

General

- THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE, AND SHALL BE RESPONSIBLE FOR CONDITIONS OF ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY SUB-CONTRACTORS. STRUCTURAL ENGINEER OF RECORD SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- ALL MATERIALS AND WORKMANSHIP SHALL BE PERFORMED IN ACCORDANCE WITH 1997 CALIFORNIA BUILDING CODE.
- ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS.
- NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
- WHERE NO DETAILS SHOWN OR NOTED ON THE DRAWINGS, THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
- OPENINGS, PICKETS, SLEEVES, ETC., SHALL NOT BE PLACED IN SLABS, BEAMS, WALLS, COLUMNS AND FOOTINGS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS.
- CONSTRUCTION MATERIALS SHALL BE SPREAD BUT IF PLACED ON FRAMED FLOORS OR ROOF, LOADS SHALL NOT EXCEED DESIGN LIVE LOADS FOR EACH PARTICULAR LEVEL. PROVIDE ADEQUATE SHORING AND BRACING IF LOAD EXCEED DESIGN LIVE LOAD OR WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
- THIS SET OF DRAWINGS REPRESENT THE FINISHED STRUCTURE, METHOD OF CONSTRUCTION NOT NECESSARY INDICATED. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO BRACING, SHORING, SCAFFOLDING, ETC.

Foundation

- THE SOILS BEARING PRESSURE = 2,500 p.s.f.
- SOIL REPORT #1620-38 IS PREPARED BY SCOTT M. LECK OF TRC DATED APRIL 6, 2007.
- NOT USED
- SOIL ENGINEER OR DEPUTY INSPECTOR SHALL VERIFY THAT CONSTRUCTION AT THE SITE IS IN ACCORDANCE WITH THE RECOMMENDATIONS AND CONCLUSIONS OF HIS REPORT. FINISHED EXCAVATION FOR FOUNDATION SHALL BE NEAT AND TRUE TO LINE WITH ALL LOOSE MATERIAL AND STANDING WATER REMOVED FROM EXCAVATIONS.
- BEFORE ANY CONCRETE IS PLACED, EXCAVATIONS SHALL BE CHECKED AND APPROVED BY A QUALIFIED SOILS ENGINEER OR DEPUTY INSPECTOR TO ENSURE COMPLIANCE WITH THE REQUIREMENTS.
- ALL FILL MATERIAL IS TO BE APPROVED BY THE SOILS ENGINEER OR DEPUTY INSPECTOR AND APPROVED BY A QUALIFIED SOILS ENGINEER OR DEPUTY INSPECTOR TO ENSURE COMPLIANCE W/ THE REQUIREMENTS.
- SUBGRADE SHALL BE 2" SAND OVER POLYETHYLENE FILM VAPOR BARRIER.
- SIDE OF FOUNDATION MAY BE POURED AGAINST STABLE EARTH UNLESS SHOWN OR NOTED OTHERWISE.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY AND PERMANENT DRAINAGE FOR EITHER SURFACE WATER, GROUND WATER OR SEEPAGE WATER.
- NOT USED.

- CONTRACTOR SHALL PROVIDE AND INSTALL ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANK.
- FOOTING BACKFILL AND UTILITY TRENCH BACKFILL SHALL BE PROPERLY COMPACTED.
- CONTRACTOR SHALL BRACE OR PROTECT FROM LATERAL LOADS FOR PITS AND RETAINING WALLS UNTILL ATTACHING SLABS ARE COMPLETELY IN PLACE AND HAVE ATTAINED FULL STRENGTH.
- NO VERTICAL EXCAVATIONS 5'-0" OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND SHALL BE PERMITTED.

15. REINFORCING BAR SPLICES AND NON-FOOTING EMBEDMENTS

ALL REINFORCING BARS TO HAVE A MINIMUM OF CLASS 'B' TENSION SPLICE AS FOLLOWS:

BAR SIZE	CLASS 'B' TENSION SPLICE CONCRETE STRENGTH			
	3,000 PSI	4,000 PSI	6,000 PSI	7,000 PSI
#3 TO #4	28"	24"	24"	24"
#5	36"	30"	30"	30"
#6	43"	36"	36"	36"
#7	62"	54"	44"	41"
#8	71"	62"	50"	48"
#9	80"	69"	57"	52"
#10	89"	77"	63"	58"
#11	98"	85"	69"	64"

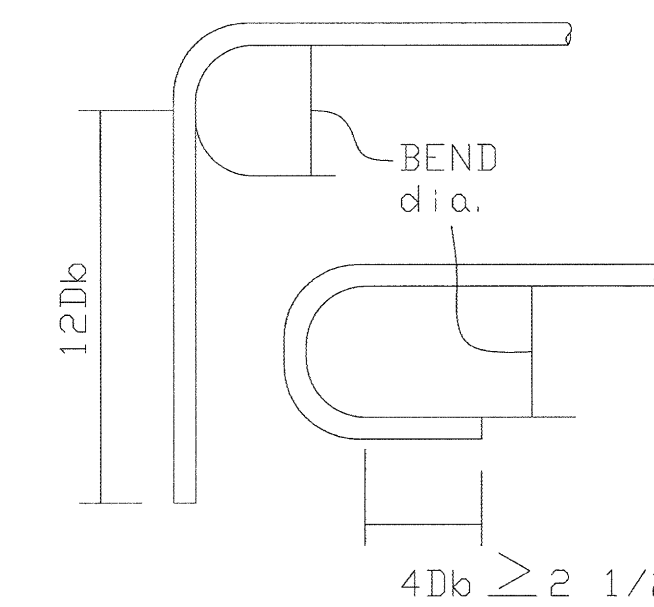
NOTE: TOP BAR TENSION SPLICES ARE 1.3 TIMES ABOVE SPLICES. TOP SPLICE LENGTHS APPLY TO HORIZONTAL REINFORCEMENT CAST WITH 12" OR MORE OF CONCRETE BELOW THE BAR.

NOTE: SEE PODIUM LEVEL WALL ELEVATIONS AND SHEARWALL ELEVATIONS FOR SPECIFIC SPLICE REQUIREMENTS.

16. REQUIREMENTS FOR STANDARD HOOKS AND MINIMUM FINISHED INSIDE BEND DIAMETERS FOR REINFORCING BARS ARE ILLUSTRATED BELOW. THE STANDARD HOOK DETAILS FOR STIRRUPS AND TIES APPLY TO NO. 8 AND SMALLER BAR SIZES ONLY.

TABLE 3-1 STANDARD HOOKS FOR PRIMARY REINFORCEMENT

BAR SIZE NO.	MIN. FINISHED BEND DIA. (α)
3 THROUGH 8	6Db
9, 10, 11	8Db
14 AND 18	10Db

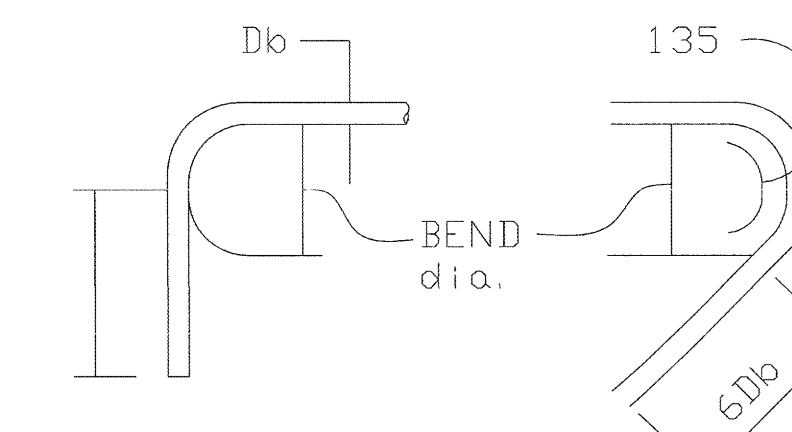


(α) MEASURED ON INSIDE OF BAR.

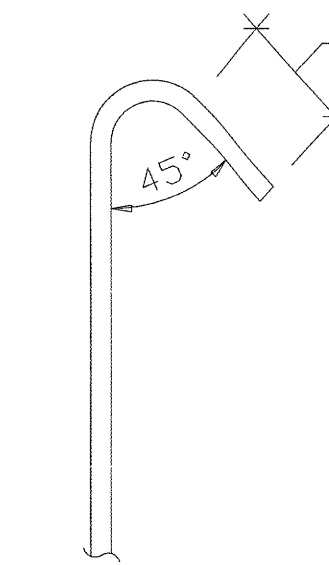
TABLE 3-2 STANDARD HOOKS FOR STIRRUPS AND TIE REINFORCEMENT (NO. 8 OR SMALLER ONLY)

BAR SIZE NO.	MIN. FINISHED BEND DIA. (α)
3 THROUGH 5	4Db
6 THROUGH 8	6Db

(b) MEASURED ON INSIDE OF BAR.



6 Db FOR NO. 3 THRU NO. 5  
12 Db FOR NO. 6 THRU NO. 8



BAR	A = 6α ≥ 3"
#3	= 3"
#4	= 3"
#5	= 4"
#6	= 5"
#7	= 6"
#8	= 6"

SEISMIC HOOK DETAIL

NOTE: SEISMIC HOOKS SHALL BE USED FOR ALL HOOPS, STIRRUPS, AND CROSS-TIES IN SEISMIC RESISTING ELEMENTS

Structural

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Notes

Scale: None

- ALL CONCRETE SHALL BE NORMAL WEIGHT CONFORMING TO THE FOLLOWING:
  - LOCATION: 28-DAY MIN. COMPRESSIVE STRENGTH
  - A. SLAB ON GRADE: 2500 psi\*
  - B. FOOTING: 2500 psi\*
  - \* WHERE SUBSTRATE EXPOSURE LEVEL IS SEVERE USE 4500 psi WITH W/C RATIO OF 0.45 (MAX)
- ALL CONCRETE MIX DESIGN SHALL BE REVIEWED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE II CEMENT.
- AGGREGATE SHALL CONFORM TO ASTM C-33.
- WATER SHALL BE CLEAN, FREE FROM DELETERIOUS AMOUNTS OF ACIDS, ALKALIS OR ORGANIC MATERIALS, OILS, SALTS AS PER U. B. C. SECTION 1903.4.
- CONCRETE MIXING OPERATIONS, ETC. SHALL CONFORM TO ASTM C-94. WATER-CEMENT RATIO IS LESS THAN 0.50
- UNLESS SHOWN OR NOTED OTHERWISE, CONCRETE COVERAGE FOR REINFORCING BAR TO FACE OF BAR SHALL BE AS FOLLOWS:
  - A. CONCRETE IN CONTACT WITH EARTH, UNFORMED: 3"
  - B. CONCRETE IN CONTACT WITH EARTH, FORMED: 2"
  - C. WALLS: 1 1/2"
  - D. BEAMS, GIRDERS & COLUMNS (< TO TIES OR STIRRUPS): 1 1/2"
- CONDUIT PLACED IN A CONCRETE SLAB SHALL NOT EXCEED 1/3 OF THE THICKNESS OF THE SLAB AND SHALL BE PLACED BETWEEN THE TOP AND BOTTOM REINFORCING STEEL. MINIMUM CLEAR DISTANCE BETWEEN CONDUITS SHALL BE 6".
- CONSTRUCTION JOINTS:
  - THE SURFACES OF ALL CONSTRUCTION JOINTS SHALL BE CLEAN, FREE FROM LOOSE DEBRIS. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.
- CONCRETE SHALL BE CURED IN ACCORDANCE WITH SECT 1905.11 OF U. B. C.
- REMOVAL OF CONCRETE FORMS AND SHORES SHALL BE IN ACCORDANCE WITH SECTION 1906.2 OF U. B. C.
- CONDUITS AND PIPES EMBEDDED IN CONCRETE SHALL COMPLY WITH THE PROVISION OF SECTION 1906.3 OF U. B. C.
- DESIGN AND CONSTRUCTION OF CONCRETE FORMWORK SHALL CONFORM TO ACI 347 "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK".
- ALL SAW CUTS IN SLAB ON GRADE SHALL BE MADE NOT LATER THAN 24 HOURS AFTER PLACING CONCRETE.

Concrete

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Notes

Scale: None

- ALL REINFORCING BARS SHALL BE ASTM A-615 GRADE 60 DEFORMED BILLET STEEL BARS, EXCEPT NOTED BELOW.
  - A. WELDED SMOOTH WIRE FABRIC SHALL CONFORM TO ASTM A-185.
- GRADE 60 BARS SHALL BE MARKED SO ITS IDENTIFICATION CAN BE MADE WHEN THE FINAL INSPECTION IS MADE.
- THE TIE WIRE USED SHALL BE BLACK ANNEALED WIRE, 16 GA. OR HEAVIER.
- BAR SUPPORTS SHALL CONFORM TO THE BAR SUPPORT SPECIFICATIONS CONTAINED IN THE "MANUAL OF STANDARD PRACTICE" BY ACI.
- A CERTIFIED COPY OF MILL TEST ON EACH HEAT OF REINFORCING STEEL DELIVERED SHOWING PHYSICAL AND CHEMICAL ANALYSIS SHALL BE PROVIDED UPON REQUEST AT THE TIME OF SHIPMENT.
- ALL REQUIREMENT OF CONCRETE REINFORCEMENT NOT COVERED ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH ACI "MANUAL OF STANDARD PRACTICE".
- REINFORCING STEEL AT THE TIME OF THE CONCRETE IS PLACED SHALL BE FREE FROM MUD, OIL, OR OTHER NON METALLIC COATINGS THAT ADVERSELY AFFECT BONDING CAPACITY.
- ALL HOOKS SHALL CONFORM TO THE BEND DIMENSION PER ACI "STANDARD HOOK" UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- REINFORCING BARS SHALL NOT BE BENT OR STRAIGHTENED IN A MANNER THAT WILL INJURE THE MATERIAL.
- REINFORCING BARS SHALL CONFORM ACCURATELY TO THE DIMENSIONS SHOWN ON THE DRAWINGS WITH THE FABRICATING TOLERANCES PER ACI "MANUAL OF STANDARD PRACTICE".
- BARS SHALL BE SECURELY TIED TO PREVENT DISPLACEMENT DURING THE CONCRETE OPERATION AND ALL DOWELS SHALL BE WIRED IN PLACE BEFORE DEPOSITING CONCRETE.
- SPLICES OF REINFORCEMENT SHALL HAVE 42 BAR DIAMETER LAP OR 2'-0" LAP MINIMUM.
- DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL HAVE SAME SIZE AS THE VERTICAL REINFORCEMENT, EMBEDMENT OF DOWELS SHALL BE 36 BAR DIAMETER OR 2'-0" MINIMUM UNLESS OTHERWISE SHOWN.
- MINIMUM LAP OF MESH SHALL BE NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS TWO INCHES OR 60 DIA. OR 8 IN. WHICHEVER IS GREATER.

Reinforcing

③

Steel

Scale: None

Structural

④

Details

Scale: None

CONCRETE WATERPROOFING ADMIX:

P/N DESCRIPTION:

INTEGRAMIX-WP

WATERPROOFING CONCRETE ADMIX, FOR USE IN ABOVE GRADE STRUCTURES ONLY. NON-CAUSTIC FORMULA, WILL NOT CORRODE COPPER, BRASS, BRONZE, OR REBAR.

AQUAFIN, Inc., (410) 964-3165

- or -

IPANEX

WATERPROOFING CONCRETE ADMIX, FOR USE IN ABOVE GRADE STRUCTURES ONLY. NON-CAUSTIC FORMULA, WILL NOT CORRODE COPPER, BRASS, BRONZE, OR REBAR.

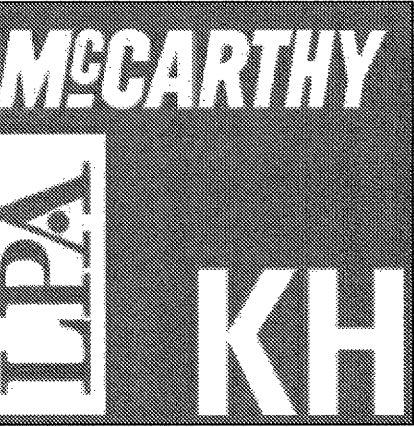
IPA Systems, Inc., (215) 425-6607

Waterproofing

⑤

Admix

Scale: None



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IDENTIFICATION STAMP

DIVISION OF THE STATE ARCHITECT

APR 09 2009

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College of San Mateo  
Site Package  
San Mateo, CA

Developed for  
San Mateo County Community College District

Revision Description  
19 SEPT 2008  
08 APRIL 2009

Job No. 27082.30  
Date 09 APRIL 2009  
Drawn by VM  
Checked by LM  
Scale AS SHOWN

FOUNTAINS  
STRUCTURAL  
DETAILS & NOTES

F0.05