

one eighth inch = one foot  
one quarter inch = one foot  
three eighths inch = one foot  
one half inch = one foot  
three quarters inch = one foot  
one inch = one foot  
one and one half inches = one foot  
two inches = one foot  
three inches = one foot


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VA FORM 08-6231

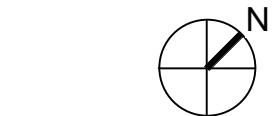
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Drawing Title: CODE SHEET
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am duly licensed Architect under the laws of the State of Minnesota
Signature: 
Printed Name: Michael Krusell Moeller Date: 02-24-2012

Project Title CONSTRUCT PARKING RAMP DESIGN	Project Number 618-820	Office of Construction and Facilities Management  Department of Veterans Affairs
Location 1 VETERANS DRIVE MINNEAPOLIS, MN 55417	Building Number 78	
Date 02-24-2012	Checked Modeler Author	
Drawing Number AS-100		Drawing 050 of 116



## CONSTRUCTION DOCUMENTS

### CODE ANALYSIS

GENERAL INFO  
GROSS SQUARE FOOTAGE = 49,400 SF PER LEVEL X 4 LEVELS = 197,600 SF

#### APPLICABLE CODES

International Building Code (when specifically referenced in VA Design Documents)

2012 NFPA 101 Life Safety Code (see notes below)

NFPA National Fire Codes with the exception of NFPA 5000 and NFPA 900

Occupational, Safety and Health Administration (OSHA) Standards.

VA Seismic Design Requirements, H-18-8

National Electrical Code (NEC)

National Standard Plumbing Code (NSPC)

Safety Code for Elevators and Escalators, American Society of Mechanical Engineers (ASME) A 17.1.

ASME Boiler and Pressure Vessel Code

ASME Code for Pressure Piping

Uniform Federal Accessibility Standards (UFAS) including VA Supplement, Barrier Free Design

Building Code Requirements for Reinforced Concrete, American Concrete Institute and Commentary (ACI 318)

Manual of Steel Construction, Load and Resistance Factor Design Specifications for Structural Steel Buildings, American Institute of Steel Construction (AISC)

Energy policy Act of 2005 (EPAct)

DOE Interim Final Rule: Energy Conservation Standards for New Federal, Commercial and Multi-Family High-Rise Residential Buildings and New Low-Rise Residential Buildings, 10 CFR Parts 433, 434 and 435.

Federal Leadership in High Performance and Sustainable Buildings: Memorandum of Understanding (MOU)

Executive Order 13423: Strengthening Federal Environmental, Energy, and Transportation Management.

The Provisions for Construction and Safety Signs. Stated in the General Requirements Section 01010 of the VA Master Construction Specification.

Ventilation for Acceptable Indoor Air Quality – ASHRAE Standard 62.1- 2004.

Safety Standard for Refrigeration Systems – ASHRAE Standard 15 – 2007.

CHAPTER 6	CLASSIFICATION OF OCCUPANCY AND HAZARD OF CONTENTS
6.1.13	STORAGE - SEE CHAPTER 42
6.14	MULTIPLE OCCUPANCIES
	NONE

CHAPTER 7 MEANS OF EGRESS	
7.2.2.2.1.1	MINIMUM NEW STAIR WIDTH
	36" CLEAR OF ALL OBSTRUCTIONS

CHAPTER 42	STORAGE OCCUPANCIES
42.8	SPECIAL PROVISIONS FOR PARKING STRUCTURES
42.8.1.2	MULTIPLE OCCUPANCIES - NONE
42.8.1.3	OPEN PARKING STRUCTURES
42.8.1.5	PARKING STRUCTURES USED ONLY FOR THE STORAGE OF VEHICLES SHALL BE CLASSIFIED AS ORDINARY HAZARD IN ACCORDANCE WITH SECTION 6.2.
42.8.1.6	MINIMUM CONSTRUCTION REQUIREMENTS (NO REQUIREMENTS)
42.8.1.7	OCCUPANT LOAD (NO REQUIREMENTS)
42.8.2.3.2	ENCLOSED STAIRS ARE NOT REQUIRED IN OPEN-AIR PARKING STRUCTURES.
42.8.2.2.9.2	AREAS OF REFUGE ARE NOT REQUIRED IN OPEN-AIR PARKING STRUCTURES.
42.8.2.4.1	NOT LESS THAN 2 MEANS OF EGRESS FROM EVERY FLOOR.
42.8.2.5.1	A COMMON PATH OF TRAVEL SHALL BE PERMITTED FOR THE FIRST 50 FT FROM ANY POINT IN THE PARKING STRUCTURE.
42.8.2.5.2	DEAD ENDS SHALL NOT EXCEED 50 FT.
42.8.2.6.1	TRAVEL DISTANCE TO EXIT <300'
42.8.3.1.2	UNPROTECTED VERTICAL OPENINGS ARE ACCEPTABLE
42.8.3.4.1.2	FIRE ALARM SYSTEM NOT REQUIRED
42.8.3.5	EXTINGUISHING REQUIREMENTS (NO REQUIREMENTS)

NFPA 220 -	TYPES OF BUILDING CONSTRUCTION - 2009 EDITION
4.1.1	TYPE II (000)
	EXTERIOR BEARING WALLS = 0 HR
	INTERIOR BEARING WALLS = 0 HR
	COLUMNS = 0 HR
	BEAMS, GIRDERS, TRUSSES, AND ARCHES = 0 HR
	FLOOR-CEILING ASSEMBLIES = 0 HR
	ROOF-CEILING ASSEMBLIES = 0 HR
	INTERIOR NONBEARING WALLS = 0 HR
	EXTERIOR NONBEARING WALLS = 0 HR

% OPEN CALCULATION- USE IBC INTERPRETATION - MORE STRINGENT

REQUIREMENT 20% OPEN AREA			
<u>WALL DESCRIPTION</u>	<u>LENGTH</u>	<u>OPENNESS</u>	<u>EFFECTIVE OPEN AREA</u>
SOLID WALL	238 FEET	0 PERCENT	0 FEET
PERFORATED METAL WALL	254 FEET	40 PERCENT	101 FEET
PERFORATED METAL OVER COLUMNS	406 FEET	33 PERCENT	135 FEET
TOTALS	898		236    236 / 898 = 26% OPEN

REQUIREMENT 40% OF LENGTH			
<u>WALL DESCRIPTION</u>	<u>LENGTH</u>	<u>OPENNESS</u>	<u>EFFECTIVE OPEN LENGTH</u>
SOLID WALL	238 FEET	0 PERCENT	0 FEET
PERFORATED METAL WALL	254 FEET	100 PERCENT*	254 FEET
PERFORATED METAL OVER COLUMNS	406 FEET	66 PERCENT	268 FEET
TOTALS	898		522 522 / 898 = 58% OPEN LENGTH

\* NOTE STAGGERED HOLE PATTERN ON PERFORATED METAL IS 100% OPEN IN LENGTH WHILE ONLY 50% OPEN IN AREA.