



CITY OF CORONADO

DEPARTMENT OF COMMUNITY DEVELOPMENT  
BUILDING DIVISION  
1825 STRAND WAY, CORONADO, CA 92118  
(619) 522-7331 / (619) 522-2418 (FAX)  
COMMDEV@CORONADO.CA.US

<p>HANDOUT</p> <p><b>310</b></p> <p>MARCH 2015</p>	<h1>CONCRETE MASONRY UNIT FENCE WALLS</h1>
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**PURPOSE:** To ensure uniformity in construction of CMU fence walls within designated seismic activity zones.

**AUTHORITY:** City of Coronado Municipal Code – Chapter 70.01, Section 70.01.050.B  
*“Section 301.2.1, item #2, entitled ‘Building permits,’ is hereby amended to read as follows: Fences not over 24 inches (610 mm) high.”*  
 2013 California Building Code – Chapter 19 and Chapter 21

**NOTES:**

1. Site Plan  
 A dimensioned site plan (3 copies) with location of planned CMU wall(s) is required for City of Coronado Planning Division review and approval prior to permit issuance. (See “Site Plan” handout for additional information)
2. Fence Construction Certification  
 A completed Fence Construction Certification (Handout #112) may be required if construction occurs on a shared property line.
3. Diagrams  
 Please see the attached diagrams for CMU Fence Wall Specifications
  - A. 6’ Max High CMU Fence Wall Specs (City of San Diego: Master Plan #47-6)
  - B. 8’ Max High CMU Fence Wall Specs (Master Plan #47-8)
4. All material and workmanship shall conform to the requirements of the California Building Code 2013 Edition.

**QUESTIONS:** If you have any questions regarding your project, please contact the Building Division at (619) 522-7331.

**RCP BLOCK & BRICK INC.**  
**6' MAX HIGH CMU FENCE WALL SPECS.**  
**CITY OF SAN DIEGO: MASTER PLAN #47-6**

1. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE. 2010 EDITION.
2. CONCRETE SHALL ATTAIN A COMPRESSIVE STRENGTH OF 2,500 PSI MINIMUM AT 28 DAYS.
3. CONCRETE BLOCK UNITS SHALL BE MEDIUM OR NORMAL WEIGHT UNITS CONFORMING TO ASTM C90 (LATEST REVISION),  $F'_m = 1500$  PSI
4. MORTAR SHALL BE TYPE S CONFORMING TO ASTM C270 WITH A COMPRESSIVE STRENGTH OF 1,800 PSI MINIMUM AT 28 DAYS.
5. GROUT SHALL CONFORM TO ASTM C476 AND BE COMPOSED OF THE FOLLOWING RATIO BY VOLUME: 1 PART PORTLAND CEMENT, 3-PARTS SAND, 2-PARTS PEA GRAVEL, AND SUFFICIENT WATER FOR POURING WITHOUT SEGREGATION OF GROUT CONSTITUENTS (MIN. COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS).
6. ALL REINFORCING STEEL SHALL COMPLY WITH ASTM A615, GRADE 40 FOR #3 BARS AND GRADE 60 FOR #4 BARS AND LARGER. VERTICAL STEEL SHALL BE CENTERED IN THE CONCRETE BLOCK CELL IN WHICH IT IS LOCATED,
7. ONLY CELLS CONTAINING REINFORCING STEEL SHALL BE SOLID GROUTED.
8. ALL HORIZONTAL WALL REINFORCING BARS SHALL BE PLACED IN BOND BEAM UNITS. ALL JOINT REINFORCING SHALL BE PLACED IN THE MORTARED BED JOINT.
9. ALL GROUT SHALL BE CONSOLIDATED BY VIBRATING IMMEDIATELY. RECONSOLIDATE GROUT AFTER INITIAL WATER LOSS BUT BEFORE PLASTICITY IS LOST TO INSURE ADEQUATE CONSOLIDATION.
10. MINIMUM LAP SPLICE OF REINFORCING BARS SHALL BE 48 DIAMETERS.
11. CONCRETE BLOCK UNITS ARE TO BE STAGGERED (COMMON BOND) AND ARE TO HAVE THE CONTINUITY OF THE CELLS UNOBSTRUCTED.
12. ALL FOOTINGS MUST EXTEND INTO FIRM UNDISTURBED NATURAL SOIL OR SOIL WHICH HAS BEEN COMPACTED TO AT LEAST 90 PERCENT MAXIMUM DENSITY.
13. THESE WALLS SHALL NOT BE CONSTRUCTED ON EXPANSIVE SOIL (EXPANSION INDEX GREATER THAN 15) UNLESS THE SOIL HAS BEEN SPECIALLY PREPARED IN ACCORDANCE WITH RECOMMENDATIONS OF A REGISTERED GEOTECHNICAL ENGINEER. THESE WALLS SHALL NOT BE CONSTRUCTED ON LIQUEFIABLE SOILS OR OTHER QUESTIONABLE SOILS.
14. PROVIDE VERTICAL CONTROL JOINTS AT 25'-0" ON CENTERS MAXIMUM.
15. FENCE WALL DESIGN INCLUDES 1/2" OF PLASTER (OR VENEER) ON EACH SIDE OF THE WALL. NO FINISHES WITH A TOTAL WEIGHT GREATER THAN 13 PSF (SUMMATION OF BOTH SIDES OF WALL) ARE ALLOWED.



**NOTES:**

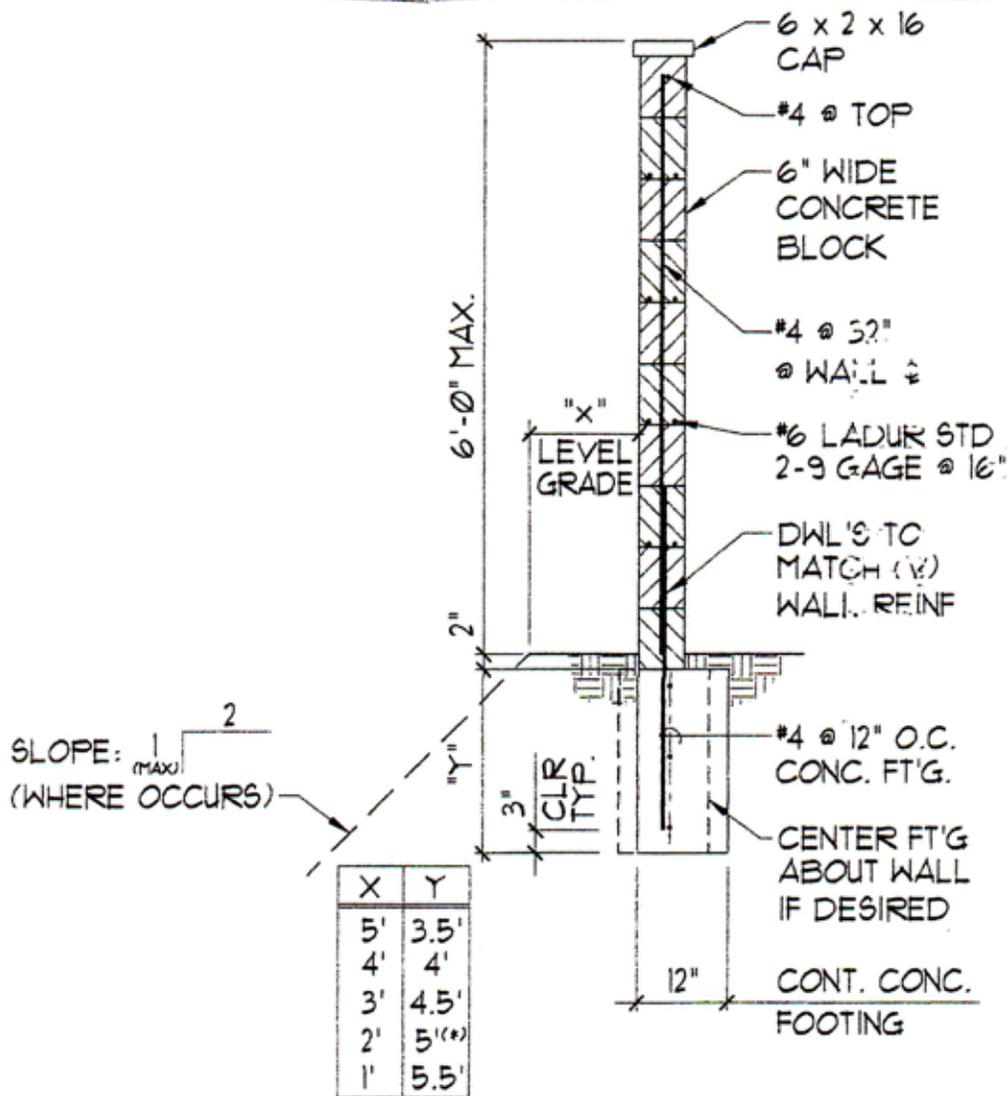
1. THE INTERNATIONAL BUILDING CODE EXEMPTS FENCES FROM A BUILDING PERMIT IF THE FENCE IS NOT OVER 6 FEET IN HEIGHT. THE CODE ALSO STATES THAT WORK MUST STILL COMPLY WITH BUILDING CODE REQUIREMENTS EVEN WHEN A PERMIT IS NOT REQUIRED. CONTACT THE DEVELOPMENT SERVICES DEPARTMENT FOR THEIR PARTICULAR PERMIT REQUIREMENTS.
2. FENCE HEIGHTS MAY ALSO BE REGULATED BY THE ZONING LAWS OF THE CITY. FOR SPECIFIC INFORMATION ABOUT THE ZONING REGULATIONS FOR YOUR FENCE ON YOUR LOT, CONTACT THE DEVELOPMENT SERVICES AND ZONING DEPARTMENTS FOR REQUIREMENTS.



# RCP BLOCK & BRICK, INC.

## 6'-0" MAX HIGH CMU FENCE WALL DESIGN

### CITY of SAN DIEGO MASTER PLAN #47-6



## ALTERNATE 2

NOTE: SEE PREVIOUS PAGE FOR ALTERNATE FOOTING DESIGN

### DESIGN CRITERIA

1. ALLOWABLE SOIL BEARING PRESSURE = 1,500 PSF
2. ALLOWABLE LATERAL BEARING PRESSURE = 100 PSF
3. SEISMIC LOAD BASED ON SITE CLASS D w/ MAPPED SPECTRAL ACCELERATION,  $S_s = 2.03$  (MAX. FOR SD COUNTY)
4. WIND LOAD BASED ON 65 MPH BASIC WIND SPEED, EXPOSURE CATEGORY C.
5. SEE SHEET 1 FOR CONSTRUCTION SPECS.

SHEET 3 (REV. 03/11)



# RCP BLOCK & BRICK, INC.

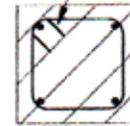
## 6' CONCRETE BLOCK PILASTER

### CITY OF SAN DIEGO MASTER PLAN #47-6

**PILASTER NOTES:**

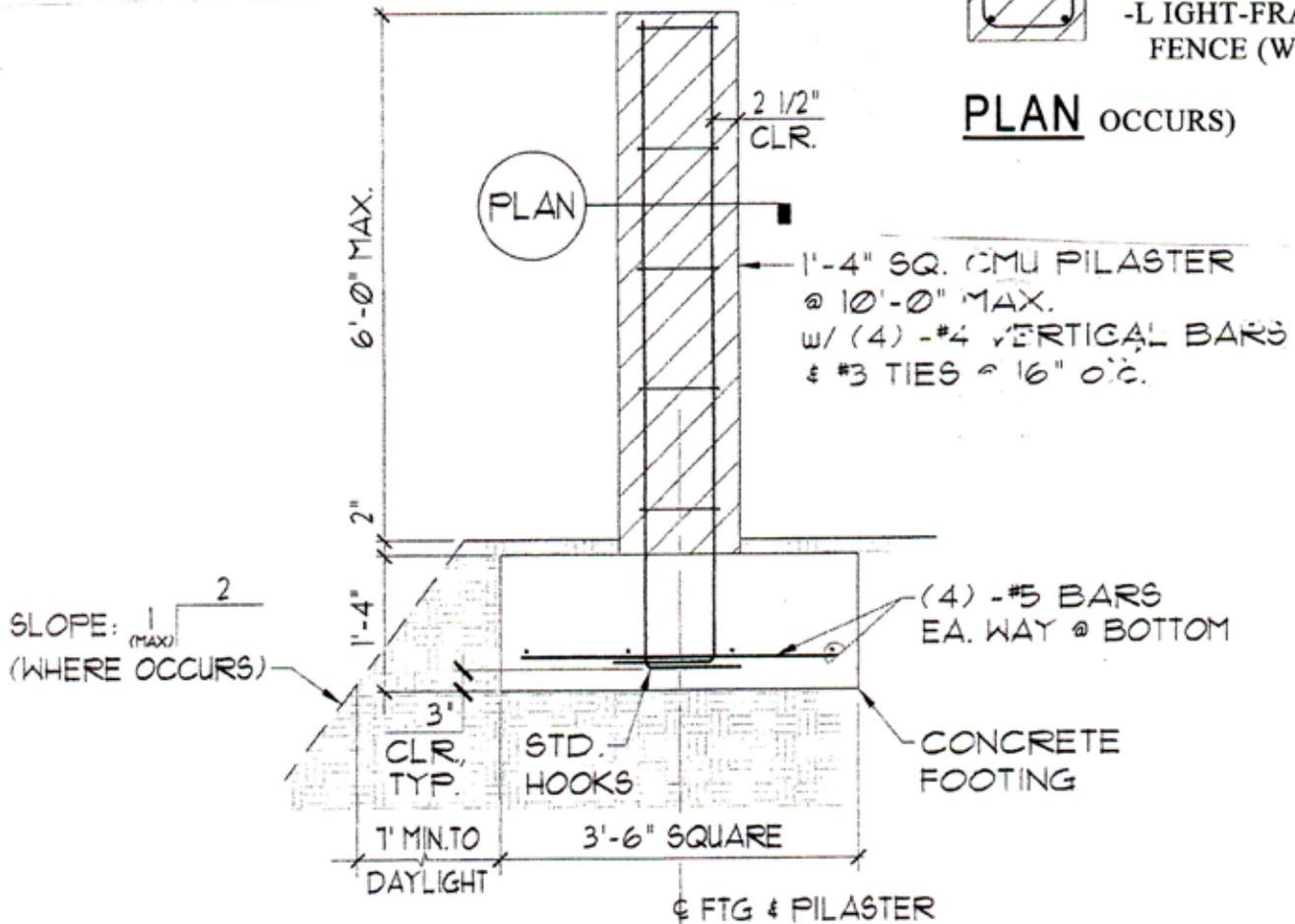
- A. ALL PILASTER CELLS SHALL BE SOLID GROUTED.
- B. DESIGN INCLUDES 1 1/2" OF PLASTER (OR VENEER) ON ALL FOUR SIDES OF THE PILASTER. NO FINISHES WITH A TOTAL WEIGHT GREATER THAN 26 PSF (SUMMATION ON ALL SIDES OF PILASTER) ARE ALLOWED.
- C. PILASTER DESIGN DOES INCLUDE SUPPORT LOADS (250 LBS. PER SIDE) FOR 6' HIGH "LIGHT-FRAMED" FENCE OR GATE (E.G. WOOD, CHAIN-LINK, WROUGHT IRON, ETC.). OTHERWISE, CONTACT ENGINEER OF RECORD FOR DESIGN OF SPECIFIC LOADINGS.

135° 4 HOOKTIES  
~ CMU PILASTER



- LIGHT-FRAMED  
FENCE (WHERE

PLAN OCCURS)



**DESIGN CRITERIA**

1. ALLOWABLE SOIL BEARING PRESSURE = 1,500 PSF
2. ALLOWABLE LATERAL BEARING PRESSURE = 100 PSF
3. SEISMIC LOAD BASED ON SITE CLASS D w/ MAPPED SPECTRAL ACCELERATION,  $S_s = 2.03$  (MAX. FOR 5D COUNT)
4. WIND LOAD BASED ON 85 MPH 545IC WIND SPEED, EXPOSURE CATEGORY C.
5. SEE SHEET I FOR CONSTRUCTION SPECS.

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# RCP BLOCK & BRICK INC. CONCRETE BLOCK FENCE WALL SPECS. FOR STANDARD 8' HIGH CMU FENCE MASTER PLAN #47-8

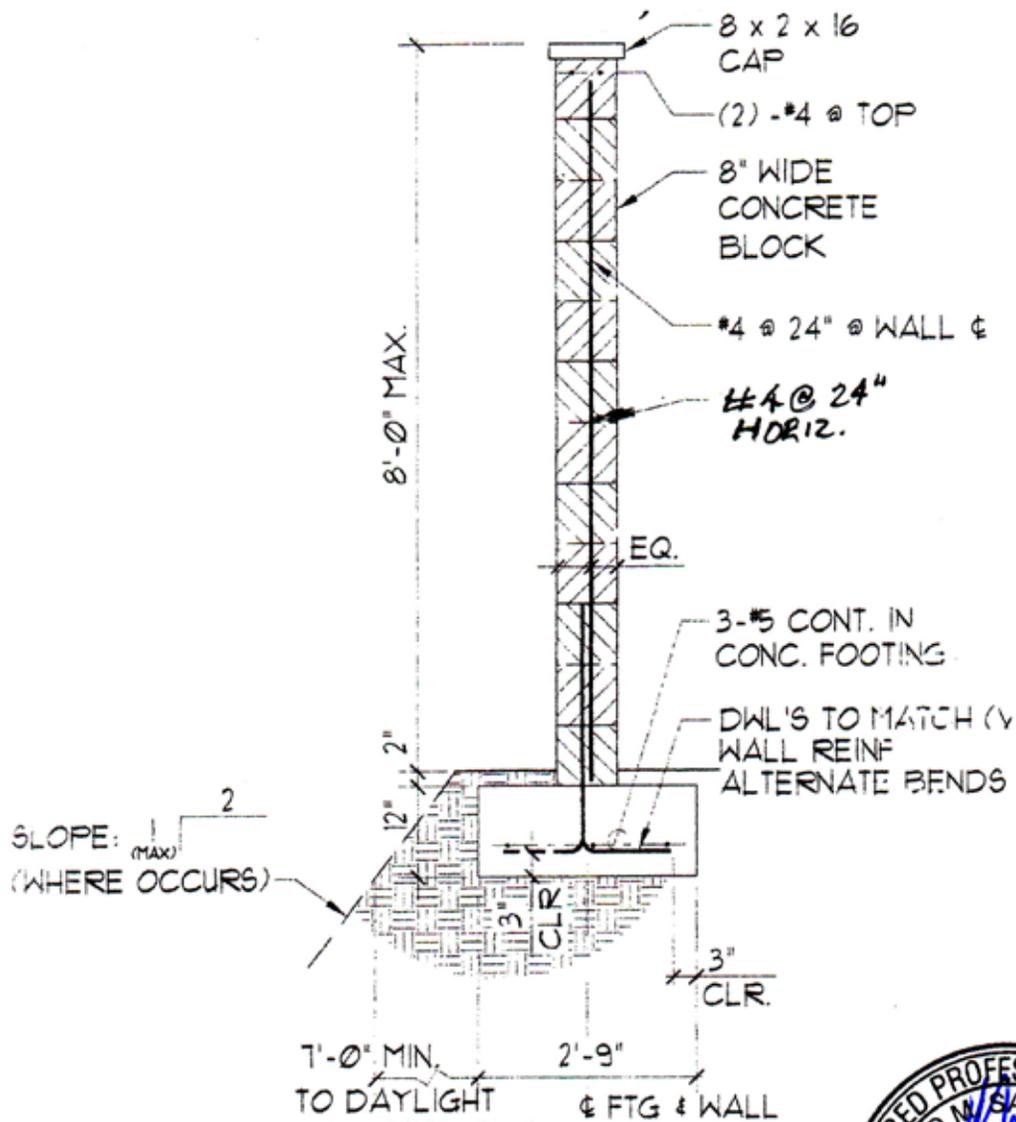
ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE, 2010 EDITION. NOTE: WALLS SHALL RECEIVE "LEVEL 1" SPECIAL INSPECTION AS REQ'D. BY CHAPTERS 17 & 21 OF THE 2010 CBC. (SEE CHECKLIST ATTACHED)

1. CONCRETE SHALL ATTAIN A COMPRESSIVE STRENGTH OF 2,500 PSI MINIMUM AT 28 DAYS.
2. CONCRETE BLOCK UNITS SHALL BE MEDIUM OR NORMAL WEIGHT UNITS CONFORMING TO ASTM C90 (LATEST REVISION),  $F_m = 1500$  PSI
3. MORTAR SHALL BE TYPE S CONFORMING TO ASTM C270 WITH A COMPRESSIVE STRENGTH OF 1,800 PSI MINIMUM AT 28 DAYS.
4. GROUT SHALL CONFORM TO ASTM C476 AND BE COMPOSED OF THE FOLLOWING RATIO BY VOLUME: 1 PART PORTLAND CEMENT, 3-PARTS SAND, 2-PARTS PEA GRAVEL, AND SUFFICIENT WATER FOR POURING WITHOUT SEGREGATION OF GROUT CONSTITUENTS (MIN. COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS).
5. ALL REINFORCING STEEL SHALL COMPLY WITH ASTM A615, GRADE 40 FOR #3 BARS AND GRADE 60 FOR #4 BARS AND LARGER. VERTICAL STEEL SHALL BE CENTERED IN THE CONCRETE BLOCK CELL IN WHICH IT IS LOCATED, U.O.N.
6. ONLY CELLS CONTAINING REINFORCING STEEL SHALL BE SOLID GROUTED.
7. ALL HORIZONTAL WALL REINFORCING BARS SHALL BE PLACED IN BOND BEAM UNITS. ALL JOINT REINFORCING SHALL BE PLACED IN THE MORTARED BED JOINT.
8. ALL GROUT SHALL BE CONSOLIDATED BY VIBRATING IMMEDIATELY. RECONSOLIDATE GROUT AFTER INITIAL WATER LOSS BUT BEFORE PLASTICITY IS LOST TO INSURE ADEQUATE CONSOLIDATION.
9. MINIMUM LAP SPLICE OF REINFORCING BARS SHALL BE 48 DIAMETERS.
10. CONCRETE BLOCK UNITS ARE TO BE STAGGERED (COMMON BOND) AND ARE TO HAVE THE VERTICAL CONTINUITY OF THE CELLS UNOBSTRUCTED.
11. ALL FOOTINGS MUST EXTEND INTO FIRM UNDISTURBED NATURAL SOIL OR SOIL WHICH HAS BEEN COMPACTED TO AT LEAST 90 PERCENT MAXIMUM DENSITY.
12. THESE WALLS SHALL NOT BE CONSTRUCTED ON EXPANSIVE SOIL (EXPANSION INDEX GREATER THAN 20) UNLESS THE SOIL HAS BEEN SPECIALLY PREPARED IN ACCORDANCE WITH RECOMMENDATIONS OF A CIVIL OR GEOTECHNICAL ENGINEER. THESE WALLS SHALL NOT BE CONSTRUCTED ON LIQUEFIABLE SOILS OR OTHER QUESTIONABLE SOILS.
13. PROVIDE VERTICAL CONTROL JOINTS AT 25'-0" ON CENTERS MAXIMUM.
14. FENCE WALL DESIGN INCLUDES 1/2" OF PLASTER (OR VENEER) ON EACH SIDE OF THE WALL. NO FINISHES WITH A TOTAL WEIGHT GREATER THAN 13 PSF (SUMMATION OF BOTH SIDES OF WALL) ARE ALLOWED. NOTES:
  1. BUILDING PERMIT REQUIRED.
  2. FENCE HEIGHTS MAY ALSO BE REGULATED BY THE ZONING LAWS OF THE CITY FOR SPECIFIC AREAS. ABOUT THE ZONING REGULATIONS FOR YOUR FENCE ON YOUR LOT, CONTACT THE DEVELOPER'S ZONING DEPARTMENTS FOR REQUIREMENTS.

SHEET 1 REV. ( 05 / 2011 )



# RCP BLOCK & BRICK, INC. CONCRETE BLOCK FENCE 8'-0" HIGH MAX



## ALTERNATE 1

NOTE: SEE NEXT PAGE FOR ALTERNATE FOOTING DESIGN.

### DESIGN CRITERIA

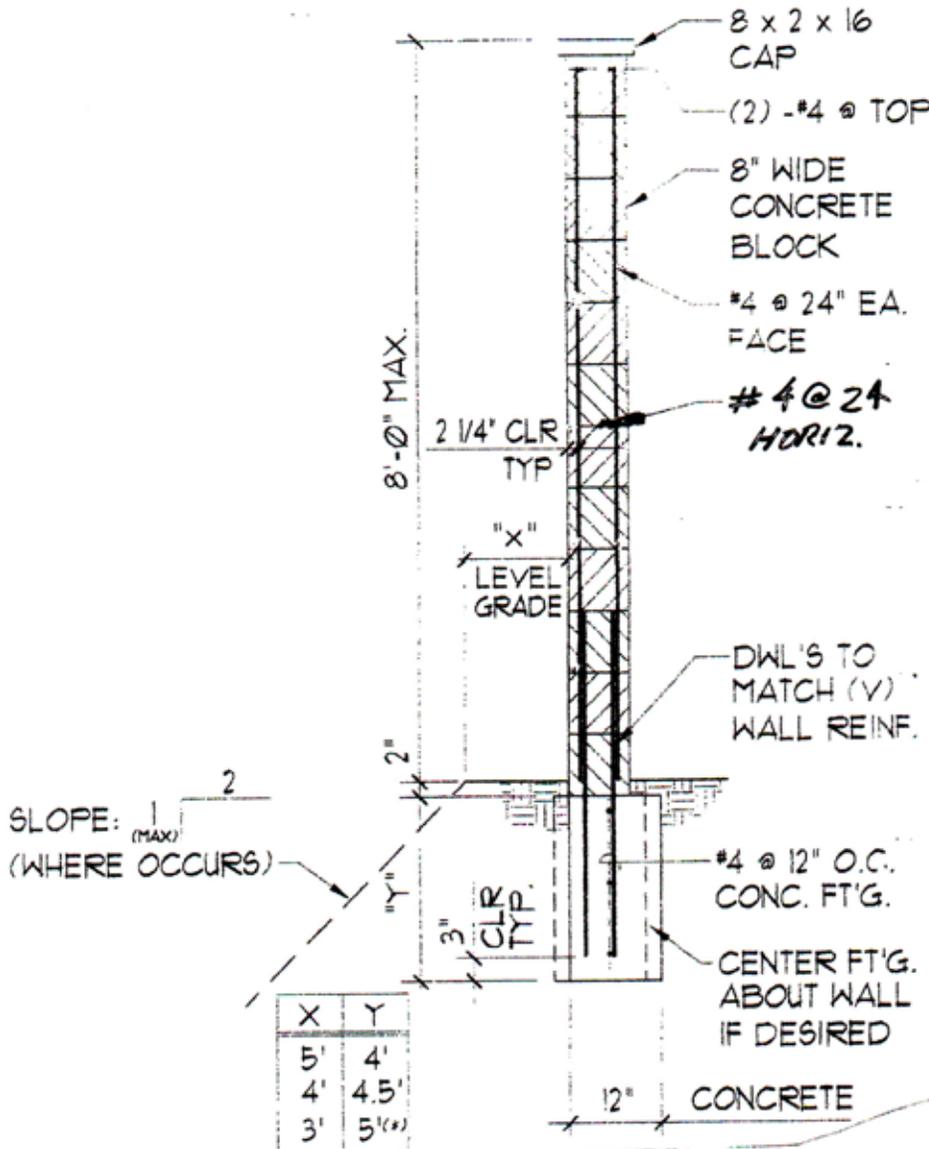
1. ALLOWABLE SOIL BEARING PRESSURE = 1,500 PSF
2. ALLOWABLE LATERAL BEARING PRESSURE = 100 PSF
3. SEISMIC LOAD BASED ON SITE CLASS D w/ MAPPED SPECTRAL ACCELERATION,  $1.50 < S_s < 2.03$
4. WIND LOAD BASED ON 85 MPH BASIC WIND SPEED, EXPOSURE CATEGORY B.
5. SEE SHEET 1 FOR CONSTRUCTION SPECS. FOR SPECIAL INSPECTION REQUIREMENTS.

SHT 3 REV (5/2011)



# RCP BLOCK & BRICK, INC.

## CONCRETE BLOCK FENCE - 8'-0" HIGH MAXIMUM



### ALTERNATE 2

FOR EXCAVATIONS > 5' OR GREATER CALL THE DIVISION INDUSTRIAL SAFETY (619) 161-2280 FOR ADD'L INFO. AND NECESSARY PERMITS.

#### DESIGN CRITERIA

1. ALLOWABLE SOIL BEARING PRESSURE = 1,500 PSE
2. ALLOWABLE LATERAL BEARING PRESSURE = 100 PSP
3. SEISMIC LOAD BASED ON SITE CLASS D w/ MAPPED SPECTRAL ACCELERATION,  $1.50 < S_s < 2.03$
4. WIND LOAD BASED ON 85 MPH BASIC WIND SPEED, EXPOSURE CATEGORY B.
5. SEESHEET 1 FOR CONSTRUCTION SPECS. & SPECIAL INSPECTION REQUIREMENTS.