DESIGN CODES AND SPECIFICATIONS

Building Code	2012 International Building Code
Design Loads	ASCE 7-10: Minimum Design Loads for Buildings and Other Structures
Concrete	ACI 318-11: Building Code Requirements for Structural Concrete
	ACI 315-99: Manual of Standard Practice for Detailing Concrete Structures
	ACI 301-10: Specifications for Structural Concrete
	ACI 305.1-06: Specifications for Hot Weather Concrete
	ACI 306.1-90: Standard Specification for Cold Weather Concreting
	ACI 302.1R-04: Guide for Concrete Floor and Slab Construction
	ACI 304.R-00: Guide for Measuring, Mixing, Transporting and Placing Concrete
	CRSI 8th Edition: Placing Reinforcing Bars
	AWS D1.4/D1.4M-2011: Structural Welding Code - Reintorcing Steel
Steel	AISC 360-10: Specification for Structural Steel Buildings
	AWS D1.1/D1.1M-2010: Structural Welding Code - Steel
Cold-formed Steel	2007 NASPEC w/ 2010 Supplement: North American Specification for Design of Cold-formed Steel Structural Members
	SSMA (ICBO ER-4943P): Steel Stud Manufacturers Association Product Technical Information
Aluminum	2010 ADM: Aluminum Design Manual

DESIGN LOADS

1. Dead Load	
Roof	20 psf
2. Live Load	
Roof (unreducible)	20 psf
3. Wind Load	
Ultimate Wind Speed	134 mph
Nominal Wind Speed	104 mph
Risk Category	II
Exposure Category	C
Enclosure Classification	Enclosed
Internal Pressure Coefficient	±0.18
Mean Roof Height, h	15 ft
Velocity Pressure, qh	19.9 psf
Wall C&C Pressure (zone 5)	
Effective Area < 50 sf	+21.5 / -28.7 psf
50 sf ≤ Effective Area < 100 sf	+18.3 / -22.3 psf
Effective Area ≥ 100 sf	+16.1 / -17.9 psf
4. Seismic Load	
Risk Category	II
Importance Factor, I	1.0
Site Class	D
Mapped Acceleration Parameters	
Ss	35.1%
S1	13.0%
Design Spectral Acceleration Parameters	
Sds	0.355
Sd1	0.198
Seismic Design Category	C

GENERAL NOTES

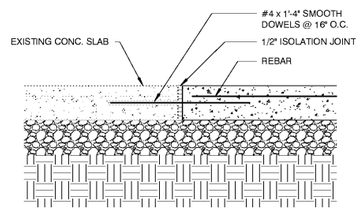
1. Structural drawings are intended to be used in close coordination with the civil, architectural, mechanical, plumbing and electrical drawings. Any discrepancies or omissions shall be brought to the attention of the Architect and resolved prior to the beginning of construction.
2. Submit written request to the Architect for approval of any proposed change to the requirements of the contract documents. Splicing, cutting, notching or other alterations to structural members are not permitted without written authorization of the Structural Engineer. Any unauthorized deviation from the contract documents, and correction thereof, is the responsibility of the Contractor.
3. The Contractor is responsible for the means and methods of construction in regards to job site safety.
4. The Contractor shall verify all dimensions and conditions. The Architect shall be notified of any discrepancies.
5. The Contractor is responsible for bracing the structure prior to the completion of all roof, floor, and wall diaphragms.
6. The Contractor shall coordinate the structural foundation and framing layouts with other trades.
7. Where live loads for which each floor or portion thereof a commercial or industrial building is or has been designed to exceed 50 psf, such design live loads shall be conspicuously posted by the owner in that part of each story in which they apply using durable signs.

CONCRETE NOTES

1. All concrete elements shall be installed and detailed in accordance with the appropriate ACI documents. Contractor to have copies of the ACI documents at the job site during construction.
2. Concrete compressive strength, f'c, at 28-days shall be as follows at minimum unless noted otherwise:
   a) Footings: 3000 psi (2500 psi used in design)
   b) Interior Slabs on Grade Less Than 6" Thick: 3000 psi (non air entrained)
   c) Formed Walls, Beams, Structural Slabs and Stairs: 4000 psi
   d) Concrete Exposed to Weather: 4000 psi (w/ 4%-6% air entrainment)
3. The maximum water-to-cement ratios shall be as follows:
   a) Concrete exposed to freezing and thawing: 0.50
   b) Concrete subject to deicers and/or required to be watertight: 0.45
   c) All other concrete types: 0.58
4 Fly ash, meeting ASTM C618 Class C or Class F may be used to replace up to 25% of Portland cement. Contractor and supplier shall coordinate to ensure that required set times for concrete are not adversely affected by use of fly ash. Contractor and all concrete subcontractors shall have experience with handling, placing and finishing concrete with fly ash.
5. The following minimum concrete cover shall be provided for reintorcing bars:
   a) Cast against and permanently exposed earth: 3"
   b) Formed and exposed to earth or weather (#6 thru #18 bars): 2"
   c) Formed and exposed to earth or weather (#5 bars, W31 wire and smaller): 1-1/2"
   d) Slabs, walls & joists formed and not exposed to weather or in contact with the ground (#11 bar and smaller): 3/4"
   e) Beams, girders & columns formed and not exposed to weather or in contact with the ground: 1-1/2"

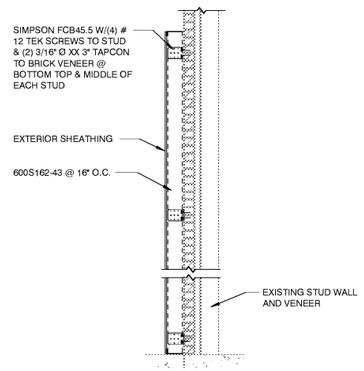
FOUNDATION PLAN NOTES

3. SLAB TO BE 5" THICK 3,000 PSI CONCRETE SLAB W/#4 @ 18" O.C. OVER 15 MIL POLY OVER 4" CRUSHED STONE BASE.



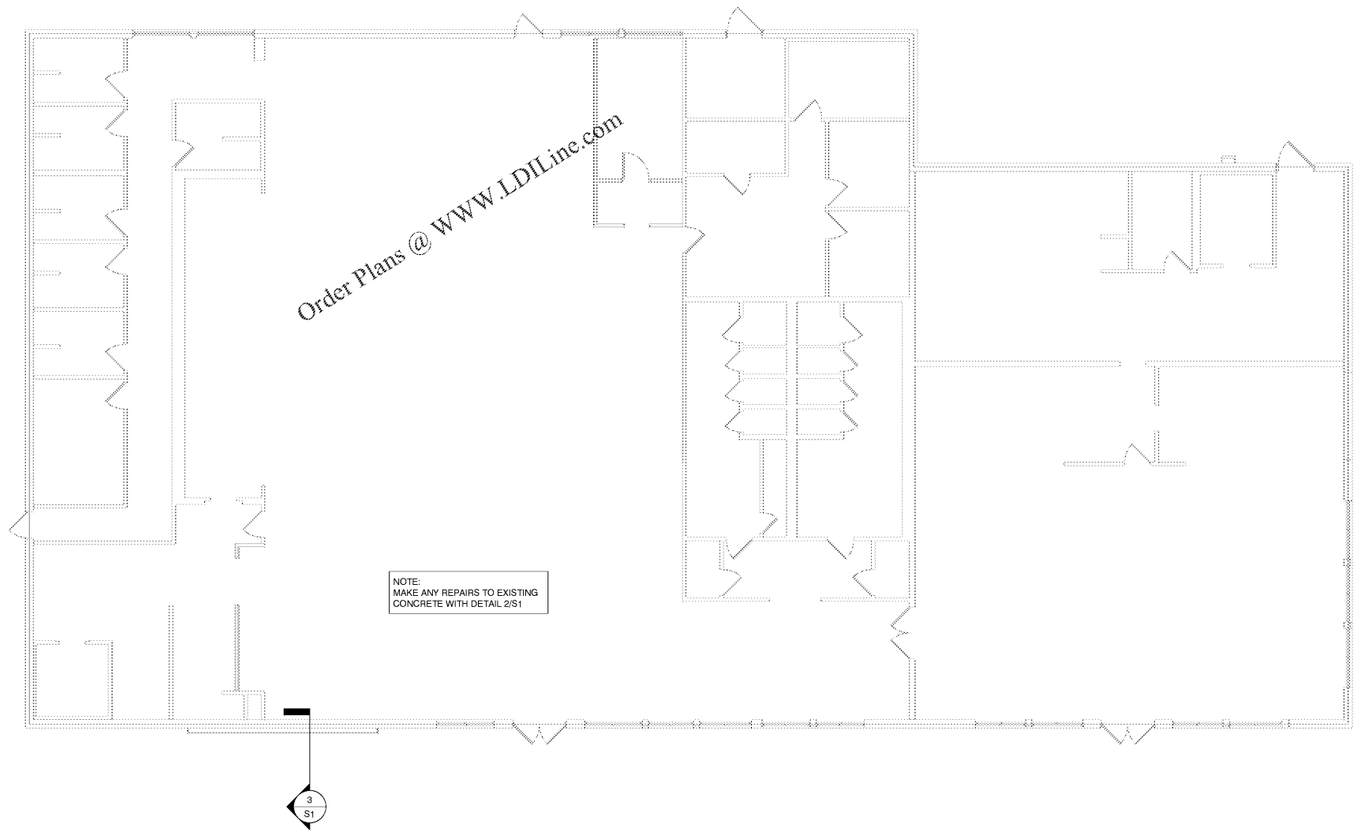
SLAB DETAIL 2

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



CONNECTION DETAIL 3

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



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FOUNDATION PLAN 1

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

299 N. WEISGARBER RD.
KNOXVILLE, TENNESSEE 37919
(865) 584-0999 FAX 584-5213
www . michaelbradyinc . com
MBI michael brady inc.

JOB NUMBER: 180002.01

SOUTH CAROLINA NORTH CAROLINA MICHAEL BRADY INC. No. C01260 CERTIFICATE OF AUTHORIZATION

FOUNDATION PLAN

PILOT TRAVEL CENTER

15845 WHYTE HARDEE BLVD
HARDEEVILLE, SC 29927

DRAWN BY: JCP | PROJECT: 4569-01

DATE: 2-23-18 | REV: | REVISION DESCRIPTION: | INT:

DATE:

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