

GRADING NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE GRADING CODE OF THE COUNTY OF ORANGE AND ANY SPECIAL REQUIREMENTS OF THE PERMIT. A COPY OF THE GRADING CODE AND THE MANUAL SHALL BE RETAINED ON THE JOB SITE WHILE WORK IS IN PROGRESS. WHEN REFERENCED ON THE PLANS, A COPY OF PF&RD STANDARD PLANS SHALL ALSO BE RETAINED ON THE SITE.
2. GRADING SHALL NOT BE STARTED WITHOUT FIRST NOTIFYING THE DISTRICT GRADING INSPECTOR. A PRE-GRADING MEETING ON THE SITE IS REQUIRED BEFORE START OF GRADING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, DESIGN CIVIL ENGINEER, SOILS ENGINEER, GEOLOGIST, DISTRICT GRADING INSPECTOR AND, WHEN REQUIRED, THE ARCHAEOLOGIST AND PALEONTOLOGIST. THE REQUIRED INSPECTIONS FOR GRADING WILL BE EXPLAINED AT THE MEETING.
3. ISSUANCE OF A GRADING PERMIT DOES NOT ELIMINATE THE NEED FOR PERMITS FROM OTHER AGENCIES WITH REGULATORY RESPONSIBILITIES FOR CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE WORK AUTHORIZED ON THIS PLAN.
4. THE GRADING PERMIT AND AN APPROVED COPY OF THE GRADING PLAN SHALL BE ON THE PERMITTED SITE WHILE WORK IS IN PROGRESS.
5. PRELIMINARY SOIL AND GEOLOGY REPORTS AND ALL SUBSEQUENT REPORTS AS APPROVED BY PSDS, GRADING SECTION, ARE CONSIDERED A PART OF THE APPROVED GRADING PLAN.
6. THE SOIL ENGINEER AND ENGINEERING GEOLOGIST SHALL PERFORM SUFFICIENT OBSERVATION AND BE AVAILABLE DURING GRADING AND CONSTRUCTION TO VERIFY COMPLIANCE WITH THE PLANS, SPECIFICATIONS AND THE CODE WITHIN THEIR PURVIEW.
7. THE CIVIL ENGINEER SHALL BE AVAILABLE DURING GRADING TO VERIFY COMPLIANCE WITH THE PLANS, SPECIFICATIONS, CODE AND ANY SPECIAL CONDITIONS OF THE PERMIT WITHIN THEIR PURVIEW.
8. THE ENGINEERING GEOLOGIST AND SOIL ENGINEER SHALL, AFTER CLEARING AND PRIOR TO THE PLACEMENT OF FILL IN CANYONS, INSPECT EACH CANYON FOR AREAS OF ADVERSE STABILITY AND TO DETERMINE THE PRESENCE OR ABSENCE OF SUBSURFACE WATER OR SPRING FLOW. IF NEEDED, SUBDRAINS WILL BE DESIGNED AND CONSTRUCTED PRIOR TO THE PLACEMENT OF FILL IN EACH RESPECTIVE CANYON.
9. SUBDRAIN OUTLETS SHALL BE COMPLETED AT THE BEGINNING OF THE SUBDRAIN CONSTRUCTION.
10. THE EXACT LOCATION OF THE SUBDRAINS SHALL BE SURVEYED IN THE FIELD FOR LINE/GRADE AND REFLECTED ON AS GRADED PLANS.
11. AREAS TO RECEIVE FILL SHALL BE PROPERLY PREPARED AND APPROVED IN WRITING BY THE SOIL ENGINEER AND THE BUILDING OFFICIAL PRIOR TO PLACING FILL.
12. FILLS SHALL BE BENCHED INTO COMPETENT MATERIAL PER PF&RD STANDARD PLAN NO. 1322.
13. ALL EXISTING FILLS SHALL BE APPROVED BY THE BUILDING OFFICIAL OR REMOVED PRIOR TO PLACING ADDITIONAL FILLS.
14. FILLS SHALL BE COMPACTED THROUGHOUT TO A MINIMUM OF 90% RELATIVE COMPACTION. AGGREGATE BASE FOR ASPHALT SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION. MAXIMUM DENSITY SHALL BE DETERMINED BY UNIFORM BUILDING CODE STANDARD NO. 70-1 OR APPROVED EQUIVALENT AND FIELD DENSITY BY UNIFORM BUILDING CODE STANDARD NO. 70-2 OR APPROVED EQUIVALENT.
15. CUT AND FILL SLOPES SHALL BE NO STEEPER THAN 2 FOOT HORIZONTAL TO 1 FOOT VERTICAL (2:1) EXCEPT WHERE SPECIFICALLY APPROVED OTHERWISE.
16. ALL CUT SLOPES SHALL BE INVESTIGATED BOTH DURING AND AFTER GRADING BY THE ENGINEERING GEOLOGIST TO DETERMINE IF ANY SLOPE STABILITY PROBLEM EXISTS. SHOULD EXCAVATION REVEAL ANY GEOLOGICAL HAZARDS OR POTENTIAL GEOLOGICAL HAZARDS, THE ENGINEERING GEOLOGIST SHALL SUBMIT RECOMMENDED TREATMENT TO THE BUILDING OFFICIAL FOR APPROVAL.
17. WHERE SUPPORT OR BUTTRESSING OF CUT AND FILL AND NATURAL SLOPES IS DETERMINED TO BE NECESSARY BY THE ENGINEERING GEOLOGIST AND SOIL ENGINEER, THE SOIL ENGINEER SHALL SUBMIT DESIGN, LOCATIONS AND CALCULATIONS TO THE BUILDING OFFICIAL PRIOR TO CONSTRUCTION. THE ENGINEERING GEOLOGIST AND SOIL ENGINEER SHALL OBSERVE AND TEST THE CONSTRUCTION OF THE BUTTRESSING AND PROVIDE THEIR PROFESSIONAL OPINIONS AS TO THE STABILITY OF THE SLOPE AND ADJACENT STRUCTURES UPON COMPLETION.
18. WHEN CUT PADS ARE BROUGHT TO NEAR GRADE, THE ENGINEERING GEOLOGIST SHALL DETERMINE IF THE BEDROCK IS EXTENSIVELY FRACTURED OR FAULTED AND WILL READILY TRANSMIT WATER. IF CONSIDERED NECESSARY BY THE ENGINEERING GEOLOGIST AND SOIL ENGINEER, A COMPACTED FILL BLANKET WILL BE PLACED.
19. ALL TRENCH BACKFILLS SHALL BE TESTED AND APPROVED BY THE SOIL ENGINEER PER THE GRADING CODE.
20. ANY EXISTING IRRIGATION LINES AND CISTERNS SHALL BE REMOVED, OR CRUSHED IN PLACE, AND APPROVED BY THE BUILDING OFFICIAL AND SOIL ENGINEER.
21. ANY EXISTING WATER WELLS SHALL BE ABANDONED IN COMPLIANCE WITH THE SPECIFICATIONS APPROVED BY ORANGE COUNTY, HUMAN SERVICES AGENCY, DIVISION OF ENVIRONMENTAL HEALTH.
22. ANY EXISTING CESSPOOLS AND SEPTIC TANKS SHALL BE ABANDONED IN COMPLIANCE WITH THE UNIFORM PLUMBING CODE TO THE APPROVAL OF P.D.S.D./BUILDING INSPECTION.
23. STOCK PILING OF EXCESS MATERIAL SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO EXCAVATION.
24. EXPORT SOIL MUST BE TRANSPORTED TO A LEGAL DUMP OR TO A PERMITTED SITE APPROVED BY THE DISTRICT GRADING INSPECTOR.
25. THE PERMITTEE SHALL COMPLY WITH THE GRADING CODE REQUIREMENTS FOR HAUL ROUTES WHEN AN EXCESS OF 5,000 CUBIC YARDS OF EARTH IS TRANSPORTED TO OR FROM A PERMITTED SITE ON PUBLIC ROADWAYS.
26. THE PERMITTEE IS RESPONSIBLE FOR DUST CONTROL MEASURES.
27. THE PERMITTEE SHALL GIVE REASONABLE NOTICE TO THE OWNER OF ADJOINING LANDS AND BUILDINGS PRIOR TO BEGINNING EXCAVATIONS WHICH MAY AFFECT THE LATERAL AND SUBJACENT SUPPORT OF THE ADJOINING PROPERTY. THE NOTICE SHALL STATE THE INTENDED DEPTH OF EXCAVATION AND WHEN THE EXCAVATION WILL COMMENCE. THE ADJOINING OWNER SHALL BE ALLOWED AT LEAST 30 DAYS AND REASONABLE ACCESS ON THE PERMITTED PROPERTY TO PROTECT HIS STRUCTURE, IF HE SO DESIRES, UNLESS OTHERWISE PROTECTED BY LAW.
28. ALL CONCRETE STRUCTURES THAT COME IN CONTACT WITH THE ON-SITE SOILS SHALL BE CONSTRUCTED WITH TYPE 5 CEMENT UNLESS OTHERWISE UNNECESSARY BY SOLUBLE SULPHATE-CONTENT TESTS CONDUCTED BY THE SOIL ENGINEER.
29. SLOPES EXCEEDING 5 FEET HEIGHT SHALL BE PLANTED WITH AN APPROVED PLANT MATERIAL. IN ADDITION, SLOPES EXCEEDING 15 FEET IN HEIGHT SHALL BE PROVIDED WITH AN APPROVED IRRIGATION SYSTEM, UNLESS OTHERWISE APPROVED BY THE BUILDING OFFICIAL.
30. ALL EXISTING DRAINAGE COURSE THROUGH THIS SITE SHALL REMAIN OPEN UNTIL FACILITIES TO HANDLE STORM WATER ARE APPROVED AND FUNCTIONAL; HOWEVER, IN ANY CASE, THE PERMITTEE SHALL BE HELD LIABLE FOR ANY DAMAGE DUE TO THE OBSTRUCTING OF NATURAL DRAINAGE PATTERNS.
31. SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE.
32. THE LOCATION AND PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE PERMITTEE.
33. APPROVED PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS SHALL BE USED TO PROTECT ADJOINING PROPERTIES DURING GRADING.
34. GRADING OPERATIONS INCLUDING MAINTENANCE OF EQUIPMENT WITHIN ONE-HALF MILE OF A HUMAN OCCUPANCY SHALL NOT BE CONDUCTED BETWEEN THE HOURS OF 8 P.M. AND 7 A.M. DAILY, ON SUNDAY OR ON A FEDERAL HOLIDAY.
- a. ALL CONSTRUCTION VEHICLES OR EQUIPMENT, FIXED OR MOBILE, OPERATED WITHIN 1,000 FEET OF A DWELLING SHALL BE EQUIPPED WITH PROPERLY OPERATING AND MAINTAINED MUFFLERS.

- b. ALL OPERATION SHALL COMPLY WITH ORANGE COUNTY COODIFIED ORDINANCE DIVISION 6 (NOISE CONTROL), INCLUDING THE RESTRICTION OF CONSTRUCTION ACTIVITIES FROM 7 A.M. TO 8 P.M. MONDAY THROUGH SATURDAY, WITH NO CONSTRUCTION ALLOWED ON SUNDAYS OR FEDERAL HOLIDAYS.
- c. STOCKPILING AND/OR VEHICLE STAGING AREAS SHALL BE LOCATED AS FAR AS PRACTICABLE FROM DWELLINGS AND WITHIN THE LIMITS OF GRADING PERMIT.
35. GRADING AND EXCAVATION SHALL BE HALTED DURING PERIODS OF HIGH WINDS ACCORDING TO AQMD MEASURE F-4. HIGH WINDS ARE DEFINED AS 30 MPH OR GREATER. THIS LEVEL OCCURS ONLY UNDER UNUSUALLY EXTREME CONDITIONS, SUCH AS SANTA ANA WIND CONDITIONS.
36. THE CIVIL ENGINEER, AS A CONDITION OF ROUGH GRADE APPROVAL, SHALL PROVIDE A BLUE TOP WITH ACCOMPANYING WITNESS STAKE, SET AT THE CENTER OF EACH PAD REFLECTING THE PAD ELEVATION FOR PRECISE PERMITS AND A BLUE TOP WITH WITNESS STAKE SET AT THE DRAINAGE SWALE HIGH POINT REFLECTING THE HIGH POINT ELEVATION FOR PRELIMINARY PERMITS.
37. PRIOR TO FINAL APPROVAL, THE CIVIL ENGINEER SHALL VERIFY TO THE BUILDING OFFICIAL THE AMOUNT OF EARTH MOVED DURING THE GRADING OPERATION.
38. THE ENGINEERING GEOLOGIST SHALL PERFORM PERIODIC OBSERVATION AND SUBMIT A COMPLETE REPORT AND MAP UPON COMPLETION OF THE ROUGH GRADING.
39. THE GRADING CONTRACTOR SHALL SUBMIT A STATEMENT OF COMPLIANCE TO THE APPROVED GRADING PLAN PRIOR TO FINAL APPROVAL.
40. THE COMPACTION REPORT AND APPROVAL FROM THE SOIL ENGINEER SHALL INDICATE THE TYPE OF FIELD TESTING PERFORMED. THE METHOD OF OBTAINING THE IN-PLACE DENSITY SHALL BE IDENTIFIED, WHETHER SAND CONE, DRIVE RING, OR NUCLEAR, AND SHALL BE SO NOTED FOR EACH TEST. SUFFICIENT MAXIMUM DENSITY DETERMINATIONS SHALL BE PERFORMED TO VERIFY THE ACCURACY OF THE MAXIMUM DENSITY CURVES USED BY THE FIELD TECHNICIAN.
41. IN THE EVENT THAT SOIL CONTAMINATION IS DISCOVERED DURING EXCAVATION AND REMOVAL OF AN EXISTING TANK, WORK SHALL BE STOPPED UNTIL A SITE ASSESSMENT AND MITIGATION PLAN HAS BEEN PREPARED, SUBMITTED AND APPROVED BY HCA/ENVIRONMENTAL HEALTH AND P.D.S.D./GRADING.

EROSION CONTROL

42. IN CASE OF EMERGENCY CALL:  
NAME : JOHN MARKEL  
WORK TELEPHONE: (949) 240-3363 (24 HR. NO.)
43. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
44. EROSION CONTROL DEVICES SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE BUILDING OFFICIAL.
45. ALL REMOVABLE EROSION PROTECTIVE DEVICES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE 5-DAY RAIN PROBABILITY FORECAST EXCEEDS 40%.
46. AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM STREETS, CHECK BERMS AND BASINS.
47. GRADED AREAS ON THE PERMITTED AREA PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPES AT THE CONCLUSION OF EACH WORKING DAY. DRAINAGE TO BE DIRECTED TOWARD DESILTING FACILITIES.
48. THE PERMITTEE AND CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.
49. THE PERMITTEE AND CONTRACTOR SHALL INSPECT THE EROSION CONTROL WORK AND INSURE THAT THE WORK IS IN ACCORDANCE WITH THE APPROVED PLANS.
50. REGULAR WATERING, AND OTHER DUST SUPPRESSION MEASURES AS REQUIRED BY THE MANAGER, DEVELOPMENT SERVICES, SHALL BE IMPLEMENTED TO REDUCE EMISSIONS DURING GRADING & CONSTRUCTION, AND TO ENSURE COMPLIANCE WITH SCAQMD RULE 403.
51. THE PERMITTEE SHALL NOTIFY ALL GENERAL CONTRACTORS, SUBCONTRACTORS, MATERIAL SUPPLIERS, LESSORS, AND PROPERTY OWNERS THAT DUMPING OF CHEMICALS INTO THE STORM DRAIN SYSTEM OR THE WATERSHED IS PROHIBITED.
52. PERMITTEE SHALL MAINTAIN CONSTRUCTION SITE IN SUCH A CONDITION THAT AN ANTICIPATED STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. POTENTIAL POLLUTANTS ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STAINS, SEALANTS, GLUES, LIMES, PESTICIDES, HERBICIDES, WOOD PRESERVATIVES AND SOLVENTS; ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS; FUELS, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS; FERTILIZERS, VEHICLE/EQUIPMENT WASH WATER AND CONCRETE WASH WATER; CONCRETE DETERGENT OR FLOATABLE WASTES; WASTES FROM ANY; ENGINE/EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING; AND SUPERCHLORINATED POTABLE WATER LINE FLUSHINGS.
53. DURING CONSTRUCTION, PERMITTEE SHALL DISPOSE OF SUCH MATERIALS IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ON-SITE, PHYSICALLY SEPARATED FROM POTENTIAL STORMWATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
54. PERMITTEE MAY DISCHARGE MATERIAL OTHER THAN STORMWATER ONLY WHEN NECESSARY FOR PERFORMANCE AND COMPLETION OF CONSTRUCTION PRACTICES AND WHERE THEY DO NOT: CAUSE OR CONTRIBUTE TO A VIOLATION OF ANY WATER QUALITY STANDARD; CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR NUISANCE; OR CONTAIN A HAZARDOUS SUBSTANCE IN A QUANTITY REPORTABLE UNDER FEDERAL REGULATIONS 40 CFR PARTS 117 AND 302.
55. IN THE EVENT THAT HUMAN REMAINS ARE EXPOSED DURING SITE PREPARATION, GRADING OR CONSTRUCTION, THE PROJECT CONTRACTOR SHALL CEASE ALL ACTIVITY IN THE VICINITY OF THE REMAINS. THE PROJECT CONTRACTOR WILL COMPLY WITH THE REQUIREMENTS OF THE STATE HEALTH AND SAFETY CODE SECTION 7050.5 WHICH STATES THAT NO FURTHER DISTURBANCE OF THE REMAINS SURROUNDING AREA SHALL OCCUR UNTIL THE COUNTY CORONER HAS MADE THE NECESSARY FINDINGS AS TO THE ORIGIN AND DISPOSITION OF THE HUMAN REMAINS, PURSUANT TO PUBLIC RESOURCES CODE SECTION 5097.98 (FINAL EIR 557 MITIGATION MONITORING PROGRAM CONDITION NO. CR-5).
56. CONTRACTOR SHALL MINIMIZE THE GENERATION OF WASTE MATERIAL DURING CONSTRUCTION AND GRADING CONSISTENT WITH ASSEMBLY BILL 939, WHERE POSSIBLE THE CONTRACTOR SHALL RECYCLE SOLID CONSTRUCTION WASTE MATERIALS INTO MATERIALS TO BE REUSED ON SITE OR AT THE APPROPRIATE RECYCLE CENTER. MATERIALS INCLUDE, BUT ARE NOT LIMITED TO: CONCRETE, MASONRY, ASPHALTIC CONCRETE, WOOD, GLASS, METALS, PAPER, PLASTICS, ETC. HAZARDOUS MATERIALS SHALL BE RECYCLED OR PROCESSED AT THE APPROPRIATE FACILITIES. CONTRACTOR SHALL MAKE NECESSARY EFFORTS TO REDUCE WASTE SOURCE AND OVERALL AMOUNT OF WASTES GENERATED. (FINAL EIR 557 MITIGATION MONITORING PROGRAM CONDITION NO. U-5).

57. THE PERMITTEE SHALL GIVE REASONABLE NOTICE TO THE OWNER OF ADJOINING LANDS AND BUILDINGS PRIOR TO BEGINNING EXCAVATIONS WHICH MAY AFFECT THE LATERAL AND SUBJACENT SUPPORT OF THE ADJOINING PROPERTY. THE NOTICE SHALL STATE THE INTENDED DEPTH OF EXCAVATION AND WHEN THE EXCAVATION WILL COMMENCE. THE ADJOINING OWNER SHALL BE ALLOWED AT LEAST 30 DAYS AND REASONABLE ACCESS ON THE PERMITTED PROPERTY TO PROTECT HIS STRUCTURE, IF HE SO DESIRES, UNLESS OTHERWISE PROTECTED BY LAW.
58. ALL CONCRETE STRUCTURES THAT COME IN CONTACT WITH THE ON-SITE SOILS SHALL BE CONSTRUCTED WITH TYPE 5 CEMENT UNLESS OTHERWISE UNNECESSARY BY SOLUBLE SULPHATE-CONTENT TESTS CONDUCTED BY THE SOIL ENGINEER.
59. SLOPES EXCEEDING 5 FEET HEIGHT SHALL BE PLANTED WITH AN APPROVED PLANT MATERIAL. IN ADDITION, SLOPES EXCEEDING 15 FEET IN HEIGHT SHALL BE PROVIDED WITH AN APPROVED IRRIGATION SYSTEM, UNLESS OTHERWISE APPROVED BY THE BUILDING OFFICIAL.
60. ALL EXISTING DRAINAGE COURSE THROUGH THIS SITE SHALL REMAIN OPEN UNTIL FACILITIES TO HANDLE STORM WATER ARE APPROVED AND FUNCTIONAL; HOWEVER, IN ANY CASE, THE PERMITTEE SHALL BE HELD LIABLE FOR ANY DAMAGE DUE TO THE OBSTRUCTING OF NATURAL DRAINAGE PATTERNS.
61. SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE.
62. THE LOCATION AND PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE PERMITTEE.
63. APPROVED PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS SHALL BE USED TO PROTECT ADJOINING PROPERTIES DURING GRADING.
64. GRADING OPERATIONS INCLUDING MAINTENANCE OF EQUIPMENT WITHIN ONE-HALF MILE OF A HUMAN OCCUPANCY SHALL NOT BE CONDUCTED BETWEEN THE HOURS OF 8 P.M. AND 7 A.M. DAILY, ON SUNDAY OR ON A FEDERAL HOLIDAY.
- a. ALL CONSTRUCTION VEHICLES OR EQUIPMENT, FIXED OR MOBILE, OPERATED WITHIN 1,000 FEET OF A DWELLING SHALL BE EQUIPPED WITH PROPERLY OPERATING AND MAINTAINED MUFFLERS.

NOTICE TO CONTRACTORS

ALL UNDERGROUND UTILITIES OR STRUCTURES REPORTED BY THE OWNER OR OTHERS, AND THOSE SHOWN ON THE RECORDS EXAMINED, ARE INDICATED WITH THEIR APPROXIMATE LOCATION AND EXTENT. THE OWNER, BY ACCEPTING THESE PLANS OR PROCEEDING WITH THE IMPROVEMENTS, WARRANTS HERETO, AGREES TO ASSUME LIABILITY AND TO HOLD UNDERDESIGNED HARMLESS FOR ANY DAMAGES RESULTING FROM THE EXISTENCE OF UNDERGROUND UTILITIES OR STRUCTURES NOT REPORTED TO THE UNDERSIGNED, NOT INDICATED ON THE PUBLIC RECORDS EXAMINED, LOCATED AT VARIANCE WITH THOSE REPORTED OR SHOWN ON RECORDS EXAMINED. THE CONTRACTOR IS REQUIRED TO TAKE THE NECESSARY PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES SHOWN AND ANY OTHER UTILITIES OR STRUCTURES FOUND AT THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF THE UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING WORK.

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THIS PLAN ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN AND ANY OTHER LINES OR STRUCTURES NOT SHOWN ON THESE PLANS.

ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE OCCUPATIONAL SAFETY AND HEALTH REGULATION OF THE U.S. DEPARTMENT OF LABOR AND WITH THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS' CONSTRUCTION SAFETY ORDERS.

THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE CONTRACTORS' AND SUBCONTRACTORS' COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH REGULATIONS OF THE U.S. DEPARTMENT OF LABOR OR WITH THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS' CONSTRUCTION SAFETY ORDERS.

CONTRACTOR FURTHER AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

THE ESTIMATED QUANTITIES HEREON ARE ONLY FOR THE PURPOSE OF OBTAINING THE NECESSARY PERMITS AND THE CONTRACTOR DOES NOT GUARANTEE THE ACCURACY OF THE ESTIMATED QUANTITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND FOR THE ACCURACY OF THE QUANTITIES COVERED BY THESE PLANS.

ALL GRADING, EXCAVATION, REMOVAL AND RECOMPACTION SHALL BE IN ACCORDANCE WITH G.M.U. GEOTECHNICAL, INC. SOIL REPORT NO. 92-06 (DATED 3-31-98).

THE PRELIMINARY REPORT AND ALL SUBSEQUENT REPORTS AS APPROVED BY THE ORANGE COUNTY P.F. & R.D. ARE CONSIDERED A PART OF GRADING PLAN.

UNAUTHORIZED CHANGES & USES

CAUTION : THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

STREET IMPROVEMENTS

1. THIS NOTE HEREIN INCORPORATES, BY REFERENCE, THOSE GENERAL NOTES NUMBERED 1 THROUGH 17 OF PF&RD STANDARD PLAN 1801, 1996 EDITION.
2. ALL WORK MUST BE IN CONFORMANCE WITH THE CURRENT ORANGE COUNTY PF&RD STANDARD PLANS AND STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION LATEST EDITIONS, WHICH MUST BE KEPT ON THE WORKSITE AT ALL TIMES.
3. THE DEVELOPER SHALL TELEPHONE PF&RD/PUBLIC WORKS/CONSTRUCTION AT 567-7800 AT LEAST 24 HOURS PRIOR TO STARTING CONSTRUCTION WORK SUBJECT TO PF&RD/PUBLIC WORKS' INSPECTION.
4. PF&RD ENCROACHMENT PERMIT REQUIRED. PF&RD APPROVED PLANS DO NOT RELIEVE CONTRACTOR/DEVELOPER FROM RESPONSIBILITY TO OBTAIN A PUBLIC PROPERTY PERMIT WHICH SHALL BE AVAILABLE ON THE JOB AT ALL TIMES WORK IS BEING ACCOMPLISHED IN THE PUBLIC RIGHT-OF-WAY.
5. ALL CONCRETE CURB AND GUTTER FLOWLINES WITH LESS THAN 1% GRADE SHALL BE WATER TESTED PRIOR TO FINAL FINISHING TO INSURE PROPER DRAINAGE WITHOUT UNACCEPTABLE HIGH OR LOW SPOTS.
6. ALL UTILITY TRENCH BACKFILL AND COMPACTION INSPECTION OUTSIDE THE LIMITS OF DEDICATED STREET RIGHT-OF-WAY SHALL BE PERFORMED BY PF&RD REGULATION.
7. ALL DAMAGED CONCRETE SIDEWALKS OR CURBS SHALL BE SAWCUT TO THE NEAREST TRANSVERSE SCORE MARK OR ADJUSTABLE CONTROL JOINT OR WEAKENED PLANE JOINT AND REPLACED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF PF&RD STANDARD PLANS.
8. DEVELOPER SHALL MAINTAIN ADJACENT STREETS IN A NEAT, CLEAN, DUST FREE AND SANITARY CONDITION AT ALL TIMES AND TO THE SATISFACTION OF COUNTY'S INSPECTOR. THE ADJACENT STREET SHALL BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCE BEING CONTROLLED AT ALL TIMES. DEVELOPER SHALL BE RESPONSIBLE FOR ANY CLEAN UP ON ADJACENT STREET AFFECTED BY HIS CONSTRUCTION. METHOD OF STREET CLEANING SHALL BE BY DRY SWEEPING OF ALL PAVED AREAS. NO STOCKPILING OF BUILDING MATERIALS WITHIN THE COUNTY RIGHT-OF-WAY WITHOUT THE PERMISSION OF COUNTY'S INSPECTOR.
9. PRIOR TO FINAL ACCEPTANCE OF STREET IMPROVEMENTS, ALL STREET PAVEMENT, STRIPING AND STENCILING WITHIN THE PERIMETER OF THE CONSTRUCTION PROJECT WILL BE RESTORED TO A "LIKE NEW" CONDITION, IN A MANNER MEETING THE APPROVAL OF THE DIRECTOR OF PUBLIC WORKS. ALL STRIPING AND STENCILING SHALL BE ACCORDING TO STANDARD PLAN NO. 1801, NOTE 18.
10. TRAFFIC SHALL BE MAINTAINED AT ALL TIMES AND SHALL BE PROTECTED WITH ADEQUATE BARRICADES, LIGHTS, SIGNS AND WARNING DEVICES AS PER THE CURRENT STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, MANUAL OF TRAFFIC CONTROLS, AND TO THE DIRECTIONS OF THE COUNTY'S INSPECTOR.
11. PF&RD STANDARD PLANS SHALL TAKE PRECEDENCE OVER ANY CONFLICTS EXCEPT FOR STANDARD PLANS AFFECTING UTILITY COMPANIES, IF THEIR STANDARDS ARE MORE STRINGENT.
12. NO CONCENTRATED FLOWS ACROSS ASPHALT PAVEMENT WITHOUT COUNTY INSPECTOR'S APPROVAL.
13. ALL TRAFFIC MARKINGS AND STRIPING SHALL BE STENCILS WHICH CONFORM WITH FEDERAL TRANSPORTATION METRIC STANDARDS.
14. SURVEY MONUMENTS SHALL BE PRESERVED AND REFERENCED BEFORE CONSTRUCTION AND REPLACED AFTER CONSTRUCTION PURSUANT TO SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE.
15. WHEREVER EXISTING PAVEMENT JOINS ANY PROPOSED PAVEMENT, DEVELOPER SHALL SAWCUT, OVERLAY OR COLD PLANE TO PROVIDE A UNIFORM 1.7% CROSSFALL TO THE SATISFACTION OF PF&RD FIELD INSPECTOR.
16. ALL INSTALLATIONS AND WORK AFFECTING COUNTY PROPERTIES OR FACILITIES SHALL CONFORM WITH STANDARD SPECIFICATIONS, STANDARD PLANS, AND WITH THE PROVISIONS OF THE CONSTRUCTION PERMIT GRANTED BY COUNTY'S PUBLIC PROPERTY DIVISION. CONTRACTOR SHALL MAINTAIN A COPY OF SAID PERMIT AND STAMPED PLANS ON THE JOB SITE. USE OF COUNTY PROPERTY AND CONFORMANCE WITH THE ABOVE SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY COUNTY'S DUTY ASSIGNED INSPECTOR.

GRADING LEGEND

---	CENTERLINE	Y Y	TOP OF SLOPE
---	TRACT BOUNDARY	---	TOE OF SLOPE
---	FLOWLINE	2%	SHEET FLOW & RATE
---	DAYLIGHT LINE	A	SECTION A, SHEET 1
---	PROPOSED STORM DRAIN	520	PAD ELEVATION
---	CONCRETE BLOCK RETAINING WALL	90	PAD NUMBER
---	PERMIT LIMIT	16	LOT NUMBER
---	ROUGH GRADE CONTOUR ELEVATION		
---	CUT/FILL LINE		
---	CANYON SUBDRAIN		
---	LIMIT OF OFFSITE GRADING		
---	GRADING LIMITS		
---	CORRECTIVE GRADING LIMITS		

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY TRAFFIC OFFICIALS	NTS	NOT TO SCALE
ADS	ADVANCE DRAINAGE SYSTEM	N'LY	NORTHERLY
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	OC	ON CENTER
AQMD	AIR QUALITY MANAGEMENT DISTRICT	OCS	ORANGE COUNTY SURVEYOR
BC	BEGINNING OF CURVE	OD	OUTSIDE DIAMETER
CF	CURB FACE	PCC	POINT OF COMPOUND CURVE
CIDH	CAST-IN-DRILLED-HOLE	PF	PUBLIC FACILITY
CL OR C	CENTERLINE	PKWY	PARKWAY
CLR	CLEARANCE	PCC	POINT OF CONNECTION
COL'S	COLUMNS	PSF	POUNDS PER SQUARE FOOT
CONT	CONTINUOUS	PSI	POUNDS PER SQUARE INCH
CVP	CROWN VALLEY PARKWAY	PT	POINT
DIA	DIAMETER	RAD	RADIAL
EC	END OF CURVE	RD	ROADS DEPARTMENT
EIR	ENVIRONMENTAL IMPACT REPORT	RG	ROUGH GRADE
EL OR ELEV	ELEVATION	RIM	RIM OF DRAINAGE OR MANHOLE
EX	EXISTING	R/W	RANCHO MISSION VIEJO
FG	FINISHED GRADE	RT	RIGHT
FL	FLOWLINE	R/W	RIGHT OF WAY
FS	FINISHED SURFACE	SCAQMD	SOUTHERN CALIFORNIA AIR QUALITY MANAGEMENT DISTRICT
FT	FEET	SMWD	SANTA MARGARITA WATER DISTRICT
FY	FIELD OF STEEL	STA	STATION
F'c	CONCRETE CRUSHING STRENGTH	STD	STANDARD
GB	GRADE BREAK	STY	SOUTHERLY
GPS	GLOBAL POSITIONING SYSTEM	TB	TOP OF BERM
HP	HIGH POINT	TC OR TOC	TOP OF CURB
INTER	INTERSECTION	TF	TOP OF FOOTING
INV	INVERSE	TG	TOP OF GRATE
KSI	KIPS PER SQUARE INCH	TP	TOP OF PAVEMENT
L	LENGTH	TPB	TREATED PERMEABLE BASE
LF	LINEAL FEET	TS	TOP OF SLOPE
LLC	LIMITED LIABILITY CORPORATION	TT	TENTATIVE TRACT
LP	LOW POINT	TW	TOP OF WALL
LT	LEFT	TYP	TYPICAL
M	METER	W	WIDTH
MAX	MAXIMUM	WF	WIDE FLANGE
MIN	MINIMUM	WO	WORK ORDER
MM	MILLIMETER	W/	WITH

EARTHWORK QUANTITY ESTIMATE

CUT C.Y.	FILL C.Y.
580	340

THE ABOVE LISTED QUANTITIES REFLECT THE ENGINEER'S ESTIMATE OF THE ACTUAL VOLUMES OF MATERIAL CUT AND FILLED. THESE QUANTITIES ARE FOR DESIGN AND BONDING PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR COMPUTING HIS OWN QUANTITIES FOR CONTRACT PURPOSES. SHRINKAGE, SWELL, SUBSIDENCE, AND ANY REMOVALS ARE BASED ON DATA OBTAINED FROM THE SOILS REPORT. FIELD CONDITIONS DURING CONSTRUCTION MAY VARY RESULTING IN ACTUAL EARTHWORK QUANTITIES DIFFERENT FROM THOSE SHOWN ABOVE.

CONSTRUCTION NOTES

QUANTITIES

- ①— CONSTRUCT PCC SIDEWALK PER PF&RD STD. PLAN 1205 ( "W" PER PLAN ) 6,100 S.F.
- ②— INSTALL METAL HAND RAILING PER DETAIL ON SHEET 4 190 L.F.
- ③— INSTALL REMOVABLE BOLLARD PER DETAIL ON SHEET 4 3 EA.
- ④— CONSTRUCT TRAFFIC SIGN PER PF&RD STD. PLAN 1409 TYPE : R5-3 ( "NO MOTORIZED VEHICLES" ) 3 EA.
- ⑤— CONSTRUCT BRIDGE ABUTMENT PER DETAIL ON SHEET 5 2 EA.
- ⑥— CONSTRUCT BRIDGE CENTER BENT PER DETAIL ON SHEET 6 1 EA.
- ⑦— CONSTRUCT TYPE 5 THREE BEAM BARRIER PER CALTRANS STANDARD PLAN A79-A 170 L.F.
- ⑧— INSTALL 4" SOLID WALL HIGH DENSITY POLYETHYLENE DRAINAGE PIPE (ADS N-12 SMOOTH INTERIOR PIPE OR EQUIVALENT) 96 L.F.
- ⑨— INSTALL 4" HIGH DENSITY POLYETHYLENE FLARED END SECTION (ADS OR EQUIVALENT) 2 EA.
- ⑩— INSTALL 4" HIGH DENSITY POLYETHYLENE 11.25 DEGREE VERTICAL BEND (ADS OR EQUIVALENT) 2 EA.

NO.	DATE	REVISIONS	APPROVED



**HUITT-ZOLIARS**  
Huitt-Zoliars, Inc.  
1501 Red Hill Avenue, Tustin, CA 92780 (714) 259-7900

PREPARED UNDER THE SUPERVISION OF  
*Gregory R. Cooke*  
GREGORY R. COOKE 39478 12-31-01 R.C.E. EXPIRES DATE

DESIGNED BY D.K.
DRAWN BY E.D.
CHECKED BY D.K.

CONSTRUCTION NOTES AND QUANTITIES



CROWN VALLEY PEDESTRIAN BRIDGE

SHEET 2 OF 7 SHEETS
JOB NO. 10-0367-12