GENERAL

1. REFER TO SPECIFICATIONS FOR COMPLETE REQUIREMENTS. MORE STRINGENT REQUIREMENT CONTROLS WHERE INFORMATION SHOWN ON DRAWINGS AND IN SPECIFICATIONS ARE IN CONFLICT.
2. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE, 2007 EDITION.
3. DETAILS OF THE CONSTRUCTION NOT FULLY SHOWN OR NOTED ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS SHALL BE OF THE SAME SIZE AND CHARACTER AS FOR SIMILAR CONDITIONS WHICH ARE SHOWN AND NOTED.
4. THE WORD "TYPICAL" SHALL MEAN THAT THE INDICATED INFORMATION SHALL BE APPLIED TO ALL SIMILAR CONDITIONS WHETHER OR NOT THE INFORMATION IS SPECIFICALLY REFERENCED, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
5. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT JOB SITE. THE CONTRACTOR SHALL COMPARE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, CIVIL, LANDSCAPE, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS BEFORE COMMENCING WITH THE WORK AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES REQUIRING CLARIFICATION OR REVISION. DO NOT SCALE DRAWINGS.
6. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITONS IS GIVEN AS THE BEST AVAILABLE KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. ACTUAL AS-BUILT CONDITIONS MAY BE DIFFERENT THAN RECORDED IN THE DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AT JOBSITE PRIOR TO PRODUCING SHOP DRAWINGS AND FABRICATING AND INSTALLING NEW WORK. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS THEY SHALL BE REPORTED TO THE ARCHIITECT SO THAT THE PROPER REVISIONS MAY BE MADE. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN DIRECTION OF THE ARCHITECT.
7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SAFETY AND PRESERVATION OF THE BUILDING AND CONTENTS DURING CONSTRUCTION, AND SHALL BE SOLELY RESPONSIBLE FOR PROVIDING A SAFE PLACE TO WORK. THE CONTRACTOR SHALL EXECUTE WORK TO PREVENT DAMAGE BY FALLING DEBRIS AND OTHER HAZARDS IN CONNECTION WITH THIS WORK, AND SHALL PROVIDE ADEQUATE SHORING AND BRACING DURING ALL DEMOLITION AND CONSTRUCTION.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND CONSTRUCTION OF ANY NEW ELEMENTS.
9. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR DEVELOPING AND COORDINATING A SEQUENCE OF TEMPORARY BRACING, SHORING, DEMOLITION, AND NEW CONSTRUCTION. SHORING TO SUPPORT EXISTING CONSTRUCTION TO REMAIN SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL SHORING AND TEMPORARY BRACING SHALL BE DESIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA HIRED AND PAID BY THE CONTRACTOR.
10. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL FABRICATED ELEMENTS AND SHALL BE APPROVED BY THE ARCHITECT PRIOR TO FABRICATION.

DESIGN BASIS

THE DESIGN IS IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE, 2007 EDITION WITH DSA/OSHPD ANENDMENTS AND PROVIDES FOR THE FOLLOWING LOADS:

LIVE LOADS FOR POOL EQUIPMENT BUILDING

ROOFS 20 PSF

WIND LOADS FOR POOL EQUIPMENT BUILDING & SITE CONSTRUCTION

BASIC WIND SPEED = 85 MPH
EXPOSURE C
Iw = 1.0

SEISMIC LOADS FOR POOL EQUIPMENT BUILDING

BASE SHEAR = V = 0.35W
SITE LATITUDE = 37.53 (2)
SITE LONGITUDE = - 122.33
SEISMIC DESIGN CATAGORY = E
OCCUPANCY CATAGORY = II (2)
I = 1.0
Ip = 1.0
S_s = 1.995g (2)
S_1 = 1.2135g
SOIL TYPE = Sb
S_{ds} = 1.333g (2)
S_{d1} = 0.80g

LATERAL LOAD RESISTING SYSTEMS FOR POOL EQUIPMENT BUILDING

MASONRY BEARING SHEAR WALL R = 5.0 Ω_o = 2.5

SPECIAL INSPECTION

THE SPECIAL INSPECTION REQUIREMENTS OF CHAPTER 17 OF THE CALIFORNIA BUILDING CODE APPLY TO THE FOLLOWING:

- STEEL CONSTRUCTION
- CONCRETE CONSTRUCTION
- MASONRY CONSTRUCTION
- BOLTS INSTALLED IN CONCRETE AND MASONRY
- METAL DECK
- SOIL

STRUCTURAL OBSERVATION

STRUCTURAL OBSERVATION FOR SEISMIC RESISTANCE SHALL BE PROVIDED IN ACCORDANCE WITH CBC SECTIONS 1705A AND 1707A. AT THE CONCLUSION OF THE STRUCTURAL WORK. THE OBSERVER SHALL SUBMIT A WRITTEN STATEMENT TO THE BUILDING OFFICIAL THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

GEOTECHNICAL INFORMATION

1. FOR SITE CONSTRUCTION, (1)
THE OWNER'S GEOTHECHNICAL ENGINEER, CORNERSTONE EARTH GROUP, HAS PREPARED AN INVESTIGATION REPORT FOR USE ON THIS PROJECT, TITLED: "COLLEGE OF SAN MATEO SITE WORK PACKAGE", DATED MARCH 25, 2009 (1) (1)
FOR THE POOL EQUIPMENT BUILDING,
THE OWNER'S GEOTHECHNICAL ENGINEER, CORNERSTONE EARTH GROUP, HAS PREPARED AN INVESTIGATION REPORT FOR USE ON THIS PROJECT, TITLED: "SUPPLEMENT GEOTECHNICAL RECOMMENDATIONS, COLLEGE OF SAN MATEO AQUATIC CENTER", DATED FEB. 2, 2009. (1)
2. THE CONTRACTOR SHALL REVIEW AND UNDERSTAND THE INFORMATION CONTAINED IN THE REPORT, BUT SHALL NOT ASSUME THAT SUCH INFORMATION IS SUFFICIENT FOR THE CONTRACTOR'S PURPOSES.
3. THE CONTRACTOR SHALL BE FAMILIAR WITH THE GEOTECHNICAL CONDITIONS AT THE PROJECT SITE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN GEOTECHNICAL STUDIES AND INFORMATION NECESSARY TO COMPLETE THE WORK.
5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF AN INDEPENDENT GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA TO ANALYZE AVAILABLE INFORMATION AND TO MAKE ADDITIONAL INVESTIGATIONS AS NECESSARY TO COMPLETE THE WORK.

FOUNDATIONS

1. REFER TO GENERAL NOTES SECTION TITLED "GEOTECHNICAL INFORMATION".
2. SLABS ON GRADE AND FOUNDATIONS SHALL BEAR ON APPROVED NATIVE SUBGRADE OR COMPACTED SOIL.
3. FOOTINGS AND GRADE BEAMS SHALL BE CAST IN NEAT TRENCHED EXCAVATIONS (1" MINIMUM WIDER THAN SCHEDULED). IF FOOTINGS CANNOT BE CAST IN TRENCHES, FORM FOOTINGS TO SCHEDULED DIMENSIONS.
4. BOTTOM OF FOOTINGS SHALL BE CALCULATED USING INFORMATION SHOWN ON THE DRAWINGS AND MAY BE REVISED BY THE GEOTECHNICAL ENGINEER TO ENSURE PROPER BEARING OF FOOTINGS INTO FIRM, APPROVED SOIL MATERIAL (UNDISTURBED NATURAL SOILS OR COMPACTED ENGINEERED FILL). TOP OF FOOTING DIMENSION FROM DATUM SHALL BE AS SHOWN ON PLANS.
5. COMPACTED NATURAL SOIL, FILL, AND BACKFILL IS TO BE UNIFORMLY COMPACTED WITH APPROVED COMPACTION EQUIPMENT. FILL MATERIAL AND OPERATIONS SHALL BE INSPECTED BY THE OWNER'S GEOTECHNICAL ENGINEER.
6. WATER SHALL NOT BE ALLOWED TO STAND IN TRENCHES OR FORMS BEFORE OR AFTER CONCRETE IS PLACED, AND SHALL BE PUMPED OUT. IF BOTTOMS OF TRENCHES BECOME SOFTENED DUE TO RAIN OR OTHER WATER BEFORE FOOTINGS ARE CAST, THE CONTRACTOR SHALL EXCAVATE THE SOFTENED MATERIAL AND REPLACE WITH CONCRETE.
7. ALLOWABLE BEARING PRESSURES FOR SPREAD FOOTINGS:
POOL EQUIPMENT BUILDING: (1)
DEAD LOAD 3000 PSF
DEAD PLUS LIVE LOAD 4500 PSF
TOTAL LOAD (INCLUDING SEISMIC) 6000 PSF
SITE CONSTRUCTION: (1)
DEAD LOAD 2000 PSF
DEAD PLUS LIVE LOAD 3000 PSF
TOTAL LOAD (INCLUDING SEISMIC) 4000 PSF
8. CANTILEVER RETAINING WALL DESIGN PRESSURE:
POOL EQUIPMENT BUILDING: (1) 35 PCF (LEVEL BACKFILL)
SITE CONSTRUCTION: 35 PCF (LEVEL BACKFILL)
9. SEISMIC INCREMENT SOIL PRESSURE: 13H (RECTANGULAR)
10. SPECIAL INSPECTION REQUIREMENTS APPLY TO FILL AND BACKFILL OPERATIONS FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING REINFORCEMENT STEEL.

CONCRETE

1. ALL CONCRETE SHALL DEVELOP THE FOLLOWING COMPRESSIVE STRENGTHS AT 28 DAYS :

NORMAL WEIGHT CONCRETE	28 DAYS
FOOTINGS, GRADE BEAMS	4000 PSI
SLAB ON GRADE	3000 PSI (3)
WALL	4000 PSI RFI#13

2. REFER TO SPECIFICATIONS FOR CONCRETE CLASS DESIGNATIONS.
3. ALL EXPOSED CORNERS OR EDGES OF COLUMNS, PIERS, WALLS, BEAMS, ETC., SHALL BE FORMED WITH A 3/4" CHAMFER UNLESS OTHERWISE NOTED ON DRAWINGS.
4. CONSTRUCTION JOINTS SHALL BE LOCATED WHERE SHOWN AND, IF NOT SHOWN, WHERE DIRECTED BY THE ARCHITECT. THEY SHALL BE LOCATED SO AS TO LEAST IMPAIR THE STRENGTH OF THE STRUCTURE AND TO MINIMIZE SHRINKAGE. PROVIDE DOWELS AND KEYS AS DETAILED AND DIRECTED, AND THOROUGHLY CLEAN AND REMOVE LAITANCE FROM SURFACES BEFORE PROCEEDING WITH THE NEXT PLACEMENT.
5. CONTRACTOR SHALL SUBMIT CONSTRUCTION JOINT LAYOUT FOR REVIEW.
6. FOR DRIP EDGES, REGLETS, REVEALS, AND OTHER FEATURES NOT SHOWN ON THE STRUCTURAL DRAWINGS, SEE ARCHITECTURAL DRAWINGS.

METAL DECK

1. SEE S7.1T FOR DECK PROFILES.
2. STEEL DECK SHALL BE WELDED TO ALL STRUCTURAL STEEL AND TO ADJACENT DECK SECTIONS IN ACCORDANCE WITH THE DECK WELDING SCHEDULE ON S7.1.
3. WELDING OF DECK SHALL BE IN ACCORDANCE WITH AWS STANDARDS AND PERFORMED BY WELDERS CERTIFIED FOR LIGHT-GAGE METALS.
4. PROVIDE VENTED DECK FOR ALL DECKS TO RECEIVE CONCRETE FILL UNLESS OTHERWISE NOTED. DECKS WITHOUT CONCRETE FILL SHALL NOT BE VENTED.

CONCRETE REINFORCEMENT

1. ALL CONCRETE SHALL BE REINFORCED. REINFORCEMENT SHALL BE NEW DEFORMED STEEL BARS, ASTM A615, GRADE 60.
2. ALL CONCRETE REINFORCEMENT DETAILS SHALL CONFORM TO ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES".
3. CONCRETE COVER SHALL BE TO FACE OF BAR, MECHANICAL COUPLER, OR WELDED HEADED BAR AS FOLLOWS, UNLESS OTHERWISE NOTED ON DRAWINGS:

CAST-IN-PLACE CONCRETE	MINIMUM CONCRETE COVER
CAST AGAINST AND EXPOSED TO EARTH	3"
EXPOSED TO EARTH OR WEATHER	
#5 AND SMALLER	1 ½"
#6 AND LARGER	2"
NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH	
SLABS, JOISTS	1"
WALLS	1 ½"
COLUMNS, BEAMS	1 ½"
SLABS ON GRADE (8" THICK OR LESS)	MID-DEPTH

4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF REINFORCEMENT LAYOUTS AND DETAILS FOR REVIEW PRIOR TO FABRICATION. SHOW ALL PROPOSED SPLICE LOCATIONS. FABRICATE FROM APPROVED SHOP DRAWINGS ONLY.
5. THE LENGTHS AND SPLICES OF REINFORCEMENT SHOWN ON DRAWINGS REPRESENT A SUGGESTED CONSTRUCTION JOINT LAYOUT. BAR SPLICES MAY BE DELETED AND CONTINUOUS REINFORCEMENT USED AT THE CONTRACTOR'S OPTION. LONG BARS OR BENT BARS SHOWN MAY BE SPLICED IF NECESSARY FOR PLACEMENT OR EASE OF CONSTRUCTION PROVIDED MINIMUM SCHEDULED LAP LENGTHS ARE FOLLOWED WITH APPROVAL FROM THE ARCHITECT. MECHANICAL COUPLERS SHALL BE USED WHERE SHOWN ON THE DRAWINGS AND MAY BE USED IN LIEU OF LAP SPLICES WITH APPROVAL FROM THE ARCHITECT.
6. PROVIDE DOWELS OR CONTINUOUS REINFORCEMENT BETWEEN ALL CONCRETE ELEMENTS, UNLESS OTHERWISE NOTED. IN GENERAL, BAR SPLICES SHALL BE MADE AT POINTS OF MINIMUM STRESS. IN FRAMED BEAMS AND SLABS, SPLICE TOP BARS AT MID-SPAN, BOTTOM BARS OVER SUPPORTS, UNLESS OTHERWISE NOTED. IN GRADE BEAMS SUPPORTED ON SOIL, SPLICE TOP BARS AT COLUMNS, BOTTOM BARS AT MID-SPAN BETWEEN COLUMNS, UNLESS OTHERWISE NOTED ON DRAWINGS. VERTICAL REINFORCEMENT FROM COLUMNS, PILASTERS, AND WALLS SHALL BE DOWELED TO SUPPORTING FOOTINGS WITH BARS OF SAME SIZE AND SPACING AS VERTICAL REINFORCEMENT UNLESS OTHERWISE NOTED ON DRAWINGS.
7. ALL SPLICES OF #8 AND LARGER REINFORCEMENT SHALL BE MADE USING TYPE II MECHANICAL COUPLERS, UNLESS OTHERWISE SHOWN. LAP SPLICES FOR #8 AND LARGER BARS SHALL NOT BE PERMITTED.
8. TYPE II MECHANICAL COUPLERS SHALL CONFORM TO DIMENSIONAL REQUIREMENTS SHOWN ON THE DRAWINGS, SO AS NOT TO REQUIRE SPECIAL STIRRUPS OR HOOPS, OR VIOLATE THE REQUIRED CLEAR COVER OF CONCRETE. HRC TYPE 510 XTENDER OR EQUAL (NO KNOWN EQUAL). MECHANICAL COUPLERS SHALL BE STAGGERED A MINIMUM OF 3'-0" FROM MECHANICAL COUPLERS ON ADJACENT BARS, UNLESS OTHERWISE NOTED ON DRAWINGS.
9. CONTRACTOR SHALL ORDER ADEQUATE ADDITIONAL UNITS OF REINFORCEMENT SPLICED WITH MECHANICAL COUPLERS AND ADEQUATE ADDITIONAL UNITS OF REINFORCEMENT TERMINATED WITH WELDED HEADED BARS TO FACILITATE THE MINIMUM TESTING REQUIREMENTS TO BE PERFORMED BY THE OWNER'S TESTING AGENCY.
10. THE OWNER'S TESTING AGENCY SHALL TENSION TEST ONE TYPE II MECHANICAL COUPLER FOR EACH ONE HUNDRED DEVICES UTILIZED ON PROJECT. ROUND UP TO NEXT HIGHER 100 FOR INTERMEDIATE NUMBER OF DEVICES, AND TEST A MINIMUM OF TWO DEVICES. OWNER'S TESTING AGENCY SHALL TENSION TEST ONE WELDED HEADED BAR FOR EACH ONE HUNDRED DEVICES UTILIZED ON PROJECT. ROUND UP TO NEXT HIGHER 100 FOR INTERMEDIATE NUMBERS AND TEST TWO DEVICES MINIMUM. FAILURE OF A DEVICE SHALL REQUIRE ADDITIONAL TESTS OF ONE IN TEN DEVICES OF THE SAME HEAT OF DEVICE. ADDITIONAL REINFORCEMENT REQUIRED DUE TO FAILED DEVICES SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
11. THE OWNER'S TESTING AGENCY SHALL TORQUE TEST TEN PERCENT OF ALL IN-PLACE TYPE II MECHANICAL COUPLERS TO THE VALUES TABULATED ON THE DRAWINGS. IF ANY ONE TORQUE TEST FAILS, ALL TYPE II MECHANICAL COUPLERS INSTALLED THAT DAY SHALL BE TORQUE TESTED BY THE OWNER'S TESTING AGENCY. THE CONTRACTOR SHALL CORRECT ALL TYPE II MECHANICAL COUPLERS IDENTIFIED AS HAVING FAILED TORQUE TESTS AT NO ADDITIONAL COST TO THE OWNER. THE OWNER'S TESTING AGENCY SHALL RETEST ALL FAILED COUPLERS.

CONCRETE MASONRY UNITS

1. MINIMUM MASONRY COMPRESSIVE STRENGTH AT 28 DAYS, f'm = 1,500 psi.
2. MASONRY MATERIALS SHALL CONFORM TO THE FOLLOWING U.O.N.: (2)

CONCRETE MASONRY UNITS: ASTM C90, , GRADE N, LIGHTWEIGHT, HOLLOW LOAD BEARING UNITS (MINIMUM COMPRESSIVE STRENGTH = (1,900 psi) (2)
GROUT: ASTM C476 (FILL ALL CELLS) (MINIMUM COMPRESSIVE STRENGTH = (2,000 psi) (2)
MORTAR: ASTM C270, TYPE S (MINIMUM COMPRESSIVE STRENGTH = (1,800 psi) (2)

3. REINFORCING STEEL:

REINFORCING TO BE WELDED: ASTM A706
ALL OTHER REINFORCING: ASTM A615, GRADE 60
JOINT REINFORCING: UBC STANDARD 21-10

4. REINFORCING BAR LAP SPLICES: 65 BAR DIAMETERS, UNLESS OTHERWISE NOTED. WHERE MULTIPLE BARS ARE LAPPED IN THE SAME CELL OR COURSE, STAGGER LAP SPLICES A MINIMUM OF 3 FEET.
5. FILL ALL CELLS WITH GROUT.
6. S.L.D. FOR COURSING LAYOUT AND LOCATIONS OF CONSTRUCTION JOINTS IN CMU WALLS.
7. FOR HIGH LIFT GROUTING MAX WALL HEIGHT IS 12 ' AND MAX GROUT LIFT IS 4'-0". IF BLOW-OUT SITUATION OCCURS, CONTRACTOR SHALL STOP THE WORK AND REPORT TO THE STRUCTURAL ENGINEER AND DSA FOR REMEDIAL CORRECTIVE ACTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. (2)

STRUCTURAL STEEL

1. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING:

W-SHAPES, WT-SHAPES	ASTM A 992, GRADE 50
CHANNEL AND ANGLE SHAPES	ASTM A 36
RECTANGULAR HSS	ASTM A 500, GRADE B
PLATES	ASTM A 36
BASE PLATES	ASTM A 36
ANCHOR RODS	ASTM F 1554 GRADE 55 W/ S1
MACHINE BOLTS	ASTM A 307
HIGH STRENGTH BOLTS	ASTM A 325-N TYP. U.O.N., SC OR X AS INDICATED

2. ALL STRUCTURAL STEEL SHALL CONFORM TO AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. FABRICATE FROM APPROVED SHOP DRAWINGS ONLY.
4. ALL HIGH STRENGTH BOLTS SHALL BE SNUG TIGHT ONLY UNLESS OTHERWISE NOTED ON THE DRAWINGS AS SLIP CRITICAL (SC). ALL BOLTED CONNECTIONS NOTED AS SLIP CRITICAL SHALL BE FULLY TENSIONED IN ACCORDANCE WITH THE SPECIFICATIONS.
5. WELDING SHALL ONLY BE PERFORMED BY CERTIFIED WELDERS. ALL WELDING SHALL CONFORM TO AWS SPECIFICATIONS. PROVIDE TEMPORARY BACK-UP PLATES OR WELDS AT ALL COMPLETE JOINT PENETRATION (CJP) WELD LOCATIONS AS REQUIRED; REMOVE PLATES AFTER CJP WELDING AND GRIND AREA SMOOTH WHERE EXPOSED.
6. WHERE FIELD WELDING IS SPECIFICALLY NOTED, THE DESIGNATION IS GIVEN AS A SUGGESTED CONSTRUCTION PROCEDURE ONLY. CONTRACTOR SHALL DETERMINE SUITABILITY OF SHOP OR FIELD WELDING FOR ALL CONDITIONS.
7. DO NOT CUT THROUGH ERECTED STEEL PLATES, BOLTS, ANGLES OR SHAPES WITHOUT PERMISSION OF THE ARCHITECT. WHERE STEEL WILL BE EXPOSED TO VIEW, ALL SLAG AND ROUGH EDGES SHALL BE MECHANICALLY REMOVED TO PROVIDE A SMOOTH EDGE AFTER CUTTING OR BORING. ALL SURFACES CUT BY THERMAL PROCESSES SHALL BE GROUND (1/32 INCH MIN.) TO BRIGHT METAL.
8. ALL SHOP AND FIELD WELDING SHALL BE INSPECTED BY THE OWNER'S TESTING AGENCY.
9. WHERE STRUCTURAL STEEL IS TO BE ATTACHED USING POST-INSTALLED ANCHORS, ANCHOR HOLES SHALL BE DRILLED PRIOR TO PREPARATION OF STEEL SHOP DRAWINGS AND FABRICATION. DRILLED HOLE LOCATIONS SHALL BE RECORDED AND TRANSFERRED USING TEMPLATES FOR THE PURPOSE OF ACCURATELY LOCATING HOLES IN STRUCTURAL STEEL.
10. SEE ARCHITECTURAL DRAWINGS FOR FINISHES AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS).

RESIN ANCHORS AND DOWELS IN CONCRETE

1. DRILLED RESIN ANCHORS AND DOWELS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. DRILLED RESIN ANCHORS AND DOWELS SHALL NOT BE USED TO RESIST VIBRATORY OR SHOCK (IMPACT) LOADS.
3. MINIMUM ANCHOR OR DOWEL EMBEDMENT SHALL BE AS INDICATED IN THE APPROPRIATE TABLES BELOW, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
4. ANCHORS SHALL BE ASTM A 36 ALL-THREAD ROD, EXCEPT AS NOTED OTHERWISE ON THE DRAWINGS OR IN THE SPECIFICATIONS. DOWELS SHALL BE ASTM A 615 GRADE 60, EXCEPT AS NOTED OTHERWISE ON DRAWINGS OR IN THE SPECIFICATIONS.
5. THE OWNERS TESTING AGENCY SHALL PERFORM TENSION LOAD TESTS ON 10% OF ANCHORS AND DOWELS TO THE TEST VALUES INDICATED IN THE TABLES BELOW.
6. WHEN ANCHOR OR DOWEL FAILS A TENSION LOAD TEST, NOTIFY THE ARCHITECT IMMEDIATELY. REFER TO SPECIFICATIONS FOR REPLACEMENT AND RETESTING REQUIREMENTS. ABANDONED HOLES SHALL BE PATCHED.
7. ANCHORS AND DOWELS SPECIFICALLY NOTED ON THE DRAWINGS AS "NO TEST REQUIRED," DO NOT REQUIRE TENSION LOAD TESTS.
8. THE OWNER'S TESTING AGENCY SHALL DEVELOP AND UTILIZE AN EFFECTIVE METHOD FOR FIELD MARKING LOCATIONS OF ANCHOR AND DOWEL TESTS.
9. THE TENSION LOAD TEST VALUES FOR ANCHORS ARE BASED ON 200% OF THE MINIMUM ALLOWABLE TENSION LOAD REPORTED IN THE INTERNATIONAL CODE COUNCIL EVALUATION SERVICES (ICC-ES) TGEST REPORTS FOR THE MANUFACTURERS LISTED IN THE SPECIFICATIONS FOR 2,000 PSI CONCRETE. THE TENSION LOAD TEST VALUES FOR DOWELS IN CONCRETE ARE BASED ON 90% OF THE SPECIFIED YEILD STRENGTH OF THE DOWEL.

RESIN ANCHORS INSTALLED IN EXISTING NORMAL WEIGHT CONCRETE

ANCHOR DIAMETER	MINIMUM EMBEDMENT	TENSION TEST LOAD (Pounds)
3/8"	3 3/8"	2,580
1/2"	4 1/2"	6,210
5/8"	5 5/8"	8,200
3/4"	6 3/4"	8,720
7/8"	7 7/8"	14,710
1"	9"	15,870
1 1/4"	12"	29,980

RESIN DOWELS INSTALLED IN EXISTING NORMAL WEIGHT CONCRETE

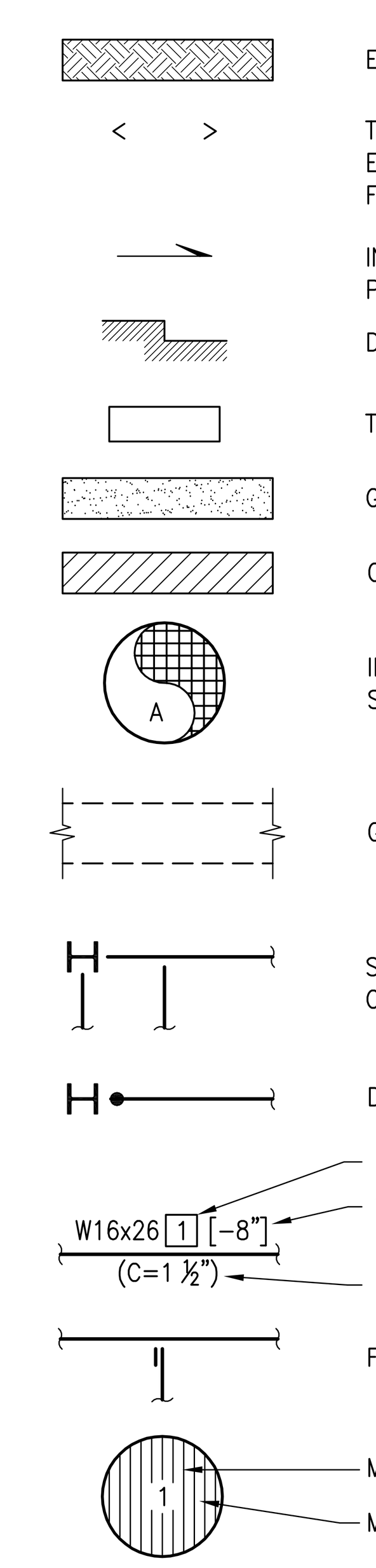
BAR SIZE	MINIMUM EMBEDMENT	TENSION TEST LOAD (Pounds)
#3	4"	5,860
#4	6"	10,808
#5	7 1/2"	14,740
#6	9"	23,760
#7	10"	32,400
#8	12"	42,650
#9	13"	54,000

(3) RFI#24

ABBREVIATIONS

&	AND	HSB	HIGH STRENGTH BOLT
@	AT	HSS	HOLLOW STRUCTURAL SHAPE
A.B.	ANCHOR BOLT	I.F.	INSIDE FACE
ABV.	ABOVE	JT.	JOINT
ALT.	ALTERNATE	LLH	LONG LEG HORIZONTAL
A.R.	ANCHOR ROD	LLV	LONG LEG VERTICAL
BLW.	BELOW	L.S.	LAG SCREW
BM.	BEAM	MAX.	MAXIMUM
B.N.	BOUNDARY NAILING	MB	MACHINE BOLT
B.O.	BOTTOM OF	MIN.	MINIMUM
B.O.S.	BOTTOM OF STEEL	(N)	NEW
BOTT.	BOTTOM	N/A	NOT APPLICABLE
BRG.	BEARING	N.I.C.	NOT IN CONTRACT
B.S.	BACK SIDE	N.S.	NEAR SIDE
BTW/	BETWEEN	N.T.S.	NOT TO SCALE
C.B.F.	CONCENTRIC BRACED FRAME	O.C.	ON CENTER
C.I.P.	CAST-IN-PLACE	O.F.	OUTSIDE FACE
C.J.	CONSTRUCTION JOINT	O.H.	OPPOSITE HAND
CJP	COMPLETE PENETRATION JOINT	OP'G OR OPG.	OPENING
C.L.	CENTERLINE	O.S.B.	ORIENTED STRAND BOARD
CLR.	CLEAR	PDF	POWDER DRIVEN FASTENER
C.M.U.	CONCRETE MASONRY UNIT	PJP	PARTIAL JOINT PENETRATION
CONC.	CONCRETE	PL.	PLATE
CONN.	CONNECTION	PLY. or P.W.	PLYWOOD
CONT.	CONTINUOUS	P.T.	POST-TENSION OR PRESSURE TREATED
CTR'D.	CENTERED	R.D.	RESIN DOWEL
D.B.A.	DEFORMED BAR ANCHOR	REINF.	REINFORCEMENT
DBL.	DOUBLE	REQ.	REQUIRED
DET.	DETAIL	R.O.	ROUGH OPENING
DIA. OR Ø	DIAMETER	S.A.D.	SEE ARCHITECTURAL DRAWINGS
DIAG.	DIAGONAL	S.B.	SOLID BLOCKING
DN.	DOWN	S.C.D.	SEE CIVIL DRAWINGS
DWG.	DRAWING(S)	SECT.	SECTION
DWL.	DOWEL	S.E.D.	SEE ELECTRICAL DRAWINGS
EA.	EACH	SHT.	SHEET(S)
E.F.	EACH FACE	SIM.	SIMILAR
EL. or ELEV.	ELEVATION	S.J.	SEISMIC JOINT
EQ.	EQUAL	S.L.D.	SEE LANDSCAPE ARCHITECTURAL DRAWINGS
E.S.	EACH SIDE	S.M.D.	SEE MECHANICAL
E.W.	EACH WAY	S.P.D.	SEE PLUMBING DRAWINGS
FDN.	FOUNDATION	SPECS.	SPECIFICATIONS
F.F.	FINISH FLOOR	SQ.	SQUARE
FIN.	FINISH	S.R.	SEISMIC RESISTING
FLG.	FLANGE	STAGG'D.	STAGGERED
FLR.	FLOOR	STD.	STANDARD
F.O.C.	FACE OF CONCRETE	STIFF.	STIFFENER
F.O.W.	FACE OF WALL	STL.	STEEL
FRMG.	FRAMING	SYMM.	SYMMETRICAL
F.S.	FAR SIDE	SIM.	SIMILAR
FTG.	FOOTING	T&B	TOP AND BOTTOM
GALV.	GALVANIZED	T.O.F.F.	TOP OF FINISHED FLOOR
G.B.	GRADE BEAM	T.O.F.	TOP OF FOOTING
GR.	GRADE	T.O.C.	TOP OF CONCRETE
H. or HORIZ.	HORIZONTAL	T.O.S.	TOP OF STEEL
H.S.	HEADED STUD	T.O.W.	TOP OF WALL
		TYP.	TYPICAL
		U.O.N.	UNLESS OTHERWISE NOTED
		V.I.F.	VERIFY IN FIELD
		(V) or VERT.	VERTICAL
		W/	WITH
		W/O	WITHOUT
		W.P.	WORK POINT

LEGEND



EARTH
TOP OF FOOTING, GRADE BEAM, OR MAT SLAB ELEVATION WITH RESPECT TO TOP OF FINISHED FLOOR
INDICATES SLOPE. ARROWHEAD POINTS TO LOWER ELEVATION.
DEPRESSED SLAB TYPE, SEE
TOP OF SLAB, WALL, ETC. ELEVATION
GROUT
C.M.U.
INDICATES CONCRETE SLAB ON GRADE
GRADE BEAM
SIMPLE BEAM TO BEAM AND BEAM TO COLUMN CONNECTION
DOUBLE ROW BOLTING CONNECTION
HEADED STUD LAYOUT
TOP OF BEAM ELEVATION WITH RESPECT TO TYPICAL TOP OF STEEL ELEVATION
POSITIVE OR UPWARD CAMBER AT MID-SPAN
FULL-DEPTH STIFFENER
METAL DECK SPAN DIRECTION
METAL DECK TYPE (NO FILL)

McCARTHY

LPA KH

McCarthy Building Companies, Inc
343 Sansome Street, 14th Floor
San Francisco, California 94104
P 415 | 364-1339
F 415 | 397-5999

REGISTERED PROFESSIONAL ENGINEER
PAUL E. RODLER
No. 3425
Exp.3/31/10
STRUCTURAL
STATE OF CALIFORNIA

FORELL/ELSESSER ENGINEERS, INC.
Structural Engineers
160 Pine Street · San Francisco, CA. 94111
Phone: (415) 837-0700 · Fax: (415) 837-0800
www.forell.com Job No.: 06-091.004

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICE
APPL. #: 01-110097
AC____ FLS____ SS____
DATE____
FILE NUMBER:

College of San Mateo
Site Package
San Mateo, CA

Developed for
San Mateo County Community College District

Revision Description	Date
DSA Submittal	09-19-08
(1) UPDATED DETAILS FOR PRICING SET	09 APRIL 2009
(2) DSA FINAL	09 APRIL 2009
(3) PROJECT RECORD DRAWING	JUNE 2011

Revision Description	Date

Job. No.	27082.30
Date	09 APRIL 2009
Drawn by	MC
Checked by	PR
Scale	NO SCALE

0 4 8 16

GENERAL NOTES, ABBREVIATIONS AND LEGEND

S0.1