



- REFERENCES**
- (N) 4" CONCRETE SLAB W/ #3 @ 18" O.C. E.A. WAY OVER 2" LEVELING SAND OVER 90% COMPACTED SOIL
 - CL CONTROL / CONTRACTION JOINTS W/ SEALANT AS PER DETAIL G/SF516
 - EU EXPANSION JOINT W/ SEALANT AS PER DETAIL G/SF516
 - TC TOP OF CURB
 - C CONCRETE
 - FF FINISH FLOOR
 - TW TOP OF WALL
 - G GROUND
 - PROPOSED GRADE ELEVATION
 - (E) XXX.XX' AC EXISTING GRADE ELEVATION
 - DI DRAIN INLET
 - CC CABINET CONCRETE

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ATRium CANOPIES GRADING PLAN

Project Title
 BUILDING 1 - CANOPIES AT ATRIUM WITH FLAT WORK IMPROVEMENT

Location
 205 E. Clinton Ave, Fresno, CA

Date
 05-07-2012

Project Number
 570-11-123

Building Number
 Building 1

Drawing Number
 CS110

Office of Construction and Facilities Management
 Department of Veterans Affairs

100% SUBMITTAL - FOR CONSTRUCTION

- GENERAL NOTES FOR FOUNDATIONS AND SLAB ON GRADES:**
1. ALL CONCRETE PLACEMENT SHALL MEET THE REQUIREMENTS OF CHAPTER 19 OF THE 2010 C.B.C. & ACI 360R-06.
 2. INITIALLY, THE TOP LAYER OF SOIL SHOULD BE STRIPPED OF ALL ORGANIC MATERIAL, DEBRIS AND FROZEN MATERIAL.
 3. THE SITE SHOULD BE GRADED TO PROVIDE GOOD SURFACE DRAINAGE THROUGHOUT THE CONSTRUCTION PERIOD AND FOR THE LIFETIME OF THE STRUCTURE.
 4. COMPACT SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY, ACCORDING TO ASTM D-1557 AS SPECIFIED BELOW:
 -UNDER SLABS, STEPS, SIDEWALKS: 90% (PERCENT)
 5. CONCRETE SHALL HAVE A 28-DAYS SPECIFIED COMPRESSIVE STRENGTH (F'c) OF NOT LESS THAN 2,500 PSI FOR SLABS & SIDEWALKS AND 3000 PSI FOR CANOPY STEEL POSTS FOUNDATION.
 6. IF CONCRETE POUR IS EVER INTERRUPTED LONG ENOUGH FOR THE PLACED CONCRETE TO HARDEN, A CONSTRUCTION JOINT SHOULD BE USED.
 7. CONSTRUCTION JOINTS OR BULKHEADS CAN BE WOOD, METAL, OR PRECAST CONCRETE. THEY SHOULD BE PLACED AT THE PROPER ELEVATION WITH THE NECESSARY SUPPORT TO KEEP THE BULKHEAD STRAIGHT DURING THE ENTIRE PLACING & FINISHING PROCEDURE. IF DOWELS ARE REQUIRED, THE PROVISIONS SHOULD BE MADE ALONG THE BULKHEAD TO ENSURE PROPER ALIGNMENT DURING THE ENTIRE PROCEDURE.
 8. CONSTRUCTION JOINTS AND THEIR LOCATIONS, SHALL COMPLY WITH THE PROVISIONS OF ACI 318, SECTION 6.4
 9. ALL CONSTRUCTION JOINTS SHOULD BE INTERNALLY VIBRATED AT FREQUENT INTERVALS TO PROPERLY CONSOLIDATE AND DENSIFY THE CONCRETE AT THE JOINT AND AROUND THE DOWELS.
 10. USE SAMCUT JOINTS TO LIMIT RANDOM, OUT OF JOINT, FLOOR SLAB CRACKING. SAMCUT JOINTS SHOULD BE CONTINUOUS ACROSS INTERSECTING JOINTS; NOT STAGGERED OR OFFSET.
 11. USING CONVENTIONAL PROCESSES, SAMCUT SHALL BE MADE WITHIN 4 TO 12 HOURS AFTER THE SLAB HAS BEEN FINISHED IN AN AREA - 4 HOURS IN HOT WEATHER TO 12 HOURS IN COLD WEATHER. FOR EARLY-ENTRY DRY-CUT SAWS, THE WAITING PERIOD WILL TYPICALLY VARY FROM 1 HOUR IN HOT WEATHER TO 4 HOURS IN COLD WEATHER.
 12. THE DEPTH OF SAMCUTS USING A WET CONVENTIONAL SAW SHOULD BE AT LEAST 1/4 OF THE SLAB DEPTH OR A MINIMUM OF 1 IN. IF USING AN EARLY-ENTRY DRY-CUT SAW SHOULD BE 1 IN. MINIMUM FOR SLAB DEPTHS UP TO 9 IN.
 13. JOINTS SHOULD BE PROTECTED TO ENSURE THEIR LONG-TERM PERFORMANCE. JOINTS SHALL BE VACUUM BEFORE FILLING & SEALING THEM.
 14. IT IS ADVISABLE TO DEFER JOINT FILLING AND SEALING AS LONG AS POSSIBLE TO MINIMIZE THE EFFECTS OF SHRINKAGE-RELATED JOINT OPENING ON THE FILLER OR SEALANT. APPROVAL OF VA COR IS REQUIRED PRIOR TO STARTING THIS WORK
 15. REINFORCEMENT FOR CRACK-WIDTH CONTROL ONLY SHOULD BE AT OR ABOVE MID-DEPTH OF THE SLAB-ON-GROUND, OR 1/3 OF THE DEPTH FROM THE TOP, NEVER BELOW MID-DEPTH.
 16. A MINIMUM RATIO OF REINFORCEMENT AREA TO GROSS CONCRETE AREA OF 0.0015 SHOULD BE USED IN EACH DIRECTION THAT SHRINKAGE COMPENSATION IS DESIRED. FOR A 4IN. THICK CONC SLAB THE MINIMUM REINFORCEMENT IS #3 @ 18IN. O.C IN EACH DIRECTION. THE LENGTH OF TIME, TEMPERATURE AND MOISTURE CONDITIONS FOR CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318, SECTION 5.11. USE THE WET COVERING METHOD USING BURLAPS OR SIMILAR.
 17. CONCRETE SHALL BE PROTECTED ADEQUATELY FROM INJURIOUS ACTION BY THE SUN, RAIN, WIND, FLOWING WATER, FROST AND MECHANICAL INJURY, AND SHALL NOT BE ALLOWED TO DRY OUT FROM THE TIME IT IS PLACED UNTIL THE EXPIRATION OF THE MINIMUM CURING PERIOD. A FINE FOG SPRAY SHALL BE USED TO REDUCE PLASTIC SHRINKAGE CRACKS AFTER FINISHING OPERATIONS. IMMEDIATELY AFTER THE WET CONCRETE HAS BEEN BROUGHT TO A FLAT SURFACE AND THE SHINY SURFACE HAS DISAPPEARED, ADDITIONAL MOISTURE SHALL BE APPLIED TO RESTORE SHINE. USING AN ATOMIZING TYPE FOG SPRAYER. FREQUENT LIGHT APPLICATION OF MOISTURE SHALL BE PROVIDED AS REQUIRED BY WEATHER CONDITIONS.
 18. MINIMUM CURING PERIOD SHALL BE AT LEAST 7 DAYS. DO NOT HOLD OFF THE CURING PROCEDURE. IT SHOULD START IMMEDIATELY AFTER FINISHED POURING OF THE CONCRETE SLAB AS PER ACI 308
 19. KEEP HEAVY EQUIPMENT OFF SLABS FOR AT LEAST 7 DAYS.
 20. FINISHED CONCRETE SLABS SHALL BE LOCATED A MINIMUM OF 6 INCHES ABOVE FINISHED GRADE AND SHALL BE LEVEL TO A TOLERANCE OF 1/4 INCH IN 10 FEET. FINISH SLAB FLATNESS AND LEVELNESS VALUES SHALL COMPLY WITH CONTRACT SPECIFICATIONS, SECTION 03 30 00, NOTE 3.13
 21. ALL CONCRETE WALKS SHALL BE A MINIMUM OF 1 INCH ABOVE FINISHED GRADE OF LAWN AREAS, 2 INCHES MINIMUM ABOVE FINISHED GRADE OF PLANTING AREA.
 22. ALL STEEL REBAR REINFORCEMENT SHALL BE OF INTERMEDIATE GRADE CONFORMING TO THE STANDARD SPECIFICATIONS FOR BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT ASTM A615-70 GRADE 60. BARS LARGER THAN # 3 SHALL BE DEFORMED. ALL BARS SHALL BE CLEAN, FREE FROM OIL, EXCESSIVE MILL SCALE, PITTED OR LOOSE RUST.
 23. ALL VERTICAL OR HORIZONTAL SPLICES OF STEEL REINFORCEMENT SHALL HAVE A MINIMUM LAP OF 40 BAR DIAMETERS.
 24. THE WIRE FOR REINFORCEMENT SHALL BE 16 GAUGE OR HEAVIER WHERE NOTED OR SPECIFIED, BLACK OR GALVANIZED STEEL WIRE, CONFORMING TO ASTM A82-70.
 25. ***CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND TO BRING ANY OMISSIONS OR DISCREPANCIES TO THE ATTENTION OF THE ENGINEER.***
 26. CURING PROCESSES SHALL BE IN CONFORMANCE WITH ACI 308R-01 (GUIDE TO CURING CONCRETE) THE FOLLOWING LIST OF PRACTICES AND MEASURES TO REDUCE OR AVOID POTENTIAL PROBLEMS OF HOT WEATHER COND. CONCRETING ARE:
 - COOL THE CONCRETE
 - SELECT CONCRETE MATERIALS & PROPORTIONS W/ SATISFACTORY RECORDS IN HOT WEATHER COND.
 - COOL THE CONCRETE
 - MANAGE ON-SITE CONCRETE PLACEMENT & FINISH THE CONCRETE
 - MINIMIZE ON-SITE CONCRETE PLACEMENT & FINISH THE CONCRETE
 - PLAN THE JOB TO AVOID ADVERSE EXPOSURE OF THE CONCRETE TO THE ENVIRONMENT. SCHEDULE PLACING OPERATIONS DURING TIME OF THE DAY OR NIGHT WHEN THE WEATHER CONDITIONS ARE FAVORABLE
 - PROTECT THE CONCRETE FROM MOISTURE LOSS DURING PLACING AND CURING PERIODS.
 - FOLLOW ACI 308 HOT WEATHER CONCRETING
 27. MAXIMUM CONCRETE SLAB SHRINKAGE CRACK WIDTH SHALL BE 0.016 INCHES AS SPECIFIED PER ACI 224R, SECTION 4.4, TABLE 4.1
 28. CONCRETE SLAB FLATNESS AND LEVELNESS AS PER CONTRACT SPECIFICATION