Bridge Inspection Records Information System

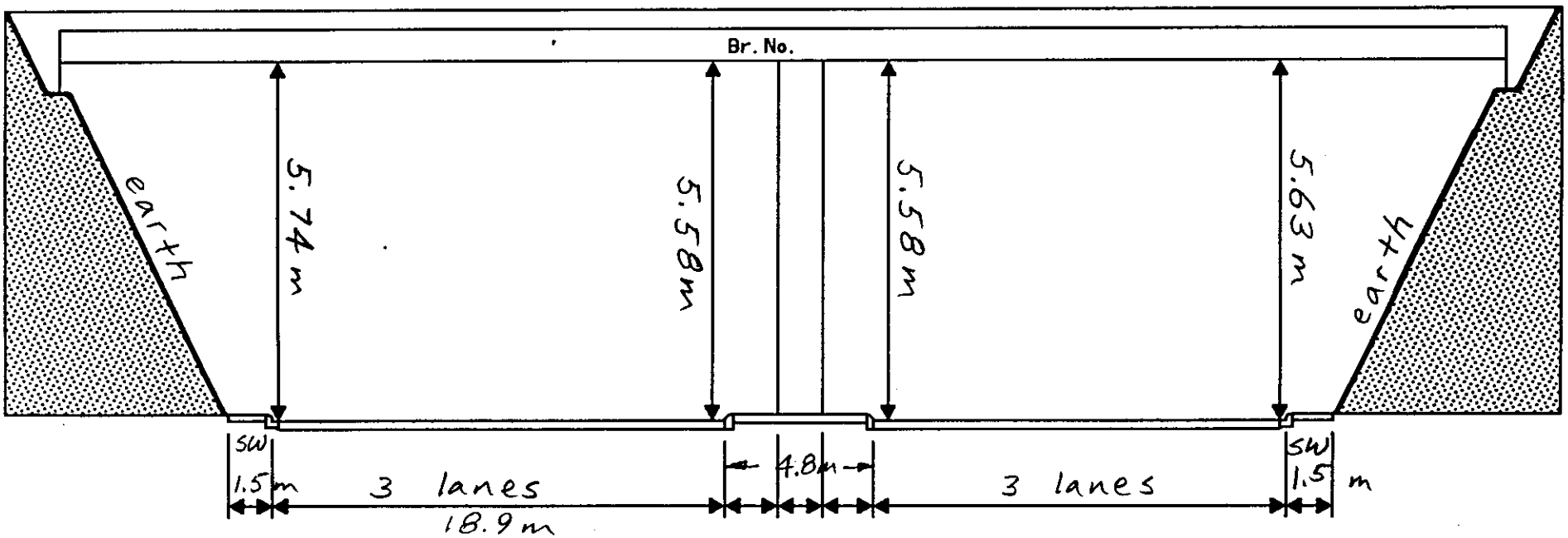
The requested documents have been generated by the BIRIS.

The documents provided are considered confidential and may only be released outside of the department of transportation upon proper execution of the confidentiality agreement.

State of California
Department of Transportation

Division of Maintenance
Structures Maintenance & Investigations

CLEARANCE DIAGRAM



Looking west on Crown Valley Pkwy

BR. NO. 55C 0652

BR. NAME Crown Valley POC

LOCATION 12-Ora-CR

Dist.-Co.-Rte.-PM-City

BY M. OGATA

DATE 6-12-01

DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0652
Facility Carried: CROWN VALLEY PARKW
Location : 0.2 MI W/O ANTONIO PKWY
City :
Inspection Date : 12-JUN-01
Inspection Type

Bridge Inspection Report

Routine	Group A	Underwater	Special	Other
X				

Name : CROWN VALLEY POC

CONSTRUCTION INFORMATION

Year Built : 2000
Year Widened : N/A
Length (m) : 68.1

Skew (degrees): 0
No. of Joints : 0
No. of Hinges : 0

Description of Structure : Simply supported two span welded steel tube truss (Steadfast) with a continuous RC deck, an RC single column bent, and RC open end seat abutments, all supported upon 45 ton CIDH concrete piles.

Span Configuration : (s) 38.0 m, 29.5 m (n) c/c

LOAD CAPACITY AND RATINGS

Design Live Load : PEDESTRIAN
Inventory Rating : metric tons Calculation Method :
Operating Rating : metric tons Calculation Method :
Permit Rating :
Posting Load : Type 3 N/A english tons Type 3S2 N/A english tons Type 3-3 N/A english tons

DESCRIPTION ON STRUCTURE

Bridge width : (w) 3.2 m (e)
Total Width : 3.2 m Net Width : N/A m No. of Lanes :
Rail Description : none Rail Code : NNNN
Min. Vertical Clearance : Unimpaired

DESCRIPTION UNDER STRUCTURE

Facility Name	Func Class	Lanes	Horiz Clr (m)	Vert Clr (m)
CROWN VALLEY PARKW	19	6	13.4	5.58

Channel Description : none

CONDITION OF STRUCTURE

The structure is in excellent condition.

MISCELLANEOUS

ELEMENT LEVEL INSPECTION RATINGS

F#	Elem No.	Element Description	Env	Total Units Quantity	Qty in each Condition State St. 1	St. 2	St. 3	St. 4	St. 5
01	12	Concrete Deck - Bare	2	216 sq.m.	216	0	0	0	0
01	205	Reinforced Conc Column or Pile Extension	2	1 ea.	1	0	0	0	
01	215	Reinforced Conc Abutment	2	6 m.	6	0	0	0	
01	234	Reinforced Conc Cap	2	3 m.	3	0	0	0	
01	252	Cast-In-Drilled Hole Concrete Pile	2	1 ea.	1	0	0	0	

WORK RECOMMENDATIONS - NONE

Printed on : 13-JUN-2001 08:19:24 AM

Bridge No.: 55C0652 Location: 0.2 MI W/O ANTONIO PKWY Inspection Date: 12-JUN-01

Inspected By : M. Ogata

M. Ogata

Registered Civil Engineer

CC : TMRut
Orange County

Bridge No.: 55C0652 **Location: 0.2 MI W/O ANTONIO PKWY** **Inspection Date: 12-JUN-01**

STRUCTURE INVENTORY AND APPRAISAL REPORT

********** IDENTIFICATION **********

(1)	STATE NAME - CALIFORNIA	06 9
(8)	STRUCTURE NUMBER	55C0652
(5)	INVENTORY ROUTE(ON/UNDER) - UNDER	A 40 00000N
(2)	HIGHWAY AGENCY DISTRICT	12
(3)	COUNTY CODE 059 (4) PLACE CODE	00000
(6)	FEATURE INTERSECTED - CROWN VALLEY PCC	
(7)	FACILITY CARRIED - CROWN VALLEY PARKW	
(9)	LOCATION - 0.2 MI W/O ANTONIO PKWY	
(11)	MILEPOINT/KILOMETERPOINT	
(12)	BASE HIGHWAY NETWORK - NOT ON NET	0
(13)	LRS INVENTORY ROUTE & SUBROUTE	
(16)	LATITUDE	33 DEG 34 MIN 06 SEC
(17)	LONGITUDE	117 DEG 38 MIN 18 SEC
(98)	BORDER BRIDGE STATE CODE % SHARE	%
(99)	BORDER BRIDGE STRUCTURE NUMBER	

********** STRUCTURE TYPE AND MATERIAL **********

(43)	STRUCTURE TYPE MAIN: MATERIAL - STEEL TYPE - TRUSS - DECK CODE	3 09
(44)	STRUCTURE TYPE APPR: MATERIAL - TYPE - CODE	
(45)	NUMBER OF SPANS IN MAIN UNIT	2
(46)	NUMBER OF APPROACH SPANS	0
(107)	DECK STRUCTURE TYPE CIP CONCRETE	CODE 1
(108)	WEARING SURFACE / PROTECTIVE SYSTEM:	
	A) TYPE OF WEARING SURFACE - CONCRETE	CODE 1
	B) TYPE OF MEMBRANE - NONE	CODE 0
	C) TYPE OF DECK PROTECTION - NONE	CODE 0

********** AGE AND SERVICE **********

(27)	YEAR BUILT	2000
(106)	YEAR RECONSTRUCTED	
(42)	TYPE OF SERVICE: ON - PEDESTRIAN-BICYCLE	3
	UNDER - HIGHWAY W/NO PEDESTRIAN	1
(28)	LANES: ON STRUCTURE UNDER STRUCTURE	06
(29)	AVERAGE DAILY TRAFFIC	20000
(30)	YEAR OF ADT 2000 (109) TRUCK ADT	1%
(19)	BYPASS, DETOUR LENGTH	2 KM

********** GEOMETRIC DATA **********

(48)	LENGTH OF MAXIMUM SPAN	38 M
(49)	STRUCTURE LENGTH	68.1 M
(50)	CURB OR SIDEWALK: LEFT M RIGHT	M
(51)	BRIDGE ROADWAY WIDTH CURB TO CURB	13.4 M
(52)	DECK WIDTH OUT TO OUT	13.2 M
(32)	APPROACH ROADWAY WIDTH (W/SHOULDERS)	13.4 M
(33)	BRIDGE MEDIAN - NO MEDIAN	0
(34)	SKEW 0 DEG (35) STRUCTURE FLARED	NO
(10)	INVENTORY ROUTE MIN VERT CLEAR	5.58 M
(47)	INVENTORY ROUTE TOTAL HORIZ CLEAR	13.4 M
(53)	MIN VERT CLEAR OVER BRIDGE RDWY	99.99 M
(54)	MIN VERT UNDERCLEAR REF - HIGHWAY	5.58 M
(55)	MIN LAT UNDERCLEAR RT REF - HIGHWAY	1.5 M
(56)	MIN LAT UNDERCLEAR LT	1.5 M

********** NAVIGATION DATA **********

(38)	NAVIGATION CONTROL - NOT APPLICABLE	CODE N
(111)	PIER PROTECTION - NOT REQUIRED	CODE 1
(39)	NAVIGATION VERTICAL CLEARANCE	0 M
(116)	VERT-LIFT BRIDGE NAV MIN VERT CLEAR	0 M
(40)	NAVIGATION HORIZONTAL CLEARANCE	0

****

SUFFICIENCY RATING =

STATUS =

HEALTH INDEX = 100

********** CLASSIFICATION **********

		CODE
(112)	NBIS BRIDGE LENGTH - YES	Y
(104)	HIGHWAY SYSTEM - NOT ON NHS	0
(26)	FUNCTIONAL CLASS - LOCAL URBAN	19
(100)	DEFENSE HIGHWAY - NOT STRAHNET	0
(101)	PARALLEL STRUCTURE - NONE EXISTS	N
(102)	DIRECTION OF TRAFFIC - TRAFFIC NOT CARRIED	0
(103)	TEMPORARY STRUCTURE -	
(105)	FEDERAL LANDS HIGHWAY - NOT APPLICABLE	0
(110)	DESIGNATED NATIONAL NETWORK - NOT ON NET	0
(20)	TOLL - ON FREE ROAD	3
(21)	MAINTAIN - COUNTY HIGHWAY AGENCY	2
(22)	OWNER - COUNTY HIGHWAY AGENCY	2
(37)	HISTORICAL SIGNIFICANCE - NOT ELIGIBLE	5

********** CONDITION **********

		CODE
(58)	DECK	7
(59)	SUPERSTRUCTURE	
(60)	SUBSTRUCTURE	7
(61)	CHANNEL & CHANNEL PROTECTION	N
(62)	CULVERTS	

********** LOAD RATING AND POSTING **********

		CODE
(31)	DESIGN LOAD - PEDESTRIAN	7
(63)	OPERATING RATING METHOD -	
(64)	OPERATING RATING -	
(65)	INVENTORY RATING METHOD -	
(66)	INVENTORY RATING -	
(70)	BRIDGE POSTING -	
(41)	STRUCTURE OPEN, POSTED OR CLOSED -	A
	DESCRIPTION - OPEN, NO RESTRICTION	

********** APPRAISAL **********

		CODE
(67)	STRUCTURAL EVALUATION	*
(68)	DECK GEOMETRY	*
(69)	UNDERCLEARANCES, VERTICAL & HORIZONTAL	4
(71)	WATER ADEQUACY	N
(72)	APPROACH ROADWAY ALIGNMENT	N
(36)	TRAFFIC SAFETY FEATURES	NNNN
113	SCOUR CRITICAL BRIDGES	

********** PROPOSED IMPROVEMENTS **********

(75)	TYPE OF WORK -	CODE
(76)	LENGTH OF STRUCTURE IMPROVEMENT	M
(94)	BRIDGE IMPROVEMENT COST	
(95)	ROADWAY IMPROVEMENT COST	
(96)	TOTAL PROJECT COST	
(97)	YEAR OF IMPROVEMENT COST ESTIMATE	
(114)	FUTURE ADT	40000
(115)	YEAR OF FUTURE ADT	2020

********** INSPECTIONS **********

(90) INSPECTION DATE 06/01 (91) FREQUENCY 24 MO

(92) CRITICAL FEATURE INSPECTION: (93) CFI DATE

A)	FRACTURE CRIT DETAIL -	-1 MO	A)
B)	UNDERWATER INSP - NO	-1 MO	B)
C)	OTHER SPECIAL INSP - NO	-1 MO	C)

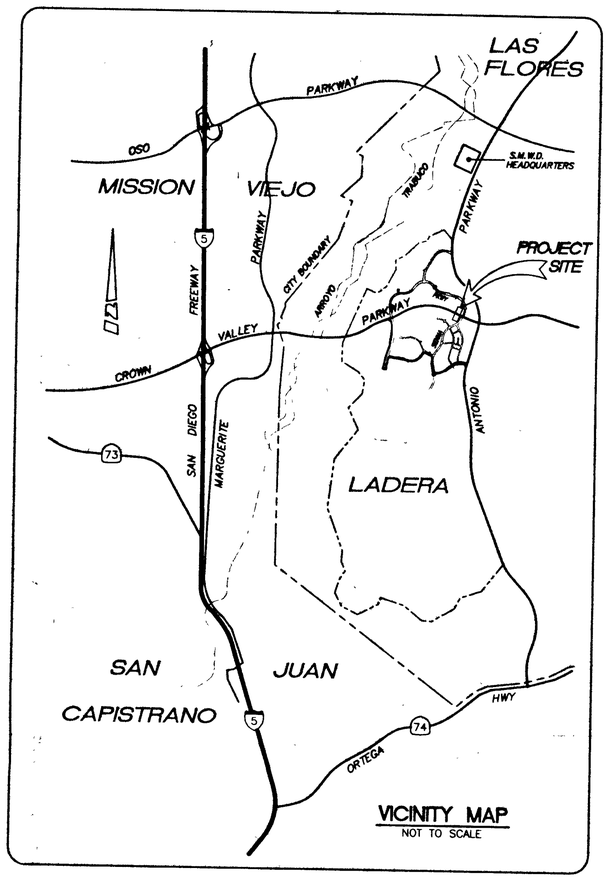
ORANGE COUNTY
PLANNING AND DEVELOPMENT SERVICES

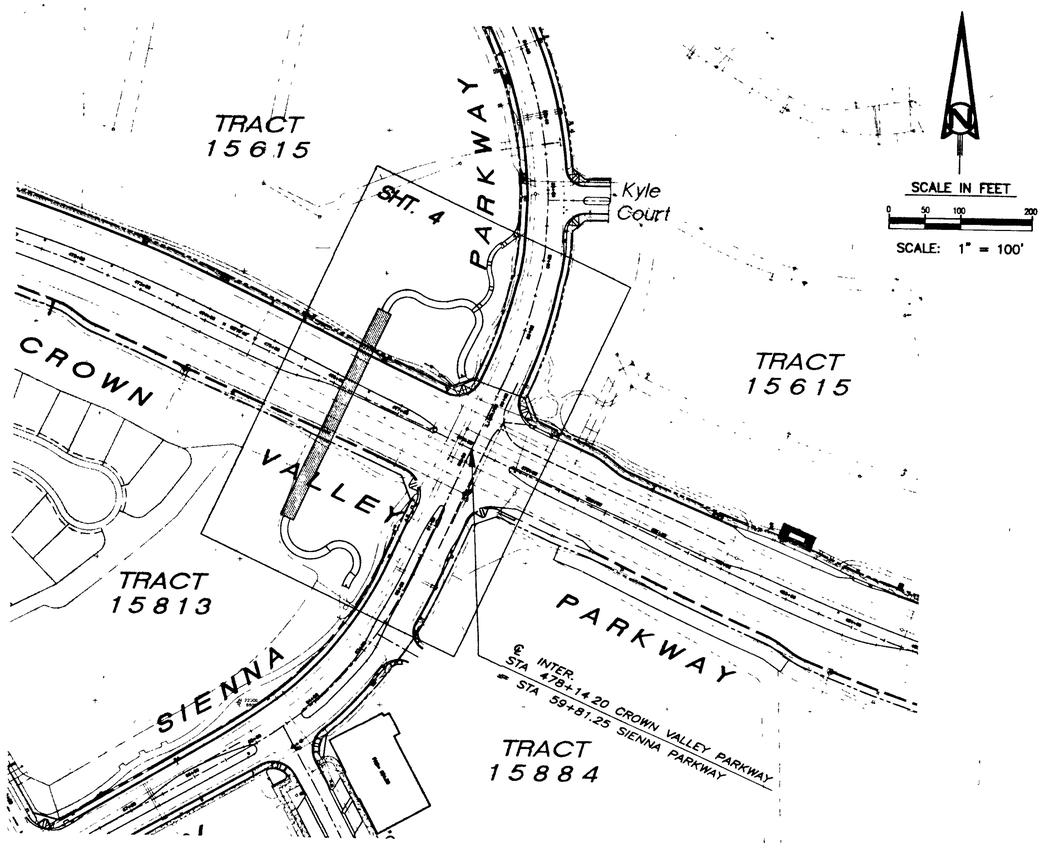
SANTA ANA, CALIFORNIA

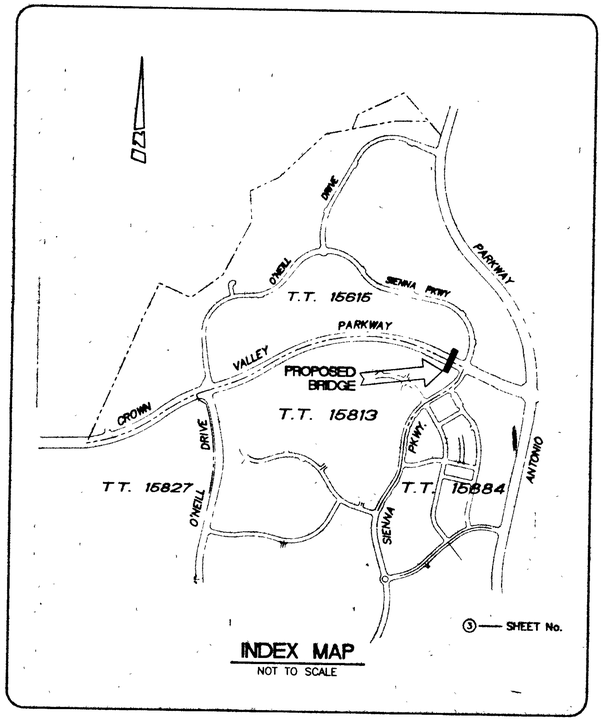
THOMAS B. MATHEWS, DIRECTOR

PLANS FOR CONSTRUCTION OF
CROWN VALLEY PEDESTRIAN BRIDGE
AT SIENNA PARKWAY

BONDED WITHIN
TENTATIVE TRACT NO. 15813 LADERA RANCH







INDEX OF SHEETS

DIGALERT

IMPORTANT NOTICE

SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIGALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIGALERT I D NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE YOU DIG

ENCROACHMENT PERMIT No. 2000 - 00247

COUNTY OF ORANGE APPROVED PLANS DO NOT RELIEVE CONTRACTOR/DEVELOPER FROM RESPONSIBILITY TO OBTAIN PUBLIC PROPERTY PERMIT WHICH SHALL BE AVAILABLE ON THE JOB SITE AT ALL TIMES WHEN WORK IS BEING ACCOMPLISHED IN PUBLIC RIGHT OF WAY

ST ADDRESS 28548 CROWN VALLEY PARKWAY

GRADING PERMIT No. GB 000041

CAL TRANS BRIDGE No. 55C-652

UTILITY OWNER	CONTACTS	PHONE NO.
PACIFIC BELL TELEPHONE	STEVE MATHES	(714) 237-6946
SAN DIEGO GAS AND ELECTRIC	GRACE TURNER	(714) 361-8037
THE GAS CO.	JIM HINTON	(714) 448-8512
COX CABLE	DUANE BROWNING	(714) 634-3041
SANTA MARGUERITA WATER DISTRICT	JAIME AGUILAR	(714) 459-6582
PF & RD INSPECTION		(714) 567-7800
UNDERGROUND SERVICE ALERT		1 (800) 422-4133

BENCH MARK

3BB-36-88 ELEV. 478.775 (1988) AT THE SOUTHWEST CORNER OF THE INTERSECTION OF CROWN VALLEY PKWY. AND MARGUERITE PKWY, 48 FT. WESTERLY OF THE CENTERLINE OF MARGUERITE PKWY.; 82 FT SOUTHERLY OF THE CENTERLINE OF CROWN VALLEY PKWY. SET AT THE TOP OF THE NORTHWEST CORNER OF A 3 FT. BY 3 FT. CONCRETE BASE FOR THE TRAFFIC SIGNAL LIGHT POLE.

BASIS OF BEARINGS

THE BEARINGS SHOWN HEREON, ARE BASED ON THE BEARING BETWEEN O.C.S. HORIZONTAL CONTROL STATIONS GPS No. 1417 AND STATION GPS No. 1431, BEING N4°51'16"W PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

BRIDGE # 55C-652

NO.	DESCRIPTION	SHT.	APPROVED	DATE

REVISIONS

W. O. NO. _____

DWG. NO. _____

SHEET 1 OF 7

J.N. 10-0367-12

PLANNING & DEVELOPMENT SERVICES

COUNTY OF ORANGE
PLANNING & DEVELOPMENT SERVICES

THIS PLAN IS SIGNED BY PLANNING & DEVELOPMENT SERVICES FOR CONCEPT AND ADHERENCE TO COUNTY STANDARDS AND REQUIREMENTS ONLY. PLANNING & DEVELOPMENT SERVICES IS NOT RESPONSIBLE FOR DESIGN, ASSUMPTIONS OR ACCURACY.

APPROVED: Patrick Stanton R.C.E.

DATE: 7/6/2000

OWNER/DEVELOPER

DMB LADERA, L.L.C.
A DELAWARE LIMITED LIABILITY COMPANY
C/O: RMV LLC
28811 ORTEGA HIGHWAY
SAN JUAN CAPISTRANO, CA 92675
TEL. (714) 240-3363

BRIDGE TO BE PRIVATELY MAINTAINED BY OWNER/DEVELOPER IT'S SUCCESSORS OR ASSIGNEES

PREPARED BY

HUITT-ZOLLARS
15101 RED HILL AVENUE, * TUSTIN, CALIFORNIA 92780-6500 * (714) 258-7800

PREPARED UNDER THE SUPERVISION OF:

REGISTERED PROFESSIONAL ENGINEER GREGORY R COOKE No. 39478 Expiration 12-31-01 CIVIL STATE OF CALIFORNIA

39478 RCE

12/31/01 EXP

GREGORY R COOKE

6/28/00 DATE

F:\10036700\10036712\P_BRIDGE\0367B01.DWG 6-28-00 11:07:57 cm pat

JUL 11 2000

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 PDSD, 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 ASPHALTIC AREAS 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 DISCLOSE 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 DEEMED 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 CODIFIED 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.

ENVIRONMENTAL NOTES

51. THE PERMITTEE SHALL NOTIFY ALL GENERAL CONTRACTORS, SUBCONTRACTORS, MATERIAL SUPPLIERS, LESSEES, 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 INCLUDE BUT 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.

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

53 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

54 DEWATERING OF CONTAMINATED GROUNDWATER, OR DISCHARGING CONTAMINATED SOILS VIA SURFACE EROSION IS PROHIBITED. DEWATERING OF NON-CONTAMINATED GROUNDWATER REQUIRES A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT FROM THE RESPECTIVE STATE REGIONAL WATER QUALITY CONTROL BOARD

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 AND 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 WASTE 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).

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 PURSUANT THERETO, AGREES TO ASSUME LIABILITY AND TO HOLD UNDERSIGNED 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 DUE 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, AND THAT 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 HUITT-ZOLLARS DOES NOT GUARANTEE THE ACCURACY OF THE ESTIMATED QUANTITIES THE CONTRACTOR SHALL PERFORM HIS OWN QUANTITY TAKEOFF BEFORE SUBMITTING A BID FOR ANY PORTION OF THE IMPROVEMENTS 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 PERMITS 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
TRACT BOUNDARY
FLOWLINE
DAYLIGHT LINE
PROPOSED STORM DRAIN
CONCRETE BLOCK RETAINING WALL
PERMIT LIMIT
510 ROUGH GRADE CONTOUR ELEVATION
CUT/FILL LINE
CANYON SUBDRAIN
LIMIT OF OFFSITE GRADING
GRADING LIMITS
CORRECTIVE GRADING LIMITS

TOP OF SLOPE
TOE OF SLOPE
2% SHEET FLOW & RATE
A / 1 SECTION A, SHEET 1
520 PAD ELEVATION
90 PAD NUMBER
16 LOT NUMBER

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY TRAFFIC OFFICIALS
ADS	ADVANCE DRAINAGE SYSTEM
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AQMD	AIR QUALITY MANAGEMENT DISTRICT
BC	BEGINNING OF CURVE
CF	CURB FACE
CIDH	CAST-IN-DRILLED-HOLE
CL OR ℄	CENTERLINE
CLR	CLEARANCE
COL'S	COLUMNS
CONT	CONTINUOUS
CVP	CROWN VALLEY PARKWAY
CY	CUBIC YARDS
DIA	DIAMETER
EC	END OF CURVE
EIR	ENVIRONMENTAL IMPACT REPORT
EL OR ELEV	ELEVATION
EX	EXISTING
FG	FINISHED GRADE
FL	FLOWLINE
FS	FINISHED SURFACE
FT	FEET
FY	YIELD OF STEEL
F'c	CONCRETE CRUSHING STRENGTH
GB	GRADE BREAK
GPS	GLOBAL POSITIONING SYSTEM
HP	HIGH POINT
INTER	INTERSECTION
INV	INVERSE
KSI	KIPS PER SQUARE INCH
L	LENGTH
LF	LINEAL FEET
LLC	LIMITED LIABILITY CORPORATION
LP	LOW POINT
LT	LEFT
M	METER
MAX	MAXIMUM
MIN	MINIMUM
MM	MILLIMETER

NTS	NOT TO SCALE
N'LY	NORTHERLY
OC	ON CENTER
OCS	ORANGE COUNTY SURVEYOR
OD	OUTSIDE DIAMETER
PCC	POINT OF COMPOUND CURVE
PF	PUBLIC FACILITY
PKWY	PARKWAY
POC	POINT OF CONNECTION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
RAD	RADIAL
RD	RESOURCES DEPARTMENT
RG	ROUGH GRADE
RIM	RIM OF DRAINAGE OR MANHOLE
RMV	RANCHO MISSION VIEJO
RT	RIGHT
R/W	RIGHT OF WAY
SCAQMD	SOUTHERN CALIFORNIA AIR QUALITY MANAGEMENT DISTRICT
SMWD	SANTA MARGARITA WATER DISTRICT
STA	STATION
STD	STANDARD
S'LY	SOUTHERLY
TB	TOP OF BERM
TC OR TOC	TOP OF CURB
TF	TOP OF FOOTING
TG	TOP OF GRATE
TP	TOP OF PAVEMENT
TPB	TREATED PERMEABLE BASE
TS	TOP OF SLOPE
TT	TENTATIVE TRACT
TW	TOP OF WALL
TYP	TYPICAL
W	WIDTH
WF	WIDE FLANGE
WO	WORK ORDER
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

	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 THRIE 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.

BR # 55C 0652

NO	DATE	REVISIONS	APPROVED

REGISTERED PROFESSIONAL ENGINEER
GREGORY R COOKE
No. 39478
Expiration 12-31-01
CIVIL
STATE OF CALIFORNIA

HUITT-ZOLLARS
Huitt-Zollars, Inc.
15101 Red Hill Avenue, Tustin, CA 92780 (714) 259-7900

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

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

CONSTRUCTION NOTES AND QUANTITIES
LADERA RANCH
CROWN VALLEY PEDESTRIAN BRIDGE

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

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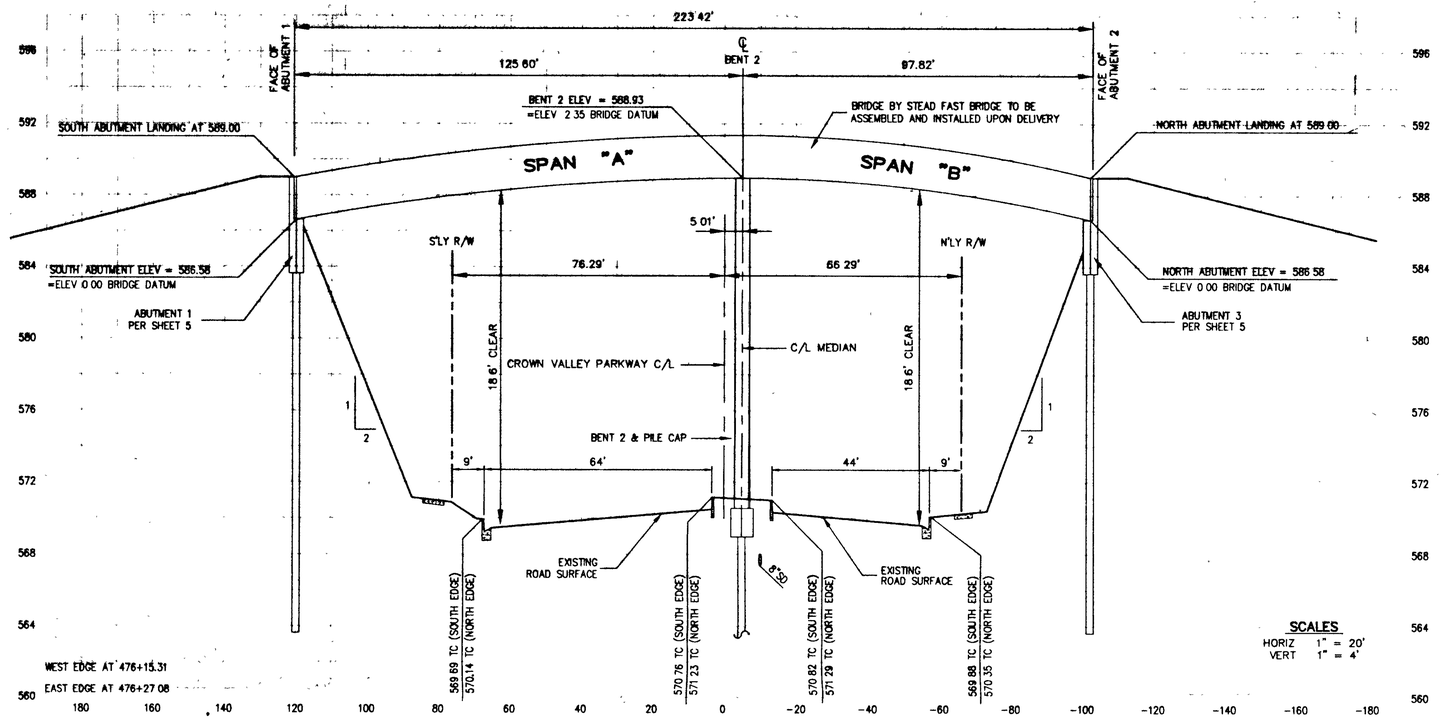
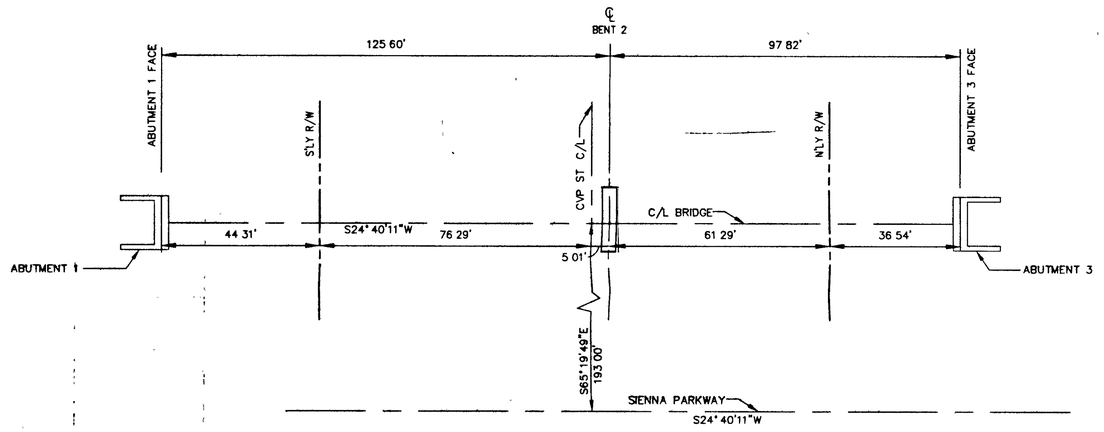


SECTION AT 476+21.20 CROWN VALLEY PARKWAY



HORIZONTAL LAYOUT

NTS

BR # 55C0652

NO.	DATE	REVISIONS	APPROVED

REGISTERED PROFESSIONAL ENGINEER
GREGORY R COOKE
No 39478
Expiration
12-31-01
CIVIL
STATE OF CALIFORNIA

HUITT-ZOLLARS
Huitt-Zollars, Inc.
15101 Red Hill Avenue, Tustin, CA 92780 (714) 259-7900

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

DESIGNED BY P.L.
DRAWN BY LE
CHECKED BY P.L.

HORIZONTAL CONTROL FOR
LADERA RANCH
CROWN VALLEY PEDESTRIAN BRIDGE

SHEET 3 OF 7 SHEETS
JOB NO. 10-0367-12

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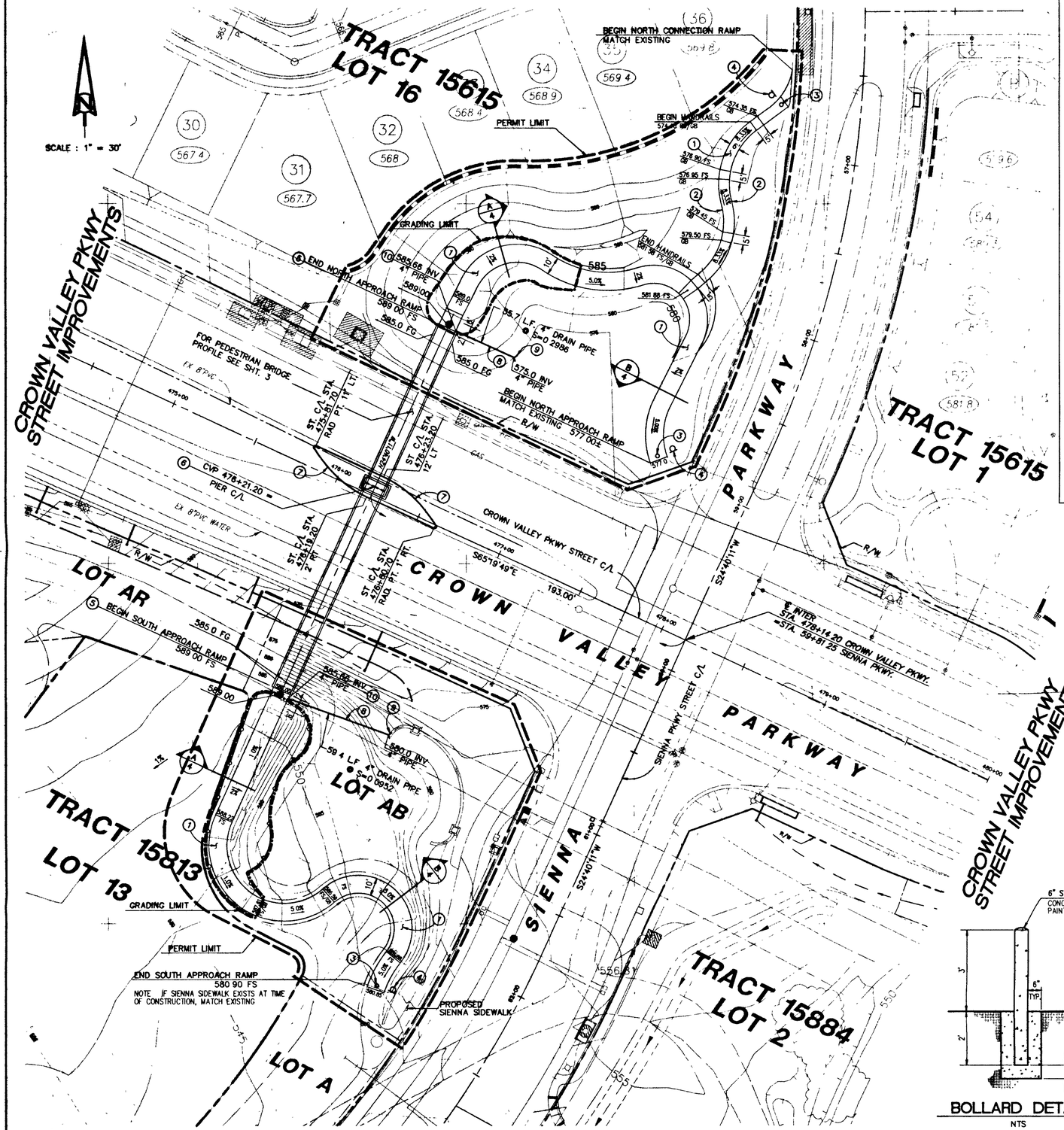

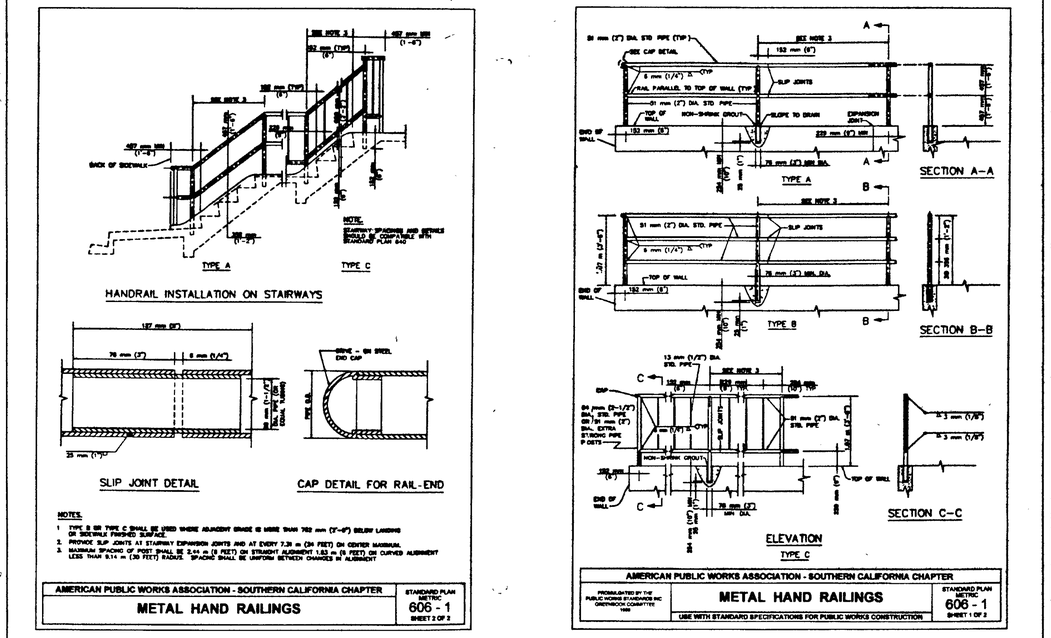

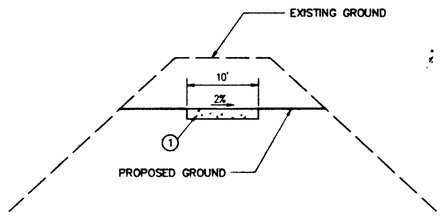

SECTION "A - A"
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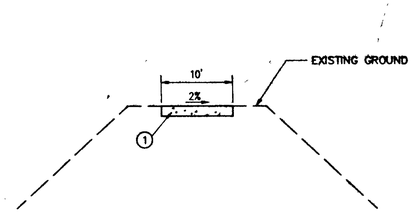
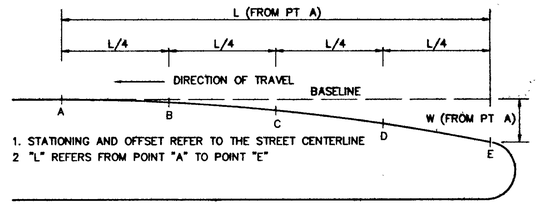


SECTION " B - B "
NTS

CONSTRUCTION NOTES

1. CONSTRUCT PCC SIDEWALK PER PF&RD STD PLAN 1205 ("W" PER PLAN)
2. INSTALL METAL HAND RAILINGS PER DETAIL ON SHT 4
3. INSTALL REMOVABLE BOLLARD PER DETAIL ON SHT 4
4. CONSTRUCT TRAFFIC SIGN PER PF&RD STD 1409 TYPE R5-3 ("NO MOTORIZED VEHICLES")
5. CONSTRUCT BRIDGE ABUTMENT PER DETAIL ON SHEET 5
6. CONSTRUCT BRIDGE BENT PER DETAIL ON SHEET 6
7. CONSTRUCT TYPE 5 THRIE BEAM BARRIER PER CALTRANS (1992) STANDARD PLAN A77-E
8. INSTALL 4" SOLID WALL HIGH DENSITY POLYETHYLENE DRAINAGE PIPE (ADS N-12 SMOOTH INTERIOR PIPE OR EQUIVALENT)
9. INSTALL 4" HIGH DENSITY POLYETHYLENE FLARED END SECTION (ADS OR EQUIVALENT)
10. INSTALL 4" HIGH DENSITY POLYETHYLENE 11 25 DEGREE VERTICAL BEND (ADS OR EQUIVALENT)

BOLLARD DETAIL
NTS



METAL GUARD RAIL FLARE DETAIL

NTS

	TAPER #1			TAPER #2	
	W=12'	L=37 5		W=12'	L=37 5
PT	STA	OFFSET	PT	STA	OFFSET
A	476+23 20	12.00' LT	A	476+19.20	2 00' RT
B	476+32 58	11.25' LT	B	476+09 83	1 25' RT
C	476+41 95	9 00' LT	C	476+00 45	1 00' LT
D	476+51.33	5 25' LT	D	475+91 08	4.75' LT
E	476+60 70	0 00' LT	E	475+81.70	10.00' LT

BR # 55C0652

TRACT 15813
STREET IMPROVEMENTS

NO.	DATE	REVISIONS	APPROVED

REGISTERED PROFESSIONAL ENGINEER
GREGORY R COOKE
No 39478
Expiration
12-31-01
CIVIL
STATE OF CALIFORNIA

HUITT-ZOLLARS
Huitt-Zollars, Inc.
19101 Red Hill Avenue, Tustin, CA 92780 (714) 259-7900

PREPARED UNDER THE SUPERVISION OF
GREGORY R COOKE — 39478 RCE — 12-31-01 EXPIRES — 6/14/00 DATE

DESIGNED BY P.L.
DRAWN BY LE
CHECKED BY P.L.

PRECISE GRADING PLANS FOR
LADERA RANCH
CROWN VALLEY PEDESTRIAN BRIDGE

SHEET 4 OF 7 SHEETS
JOB NO. 10-0367-12

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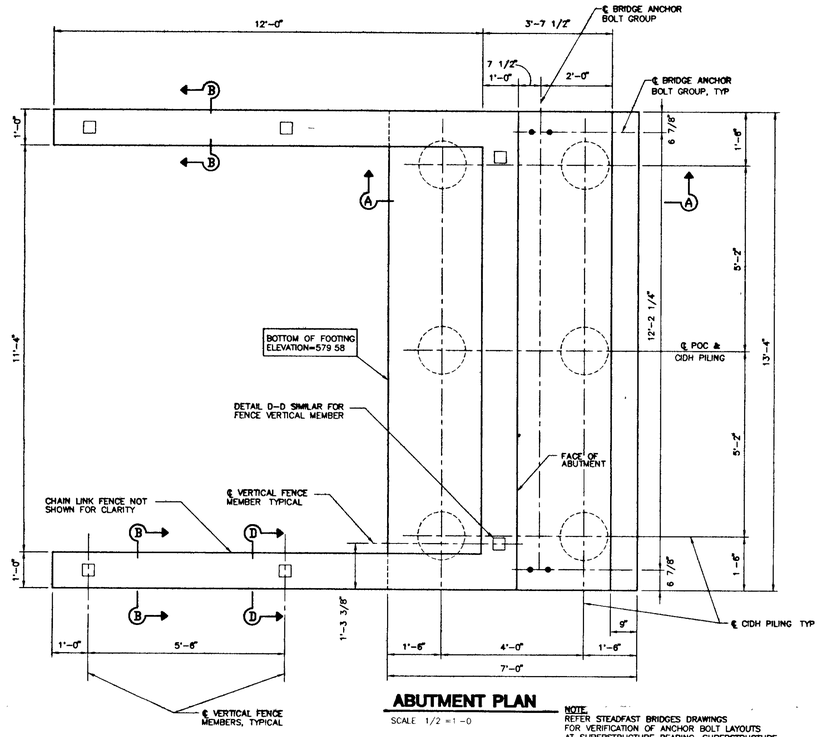
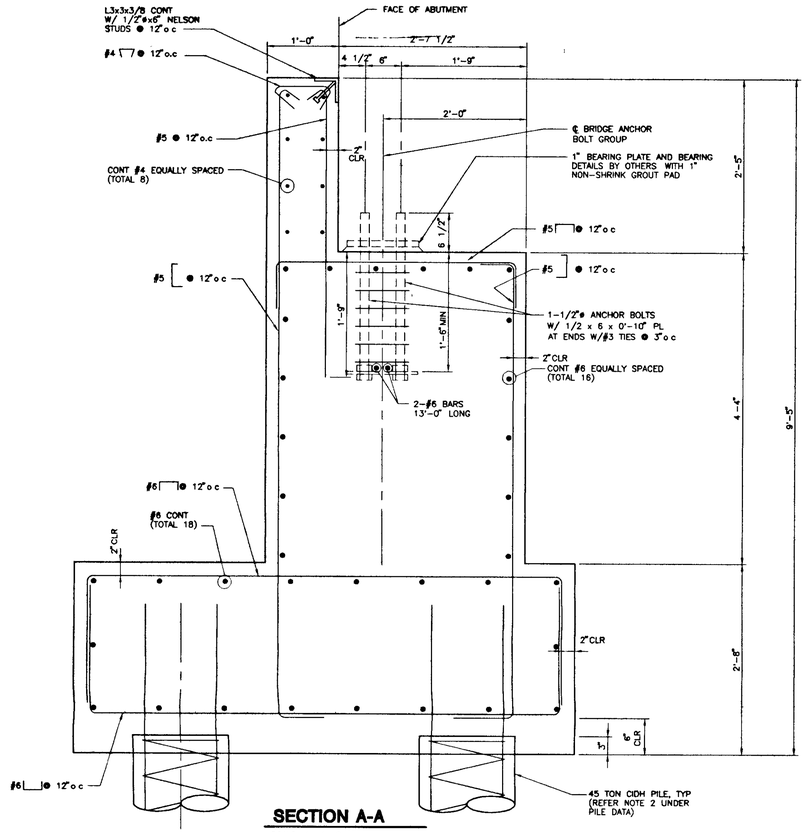


ABUTMENT PLAN

SCALE 1/2 =1 -0

NOTE
REFER STEADFAST BRIDGES DRAWINGS FOR VERIFICATION OF ANCHOR BOLT LAYOUTS AT SUPERSTRUCTURE BEARING SUPERSTRUCTURE NOT SHOWN (BY OTHERS)



SECTION A-A

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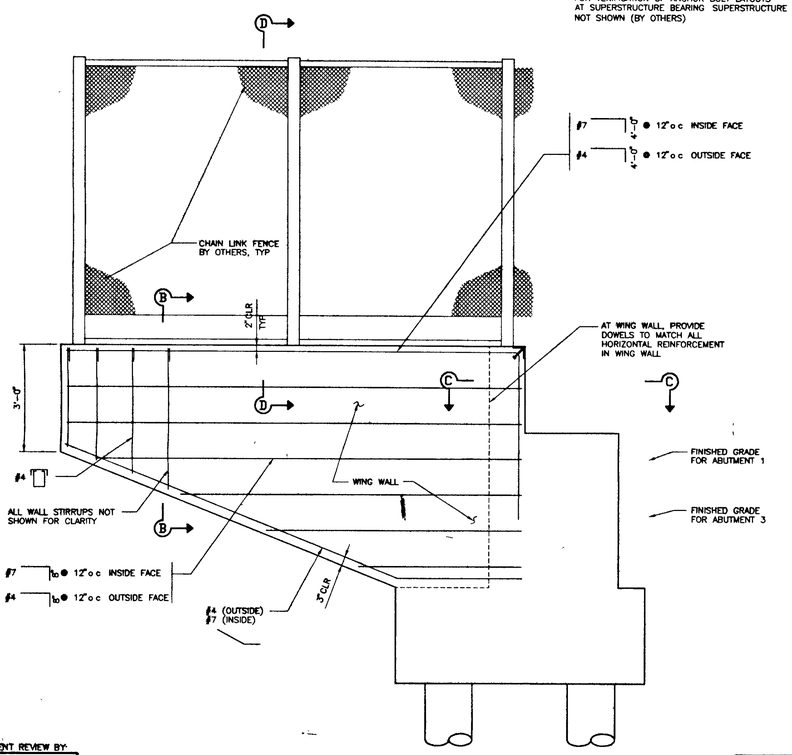
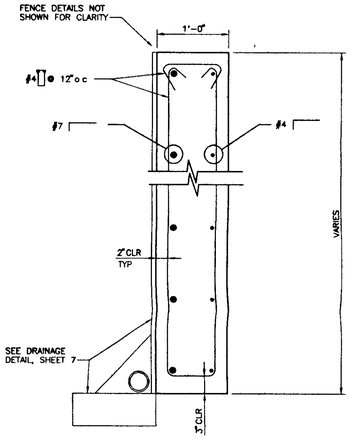


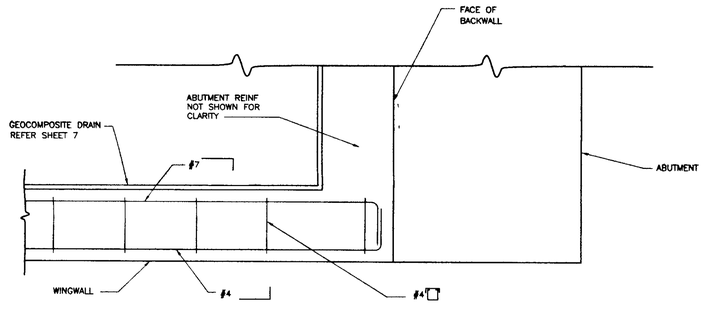
WINGWALL ELEVATION

SCALE 1/2 =1 -0



SECTION B-B

SCALE 1 =1 -0



PLAN SECTION C-C

SCALE 1" =1 -0

GENERAL NOTES
LOAD FACTOR DESIGN

DESIGN	CALTRANS BRIDGE DESIGN SPECIFICATIONS (1983 AASHTO WITH INTERIMS AND REVISIONS BY CALTRANS) AASHTO "GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES"
LIVE LOADING	PEDESTRIAN (85psf)
SEISMIC LOADING	REFER ATC-32 FIGURE R3-8 W/FOLLOWING SPECIFICATIONS· PEAK ROCK ACCELERATION 0 3g SOIL PROFILE TYPE D MAGNITUDE 7 25±0 25
REINFORCING STEEL. REINFORCED CONCRETE.	Fy = 60 KSI F'c = 3500 PSI
SUPERSTRUCTURE DEFLECTION·	MAXIMUM ALLOWABLE LIVE LOAD DEFLECTION FOR SUPERSTRUCTURE IS 1/500 OF SPAN LENGTH

STRUCTURAL STEEL

1 STEEL SHALL CONFORM TO THE FOLLOWING GRADES
ALL WF CHANNELS, ANGLES PLATES ETC (UNO) A36
HSS TUBULAR MEMBERS A500 GR B
ANCHOR BOLTS A325

2 ALL STRUCTURAL STEEL SHALL BE DETAILED FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE (1992), EXCEPT AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS

3. ALL BOLTED CONNECTIONS SHALL BE ACCORDING TO AISC SPECIFICATIONS FOR STRUCTURAL JOINTS. ALL WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL WELDING CODE (1996) BY THE AMERICAN WELDING SOCIETY. WELDER CERTIFICATION SHALL BE MADE AVAILABLE AT THE JOB SITE. WELD INSPECTIONS SHALL BE IN ACCORDANCE WITH CALTRANS SPECIFICATIONS

4. SECURE STEEL PLATES TO ANCHORS

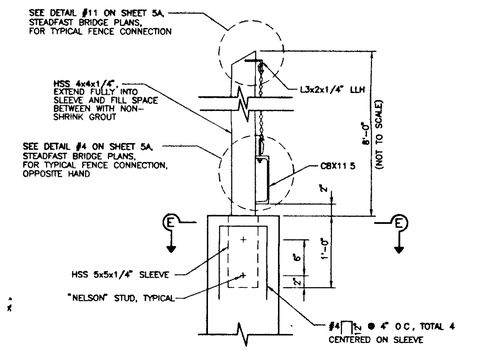
5 GROUT SHALL BE ACCORDING TO CALTRANS STANDARD SPECIFICATIONS DATED JULY 1995

6 PAINT FENCE POSTS AND CHANNEL ASSOCIATED WITH CHAIN LINK FENCE ACCORDING TO STEADFAST SPECIFICATIONS

PILE DATA – CIDH CONCRETE PILES

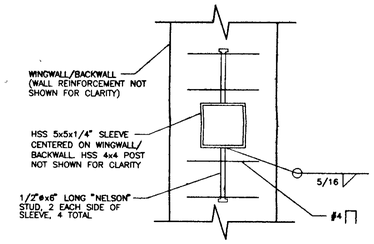
LOCATION	DIAMETER	DESIGN LOADING (SERVICE)	NOMINAL RESISTANCE		APPROX CUT-OFF ELEVATION	DESIGN TIP ELEVATION	SPECIFIED TIP ELEVATION
			COMPRESSION	TENSION			
ABUTMENT 1	16"	45 tons	180 kips	90 kips	580	547(1)	547
BENT 2	16"	45 tons	180 kips	90 kips	568	535(1)	535
ABUTMENT 3	16"	45 tons	180 kips	90 kips	580	547(1)	547

(1) DESIGN TIP ELEVATION IS CONTROLLED BY COMPRESSION
(2) REFER CALTRANS STANDARD PLAN B2-3 "16" CAST-IN-DRILLED-HOLE CONCRETE PILE" DATED JULY 1992



SECTION D-D

SCALE 1 =1'-0



PLAN SECTION E-E

SCALE 1 1/2 =1 -0

INDEPENDENT REVIEW BY:

NO	DATE	REVISIONS	APPROVED

REGISTERED PROFESSIONAL ENGINEER · ROBERT JAMES McDERMOTT · C 054378 · CIVIL · STATE OF CALIFORNIA

HUITT-ZOLLARS
Huitt-Zollars, Inc.
15101 Red Hill Avenue, Tustin, CA 92780 (714) 259-7900

PREPARED UNDER THE SUPERVISION OF
Robert J McDermott
ROBERT J McDERMOTT

054378 R C E
12/31/00 EXPIRES
12/27/00 DATE

DESIGNED BY AWM
DRAWN BY LL
CHECKED BY CMG

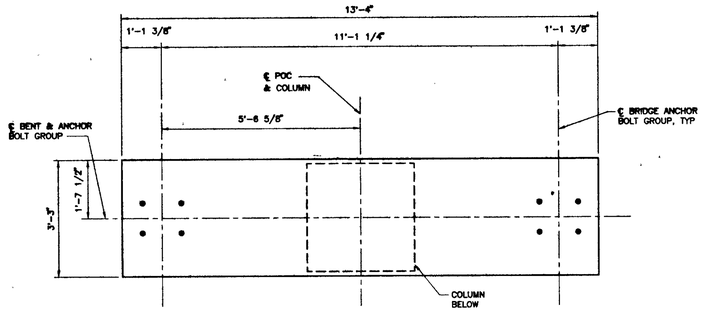
STRUCTURAL PLANS FOR
LADERA RANCH
CROWN VALLEY PEDESTRIAN BRIDGE

SHEET 5 OF 7 SHEETS
JOB NO. 10-0367-12

BR. # 55C 0652

JUL 11 2000

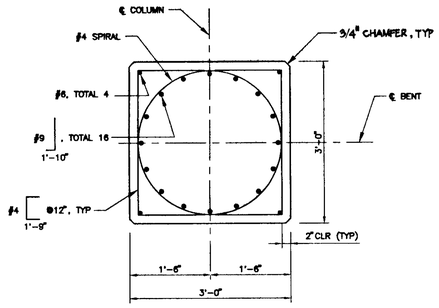
NOTE. REFER SHEET 5 FOR GENERAL NOTES



PLAN OF CAP

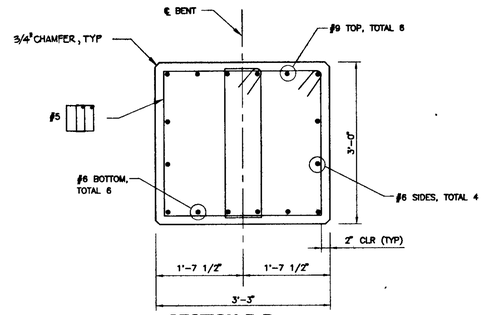
SCALE 1/2"=1'-0"

NOTE.
REFER STEADFAST BRIDGES DRAWINGS FOR VERIFICATION OF ANCHOR BOLT LAYOUTS AT SUPERSTRUCTURE BEARING SUPERSTRUCTURE NOT SHOWN (BY OTHERS)



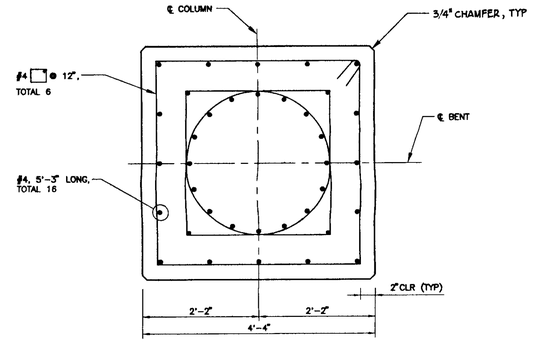
SECTION A-A

SCALE 3/4"=1'-0"



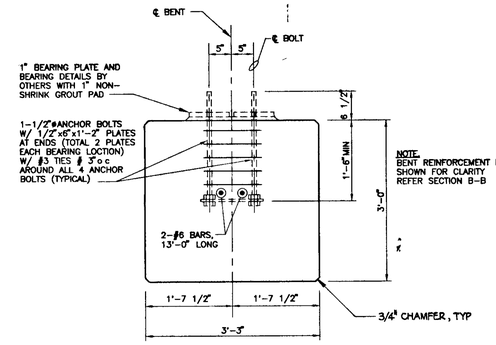
SECTION B-B

SCALE 3/4"=1'-0"



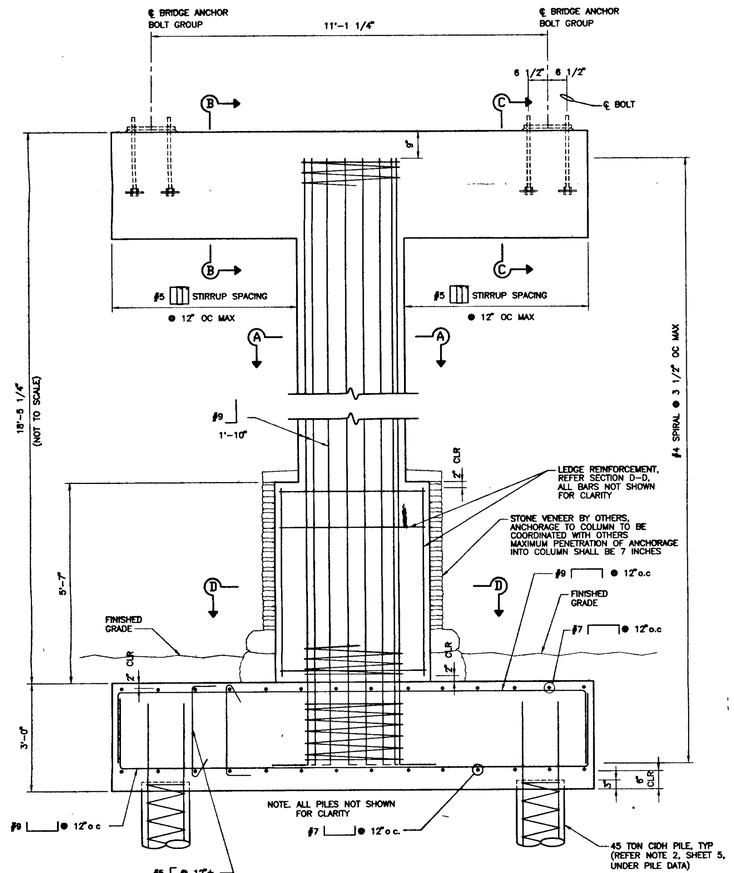
SECTION D-D

SCALE 3/4"=1'-0"



SECTION C-C

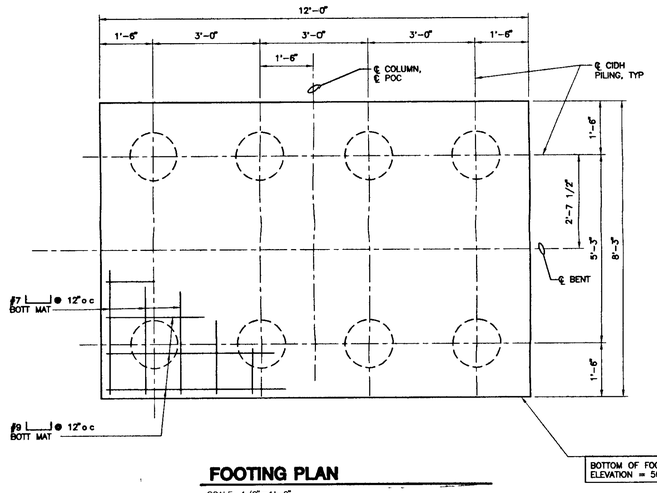
SCALE 3/4"=1'-0"



BENT ELEVATION

SCALE 1/2"=1'-0"

NOTE.
SPIRAL REINFORCEMENT MAY BE DISCONTINUOUS AT BENT CAP AND FOOTING TO ALLOW FOR PLACING BENT CAP AND FOOTING HORIZONTAL REINFORCEMENT



FOOTING PLAN

SCALE 1/2"=1'-0"

BR #55C 0652

INDEPENDENT REVIEW BY:

NO	DATE	REVISIONS	APPROVED

REGISTERED PROFESSIONAL ENGINEER — ROBERT JAMES McDERMOTT — C 054378 — CIVIL — STATE OF CALIFORNIA

HUITT-ZOLLARS
Huitt-Zollars, Inc.
1501 Red Hill Avenue, Tustin, CA 92780 (714) 259-7900

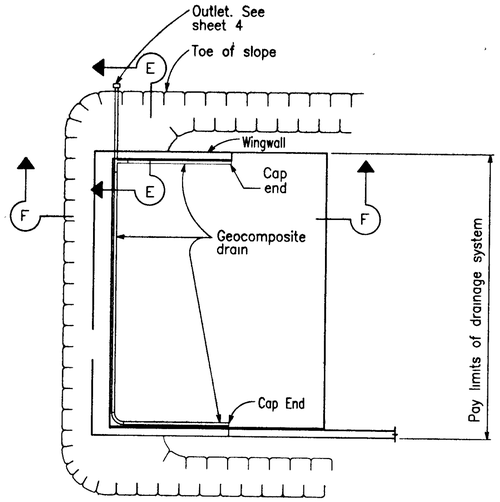
PREPARED UNDER THE SUPERVISION OF
ROBERT J. McDERMOTT — 054378 RCE — 12/31/00 EXPIRES — 6/27/00 DATE

DESIGNED BY: AWM
DRAWN BY: LL
CHECKED BY: CMG

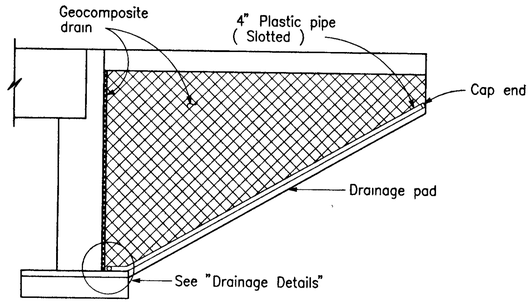
STRUCTURAL PLANS FOR
LADERA RANCH
CROWN VALLEY PEDESTRIAN BRIDGE

SHEET 6 OF 7 SHEETS
JOB NO. 10-0367-12

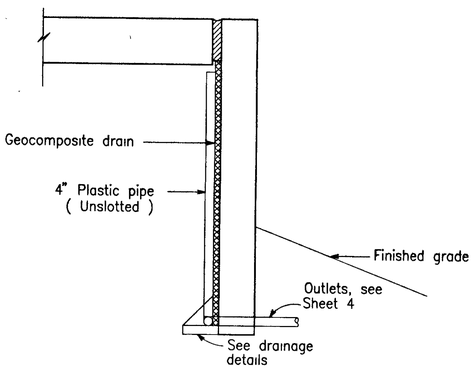
JUL 2000



TYPICAL PLAN

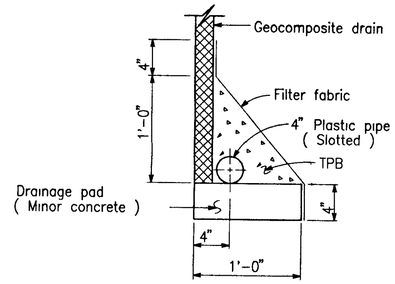


CANTILEVER WINGWALL
SECTION F-F

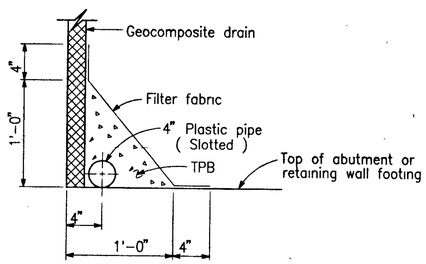


SECTION E-E

Note: Bends and junctions in 4" plastic pipe are 30" radius min.



WITHOUT FOOTING



WITH FOOTING

DRAINAGE DETAILS

INDEPENDENT REVIEW BY:

NO.	DATE	REVISIONS	APPROVED

REGISTERED PROFESSIONAL ENGINEER ★ STATE OF CALIFORNIA ★ ROBERT JAMES McDERMOTT C 054378 CIVIL

HUITT-ZOLLARS
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15101 Red Hill Avenue, Tustin, CA 92780 (714) 259-7900

PREPARED UNDER THE SUPERVISION OF
ROBERT J McDERMOTT 054378 R.C.E 12/31/00 EXPIRES 6/27/00 DATE

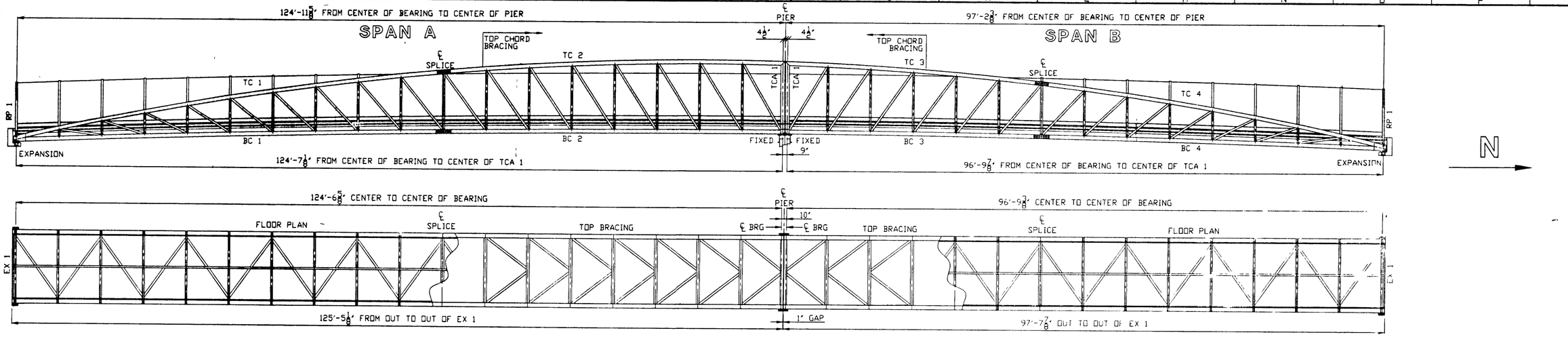
DESIGNED BY AWM
DRAWN BY LL
CHECKED BY CMG

DRAINAGE DETAILS FOR
LADERA RANCH
CROWN VALLEY PEDESTRIAN BRIDGE

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

BR # 55C0652

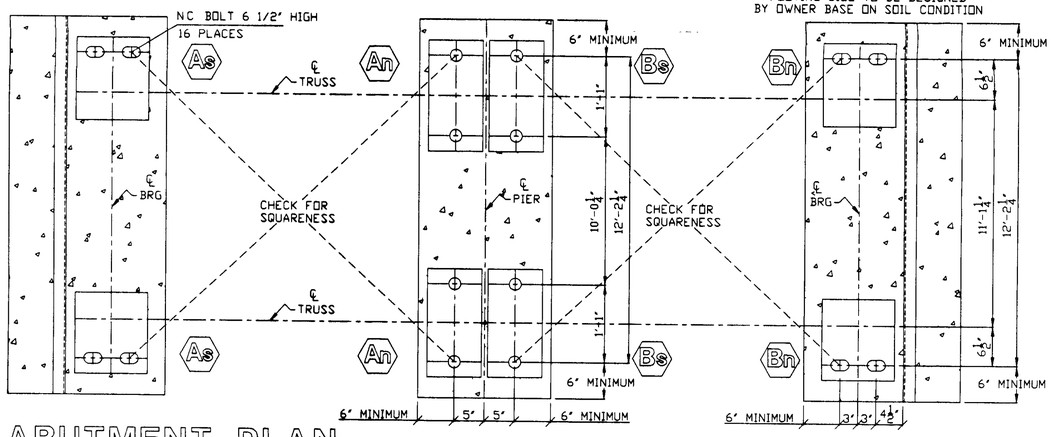
JUL 11 2000



ELEVATION AND FLOOR PLAN FOR "SPAN A" AND "SPAN B"

SCALE 1/8" = 1'

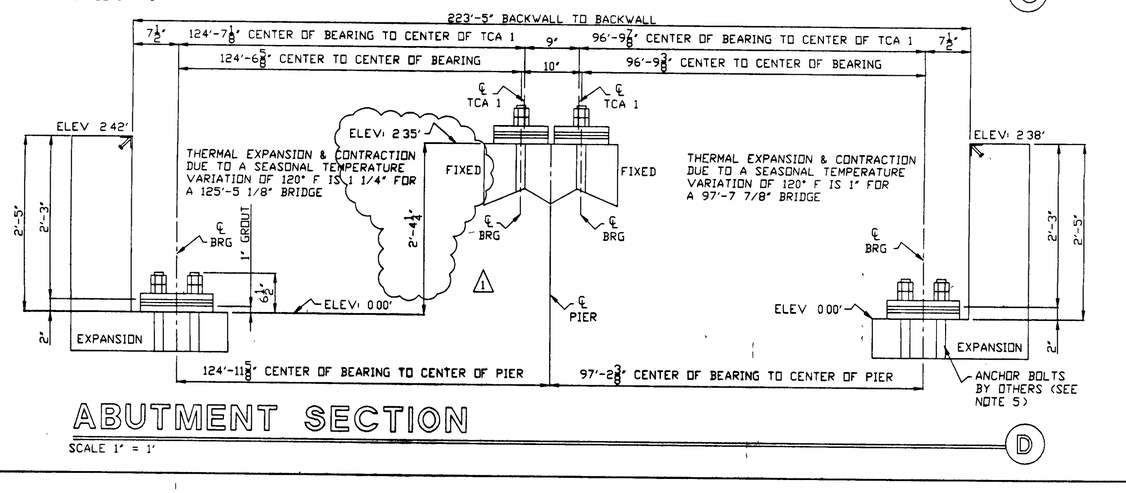
B



ABUTMENT PLAN

SCALE 1" = 1'

C

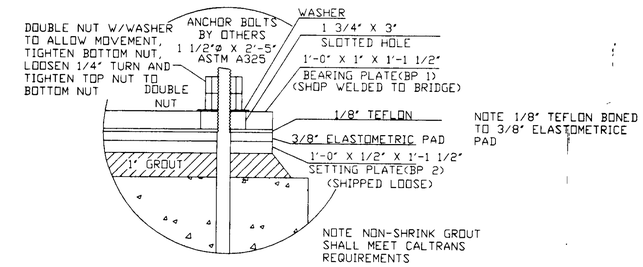


ABUTMENT SECTION

SCALE 1" = 1'

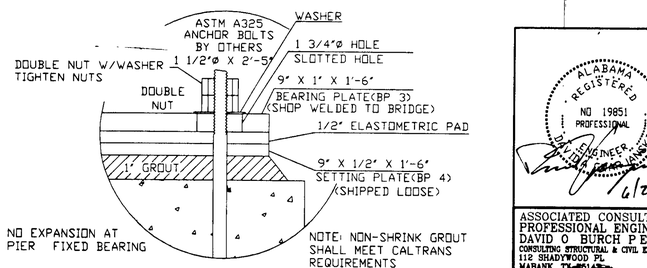
D

ABUTMENT REACTIONS	As	An	Bs	Bn
VERTICAL DEAD LOAD	27.0 K	28.2 K	21.8 K	20.8 K
VERTICAL LIVE LOAD	26.7 K	26.7 K	20.6 K	20.6 K
HORIZ (WIND)	± 8.8 K	± 11.1 K	± 7.7 K	± 6.6 K
UPLIFT (WIND)	± 11.2 K	± 14.1 K	± 10.7 K	± 8.6 K
VERTICAL (SEISMIC)	± 17.1 K	± 17.9 K	± 13.8 K	± 13.2 K
HORZI (SEISMIC)	± 53.0K	± 55.6K	± 40.3K	± 38.7K



BEARING DETAIL @ ABUTMENT (TYP)

NTS



BEARING DETAIL @ PIER (TYP)

NTS

ALABAMA REGISTERED NO 19851 PROFESSIONAL ENGINEER
6/22/00

ASSOCIATED CONSULTANT & PROFESSIONAL ENGINEER
DAVID O BURCH P E
CONSULTING STRUCTURAL & CIVIL ENGINEER
118 SHADYWOOD PL
MABANK, TX 75147

6/27/00

GENERAL NOTES

1 All design stresses are in accordance with the specification of THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION
2 Welding to conform with the AMERICAN WELDING SOCIETY D1 1 latest revision Welding to be performed by experienced welders qualified in accordance with A W S procedures Welding electrodes to be ASTM E-80XX series Weld process to be FCAW
3 All steel to have a minimum yield 50,000 psi
4 Structural welds will be a minimum of 3/16" fillet unless shown otherwise Minimum weld does not apply to Seal Welds
5 Anchor bolts to be ASTM A325
Nuts on anchor bolts should be loosely 'hand tightened' so as to allow the bearing plates to slide on the setting plates or TELFON pads, if called for Place setting plate & TELFON pads on shims, set bridge, and then grout under setting plates (IF REQUIRED)
Field connections bolts shall be ASTM A325 TYPE 3 and shall be tighten by the turn of the nut method to obtain proper torque.)
6 All steel to be sand blasted to S S P C #6 'Commercial Sand Blast Finish' immediately prior to painting Paint specifications listed below.
7 Concrete to be 4000 psi lightweight (120 PCF or less), poured and finished on the job site Concrete shall meet the requirements of Caltrans Class 'D' The bridge shall be delivered, formed with 1 1/2" deep 22 gage, galvanized composite floor deck No construction or control joints Contractor to furnish reinforcement
8 Hand rails and all other accessible surfaces to be ground smooth with no sharp edges or corners
9 Length of anchor bolts and foundation details are for general arrangement purposes only Actual foundation and substructure design, railing, camber, and slope requirements, electrical grounding, and clearances (flood plain, roadway, and waterway) are the responsibility of others

PAINT SPECIFICATIONS

Primer DEVRAN 4170 - Epoxy primer 3 0 - 8 0 Mils Dry
Top Coat DEVTHANE 389 - Aliphatic Urethane Gloss Enamel 2 - 3 Mils Dry
COLOR TO BE: _____

THIS BRIDGE IS DESIGNED BASED ON THE FOLLOWING CRITERIA
(1) Dead load of 85 psf plus an evenly distributed live load of 85 psf.
(2) Dead load + concentrated load of 10,000 pounds + impact
(3) Wind load (approx 120 mph) calculated on the entire vertical surface as though fully enclosed
(4) SEISMIC CALTRANS - BRIDGE DESIGN SPECIFICATIONS
SOIL PROFILE = S_d
ACCELERATION = 0 3g
MAGNITUDE = 7 0
REF R3-8 OF ATC-32

BR # 55C 0652

Rev	DESCRIPTION	BY/DATE	CHK'D BY
0	REVISED ELEVATION, RFF	DDY 6/22/00	DAG
B	REVISED PER CUSTOMER COMMENTS	DDY 5/26/00	
A	RELEASED FOR APPROVAL		

A DIVISION OF
BILTOLAST PRODUCTS INC
119 40th St NE
FORT PAYNE, AL 35967-8139
1-800-749-7515

STEADFAST BRIDGES®

ACTIVE MEMBER

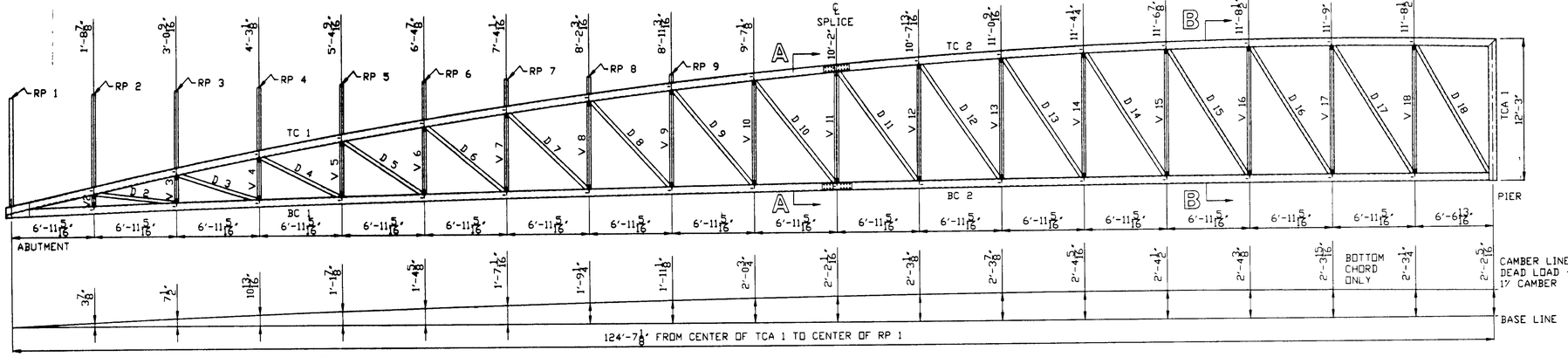
PLACARD ATTACHED ON RIGHT END OF ALL EACH END OF BRIDGE
STEADFAST BRIDGES
PEDESTRIAN TRAFFIC LIGHT VEHICLE MAXIMUM LOAD 5 TONS
BILTOLAST PRODUCTS INC FORT PAYNE ALABAMA
DATE OF MANUFACTURE
SERIAL #

JOB: 10'-5 1/4" X 223'-4" "KEYSTONE" BRIDGE
FOR: ORANGE COUNTY, CALIFORNIA
ADDRESS: RANCHO MISSION VIEJO, LLC
PO BOX 9
SAN JUAN CAPISTRANO, CA 92693
ARCHITECT: LAND CONCERN, LTD
CONTRACTOR:
DESCRIPTION: LADERA RANCH PROJECT NO. 10-0367-12

DRAWN BY: 12/21/99 DDY
APP'D BY: RGG
CHECKED BY: DAG

DRAWING #: 991043-1 OF 5
REV 0

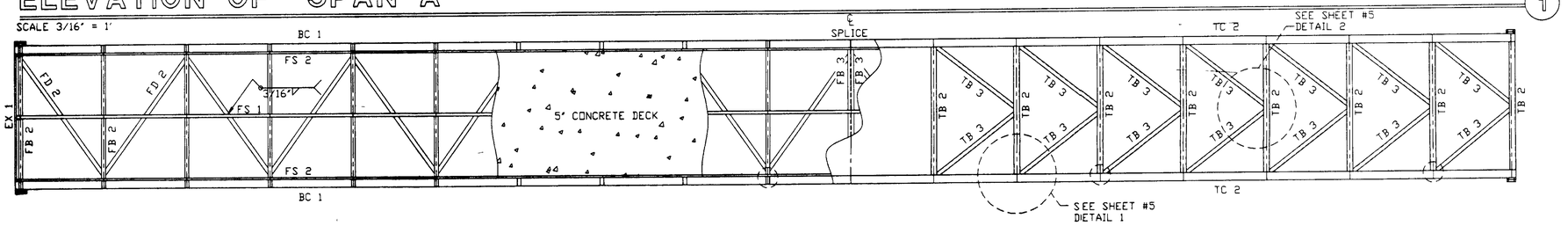
JUL 11 2000



ELEVATION OF "SPAN A"

SCALE 3/16" = 1'

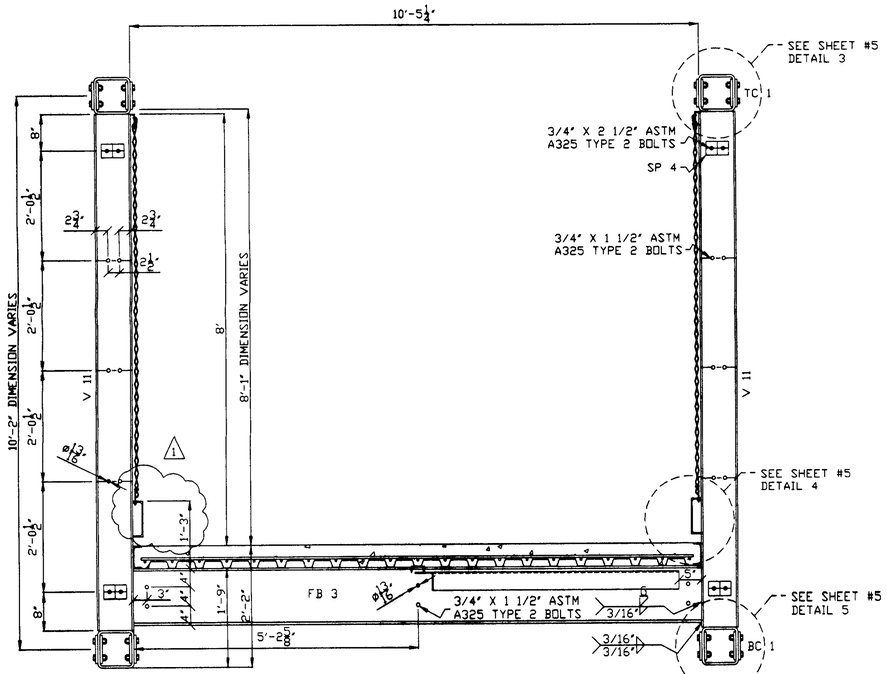
1



FLOOR PLAN OF "SPAN A"

SCALE 3/16" = 1'

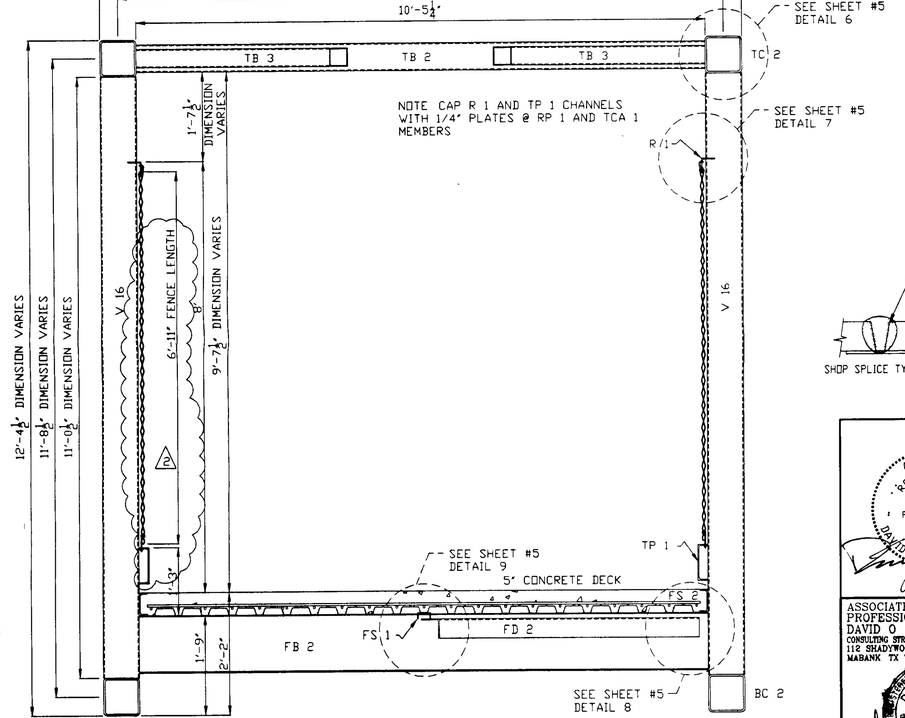
2



SECTION A - A @ SPLICE

SCALE 3/4" = 1'

3



SECTION B - B

SCALE 3/4" = 1'

4

B-U2a-GF

SHOP SPLICE TYPICAL

SKEW CUTS

V2= 7/8"
V3= 7/8"
V4= 13/16"
V5= 3/4"
V6= 11/16"
V7= 5/8"
V8= 9/16"
V9= 1/2"
V10= 3/8"
V11= 7/16"
V12= 5/16"
V13= 1/4"
V14= 3/16"
V15= 1/8"
V16= 1/16"
V17= 0
V18= 1/16"
RP 1= 1"
RP 2= 7/8"
RP 3= 7/8"
RP 4= 13/16"
RP 5= 3/4"
RP 6= 11/16"
RP 7= 5/8"
RP 8= 9/16"
RP 9= 1/2"

BILL OF MATERIALS

JOB: 991043 FOR: ORANGE COUNTY, CALIFORNIA (SPAN A)

STEEL ASTM WF-A572, A588 or A242 C&L-A36MOD (AS29) A588 or A242 TUBE-A500, A847 or A606 PLATE-A588 or A242

SHOP MK	MARK	DESCRIPTION	FEET	INCHES	WEIGHT PER/FOOT	TOTAL	TOTAL LENGTH
2	TCA 1	HSS 8" X 8" X 3/8"	12	3	37.69	923	25
2	TC 1	HSS 8" X 8" X 1/2"	71	0	48.85	6937	142
2	BC 1	HSS 8" X 8" X 1/2"	69	11 1/2	48.85	6835	140
2	TC 2	HSS 8" X 8" X 3/8"	55	6 11/16	37.69	4188	111
2	BC 2	HSS 8" X 8" X 3/8"	54	10	37.69	4133	110
2	V 2	HSS 8" X 4" X 1/4"		3 3/8	19.02	42	2
2	V 3	HSS 8" X 4" X 1/4"	2	5 1/16	19.02	92	5
2	V 4	HSS 8" X 4" X 1/4"	3	7 9/16	19.02	138	7
2	V 5	HSS 8" X 4" X 1/4"	4	9	19.02	181	10
2	V 6	HSS 8" X 4" X 1/4"	5	9 1/4	19.02	220	12
2	V 7	HSS 8" X 4" X 1/4"	6	8 7/16	19.02	255	13
2	V 8	HSS 8" X 4" X 1/4"	7	6 1/2	19.02	287	15
2	V 9	HSS 8" X 4" X 1/4"	8	3 1/2	19.02	315	17
2	V 10	HSS 8" X 4" X 1/4"	8	11 3/8	19.02	340	18
4	V 11	C 8 X 11.5	9	6 1/4	11.50	438	38
2	V 12	HSS 8" X 4" X 1/4"	10	0	19.02	380	20
2	V 13	HSS 8" X 4" X 1/4"	10	4 3/4	19.02	395	21
2	V 14	HSS 8" X 4" X 1/4"	10	8 3/8	19.02	407	21
2	V 15	HSS 8" X 4" X 1/4"	10	10 15/16	19.02	415	22
2	V 16	HSS 8" X 4" X 1/4"	11	0 1/2	19.02	420	22
2	V 17	HSS 8" X 4" X 1/4"	11	1	19.02	422	22
2	V 18	HSS 8" X 4" X 1/4"	11	0 1/2	19.02	420	22
2	RP 1	HSS 8" X 4" X 1/4"	9	4 1/16	19.02	355	19
2	RP 2	HSS 6" X 4" X 3/16"	7	11 3/16	11.97	190	16
2	RP 3	HSS 6" X 4" X 3/16"	6	7 7/16	11.97	158	13
2	RP 4	HSS 6" X 4" X 3/16"	5	4 7/8	11.97	129	11
2	RP 5	HSS 6" X 4" X 3/16"	4	3 3/8	11.97	102	9
2	RP 6	HSS 6" X 4" X 3/16"	3	3 1/16	11.97	78	7
2	RP 7	HSS 6" X 4" X 3/16"	2	3 3/16	11.97	54	5
2	RP 8	HSS 6" X 4" X 3/16"	1	5 5/8	11.97	35	3
2	RP 9	HSS 6" X 4" X 3/16"		8 9/16	11.97	17	1
2	D 2	HSS 4" X 4" X 3/16"	6	8	9.42	126	13
2	D 3	HSS 4" X 4" X 3/16"	6	11 9/16	9.42	131	14
2	D 4	HSS 4" X 4" X 3/16"	7	5 1/4	9.42	140	15
2	D 5	HSS 4" X 4" X 3/16"	8	0 1/4	9.42	151	16
2	D 6	HSS 4" X 4" X 3/16"	8	7 7/8	9.42	163	17
2	D 7	HSS 4" X 4" X 3/16"	9	3 9/16	9.42	175	19
2	D 8	HSS 4" X 4" X 3/16"	9	11	9.42	187	20
2	D 9	HSS 4" X 4" X 3/16"	10	7 1/8	9.42	200	21
2	D 10	HSS 4" X 4" X 3/16"	11	1 5/16	9.42	209	22
2	D 11	HSS 4" X 4" X 3/16"	11	6 1/8	9.42	217	23
2	D 12	HSS 4" X 4" X 3/16"	11	11 1/16	9.42	225	24
2	D 13	HSS 6" X 4" X 3/16"	12	3 3/16	11.97	294	25
2	D 14	HSS 6" X 4" X 3/16"	12	6 7/16	11.97	300	25
2	D 15	HSS 6" X 4" X 3/8"	12	8 13/16	22.37	570	25
2	D 16	HSS 6" X 4" X 3/8"	12	10 5/16	22.37	575	26
2	D 17	HSS 6" X 4" X 3/8"	12	11	22.37	578	26
2	D 18	HSS 6" X 4" X 3/8"	12	7 3/8	22.37	564	25
2	EX 1	C 5 X 6.7	10	5 1/4	6.70	140	21
1	FB 1	W 12 X 40	10	5 1/4	40.00	418	10
17	FB 2	W 12 X 16	10	5 1/4	16.00	2839	177
2	FB 3	C 12 X 20.7	10	5 1/4	20.70	432	21
1	FD 1	L 4" X 4" X 1/4"	11	10 3/4	6.60	79	12
17	FD 2	L 4" X 4" X 1/4"	12	3 1/2	6.60	1379	209
1	FS 1	C 3 X 4.1	125	5 1/2	4.10	514	125
2	FS 2	C 5 X 6.7	125	5 1/2	6.70	1681	251
		CONCRETE FLOOR					
24	CFD	DECKING 3"WID	22	0	6.00	3168	528
		TOP BRACING					
8	TB 2	HSS 6" X 4" X 3/16"	10	5 1/4	11.97	999	84
14	TB 3	HSS 4" X 4" X 3/16"	8	2 5/8	9.42	1083	115
		PLATES					
2	BP 1	PL 1'-0" X 1" A588	1	1 1/2	40.80	92	2
2	BP 3	PL 9" X 1" A588	1	6	30.60	92	3
8	SP 1	PL 6" X 1/2" A588	2	2	10.20	177	17
8	SP 2	PL 6" X 1/2" A588	2	6	10.20	204	20
8	SP 4	PL 3" X 1/2" A588		5	5.10	17	3
2	GP 1	PL 10 3/4" X 3/8"	2	0	18.00	72	4
2	GP 2	PL 8" X 3/8"		10 3/4	10.20	18	2
		SPLICE BOLTS					
24	BOLTS	3/4" ASTM A325 TY3	0	1 1/2	1.50	5	3
136	BOLTS	3/4" ASTM A325 TY3	0	2 1/2	2.50	71	28
		CHAIN LINK FENCE					
2	R 1	L 3" X 2" X 1/4"	125	1 1/2	4.10	1026	250
2	TP 1	C 8 X 11.5	125	1 1/2	11.50	2875	250
2	CP 1	PL 8" X 1/4" A588	0	4	6.81	5	1
16	CP 2	PL 6" X 1/4" A588	0	4	5.10	27	5
167	BOLTS	JBOLTS 1/4" WA/NUT	0	4	0.25	14	56
167	HOOKS	FENCE HOOKS					
52	ROD	3/8" ROD	10	0	0.38	198	520
6	CLF	6'-11" HI 1" 9GAVINYL	50	0	15.75	4725	300
		SHIPPED LOOSE					
2	BP 2	PL 1'-0" X 1/2" A588	1	1 1/2	20.40	46	2
2	BP 4	PL 9" X 1/2" A588	1	6	15.30	46	3
2	PADS	11" X 1/8" TEFLON	1	1 1/2	0.25	1	2
1	EXP 1	1/4" X 4 1/2" CHKPL	10	5 1/4	3.83	40	10

TOTAL LIFTING WEIGHT 56891

BR #55C0652

Rev	DESCRIPTION	BY/DATE	CHK'D BY
0	REVISED TOE PLATE, REMOVED LIGHT BRACKET	DDY 6/22/00	DAG
B	REVISED PER CUSTOMER COMMENTS	DDY 5/26/00	
A	RELEASED FOR APPROVAL		

ALABAMA REGISTERED NO 19851 PROFESSIONAL ENGINEER DAVID G. BURCH

6/22/00

ASSOCIATED CONSULTANT & PROFESSIONAL ENGINEER
DAVID O BURCH P.E.
CONSULTING STRUCTURAL & CIVIL ENGINEER
112 SHADYWOOD PL.
MABANK, TX 75147

6/27/00

STEADFAST BRIDGES®

A DIVISION OF BILTOLAST PRODUCTS INC
119 40th St. NE
FORT PAYNE, AL 35967-8139
1-800-749-7515

AISC ACTIVE MEMBER

PLACARD ATTACHED ON RIGHT END POST AT LOW END OF BRIDGE

STEADFAST BRIDGES

PEDESTRIAN TRAFFIC LIGHT VEHICLE MAXIMUM LOAD 5 TONS

BILTOLAST PRODUCTS INC FORT PAYNE ALABAMA

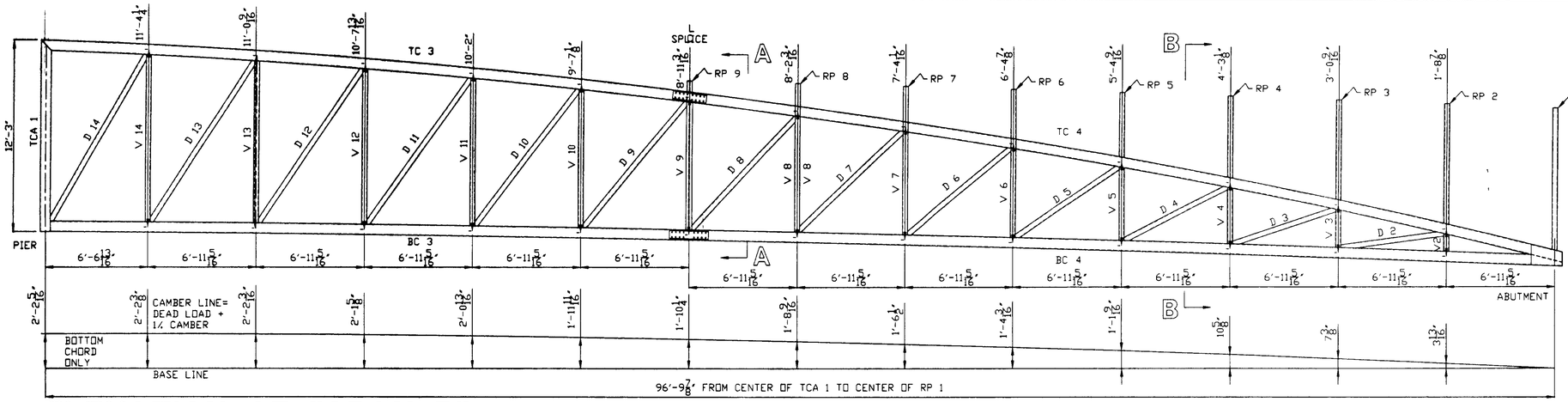
DATE OF MANUFACTURE

SERIAL #

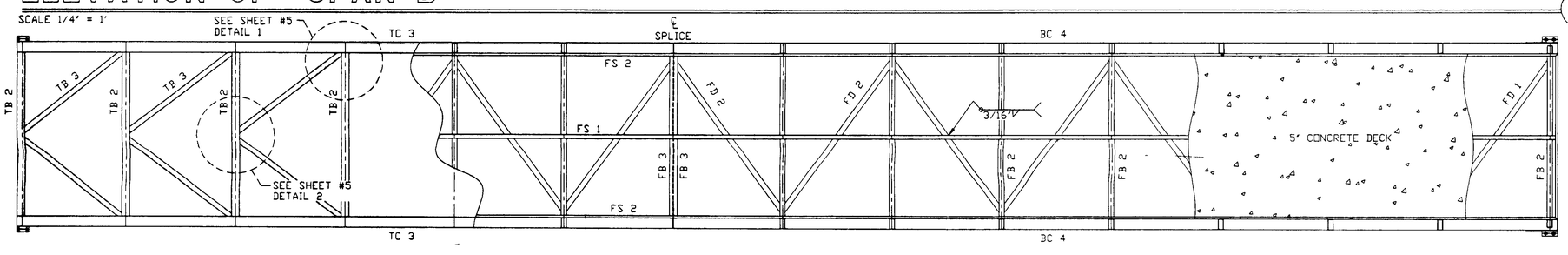
JOB: 10'-5 1/4" X 223'-4" "KEYSTONE" BRIDGE
FOR: ORANGE COUNTY, CALIFORNIA
ADDRESS: RANCHO MISSION VIEJO, LLC
PO BOX 9
SAN JUAN CAPISTRANO, CA 92693
ARCHITECT: LAND CONCERN, LTD
CONTRACTOR:
DESCRIPTION: LADERA RANCH PROJECT NO. 10-0367-12 (SPAN A)

DRAWN BY: 12/21/99 DDY
APP'D BY: RGG
CHECKED BY: DAG

DRAWING # 991043-2 OF 5 REV O

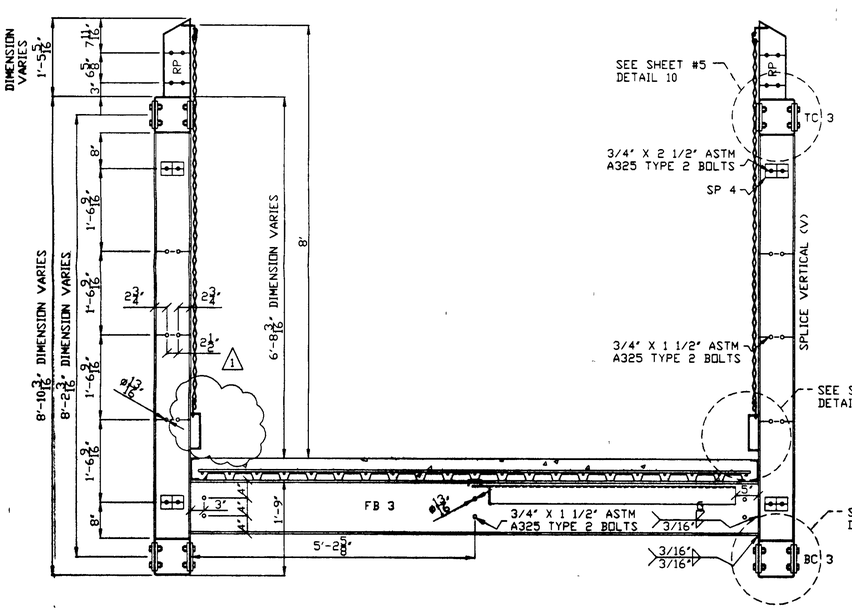


ELEVATION OF "SPAN B"



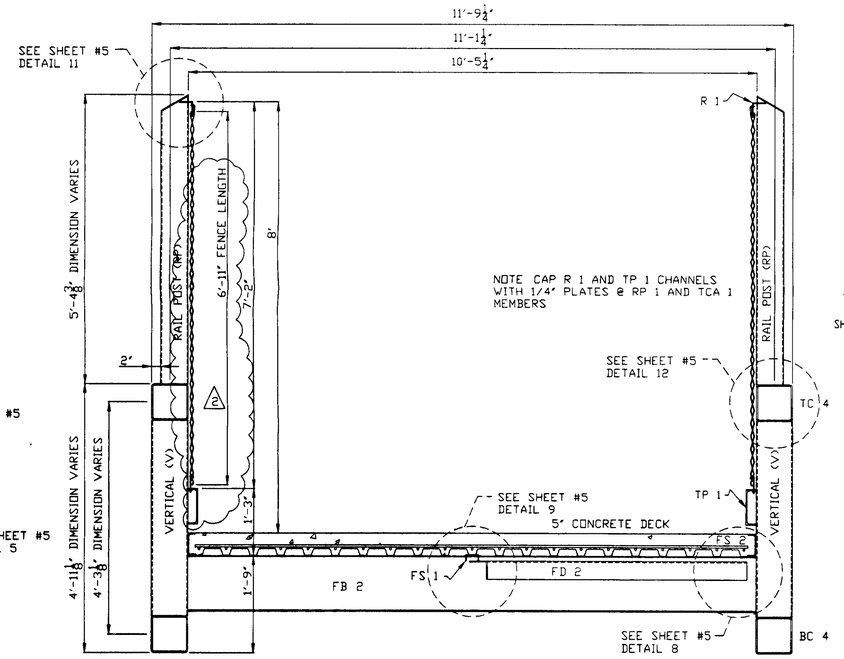
FLOOR PLAN OF "SPAN B"

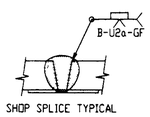
SCALE 1/4" = 1'



SECTION A - A ● SPLICE

SCALE 3/4" = 1'





SHOP SPLICE TYPICAL

SECTION B - B

BILL OF MATERIALS

JOB: 991043 FOR: ORANGE COUNTY, CALIFORNIA (SPAN B)

STEEL ASTM WF-A572, A588 or A242 C&L-A36MOD (A529) A588 or A242 TUBE-A500, A847 or A606 PLATE-A588 or A242

SHOP No.	MARK	DESCRIPTION	FEET	INCHES	WEIGHT PER/FOOT	TOTAL	TOTAL LENGTH
2	TCA 1	HSS 8" X 8" X 1/4"	12	3	25.92	633	25
2	TC 3	HSS 8" X 8" X 1/4"	41	9	25.92	2156	84
2	BC 3	HSS 8" X 8" X 1/4"	40	11 7/16	25.92	2115	82
2	TC 4	HSS 8" X 8" X 5/16"	57	0 7/16	31.84	3632	114
2	BC 4	HSS 8" X 8" X 5/16"	56	0 13/16	31.84	3570	112
2	V 2	HSS 8" X 4" X 1/4"	1	5 3/8	19.02	42	2
2	V 3	HSS 8" X 4" X 1/4"	2	5 1/16	19.02	92	5
2	V 4	HSS 8" X 4" X 1/4"	3	7 9/16	19.02	138	7
2	V 5	HSS 8" X 4" X 1/4"	4	9	19.02	181	10
2	V 6	HSS 8" X 4" X 1/4"	5	9 1/4	19.02	220	12
2	V 7	HSS 8" X 4" X 1/4"	6	8 7/16	19.02	255	13
2	V 8	HSS 8" X 4" X 1/4"	7	6 1/2	19.02	287	15
4	V 9	C 8 X 11.50	8	3 1/8	11.50	381	33
2	V 10	HSS 8" X 4" X 1/4"	8	11 3/8	19.02	340	18
2	V 11	HSS 8" X 4" X 1/4"	9	6 1/4	19.02	362	19
2	V 12	HSS 8" X 4" X 1/4"	10	0	19.02	380	20
2	V 13	HSS 8" X 4" X 1/4"	10	4 3/4	19.02	395	21
2	V 14	HSS 8" X 4" X 1/4"	10	8 3/8	19.02	407	21
2	RP 1	HSS 8" X 4" X 1/4"	9	4 1/16	19.02	355	19
2	RP 2	HSS 6" X 4" X 3/16"	7	11 3/16	11.97	190	16
2	RP 3	HSS 6" X 4" X 3/16"	6	7 7/16	11.97	158	13
2	RP 4	HSS 6" X 4" X 3/16"	5	4 7/8	11.97	129	11
2	RP 5	HSS 6" X 4" X 3/16"	4	3 3/8	11.97	102	9
2	RP 6	HSS 6" X 4" X 3/16"	3	1 1/16	11.97	78	7
2	RP 7	HSS 6" X 4" X 3/16"	2	3 3/16	11.97	54	5
2	RP 8	HSS 6" X 4" X 3/16"	1	5 5/8	11.97	35	3
2	RP 9	C 6 X 8.2		8 9/16	8.20	8	1
2	D 2	HSS 4" X 4" X 3/16"	6	8	9.42	126	13
2	D 3	HSS 4" X 4" X 3/16"	6	11 9/16	9.42	131	14
2	D 4	HSS 4" X 4" X 3/16"	7	5 1/4	9.42	140	15
2	D 5	HSS 4" X 4" X 3/16"	8	0 1/4	9.42	151	16
2	D 6	HSS 4" X 4" X 3/16"	8	7 7/8	9.42	163	17
2	D 7	HSS 4" X 4" X 3/16"	9	4 3/4	9.42	177	19
2	D 8	HSS 4" X 4" X 3/16"	10	0	9.42	188	20
2	D 9	HSS 4" X 4" X 3/16"	10	6	9.42	198	21
2	D 10	HSS 4" X 4" X 3/16"	11	0 7/16	9.42	208	22
2	D 11	HSS 4" X 4" X 3/16"	11	6 1/8	9.42	217	23
2	D 12	HSS 6" X 4" X 3/16"	11	11 1/16	11.97	285	24
2	D 13	HSS 6" X 4" X 3/16"	12	3 3/16	11.97	294	25
2	D 14	HSS 6" X 4" X 3/16"	12	3 1/8	11.97	294	25
2	EX 1	C 5 X 6.7	10	5 1/4	6.70	140	21
1	FB 1	W 12 X 40	10	5 1/4	40.00	418	10
13	FB 2	W 12 X 16	10	5 1/4	16.00	2171	136
2	FB 3	C 12 X 20.7	10	5 1/4	20.70	432	21
1	FD 1	L 4" X 4" X 1/4"	11	10 3/4	6.60	79	12
13	FD 2	L 4" X 4" X 1/4"	12	3 1/2	6.60	1055	160
1	FS 1	C 3 X 4.1	97	8 1/4	4.10	401	98
2	FS 2	C 5 X 6.7	97	8 1/4	6.70	1309	195
		CONCRETE FLOOR					
19	CFD	DECKING 3"WID	22	0	6.00	2508	418
		TOP BRACING					
4	TB 2	HSS 6" X 4" X 3/16"	10	5 1/4	11.97	499	42
6	TB 3	HSS 4" X 4" X 3/16"	8	2 5/8	9.42	464	49
		PLATES					
2	BP 1	PL 1'-0" X 1" A588	1	1 1/2	40.80	92	2
2	BP 3	PL 9" X 1" A588	1	6	30.60	92	3
8	SP 2	PL 6" X 1/2" A588	2	6	10.20	204	20
8	SP 3	PL 6" X 1/2" A588	2	4	10.20	194	19
8	SP 4	PL 3" X 1/2" A588		5	5.10	17	3
2	GP 1	PL 10 3/4" X 3/8"	2	0	18.00	72	4
2	GP 2	PL 8" X 3/8"		10 3/4	10.20	18	2
		SPLICE BOLTS					
26	BOLTS	3/4" ASTM A325 TY 3		1 1/2	1.50	5	3
136	BOLTS	3/4" ASTM A325 TY 3		2 1/2	2.50	71	28
		CHAIN LINK FENCE					
2	R 1	L 3" X 2" X 1/4"	97	3 7/8	4.10	798	195
2	TP 1	C 8 X 11.5	97	3 7/8	11.50	2243	195
2	CP 1	PL 8" X 1/4" A588		4	6.81	5	1
16	CP 2	PL 6" X 1/4" A588		4	5.10	27	3
130	BOLTS	JBOLT 1/4" WA/NUT		4	0.25	11	43
130	HOOKS	FENCE HOOKS					
40	ROD	3/8" ROD	10	0	0.38	152	400
4	CLF	6'-11" HI 1" GA VINYL	50	0	15.75	3150	200
		SHIPPED LOOSE					
2	BP 2	PL 1'-0" X 1/2" A588	1	1 1/2	20.40	46	2
2	BP 4	PL 9" X 1/2" A588	1	6	15.30	46	3
2	PADS	11" X 1/8" TEFLON	1	1 1/2	0.25	1	2
1	EXP 1	1/4" X 4 1/2" CHKPL	10	5 1/4	3.83	40	10
		TOTAL LIFTING WEIGHT				36099	

BR # 55C0652

Rev	DESCRIPTION	BY/DATE	CHK'D BY
0	REVISED TOE PLATE, REMOVED LIGHT BRACKET	DDY 6/22/00	DAG
B	REVISED PER CUSTOMER COMMENTS	DDY 5/26/00	
A	RELEASED FOR APPROVAL		

ALABAMA REGISTERED NO 19851 PROFESSIONAL ENGINEER DAVID O. BURCH JR. 6/22/00

ASSOCIATED CONSULTANT & PROFESSIONAL ENGINEER
DAVID O BURCH P E
CONSULTING STRUCTURAL & CIVIL ENGINEER
118 SHADYWOOD PL
MABANK, TX 75147

6/27/00

STEADFAST BRIDGES®

A DIVISION OF BILTOLAST PRODUCTS INC.
119 40th St. NE
FORT PAYNE, AL 35967-8139
1-800-749-7515

ACTIVE MEMBER

PLACARD ATTACHED ON RIGHT END POST AT EACH END OF BRIDGE

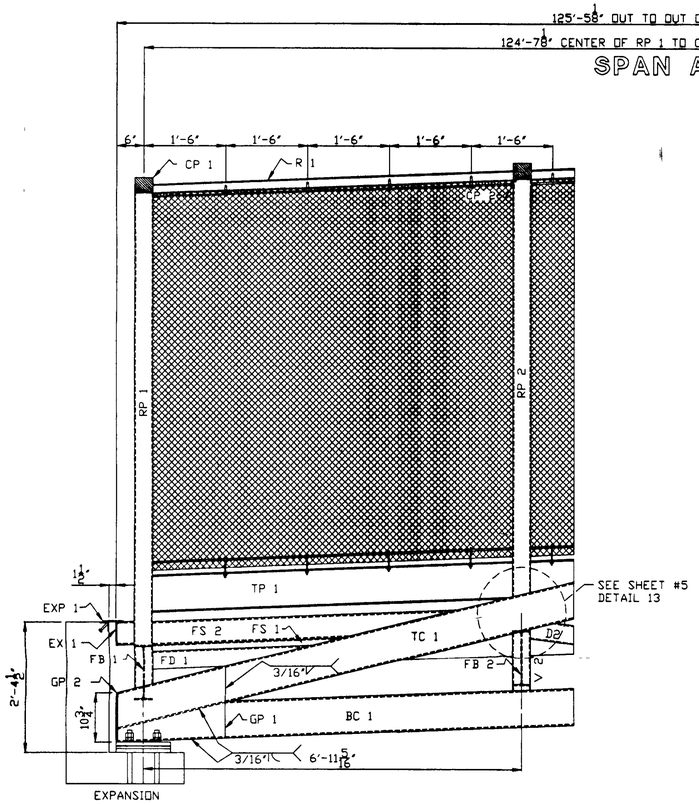
STEADFAST BRIDGES
PEDESTRIAN TRAFFIC
LIGHT VEHICLE
MAXIMUM LOAD
4 TONS
BILTOLAST PRODUCTS INC
FORT PAYNE ALABAMA
DATE OF MANUFACTURE
SERIAL #

JOB 10'-5 1/4" X 223'-4" "KEYSTONE" BRIDGE
FOR ORANGE COUNTY, CALIFORNIA
ADDRESS: RANCHO MISSION VIEJO, LLC
PO BOX 9
SAN JUAN CAPISTRANO, CA 92693
ARCHITECT: LAND CONCERN, LTD
CONTRACTOR:
DESCRIPTION: LADERA RANCH PROJECT NO. 10-0367-12 (SPAN B)

DRAWN BY: 12/21/99 DDY
APP'D BY: RGG
CHECKED BY: DAG

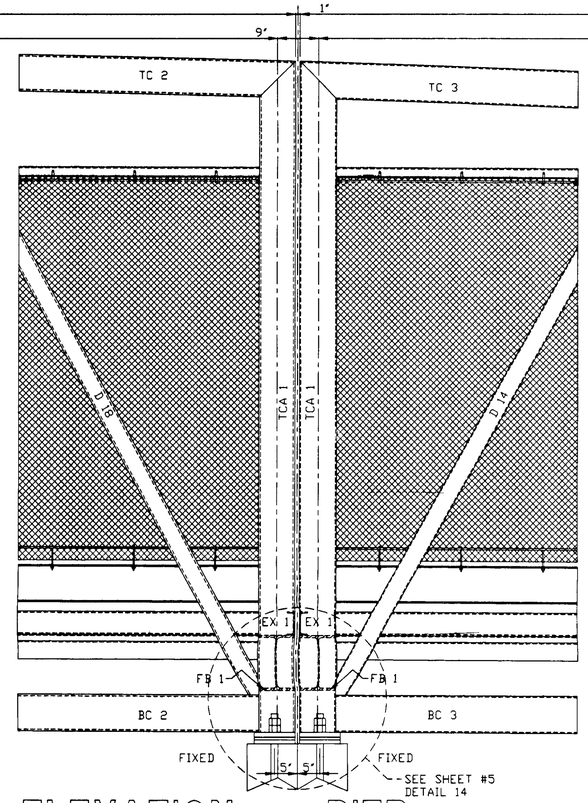
DRAWING # 991043-3 OF 5 REV 0

JUL 12000



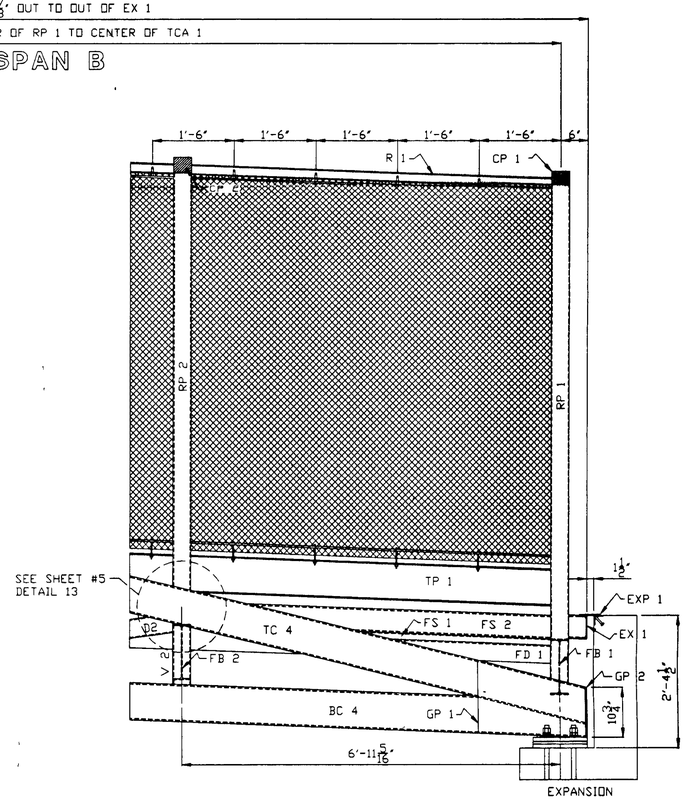
ELEVATION @ ABUTMENT

SCALE 3/4" = 1'



ELEVATION @ PIER

SCALE 3/4" = 1'



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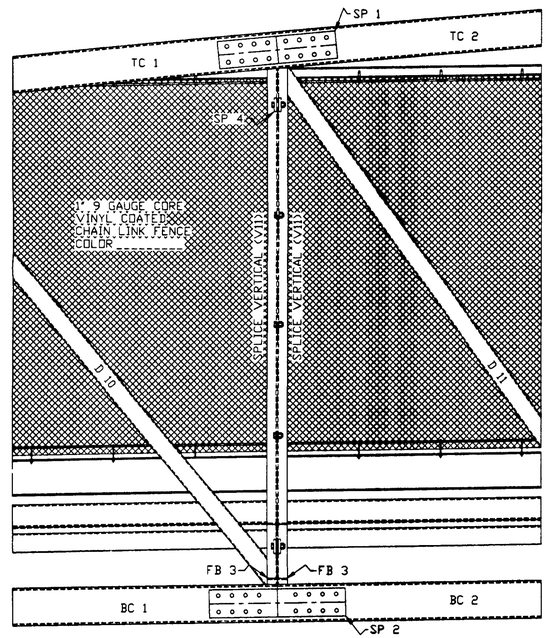
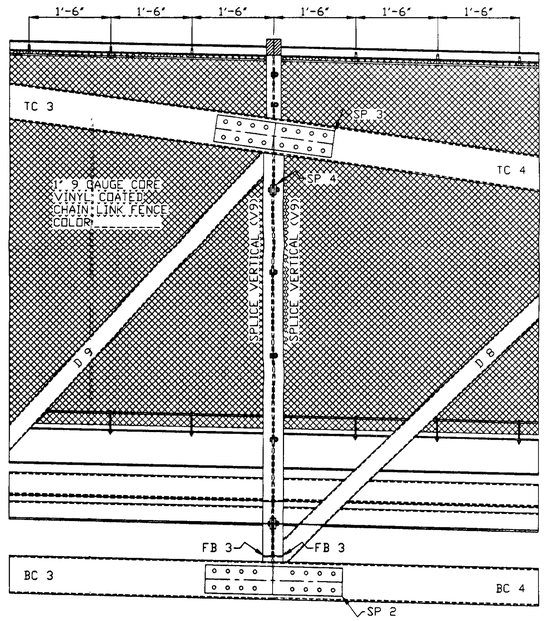


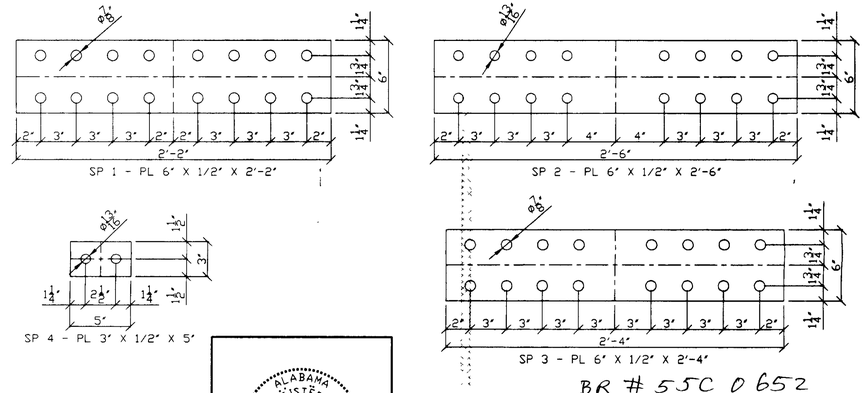
SPLICE @ SPAN A

SCALE 3/4" = 1'



SPLICE @ SPAN B

SCALE 3/4" = 1'



BR # 55C 0652

Rev	DESCRIPTION	BY/DATE	CHK'D BY
0	REVISED TOE PLATE, REMOVED LIGHT BRACKET	DDY 6/22/00	DAG
B	REVISED PER CUSTOMER COMMENTS	DDY 5/26/00	
A	RELEASED FOR APPROVAL		

ALABAMA REGISTERED ND 19851 PROFESSIONAL ENGINEER DAVID A. GARRANT
6/22/00

ASSOCIATED CONSULTANT & PROFESSIONAL ENGINEER
DAVID O BURCH P E
CONSULTING STRUCTURAL & CIVIL ENGINEER
112 SHADYWOOD PL
MABANK, TX 75147
6/27/00

STEADFAST BRIDGES®

A DIVISION OF
BILTOLAST PRODUCTS INC
119 40th St. NE
FORT PAYNE, AL 35967-8139
1-800-749-7515

ACTIVE MEMBER

PLACARD ATTACHED ON RIGHT END POST AT EACH END OF BRIDGE
STEADFAST BRIDGES
PEDESTRIAN TRAFFIC
LIGHT VEHICLE
MAXIMUM LOAD
5 TONS
BILTOLAST PRODUCTS INC
FORT PAYNE ALABAMA
DATE OF MANUFACTURE
SERIAL #

JOB: 10'-5 1/4" X 223'-4" "KEYSTONE" BRIDGE
FOR: ORANGE COUNTY, CALIFORNIA
ADDRESS: RANCHO MISSION VIEJO, LLC
PO BOX 9
SAN JUAN CAPISTRANO, CA 92693
ARCHITECT: LAND CONCERN, LTD
CONTRACTOR:
DESCRIPTION: LADERA RANCH PROJECT NO. 10-0367-12

DRAWN BY: 12/21/99 DDY
APP'D BY: RGG
CHECKED BY: DAG

DRAWING #: 991043-4 OF 5 REV 0

BR # 55C 0652

Rev	DESCRIPTION	BY/DATE		CHK'D BY
0	REVISED TOE PLATE, REMOVED LIGHT BRACKET,RFF	DDY	6/22/00	DAG
B	REVISED PER CUSTOMER COMMENTS	DDY	5/26/00	
A	RELEASED FOR APPROVAL			

ALABAMA REGISTERED NO 19851 PROFESSIONAL ENGINEER DAVID A GUARJANSKI
6/22/00

ASSOCIATED CONSULTANT & PROFESSIONAL ENGINEER
DAVID O BURCH P E
CONSULTING STRUCTURAL & CIVIL ENGINEER
112 SHADYWOOD PL
MABANK TX 75147

REGISTERED PROFESSIONAL ENGINEER DAVID O BURCH No 18966 EXPIRES 9-30-2000
6/27/00

STEADFAST BRIDGES®

A DIVISION OF
BILTOLAST PRODUCTS INC
119 40th St. NE
FORT PAYNE, AL 35967-8139
1-800-749-7515

AISC ACTIVE MEMBER

PLACARD ATTACHED ON RIGHT END POST AT EACH END OF BRIDGE
STEADFAST BRIDGES
PEDESTRIAN TRAFFIC
LIGHT VEHICLE
MAXIMUM LOAD
5 TONS
BILTOLAST PRODUCTS INC FORT PAYNE ALABAMA
DATE OF MANUFACTURE
SERIAL #

JOB: 10'-5 1/4" X 223'-4" 'KEYSTONE' BRIDGE
FOR: ORANGE COUNTY, CALIFORNIA
ADDRESS: RANCHO MISSION VIEJO, LLC
PO BOX 9
SAN JUAN CAPISTRANO, CA 92693
ARCHITECT: LAND CONCERN, LTD
CONTRACTOR:
DESCRIPTION: LADERA RANCH PROJECT NO. 10-0367-12

DRAWN BY: 12/21/99 DDY
APP'D BY: RGG
CHECKED BY: DAG

DRAWING #: 991043-5 OF 5
REV: 0

JUL 1 2000