

GENERAL STRUCTURAL NOTES

15-0243
Bayside Bowl Foundation
58 Alder Street, Portland, ME.

DESIGN LIVE LOADS: 2009 IBC, MUEBC
Floor 100 psf

FOUNDATION:

- See geotechnical report # 151285 by Summit Geoenvironment Inc.. Soils engineer shall verify soil conditions and types during excavation and prior to concrete placement.
- The report is hereby referenced and except where otherwise specifically noted herein, all recommendations and precautions contained in that report shall be adhered to by the contractor.
- Maximum design soil pressure: 2,000 psf

CONCRETE AND REINFORCEMENT:

- Concrete shall conform to applicable provisions of ACI-301 and 318.
- Minimum 28 day compressive strength (F_c) as follows:
 - Footings and Walls: 3,000 w/ 4-6% air entrainment.
 - Interior Slabs: 4,000 psi w/ fibermesh
- Cement Type: I/II
- Deformed reinforcement: ASTM A615 grade 60, except bars specified to be field_bent, stirrups, and ties which shall be grade 40.
- Fibermesh: 100% virgin polypropylene, fibrillated fibers as manufactured by Fibermesh Co. per ASTM C-1116 type 111 4.1.3 and ASTM C-1116 performance level one, 1.5 lb. per cubic yard.
- Welded Wire Fabric (WWF): ASTM A185. See also plan.
- Typical minimum foundation reinforcing: 2 #5 top and bottom, (except as noted) continuous at corners and steps.
- Reinforcement shall be fabricated and placed per ACI Manual of Standard Practice (ACI_315). At splices, lap bars 50 diameters unless noted otherwise.
- Minimum 2 #5 around all four sides of all openings, extend min. 2'0" beyond openings.
- Concrete cover over reinforcing: 1 1/2" for concrete placed against forms; 3" for concrete placed against earth. See also drawings.
- In continuous members, splice top bars at mid span and bottom bars over supports.
- Keep reinforcement clean and free of dirt, oil, and scale. Oil forms prior to placing reinforcement.

STRUCTURAL STEEL:

- Angles, misc.: ASTM A36
- Anchor Bolts: A1554 Grade 55 U.N.O.
- Expansion Anchors shall be NER approved, installed in accordance with manufacturers specifications.
- In concrete: Wedge Type
- In solid masonry: Sleeve Type
- Non-shrink grout beneath column base and beam bearing plates shall be non-metallic with minimum compressive strength 5000psi.
- All structural steel shall be fabricated and erected per the current edition of AISC Steel Construction Manual.
- Welding by qualified welders. E70XX electrodes.
- Except as noted, framed beam connections shall be detailed to develop 0.6 x Allowable Uniform Load values tabulated in the 9th Edition AISC Manual, Pp. 2-27 and following.
- All beams shall have fitted web stiffeners welded to each side of webs above and below columns. (3/4" plate or as noted)
- Attach wood nailer plates to beams with 1/2" diameter machine or carriage bolts at maximum 32" o.c., or 3/8" diameter bolts at 32" with glued contact face, or 5/32" diameter powder actuated drive pins at 24" o.c., U.O.N.

STRUCTURAL ERECTION AND BRACING REQUIREMENTS

- The structural drawings illustrate the completed structure with all elements in their final positions, properly supported and braced. The contractor, in the proper sequence, shall provide proper shoring and bracing as may be required to achieve the final completed structure.
- These plans have been engineered for construction at one specific building site. Builder assumes ALL responsibility for use of these plans at Any Other building site. Plans shall not be used for construction at any other building site without specific review by the engineer.
- Observations of foundation reinforcing or framing required by the owner, lender, insurer, building department or any other party will be accomplished by the engineer at the owner's expense. At least 24 hours advance notice is requested.
- All slabs on grade shall be separated from adjacent structural and finish elements to allow free movement of the slab, unless specifically shown and noted otherwise.

LOOSE LINTELS:

- Minimum lintel except as noted, one angle for each 4" of wall thickness to bear 6" each end:
- Openings to 4'-0" L 3-1/2 x 3-1/2 x 1/4
- 4'-1 to 5'-4" L 5 x 3-1/2 x 1/4
- 5'-5 to 6'-6" L 6 x 3-1/2 x 5/16

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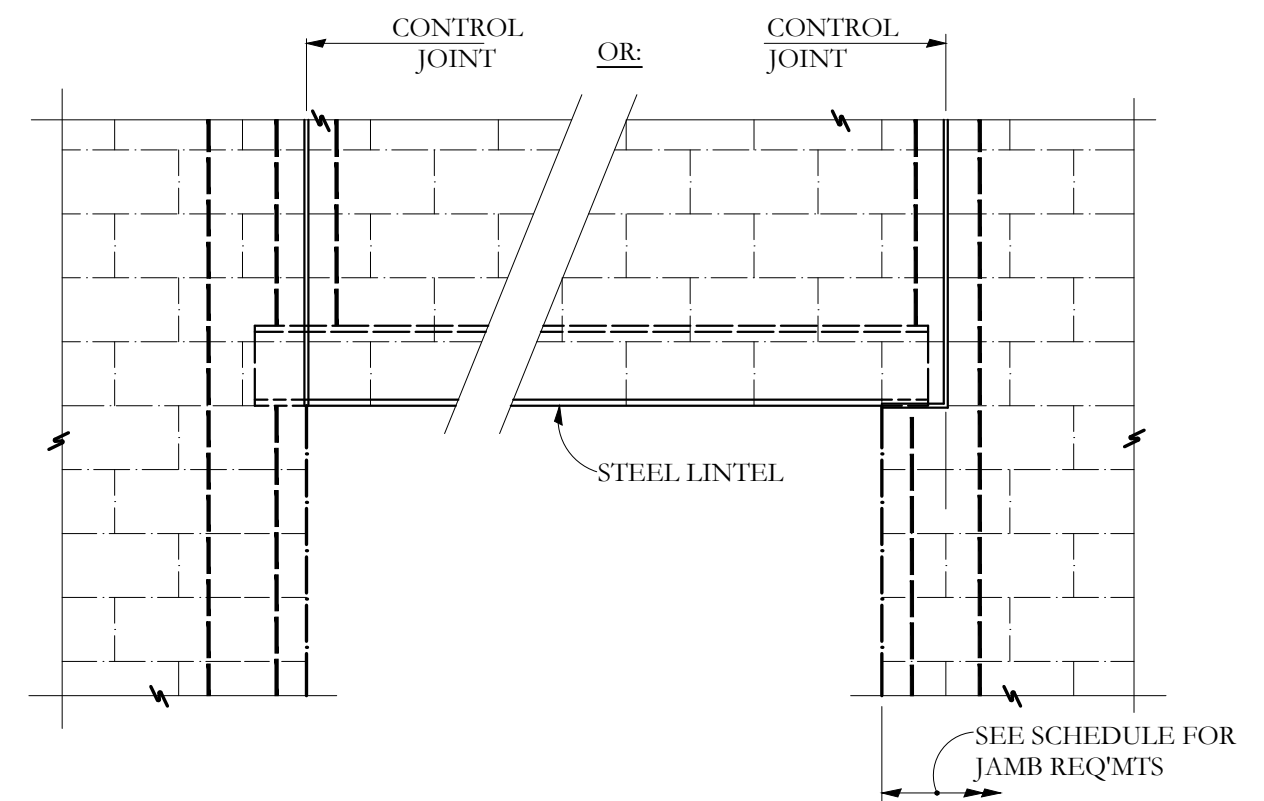
SHOP DRAWINGS

- Fabricator and / or supplier of rebar, structural steel, shall submit shop and erection drawings for architect and engineer review. Submit one reproducible and two prints for each drawing. Allow five working days for review.

MASONRY:

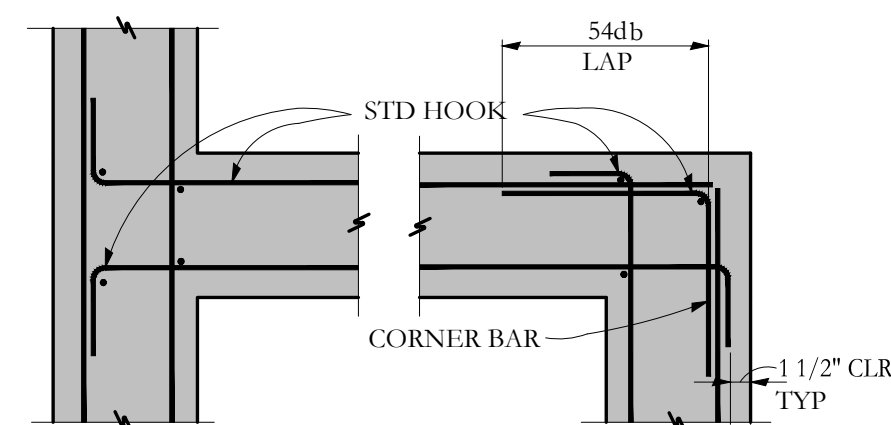
- Concrete masonry units (CMU) ASTM C90-N-1. Horizontal deformed reinforcement shall be placed in precast knock-out bond beam blocks.
- Mortar: Type S or N
- Grout: 2500 psi at 28 days. Vibrate to consolidate.
- Reinforcement: Standard Dur-O-Wall at 16" o.c. in CMU walls and rebar as noted on drawings
- Deformed reinforcement shall be as specified for concrete unless otherwise noted, except that laps shall be min. 48 diameter. If High Lift Grouting is used, cleanout holes shall be provided and bar-positioners shall be located at bottom and at 120 diameter maximum spacing.
- MSJC Level One Inspections are required.

NOTE: THIS FOUNDATION DESIGN IS INTENDED TO BE USED IN CONJUNCTION WITH PRE-ENGINEERED METAL BUILDING DRAWINGS. COORDINATE ALL WORK PRIOR TO THE START OF SHOP DRAWINGS AND/OR CONSTRUCTION. SPECIFICALLY REFERENCE METAL BUILDING DRAWINGS FOR ANCHOR BOLT LOCATIONS.

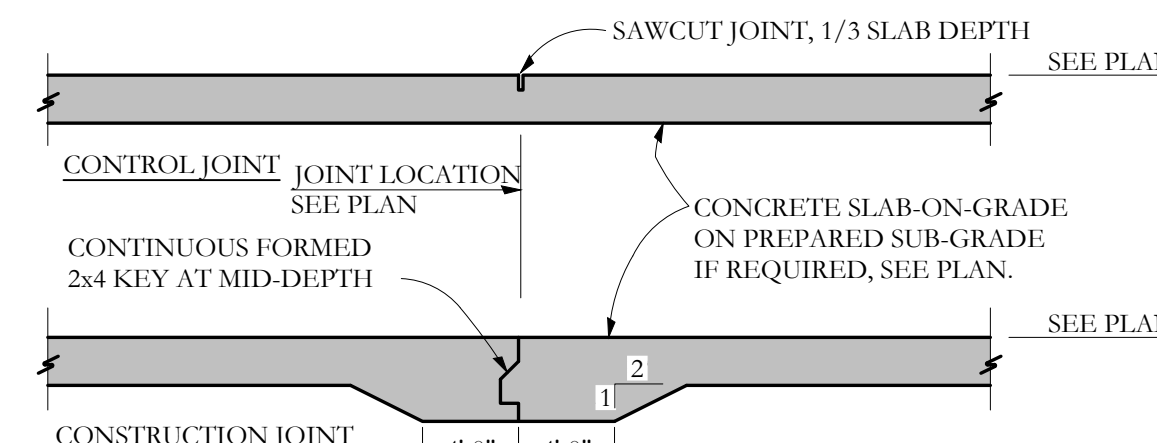


OPENING SIZE	LINTEL SIZE	JAMB ANCHORS	JAMB EXTENSION	ANCHORS
LESS THAN 4'-0"	C6 x 8.2 OR L3 1/2x 3 1/2x 1/4	(1) 5/8"Ø x 6"	6"	5/8"Ø x 6" @ 12"
4'-1 TO 5'-4"	C8 x 11.5 OR L5x 3 1/2x 1/4	(2) 5/8"Ø x 6"	6"	5/8"Ø x 6" @ 12"
5'-5 TO 6'-6"	C8 x 11.5 OR L6x 3 1/2x 5/16	(2) 5/8"Ø x 6"	10"	5/8"Ø x 6" @ 12"

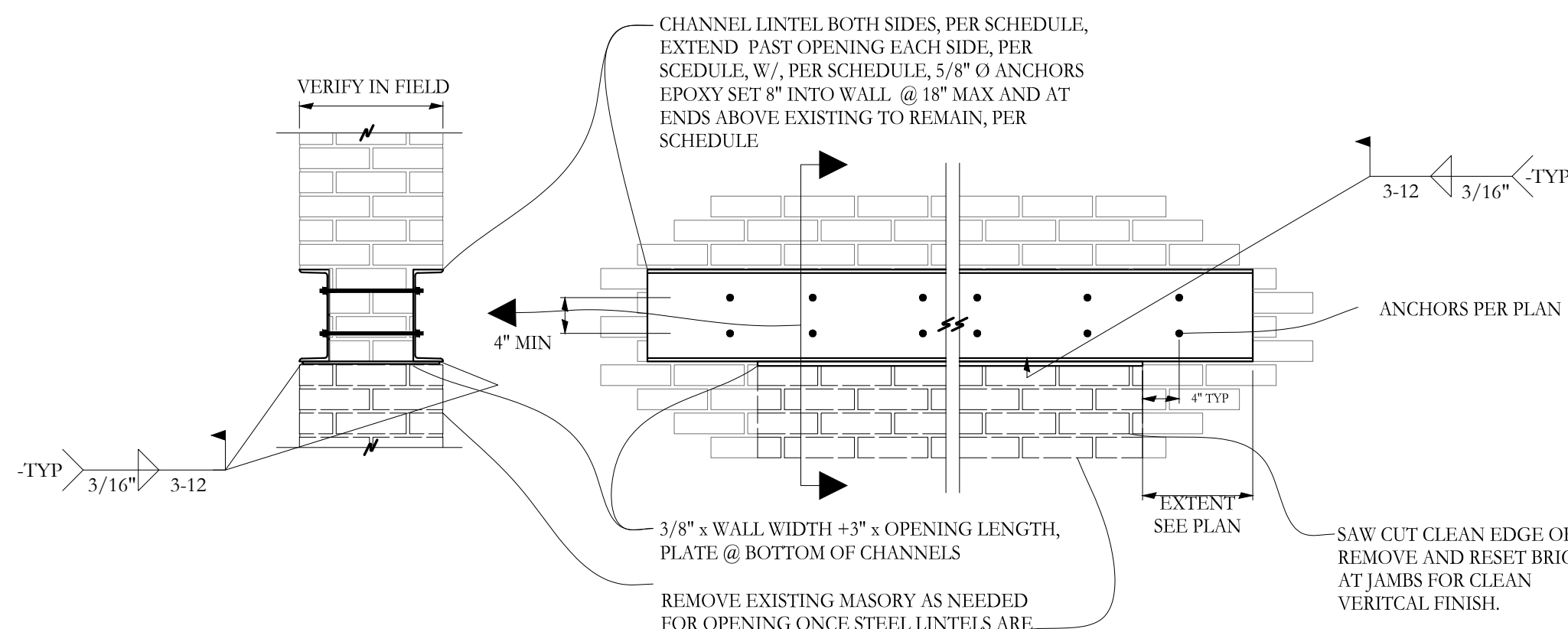
TYPICAL LOOSE LINTEL INSTALLATION
NO SCALE



TYPICAL CONCRETE REINFORCEMENT @ INTERSECTIONS PLAN



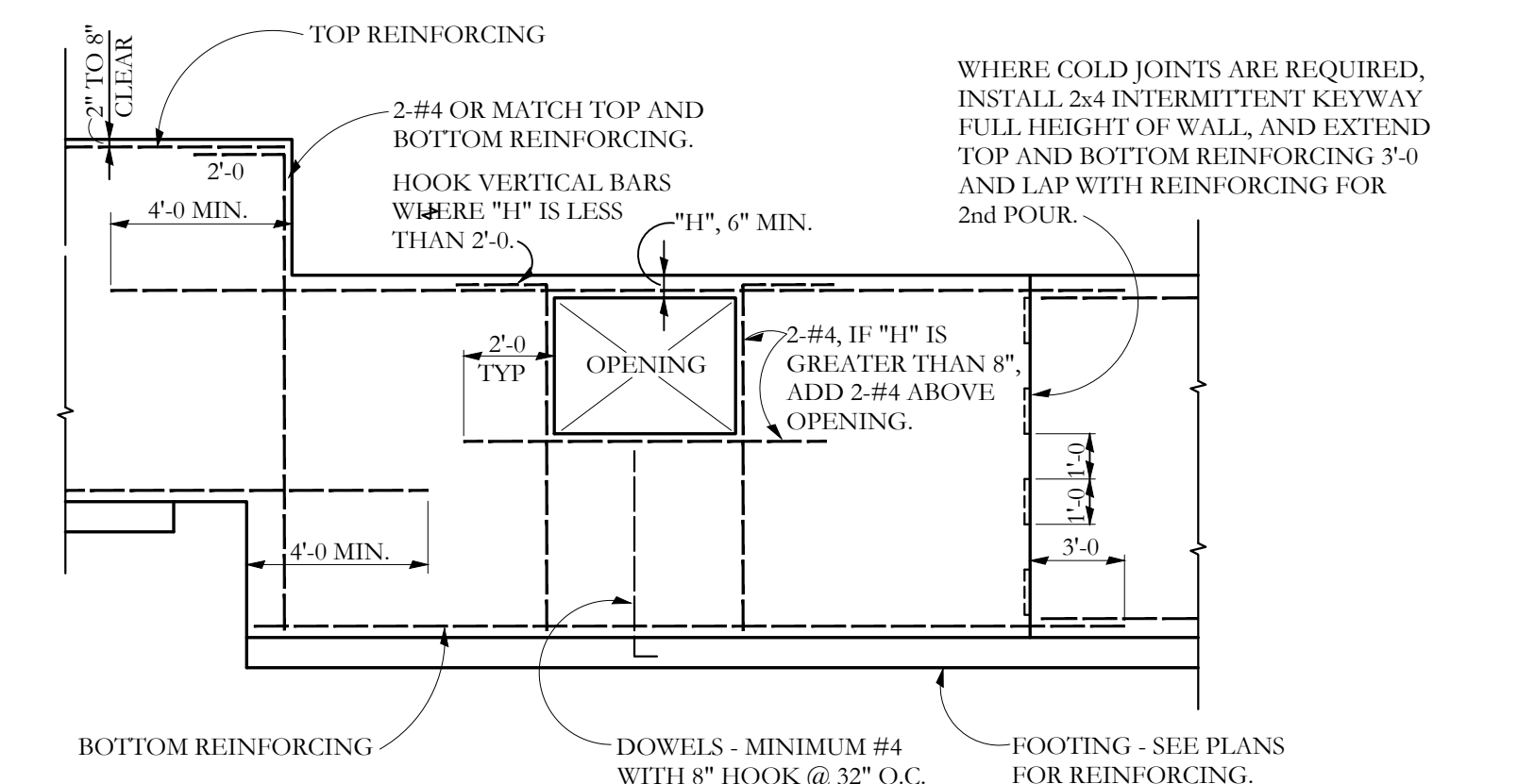
TYPICAL JOINTS AT INTERIOR SLAB-ON-GRADE



NEW LINTEL INSTALLATION IN EXISTING BRICK

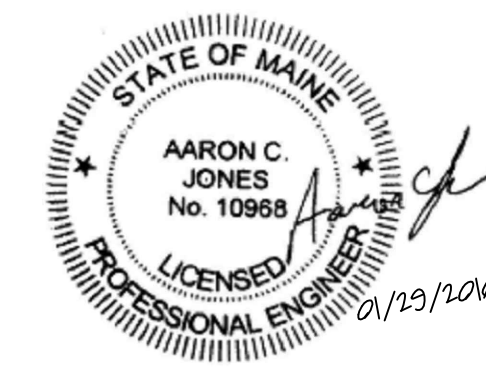
ABBREVIATIONS KEY			
AB	Anchor Rod (Bolt)	EF	Each Face
ADDL	Additional	EJ	Expansion Joint
ADJ	Adjustable	ELEV	Elevation
AFF	Above Finished Floor	ELEC	Electric (Electrical)
ALT	Alternate	ENGR	Engineer
AMT	Amount	EQ	Equal
ANCH	Anchor, Anchorage	EQUIP	Equipment
APPROX	Approximate	EQUIV	Equivalent
ARCH	Architect, -ural	ES	Each Side
ATR	All Thread Rod	EST	Estimate
AVG	Average	E-W	East to West
BC	Bottom of Concrete	EXC	Excavate
BL	Brick Ledge	EXP	Expansion
BLK	Block	EXT	Exterior
BLKG	Blocking	FND	Foundation
BM	Beam	FF	Far Face, Finished Floor
BOT	Bottom	F-F	Face to Face
BRG	Bearing	FIG	Figure
BW	Bottom of Wall	FL	Flush
CB	Counterbore	FLG	Flange
CF	Cubic Foot	FLR	Floor
CG	Center of Gravity	FO	Face of
CIP	Cast in Place	FP	Full Penetration
CJ	Construction Joint (Control Joint)	FS	Far Side
CLG	Ceiling	FTG	Footing
CLR	Clear	GA	Gage (Gauge)
CM	Construction Manager (Management)	GALV	Galvanized
CMU	Concrete Masonry Unit	GC	General Contractor
COL	Column	GEN	General
COM	Common	GL	Glue laminated (Glulam)
COMB	Combination	GND	Ground
CONC	Concrete	GR	Grade
CONN	Connection	GT	Girder Truss
CONC	Concrete	GYP BD	Gypsum Board
CONN	Connection	HAS	Headed Anchor Stud
CONT	Continue (Continuous)	HORIZ	Horizontal
COORD	Coordinate, -tion	HT	Height
CS	Countersink	ID	Inside Diameter
CTR	Center	IF	Inside Face
CY	Cubic Yard	INT	Interior (Intermediate)
DAB	Deformed Anchor Bar	JB	Joist Bearing
DET	Detail	JST	Joist
DEV	Develop	JT	Joint
DIAG	Diagonal	K	Kip (1,000 lbs.)
DIM	Dimension	LD	Load
DL	Dead Load	LL	Live Load
DN	Down	LLH	Long Leg Horizontal
DP	Drilled Pier	LLV	Long Leg Vertical
DT	Double Tee	LOC	Location
DWG	Drawing	LSL	Laminated Strand Lumber (generic term)
DWL	Dowel	LT	Light
E-A	Each	LVL	Laminated Veneer Lumber (generic term)
ECC	Eccentric		
E-E	End to End		
EF	Each Face	MACH	Machine
EJ	Expansion Joint	MASY	Masonry
ELEV	Elevation	MATL	Material
ELEC	Electric (Electrical)	MAX	Maximum
ENGR	Engineer	MB	Machine bolt
EQ	Equal	MECH	Mechanical
EQUIP	Equipment	MEZZ	Mezzanine
EQUIV	Equivalent	MFR	Manufacture, -er, -ed
ES	Each Side	MIN	Minimum
EST	Estimate	ML	Microllam
E-W	East to West	E-W	East to West
EXC	Excavate	MO	Masonry Opening
EXP	Expansion	MTL	Metal
EXT	Exterior	NF	Near Face
FND	Foundation	NIC	Not In Contract
FF	Far Face, Finished Floor	NS	Near Side
F-F	Face to Face	N-S	North to South
FIG	Figure	NTS	Not to Scale
FL	Flush	OCJ	OSHA Column Joist
FLG	Flange	OD	Outside Diameter
FLOOR	Floor	OF	Outside Face
FO	Face of	OH	Opposite Hand
FP	Full Penetration	OPNG	Opening
FS	Far Side	OPP	Opposite
FTG	Footing	OSB	Oriented Strand Board
GA	Gage (Gauge)	PAF	Powder Actuated Fastener
GALV	Galvanized	PC	Precast
GC	General Contractor	PCF	Pounds Per Cubic Foot
GEN	General	PEN	Penetration
GL	Glue laminated (Glulam)	PERP	Perpendicular
GND	Ground	PL	Property Line
GR	Grade	PLF	Pounds per Linear Foot
GT	Girder Truss	PNL	Panel
GYP BD	Gypsum Board	PP	Panel Point
HAS	Headed Anchor Stud	PS	Prestressed
HORIZ	Horizontal	PSF	Pounds per Square Foot
HT	Height	PSI	Pounds per Square Inch
ID	Inside Diameter	PSL	Parallel Strand Lumber (generic term)
IF	Inside Face	PT (1)	Post Tensioned
INT	Interior (Intermediate)	PT (2)	Pressure Treated
JB	Joist Bearing	PTN	Partition
JST	Joist	PWD	Phywood
JT	Joint	QTY	Quantity
K	Kip (1,000 lbs.)	R	Radius
LD	Load	RE	Reference (refer to)
LL	Live Load	RECT	Rectangle
LLH	Long Leg Horizontal	REIN	Reinforce, -ed, -ing
LLV	Long Leg Vertical	REQ	Required
LOC	Location	REQMT	Requirement
LSL	Laminated Strand Lumber (generic term)	RET	Retaining
LT	Light	RM	Room
LVL	Laminated Veneer Lumber (generic term)	RMO	Rough Masonry Opening
		RO	Rough Opening
		SC	Slip Critical
		SCH	Schedule
		SDST	Self Drilling Self Tapping
		SECT	Section
		SF	Square Feet
		SHT	Sheet
		SHTG	Sheathing
		SIM	Similar
		SLH	Short Leg Horizontal
		SLV	Short Leg Vertical
		SOG	Slab on Grade
		SP	Spaces
		SPEC	Specifications
		SOQ	Square
		ST	Smog Tight
		STD	Standard
		STIFF	Stiffener
		STL	Steel
		STRUCT	Structure, -al
		SUP	Support
		SY	Square Yard
		SYM	Symmetrical
		T&B	Top and Bottom
		T&G	Tongue and Groove
		TB	Top of Beam
		TC	Top of Concrete
		TD	Top of Deck
		THD	Thread
		THK	Thick, -ness
		TJ	Top of Joist
		TL	Total Load
		TPG	Topping
		TRANS	Transverse
		TW	Top of Wall
		TYP	Typical
		ULT	Ultimate
		UNO	Unless Noted Otherwise
		VERT	Vertical
		VIF	Verify in Field
		WA	Wedge Anchor
		WP	Work Point
		WT	Weight
		WWF	Welded Wire Fabric
		XS	Extra Strong
		XSECT	Cross-section
		XXS	Double Extra Strong
		(E)	Existing
		(N)	New
		(R)	Remove

Structural Drawing Index	
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S1.3	Roof Level Plan
S1.4	Stair Shaft / Elevator Shaft Plans
S2.1	Sections
S2.2	Sections



TYPICAL REINFORCING AT STEPS AND OPENINGS
NO SCALE

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BAYSIDE BOWL
FOUNDATION DESIGN
58 Alder St Portland, ME 04101



CONSULTANTS:
STRUCTURAL:
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REVISIONS:

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SCALE: AS NOTED

SHEET TITLE:
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S1.0