOOR
- AIR CONDITIONING UNIT

HVAC GENERAL

- POINT OF CONNECTION
- POINT OF DISCONNECTION
- DDCP — DIRECT DIGITAL CONTROL PANEL
- NEW STEEL CUT
- EXISTING STEEL CUT
- SECTION DESIGNATION — SHEET No. WHERE SECTION IS SHOWN
- SECTION DESIGNATION — SHEET No. WHERE SECTION IS SHOWN

MECHANICAL ABBREVIATIONS

A	AMPERES
AAV	AUTOMATIC AIR VENT
AC	AIR CONDITIONING
ACCU	AIR COOLED CONDENSING UNIT
ACS	AUTOMATIC CONTROL SYSTEM
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AF	AFTER FILTER
AFDW	AIR FOIL DOUBLE WIDTH
AFF	ABOVE FINISHED FLOOR
AFMS	AIR FLOW MONITORING STATION
AFSW	AIR FOIL SINGLE WIDTH
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AMCS	AUTOMATED MONITORING AND CONTROL SYSTEM
AP	ACCESS PANEL
BAD	BOTTOM ANGULAR DISCHARGE
BD	BLOW DOWN
BF	BOOSTER FAN
BFP	BOILER FEED PUMP
BGE	BOTTOM EXHAUST GRILLE
BGR	BOTTOM RETURN GRILLE
BHD	BOTTOM HORIZONTAL DISCHARGE
BHP	BRAKE HORSEPOWER
BIDW	BACKWARD INCLINE DOUBLE WIDTH
BISW	BACKWARD INCLUDE SINGLE WIDTH
BMS	BUILDING MANAGEMENT SYSTEM
BRS	BOTTOM SUPPLY REGISTER
BT	BOTTOM THROAT
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
C	CONVERTOR
CAC	CONTROL AIR COMPRESSOR
CC	COOLING COIL
CCP	CENTRAL CONTROL PANEL
CCW	COUNTER CLOCKWISE
CD	CEILING DIFFUSER
CFFC	CAP FOR FUTURE CONNECTION
CFM	CUBIC FEET PER MINUTE
CFP	CHEMICAL FEED PUMP
CG	CEILING GRILLE
CH	CHILLER
CHWP	CHILLED WATER PUMP
CLG	CEILING
COD	CLEAN-OUT DOOR
COMPR	COMPRESSOR
COND	CONDENSATE
COV	CHAIR OPERATED VALVE
CP	CONDENSATE PUMP
CPA	CONTROL POINT ADJUSTMENT
CPU	CONDENSATE PUMP UNIT
CR	CEILING REGISTER
CT	COOLING TOWER
CU FT	CUBIC FEET
CU IN	CUBIC INCHES
CUH	CABINET UNIT HEATER
CV	CONSTANT VOLUME
CW	CLOCKWISE
CWP	CONDENSER WATER PUMP
°C	DEGREES CENTIGRADE (CELSIUS)
D	DROP
DB	DRY BULB
DBD	DOWN BLAST DISCHARGE
DF	DUCT FURNACE UNIT
DFWP	DEARATOR FEED WATER PUMP
DG	DIESEL GENERATOR
DHW	DOMESTIC HOTER WATER
DMPR	DAMPER
DN	DOWN
DOP	DIESEL OIL PUMP
DWG	DRAWING
DX	DIRECT EXPANSION
ø,DIAM	DIAMETER
(E)	EXISTING TO REMAIN
(ER)	EXISTING TO BE REMOVED
(ERR)	EXISTING TO BE REMOVED & RELOCATED
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB TEMPERATURE
EDH	ELECTRIC DUCT HEATER
EDR	EQUIVALENT DIRECT RADIATION
EF	EXHAUST FAN
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATOR
EQ	EQUAL
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EWB	ENTERING WET BULB
EWT	ENTERING WET TEMPERATURE
EXH	EXHUAST
EXIST	EXISTING
EXP	EXPANSION
F	FILTER
F&T	FLOAT AND THERMOSTATIC
FA	FREE AREA (SQ.FT.)
FC	FLEXIBLE CONNECTION
FCDW	FORWARD CURVED DOUBLE WIDTH
FCSW	FORWARD CURVED SINGLE WIDTH
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FF	FINAL FILTER
FG	FINISHED GRADE
FIN.FL	FINISHED FLOOR
FLA	FULL LOAD AMPERES
FOP	FUEL OIL PUMP
FOT	FUEL COIL TANK
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FR	FLOOR REGISTER
FT	FEET
FTR	FINNED TUBE RADIATION
FV	FACE VELOCITY
FX	FUME HOOD EXHAUST
°F	DEGREES FAHRENHEIT
G	GAUGE
GAL	GALLON
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GX	GENERAL EXHUAST
H	HUMIDIFIER
HALX	HALON EXHAUST
HC	HEATING COIL
HD	HEAD
HR	HOUR
HRC	HEAT RECOVERY COIL
HT	HEIGHT
HTWP	HIGH TEMPERATURE WATER PUMP
HV	HEATING AND VENTILATING
HWP	HOT WATER PUMP
HX	HEAT EXCHANGER
HZ	FREQUENCE
IN	INCH OR INCHES
IPS	IRON PIPE SIZE
KW	KILOWATT
KX	KITCHEN RANGE HOOD EXHAUST
L	LENGTH
LAT	LEAVING AIRE TEMPERATURE
LBS	POUNDS
LCP	LOCAL CONTROL PANEL
LD	LINEAR DIFFUSER
LDB	LEAVING DRY BULB TEMPERATURE
LF, LIN.FT.	LINEAR FEET
LR	LINEAR RETURN
LRA	LOCKED ROTOR AMPS
LV	LOW VELOCITY
LWB	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MB	MIXING BOX
MBH	THOUSAND BTU PER HOUR
MCC	MOTOR CONTROL CENTER
MER	MECHANICAL EQUIPMENT ROOM
MHP	MOTOR HORSEPOWER
MIN	MINIMUM
MM	MILLIMETER
MOT	MOTOR
MOV	MOTOR OPERATED VALVE
MX	MECHANICAL ROOM EXHAUST
N.O.	NORMALLY OPEN
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO.	NUMBER
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
OD	OUTSIDE DIAMETER
OED	OPEN END DUCT
OV	OUTLET VELOCITY
P	PUMP
PCC	PRE-COOLING COIL
PD	PRESSURE DROP
PF	PRE-FILTER
PHC	PREHEAT COIL
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAUGE
(RE)	RELOCATED EXISTING
(RRO)	EXISTING TO REMOVED AND RETURN TO OWNER
R	RISE
RA	RETURN AIR
RAD	RADIATION
RCC	RECOOLING COIL
REFR	REFRIGERANT
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RHWP	REHEAT WATER PUMP
RLA	RUNNING LOAD AMPS
RM	ROOM
ROT	ROTATION
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SAU	SOUND ATTENUATION UNIT
SCHWP	SECONDARY CHILLED WATER PUMP
SD	SMOKE DETECTOR
SF	SUPPLY FAN
SHWP	SECONDARY HOT WATER PUMP
SLD	STRIPLINE DIFFUSER
SMK.CTL.	SMOKE CONTROL OPERATION
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SQ.FT.	SQUARE FEET
SS	STAINLESS STEEL
SX	SMOKE EXHAUST
T	THROAT
TAD	TOP ANGULAR DISCHARGE
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE
TF	TERMINAL FILTER
TG	TOP GRILLE
TGE	TOP EXHAUST GRILLE
TGR	TOP RETURN GRILLE
THD	TOP HORIZONTAL DISCHARGE
TR	TOP REGISTER
TRD	TRANSFER DUCT
TRF	TRANSFER FAN
TRG	TRANSFER GRILLE
TRS	TOP SUPPLY REGISTER
TS	TIP SPEED
TT	TOP THROAT
TV	TURNING VANES
TX	TOILET EXHAUST
TYP	TYPICAL
UBD	UPBLAST DISCHARGE
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VA	VENTILATION AIR
VAC	VACUUM
VAV	VARIABLE AIR VOLUME UNIT
VF	VENTILATION FAN
VFD	VARIABLE FREQUENCY DRIVE
VIV	VARIABLE INLET VANES
VP	VACUUM PUMP
W	WIDTH
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER COLUMN
WG	WATER GAUGE
WMS	WIRE MESH SCREEN
WP	WORKING PRESSURE
WSP	WORKING STEAM PRESSURE

MECHANICAL DEMOLITION NOTES

Key Notes — Demolition Notes_Mechanical

1. ALL PIPING IN WALLS AND FLOORS NOT TO BE REUSED WILL BE PLUGGED OR CAPPED AND CUTTING AND PATCHING WILL BE PERFORMED TO RESTORE SURFACE TO ORIGINAL CONDITION BY THIS CONTRACTOR.
2. AFTER REMOVING PIPE THROUGH THE FLOOR SLABS, PACK OPENING WITH APPROVED FIRE-RATED PACKING.
3. THE CONTRACTOR SHALL INCLUDE IN HIS PRICE ALL COSTS ASSOCIATED WITH REMOVALS AND RELOCATIONS OF HVAC WORK AS DESCRIBED ON THE DRAWINGS AND IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE OWNER/ENGINEER.
4. THE CONTRACTOR SHALL PERFORM DEMOLITION AND REMOVAL WORK WITH MINIMUM INTERFERENCE WITH FUNCTIONING HVAC SYSTEMS. ALL AFFECTED SYSTEMS SHALL BE RECONNECTED AND RESTORED.
5. DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION.
6. THE CONTRACTOR SHALL REMOVE ALL DUCT & PIPING SUPPORTS, ETC. FROM PARTITIONS THAT ARE TO BE REMOVED. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING PIPING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL AND PROVIDE BYPASS CONNECTIONS NECESSARY.
7. ALL PIPING WHICH BECOMES EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.
8. PORTIONS OF PIPING & DUCTWORK TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ACTIVE, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED.
9. THE CONTRACTOR SHALL NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS.
10. ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THE HVAC CONTRACTOR, AS DIRECTED BY THE OWNER.
11. ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVER TIME, IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING SYSTEMS.
12. THE SHUTDOWN OF EXISTING BUILDING HVAC SERVICES SHALL BE COORDINATED WITH THE OWNER. MAKE ARRANGEMENTS AT LEAST 5 BUSINESS DAYS PRIOR TO A SHUTDOWN.
13. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL STATE & LOCAL REQUIREMENTS REGARDING DISPOSAL OF REFRIGERANTS.

MECHANICAL GENERAL NOTES

Key Notes — General Notes_Mechanical

1. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.
2. ALL WORK IS NEW UNLESS OTHERWISE NOTED.
3. DRAWINGS ARE DIAGRAMMATIC. DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD. RELOCATE EXISTING WORK THAT INTERFERES WITH WORK OF THIS CONTRACT.
4. COORDINATE THIS WORK WITH THAT OF OTHER TRADES.
5. DIMENSIONS SHOWN ON PLAN ARE HORIZONTAL. DIMENSIONS SHOWN IN ELEVATION ARE VERTICAL EXCEPT IN WAY OF STRUCTURAL STEEL, DIMENSIONS ARE MEASURED PERPENDICULAR TO FLANGE.
6. NEITHER ACCURACY NOR COMPLETION OF SERVICES AND UTILITY LOCATIONS SHOWN ON DRAWINGS IS GUARANTEED. DETERMINE EXACT LOCATIONS OF EXISTING SERVICES AND UTILITIES IN FIELD, WHETHER OR NOT SHOWN ON DRAWINGS. EXERCISE CAUTION AND IDENTIFY LOCATIONS OF UNMARKED UTILITY LINES AS NECESSARY TO PERFORM WORK OF THIS SECTION.
7. MANUFACTURERS MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
8. PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS RECOMMENDATIONS.
9. PROVIDE ACCESS PANELS FOR EQUIPMENT THAT REQUIRES PERIODIC SERVICE.
10. PROVIDE HANGERS, INSERTS, ANCHORS, SUPPPLEMENTAL STEEL & SUPPORTS AS REQUIRED TO SUPPORT DUCTWORK, PIPING AND EQUIPMENT FROM STRUCTURE.
11. SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERING WITH EXISTING OPERATIONS IN THE FACILITY.
12. COORDINATE ROOF PENETRATIONS WITH WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS. MECHANICAL CONTRACTOR TO NOTIFY OWNER PRIOR TO STARTING WORK TO VERIFY COMPLIANCE WITH BOND AND WARRANTY OF EXISTING ROOF.
13. RUN DUCTS AND PIPING CONCEALED, UNLESS OTHERWISE SPECIFIED AND CLEAR OF CEILING INSERTS.
14. INSTALL THERMOSTATS 4'-6" ABOVE FINISHED FLOOR OR AS DIRECTED OTHERWISE BY ARCHITECT.
15. STRUCTURAL WELDING SHALL BE CONTINUOUS 1/4" FILLET UNLESS REQUIRED OTHERWISE.

AIR SYSTEMS:

16. AIR SYSTEMS REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF AIR DEVICES.
17. INTERNAL AIRFLOW DIMENSIONS ARE SHOWN FOR DUCTS. INCREASE DUCT SIZE AS NECESSARY TO MAINTAIN FREE FLOW AREA INDICATED.
18. USE FLAT TRANSVERSE SEAM FOR DUCTWORK WHERE SPACE AVAILABLE DICTATES.
19. DIFFUSER SIZES SHOWN ARE NECK SIZES. REGISTERS AND GRILLE SIZES ARE NOMINAL.
20. PROVIDE VOLUME DAMPERS OR OTHER APPROVED BALANCING DEVICES AT DUCT BRANCHES AND RUN OUTS, AND AT REGISTER GRILLE AND DIFFUSER NECKS IN SUPPLY, RETURN AND EXHAUST DUCTWORK WHETHER SHOWN OR NOT.
21. DUCTWORK DOWNSTREAM OF ALL VAV AND FAN POWERED VAV BOXES SHALL BE ACOUSTICALLY LINED WITH 1" ACOUSTICAL LINING FOR A MINIMUM OF 10 FEET.
22. PROVIDE 36" CLEARANCE IN FRONT OF ALL ELECTRIC CONTROL PANELS PER N.E.C. AND MFG. REQUIREMENTS.
23. PROVIDE DUCT TRANSITIONS FROM VAV BOX INLET/OUTLET DUCT WORK AT SIZES INDICATED TO VAV BOX INLET/OUTLET UNIT CONNECTIONS.
24. VAV DUCT INLET SIZE SHALL BE AS SCHEDULED OR AS INDICATED ON THE FLOOR PLANS. PROVIDE TRANSITION FROM DUCT SIZE INDICATED ON THE FLOOR PLANS TO SCHEDULED SIZE MINIMUM 2'-0" FROM VAV BOX INLETS.

PIPING SYSTEMS

25. PITCH PIPING 1" IN 20' IN DIRECTION OF FLOW.
26. PROVIDE TRAPS IN CONDENSATE LINES THAT EXTEND OVER 2".

MECHANICAL DRAWING LIST

DRAWING No.	DRAWING TITLE
M00-01	MECHANICAL GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
M00-10	MECHANICAL SCHEDULES & DETAILS
M11-10	MECHANICAL PLANS - DEMOLITION & NEW WORK

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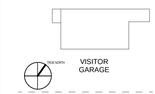
PROJECT KEY PLAN



OVERALL KEY PLAN

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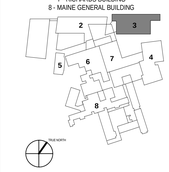

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
2	ADDENDUM #2	01.05.18
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	JDL
Checked	DC
Approved	DR

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

TITLE

MECHANICAL GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

SHEET NUMBER

M00-01

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SPLIT AIR COOLED SCHEDULE

EQUIP. NO	LOCATION	SERVICE	TOTAL COOLING (MBH)	EVAPORATOR COIL CONDITIONS				ELECTRICAL DATA				AHU OPER. WEIGHT (LBS)	UNIT DIMENSIONS			BASIS OF DESIGN	CONDENSING UNIT No.	TOTAL COOLING (MBH)	CONDENSING UNIT								COND. WEIGHT (LBS.)	UNIT DIMENSIONS			BASIS OF DESIGN	REMARKS
				TOTAL (MBH)	CFM	ENTERING AIR		VOLTS	PH	HZ	FLA		LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)				COMPRESSOR			ELECTRICAL DATA			COMPRESSOR MCA	EER		LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)		
						DB (°F)	WB (°F)												QUANTITY	TYPE	FLA	VOLTS	PH	HZ								
DSS-80A	IDF ROOM	IDF ROOM	12.0	12.0	425	115	75	208	1	60	0.33	29	36	10	12	MITSUBISHI PKA-A12NHA3	DSS-80	12.0	1	ROT	0.35	208	1	60	13	15.2	90	32	14	24	MITSUBISHI PUY-A12NHA3	1,2,3,4,5,6

NOTES:

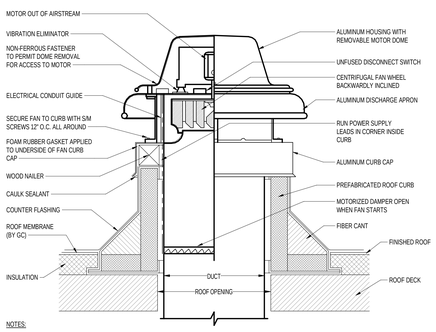
1. INDOOR UNIT IS EVAPORATOR ONLY - OUTDOOR UNIT IS CONDENSING UNIT (COMPRESSOR AND CONDENSER).
2. INDOOR UNIT AC-1-1 SHALL BE PAIRED WITH CORRESPONDING CONDENSING UNIT ACCU-2-1.
3. PROVIDE WITH A WALL MOUNTED REMOTE TEMPERATURE SENSOR.
4. INDOOR UNIT IS POWERED BY OUTDOOR UNIT.
5. CONDENSING UNIT SHALL BE CAPABLE OF LOW AMBIENT OPERATION DOWN TO 0°F. PROVIDE WIND BAFFLE AND OTHER REQUIRED ACCESSORIES.
6. PROVIDE CONDENSATE PUMP.

1 SPLIT AIR COOLED SCHEDULE
SCALE:NTS

EXHAUST FAN SCHEDULE

UNIT No.	LOCATION	SERVICE	FAN TYPE	PERFORMANCE DATA					MOTOR DATA						VIBRATION ISOLATION				
				CFM	TOTAL SP (IN. W.G.)	RPM	BHP	MAX. OV (FPM)	DRIVE TYPE	MHP	STARTER TYPE	ELECTRICAL DATA			SPECIFICATIONS		MIN. STATIC DEFLECTION (IN.)	MANUF. MODEL #	REMARKS
												VOLTS	PHASE	HZ	MOUNTING TYPE	BASE TYPE			
EXH-212	ROOF	STAIRWAY	CENT. ROOF	10,000	0.5	1097	1.88	10,338	DIRECT	3	ECM	460	3	60	CURB	-	-	GREENHECK RSI-36-609-B30	-

2 EXHAUST FAN SCHEDULE
SCALE:NTS



NOTES:

1. FANS AND CURBS SHALL BE FROM THE SAME MANUFACTURER.
2. INSTALL WITH CURB HEIGHT SUCH THAT A DISTANCE OF 18" BETWEEN THE DISCHARGE APRON AND FINISHED ROOF IS MAINTAINED. SQUARE CURB AS REQUIRED FOR LEVEL INSTALLATION.

1 ROOF EXHAUST FAN
SCALE: NTS

PERKINS + WILL
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MaineHealth

22 Bramhall Street
Portland ME 04102

CONSULTANTS

CIVIL/ LANDSCAPE ARCHITECT
Sebago Technics
75 John Roberts Road, Suite 1A,
South Portland ME 04106

STRUCTURAL ENGI/ BUILDING ENVELOPE CONSULTANT
Simpson Gumpertz & Heger Inc.
41 Seyon Street, Building 1, Suite 500,
Waltham MA 02453

MEP/FP ENGINEER/ CODE
AKF Group LLC
99 Bedford Street, 2nd Floor, Boston MA 02111

CONSTRUCTION MANAGER
Turner Construction
2 Seaport Lane, Suite 200, Boston MA 02210

ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02210

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

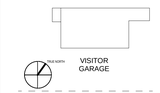
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

STATE OF MAINE — Daniel R. Rancourt — No. 7956 — LICENSED PROFESSIONAL ENGINEER

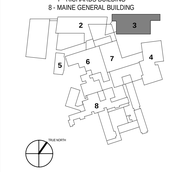
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
2	ADDENDUM #2	01.05.18
1	ADDENDUM #1	12.05.17
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	JDL
Checked	DC
Approved	DR

TITLE

MECHANICAL SCHEDULES & DETAILS

SHEET NUMBER

M00-10

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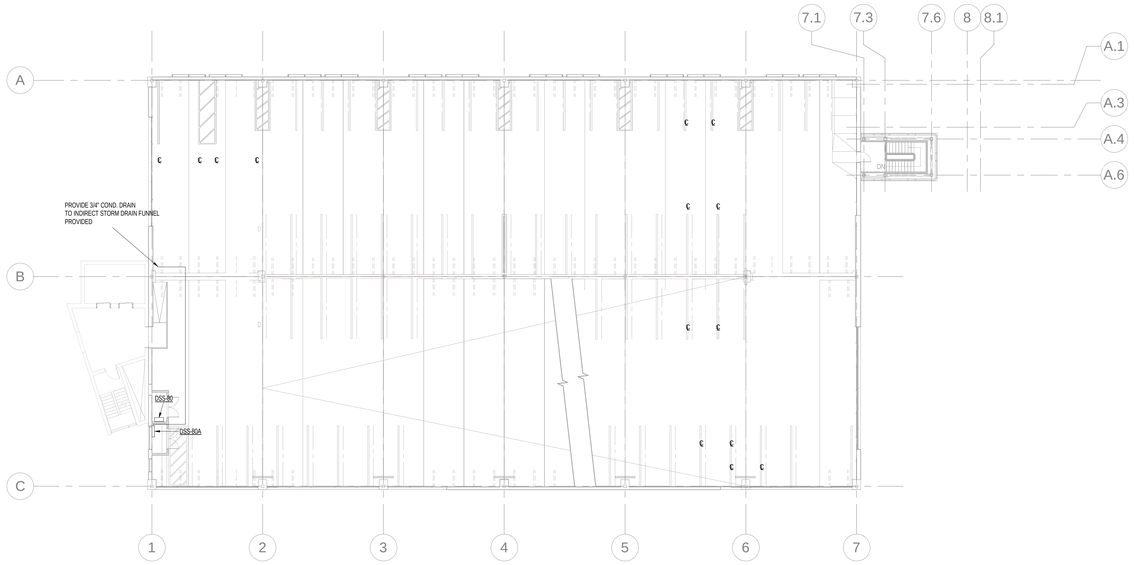
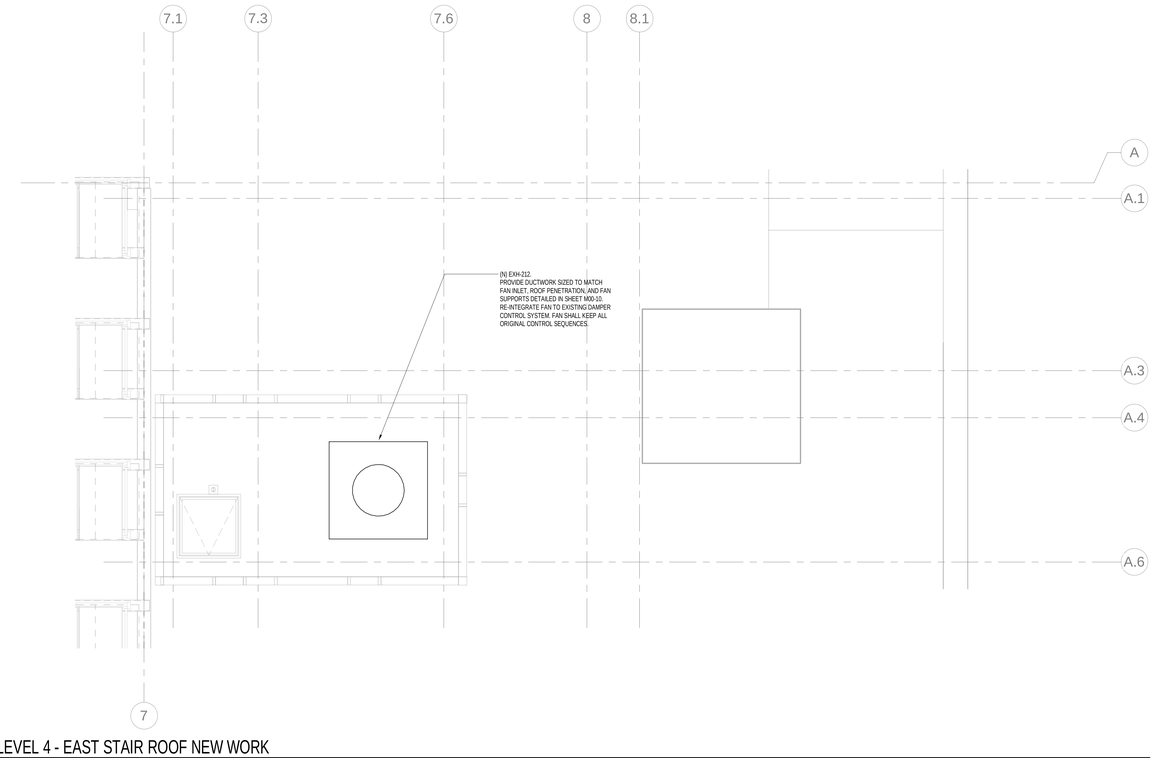
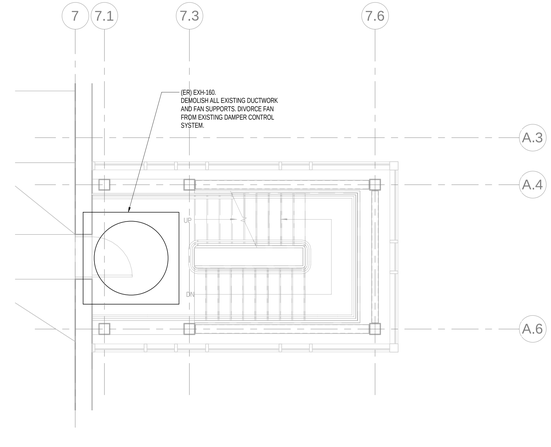


1 MECHANICAL 2ND FLOOR DUCTWORK
SCALE: 1/16" = 1'-0"



2 LEVEL 4 - EAST STAIR ROOF NEW WORK
SCALE: 1/4" = 1'-0"



3 GROUND LEVEL - EAST STAIR ROOF DEMOLITION
SCALE: 1/4" = 1'-0"

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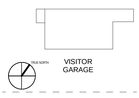
Portland ME 04102

STATE OF MAINE
DAVID P. ROBERTS
No. 11646
LICENSED
PROFESSIONAL ENGINEER

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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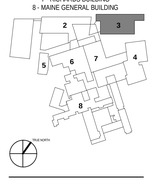

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Approved	DR

TITLE

MECHANICAL PLANS - DEMOLITION & NEW WORK

SHEET NUMBER

M11-10

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ELECTRICAL SYMBOLS LIST

LIGHTING SYMBOLS

NS — 2'x4'/2'x2' RECESSED FLUORESCENT CEILING MOUNTED FIXTURE
- 'A' = FIXTURE TYPE
- 'a' = CONTROLLED BY SWITCH 'a'
- NS = NOT SWITCHED
- NL = NIGHT LIGHT

EM — SIMILAR TO ABOVE WITH EMERGENCY BACKUP
- 'A' = FIXTURE TYPE
- 'a' = CONTROLLED BY SWITCH 'a'

NL — RECESSED FLUORESCENT LIGHT FIXTURE ON EMERGENCY LIFE SAFETY CIRCUIT
- 'A' = FIXTURE TYPE
- 'a' = CONTROLLED BY SWITCH 'a'

NS — WALL MOUNTED FLUORESCENT LIGHT FIXTURE
- 'A' = FIXTURE TYPE
- 'a' = CONTROLLED BY SWITCH 'a'
- NS = NOT SWITCHED
- NL = NIGHT LIGHT

EM — FLUORESCENT STRIP FIXTURE - TYPE AS NOTED
- 'A' = FIXTURE TYPE
- 'a' = CONTROLLED BY SWITCH 'a'
- EM = EMERGENCY BACKUP

UNDERCABINET LIGHT FIXTURE
- 'A' = FIXTURE TYPE

EM — RECESSED CEILING MOUNTED FIXTURE
- 'A' = FIXTURE TYPE
- 'a' = CONTROLLED BY SWITCH 'a'
- EM = EMERGENCY BACKUP

EM — WALL MOUNTED LIGHT FIXTURE
- 'A' = FIXTURE TYPE
- 'a' = CONTROLLED BY SWITCH 'a'
- EM = EMERGENCY BACKUP

EM — ACCENT LIGHT OR WALL WASHER
- 'A' = FIXTURE TYPE
- 'a' = CONTROLLED BY SWITCH 'a'
- EM = EMERGENCY BACKUP

'X' — CEILING MOUNTED EXIT LIGHT; TYPE 'X' - DIRECTIONAL ARROWS WHERE INDICATED - SHADED AREAS INDICATE ILLUMINATED FACE/FACES

'X1' — WALL MOUNTED EXIT LIGHT; TYPE 'X' - DIRECTIONAL ARROWS WHERE INDICATED - SHADED AREAS INDICATE ILLUMINATED FACE/FACES

'A' — EMERGENCY BATTERY LIGHT UNIT
- 'A' = FIXTURE TYPE

'A' — REMOTE LIGHT HEADS FOR EMERGENCY BATTERY LIGHT
UNIT TYPE AS NOTED

POWER SYMBOLS

S3a — SINGLE POLE SWITCH
- a = CONTROLLING OUTLET 'a'
- 2 = DOUBLE POLE
- 3 = THREE-WAY
- 4 = FOUR-WAY
- D = DOOR
- K = KEY OPERATED
- MO = MOMENTARY CONTACT
- T = TIME SWITCH
- P = PILOT LIGHT

$T — DISCONNECT SWITCH - TOGGLE TYPE WITH THERMAL OVERLOAD - 277V HP RATED

$m 450 — DISCONNECT SWITCH - TOGGLE TYPE MOTOR RATED, 20A, 1P, U.O.N.

DA — WALL DIMMER - TYPE 'A' NUMBER INDICATES WATTAGE RATING

OS — OCCUPANCY SENSOR, CEILING MOUNTED

OS — OCCUPANCY SENSOR, WALL MOUNTED

PCS — PHOTO CONTROL SWITCH

T — TRANSFORMER

a — 20A, 125V DUPLEX RECEPTACLE - FLUSH WALL MOUNTED CONTROLLED FROM WALL SWITCH 'a'

— 20A, 125V DUPLEX RECEPTACLE - FLUSH WALL MOUNTED WITH TWO (2) INTEGRALLY POWERED USB PORTS

— 20A, 125V QUADRUPLEX RECEPTACLE - FLUSH WALL MOUNTED

— 20A, 125V ISOLATED GROUND, DUPLEX RECEPTACLE, FLUSH FLOOR MOUNTED.

— 20A, 125V DUPLEX RECEPTACLE - FLUSH WALL MOUNTED. GFI TYPE. PROVIDE DIE CAST WEATHERPROOF BOX

— 20A, 125V EMERGENCY DUPLEX RECEPTACLE - FLUSH WALL MOUNTED

— 20A, 125V EMERGENCY DUPLEX RECEPTACLE - FLUSH WALL MOUNTED WITH TWO (2) INTEGRALLY POWERED USB PORTS

FM — SINGLE RECEPTACLE - FLUSH WALL MOUNTED
- FM = FLOOR MACHINE
- WC = WATER COOLER
- XR = X-RAY

— 20A, 125V DUPLEX RECEPTACLE SURFACE MOUNTED

— 20A, 125V SURGE SUPPRESSION DUPLEX RECEPTACLE - FLUSH WALL MOUNTED

C — FLUSH FLOOR MOUNTED JUNCTION BOX OR POKE-THRU FOR ELECTRIFIED FURNITURE POWER FEED
- C = VOICE/DATA FEED

— 20A, 125V DUPLEX RECEPTACLE - FLUSH FLOOR MOUNTED

— 20A, 125V QUADRUPLEX RECEPTACLE - FLUSH FLOOR MOUNTED

A — SPECIAL PURPOSE RECEPTACLE - FLUSH WALL MOUNTED
- A = TYPE

A — SPECIAL PURPOSE RECEPTACLE - FLUSH FLOOR MOUNTED
- A = INDICATES TYPE

A — PLUG-IN SURFACE METAL RACEWAY - LETTER INDICATES TYPE - WITH SPECIAL PURPOSE RECEPTACLES WHERE INDICATED

5 3 1 — HOMERUN-NUMERAL WHERE USED INDICATES CIRCUIT NUMBER FOR REFERENCE ONLY.
- 2#12+1#12G-3/4"C FOR ONE CKT. HOMERUN, U.O.N.
- 3#12+1#12G-3/4"C FOR TWO CKT. HOMERUN, U.O.N.
- 4#12+1#12G-3/4"C FOR THREE CKT. HOMERUN, U.O.N.

— HOMERUN - NUMERAL WHERE USED INDICATES CIRCUIT NUMBER FOR REFERENCE ONLY

— DIMMER ZONE HOMERUN

— MOTOR CONTROLLER

100/3 — COMBINATION MOTOR CONTROLLER AND DISCONNECT SWITCH SWITCH AMPS/# OF POLES, VOLTAGE RATING AS REQUIRED

30/3 — UNFUSED DISCONNECT SWITCH SWITCH AMPS/# OF POLES, VOLTAGE RATING AS REQUIRED

100/60/3 — FUSED DISCONNECT SWITCH, SWITCH AMPS/FUSE AMPS/ # OF POLES, VOLTAGE RATING AS REQUIRED

90/3 CB — ENCLOSED CIRCUIT BREAKER
TRIP AMPS/# OF POLES, VOLTAGE RATING AS REQUIRED
- NA = NON-AUTOMATIC

— SURFACE MOUNTED LIGHTING PANELBOARD

— FLUSH MOUNTED LIGHTING PANELBOARD

— SURFACE MOUNTED POWER PANELBOARD

— FLUSH MOUNTED POWER PANELBOARD

— SURFACE MOUNTED POWER DISTRIBUTION PANELBOARD

J — CEILING MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT CONNECTION

J — FLUSH WALL MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT CONNECTION

J — FLUSH FLOOR MOUNTED JUNCTION BOX

— PULLBOX

— EXISTING CONDUIT TO BE REMOVED

— EXISTING CONDUIT/EQUIPMENT TO REMAIN

— NEW CONCEALED CONDUIT

— NEW EXPOSED CONDUIT

— NEW UNDERGROUND/IN SLAB CONDUIT

— NEW EMERGENCY CONDUIT

— CONDUIT TURNING UP

— CONDUIT TURNING DOWN

— CONDUIT STUB-UP WITH FLEXIBLE EQUIPMENT CONNECTION

— FLEXIBLE EQUIPMENT CONNECTION

— CAPPED CONDUIT

K — PUSH BUTTON
- K = KEY OPERATED
- H = HOLD UP
- P = PANIC

A — SECTION A-A

HA 1 — FEEDER DESIGNATION
- H = 480V
- L = 208V
- A = SWITCHBOARD 'A'
- 1 = FEEDER NUMBER ONE

SINGLE LINE DIAGRAM SYMBOLS

480V 500KVA 120/208V — POWER TRANSFORMER
VOLTAGES, WINDINGS AND SIZE AS INDICATED

ATS-1 A N B 200A 4P — AUTOMATIC TRANSFER SWITCH
- ATS = AUTOMATIC TRANSFER
- MTS = MANUAL TRANSFER POLES AND RATING AS NOTED

M — MOTOR

G — GENERATOR

— GROUND CONNECTION

100/60/3 — FUSED SWITCH
100 AMP SWITCH / 90 AMP/ 3 POLE

100/3 — UNFUSED SWITCH
100 AMP SWITCH / 3 POLE

100/90 — CIRCUIT BREAKER - DRAW OUT TYPE
100 AMP FRAME / 90 AMP TRIP

90/3 — CIRCUIT BREAKER - MOLDED CASE TYPE
90 AMP TRIP / # OF POLES
- LT = LONG TIME SETTING
- ST = SHORT TIME SETTING
- I = INSTANTANEOUS SETTING

2000/1600 — NETWORK PROTECTOR
2000 AMP FRAME / 1600 AMP TRI

M — DIGITAL MULTIMETER

200A — MEDIUM VOLTAGE CIRCUIT BREAKER
200A CAPACITY

200A CB — MEDIUM VOLTAGE CIRCUIT BREAKER DRAW OUT TYPE - 200A CAPACITY

400/5 3 — CURRENT TRANSFORMER
NUMBER AND RATIO AS INDICATED

100/90 — FUSED SWITCH
100 AMP SWITCH / 90 AMP

125A — HOOKSWITCH FUSE - 125A EXPULSION FUSE

— CURRENT LIMITER

— LIGHTNING ARRESTOR WITH GROUND CONNECTION

— CAPACITOR

— REACTOR

100/90/3 — COMBINATION MOTOR CONTROLLER AND FUSED DISCONNECT SWITCH, SWITCH AMPS / FUSE AMPS / # OF POLES, VOLTAGE RATING & STARTER SIZE AS REQUIRED

90/3 — COMBINATION MOTOR CONTROLLER AND CIRCUIT BREAKER TRIP AMPS / # OF POLES, VOLTAGE RATING & STARTER SIZE AS REQUIRED

ELECTRICAL ABBREVIATIONS

*	SPECIAL MOUNTING HEIGHT. COORDINATE LOCATION WITH ARCHITECTURAL ELEVATIONS
1P	SINGLE POLE
2P	TWO POLE
3P	THREE POLE
A	AMPERE
AC	ABOVE COUNTER
ACB	AIR CIRCUIT BREAKER
AFF	ABOVE FINISHED FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
ALM	ALARM
AMM	AMMETER
AQST	AQUASTAT
ARF	ABOVE RAISED FLOOR
ASYM	ASYMMETRICAL
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BG	BREAK GLASS SWITCH
BIL	BASIC IMPULSE LEVEL
BLDG	BUILDING
C	CONDUIT
CAB	CABINET
CAT	CATALOG
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING
CLOS	CLOSET
CO	CONDUIT ONLY
COMM	COMMUNICATION
CONN	CONNECTED
CONT	CONTINUATION
CT	CURRENT TRANSFORMER
CTL	CONTROL
CU	COPPER
CUH	CABINET UNIT HEATER
DB	DECIBEL
DE	DOUBLE ENDED SUBSTATION
DEG	DEGREE
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DISC	DISCONNECT
DIV	DIVISION
DN	DOWN
DP	DISTRIBUTION PANEL BOARD
DT	DUST TIGHT
DWG	DRAWING
°C	DEGREE CELSIUS
°F	DEGREE FAHRENHEIT
(E)	EXISTING TO REMAIN
(ER)	EXISTING TO BE REMOVED
(ERR)	EXISTING TO BE REMOVED AND RELOCATED
E.C.	EMPTY CONDUIT
EA	EACH
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMER,EM	EMERGENCY
EQUIP	EQUIPMENT
ERC	ELECTRIC REHEAT COIL
EWC	ELECTRIC WATER COOLER
EXIST,EX	EXISTING
EXT	EXTERIOR
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAP	FIRE ALARM ANNUNCIATOR PANEL
FBO	FURNISHED BY OTHER DIVISION OF WORK
FCU	FAN COIL UNIT
FDR	FEEDER
FDS	FUSED DISCONNECT SWITCH
FIXT	FIXTURE
FL	FL
FLA	FULL LOAD AMPERES
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FM	FLOOR MACHINE
FRZ	FREEZER
FSP	FAN SHUTDOWN PANE;
FT	FEET OR FOOT
G	GROUND
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
HC	HUNG CEILING
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HN	HALF NEUTRAL
HP	HORSE POWER
HV	HIGH VOLTAGE
HZ	HERTZ
IC	INTERRUPTING CAPACITY
ID	INSIDE DIAMETER
IG	ISOLATED GROUND
INCAND	INCANDESCENT
INST	INSTRUMENT
IPC	ISOLATED POWER CENTER
IPX	ISOLATED POWER CENTER X-RAY
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LCP	LOCAL CONTROL PANEL
LIM	LINE ISOLATION MONITOR
LTG	LIGHTING
MAP	MECHANICAL ALARM PANEL
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPERES
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MFS	MAIN FUSED SWITCH
MH	MANHOLE
MIC	MICROPHONE
MIN	MINIMUM
MLO	MAIN LUG ONLY
MOPD,MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MUFS	MAIN UNFUSED SWITCH
N	NEUTRAL
NIC	NOT IN CONTRACT
NO	NORMALLY CLOSED
NO	NORMALLY OPEN
NP	NETWORK PROTECTOR
NTS	NOT TO SCALE
OC	ON CENTER
OCB	OIL CIRCUIT BREAKER
OD	OUTSIDE DIAMETER
P	POLE
PA	PUBLIC ADDRESS
PAP	PLUMBING ALARM PANEL
PB	PULL BOX
PBS	PUSH BUTTON SWITCH
PHC	PIPE HEATING CABLE
PNL	PANEL
PR	PRINTER
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PWR	POWER
ø	PHASE
(RE)	RELOCATED EXISTING
(RRO)	EXISTING TO BE REMOVED AND RETURN TO OWNER
RCS	REMOTE CONTROL SWITCH
RDCP	REMOTE DATA COLLECTION PANEL
RECEPT,REC	RECEPTACLE
REF	REFRIGERATOR
REQ	REQUIRED
RFL	RAISED FLOOR
RG	ROOM GROUND POINT
RM	ROOM
RO	RACEWAY ONLY
RP	REFERENCE GROUND POINT
SAP	SPRINKLER ALARM PANEL
SBST	SUBSTATION
SCHED,SCH	SCHEDULE
SD	SMOKE DETECTOR
SDP	SMOKE DETECTION PANEL
SE	SINGLE ENDED SUBSTATION
SECT	SECTION
SIG	SIGNAL
SN	SOLID NEUTRAL
SP	SINGLE POLE
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SPKR	SPEAKER
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
SYS	SYSTEMS
TB	TROUBLE BELL
TBD	TO BE DETERMINED
TEL	TELEPHONE
TEMP	TEMPERATURE
THERM	THERMOSTAT
TLBD	TERMINAL BOARD
TP	TAMPER PROOF
TRANSF,XFMR	TRANSFORMER
TS	TAMPER SWITCH
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UFD	UNDERFLOOR DUCT
UH	UNIT HEATER
UNF	UNFUSED
UON	UNLESS OTHERWISE NOTED
V	VOLT OR VOLTAGE
VA	VOLT AMPERE
VP	VAPORPROOF
WFD	VARIABLE FREQUENCY DRIVE
WM	VOLTMETER
W	WATT
WFS	WATERFLOW SWITCH
WHM	WATT HOUR METER
WP	WEATHERPROOF
WT	WATERTIGHT
XP	EXPLOSION PROOF

ELECTRICAL DRAWING LIST

DRAWING No.	DRAWING TITLE
E00-01	ELECTRICAL GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
E00-10	ELECTRICAL SCHEDULES
E00-20	ELECTRICAL DETAILS
E04-10	ELECTRICAL DEMOLITION PLAN - GROUND FLOOR
E10-10	ELECTRICAL LIGHTING & POWER PLAN - GROUND & FIRST FLOORS
E10-20	ELECTRICAL LIGHTING & POWER PLAN - SECOND & THIRD FLOOR
E10-30	ELECTRICAL LIGHTING & POWER PLAN - ROOF
E11-10	ELECTRICAL PARTIAL FLOOR PLANS
E20-01	ELECTRICAL SINGLE LINE DIAGRAM

ELECTRICAL GENERAL NOTES

1. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL ELECTRICAL DRAWINGS.
2. ALL WORK IS NEW UNLESS OTHERWISE NOTED.
3. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITIONS.
4. SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHIELDS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), BEAM CLAMPS (FRAMEWORK), WOOD SCREWS (WOOD) OR PAN THRU STRAPS (METAL DECK). NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10 FT APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
5. PASS RACEWAYS OVER WATER, STEAM OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. NO RACEWAY WITHIN 3 INCHES OF STEAM OR HOT WATER PIPES OR APPLIANCES (EXCEPT PIPE CROSSINGS WHERE RACEWAY SHALL BE AT LEAST 1 INCH FROM PIPE COVERS).
6. CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREAD OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.
7. HORIZONTAL OR CROSS RUNS IN PARTITIONS AND WALLS ARE NOT PERMITTED. DO NOT RUN CONDUIT IN PRECAST ROOF SLABS, IN 2 INCH SLABS OR IN TERRAZZO FLOOR FINISH.
8. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 10 FT LONG IN WHICH WIRING IS NOT INSTALLED: FURNISH FISH WIRE.
9. SET BOXES SQUARE AND TRUE WITH BUILDING FINISH. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS.
10. VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. IN CENTERING OUTLETS AND LOCATING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT. VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILINGS AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
11. LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS AT OR NEAR DOORS. COORDINATE WITH ARCHITECT AND INSTALL SWITCH ON SIDE OPPOSITE HINGE. VERIFY FINAL HINGE LOCATIONS IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.
12. COVERS OF JUNCTION AND PULLBOXES SHALL BE READILY ACCESSIBLE.
13. PROVIDE PULLBOXES WHERE INDICATED, WHERE REQUIRED BY CODE AND WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE. COORDINATE PULLBOX LOCATIONS WITH OTHER TRADES.
14. EMPTY RACEWAY RUNS: PROVIDE PULLBOXES EVERY 100 FT AND AS INDICATED. COORDINATE LOCATIONS WITH OTHER TRADES.
15. JUNCTION AND PULLBOXES: LOCATE GENERALLY NOT EXPOSED IN FINISHED SPACES. WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT.
16. SUPPORT PANEL, JUNCTION AND PULLBOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
17. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
18. CONNECT CONDUIT TO MOTOR CONDUIT TERMINAL BOXES WITH FLEXIBLE CONDUIT (MINIMUM 18 IN. LENGTH AND 50% SLACK). DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.
19. PROVIDE 2#14 INDICATING PILOT LIGHT WIRES FROM PILOT LIGHT IN CONTROLLER TO LOAD SIDE OF DISCONNECT SWITCH. RUN WIRES IN BRANCH CIRCUIT CONDUIT AND INCREASE CONDUIT SIZE AS REQUIRED.
20. PULL NO THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32°F (0C). PROVIDE CABLE SUPPORTS FOR WIRE IN RISER CONDUITS AS REQUIRED BY CODE.
21. PROVIDE SEPARATE RACEWAYS FOR CONDUCTORS OF NORMAL AND EMERGENCY CIRCUITS. COMMON BOXES: PROVIDE BARRIERS BETWEEN EMERGENCY AND NORMAL WIRING.
22. HEIGHTS OF OUTLETS FROM FINISHED FLOOR TO CENTERLINE OF OUTLET:

RECEPTACLES AND TELEPHONES:	
GENERALLY	1'-6"
OVER WORK BENCHES	3'-6"
WALL SWITCHES	4'-0"
WALL FIXTURES	7'-0"
MOTOR CONTROLLERS	5'-0"
GONGS AND HORNS	7'-6"
FIRE ALARM STATIONS	4'-0"
CLOCKS	7'-6"
STROBE LIGHTS	6'-8" TO BOTTOM

EXCEPTIONS: AT JUNCTION OF DIFFERENT WALL FINISH MATERIALS, ON MOLDING OR BREAK IN WALL SURFACE, IN VIOLATION OF CODE REQUIREMENTS, AS NOTED OR DIRECTED.

CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND CONFIRMING ALL MOUNTING HEIGHTS WITH ARCHITECT AND ARCHITECTURAL DRAWINGS.

23. WIRE COLOR CODING: AS PER CODE. WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION FOR OVERLAP COLOR TAPING OF CONDUCTORS (MINIMUM LENGTH 6") IN ACCESSIBLE LOCATIONS. COLOR CODING, ONCE SELECTED, MUST BE USED CONSISTENTLY FOR THE ENTIRE PROJECT.
24. INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM. INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS: ONLY WITH WRITTEN CONSENT OF OWNER. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES. ALARM AND EMERGENCY SYSTEMS ARE NOT TO BE INTERRUPTED.
25. FIRESTOPPING SHALL BE INSTALLED WHENEVER WIRING OR RACEWAYS CROSS FIRE RATED CONSTRUCTION.
26. PROVIDE EXPANSION FITTINGS FOR ALL CONDUIT AT JOINTS WHERE EXPANSION INDICATED ON ARCHITECTURAL/STRUCTURAL DRAWINGS.
27. MINIMUM SIZED CONDUIT AND WIRE FOR 120V AND 277V CIRCUITS SHALL BE #10 AWG CU IN 1" CONDUIT.
28. ALL HANGERS AND SUPPORTS SHALL BE HOT DIPPED GALVANIZED STEEL WITH STAINLESS STEEL HARDWARE.

ELECTRICAL DEMOLITION NOTES

1. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL COSTS ASSOCIATED WITH REMOVALS & RELOCATIONS OF ELECTRICAL WORK AS DESCRIBED IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE ARCHITECT.
2. THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL EXISTING ELECTRICAL WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL AND ELECTRICAL LAYOUTS IN FULL COORDINATION WITH THE ARCHITECT'S DEMOLITION PLANS. ALL SYSTEMS WHICH ARE NO LONGER REQUIRED TO FUNCTION SHALL BE DE-ENERGIZED AND DISCONNECTED AT THE SOURCE OF POWER SUPPLY.
3. THE CONTRACTOR SHALL PERFORM DEMOLITION AND REMOVAL WORK WITH MINIMUM INTERFERENCE WITH FUNCTIONING ELECTRICAL SYSTEMS. ALL AFFECTED SYSTEMS SHALL BE RECONNECTED AND RESTORED.
4. DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO IT'S ORIGINAL CONDITION.
5. THE CONTRACTOR SHALL REMOVE ALL ELECTRICAL OUTLETS, SWITCHES AND OTHER DEVICES, COMPLETE WITH ASSOCIATED WIRING, CONDUITS, ETC., FROM PARTITIONS THAT ARE TO BE REMOVED. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING WIRING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL JUNCTION BOXES & OTHER DEVICES AND PROVIDE BYPASS CONNECTIONS NECESSARY TO MAKE CIRCUITS AFFECTED CONTINUOUS AND READY FOR OPERATION. OTHERWISE, WIRING SHALL BE REMOVED BACK TO THE NEAREST ELECTRICAL JUNCTION BOX THAT IS TO REMAIN OR TO PANELBOARD.
6. ALL RACEWAYS WHICH BECOME EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.
7. ALL UNUSED OUTLET BOXES OR CAPPED FLOOR OUTLETS SHALL BE PROVIDED WITH MATCHING BLANK COVERS.
8. EXISTING PANEL DIRECTORIES AFFECTED BY THE ALTERATION WORK SHALL BE MODIFIED TO REFLECT THE BRANCH CIRCUIT WIRING CHANGES.
9. PORTIONS OF FEEDER RUNS TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ENERGIZED, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED. NEW FEEDER EXTENSIONS SHALL MATCH EXISTING ONES IN ALL RESPECTS, CABLE TYPE, CONDUCTOR AMPACITY, CONDUIT SIZES, ETC.
10. THE CONTRACTOR SHALL NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS. THE CONTRACTOR SHALL FOLLOW CLOSELY THE ARCHITECT'S DEMOLITION AND PHASING SCHEDULE AND PROCEED IN THE SPECIFIED SEQUENCE.
11. ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THE ELECTRICAL CONTRACTOR, AS DIRECTED BY THE OWNER.
12. ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVER TIME, IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING SYSTEMS.
13. THE SHUTDOWN OF EXISTING BUILDING ELECTRICAL SERVICES SHALL BE COORDINATED WITH THE OWNER. MAKE ARRANGEMENTS AT LEAST 5 BUSINESS DAYS PRIOR TO A SHUTDOWN.

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41 Seyon Street, Building 1, Suite 500,
Waltham MA 02453

MEP/FP ENGINEER/ CODE
AKF Group LLC
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CONSTRUCTION MANAGER
Turner Construction
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ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

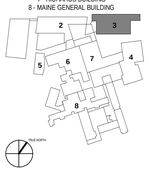
STATE OF MAINE
MARK F. RATTENBURY
No. 9122
ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER

KEY PLANS

PROJECT KEY PLAN

OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
1	ADDENDUM #1	12.05.17
	DESIGN DEVELOPMENT	08.25.17
NO	ISSUE	DATE

Job Number	B150311-000
Drawn	BC
Checked	JAM
Approved	MR

TITLE

ELECTRICAL GENERAL NOTES, SYMBOLS AND __ABBREVIATIONS

SHEET NUMBER

E00-01

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SCHEDULE OF PANELBOARDS

PANEL No.	LOCATION	MTG.	VOLTAGE□W	CIRCUIT BREAKERS 20/1	20/1 GFI	20/2	20/3	30/2	40/2	30/3	40/3	60/3	90/3	100/3	125/3	150/3	175/3	250/3	300/3	SPACES	TOTAL POLES	AIC	BUS SIZE	MAIN C.B.	NEUTRAL 200%	GND. BUS	ISO. GND. BUS	REMARKS
NP4B	BASEMENT FLOOR (MAIN ELECTRICAL ROOM)	SURF	277/480V,3,4W	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	35K	100A	60A	N	Y	N	-
NP42	2ND FLOOR FLOOR (MAIN ELECTRICAL ROOM)	SURF	277/480V,3,4W	8	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	24	35K	225A	150A	N	Y	N	-
NP44	FOURTH FLOOR	SURF	277/480V,3,4W	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	24	35K	100A	60A	N	Y	N	-
NDP4B3	SUB LEVEL 3	SURF	277/480V,3,4W	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	3	42	35K	600A	500A	N	Y	N	(E)
NDP4PV	2ND FLOOR ELECTRICAL ROOM (ALTERNATE #1)	SURF	277/480V,3,4W	-	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	3	42	35K	600A	500A	N	Y	N	NEMA 3R
NP2B	BASEMENT (MAIN ELECTRICAL ROOM)	SURF	120/208V,3,4W	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	10K	60A	40A	N	Y	N	-
NP22	2ND FLOOR (MAIN ELECTRICAL ROOM)	SURF	120/208V,3,4W	23	-	1	-	1	7	-	-	-	-	-	-	-	-	-	-	-	42	10K	400A	250A	N	Y	N	-
NP24	FOURTH FLOOR	SURF	120/208V,3,4W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	10K	60A	40A	N	Y	N	-
LS4B	BASEMENT FLOOR (MAIN ELECTRICAL ROOM)	SURF	277/480V,3,4W	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	35K	100A	60A	N	Y	N	-
LS44	FOURTH FLOOR	SURF	277/480V,3,4W	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	35K	100A	60A	N	Y	N	-
LS2B	BASEMENT (MAIN ELECTRICAL ROOM)	SURF	120/208V,3,4W	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	10K	60A	40A	N	Y	N	-
LS4B	FOURTH FLOOR	SURF	120/208V,3,4W	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	10K	60A	40A	N	Y	N	-

NOTES:

1. THIS PANEL SCHEDULE IS FOR GENERAL INFORMATION ONLY. ELECTRICAL CONTRACTOR SHALL VERIFIED IN FIELD.
2. EXISTING PANELS, UTILIZE SPARE CIRCUIT BREAKERS MADE AVAILABLE AFTER DEMOLITION. SUPPLEMENT WITH NEW AS NECESSARY. CIRCUIT BREAKER CHARACTERISTICS SHALL MATCH EXISTING. CIRCUIT BREAKER MANUFACTURER SHALL MATCH THAT OF THE PANELBOARD IT IS INSTALLED WITHIN. AIC RATING SHALL MEET THE AVAILABLE FAULT AT THE POINT OF INSTALLATION.

NEW DISTIBUTION PANELBOARD NDP4B3PV (ALTERNATE #1)

PANEL	BUS (AMPS)	MAIN DEVICE FRAME (AMPS)	MAIN DEVICE TRIP (AMPS)	CKT. NO.	EQUIPMENT	LOAD H.P. (KW)	BRANCH DEVICE FRAME (AMPS)	BRANCH DEVICE TRIP (AMPS)	BRANCH DEVICE POLES	FEEDER N=NEUTRAL, G=GROUND
DISTRIBUTION PANELBOARD 277/480V, 3 PHASE, 4W+G AIC 35K	1000	1000	MLO	1	NP4B3	-	600	500A	3	-
				2	PV SYSTEM (ALTERNATE)	-	600	500A	3	-
				3	SPACE	-	225	-	-	-
				4	SPACE	-	100	-	-	-
				5						-
				6						-
				7						-
				8						-
				9						-
				10						-
				11						-
				12						-

TRANSFORMER SCHEDULE

(ALL TRANSFORMERS ARE CONNECTED -Y) △ COPPER: YES

No.	KVA	PHASE	PRIMARY VOLT	PRIMARY AMPS	PRIMARY C.B	PRIMARY FEEDER	SECONDARY VOLT	SECONDARY AMPS	SECONDARY C.B	SECONDARY FEEDER	K-FACTOR	SYSTEM GROUND & BOND	REMARKS
T9	9	3	480	11	20A-3P	(3)#12 & (1)#12G-3/4"C	208	25	30A-3P	(4)#10 & (1)#10G-3/4"C	NO	(1)#8-3/4"C	
T15	15	3	480	18	30A-3P	(3)#12 & (1)#10G-3/4"C	208	42	50A-3P	(4)#6 & (1)#8G-1"C	NO	(1)#8-3/4"C	
T30	30	3	480	36	60A-3P	(3)#4 & (1)#10G-1"C	208	83	100A-3P	(4)#1 & (1)#6G-1 1/2"C	NO	(1)#6-3/4"C	
T45	45	3	480	54	80A-3P	(3)#3 & (1)#8G-1 1/4"C	208	125	150A-3P	(4)#1/0 & (1)#6G-2"C	NO	(1)#6-3/4"C	
T75	75	3	480	90	150A-3P	(3)#1/0 & (1)#6G-1 1/2"C	208	208	250A-3P	(4)#250 & (1)#4G-3"C	NO	(1)#2-3/4"C	
T112	112.5	3	480	135	250A-3P	(3)#250 & (1)#4G-2 1/2"C	208	313	400A-3P	(4)#500 & (1)#3G-4"C	NO	(1)#1/0-3/4"C	
T150	150	3	480	181	300A-3P	(3)#350 & (1)#4G-3"C	208	417	500A-3P	(8)#250 & (2)#2G-(2)3"C	NO	(1)#1/0-3/4"C	
T22	225	3	480	270	400A-3P	(3)#500 & (1)#3G-3 1/2"C	208	625	800A-3P	(8)#500 & (2)#1/0G-(2)4"C	NO	(1)#2/0-3/4"C	

NOTES:

1. THE GROUNDING ELECTRODE CONDUCTOR SHALL NOT BE SPLICED.
2. PROVIDE ADAPTERS TO ENSURE CONDUCTOR SIZES COORDINATE WITH BREAKER LUG SIZES.
3. THE SECONDARY OVER CURRENT PROTECTION DEVICE SHALL BE LOCATED SUCH THAT THE MAXIMUM LENGTH OF SECONDARY CONDUCTORS DOES NOT EXCEED 10'-0".
4. FOR ALL TRANSFORMERS SERVING ISOLATED GROUND PANELS. PROVIDE ADDITIONAL GROUND "IG" TYPE. REFER TO SPECIFICATIONS.

MECHANICAL EQUIPMENT SCHEDULE

(THE ELECTRICAL CONTRACTOR SHALL PROVIDE COMPLETE ELECTRICAL DEVICES AS INDICATED ON THIS SCHEDULE)

EQUIPMENT SYMBOL	LOCATION	DESCRIPTION	HP/MCA/KW	PANEL/CKT #	VOLTS	PHASE	CIRCUIT BREAKER	FEEDER	MOTOR WIRING, CONTROL AND MONITORING EQUIPMENT $	VFD (BY HVAC)						WP	REMARKS
ACCU-1	2ND LEVEL	SPLIT SYSTEM	13 MCA	NP22-25,27	208V	1	20A/2P	2C	-	-	-	-	-	✓	-	✓	
AC-1	2ND LEVEL IDF ROOM	-	-	-	-	-	-	-	-	-	-	-	✓	✓	-	-	FEED THRU ACCU
EF-P-1	ROOF	EXHAUST FAN	3 HP	NP44-1,3,5	480V	3	20A/3P	2C	✓	-	-	-	-	✓	-	✓	

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	MODEL	WATTS	VOLTAGE	COMMENTS
EX	SURFACE MOUNTED LED WET LOCATION EXIT SIGN	Acuity Brands Lighting	WLTE-W-2-R-TP	3.7	MVOLT	
LP1	PENDANT MOUNTED LED GARAGE LUMINAIRE	LSI LIGHTING	XPG3P-SW-LED-50-350-NW-UE-BLK-XPG3 BG	56	MVOLT	
LP2	MOUNTED LED GARAGE LUMINAIRE - ALT ROOF	LSI LIGHTING	XPG3P-SW-LED-50-350-NW-UE-BLK-XPG3 BG	56	MVOLT	NOTE 9.
LP3	SURFACE MOUNT LED ROUGH SERVICE DOWNLIGHT	Acuity Brands Lighting	VGR1C-50W-MVOLT	50	MVOLT	
LS1	SUSPENDED LED LINEAR VANDAL RESISTANT LUMINAIRE	Acuity Brands Lighting	VAP-40000LM-FST-MD-MVOLT-GZ10-40K-90CRI-CMB-DL	40	MVOLT	NOTE 8.

LIGHTING FIXTURE SCHEDULE NOTES

1. FURNISH ALL LIGHTING FIXTURES COMPLETE WITH MOUNTING ACCESSORIES TO MEET JOB REQUIREMENTS. VERIFY FIXTURES MOUNTING AND LOCATION AGAINST ARCHITECTS PLANS, ELEVATIONS AND DETAIL DRAWINGS. EXACT LOCATION OF ALL FIXTURES SHALL CONFORM WITH THE ARCHITECT PRIOR TO ROUGHING IN.
2. COORDINATE ALL FIXTURE FINISH COLORS, COLOR AND TEMPERATURE OF ALL LAMPS, AND FIXTURE TRIM WITH CEILING TYPE WHERE FIXTURE IS BEING INSTALLED WITH ARCHITECT.
3. COORDINATE ALL FIXTURE LENGTHS WITH ARCHITECTURAL CEILING PLANS.
4. ALL FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE, INDEPENDENT OF HUNG CEILING WITH ROD OR JACK CHAIN SUPPORT. STEM LENGTHS, STEM FINISHES AND STEM LOCATIONS OF ALL PENDANT FIXTURES TO BE VERIFIED BY ARCHITECT AND ENGINEER PRIOR TO ORDERING STEMS.
5. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE COORDINATION OF ALL LIGHTING EQUIPMENT AND CONTROL DEVICES WITH CEILING AND WALL TYPES SPECIFIED PRIOR TO ORDERING LIGHTING EQUIPMENT.
6. AT THE TIME OF ACCEPTANCE BY THE OWNER, ALL LIGHTING FIXTURES SHALL HAVE BEEN THOROUGHLY CLEANED WITH MATERIALS AND METHODS RECOMMENDED BY THE MANUFACTURERS, ALL BROKEN PARTS SHALL HAVE BEEN REPLACED, AND ALL LAMPS SHALL BE OPERATIVE.
7. INCLUDE COST OF ADDING 6 ADDITIONAL EXIT SIGNS LOCATED PER DIRECTION OF THE FIRE MARSHALL DURING WALK THROUGH. COST SHALL INCLUDE PREMIUM TIME AND ALL ASSOCIATED WIRING.
8. COORDINATE MOUNTING HEIGHT WITH ARCHITECT.
9. MOUNT TO PV ARRAY STRUCTURE. COORDINATE MOUNTING WITH ARCHITECT.

WIRE & CONDUIT SIZING SCHEDULE

AMPS	TAGS	WIRE SIZE (AWG/KCMIL) CONDUCTOR PHASE AND NEUTRAL	WIRE SIZE (AWG/KCMIL) GROUND	No. OF WIRES AND CONDUIT SIZE (IN INCHES) (A) 1PH, 2W+G	(B) 3PH, 3W+G	(C) 3PH, 4W+G
15	1	12	12	3/4	3/4	3/4
20	2	12	12	3/4	3/4	3/4
30	3	10	10	3/4	3/4	3/4
40	4	8	10	3/4	3/4	3/4
50	5	6	10	3/4	1	1
60	6	4	10	1	1-1/4	1-1/4
70	7	4	8	1	1-1/4	1-1/4
80	8	3	8	1	1-1/4	1-1/4
90	9	2	8	1-1/4	1-1/4	1-1/2
100	10	1	8	1-1/4	1-1/2	2
125	11	1	6	1-1/4	1-1/2	2
150	12	1/0	6	1-1/2	2	2
175	13	2/0	6	1-1/2	2	2-1/2
200	14	3/0	6	2	2	2-1/2
225	15	4/0	4	2	2-1/2	2-1/2
250	16	250	4	2	2-1/2	3
275	17	300	4	2-1/2	3	3
300	18	350	4	2-1/2	3	3
350	19	500	3	3	4	4
400	20	500	3	3	4	4
450	21	(2) 4/0	(2) 2		(2) 2-1/2	(2) 2-1/2
500	22	(2) 250	(2) 2		(2) 2-1/2	(2) 3
600	23	(2) 350	(2) 1		(2) 3	(2) 4
700	24	(2) 500	(2) 1/0		(2) 4	(2) 4
800	25	(2) 500	(2) 1/0		(2) 4	(2) 4
1000	26	(3) 400	(3) 2/0		(3) 3	(3) 4
1100	27	(3) 500	(3) 3/0		(3) 3	(3) 4
1200	28	(4) 350	(4) 3/0		(4) 3	(4) 4
1500	29	(4) 500	(4) 4/0		(4) 4	(4) 4
1600	30	(5) 400	(5) 4/0		(5) 4	(5) 4
1900	31	(5) 500	(5) 250		(5) 4	(5) 4
2000	32	(6) 400	(6) 250		(6) 4	(6) 4

NOTE:

1. THE ABOVE SCHEDULE IS BASED ON 600 VOLT WIRE TYPE THWN/THHN/XHHW AND EMT/RGS CONDUIT

1/2C NUMBER INDICATES FEEDER SIZE IN AMPS AND WIRE LETTER INDICATES CONDUIT SIZE AND NUMBER OF WIRES

RECEPTACLE SCHEDULE WITH ELECTRICAL SERVICE REQUIREMENTS-NON TWIST LOCK TYPE

TYPE CODE	NEMA CLASS	RATING OF RECEPTACLES	MANUFACTURER CATALOG No. HUBBELL	LEVITON	OR APPROVED AS EQUIVALENT	SERVICE FROM POWER DISTRIBUTION UNITS CIRCUIT BREAKERS FRAME (AMPS)	TRIP (AMPS)	POLES	FEEDER DATA	REMARKS
A	5-20R	125V, 2P, 3W, W/ GROUND - 20A	HBL5361	5361	-	100	20	1	2#12 & 1#12G - 3/4"C	-
B	5-30R	125V, 2P, 3W, W/ GROUND - 30A	HBL9308	5371	-	100	30	1	2#10 & 1#10G - 3/4"C	-
C	6-20R	250V, 2P, 3W, W/ GROUND - 20A	HBL5461	5461	-	100	20	2	3#12 & 1#12G - 3/4"C	-
D	6-30R	250V, 2P, 3W, W/ GROUND - 30A	HBL9330	5372	-	100	30	2	3#10 & 1#10G - 3/4"C	-

RECEPTACLE SCHEDULE WITH ELECTRICAL SERVICE REQUIREMENTS-TWIST LOCK TYPE

TYPE CODE	NEMA CLASS	RATING OF RECEPTACLES	MANUFACTURER CATALOG No. HUBBELL	LEVITON	OR APPROVED AS EQUIVALENT	SERVICE FROM POWER DISTRIBUTION UNITS CIRCUIT BREAKERS FRAME (AMPS)	TRIP (AMPS)	POLES	FEEDER DATA	REMARKS
AA	L5-20R	125V, 2P, 3W, W/ GROUND - 20A	HBL2310	2310	-	100	20	1	2#12 & 1#12G - 3/4"C	-
BB	L5-30R	125V, 2P, 3W, W/ GROUND - 30A	HBL2610	2610	-	100	30	1	2#10 & 1#10G - 3/4"C	-
CC	L6-20R	250V, 2P, 3W, W/ GROUND - 20A	HBL2320	2320	-	100	20	2	3#12 & 1#12G - 3/4"C	-
DD	L6-30R	250V, 2P, 3W, W/ GROUND - 30A	HBL2620	2410	-	100	30	2	3#10 & 1#10G - 3/4"C	-
EE	L14-20R	125/250V, 3P, 4W W/ GROUND-20A	HBL2410	2710	-	100	20	2	3#12 & 1#12G - 3/4"C	-
FF	L14-30R	125/250V, 3P, 4W W/ GROUND-30A	HBL2710	2710	-	100	30	2	3#10 & 1#10G - 3/4"C	-
GG	L15-20R	250V, 3, 3P, 4W W/ GROUND-20A	HBL2420	2420	-	100	20	3	3#12 & 1#12G - 3/4"C	-
HH	L15-30R	250V, 3, 3P, 4W W/ GROUND-30A	HBL2720	2720	-	100	30	3	3#10 & 1#10G - 3/4"C	-
JJ	L21-20R	120/208V, 3, 4P, 5W W/ GROUND-20A	HBL2510	2510	-	100	20	3	4#12 & 1#12G - 3/4"C	-
KK	L21-30R	120/208V, 3, 4P, 5W W/ GROUND-30A	HBL2810	2810	-	100	30	3	4#10 & 1#10G - 3/4"C	-

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COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

STATE OF MAINE
MARK F. RATTENBURY
No. 9122
ELECTRICAL
PROFESSIONAL ENGINEER
LICENSED

KEY PLANS

PROJECT KEY PLAN

OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
2	ADDENDUM #2	01.05.18
	DESIGN DEVELOPMENT	08.25.17

Job Number B150311-000
Drawn BC
Checked JAM
Approved MR

TITLE

ELECTRICAL SCHEDULES

SHEET NUMBER

E00-10

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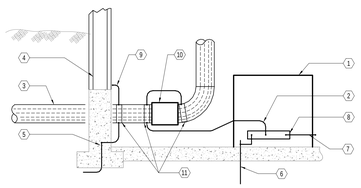
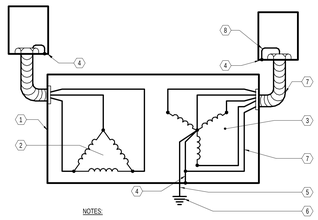


NOTES:

1. SERVICE EQUIPMENT ENCLOSURE
2. GROUNDING ELECTRODE CONDUCTOR
3. COLD WATER GROUNDING ELECTRODE (U.G. METAL PIPE)
4. GROUNDING ELECTRODE (BUILDING STEEL)
5. GROUNDING ELECTRODE (RE-BARS AT BOTTOM OF FOOTING)
6. GROUNDING ELECTRODE (RODS)
7. BOND TO ENCLOSURE (NEUTRAL DISCONNECT LINK IN NYC)
8. NEUTRAL BUS
9. BONDING JUMPER
10. WATER METER WITH JUMPER
11. BRONZE CLAMP (ONE PER JUMPER CABLE)

6 GROUNDING ELECTRODE STEEL BUILDINGS

SCALE: 1 : 1



NOTES:

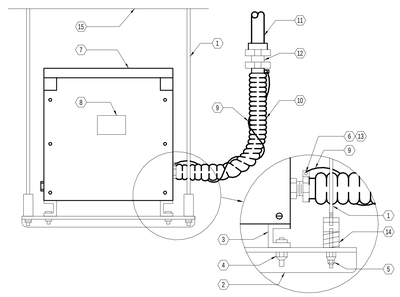
1. ENCLOSURE
2. PRIMARY WINDING
3. SECONDARY WINDING
4. BOND TO ENCLOSURE
5. GROUNDING ELECTRODE CONDUCTOR
6. GROUNDING ELECTRODE
7. FLEXIBLE CONDUIT WITH GROUNDING CONDUCTOR
8. GROUNDING ELECTRODE CONDUCTOR

7 TRANSFORMER GROUNDING

SCALE: 1 : 1

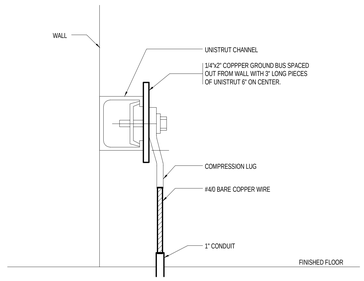
NOTES:

1. 1/2" THREADED STEEL ROD SUPPORT FROM STRUCTURE ABOVE
2. 3"x3" ANGLE IRON SUPPORT, LENGTH TO SUIT - 2 REQUIRED
3. TRANSFORMER BASE CHANNEL
4. 1/2" NUT, BOLT & LOCKWASHER 4 REQUIRED
5. 1/2" NUT, LOCKNUT & LOCKWASHER 4 REQUIRED
6. SECONDARY CONNECTION DETAIL (PRIMARY: SIMILAR)
7. TRANSFORMER - MOUNT BOTTOM SUPPORTS 0'-6" A.F.F. (MIN.)
8. NAMEPLATE - CONNECTION DIAGRAM TO FACE CLOSET ENTRANCE
9. EXTERNAL COPPER BONDING WIRE
10. LIQUIDTIGHT FLEXIBLE METAL CONDUIT - 18" MIN.
11. FEEDER CONDUIT
12. COMBINATION COUPLING
13. GROUND CONNECTOR
14. VIBRATION ELIMINATOR (NEOPRENE PAD) 4 REQUIRED
15. PROVIDE MISCELLANEOUS STEEL AS REQUIRED. TO CONN. TO STRUCTURE



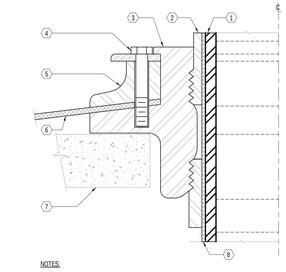
1 TRANSFORMER SUSPENSION

SCALE: NONE



5 GROUND BUS MOUNTING

SCALE: 1 : 1

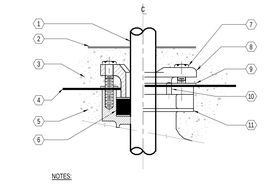


NOTES:

1. RIGID STEEL CONDUIT
2. THREADED SLEEVE
3. CAST IRON SLEEVE
4. STEEL BOLT
5. PRESSURE AND CLAMPING RINGS
6. FLASHING OR ROOFING
7. ROOF STRUCTURE
8. CAULKING/PACKING

2 ROOF SLEEVE-THREADED WATERTIGHT

SCALE: NONE



NOTES:

1. RIGID STEEL CONDUIT
2. FLOOR FINISH
3. CONCRETE FILL
4. WATERPROOF MEMBRANE
5. STRUCTURAL SLAB
6. SEALING GROMMET
7. PRESSURE CLAMP BOLT
8. PRESSURE CLAMP
9. MEMBRANE CLAMP RING
10. MEMBRANE CLAMP SCREW
11. CAST IRON BODY

4 FLOOR SLEEVE-PRESET WATERTIGHT

SCALE: NONE

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Portland ME 04102

STATE OF MAINE
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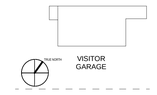
No. 9122
ELECTRICAL
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

PROJECT KEY PLAN



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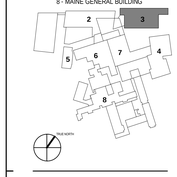

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
1	ADDENDUM #1	12.05.17
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	BC
Checked	JAM
Approved	MR

TITLE

ELECTRICAL DETAILS

SHEET NUMBER

E00-20

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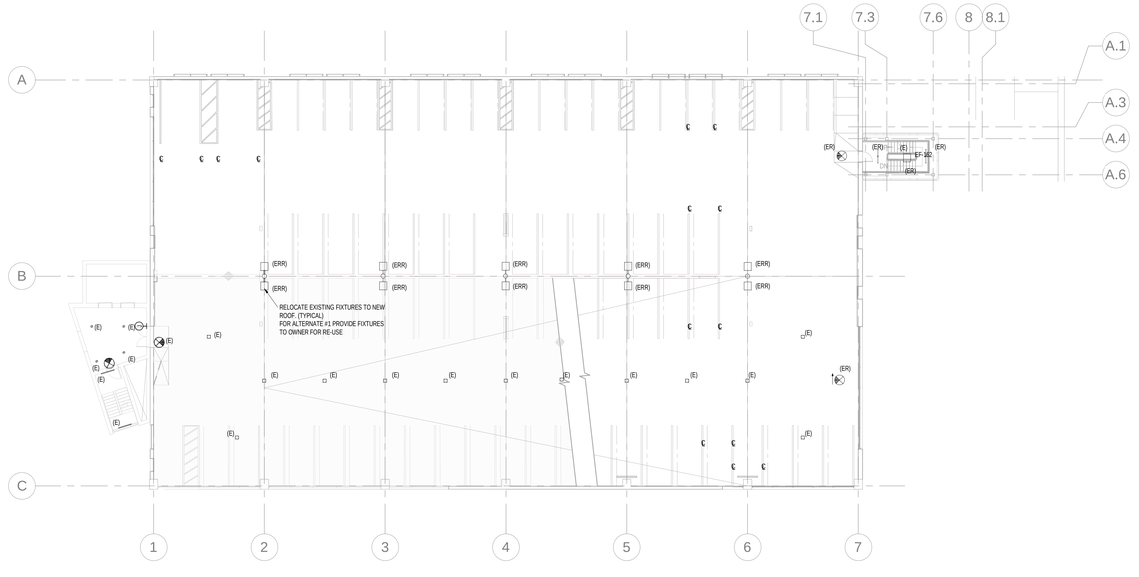

1 GROUND LEVEL ELECTRICAL DEMOLITION PLAN
SCALE: 1/16" = 1'-0"

NOTE:
ALL LIGHTING AND POWER ON EXISTING LEVELS IS TO REMAIN UNLESS NOTED OTHERWISE.

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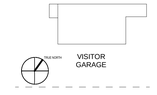
KEY PLANS

PROJECT KEY PLAN



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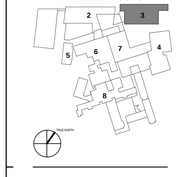

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Job Number	B150311-000
Drawn	BC
Checked	JAM
Approved	MR

TITLE

ELECTRICAL DEMOLITION PLAN - GROUND FLOOR

SHEET NUMBER

E04-10

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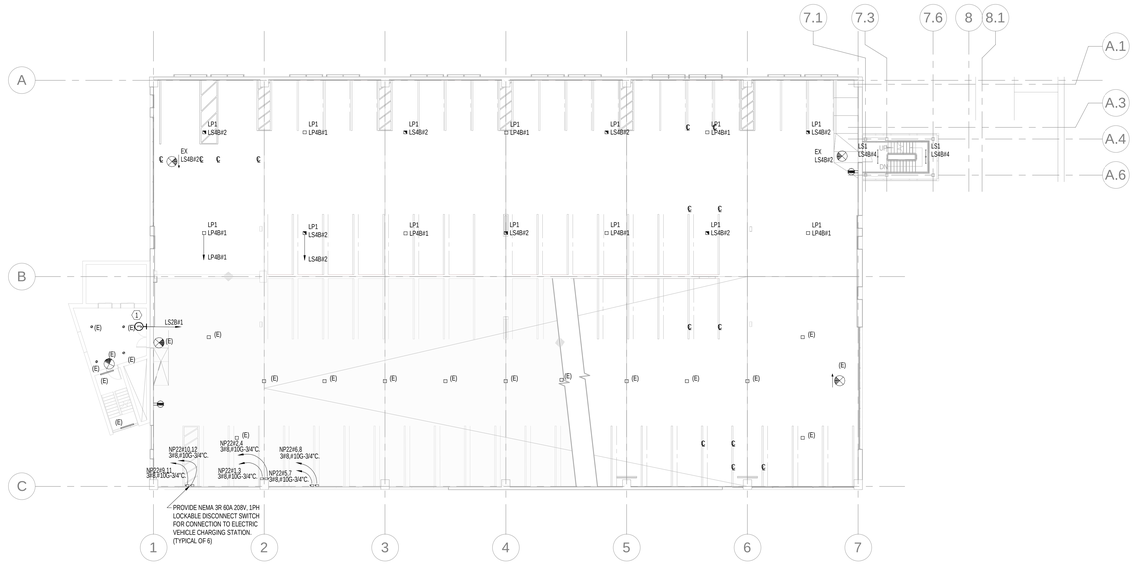
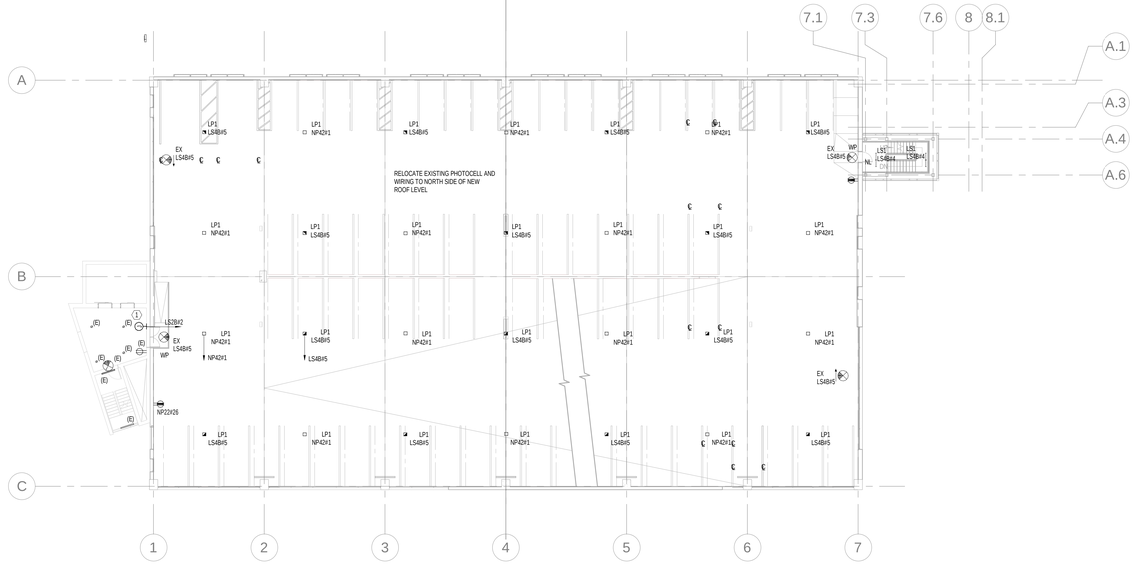
KEYED NOTES

1 PROVIDE JUNCTION BOX FOR CONNECTION TO AUTOMATIC DOOR OPENER. COORDINATE EXACT MOUNTING HEIGHT AND TERMINTION POINT WITH DOOR MANUFACURER.



2 GROUND LEVEL PLAN - ELECTRICAL AND POWER

SCALE: 1/16" = 1'-0"



1 LEVEL 1 PLAN - ELECTRICAL AND POWER

SCALE: 1/16" = 1'-0"

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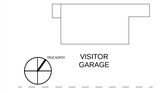
KEY PLANS

PROJECT KEY PLAN



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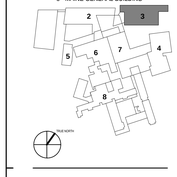

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

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	PERMIT SET	03.09.18
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1	ADDENDUM #1	12.05.17
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	BC
Checked	JAM
Approved	MR

ELECTRICAL LIGHTING & POWER PLAN - GROUND & FIRST FLOORS

SHEET NUMBER

E10-10

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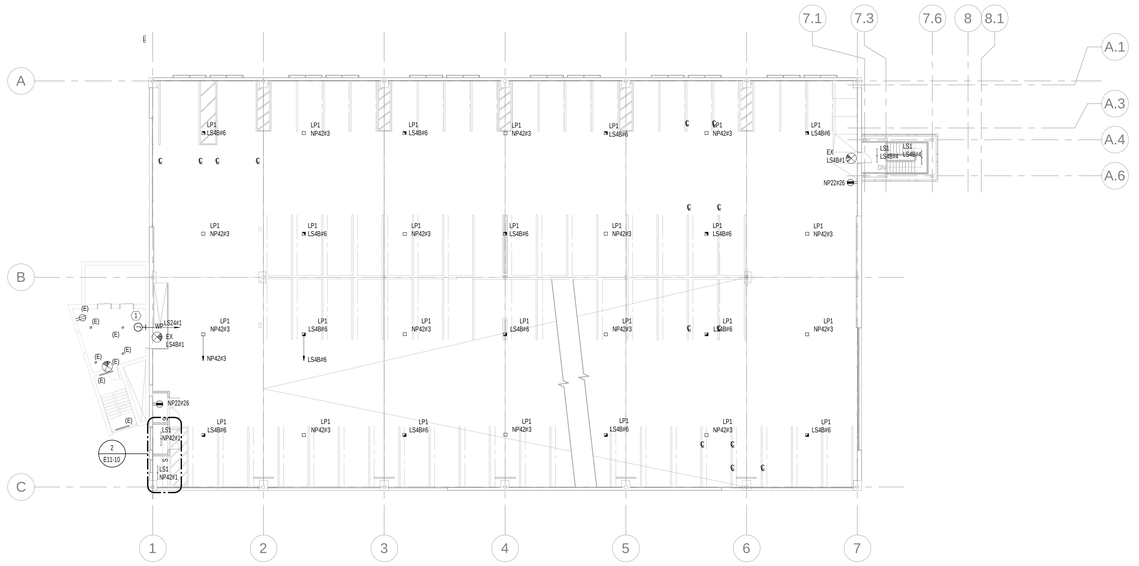
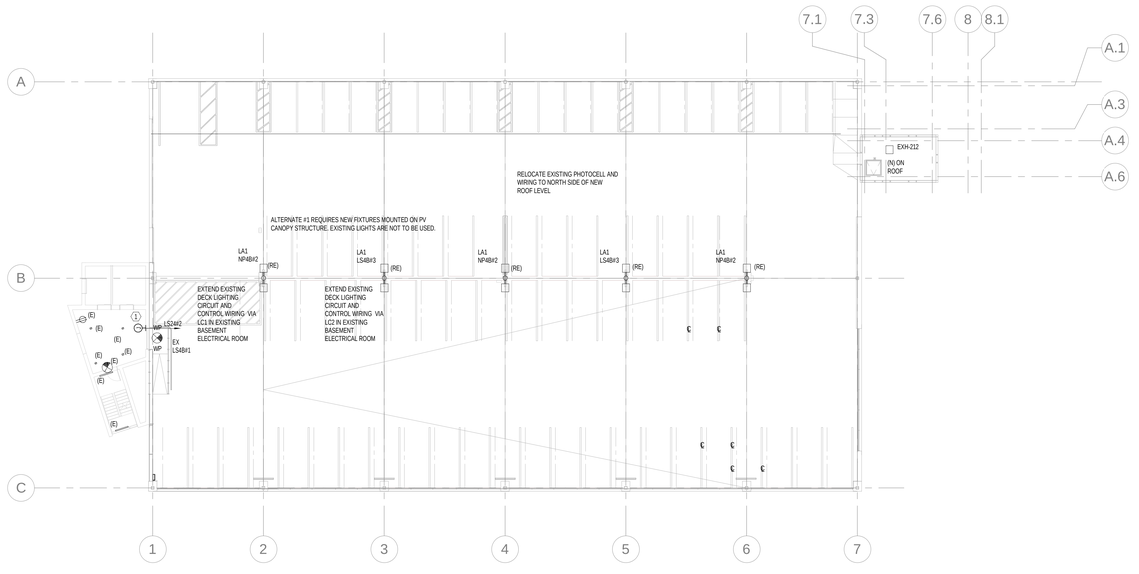


2 LEVEL 2 ELECTRICAL PLAN LIGHTING AND POWER

SCALE: 1/16" = 1'-0"



1 ROOF ELECTRICAL PLAN LIGHTING AND POWER

SCALE: 1/16" = 1'-0"

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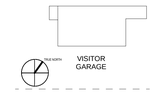
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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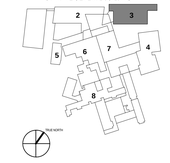
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
2	ADDENDUM #2	01.05.18
1	ADDENDUM #1	12.05.17
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	BC
Checked	JAM
Approved	MR

SHEET TITLE

ELECTRICAL LIGHTING & POWER PLAN - SECOND & THIRD FLOOR

SHEET NUMBER

E10-20

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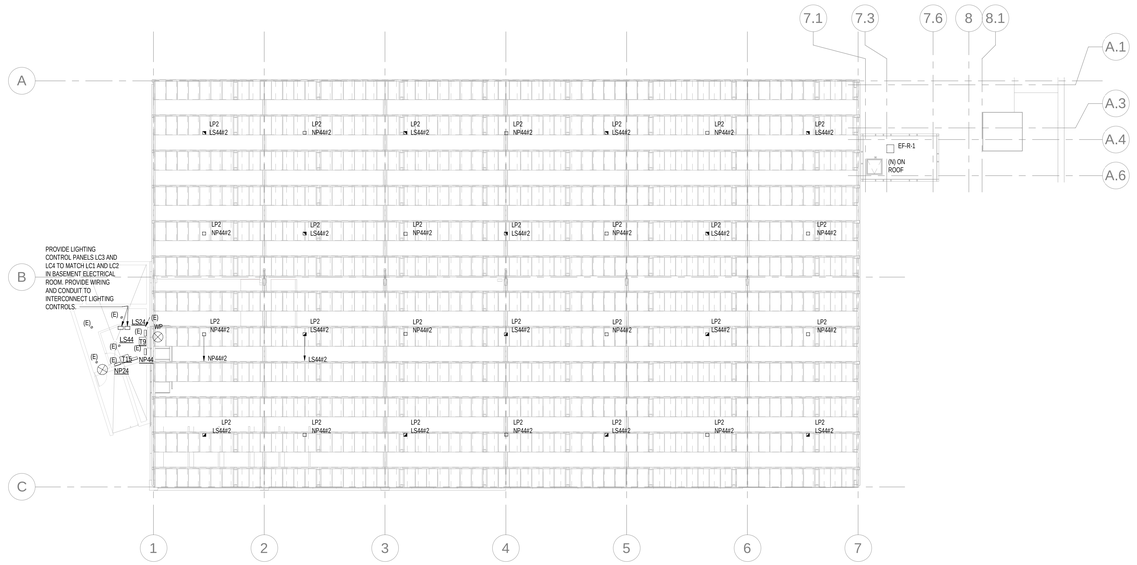

ROOF PLAN ELECTRICAL PV ARRAY (ADD ALTERNATE #1) LIGHTING AND POWER

1 SCALE: 1/16" = 1'-0"

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99 Bedford Street, 2nd Floor, Boston MA 02111

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2 Seaport Lane, Suite 200, Boston MA 02210

ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

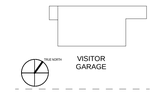
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

STATE OF MAINE
MARK F. RATTENBURY
No. 9122
ELECTRICAL
PROFESSIONAL ENGINEER

KEY PLANS

PROJECT KEY PLAN



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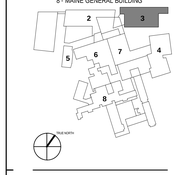

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Approved	MR

TITLE

ELECTRICAL LIGHTING & POWER PLAN - ROOF

SHEET NUMBER

E10-30

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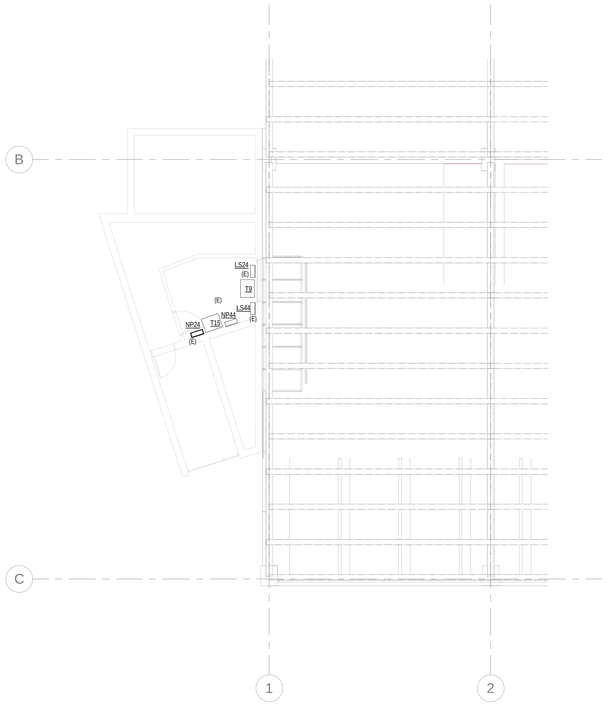
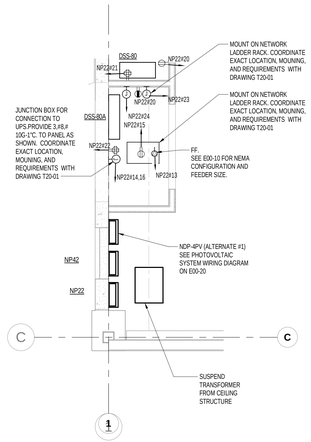


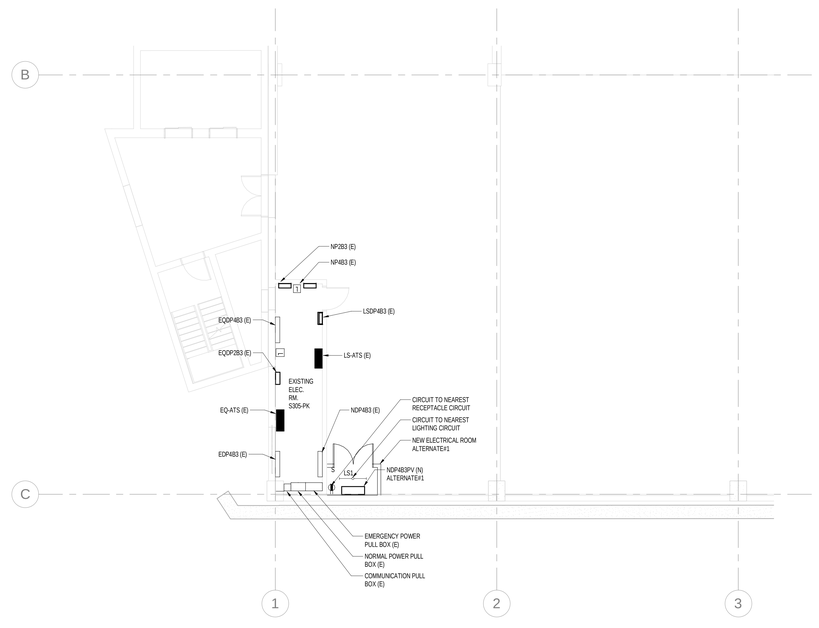
4 LEVEL 4 PART PLAN ELECTRICAL LIGHTING AND POWER

SCALE: 1/8" = 1'-0"



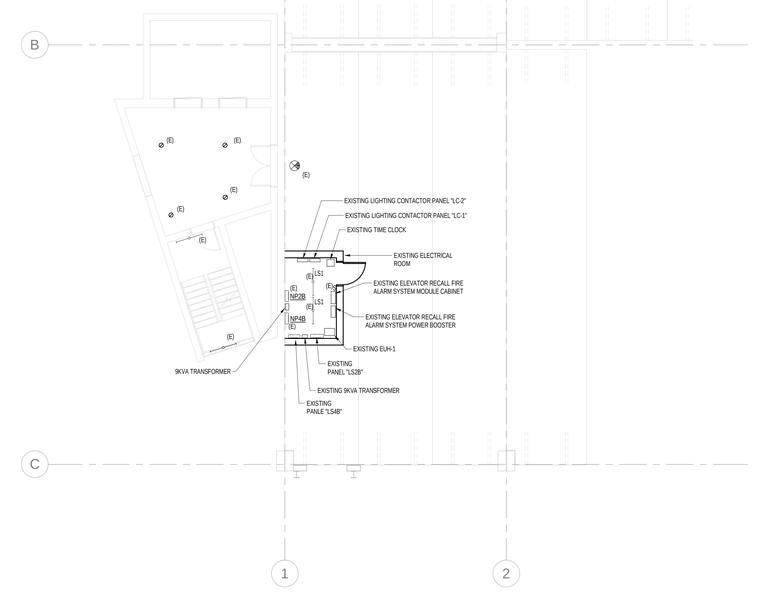
2 LEVEL 2 POWER - IT/ELECTRICAL ROOM PART PLAN

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



3 SUB-LEVEL 3 - POWER - MAIN ELECTRICAL ROOM PART PLAN

SCALE: 1/8" = 1'-0"



1 BASEMENT LEVEL - POWER - ELECTRICAL ROOM

SCALE: 1/8" = 1'-0"

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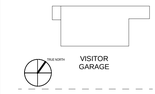
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

STATE OF MAINE
MARK F. RATTENBURY
No. 9122
ELECTRICAL
LICENSED PROFESSIONAL ENGINEER

KEY PLANS

PROJECT KEY PLAN



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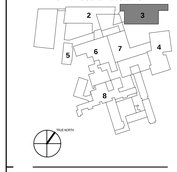

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Drawn	BC
Checked	JAM
Approved	MR

TITLE

ELECTRICAL PARTIAL FLOOR PLANS

SHEET NUMBER

E11-10

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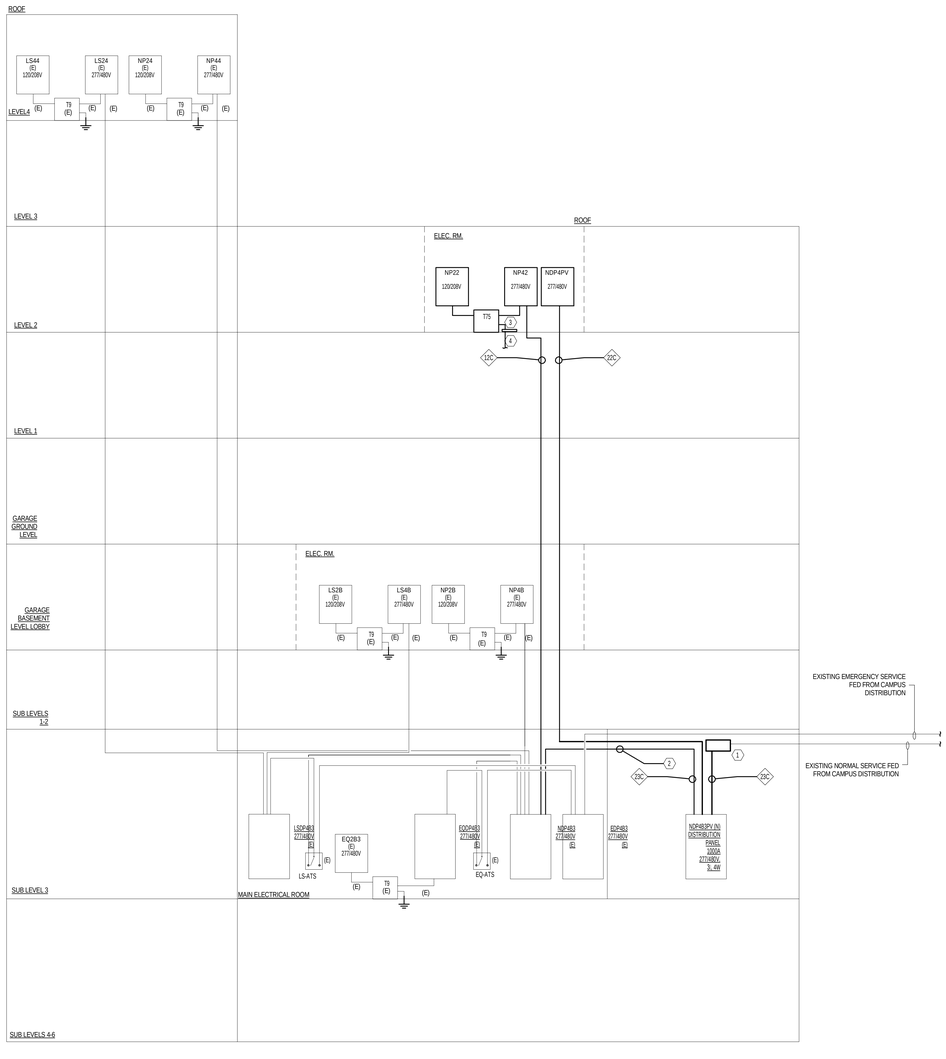
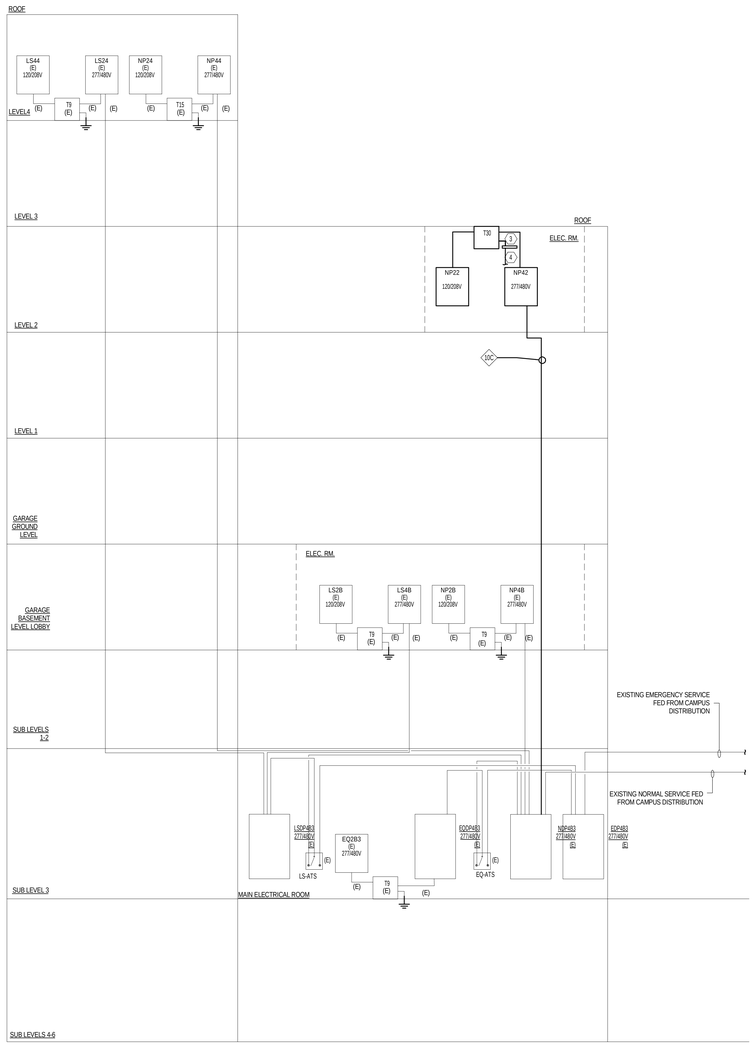
KEY NOTES:

1. INTERCEPT EXISTING FEEDER TO EXISTING PANEL NDP4B3. PROVIDE NEMA 3R PULLBOX SIZED PER NEC. PROVIDE UL LISTED SPLICES AND FEED NEW DISTRIBUTION PANEL WITH FEEDER AS SHOWN.
2. REMOVE EXISTING FEEDER TO PANEL NDP4B3 AND PROVIDE NEW FEEDER AS SHOWN FROM NDP4B3PV.
3. PROVIDE GROUND TERMINAL BAR. REFER TO DETAIL ON SHEET E00-20.
4. PROVIDE 4/0 BARE COPPER TO EXISTING BUILDING GROUNDING SYSTEM.



2 POWER RISER DIAGRAM - ALTERNATE #1

SCALE: NTS



1 POWER RISER DIAGRAM (BASE)

SCALE: NTS

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No. 9122
ELECTRICAL
PROFESSIONAL ENGINEER

KEY PLANS

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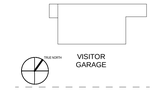

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Job Number	B150311-000
Drawn	BC
Checked	JAM
Approved	MR

TITLE

ELECTRICAL SINGLE LINE DIAGRAM

SHEET NUMBER

E20-01

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COMMUNICATIONS SYMBOL LIST

VOICE/DATA SYMBOLS

x▷	VOICE OUTLET - FLUSH WALL MOUNT
WP▶	DATA OUTLET - WALL MOUNT (WEATHERPROOF WITH COVER)
ET▷	EMERGENCY TELEPHONE OUTLET WALL MOUNT
x▷	VOICE OUTLET - FURNITURE MOUNT
x▶	DATA OUTLET - FURNITURE MOUNT
x◐	VOICE/DATA OUTLET - FURNITURE MOUNT
x◯	VOICE OUTLET - FLUSH FLOOR MOUNT
x◨	DATA OUTLET - FLUSH FLOOR MOUNT
x◐	VOICE/DATA OUTLET - FLUSH FLOOR MOUNT
x▯	VOICE OUTLET - FLOOR BOX MOUNT
x▮	DATA OUTLET - FLOOR BOX MOUNT
x◐	VOICE/DATA OUTLET - FLOOR BOX MOUNT
x◯	VOICE OUTLET - FLUSH CEILING MOUNT
x◆	DATA OUTLET - FLUSH CEILING MOUNT
x◐	VOICE/DATA OUTLET - FLUSH CEILING MOUNT
	X = # OF CABLES TO INSTALL, IF MORE THAN ONE. IF NO 'X', DATA = 1 CABLE, VOICE = 1 CABLE.
	VOICE/DATA = 1 VOICE AND 1 DATA CABLE
A▷	ANALOG OUTLET - FLUSH WALL MOUNT
W▷	WALLPHONE CAT 6 VOICE ONLY
W▶	WALLPHONE CAT 6 DATA ONLY
WAP	WIRELESS OUTLET
TV	CATV OUTLET - TERMINATED ON F-TYPE CONNECTOR
	CONDUIT SLEEVE
C	CORE DRILL
	LADDER RACKING SYSTEM
CT	CABLE TRAY / RACEWAY SYSTEM
J	J-HOOK CABLE ROUTE
	TELEPHONE TERMINAL CABINET - SURFACE MOUNT
	TELEPHONE TERMINAL CABINET - FLUSH MOUNT
	EQUIPMENT RACK - FLOOR MOUNT
	EQUIPMENT RACK - WALL MOUNT

VOICE/DATA CABLE DESIGNATIONS

VOICE/DATA FACEPLATE DESIGNATIONS

MMC BUILDING DESIGNATION

(SEE OVERALL KEY PLAN)

CONGRESS ST = BLDG# 2

VISITOR GARAGE = BLDG# 3

EAST TOWER = BLDG# 4

GILMAN GARAGE = HOLD

COMMUNICATIONS ABBREVIATIONS

+	SPECIAL MOUNTING HEIGHT. COORDINATE LOCATION WITH ARCHITECTURAL ELEVATIONS
1P	SINGLE POLE
2P	TWO POLE
3P	THREE POLE
A	AMPERE
AC	ABOVE COUNTER
ACB	AIR CIRCUIT BREAKER
AFF	ABOVE FINISHED FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
ALM	ALARM
AMM	AMMETER
AQST	AQUASTAT
ARF	ABOVE RAISED FLOOR
ASYM	ASYMMETRICAL
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BG	BREAK GLASS SWITCH
BIL	BASIC IMPULSE LEVEL
BLDG	BUILDING
C	CONDUIT
CAB	CABINET
CAT	CATALOG
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING
CLOS	CLOSET
CNTL	CONTROL
CO	CONDUIT ONLY
COMM	COMMUNICATION
CONN	CONNECTED
CONT	CONTINUATION
CT	CURRENT TRANSFORMER
CU	COPPER
CUH	CABINET UNIT HEATER
DB	DECIBEL
DE	DOUBLE ENDED SUBSTATION
DEG	DEGREE
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DISC	DISCONNECT
DIV	DIVISION
DN	DOWN
DP	DISTRIBUTION PANEL BOARD
DT	DUST TIGHT
DWG	DRAWING
°C	DEGREE CELSIUS
°F	DEGREE FAHRENHEIT
(E)	EXISTING TO REMAIN
(ER)	EXISTING TO BE REMOVED
(ERR)	EXISTING TO BE REMOVED & RELOCATED
EA	EACH
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMER. EM	EMERGENCY
EQUIP	EQUIPMENT
ERC	ELECTRIC REHEAT COIL
EWC	ELECTRIC WATER COOLER
EXIST. EX	EXISTING
EXT	EXTERIOR
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAP	FIRE ALARM ANNUNCIATOR PANEL
FBO	FURNISHED BY OTHER DIVISION OF WORK
FCU	FAN COIL UNIT
FDR	FEEDER
FDS	FUSED DISCONNECT SWITCH
FIXT	FIXTURE
FL	FLOOR
FLA	FULL LOAD AMPERES
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FM	FLOOR MACHINE
FRZ	FREEZER
FSP	FAN SHUTDOWN PANEL
FT	FEET OR FOOT
G	GROUND
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
HC	HUNG CEILING
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HN	HALF NEUTRAL
HP	HORSE POWER
HV	HIGH VOLTAGE
HZ	HERTZ
IC	INTERRUPTING CAPACITY
ID	INSIDE DIAMETER
INCAND	INCANDESCENT
INST	INSTRUMENT
IPC	ISOLATED POWER CENTER
IPX	ISOLATED POWER CENTER-X-RAY
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LCP	LOCAL CONTROL PANEL
LIM	LINE ISOLATION MONITOR
LTG	LIGHTING
MAP	MECHANICAL ALARM PANEL
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPERES
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MFS	MAIN FUSED SWITCH
MH	MANHOLE
MIC	MICROPHONE
MIN	MINIMUM
MLO	MAIN LUG ONLY
MOPD,MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MUFS	MAIN UNFUSED SWITCH
N	NEUTRAL
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NP	NETWORK PROTECTOR
NTS	NOT TO SCALE
OC	ON CENTER
OCB	OIL CIRCUIT BREAKER
OD	OUTSIDE DIAMETER
P	POLE
PA	PUBLIC ADDRESS
PAP	PLUMBING ALARM PANEL
PB	PULL BOX
PBS	PUSH BUTTON SWITCH
PHC	PIPE HEATING CABLE
PNL	PANEL
PR	PRINTER
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PWR	POWER
#1	PHASE 1
(RE)	RELOCATED EXISTING
(RRO)	EXISTING TO BE REMOVED AND RETURN TO OWNER
RCS	REMOTE CONTROL SWITCH
RDCP	REMOTE DATA COLLECTION PANEL
RECEPT, REC	RECEPTACLE
REF	REFRIGERATOR
REQ	REQUIRED
RFL	RAISED FLOOR
RG	ROOM GROUND POINT
RM	ROOM
RO	RACEWAY ONLY
RP	REFERENCE GROUND POINT
SAP	SPRINKLER ALARM PANEL
SBST	SUBSTATION
SCH	SCHEDULE
SD	SMOKE DETECTOR
SDP	SMOKE DETECTION PANEL
SE	SINGLE ENDED SUBSTATION
SECT	SECTION
SIG	SIGNAL
SN	SOLID NEUTRAL
SP	SINGLE POLE
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SPKR	SPEAKER
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
SYS	SYSTEMS
TB	TROUBLE BELL
TBD	TO BE DETERMINED
TEL	TELEPHONE
TEMP	TEMPERATURE
THERM	THERMOSTAT
TLBD	TERMINAL BOARD
TP	TAMPER PROOF
TRANSF, XFMR	TRANSFORMER
TS	TAMPER SWITCH
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UFD	UNDERFLOOR DUCT
UH	UNIT HEATER
UNF	UNFUSED
UON	UNLESS OTHERWISE NOTED
V	VOLT OR VOLTAGE
VA	VOLT AMPERE
VFD	VARIABLE FREQUENCY DRIVE
VM	VOLTMETER
VP	VAPORPROOF
W	WATT
WFS	WATER FLOW SWITCH
WHM	WATT HOUR METER
WP	WEATHERPROOF
WT	WATERTIGHT
XP	EXPLOSION PROOF

COMMUNICATION GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, NFPA, UL, ADA AND ALL OTHER GOVERNING AGENCIES HAVING JURISDICTION.
2. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL COMMUNICATIONS DRAWINGS.
3. ALL WORK IS NEW UNLESS OTHERWISE NOTED.
4. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITIONS.
5. VERIFY LOCATIONS OF OUTLETS IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH.
6. HOMERUN ALL VOICE, DATA AND VIDEO OUTLET CABLES VIA CONDUIT STUB-UPS, DRYWALLS AND ACCESSIBLE CEILINGS DIRECTLY TO THE IDF ROOMS AS INDICATED ON THE DRAWINGS.
7. INSTALL NEW WORK AND CONNECT TO EXISTING WORK, WHEN APPLICABLY, WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS: ONLY WITH WRITTEN CONSENT OF OWNER. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES. ALARM AND EMERGENCY SYSTEMS ARE NOT TO BE INTERRUPTED.
8. FIRESTOPPING SHALL BE INSTALLED WHENEVER WIRING OR RACEWAYS CROSS FIRE RATED CONSTRUCTION.
9. ANY DAMAGE TO PARTITIONS, FLOORS, CEILINGS OR ANY PART OF THE BUILDING OR EQUIPMENT CAUSED BY THE WORK OF THE CONTRACTOR SHALL BE MADE GOOD AT NO ADDITIONAL EXPENSE TO THE OWNER.
10. ALL CUTTING AND PATCHING SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR.
11. UPON COMPLETION OF THE WORK, THREE MARKED-UP SETS OF "AS-BUILT" DRAWINGS SHALL BE SUBMITTED TO THE OWNER AND TWO SETS TO THE BUILDING MANAGER.
12. COMMUNICATIONS CONTRACTOR SHALL VISIT AND EXAMINE CAREFULLY THE EXISTING AREAS AFFECTED BY THIS WORK AND BECOME FAMILIAR WITH EXISTING CONDITIONS. CONTRACTOR SHALL PERFORM THIS PRIOR TO SUBMITTING HIS PROPOSAL. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
13. CONTRACTOR, BEFORE INSTALLING ANY OF THE WORK, SHALL SEE THAT IT DOES NOT INTERFERE WITH CLEARANCES REQUIRED FOR FINISHED COLUMNS, HUNG CEILINGS, PLASTER, PARTITIONS, WALLS, ETC., AS SHOWN IN THE ARCHITECTURAL DRAWINGS AND DETAILS. IF ANY WORK IS SO INSTALLED AND IT LATER DEVELOPS THAT SUCH DETAILS OR DESIGN CANNOT BE FOLLOWED, CONTRACTOR AT HIS OWN EXPENSE SHALL MAKE SUCH CHANGES IN THE WORK AS DIRECTED BY THE ARCHITECT, AS WELL AS TO PERMIT THE INSTALLATION OF THE ARCHITECTURAL WORK AS SHOWN ON THE PLANS AND DETAILS.
14. FINAL ACCEPTANCE IS TO BE MADE AFTER THE CONTRACTOR HAS DEMONSTRATED THAT THE WORK FULFILLS THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.
15. ANY BLOCK WALLS WITHOUT EXISTING PENETRATION MUST BE CORED/DRILLED BY CONTRACTOR BASED ON FIELD COORDINATION.
16. ALL WORK SUBJECT TO FULL FIELD COORDINATION BY CONTRACTOR.
17. ALL LATERAL CABLING TO BE RUN TO WORK STATIONS VIA METAL SURFACE RACEWAY.
18. COORDINATE INSTALLATION OF CONDUITS, CABLE TRAYS AND J-HOOKS WITH ALL OTHER COMPONENTS AND/OR TRADES WITHIN THE CEILING SPACE.
19. COORDINATE WITH ELECTRICAL CONTRACTOR FOR THE ROUTING OF ALL STUB-UPS AND/OR RACEWAYS TO EACH TELECOM OUTLET BOX. STUB-UPS AND RACEWAYS SHALL BE RUN TO THE NEAREST ACCESSIBLE CEILING SPACE.
20. STANDARD OUTLET MOUNTING HEIGHT SHALL BE THE SAME AS ELECTRICAL HEIGHT, UNLESS OTHERWISE NOTED. EXACT LOCATION OF OUTLETS SHALL BE AS INDICATED ON THE ARCHITECTURAL DRAWINGS.
21. PROVIDE FIRESTOPPING FOR ALL SLEEVE AND CONDUIT PENETRATIONS THROUGH RATED PARTITIONS OR FLOORS IN ACCORDANCE WITH THE SPECIFICATIONS.
22. LABEL ALL RACKS, FRAMES, CABINETS, BLOCKS, CABLES, CABLE SUPPORTS, ETC. IN ACCORDANCE WITH EIA/TIA 606.
23. OUTLET IDENTIFICATION NUMBERING SHALL BE AS DIRECTED BY OWNERS MIS DEPARTMENT. INSTALLATION SHALL COMPLY WITH SPECIFICATIONS. EACH CABLING SHALL BE TAGGED AT ALL TERMINATION POINTS.
24. FOR ITEMS THAT ARE NOT DOCUMENTED IN DRAWINGS, CONTRACTOR TO MATCH EXISTING FIELD CONDITIONS FOR ROUTING, MOUNTING LOCATIONS, TERMINATION AND LABELING.

GROUNDING & BONDING NOTES

1. GROUNDING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITIES, AND SUBJECT TO THE APPROVAL OF THE ELECTRICAL ENGINEER.
2. ALL GROUND WIRES AND BONDING JUMPERS SHALL BE GREEN INSULATED, COPPER. ALL GROUND WIRES SHALL BE WITHOUT JOINTS AND SPLICES OVER THE ENTIRE LENGTH.
3. WHERE IT IS NECESSARY TO PLACE BONDING CONDUCTORS IN FERROUS METAL CONDUIT THAT EXCEEDS 3' IN LENGTH, THE CONDUCTORS SHALL BE BONDED TO EACH END OF THE CONDUIT. OBTAIN WRITTEN AUTHORIZATION FROM ENGINEER PRIOR TO UTILIZING FERROUS METAL CONDUITS FOR GROUNDING CONDUCTORS.
4. INSTALL BONDING AND GROUNDING CONDUCTORS IN DIRECT, STRAIGHT PATHS WITH NO "SLACK" COPPER LOOPS OR EXTRA LENGTHS. BENDS SHALL BE KEPT TO A MINIMUM, AND SHALL HAVE A RADIUS OF 4", MINIMUM.
5. PROVIDE AN INSULATED, STRANDED UNINTERRUPTED BONDING CONDUCTOR BETWEEN THE TMGB AND THE NEAREST BUILDING STEEL COLUMN, IF APPLICABLE. THE BONDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE BUILDING COLUMN AND MECHANICALLY BONDED TO THE TMGB WITH A TWO HOLE LUG THAT IS HYDRAULICALLY CRIMPED ONTO THE CONDUCTOR.
6. PROVIDE AN INSULATED, STRANDED UNINTERRUPTED BONDING CONDUCTOR BETWEEN THE TMGB AND THE MAIN ELECTRICAL PANEL ALTERNATING CURRENT EQUIPMENT GROUND THAT IS SERVING THE BUILDING. THE BONDING CONDUCTOR SHALL BE MECHANICALLY BONDED TO BOTH THE TMGB AND THE GROUND BAR IN THE ELECTRICAL PANEL WITH TWO HOLE LUGS THAT ARE HYDRAULICALLY CRIMPED ONTO EACH END OF THE BONDING CONDUCTOR.
7. PROVIDE AN INSULATED, UNINTERRUPTED TELECOMMUNICATIONS BONDING BACKBONE (TBB) CONDUCTOR BETWEEN THE TMGB AND ALL THE TGBS INDICATED ON THE DRAWINGS. MECHANICALLY BOND THE TBB TO THE TMGB WITH A TWO-HOLE LUG THAT IS HYDRAULICALLY CRIMPED ONTO THE END OF THE TBB. BOND EACH TGB TO THE TBB WITH AN INSULATED, STRANDED, UNINTERRUPTED BONDING CONDUCTOR. THE BONDING CONDUCTOR SHALL BE MECHANICALLY BONDED TO BOTH THE TGB AND THE TBB. AT THE TGB, UTILIZE A TWO-HOLE LUG THAT IS HYDRAULICALLY CRIMPED ONTO THE END OF THE BONDING CONDUCTOR. AT THE TBB, UTILIZE A HYDRAULICALLY CRIMPED BONDING LUG. REMOVE ONLY AS MUCH INSULATION FROM THE TBB AS IS NECESSARY AND PRACTICAL TO COMPLETE THE BOND.
8. PROVIDE AN INSULATED, UNINTERRUPTED GROUNDING CONDUCTOR FROM EACH TGB TO THE NEAREST ACCESSIBLE STEEL BUILDING COLUMN, IF APPLICABLE. THE BONDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE BUILDING COLUMN AND MECHANICALLY BONDED TO THE TGB WITH A TWO-HOLE LUG THAT IS HYDRAULICALLY CRIMPED ONTO THE CONDUCTOR.
9. PROVIDE AN INSULATED, UNINTERRUPTED GROUNDING CONDUCTOR FROM EACH TGB TO GROUND BAR IN THE ELECTRICAL DISTRIBUTION PANEL SERVING THE TELECOMMUNICATIONS LOADS IN THAT ROOM. THE BONDING CONDUCTOR SHALL BE MECHANICALLY BONDED TO BOTH THE TGB AND THE GROUND BAR IN THE ELECTRICAL PANEL WITH TWO HOLE LUGS THAT ARE HYDRAULICALLY CRIMPED ONTO EACH END OF THE BONDING CONDUCTOR.

COMMUNICATIONS PATHWAY NOTES

1. CONDUITS AND SLEEVES ARE SHOWN DIAGRAMMATICALLY AS COMMUNICATION PATHWAY REQUIREMENTS. EXACT ROUTING, BENDS, PULL-BOX LOCATIONS, ETC. ARE SUBJECT TO FIELD CONDITIONS AND SHALL BE COORDINATED WITH ELECTRICAL ENGINEER. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.
2. COMMUNICATIONS CONDUIT RUNS SHALL BE INSTALLED WITH:
   2.1. NO BEND IN EXCESS OF 90-DEGREES.
   2.2. NO AGGREGATE OF BENDS GREATER THAN 180-DEGREES BETWEEN PULL BOXES OR PULL POINTS.
   2.3. NO CONTINUOUS SECTION IN EXCESS OF 100'.
   2.4. NO BENDS OCCURRING WITHIN PULL BOXES.
3. COMMUNICATIONS CONDUIT BENDS SHALL BE INSTALLED WITH:
   3.1. A BEND RADIUS OF 6-TIMES THE CONDUIT'S INNER DIAMETER FOR CONDUITS 2 TRADE SIZE OR SMALLER.
   3.2. A BEND RADIUS OF 10-TIMES THE CONDUIT'S INNER DIAMETER FOR CONDUITS GREATER THAN 2 TRADE SIZE.
4. COMMUNICATIONS CONDUIT SYSTEM SHALL BE PROPERLY BONDED IN ACCORDANCE WITH ALL NATIONAL OR LOCAL REQUIREMENTS.
5. ELECTRICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF FIELD-COORDINATED TELECOM PATHWAYS TO ELECTRICAL ENGINEER AND TELECOM ENGINEER FOR REVIEW AND APPROVAL.

COMMUNICATION DRAWING...

DRAWING No.	DRAWING TITLE
T00-01	COMMUNICATIONS GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
T00-10	COMMUNICATIONS DETAILS
T00-11	COMMUNICATIONS DETAILS
T00-12	COMMUNICATIONS DETAILS
T10-10	COMMUNICATIONS FLOOR PLAN - GROUND & FIRST FLOORS
T10-20	COMMUNICATIONS FLOOR PLAN - SECOND & THIRD FLOORS
T20-01	COMMUNICATIONS PART PLAN & ELEVATION VIEW - SECOND FLOOR
T30-01	COMMUNICATIONS SINGLE LINE DIAGRAM

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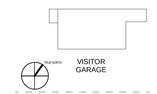
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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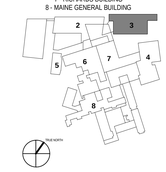
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

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	PERMIT SET	03.09.18
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	RS
Checked	BN
Approved	BN

TITLE

COMMUNICATIONS GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

SHEET NUMBER

T00-01

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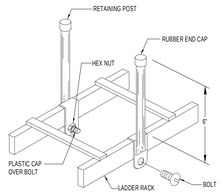
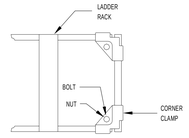


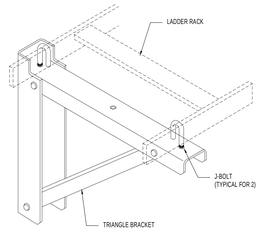
6 LADDER RACK RETAINING BAR DETAIL

SCALE: NONE



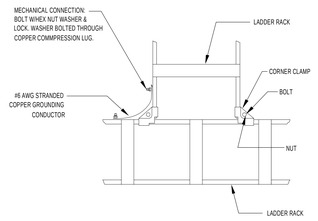
4 LADDER RACK TERMINATION DETAIL

SCALE: NONE



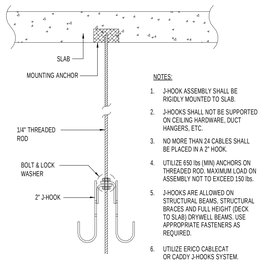
2 LADDER RACK TRIANGLE BRACKET DETAIL

SCALE: NONE



1 LADDER RACK T-SPLICE DETAIL

SCALE: N.T.S.

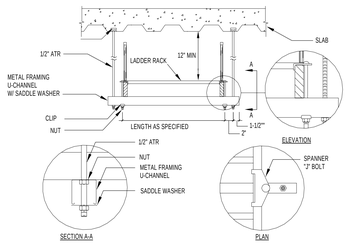


NOTES:

1. J-HOOK ASSEMBLY SHALL BE RIGIDLY MOUNTED TO SLAB.
2. J-HOOKS SHALL NOT BE SUPPORTED ON CEILING HARDWARE, DUCT HANGERS, ETC.
3. NO MORE THAN 24 CABLES SHALL BE PLACED IN A 2" HOOK.
4. UTILIZE 650 lbs (MIN) ANCHORS ON THREADED ROD. MAXIMUM LOAD ON ASSEMBLY NOT TO EXCEED 150 lbs.
5. J-HOOKS ARE ALLOWED ON STRUCTURAL BEAMS, STRUCTURAL BRACES AND FULL HEIGHT (DECK TO SLAB) DRYWELL BEAMS. USE APPROPRIATE FASTENERS AS REQUIRED.
6. UTILIZE ERICO CABLECAT OR CADDY J-HOOKS SYSTEM.

5 J-HOOK DETAIL (AS REQUIRED)

SCALE: NONE



NOTE:

1. PROVIDE CONCRETE ANCHORS SIMILAR TO HILTI-KNICK BOLT OR SERIES HDI OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH MFR. RECOMMENDATIONS.

3 LADDER RACK HANGING DETAIL

SCALE: N.T.S.

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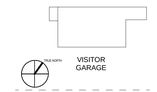
PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

KEY PLANS

PROJECT KEY PLAN



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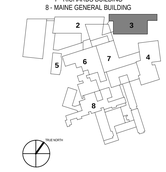

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COMMUNICATIONS DETAILS

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T00-10

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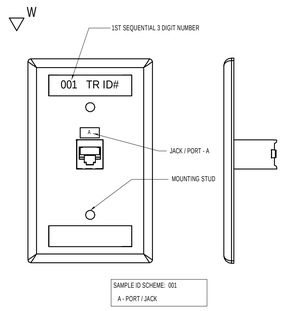
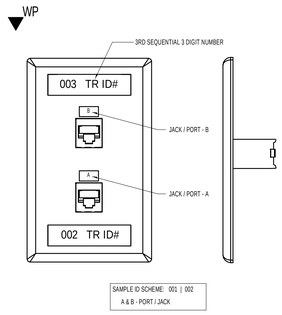


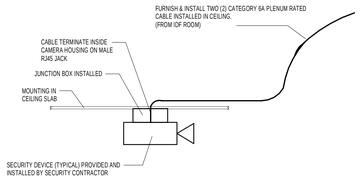
1 - PORT OUTLET

1. F&I ONE (1) 4-PAIR UTP PLENUM-RATED BLUE CAT6A CABLE AND TERMINATED ON AN 8P8C ORTRONICS TRACJACK BLUE
2. TERMINATE ALL WALL-PHONE ON CAT-6A PATCH PANEL WITH T-568A PINNING.
3. STAINLESS STEEL FACEPLATE TO BE PROVIDED WITH WALL PHONE MOUNTING STUDS.
4. PROVIDE PRINTED LABELS. HANDWRITTEN LABELS ARE UNACCEPTABLE.



2 - PORT OUTLETS

1. F&I TWO (2) 4-PAIR UTP PLENUM-RATED BLUE CAT6A CABLE AND TERMINATED ON AN 8P8C ORTRONICS
2. TERMINATE ALL EMERGENCY TELEPHONE ON CAT-6A PATCH PANEL WITH T-568A PINNING.
3. ORTRONICS PART# OR-40800017 WITH COVER. (MOUNTING TO BE COORDINATED)
4. PROVIDE PRINTED LABELS. HANDWRITTEN LABELS ARE UNACCEPTABLE.

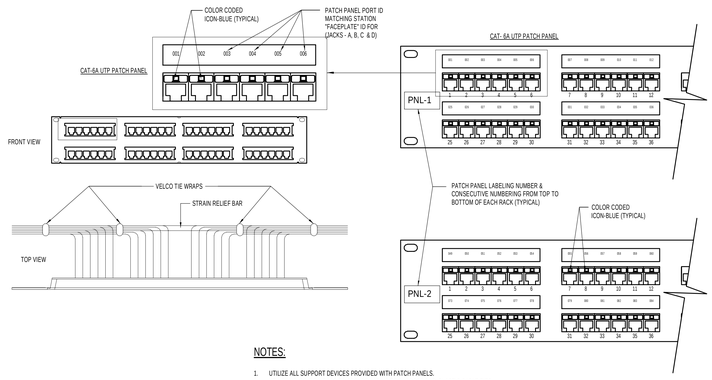


3 TYPICAL SECURITY OUTLET DETAIL

SCALE: N.T.S.

6 WALL TELEPHONE "FACEPLATE" DETAIL

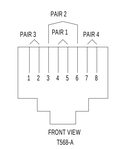
SCALE: N.T.S.

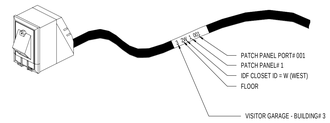


4 DATA FOR CAR CHARGER "FACEPLATE" DETAIL

SCALE: N.T.S.

CONDUCTOR IDENTIFICATION	COLOR	ABBREVIATION
PAIR 1 (T)	WHITE-BLUE	(W-BL)
PAIR 1 (R)	BLUE	(BL)
PAIR 2 (T)	WHITE-ORANGE	(W-O)
PAIR 2 (R)	ORANGE	(O)
PAIR 3 (T)	WHITE-GREEN	(W-G)
PAIR 3 (R)	GREEN	(G)
PAIR 4 (T)	WHITE-BROWN	(W-BR)
PAIR 4 (R)	BROWN	(BR)





NOTES:

1. PROVIDE COMPUTER GENERATED LABEL 6 INCHES FROM TERMINATION AT BOTH ENDS. HANDWRITTEN LABELS SHALL BE CONSIDERED UNACCEPTABLE.
2. MAINTAIN PAIR TWIST UP TO FINAL TERMINATION POINT. CABLE JACKET SHALL EXTEND TO WITHIN 1/2" OF TERMINATION POINT.
3. JACKS AND OTHER TERMINATION DEVICES SHALL BE INSTALLED INCLUSIVE OF ALL HARDWARE INCLUDING, BUT NOT LIMITED TO DUST CAPS, ICONS, ETC..

NOTES:

1. UTILIZE ALL SUPPORT DEVICES PROVIDED WITH PATCH PANELS.
2. UTILIZE VELCO TIE WRAPS TO SECURE WIRING TO SUPPORT BAR. PLASTIC CABLE TIES WILL NOT BE ACCEPTED.
3. INSTALL WHITE NUMBERED ICONS AS SHOWN ON PATCH PANEL. NUMBERED ICONS COINCIDE WITH ICONS ON FACEPLATES.
4. NEW PATCH PANELS SHALL BE CATEGORY 6A WITH 8-PORT MODULES.
5. 'A' JACKS SHALL HAVE BLUE DATA ICONS & 'B' JACKS SHALL HAVE BLUE DATA ICONS AT JACK / PORT 'FACEPLATE' STATION AND ON THE TELECOM ROOM PATCH PANEL

1 COPPER CABLE LABELING DETAIL

SCALE: NONE

5 PATCH PANEL LABELLING & SUPPORT DETAIL

SCALE: N.T.S.

2 T-568A WIRING-PINNING DETAIL

SCALE: N.T.S.

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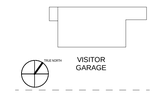

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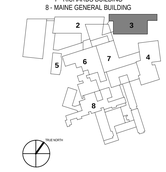

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COMMUNICATIONS DETAILS

SHEET NUMBER

T00-11

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3/29/2018 4:48:19 PM
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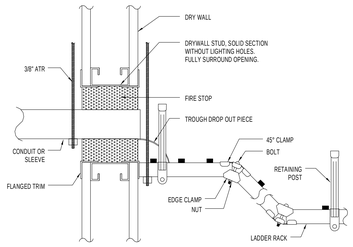
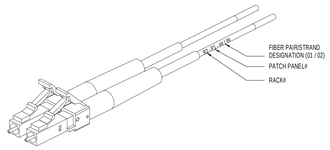


SIDE VIEW - SECTION

5 CONDUIT TO LADDER RACK DETAIL

SCALE: NONE

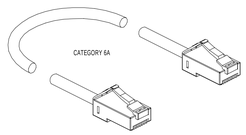


NOTES:

1. PROVIDE COMPUTER GENERATED LABEL 6 INCHES FROM TERMINATION AT BOTH ENDS. HANDWRITTEN LABELS SHALL BE CONSIDERED UNACCEPTABLE.
2. JACKS AND OTHER TERMINATION DEVICES SHALL BE INSTALLED INCLUSIVE OF ALL HARDWARE INCLUDING, BUT NOT LIMITED TO DUST CAPS, ICONS, ETC..

3 FIBER CABLE LABELING DETAIL

SCALE: NONE



FURNISH & INSTALL FOLLOWING CORDS:

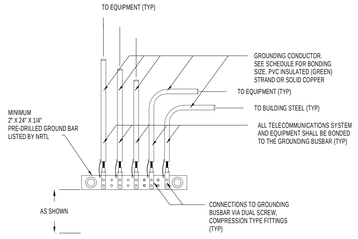
COLOR	LENGTH 5' 7' 10' 15'	
BLUE	AS REQUIRED	QUANTITY
WHITE		

NOTES:

1. CONTRACTOR SHALL CONFIRM ALL FINAL QUANTITIES, COLOR AND LENGTH WITH CLIENT PRIOR TO PURCHASING ANY PATCHING.
2. ALL CORDS SHALL BE CATEGORY 6A CORDS, WITH SNAGLESS PLUGS.
3. PROVIDE 7' PATCH CORD AT STATION, OFFICE AND PRINTER. LENGTH AS REQUIRED INSIDE TELECOM ROOM. QTY AS REQUIRED

1 PATCH CORD LABELING & QUANTITY

SCALE: NONE



4 GROUNDING BUSBAR DETAIL

SCALE: NONE

GROUNDING & BONDING CONDUCTOR SIZING	
CONDUCTOR LENGTH	SIZE (INCH)
UP TO 50 FEET	#6 AWG SOLID OR STRANDED (0.16 INCH)
50 TO 100 FEET	#4 AWG STRANDED (0.20 INCH)
100 TO 150 FEET	#2 AWG STRANDED (0.26 INCH)
150 TO 200 FEET	#1/0 AWG STRANDED (0.482 INCH)
GREATER THAN 200 FEET	#3/0 AWG STRANDED (0.580 INCH)

GROUNDING & BONDING NOTES:

1. ALL RACKS, CABINETS, LADDER RACK & CONDUITS SHALL BE PROPERLY BONDED TO THE TELECOMMUNICATIONS GROUNDING BUSBAR. REFER TO THE GROUNDING & BONDING CONDUCTOR SIZING SCHEDULE.
2. SEE T00-01 FOR GROUNDING & BONDING GENERAL NOTES.
3. PROVIDE BONDING/JUMPER FOR ALL LADDER RACK T SECTION, CROSS, AND CORNERS.

2 GROUND CONDUCTOR SIZING SCHEDULE

SCALE: NONE

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CLIENT

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MaineHealth

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CONSTRUCTION MANAGER
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101 Summer Street, 4th Floor, Boston MA 02210

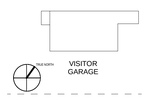
COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
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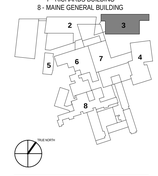
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING



CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	RS
Checked	BN
Approved	BN

TITLE

COMMUNICATIONS DETAILS

SHEET NUMBER

T00-12

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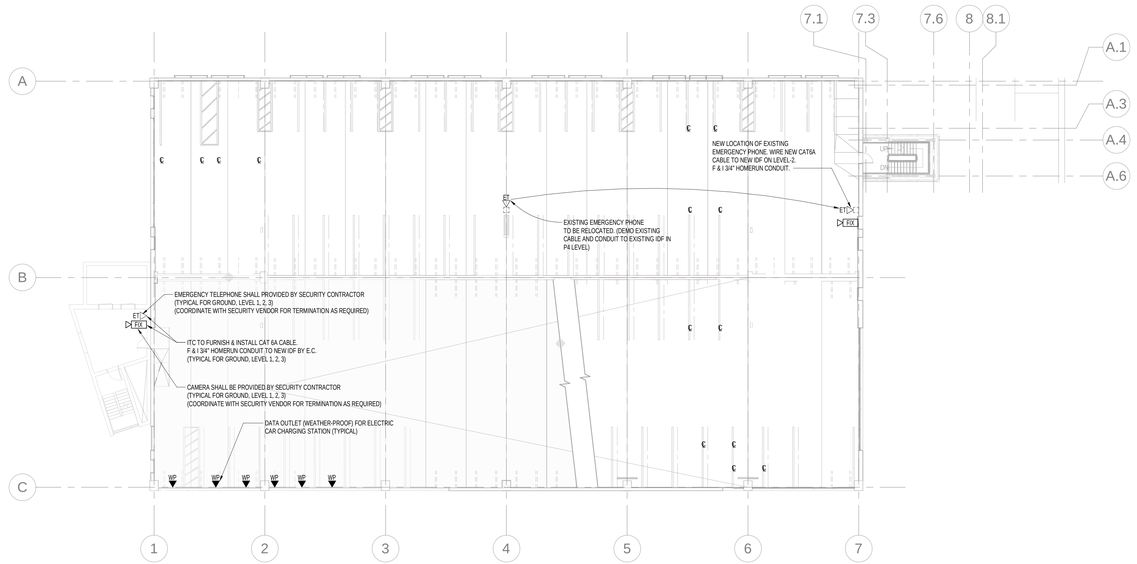
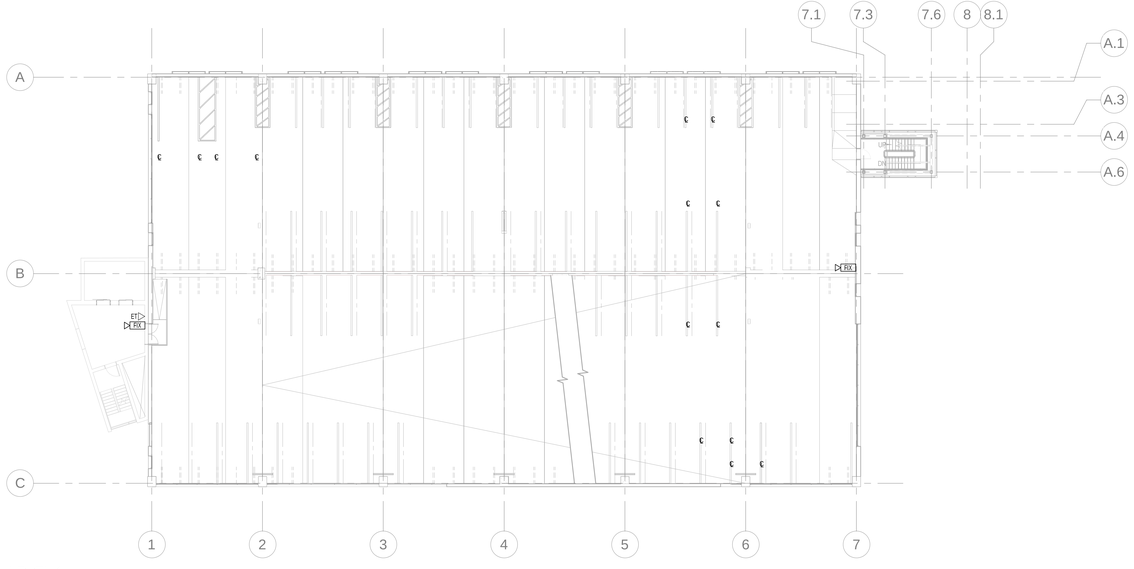


1 GROUND LEVEL
SCALE: 1/16" = 1'-0"



2 LEVEL 1
SCALE: 1/16" = 1'-0"

COMMUNICATIONS NOTES

1. DRAWINGS ARE SCHEMATIC AND INDICATE GENERAL ARRANGEMENT OF TELECOM SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT NEW WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITIONS AS NEEDED.
2. VERIFY EXACT LOCATIONS OF NEW TELEPHONE OR EMERGENCY TELEPHONE OUTLETS WITH ARCHITECTURAL DRAWINGS DETAILS PRIOR INSTALLING.
3. EMERGENCY TELEPHONE AND SECURITY OUTLET SHALL HAVE (1) CAT-6A HORIZONTAL CABLES. UNLESS OTHERWISE NOTED. F & I 3/4" HOMERUN CONDUIT TO NEW IDF LEVEL-2 BY E.C.
4. WALL TELEPHONE OUTLET SHALL HAVE (1) CAT-6A HORIZONTAL CABLE.
5. COORDINATE WITH ELECTRICIAN FOR ALL NEW TELECOM OUTLETS / J-BOX LOCATIONS, STUB-UP CONDUITS AND SLEEVES.
6. TERMINATE ALL NEW HOMERUN CABLE IN NEW IDF ROOM ON LEVEL-2.
7. FURNISH & INSTALL FIRE BARRIER PASS-THROUGH SLEEVES WITH COLLARS AT ALL PENETRATIONS AS REQUIRED (TYPICAL).

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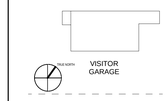
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
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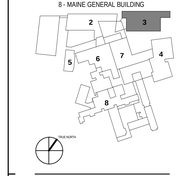

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
1	ADDENDUM #1	12.05.17
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	RS
Checked	BN
Approved	BN

TITLE

COMMUNICATIONS FLOOR PLAN - GROUND & FIRST FLOORS

SHEET NUMBER

T10-10

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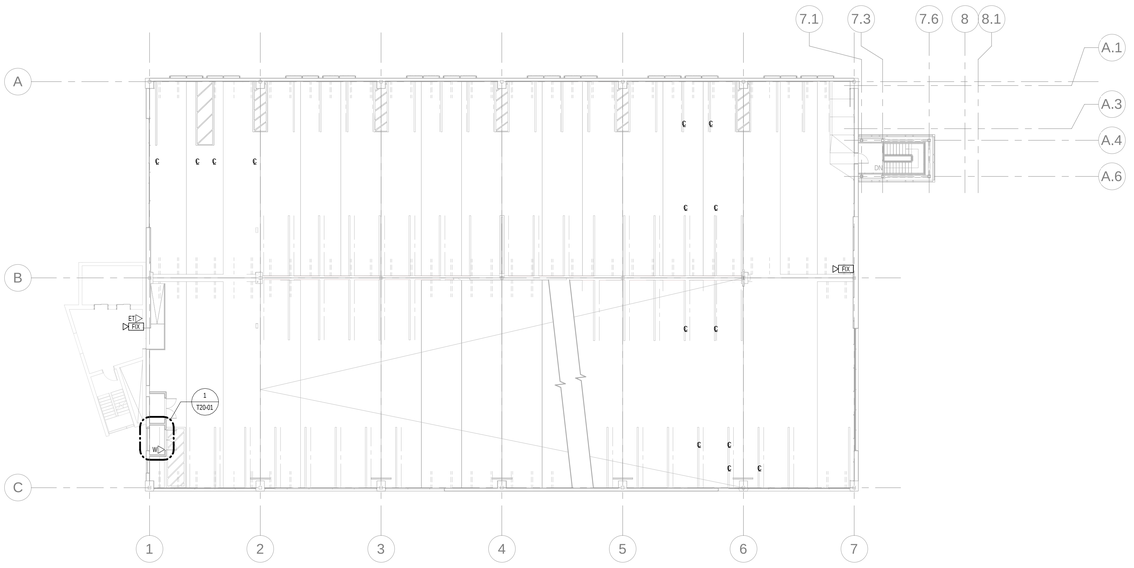
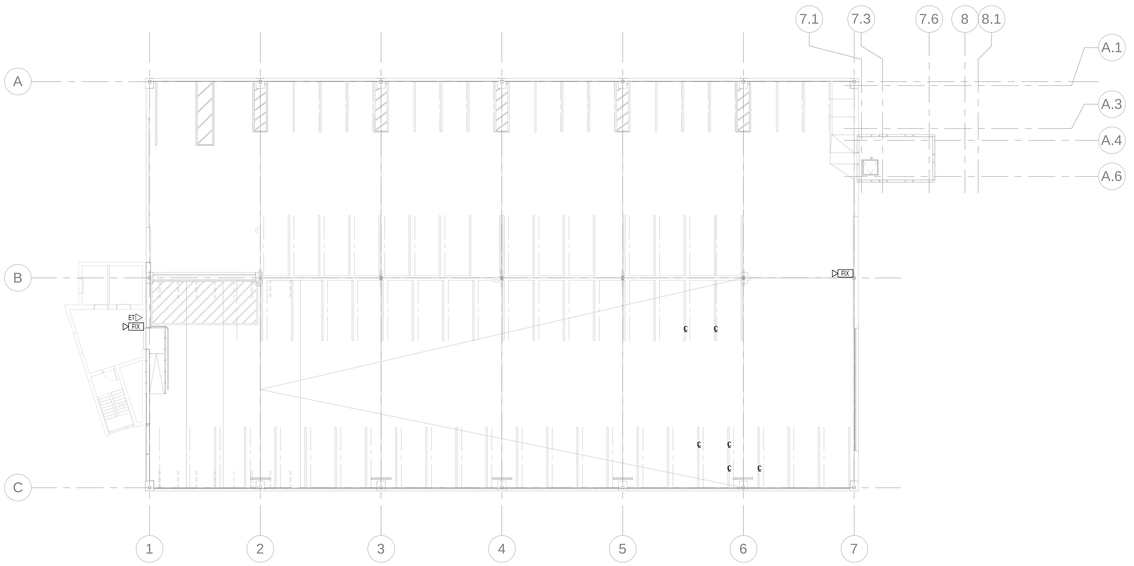


1 LEVEL 2
SCALE: 1/16" = 1'-0"



2 LEVEL 3
SCALE: 1/16" = 1'-0"

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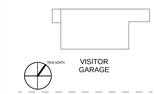
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

KEY PLANS

PROJECT KEY PLAN



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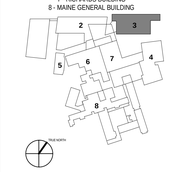

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

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Job Number	B150311-000
Drawn	RS
Checked	BN
Approved	BN

TITLE

COMMUNICATIONS FLOOR PLAN - SECOND & THIRD FLOORS

SHEET NUMBER

T10-20

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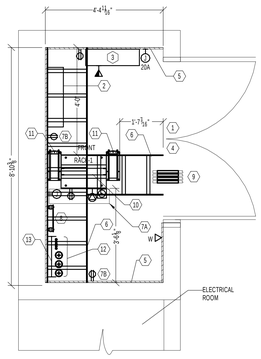


2 2ND FLOOR - IDF ROOM LAYOUT IN PARKING GARAGE

SCALE: 1/2"=1'-0"

KEY NOTES:

1. STATIC DISSIPATIVE TILE SIMILAR TO ARMSTRONG SDT 4-PART SYSTEM SHALL BE INSTALLED AT EQUIPMENT ROOM (TYPICAL):

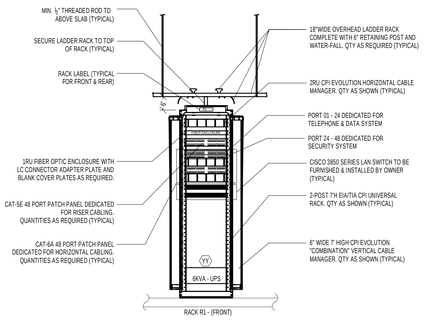
   THE 4-PART COMPONENTS MUST BE USED TOGETHER TO OBTAIN THE STATIC DISSIPATIVE PERFORMANCE REQUIREMENTS:

   1. TILE WITH INTEGRAL STATIC DISSIPATIVE ELEMENTS
   2. S-203 STATIC DISSIPATIVE ADHESIVE
   3. COPPER GROUNDING STRIPS
   4. S-392 STATIC DISSIPATIVE POLISH
   5. BONDING COPPER STRIP TO TGB

2. A MINIMUM 1 TON A/C WALL-MOUNT UNIT BY OTHERS.
3. SPACE RESERVED FOR SECURITY PANEL
4. RECOMMEND 1HR FIRE-RATED SLAB TO SLAB WALL.
5. ¾" THICK FIRE RETARDANT PLYWOOD BACKBOARD (TYPICAL FOR WALLS)
6. 18" WIDE OVERHEAD LADDER RACK TO BE INSTALLED AT 7'-6" AFF (TYPICAL)
7. A - SEE POWER REQUIREMENT FOR NETWORK RACK SCHEDULE.
   B - WALL MOUNTED DUPLEX POWER OUTLET @120VAC, 20A CIRCUIT.
8. TELECOM GROUNDING BUS-BAR BONDED TO BUILDING STEEL
9. HOMERUN CONDUIT FOR COMMUNICATION & SECURITY DEVICE (TYPICAL). (CONDUIT QUANTITIES PER NUMBER OF DEVICES)
10. 2-POST 19" EIA COMMUNICATIONS RACK @45RU, 7' HIGH
11. 6" VERTICAL WIRE MANAGEMENT (TYPICAL)
12. REFER TO RISER CONDUIT PATHWAY DIAGRAM DWG# T30-01
13. 18" VERTICAL LADDER RACK

POWER REQUIREMENTS NETWORK RACK SCHEDULE:

- (3) 120/208V J-BOX FOR HARDWIRE TERMINAL 3W (2PH + G) FOR APC 6-KVA UPS WIRE CONNECTION - BY E.C. (COORDINATION WITH OWNER AS REQUIRED)
- 30A, 2P, NEMA L14-30R TWIST LOCK RECEPTACLE FOR POU PLUG. TO BE INSTALLED AT 7'-6" AFF OR SAME LEVEL OF NEW LADDER RACK FACING THE REAR OF RACK. - BY E.C.
- APC VERTICAL POU (L14-30P) TO BE INSTALLED BEHIND RACK. CONNECT TO POWER ABOVE RACK - BY E.C. APC PART# AP8870
- (YY) APC 8KVA UPS TO BE F & I BY OWNER. (COORDINATION AS REQUIRED)
- NEMA 5-20R @120VAC, 20A CIRCUIT CONVIENIENT OUTLET - BY E.C.



1 RACK ELEVATION AND HARDWARE DETAILS

SCALE: 1/2"=1'-0"

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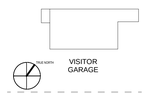
KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

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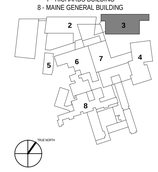

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

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	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	RS
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Approved	BN

TITLE

COMMUNICATIONS PART PLAN & ELEVATION VIEW - __SECOND FLOOR

SHEET NUMBER

T20-01

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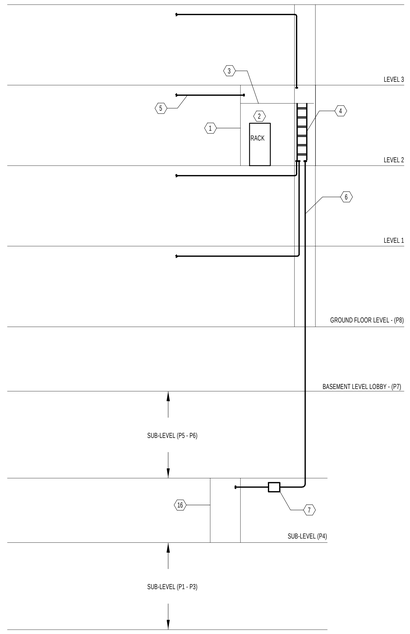
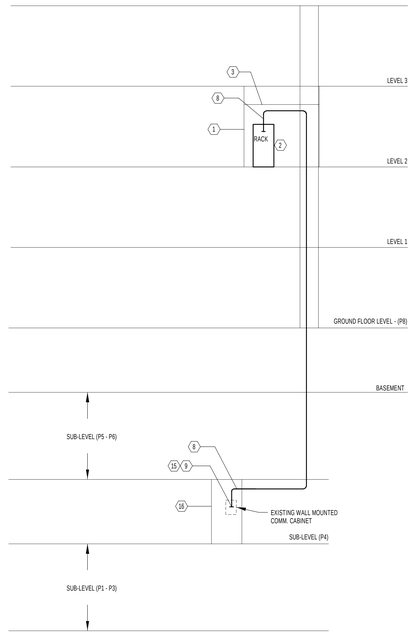
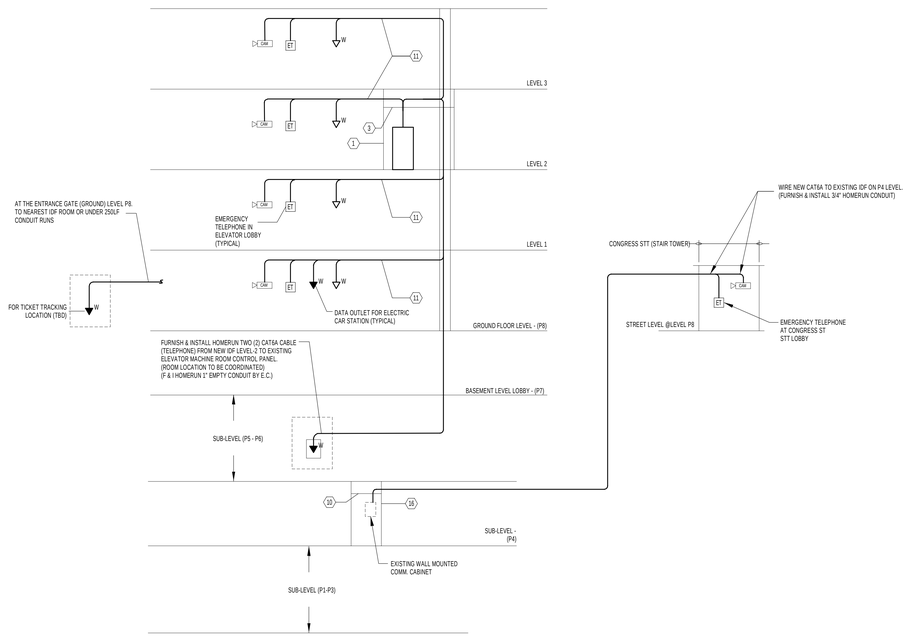


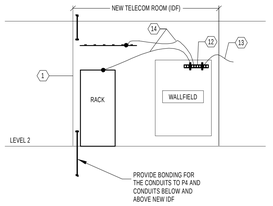
4 CABLE PATHWAY - SINGLE LINE DIAGRAM
SCALE: NONE



1 BACKBONE RISER CABLE - SINGLE LINE DIAGRAM
SCALE: NONE



3 HORIZONTAL CABLING - SINGLE LINE DIAGRAM
SCALE: NONE



2 GROUNDING AND BONDING - SINGLE LINE DIAGRAM
SCALE: NONE

DRAWING NOTES:

1. REFERENCE COMM. PLANS FOR EXACT IT OUTLET LOCATION AND QUANTITIES.
2. REFERENCE COMM. SPECS FOR FIBER AND COPPER BACKBONE TERMINATION .
3. HORIZONTAL CABLES SHALL BE TERMINATED IN IDF AND WIRED TO T-568A.
4. TELECOM ROOM (IDF) AS SHOWN. INCLUDING CABLE HARDWARE AND DETAIL.
5. EXISTING MDF ROOM(s) TO BE COORDINATED FOR EXACT LOCATION AT MMC BLDG.
6. COMM. HARDWARE & CABLING ARE NEW, UNLESS OTHERWISE NOTED EXISTING.

KEY NOTES:

1. NEW TELECOM ROOM (IDF)
2. 2-POST 19" EIA COMMUNICATION RACK
3. 18" WIDE OVERHEAD LADDER RACK WITH COMPLETE MOUNTING KIT
4. 18" WIDE VERTICAL LADDER RACK WITH COMPLETE MOUNTING KIT
5. 3/4" HOMERUN CONDUIT (TYPICAL). QUANTITIES AS REQUIRED PER IT & SECURITY DEVICE
6. (3) 3" VERTICAL EMT CONDUIT HOMERUN DOWN TO EXISTING IDF P4 LEVEL WITH (2) 2" 3-CELL MAXCELL# MXR2003BK####
7. PULL BOX (AS REQUIRED) - SIZE TO BE DETERMINED BY EC
8. ONE (1) 12 STRANDS OS2 SM (ARMORED TYPE) FIBER & (1) 25-PAIR CAT3 BACKBONE CABLE
9. TERMINATE NEW FIBER BACKBONE CABLE TO EXISTING PANEL ON SPARE PORTS, (or AS REQUIRED - INSTALL NEW FIBER PATCH PANEL AND ADAPTER PORTS) (PANEL LOCATION - TO BE COORDINATED)
10. EXISTING OVERHEAD LADDER RACK
11. HOMERUN HORIZONTAL CABLES
12. TELECOM GROUNDING BUSBAR (TGB) BY E.C.
13. BONDING CONDUCTOR TO BUILDING STEEL. SIZING BY E.C.
14. EQUIPMENT BONDING CONDUCTOR TO IT CONTRACTOR INSTALLED EQUIPMENT (E.G. LADDER RACK, RACKS, CABINETS) - QUANTITIES AS REQUIRED. SIZING BY IT / TELECOM CONTRACTOR.
15. EXISTING VOICE WALLFIELD. USE SPARE TERMINAL BLOCK / PINS FOR NEW COPPER CABLES (AS REQUIRED - INSTALL NEW BLOCKS MATCHING EXISTING) (BLOCK LOCATION - TO BE COORDINATED)
16. EXISTING IDF ROOM IN P4 LEVEL. (LOCATION TO BE COORDINATED)

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COST ESTIMATOR
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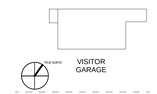
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
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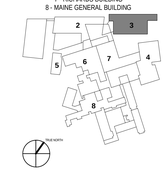

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	RS
Checked	BN
Approved	BN

TITLE

COMMUNICATIONS SINGLE LINE DIAGRAM

SHEET NUMBER

T30-01

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SECURITY SYMBOL LIST

SECURITY SYMBOLS

FIX XX-YYY-ZZZ	SECURITY CAMERA FIXED XX = FLOOR YYY = TYPE ZZZ = NUMBER
PTZ XX-YYY-ZZZ	SECURITY CAMERA PTZ XX = FLOOR YYY = TYPE ZZZ = NUMBER
NVR	NETWORK VIDEO RECORDER
DVR	DIGITAL VIDEO RECORDER
ENC	VIDEO ENCODER
DEC	VIDEO DECODER
ACP	ACCESS CONTROL PANEL
IDP	INTRUSION DETECTION PANEL
CR X	CARD READER B = BIOMETRIC M = MAGNETIC STRIKE P = PROXIMITY K = PROXIMITY/KEYPAD
DC	DOOR CONTACT
WC	WINDOW CONTACT
TH	TRANSFER HINGE (POWER & RX)
EL X	ELECTRIC LOCKSET WITH REX SWITCH C = FAIL SECURE (DEFAULT) S = FAIL SAFE
ES X	ELECTRIC STRIKE C = FAIL SECURE (DEFAULT) S = FAIL SAFE
MA X	ELECTROMAGNETIC LOCK S = SINGLE D = DOUBLE
CB X	CRASH BAR M = MANUAL E = ELECTRIC D = DELAYED EGRESS
ER X	EMERGENCY DOOR RELEASE P = PULL STATION G = BREAK GLASS STATION
RX X	REQUEST TO EXIT M = MOTION DETECTOR P = PUSH BUTTON
DR	DOOR RELEASE BUTTON
DO	DOOR OPENER (AUTOMATIC)
KS	KEY SWITCH
WTX	WIRELESS TRANCIEVER
DB	DURESS/PANIC BUTTON
GB	GLASS BREAK SENSOR
MD	MOTION DETECTOR
LA	LOCAL ALARM SOUNDER
J1	JUNCTION BOX - 4"LX4"WX4"D
J3	JUNCTION BOX - 6"LX6"WX4"D
FIR	FIRE INTERFACE RELAY (CLASS "E")
IC X	INTERCOM M = MASTER STATION S = SUB STATION
VI X	VIDEO INTERCOM M = MASTER STATION S = SUB STATION
SVR X	SERVER A = ACCESS CONTROL V = VIDEO SURVEILLANCE I = INTERCOM
WKS X	WORKSTATION A = ACCESS CONTROL V = VIDEO SURVEILLANCE I = INTERCOM
MON XX	LED MONITOR XX = SIZE
TSC XX	TOUCHSCREEN MONITOR XX = SIZE
PP X	PATCH PANEL E = ETHERNET F = FIBER OPTIC
FMC X	FIBER MEDIA CONVERTER C = COAXIAL E = ETHERNET T = TWISTED PAIR
AP	ANNUNCIATOR PANEL
ET	EMERGENCY TELEPHONE
CPS	CAMERA POWER SUPPLY
LPS	LOCK POWER SUPPLY
DPS	DEVICE POWER SUPPLY
UPS	UNINTERRUPTIBLE POWER SUPPLY

SECURITY DEVICE DESIGNATIONS

XX-YYY-ZZZ

X = FLOOR NUMBER
Y = DEVICE TYPE
Z = SEQUENTIAL NUMBERS

SECURITY ABBREVIATIONS

ACP	ACCESS CONTROL PANEL
ACS	ACCESS CONTROL SYSTEM
AMP	AMPERAGE
AP	ANNUNCIATOR PANEL
BAL	VIDEO BALUN
CAB	EQUIPMENT CABINET
CB	CRASH BAR
CPS	CAMERA POWER SUPPLY
CR	CARD READER
DB	DURESS/PANIC BUTTON
DC	DOOR CONTACT
DEC	VIDEO DECODER
DPS	DEVICE POWER SUPPLY
DR	DOOR RELEASE BUTTON
DRM	DUAL READER MODULE PANEL
DVR	DIGITAL VIDEO RECORDER
EC	ELECTRICAL CONTRACTOR
EDR	EMERGENCY DOOR RELEASE
EL	ELECTRIC LOCKSET
ENC	VIDEO ENCODER
EP	EMERGENCY PHONE
ES	ELECTRIC STRIKE
FIR	FIRE INTERFACE RELAY
FIX	FIXED CAMERA
FMC	FIBER OPTIC MEDIA CONVERTER
GB	GLASS BREAK SENSOR
GND	GROUND
IC	AUDIO INTERCOM
ICS	INTERCOM SYSTEM
IDP	INTRUSION DETECTION PANEL
IDS	INTRUSION DETECTION SYSTEM
IN	INPUT
INP	INPUT PANEL
ITC	IT CONTRACTOR
JB	JUNCTION BOX
KVM	KEYBOARD/VIDEO/MOUSE
LA	LOCAL ALARM SOUNDER
LPS	LOCK POWER SUPPLY
MD	MOTION DETECTOR
ML	ELECTROMAGNETIC LOCK
MON	LED/LCD MONITOR
MUX	MULTIPLEXOR PANEL
NC	NORMALLY CLOSED
NET	NETWORK
NO	NORMALLY OPEN
NVR	NETWORK VIDEO RECORDER
OUT	OUTPUT
OUTP	OUTPUT PANEL
PB	PUSH BUTTON
PDU	POWER DISTRIBUTION UNIT
PP	PATCH PANEL
PTZ	PAN/TILT/ZOOM CAMERA
PWR	POWER
RACK	EQUIPMENT RACK
REL	RELAY
RX	REQUEST TO EXIT
SRM	SINGLE READER MODULE PANEL
SVR	SERVER
SW	SWITCH
UL	UNDERWRITERS LABORATORY
UON	UNLESS OTHERWISE NOTED
VAC	VOLTS AC
VDC	VOLTS DC
VI	VIDEO/AUDIO INTERCOM
VSS	VIDEO SURVEILLANCE SYSTEM
WC	WINDOW CONTACT
WDB	WIRELESS DURESS/PANIC BUTTON
WKS	WIRELESS TRANSCEIVER
WTX	WORKSTATION
XFMR	TRANSFORMER

SECURITY GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, NFPA, UL, ADA AND ALL OTHER GOVERNING AGENCIES HAVING JURISDICTION.
2. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS WHEN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITIONS.
3. SECURITY CONTRACTOR SHALL VISIT AND EXAMINE CAREFULLY THE EXISTING AREAS AFFECTED BY THIS WORK AND BECOME FAMILIAR WITH EXISTING CONDITIONS. SECURITY CONTRACTOR SHALL PERFORM THIS PRIOR TO SUBMITTING A PROPOSAL. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN, HAD SUCH AN EXAMINATION BEEN MADE.
4. VERIFY LOCATIONS OF ALL ACCESS CONTROL, INTRUSION, VIDEO SURVEILLANCE AND INTERCOM DEVICES IN FINISHED SPACES WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH.
5. BEFORE PERFORMING ANY INSTALLATION, THE SECURITY CONTRACTOR SHALL SEE THAT IT DOES NOT INTERFERE WITH CLEARANCES REQUIRED FOR FINISHED COLUMNS, HUNG CEILINGS, PLASTER, PARTITIONS, WALLS, ETC., AS SHOWN IN THE ARCHITECTURAL DRAWINGS AND DETAILS. IF ANY WORK IS SO INSTALLED AND IT LATER DEVELOPS THAT SUCH DETAILS OR DESIGN CANNOT BE FOLLOWED, THE SECURITY CONTRACTOR AT HIS OWN EXPENSE SHALL MAKE SUCH CHANGES IN THE WORK AS DIRECTED BY THE ARCHITECT, AS WELL AS TO PERMIT THE INSTALLATION OF THE ARCHITECTURAL WORK AS SHOWN ON THE PLANS AND DETAILS.
6. HOMERUN ALL CABLES VIA CONDUITS, J-HOOKS AND ABOVE ACCESSIBLE CEILINGS DIRECTLY TO THE IDF/SECURITY ROOMS AS INDICATED ON DRAWINGS. ATTACHMENT TO DRYWALL IS NOT ACCEPTABLE.
7. FIRESTOPPING SHALL BE INSTALLED WHEREVER CABLING OR RACEWAYS CROSS FIRE RATED CONSTRUCTION.
8. ALL CUTTING AND PATHING SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR.
9. ANY DAMAGE TO PARTITIONS, FLOORS, CEILINGS OR ANY PART OF THE BUILDING OR EQUIPMENT CAUSED BY THE WORK OF THE SECURITY CONTRACTOR SHALL BE MADE GOOD AT NO ADDITIONAL EXPENSE TO THE OWNER.
10. MECHANICAL DOOR LOCK HARDWARE SHALL BE SUPPLIED BY OTHERS. COORDINATE WITH ARCHITECT.
11. COORDINATE ALL ELECTRICAL POWER, CONDUIT AND OUTLET BOX REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
12. ALL J-BOXES & CONDUITS SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. COORDINATION AS REQUIRED.
13. SECURITY CONTRACTOR SHALL PROVIDE ANY AND ALL REQUIRED TROUGH, CONNECTIONS TO OR TRANSITIONS FROM WALL/FIELD TROUGH AS REQUIRED.
14. COORDINATE EXACT LOCATIONS, MOUNTING AND FINISHES OF ACCESS CONTROL, INTRUSION, VIDEO SURVEILLANCE AND INTERCOM DEVICES WITH ARCHITECT.
15. COORDINATE PATCH PANEL LOCATIONS, ETHERNET SWITCHING, PORT ALLOCATION, IP ADDRESS INFO AS REQUIRED WITH OWNER.
16. FINAL ACCEPTANCE IS REQUIRED TO BE MADE AFTER THE SECURITY CONTRACTOR HAS DEMONSTRATED THAT THE WORK FULFILLS THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.
17. PROVIDE SHOP DRAWINGS & SUBMITTALS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
18. SECURITY CONTRACTOR SHALL PROVIDE COMPLETE AS-BUILT DOCUMENTATION AND ACAD DRAWINGS.

SECURITY INSTALLATION NOTES

1. AREAS OF SECURITY INSTALLATION SHALL BE CLEAN AND SECURE.
2. SECURITY CONDUIT SYSTEM MUST BE COMPLETE WITH ALL CONNECTIONS MADE END TO END.
3. PULL STRING MUST BE INSTALLED IN SECURITY CONDUIT.
4. MILLWORK AND FURNITURE THAT HOUSE SECURITY EQUIPMENT SHALL BE IN PLACE.
5. REQUIRED MODIFICATIONS/BOXES/CUTS TO MILLWORK AND FURNITURE SHALL BE COMPLETE.
6. REQUIRED EQUIPMENT COOLING VENTILATION SHALL BE IN PLACE AND OPERATIONAL.

SECURITY DRAWING LIST

DRAWING No.	DRAWING TITLE
SC00-01	SECURITY GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
SC00-10	SECURITY DETAILS
SC10-10	SECURITY FLOOR PLAN - GROUND & FIRST FLOORS
SC10-20	SECURITY FLOOR PLAN LEVEL 2 & 3
SC20-01	SECURITY RISER DIAGRAM

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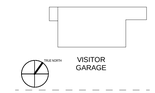
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
8 - MAINE GENERAL BUILDING

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
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	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	NV
Checked	BN
Approved	BN

TITLE

SECURITY GENERAL NOTES, SYMBOLS AND __ABBREVIATIONS

SHEET NUMBER

SC00-01

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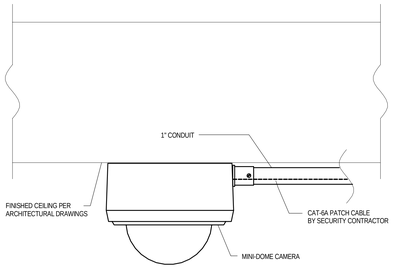
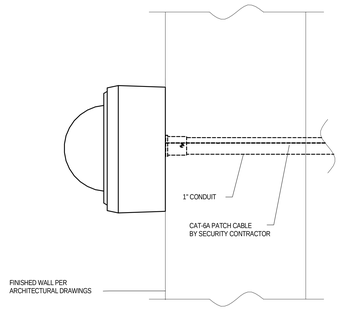


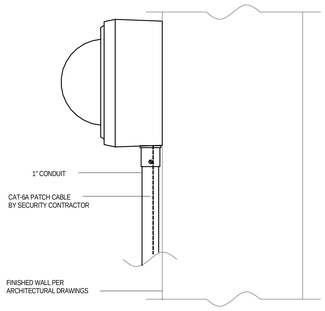
NOTES:
1. DETAIL REPRESENTS TYPICAL SECURITY REQUIREMENTS
2. SEE THE FLOOR/CEILING PLANS FOR DEVICE LOCATIONS

6 MINI-DOME CAMERA INTERIOR & EXTERIOR CEILING SURFACE MOUNT
SCALE: NTS



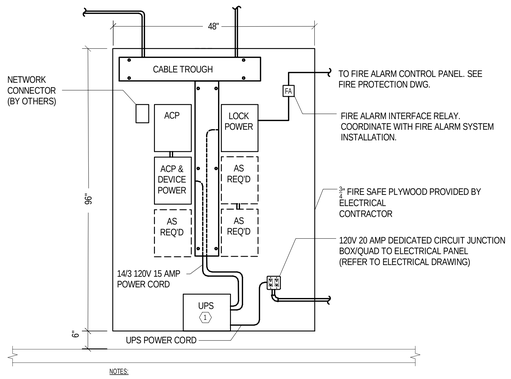
NOTES:
1. DETAIL REPRESENTS TYPICAL SECURITY REQUIREMENTS
2. SEE THE FLOOR/CEILING PLANS FOR DEVICE LOCATIONS

4 MINI-DOME CAMERA INTERIOR & EXTERIOR WALL SURFACE MOUNT
SCALE: NTS



NOTES:
1. DETAIL REPRESENTS TYPICAL SECURITY REQUIREMENTS
2. SEE THE FLOOR/CEILING PLANS FOR DEVICE LOCATIONS

2 MINI-DOME CAMERA INTERIOR & EXTERIOR WALL SURFACE MOUNT
SCALE: NTS

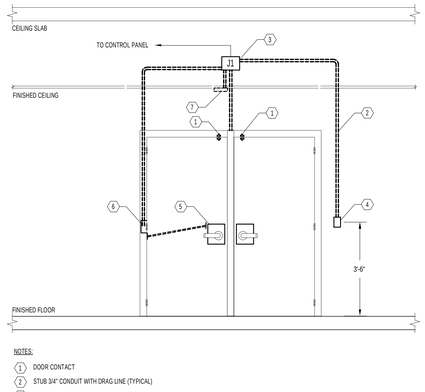


NOTES:

1. UPS 450 WATTS / 720VA AT 120VAC
APC PART# : BR700G
OUTPUT CONNECTIONS DEDICATED FOR SECURITY:
(3) NEMA 5-15R (BATTERY BACKUP)
(3) NEMA 5-15R (SURGE PROTECTION)

UPS TO BE FURNISHED AND INSTALLED BY SECURITY VENDOR.

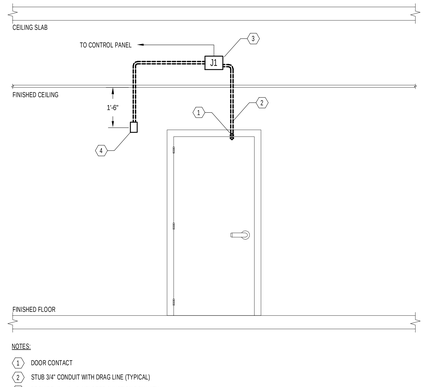
5 ACCESS CONTROL/UPS WALLFIELD ELEVATION VIEW
SCALE: NTS



NOTES:

1. DOOR CONTACT
2. STUB 3/4" CONDUIT WITH DRAG LINE (TYPICAL)
3. PROVIDE 4" x 4" x 2-1/8" DEEP JUNCTION BOX WITH
COVER MOUNTED ABOVE DOOR. ABOVE FINISHED CEILING.
4. CARD READER (UNPROTECTED SIDE)
5. ELECTRIC LOCKSET WIREQUEST-TO-EXIT
6. TRANSFER HINGE (POWER & REQUEST-TO-EXIT)
7. REQUEST-TO-EXIT MOTION DETECTOR (PROTECTED SIDE)

3 DOUBLE DOOR - ELECTRIC LOCKSET CARD READER IN
SCALE: NTS



NOTES:

1. DOOR CONTACT
2. STUB 3/4" CONDUIT WITH DRAG LINE (TYPICAL)
3. PROVIDE 4" x 4" x 2-1/8" DEEP JUNCTION BOX WITH
COVER MOUNTED ABOVE DOOR. ABOVE FINISHED CEILING.
4. LOCAL ALARM (SOUNDER)

1 SINGLE DOOR DOOR CONTACT, LOCAL ALARM
SCALE: NTS

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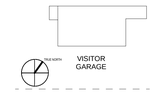

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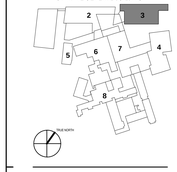

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SECURITY DETAILS

SHEET NUMBER

SC00-10

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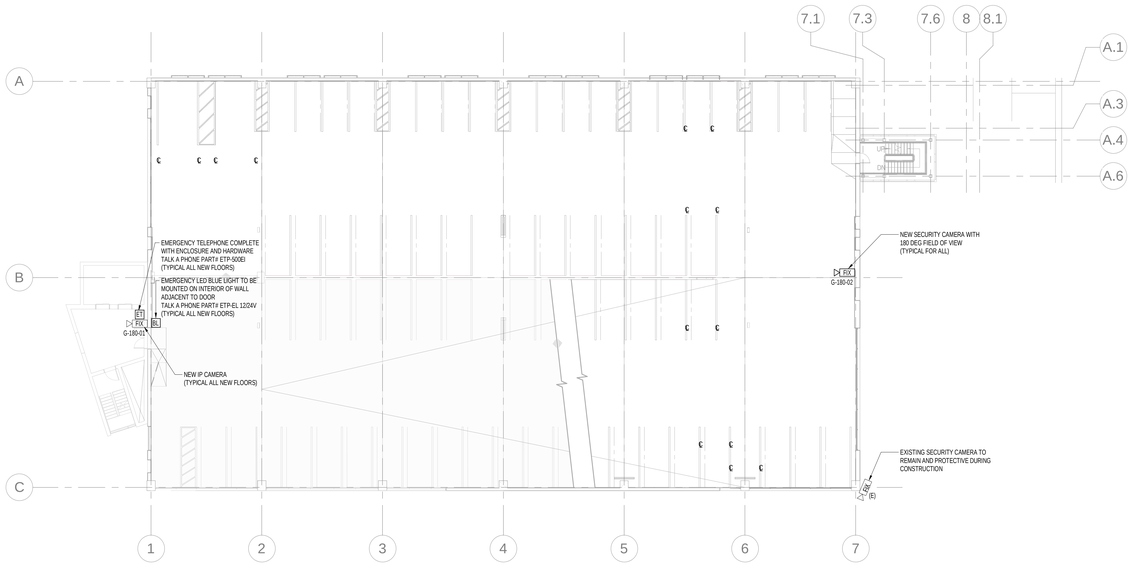
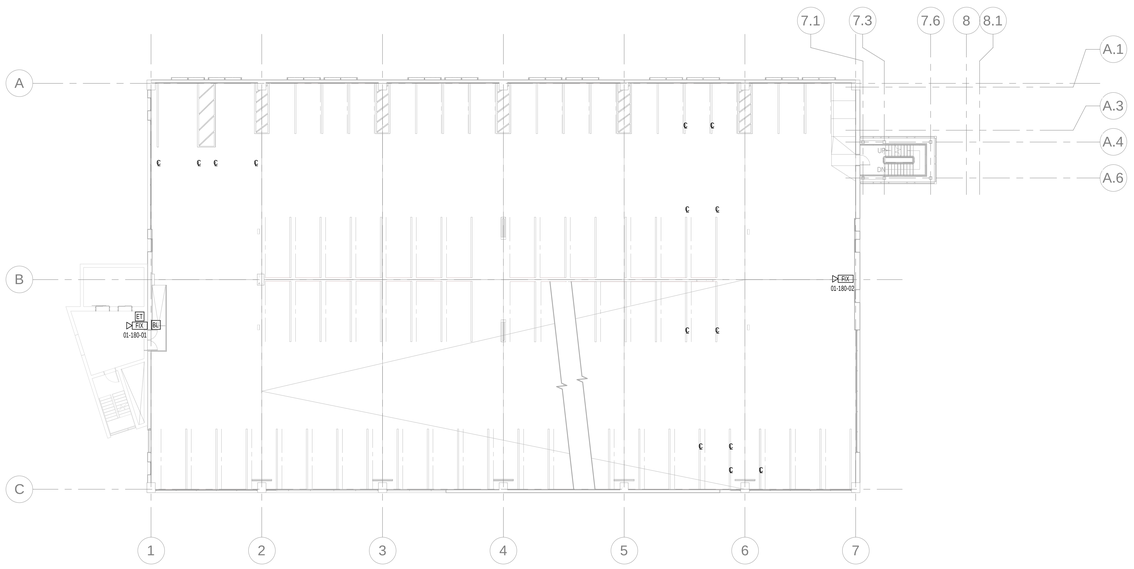


2 GROUND LEVEL
SCALE: 1/16" = 1'-0"



1 LEVEL 1
SCALE: 1/16" = 1'-0"

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101 Summer Street, 4th Floor, Boston MA 02210

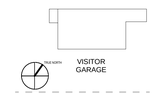
COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn MA 01801

PROJECT TITLE

Visitor Garage Expansion
22 Bramhall Street
Portland ME 04102

KEY PLANS

PROJECT KEY PLAN



OVERALL KEY PLAN

1 - NOT USED
2 - CONGRESS STREET
3 - VISITOR GARAGE
4 - EAST TOWER
5 - CENTRAL UTILITY PLANT
6 - BEAN BUILDING
7 - RICHARDS BUILDING
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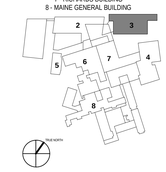

CONSTRUCTION DOCUMENT SET
SEPTEMBER 29, 2017

NO	ISSUE	DATE
	PERMIT SET	03.29.18
	PERMIT SET	03.09.18
	DESIGN DEVELOPMENT	08.25.17

Job Number	B150311-000
Drawn	NV
Checked	BN
Approved	BN

TITLE

SECURITY FLOOR PLAN - GROUND & FIRST FLOORS

SHEET NUMBER

SC10-10

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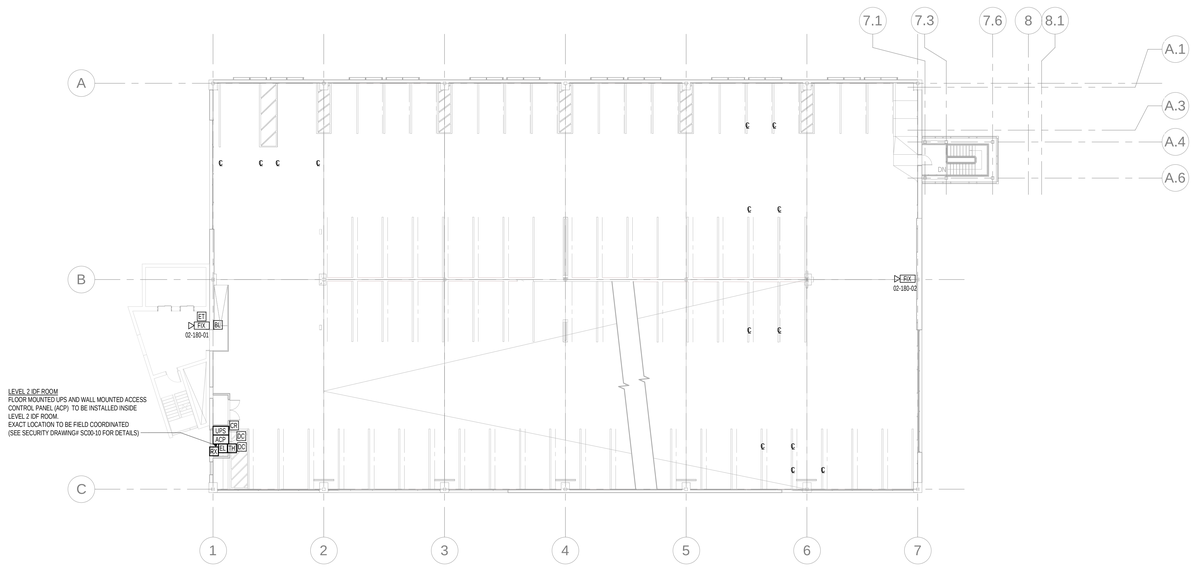
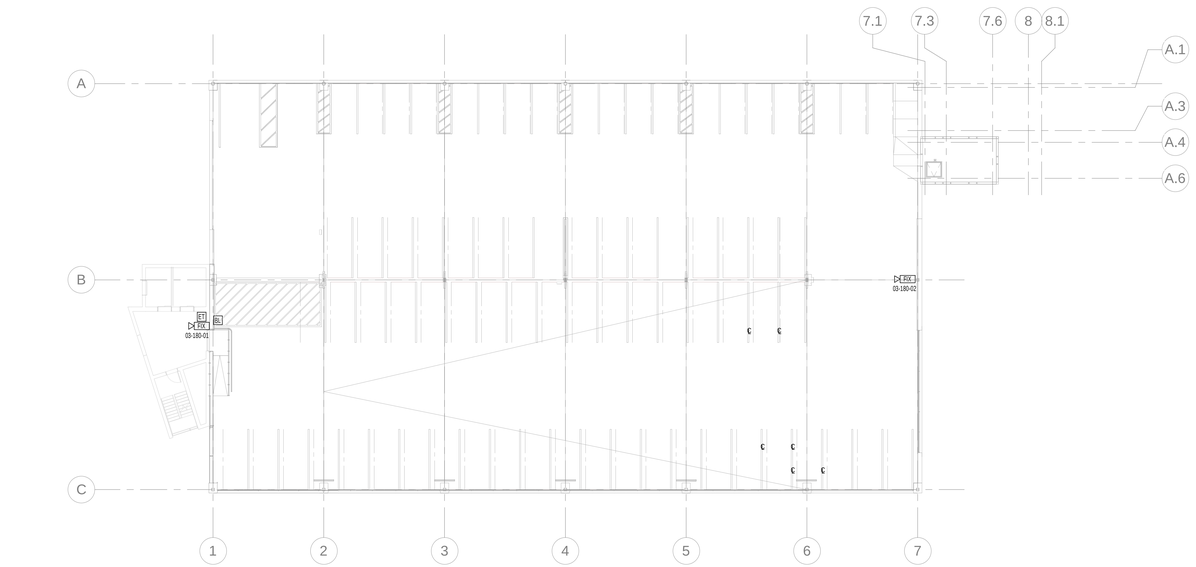


2 LEVEL 2
SCALE: 1/16" = 1'-0"



1 LEVEL 3
SCALE: 1/16" = 1'-0"

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75 John Roberts Road, Suite 1A,
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STRUCTURAL ENGI/ BUILDING ENVELOPE CONSULTANT
Simpson Gumpertz & Heger Inc.
41 Seyon Street, Building 1, Suite 500,
Waltham MA 02453

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AKF Group LLC
99 Bedford Street, 2nd Floor, Boston MA 02111

CONSTRUCTION MANAGER
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PROJECT TITLE

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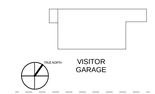
22 Bramhall Street
Portland ME 04102

KEY PLANS

PROJECT KEY PLAN



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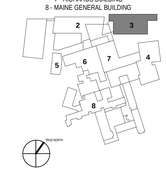

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SECURITY FLOOR PLAN LEVEL 2 & 3

SHEET NUMBER

SC10-20

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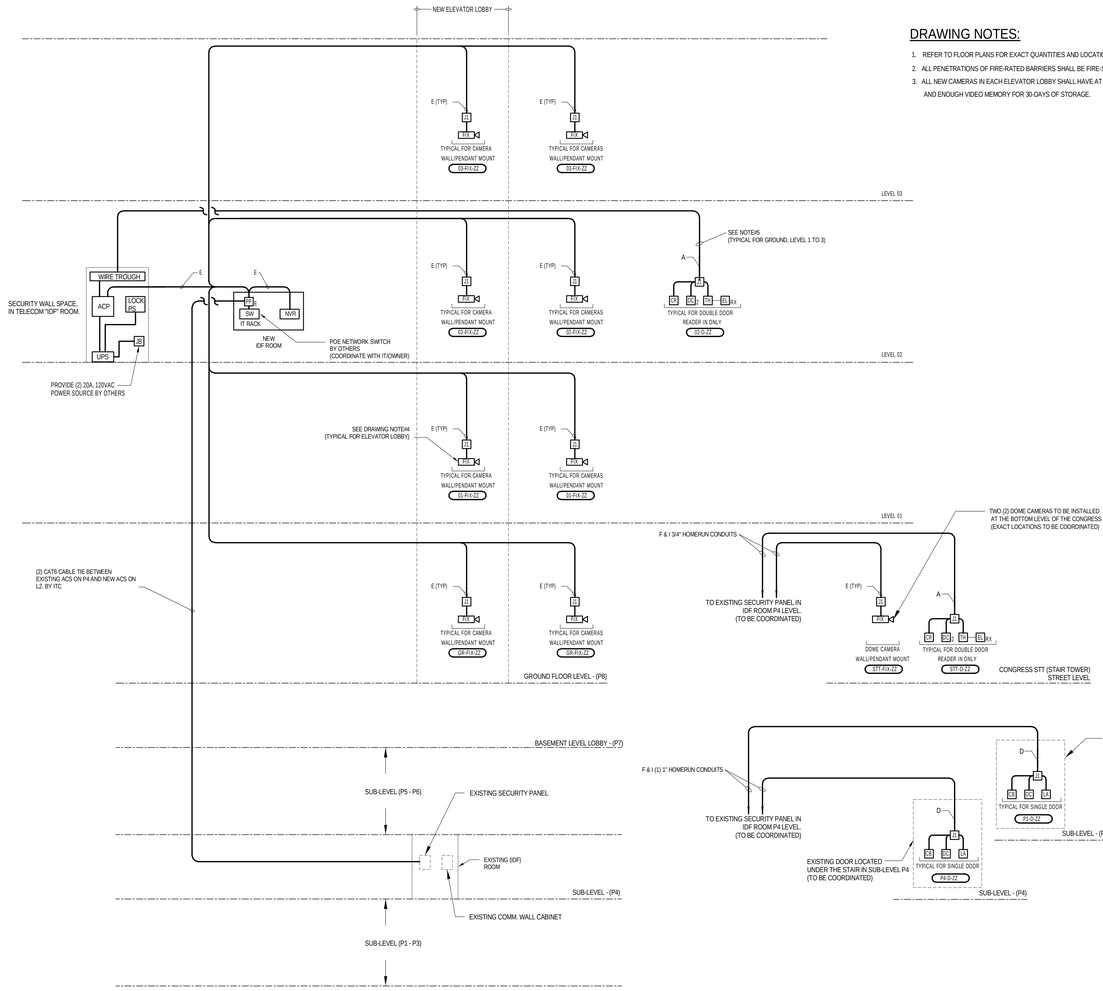
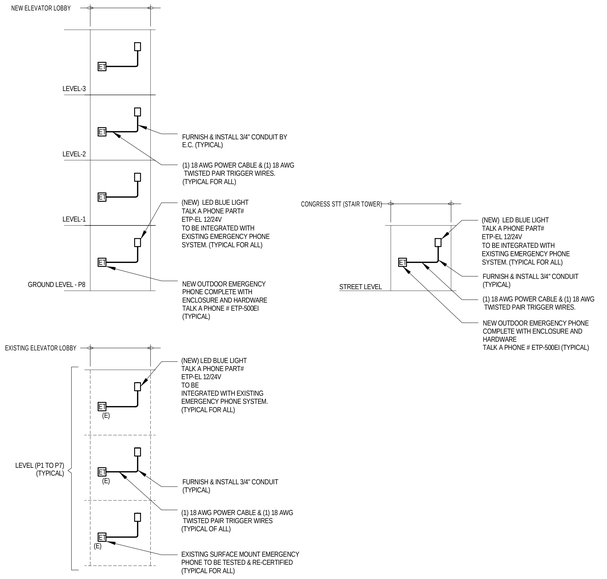
DRAWING NOTES:

1. REFER TO FLOOR PLANS FOR EXACT QUANTITIES AND LOCATIONS OF DEVICES.
2. ALL PENETRATIONS OF FIRE-RATED BARRIERS SHALL BE FIRE-STOPPED AFTER CABLE INSTALLATION.
3. ALL NEW CAMERAS IN EACH ELEVATOR LOBBY SHALL HAVE AT MINIMUM OF A 3-MEGAPIXEL RESOLUTION AND ENOUGH VIDEO MEMORY FOR 30-DAYS OF STORAGE.

CABLE LEGEND			
SYMBOL		DESCRIPTION	DEVICE
A-COMPOSITE CABLE (PLENUM)	A1	6C #22AWG TWISTED, SHIELDED - CARD READER	CR
	A2	2C #22AWG TWISTED, SHIELDED - DOOR CONTACT	DC
	A3	4C #22AWG UNSHIELDED - REX, MOTION DETECTOR / PUSH BUTTON	RX
	A4	4C #18AWG UNSHIELDED - ELEC LOCKSET / ELEC STRIKE / MAGNETIC LOCK	E1, ES, ML, LK
B		6C #22AWG TWISTED, SHIELDED - CARD READER	CR
C		2C #18AWG TWISTED, SHIELDED - DOOR CONTACT / DURESS BUTTON	DCK, DB
D		4C #18AWG TWISTED, SHIELDED - MOTION DETECTOR / GLASS BREAK / LOCAL ALARM / KEYSWITCH / CRASH BAR	MD, GB, LA, KS, CB
E		4PR #24AWG TWISTED, UNSHIELDED CAT6A BLUE CABLE - CAMERA / CONTROL PANEL / INTERCOM STATION	CAM, ACP, IC
F		2PR #24AWG TWISTED, SHIELDED, W/DRAIN RS-485 - CONTROLLER PANEL / HUB COMMUNICATION	ACP, HUB



2 SECURITY RISER DIAGRAM
SCALE: NTS



1 EMERGENCY PHONE & BLUE LIGHTS DIAGRAM
SCALE: NONE

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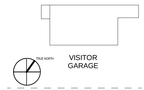

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SECURITY RISER DIAGRAM

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