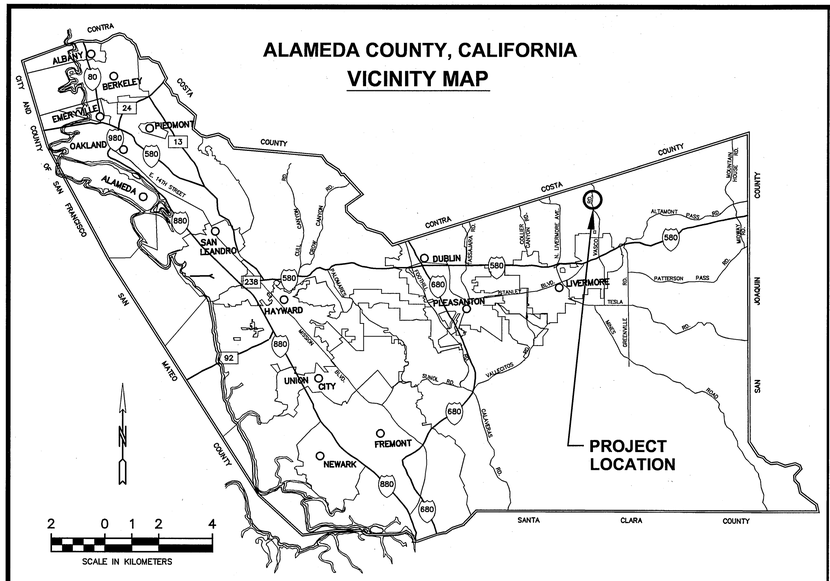
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

ALAMEDA COUNTY, CALIFORNIA
VICINITY MAP



CONVENTIONAL SYMBOLS

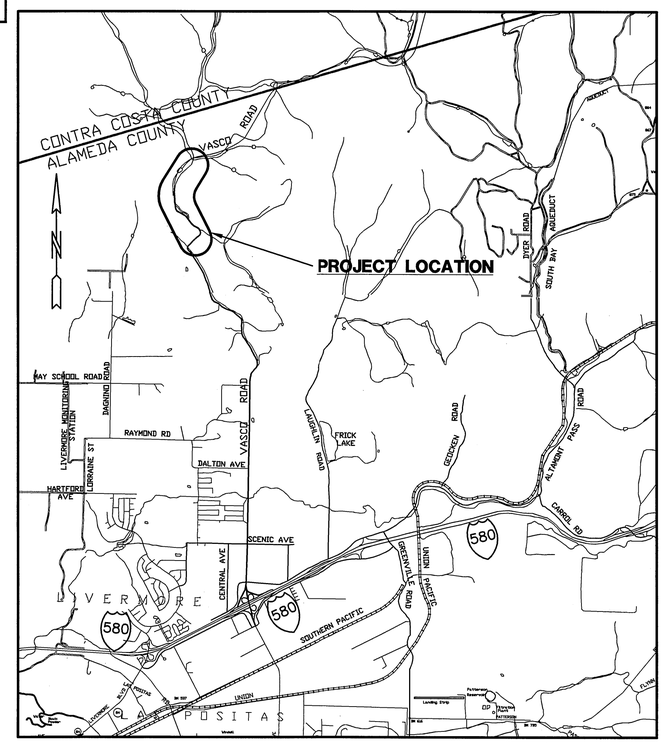
PROJECT PROPERY LINES
PROJECT EASEMENT LINES
FUTURE RIGHT OF WAY
PROJECT RIGHT OF WAY
CONSTRUCTION CENTER LINE (10 — 11)
TRAVERSE OR SURVEY LINE AND MONUMENT
CENTER LINE
CENTER LINE OF CHANNEL, CREEK, OR DITCH
TOE OF FILL OR SLOPE
TOP OF CUT OR BANK
CONCRETE CHANNEL
ROAD
EDGE OF PAVEMENT — EP
PCC EXTRUDED CURB OR AC BERM
PCC SIDEWALK, CURB GUTTER & DRIVEWAY
GUARD RAIL OR BARRICADE
EXCLUSION FENCE — x — x —
BARBED FENCE — XX —
CHAIN–LINK FENCE
RAILROAD
BUILDING
SHRUBBERY
MAIL BOX
TREE
TREE TO BE REMOVED
CHANNEL SLOPE

EXISTING UTILITIES:
WATER — W —
GAS — G —
GAS RETIRED — RG —
SANITARY SEWER — SS —
OIL — O —
GASOLINE — GS —
STORM DRAIN — SD —
ELECTRICAL — E —
ELECTRICAL RETIRED — RE —
ELECTRICAL UNDERGROUND — UE —
TELEPHONE — T —
TELEPHONE UNDERGROUND — UT —
CABLE TV — CTV —
CABLE TV UNDERGROUND — UCTV —
TRANSMISSION LINE AND TOWER
DROP INLET — DI — DI
ELECTROLIER
FIRE HYDRANT
MANHOLE — MH
MONUMENT — EXISTING — PROPOSED
POLE:
JOINT POLE — JP
POWER POLE — PP
TELEPHONE POLE — TP
GUY POLE — GP
RIGHT OF WAY MARKER
ROADWAY SIGN
STREET NAME SIGN
WATER METER — WM
WATER VALVE — WV
GAS VALVE — GV

PLANS
FOR THE RELOCATION OF
VASCO ROAD
FROM THE VICINITY OF
MILEPOSTS 3.0 TO 4.3
ALAMEDA COUNTY, CALIFORNIA

FEDERAL AID PROJECT
NO. RPSTPL-5933 (074)

JANUARY 2008



LOCATION MAP
NO SCALE

DANIEL WOLDESENBET, Ph.D., P.E.
COUNTY ENGINEER
CIVIL ENGINEER CERTIFICATE NO. 60306
EXPIRATION JUNE 30, 2008

REGISTERED PROFESSIONAL ENGINEER DANIEL WOLDESENBET No. 60306 Exp. 6/30/2010 CIVIL STATE OF CALIFORNIA

6/28/08
PLAN APPROVAL DATE

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	TITLE SHEET
2.	POLLUTION PREVENTION SHEET
3.	GENERAL NOTES, ABBREVIATIONS & STANDARD PLANS LIST
4.	CONSTRUCTION LINE LAYOUT
5.	NEW MONUMENT PLAN
6.–7.	SITE LAYOUT
8.–9.	TEMPORARY CONSTRUCTION ENTRANCE & STAGING AREA PLAN
10.–14.	TYPICAL SECTIONS & MISCELLANEOUS DETAILS
15.–18.	ROADWAY STAKING PLAN
19.–25.	ROADWAY PLAN
26.–34.	PROFILE & SUPERELEVATION – V LINE
35.	TEMPORARY BYPASS ROADWAY – TYPICAL CROSS SECTIONS
36.–37.	TEMPORARY BYPASS ROADWAY AND ACCESS ROAD PLAN
38.–39.	TEMPORARY BYPASS ROADWAY PROFILE & SUPERELEVATION – T LINE
40.	ACCESS ROAD – PROFILE AND TYPICAL SECTIONS
41.–42.	TEMPORARY BYPASS ROADWAY – DRAINAGE AND GRADING PLAN
43.–45.	TEMPORARY BYPASS ROADWAY – DRAINAGE PROFILE
46.	SOUTH INTERSECTION & PRIVATE DRIVEWAYS (RALPH & WINDY RIDGE) – TYPICAL SECTION & DETAILS
47.	SOUTHERN INTERSECTION – LAYOUT PLAN
48.	PRIVATE DRIVEWAY (RALPH) – PLAN & PROFILE
49.–50.	SOUTHERN INTERSECTION – PLAN & PROFILES
51.	PRIVATE DRIVEWAY (WINDY RIDGE) – PLAN & PROFILE
52.	NORTHERN INTERSECTION (EMERGENCY VEHICLE ACCESS)
53.–54.	OLD VASCO ROAD CUL–DE–SAC (MOOREHEAD)
55.–61.	DRAINAGE AND GRADING PLAN
62.–65.	DRAINAGE PROFILES
66.	DRAINAGE SCHEDULE
67.	DRAINAGE DETAILS
68.–71.	WATER QUALITY & HYDROMODIFICATION BASIN – PLAN & DETAILS
72.–73.	STORMWATER TREATMENT UNIT
74.–81.	TEMPORARY WATER POLLUTION CONTROL PLANS
82.–89.	EROSION CONTROL PLAN
90.–95.	LANDSCAPING PLAN & DETAILS
96.–102.	UTILITY PLAN
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106.–110.	SIGNING & STRIPING PLAN
111.	CONSTRUCTION AREA SIGNS
112.–133.	CONSTRUCTION STAGING PLAN – STAGE 1, 2, 2A, 2B, 2C, 3, & 4
134.–137.	EMBANKMENT SUBDRAINAGE LAYOUT
138	REINFORCED EMBANKMENT DETAILS
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140	RETAINING WALLS – TYPICAL SECTIONS & DETAILS
141	RETAINING WALLS – LAYOUT
142	RETAINING WALL 1 – PROFILE
143	RETAINING WALL 2 – PROFILE
144.–145.	CROSS SECTIONS – V LINE

THE CONTRACTOR SHALL POSSESS A CLASS A, OR A CLASS C–12 LICENSE AT THE TIME THIS CONTRACT IS AWARDED.

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS
0 50 mm

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
2				
3				
4				
5				

REVISIONS

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

APPROVAL RECOMMENDED JAMES CHU
APPROVAL RECOMMENDED
APPROVAL RECOMMENDED STANLEY WONG

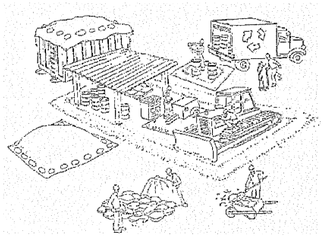
DRAWN JANE BRADY
DESIGNED
CHECKED JAMES CHU

TITLE SHEET

SCALE: AS SHOWN
DATE: JAN 2008
WORK ORDER NO.: R23265
SPECIFICATION NO.: 1903
SHEET NO.: 1 OF 145
FILE NO.: U-357-6

N:\ROAD\r23265\~Final Plan – Vasco Road 2007\Sheet 1 – Title Vasco Rd.dwg 6-19-08 09:48:38 AM janer

Pollution Prevention - It's Part of the Plan



Make sure your crews and subs do the job right!

Runoff from streets and other paved areas is a major source of pollution and damage to creeks and the San Francisco Bay. Construction activities can directly affect the health of creeks and the Bay unless contractors and crews plan ahead to keep dirt, debris, and other construction waste away from storm drains and local creeks. Following these guidelines and the project specifications will ensure your compliance with County of Alameda requirements.

Materials storage & spill cleanup

Non-hazardous materials management

- Sand, dirt, and similar materials must be stored at least 10 feet (3 meters) from catch basins, and covered with a tarp during wet weather or when rain is forecast.
- Use (but don't overuse) reclaimed water for dust control as needed.
- Sweep or vacuum streets and other paved areas daily. Do not wash down streets or work areas with water!
- Recycle all asphalt, concrete, and aggregate base material from demolition activities. Comply with Alameda County Ordinances for recycling construction materials, wood, gyp board, pipe, etc.
- Check dumpsters regularly for leaks and to make sure they don't overflow. Repair or replace leaking dumpsters promptly.

Hazardous materials management

- Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state, and federal regulations.
- Store hazardous materials and wastes in secondary containment and cover them during wet weather.
- Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- Be sure to arrange for appropriate disposal of all hazardous wastes.

Spill prevention and control

- Keep a stockpile of spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.
- When spills or leaks occur, contain them immediately and be particularly careful to prevent leaks and spills from reaching the gutter, street, or storm drain. Never wash spilled material into a gutter, street, storm drain, or creek!
- Report any hazardous materials spills immediately! Dial 911 or Alameda County Public Works Agency dispatch at (510) 670-5500

Vehicle and equipment maintenance & cleaning

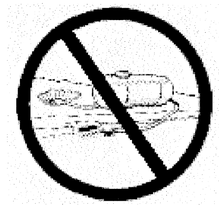
- Inspect vehicles and equipment for leaks frequently. Use drip pans to catch leaks until repairs are made; repair leaks promptly.
- Fuel and maintain vehicles on site only in a bermed area or over a drip pan that is big enough to prevent runoff.
- If you must clean vehicles or equipment on site, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or creeks.
- Do not clean vehicles or equipment on-site using soaps, solvents, degreasers, steam cleaning equipment, etc.

Earthwork & contaminated soils

- Keep excavated soil on the site where it is least likely to collect in the street.
- Transfer to dump trucks should take place on the site, not in the street.
- Use fiber rolls, silt fences, or other control measures to minimize the flow of silt off the site.

- Earth moving activities are only allowed during dry weather by permit and as approved by the County Inspector in the Field.
- Mature vegetation is the best form of erosion control. Minimize disturbance to existing vegetation whenever possible.
- If you disturb a slope during construction, prevent erosion by securing the soil with erosion control fabric, or seed with fast-growing grasses as soon as possible. Place fiber rolls down-slope until soil is secure.
- If you suspect contamination (from site history, discoloration, odor, texture, abandoned underground tanks or pipes, or buried debris), call the Engineer for help in determining what should be done, and manage disposal of cntaminated soil according to their instructions.

Dewatering operations

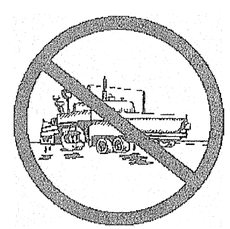


- Reuse water for dust control, irrigation, or another on-site purpose to the greatest extent possible.
- Be sure to notify and obtain approval from the Engineer before discharging water to a street, gutter, or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the Engineer to determine what testing is required and how to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.

Saw cutting

- Always completely cover or barricade storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or sand/gravel bags to keep slurry out of the storm drain system.
- Shovel, absorb, or vacuum saw-cut slurry and pick up all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- If saw cut slurry enters a catch basin, clean it up immediately.

Paving/asphalt work



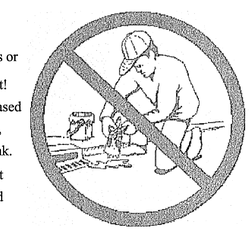
- Always cover storm drain inlets and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
- Protect gutters, ditches, and drainage courses with sand/gravel bags, or earthen berms.
- Do not sweep or wash down excess sand from sand sealing into gutters, storm drains, or creeks. Collect sand and return it to the stockfile, or dispose of it as trash.
- Do not use water to wash down fresh asphalt concrete pavement.

Concrete, grout, and mortar storage & waste disposal

- Be sure to store concrete, grout, and mortar under cover and away from drainage areas. These materials must never reach a storm drain.
- Wash out concrete equipment/trucks off-site or designate an on-site area for washing where water will flow onto dirt or into a temporary pit in a dirt area. Let the water seep into the soil and dispose of hardened concrete with trash.

- Divert water from washing exposed aggregate concrete to a dirt area where it will not run into a gutter, street, or storm drain.
- If a suitable dirt area is not available, collect the wash water and remove it for appropriate disposal off site.

Painting



- Never rinse paint brushes or materials in a gutter or street!
- Paint out excess water-based paint before rinsing brushes, rollers, or containers in a sink. If you can't use a sink, direct wash water to a dirt area and spade it in.
- Paint out excess oil-based paint before cleaning brushes in thinner.
- Filter paint thinners and solvents for reuse whenever possible. Dispose of oil-based paint sludge and unusable thinner as hazardous waste.

Bay Area Stormwater Management Agencies Association (BASMAA)
www.basmaa.org

Storm drain polluters may be liable for fines of $10,000 or more per day!

For references and more detailed information:
www.cleanwaterprogram.org
www.cabmphandbooks.com

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
A				
A				
A				
A				
A				

APPROVED

REGISTERED PROFESSIONAL ENGINEER
STEVEN W. LOWE
No. 39557
Exp. 12/31/2007
CIVIL
STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
IN THE VICINITY OF MILEPOSTS 3.0 TO 4.3

POLLUTION PREVENTION

SCALE NONE
DATE JAN 2008

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 2 OF 145
FILE NO. U-357-6

N:\ROAD\r23265\-Final Plan - Vasco Road 2007\Sheet 2 - Pollution Guidelines.dwg 2-06-08 01:43:50 PM janer

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

NOTES

1. ALL WORK IS TO BE DONE UNDER THE DIRECTION OF THE ENGINEER.
2. CALTRANS STANDARD SPECIFICATIONS JULY 1999 AND STANDARD PLANS JULY 2004 EDITION, ARE PART OF THESE PLANS.
3. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORK HOURS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND CONSTRUCTION OF PROPER SHORING OF TRENCHES IN ACCORDANCE WITH OCCUPATIONAL SAFETY LAWS. THE DUTIES OF THE ENGINEER DO NOT INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY IN, ON, OR NEAR THE CONSTRUCTION SITE.
4. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING STRUCTURES AND/OR UTILITIES DURING CONSTRUCTION. PROPER REPAIR SHALL BE DONE TO THE SATISFACTION OF THE ENGINEER AND THE RESPECTIVE UTILITY COMPANY.
5. ALL PIPELINES AND OTHER UNDERGROUND FACILITIES MAY NOT BE SHOWN. EXISTING UNDERGROUND FACILITIES AS SHOWN ARE APPROXIMATE ONLY AND WERE OBTAINED FROM AVAILABLE UTILITY RECORDS. HOWEVER, THE COUNTY ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY OR COMPLETENESS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITIES AND TO HAVE ALL FACILITIES LOCATED IN THE FIELD PRIOR TO THE START OF ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT AT 1-800-642-2444 AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION.
6. SLOPES OF ALL EMBANKMENT FILL SHALL BE 1:2 (VERTICAL: HORIZONTAL) UNLESS OTHERWISE NOTED ON PLANS OR AS DIRECTED BY THE ENGINEER. SLOPES OF ALL EMBANKMENT CUT SHALL BE 1:3 (VERTICAL: HORIZONTAL) UNLESS OTHERWISE NOTED ON PLANS OR AS DIRECTED BY THE ENGINEER. ATTENTION IS DIRECTED TO CALTRANS STANDARD SPECIFICATIONS, SECTION 19, FOR EMBANKMENT CONSTRUCTIONS WHERE APPLICABLE.
7. DUST CONTROL MEASURES, AS APPROVED BY THE ENGINEER, SHALL BE FOLLOWED AT ALL TIMES DURING CONSTRUCTION OPERATIONS.
8. EROSION CONTROL SHALL BE PERFORMED ON ALL DISTURBED AREAS.
9. FOR RIGHT OF WAY INFORMATION, SEE ALAMEDA COUNTY RIGHT OF WAY PLANS.
10. RELOCATE AND/OR ADJUST ALL SIGNS AND MARKERS AS DIRECTED BY THE ENGINEER.
11. TREES DESIGNATED ON THE PLANS ARE TO BE REMOVED UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
12. LIMITS OF EARTHWORK SHOWN ARE FOR ESTIMATING PURPOSES ONLY. EXACT LOCATION SHALL BE AS DETERMINED IN THE FIELD BY THE ENGINEER DURING EXCAVATION.
13. SEE SPECIFICATIONS, STANDARD PLANS, AND SPECIAL PROVISIONS FOR DETAILS NOT SHOWN HEREIN.
14. ALL POLES, VALVES, BOXES WITHIN THE PROJECT AREA WILL BE REMOVED, RELOCATED, OR ADJUSTED AS SHOWN.
15. FISH AND GAME AGREEMENT NO.1600-2006-0606-3 IS PART OF THESE PLANS.
16. ALL ELEVATIONS SHOWN ARE FINISHED ELEVATIONS UNLESS STATED OTHERWISE.
17. THE CONTRACTOR SHALL NOT PERFORM WORK OUTSIDE THE RIGHT OF WAY UNLESS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
18. TEMPORARY PERIMETER (WITH ENVIRONMENTAL SENSITIVE AREA (ESA) HIGH VISIBLITY FABRIC) FENCE SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS AND AT LOCATIONS DIRECTED BY THE ENGINEER.
19. CONTRACTOR SHALL SECURE PROJECT SITE FROM THE PUBLIC AND ANIMALS AT ALL TIMES. THE TEMPORARY CONSTRUCTION ENTRANCE GATE MAY REMAIN OPEN DURING NORMAL WORK HOURS, BUT SHALL BE SECURED AND LOCKED DURING NON-WORKING HOURS AND DAYS.
20. PG&E EASEMENTS ARE NOT SHOWN ON PLANS.
21. PORTLAND CEMENT CONCRETE SHALL BE ACID AND SULFATE RESISTANT TO WITHSTAND THE FOLLOWING:

pH RANGE:	3.05 TO 7.05
MINIMUM RESISTIVITY:	909 TO 4880 Ohm-cm
SULFATE CONCENTRATIONS:	<1 TO 1,860 ppm

22. REINFORCEMENT STEEL AND MISCELLANEOUS IRON AND STEEL SHALL BE ACID AND CORROSIVE RESISTANT TO WITHSTAND THE FOLLOWING:

pH RANGE:	3.05 TO 7.05
MINIMUM RESISTIVITY:	909 TO 4880 Ohm-cm

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
ACP	ASBESTOS CEMENT PIPE
ANLA	AMERICAN NURSERY & LANDSCAPE ASSOCIATION
APPROX	APPROXIMATE
AS	AGGREGATE SUBBASE
ASTM	AMERIACAN SOCIETY FOR TESTING AND MATERIALS
ATPB	ASPHALT TREATED PERMEABLE BASE
BC	BEGINNING OF HORIZONTAL CURVE
BEG	BEGIN
BKF	BACKFILL
BVC	BEGINNING OF VERTICAL CURVE
B/W	BACK OF SIDEWALK
C	CUT
C-C	CENTER TO CENTER
C&G	CURB AND GUTTER
CDS	CONTINUOUS DEFLECTIVE SEPARATION
℄	CENTER LINE
CL	CLASS, CHAIN LINK
CLR	CLEAR, CLEARANCE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
D	DEPTH
DET	DETAIL, DETOUR
DI	DRAINAGE INLET, DROP INLET
DIA	DIAMETER
DWG	DRAWING
E	EAST, ELECTRIC LINE
EBMUD	EAST BAY MUNICIPAL UTILITY DISTRICT
EC	END OF HORIZONTAL CURVE
ELEV, EL	ELEVATION
EMB	EMBANKMENT
EP	EDGE OF PAVEMENT
ESA	ENVIRONMENTALLY SENSITIVE AREA
ETW	EDGE OF TRAVEL WAY
EVC	END OF VERTICAL CURVE
EX, (E)	EXISTING
EXC	EXCAVATION
F	FILL
FG	FINISHED GRADE
FHWA	FEDERAL HIGHWAY ADMINISTRATION
FL	FLOW LINE
g	GRAM
G	GAS LINE
GA	GAUGE
gal.	GALLON
GALV	GALVANIZED
H	HEIGHT
HOR	HORIZONTAL
HP	HINGE POINT, HORSEPOWER
ID	INSIDE DIAMETER
INV, IE	INVERT GRADE ELEVATION
kg	KILOGRAM
kPa	KILOPASCAL
kV	KILOVOLT
L	LENGTH, LENGTH OF CURVE, LEFT
LC	LENGTH OF CHORD
LOL	LAYOUT LINE
LT	LEFT
m	METER
MAINT	MAINTENANCE
MAX	MAXIMUM
MBGR	METAL BEAM GUARD RAIL
MH	MANHOLE
MIN	MINIMUM
mm	MILLIMETER
MON	MONUMENT
MPa	MEGAPASCAL
MSE	MECHANICALLY STABILIZED EMBANKMENT
MTL	MATERIAL
N	NORTH
NTS	NOT TO SCALE
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OG	ORIGINAL GROUND
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PED	PEDESTRIAN
PERF	PERFORATED
PERM MTL	PERMEABLE MATERIAL
PG&E	PACIFIC GAS & ELECTRIC COMPANY
PI	POINT OF INTERSECTION
P/L	PROPERTY LINE
POC	POINT OF HORIZONTAL CURVE
POT	POINT OF TANGENCY
PPP	PERFORATED PLASTIC PIPE
PRC	POINT OF REVERSE CURVE
PT	ANGLE POINT
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
R	RADIUS, RADIAL, RIGHT
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RE	ELECTRIC LINE REMOVED BY OTHERS
REINF	REINFORCED, REINFORCEMENT
REV	REVISED
RG	RETIRED GAS LINE
RSP	ROCK SLOPE PROTECTION
RR	RAILROAD
RT	RIGHT
RW	REDWOOD, RETAINING WALL
R/W	RIGHT-OF-WAY
S	SLOPE, SOUTH
SD	STORM DRAIN
SHT	SHEET
SRW	SEGMENTED RETAINING WALL
SS	SANITARY SEWER
SSRB	SURVEY SET REBAR WITH 3/8" CAP
STA	STATION
STD	STANDARD
SWTU	STORM WATER TREATMENT UNIT
SYM	SYMMETRIC, SYMMETRICAL
T	TANGENT LENGTH, TELEPHONE LINE
TC	TOP OF CURB
TCE	TEMPORARY CONSTRUCTION EASEMENT
TEMP	TEMPORARY
TG	TOP OF GRADE
TW	TOP OF WALL
TYP	TYPICAL
UT	UNDERGROUND TELEPHONE LINE
UV	ULTRAVIOLET
VAR	VARIABLE, VARIES
VC	VERTICAL CURVE
VER	VERTICAL
W	WATER LINE, WEST, WIDTH
Δ	DELTA (ANGLE OF CURVATURE)
ø	DIAMETER, SIGNAL PHASE

1 / - DETAIL NUMBER / SHEET NUMBER OR DASH INDICATES SAME SHEET

A / - SECTION LETTER / SHEET NUMBER OR DASH INDICATES SAME SHEET

CALTRANS STANDARD PLANS - JULY 2004

A10A	ACRONYMS AND ABBREVIATIONS (A-L)
A10B	ACRONYMS AND ABBREVIATIONS (M-Z)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
A20A	PAVEMENT MARKERS AND TRAFFIC LINES, TYPICAL DETAILS
A20B	PAVEMENT MARKERS AND TRAFFIC LINES, TYPICAL DETAILS
A20C	PAVEMENT MARKERS AND TRAFFIC LINES, TYPICAL DETAILS
A20D	PAVEMENT MARKERS AND TRAFFIC LINES, TYPICAL DETAILS
A24A	PAVEMENT MARKINGS - ARROWS
A24B	PAVEMENT MARKINGS - ARROWS
RSP A24C	PAVEMENT MARKINGS - SYMBOLS AND NUMERALS (UPDATED 6-6-08)
A40A	SHOULDER RUMBLE STRIP DETAILS - ROLLED-IN INDENTATIONS
A40B	SHOULDER RUMBLE STRIP DETAILS - GROUND-IN INDENTATIONS
A62A	EXCAVATION AND BACKFILL - MISCELLANEOUS DETAILS
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE SURCHARGE AND WALL
A62D	EXCAVATION AND BACKFILL - CONCRETE PIPE CULVERTS
A62DA	EXCAVATION AND BACKFILL - CONCRETE PIPE CULVERTS (UPDATED 11-17-06)
A62E	EXCAVATION AND BACKFILL - CAST-IN-PLACE REINFORCED CONCRETE BOX AND ARCH CULVERTS
A62F	EXCAVATION AND BACKFILL - METAL AND PLASTIC CULVERTS
A73A	OBJECT MARKERS
A73B	MARKERS
A73C	DELINEATORS, CHANNELIZERS AND BARRICADES
RSP A76A	CONCRETE BARRIER TYPE 60 (UPDATED 6-6-08)
A76B	CONCRETE BARRIER TYPE 60
A77C3	METAL BEAM GUARD RAILING - TYPICAL LINE POST EMBEDMENT AND HINGE POINT OFFSET DETAILS
A77C4	METAL BEAM GUARD RAILING - TYPICAL RAILING DELINEATION AND DIKE POSITIONING DETAILS
A77H1	METAL RAILING - END ANCHOR ASSEMBLY (TYPE SFT)
A77I2	METAL BEAM GUARD RAILING - BURIED POST END ANCHOR
A77L1	METAL BEAM RAILING - TERMINAL SYSTEM (TYPE SRT)
A77L2	METAL BEAM RAILING - TERMINAL SYSTEM (TYPE SKT)
A77L3	METAL BEAM RAILING - TERMINAL SYSTEM (TYPE ET)
A82B1	CRASH CUSHION (TYPE ADIEM)
A86	BARBED WIRE AND WIRE MESH FENCES
A87B	ASPHALT CONCRETE DIKES
B0-3	BRIDGE DETAILS
B3-8	RETAINING WALL DETAILS No. 1
B3-9	RETAINING WALL DETAILS No. 2
B3-11	RETAINING WALL TYPE 6 - 1829 mm MAXIMUM
B11-47	CABLE RAILING
B11-52	CHAIN LINK RAILING TYPE 7
D73	DRAINAGE INLETS
D74C	DRAINAGE INLET DETAILS
D75A	PIPE INLETS
RSP D78C	INLET DEPRESSIONS - ASPHALT CONCRETE SHOULDERS (UPDATED 5-10-05)
D79	PRECAST REINFORCED CONCRETE PIPE - DIRECT DESIGN METHOD
D80	CAST-IN-PLACE REINFORCED CONCRETE - SINGLE BOX CULVERT
D82	CAST-IN-PLACE REINFORCED CONCRETE BOX CULVERT MISCELLANEOUS DETAILS
D84	BOX CULVERT WINGWALLS, TYPES A, B AND C
D85	BOX CULVERT WINGWALLS, TYPES D AND E
D86A	BOX CULVERT WARPED WINGWALLS
D86B	PIPE CULVERT HEADWALLS, ENDWALLS AND WARPED WINGWALLS
D87A	CORRUGATED METAL PIPE DOWNDRAIN DETAILS
D87B	PLASTIC PIPE DOWNDRAIN DETAILS
D87D	OVERSIDE DRAINS
D88	CONSTRUCTION LOADS ON CULVERTS
D88A	STRUT DETAILS FOR STRUCTURAL STEEL PIPES, ARCHES AND VEHICULAR UNDERCROSSINGS
D89	PIPE HEADWALLS
D90	PIPE CULVERT HEADWALLS, ENDWALLS AND WINGWALLS - TYPES A, B AND C
D93B	DRAINAGE INLET RISER CONNECTIONS
D94A	METAL AND PLASTIC FLARE END SECTIONS
D94B	CONCRETE FLARED END SECTIONS
D97A	CORRUGATED METAL PIPE COUPLING DETAILS NO. 1
D97C	CORRUGATED METAL PIPE COUPLING DETAILS NO. 3
D97D	CORRUGATED METAL PIPE COUPLING DETAILS NO. 4
RSP D97G	CORRUGATED METAL PIPE COUPLING DETAILS NO. 7 (UPDATED 6-6-08)
D97H	REINFORCED CONCRETE PIPE OR NON-REINFORCED CONCRETE PIPE STANDARD AND POSITIVE JOINTS
D99A	STRUCTURAL SECTION DRAINAGE SYSTEM DETAILS
D99B	EDGE DRAIN OUTLET AND VENT DETAILS
D99C	EDGE DRAIN CLEANOUT AND VENT DETAILS
D99D	CROSS DRAIN INTERCEPTOR DETAILS
D102	UNDERDRAINS
RSP ES-1A	ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS) (UPDATED 10-5-07)
RSP ES-1B	ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS) (UPDATED 10-5-07)
RSP ES-1C	ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS) (UPDATED 10-5-07)
RSP ES-6A	ELECTRICAL SYSTEMS (LIGHTING STANDARD, TYPES 15 AND 21) (UPDATED 10-5-07)
ES-6F	ELECTRICAL SYSTEMS (LIGHTING STANDARD, TYPES 30 AND 31 SLIP BASE PLATE DETAILS)
RSP ES-7M	ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARDS - DETAILS NO. 1) (UPDATED 10-5-07)
RSP ES-8	ELECTRICAL SYSTEMS (PULL BOX DETAILS) (UPDATED 10-5-07)
ES-9D	ELECTRICAL SYSTEMS (ELECTRICAL DETAILS STRUCTURE INSTALLATIONS)
RSP ES-11	SIGNAL, LIGHTING AND ELECTRIAL SYSTEMS FOUNDATION INSTALLATIONS (UPDATED 10-5-07)
NSP H51	EROSION CONTROL DETAILS (FIBER ROLL) (NEW 12-1-06)
RS1	ROADSIDE SIGNS, TYPICAL INSTALLATION DETAILS NO. 1
RS2	ROADSIDE SIGNS - WOOD POSTS, TYPICAL INSTALLATION DETAILS NO. 2
RSP T2	TEMPORARY CRASH CUSHION, SAND FILLED (SHOULDER INSTALLATIONS) (UPDATED 6-6-08)
T3	TEMPORARY RAILING (TYPE K)
RSP T7	CONSRUCTION PROJECT FUNDING IDENTIFICATIONS SIGNS (UPDATED 11-17-06)
RSP T13	TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS (UPDATED 5-10-05)
T51	TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY SILT FENCE)
T54	TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY EROSION CONTROL BLANKET)
T56	TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY FIBER ROLL)
T57	TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY CHECK DAM)
T58	TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY CONSTRUCTION ENTRANCE)

COUNTY OF ALAMEDA METRIC DESIGN GUIDELINES - JANUARY 1996

DG-305	MANHOLE FRAME AND COVER TYPE 1 (JUL 1995)
DG-315A	FIELD INLET TYPE 3 (JUL 1996)
DG-317A	FRAME & GRATE - SHEET 1 OF 2 (JUL 1996)
DG-317	FRAME & GRATE - SHEET 2 OF 2 (JUL 1995)
DG-411	CONTRACTION JOINTS (JAN 1996)
DG-501	TYPICAL PIPE SECTION - 2 SHEETS (JUL 1995)
DG-504	REINFORCED CONCRETE PIPE COLLAR (JUL 1995)
DG-505	PLASTIC STEP DETAIL - 2 SHEETS (JUL 1995)
DG-602	CONCRETE MONUMENT SECTION WITHOUT DISC (JUL 1995)
DG-603	MONUMENT DISC (JUL 1995)
DG-608	SIGNING - 2 SHEETS (JUL 1995)
DG-701	1.8 METER HIGH CHAIN-LINK FENCE AND CHAIN-LINK GATES (JUL 1995)
DG-704	SILT FENCE AND DEBRIS FENCE DETAILS - SHEET 1 OF 2 (JUL 1995)

COUNTY OF ALAMEDA DESIGN GUIDELINES

SD-401	MANHOLE TYPE II (JUL 1991)
SD-411	INLET TYPE I (JUL 1991)
SD-412	INLET TYPE II (JUL 1991)
SD-413	INLET TYPE III (JUL 1991)
SD-414	INLET TYPE IV (JUL 1991)
SD-416	INLET TYPE V (JUL 1991)
SD-503	REINFORCED CONCRETE CHANNEL 1:1 SIDE SLOPE (JAN 1995)
SD-514	JUNCTION BOX (AUG 1969)
SD-700	SIGN MOUNTING DETAILS - 2 SHEETS (DEC 1994)

ALAMEDA COUNTY Metric

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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APPROVED

REGISTERED PROFESSIONAL ENGINEER STANLEY W. LUNG No. 35957 Exp. 12/31/2008 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

APPROVAL RECOMMENDED JAMES EA

APPROVAL RECOMMENDED

APPROVAL RECOMMENDED

DATE JAN 2008 SCALE NTS

DRAWN JANE RINGOY

DESIGN

DESIGN COORDINATOR MORAYLA

CHECKED JAMES CHU

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

GENERAL NOTES, ABBREVIATIONS & STANDARD PLANS LIST

WORK ORDER NO. R23335

SPECIFICATION NO. 1903

SHEET NO. 3 OF 145

FILE NO. U-357-6

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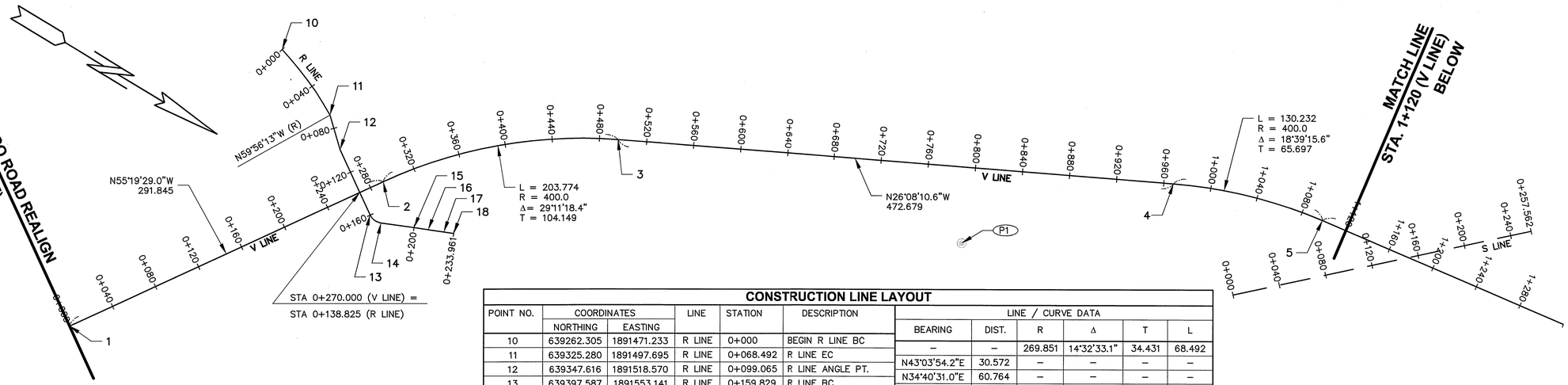
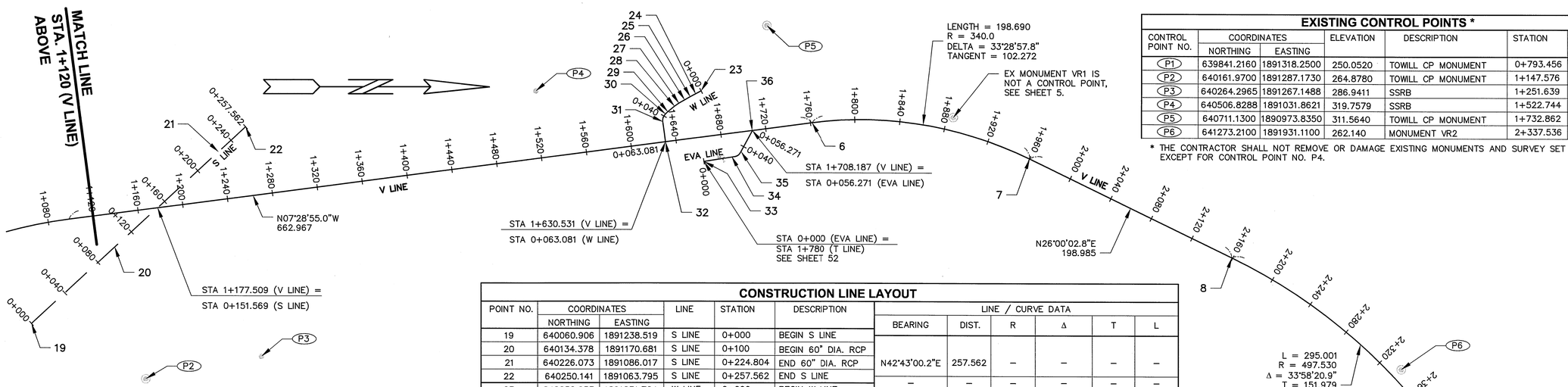


CONSTRUCTION LINE LAYOUT

POINT NO.	COORDINATES NORTHING	COORDINATES EASTING	LINE	STATION	DESCRIPTION
10	639262.305	1891471.233	R LINE	0+000	BEGIN R LINE BC
11	639325.280	1891497.695	R LINE	0+068.492	R LINE EC
12	639347.616	1891518.570	R LINE	0+099.065	R LINE ANGLE PT.
13	639397.587	1891553.141	R LINE	0+159.829	R LINE BC
14	639409.043	1891554.343	R LINE	0+171.843	R LINE EC
15	639435.021	1891543.482	R LINE	0+200	R LINE ANGLE PT.
16	639446.175	1891538.891	R LINE	0+212.062	R LINE ANGLE PT.
17	639458.581	1891533.793	R LINE	0+225.475	R LINE ANGLE PT.
18	639466.439	1891530.587	R LINE	0+233.961	END R LINE

LINE / CURVE DATA BEARING	DIST.	R	Δ	T	L
–	–	269.851	14°32'33.1"	34.431	68.492
N43°03'54.2"E	30.572	–	–	–	–
N34°40'31.0"E	60.764	–	–	–	–
–	–	12.000	57°21'56.0"	6.565	12.015
N22°41'25.0"W	28.157	–	–	–	–
N22°22'13.1"W	12.062	–	–	–	–
N22°20'21.3"W	13.413	–	–	–	–
N22°11'42.2"W	8.487	–	–	–	–



EXISTING CONTROL POINTS *

CONTROL POINT NO.	COORDINATES NORTHING	COORDINATES EASTING	ELEVATION	DESCRIPTION	STATION	OFFSET
P1	639841.2160	1891318.2500	250.0520	TOWILL CP MONUMENT	0+793.456	64.331 (RT)
P2	640161.9700	1891287.1730	264.8780	TOWILL CP MONUMENT	1+147.576	148.844 (RT)
P3	640264.2965	1891267.1488	286.9411	SSRB	1+251.639	142.315 (RT)
P4	640506.8288	1891031.8621	319.7579	SSRB	1+522.744	59.388 (LT)
P5	640711.1300	1890973.8350	311.5640	TOWILL CP MONUMENT	1+732.862	90.318 (LT)
P6	641273.2100	1891931.1100	262.140	MONUMENT VR2	2+337.536	9.266 (LT)

* THE CONTRACTOR SHALL NOT REMOVE OR DAMAGE EXISTING MONUMENTS AND SURVEY SET REBARS, EXCEPT FOR CONTROL POINT NO. P4.

CONSTRUCTION LINE LAYOUT

POINT NO.	COORDINATES NORTHING	COORDINATES EASTING	LINE	STATION	DESCRIPTION
1	639226.704	1891763.236	V LINE	0+000	BEGIN V LINE
2	639392.742	1891523.226	V LINE	0+291.845	V LINE BC
3	639545.494	1891391.696	V LINE	0+495.618	V LINE EC
4	639969.842	1891183.477	V LINE	0+968.298	V LINE BC
5	640093.959	1891145.983	V LINE	1+098.530	V LINE EC
6	640751.282	1891059.655	V LINE	1+761.497	V LINE BC
7	640944.605	1891091.172	V LINE	1+960.188	V LINE EC
8	641123.451	1891178.404	V LINE	2+159.173	V LINE BC
9	641336.099	1891376.612	V LINE	2+454.174	END V LINE EC

CONSTRUCTION LINE LAYOUT

POINT NO.	COORDINATES NORTHING	COORDINATES EASTING	LINE	STATION	DESCRIPTION
19	640060.906	1891238.519	S LINE	0+000	BEGIN S LINE
20	640134.378	1891170.681	S LINE	0+100	BEGIN 60" DIA. RCP
21	640226.073	1891086.017	S LINE	0+224.804	END 60" DIA. RCP
22	640250.141	1891063.795	S LINE	0+257.562	END S LINE
23	640652.953	1891031.704	W LINE	0+000	BEGIN W LINE
24	640648.156	1891034.308	W LINE	0+005.458	W LINE ANGLE PT.
25	640643.313	1891036.894	W LINE	0+010.948	W LINE ANGLE PT.
26	640638.410	1891039.652	W LINE	0+016.573	W LINE ANGLE PT.
27	640633.417	1891042.651	W LINE	0+022.398	W LINE ANGLE PT.
28	640629.434	1891045.292	W LINE	0+027.177	W LINE ANGLE PT.
29	640623.480	1891050.171	W LINE	0+034.875	W LINE ANGLE PT.
30	640621.434	1891052.172	W LINE	0+037.737	W LINE BC
31	640619.096	1891058.933	W LINE	0+045.153	W LINE EC
32	640621.431	1891076.709	W LINE	0+063.081	END W LINE
33	640655.525	1891094.084	EVA LINE	0+000	BEGIN EVA LINE
34	640683.191	1891089.647	EVA LINE	0+028.020	EVA LINE BC
35	640687.480	1891086.618	EVA LINE	0+033.457	EVA LINE EC
36	640698.426	1891066.597	EVA LINE	0+056.257	END EVA LINE

LINE / CURVE DATA BEARING	DIST.	R	Δ	T	L
N42°43'00.2"E	257.562	–	–	–	–
–	–	–	–	–	–
S28°29'56.5"E	5.458	–	–	–	–
S28°05'54.6"E	5.490	–	–	–	–
S29°21'12.0"E	5.625	–	–	–	–
S30°59'24.0"E	5.825	–	–	–	–
S33°33'12.1"E	4.780	–	–	–	–
S39°19'48.2"E	7.697	–	–	–	–
S44°22'06.8"E	2.862	–	–	–	–
–	–	8.000	53°06'48.2"	3.999	7.416
N82°31'05.0"E	17.929	–	–	–	–
–	–	–	–	–	–
N09°06'43"W	28.020	–	–	–	–
–	–	5.965	52°13'23"	2.924	5.437
N61°20'06"W	22.818	–	–	–	–

BASIS OF BEARING:
COORDINATES, BEARINGS AND DISTANCES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 ZONE 3 DATUM, 1992 EPOC (CCS83, 1992). HELD STANDARD COUNTY WELL MONUMENTS WITH BRASS DISK AND PUNCHMARK, DESIGNATED VR–2 AND VR–3 IN VASCO ROAD AS SHOWN ON RECORD OF SURVEY No. 1487 FILED ON OCTOBER 7, 1997 IN BOOK 21 OF RECORDS OF SURVEY AT PAGES 75–90. DISTANCES ARE IN METERS UNLESS OTHERWISE NOTED. MULTIPLY DISTANCES BY 1.0000963 TO OBTAIN GROUND DISTANCES. TO CONVERT METERS TO U.S. SURVEY FEET MULTIPLY DISTANCES BY 3937/1200.

BASIS OF ELEVATION:
THE TOWILL ALUMINUM DISK ON A 5/8" REBAR MARKED "41" AS SHOWN ON THE "CONSTRUCTION STAKING CONTROL DATA" DRAWING, DWG. No. CSS–1 OF ALAMEDA COUNTY FILE No. A357–8.
ELEVATION IS 866.36 FEET NGVD1929. TO OBTAIN NAVD1988 AND THE ELEVATION USED FOR THIS SURVEY A VERTCON SHIFT OF 2.66 FEET WAS USED AND THEN CONVERTED TO METERS.

(NGVD1929) 866.36+2.66 (VERTCON)=869.02 (NAVD1988) 869.02*1200/3937 = 264.88 m

CONSTRUCTION LINE LAYOUT
1:2000

50 0 50 100 150
SCALE = 1:2000

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
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REVISIONS

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APPROVED
REGISTERED PROFESSIONAL ENGINEER STEVEN W. FORD No. 39857 Exp. 12/31/2009 STATE OF CALIFORNIA CIVIL ENGINEERING

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

CONSTRUCTION LINE LAYOUT

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: ARTHUR de CARRERE
DRAWN: AMBER LO / JANE BINGO
DESIGNED: BINO TRIZONIA / MAXVILLA
CHECKED: JAMES CHU
DATE: JAN 2008
SCALE: 1:2000

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 4 OF 145
FILE NO. U-357-6

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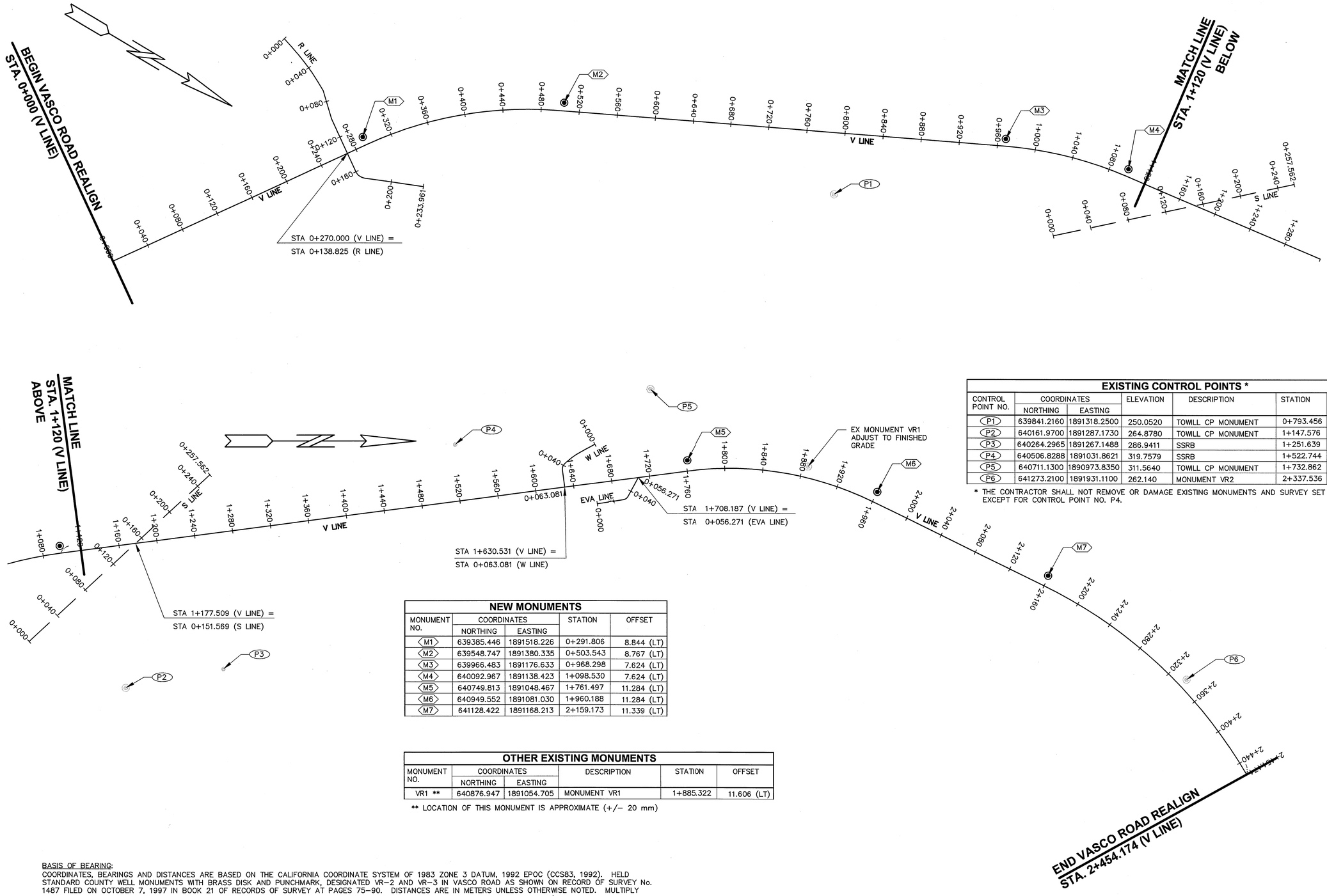

EXISTING CONTROL POINTS *

CONTROL POINT NO.	COORDINATES NORTHING	COORDINATES EASTING	ELEVATION	DESCRIPTION	STATION	OFFSET
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P4	640506.8288	1891031.8621	319.7579	SSRB	1+522.744	59.388 (LT)
P5	640711.1300	1890973.8350	311.5640	TOWILL CP MONUMENT	1+732.862	90.318 (LT)
P6	641273.2100	1891931.1100	262.140	MONUMENT VR2	2+337.536	9.266 (LT)

* THE CONTRACTOR SHALL NOT REMOVE OR DAMAGE EXISTING MONUMENTS AND SURVEY SET REBARS, EXCEPT FOR CONTROL POINT NO. P4.

NEW MONUMENTS

MONUMENT NO.	COORDINATES NORTHING	COORDINATES EASTING	STATION	OFFSET
M1	639385.446	1891518.226	0+291.806	8.844 (LT)
M2	639548.747	1891380.335	0+503.543	8.767 (LT)
M3	639966.483	1891176.633	0+968.298	7.624 (LT)
M4	640092.967	1891138.423	1+098.530	7.624 (LT)
M5	640749.813	1891048.467	1+761.497	11.284 (LT)
M6	640949.552	1891081.030	1+960.188	11.284 (LT)
M7	641128.422	1891168.213	2+159.173	11.339 (LT)

OTHER EXISTING MONUMENTS

MONUMENT NO.	COORDINATES NORTHING	COORDINATES EASTING	DESCRIPTION	STATION	OFFSET
VR1 **	640876.947	1891054.705	MONUMENT VR1	1+885.322	11.606 (LT)

** LOCATION OF THIS MONUMENT IS APPROXIMATE (+/– 20 mm)

BASIS OF BEARING:
COORDINATES, BEARINGS AND DISTANCES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 ZONE 3 DATUM, 1992 EPOC (CCS83, 1992). HELD STANDARD COUNTY WELL MONUMENTS WITH BRASS DISK AND PUNCHMARK, DESIGNATED VR–2 AND VR–3 IN VASCO ROAD AS SHOWN ON RECORD OF SURVEY No. 1487 FILED ON OCTOBER 7, 1997 IN BOOK 21 OF RECORDS OF SURVEY AT PAGES 75–90. DISTANCES ARE IN METERS UNLESS OTHERWISE NOTED. MULTIPLY DISTANCES BY 1.0000963 TO OBTAIN GROUND DISTANCES. TO CONVERT METERS TO U.S. SURVEY FEET MULTIPLY DISTANCES BY 3937/1200.

BASIS OF ELEVATION:
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(NGVD1929) 866.36+2.66 (VERTCON)=869.02 (NAVD1988) 869.02*1200/3937 = 264.88 m

NEW MONUMENT PLAN
1:2000

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SCALE = 1:2000

ALAMEDA COUNTY Metric
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UNLESS OTHERWISE NOTED.

REVISIONS

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APPROVED
REGISTERED PROFESSIONAL ENGINEER STEVEN W. FURTADO No. 39587 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

NEW MONUMENT PLAN

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: ARTURO C. CABRERA
DRAWN: KAREN DIANE BINGO
DESIGNED: BING NOMAD/JON MAVAILLA
CHECKED: JAMES CHU
DATE: JAN 2008
SCALE: 1:2000

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 5 OF 145
FILE NO. U-357-6

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

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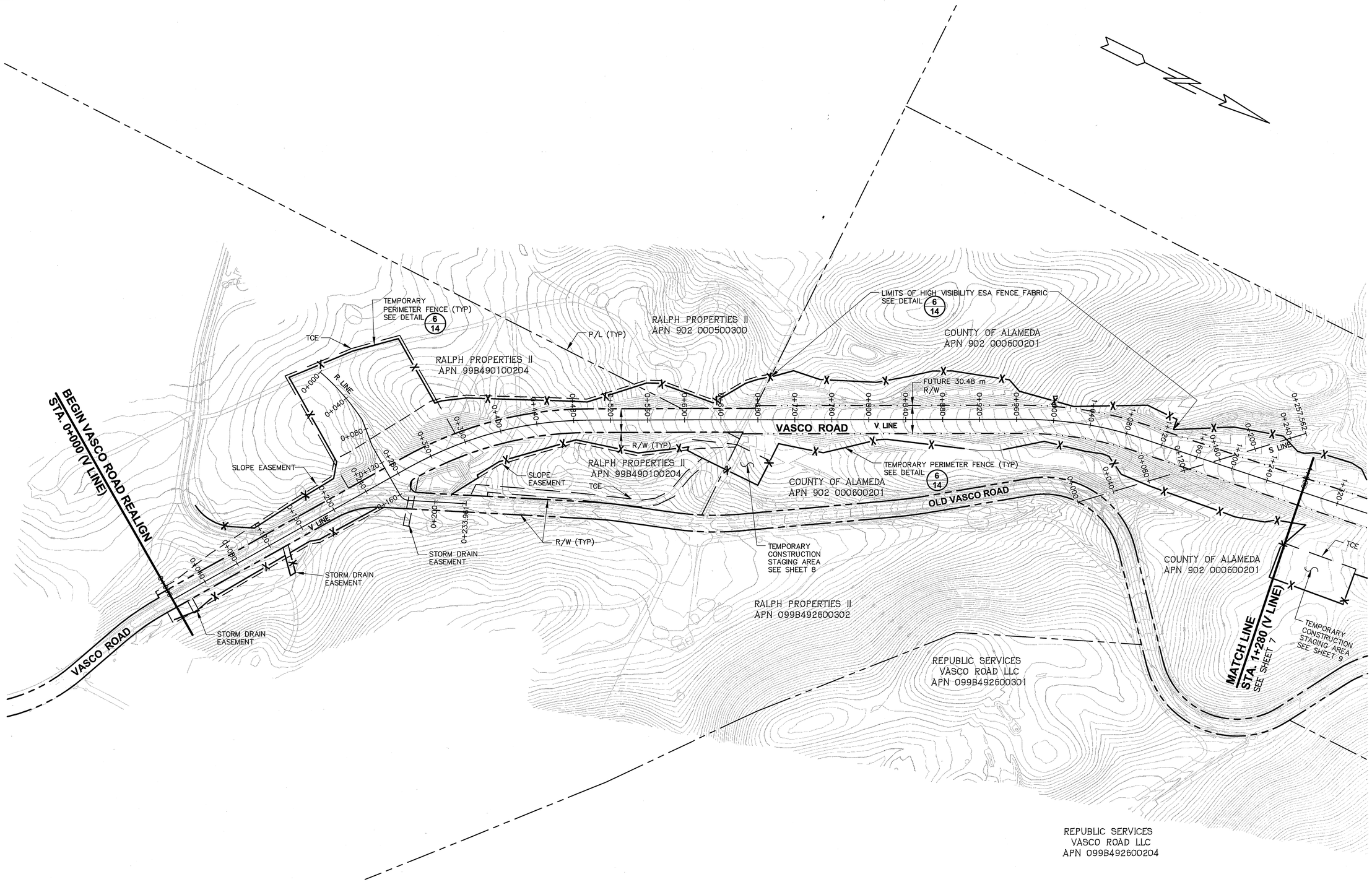

LEGEND

—X— TEMPORARY PERIMETER FENCE

SITE LAYOUT
1:2000

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SCALE = 1:2000

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS

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APPROVED

REGISTERED PROFESSIONAL ENGINEER JEFFREY W. FLOYD No. 39587 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

SITE LAYOUT

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: JAMES CHU
APPROVED: JAMES CHU
DATE: JAN 2008
SCALE: 1:2000
DRAWN: AMBER LOVAGE RINGOT
DESIGNED: BENO NG/ALDON MARAVILLA
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 6 OF 145
FILE NO. U-357-6

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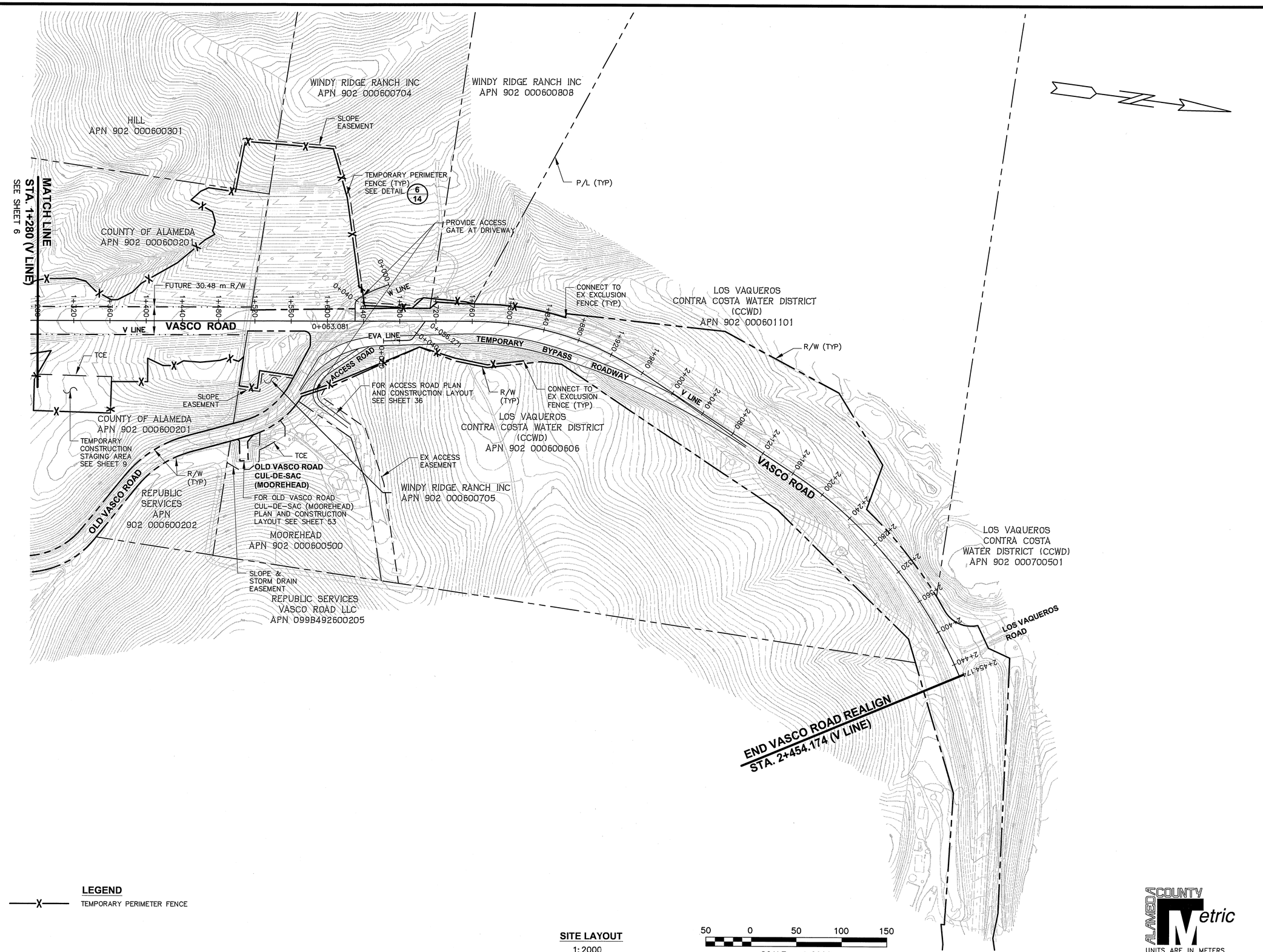

LEGEND

—X— TEMPORARY PERIMETER FENCE

SITE LAYOUT
1:2000

50 0 50 100 150
SCALE = 1:2000

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

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REVISIONS

APPROVED
REGISTERED PROFESSIONAL ENGINEER
STANLEY W. KUNZE
No. 39957
Exp. 12/31/2009
CIVIL
STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

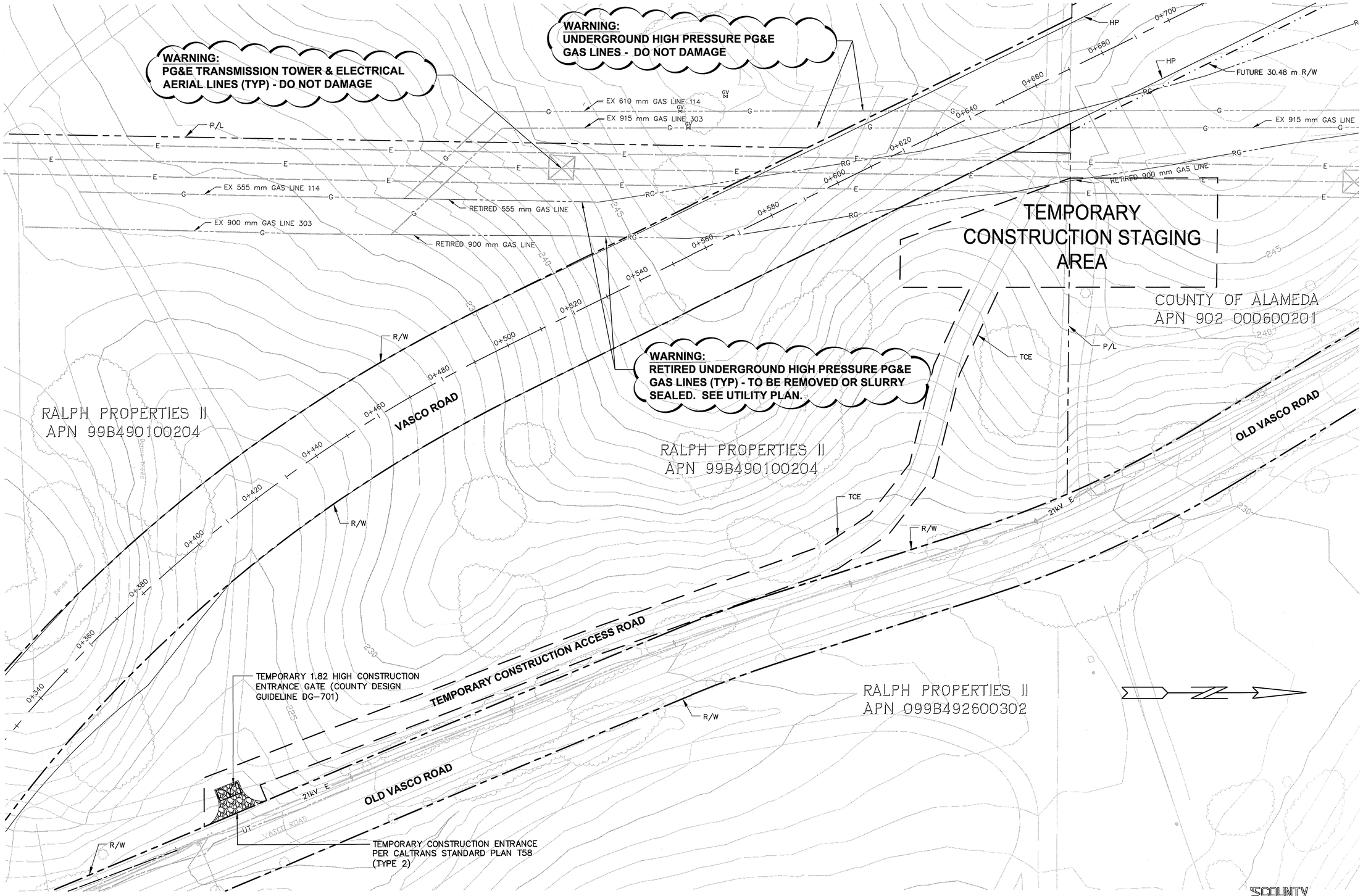
THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

SITE LAYOUT

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: ARTHUR L. DAHMS
DRAWN: BRIAN
DESIGNED: JANE PENGO
BOND: KOWSTON MANALILI
CHECKED: JAMES CHU
DATE: JAN 2008
SCALE: 1:2000

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 7 OF 145
FILE NO. U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



PLAN
1:500

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

N:\ROAD\r23265\~Final Plan - Vasco Road 2007\Staging Area Plan-500 scale.dwg 6-12-08 10:28:39 AM janer

REVISIONS				
NO.	DESCRIPTION	BY	DATE	APPVD

APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 39595 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

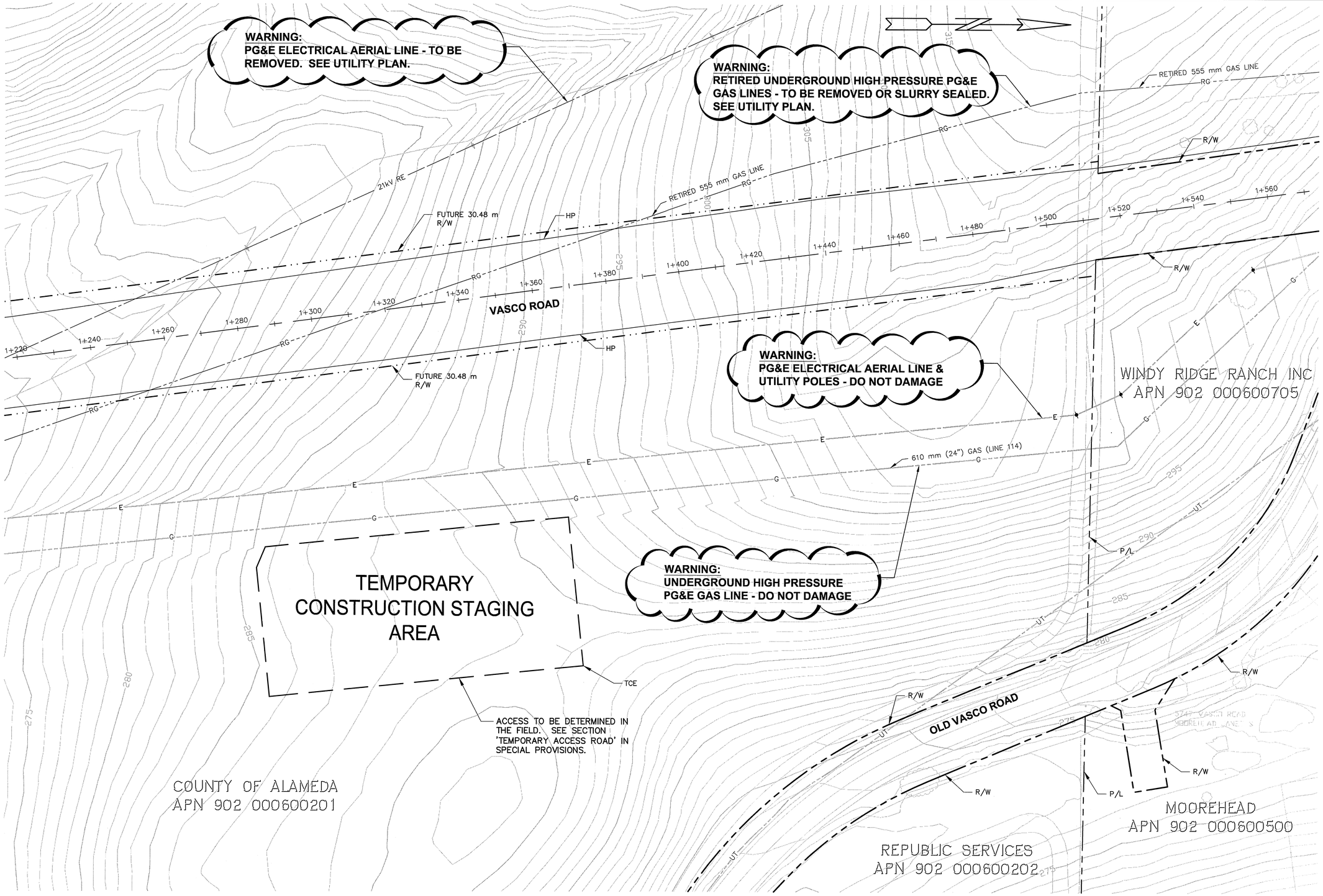
COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF OLD VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY CONSTRUCTION ENTRANCE AND STAGING AREA PLAN

DRAWN: JANE RINGO
DESIGNED: JANE RINGO
BRIDGE NO. (IF APPLICABLE): N/A
CHECKED: JAMES CHU
APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: ARTHUR L. DAHMS
DATE: JAN 2008
SCALE: 1:500

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 8 OF 145
FILE NO. U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



PLAN
1:500

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D

APPROVED REGISTERED PROFESSIONAL ENGINEER JOHN W. FLOWER No. 35457 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF OLD VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY CONSTRUCTION ENTRANCE AND STAGING AREA PLAN

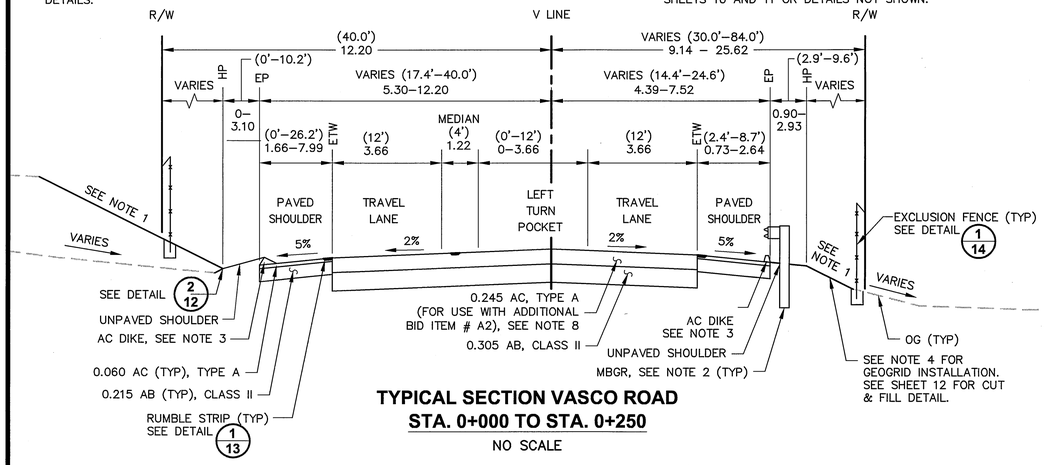
DRAWN: JANE RINGO
DESIGNED: ROD MANTON / MARVIN DILL
CHECKED: JAMES CHU
APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED:
APPROVED:
DATE: JAN 2008
SCALE: 1:500

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 9 OF 145
FILE NO. U-357-6

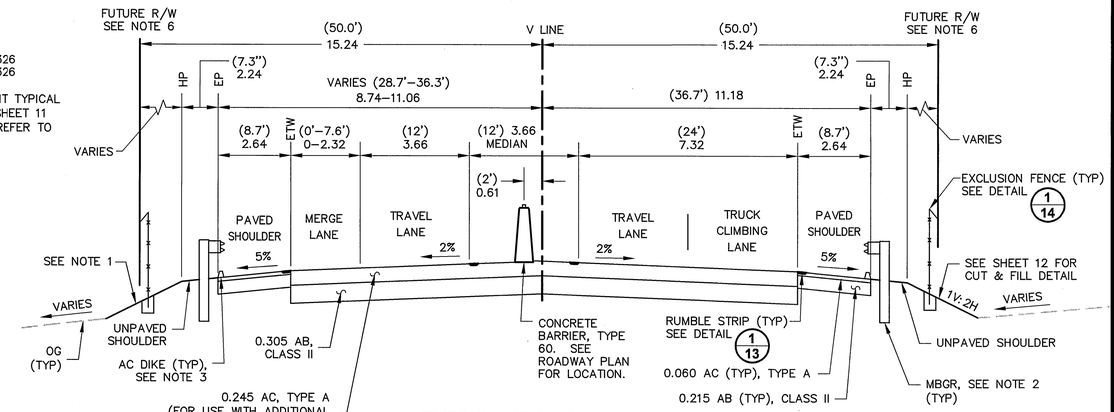
N:\ROAD\r23265\r-Final Plan – Vasco Road 2007\Staging Area Plan-500 scale.dwg 6-12-08 10:29:24 AM jamer

NOTES

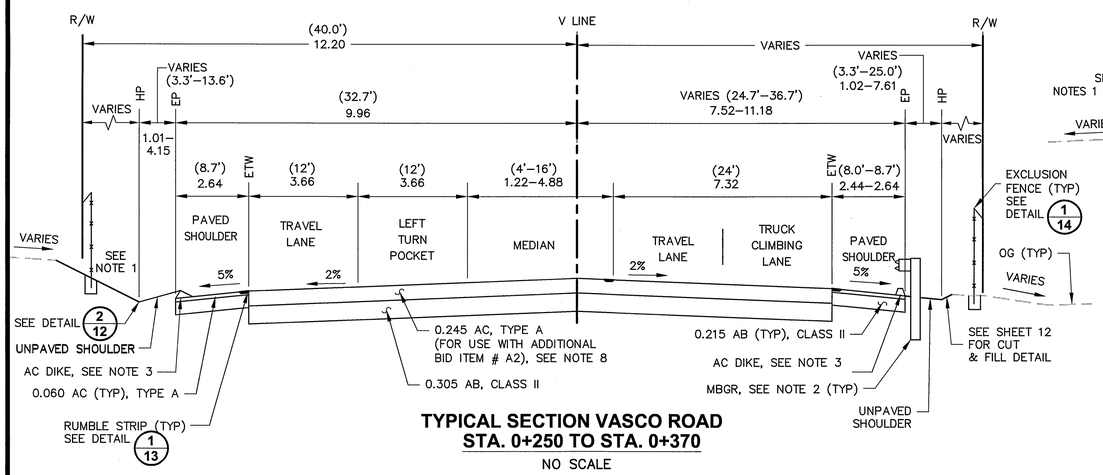
1. CUT AND FILL SLOPES ARE 1V:2H AND VARIES (TYPICAL), SEE DRAINAGE & GRADING PLAN; SEE SHEET 12 FOR BENCH DETAILS.
2. GUARDRAILS TYPICALLY CONSTRUCTED ALONG FILL SLOPES. SEE ROADWAY PLAN FOR LOCATION.
3. SEE ROADWAY PLAN FOR AC DIKE TYPE AND LOCATION. SEE STD PLANS A87B AND A77C4 FOR DETAILS NOT SHOWN.
4. FROM STA 0+000 TO STA 0+170 INSTALL GEOGRID RIGHT SLOPE ONLY. SEE SHEET 139 FOR DETAILS.
5. SEE SHEETS 26–34 FOR SUPERELEVATION DETAIL
6. FUTURE R/W LINE (STA. 0+680± TO 1+520±)
7. CUT SLOPE FROM STA. 1+370 TO 1+600 (LT.):
   - o 1V:3.5H BELOW ELEV. 326
   - o 1V:2.0H ABOVE ELEV. 326
8. SEE TYPICAL SECTIONS LABELED 'ALTERNATE ASPHALT CONCRETE PAVEMENT TYPICAL SECTIONS – VASCO ROAD FOR USE WITH ADDITIONAL BID ITEM # A3' ON SHEET 11 FOR ALTERNATE ASPHALT CONCRETE PAVEMENT CONFIGURATION (ONLY). REFER TO SHEETS 10 AND 11 OR DETAILS NOT SHOWN.



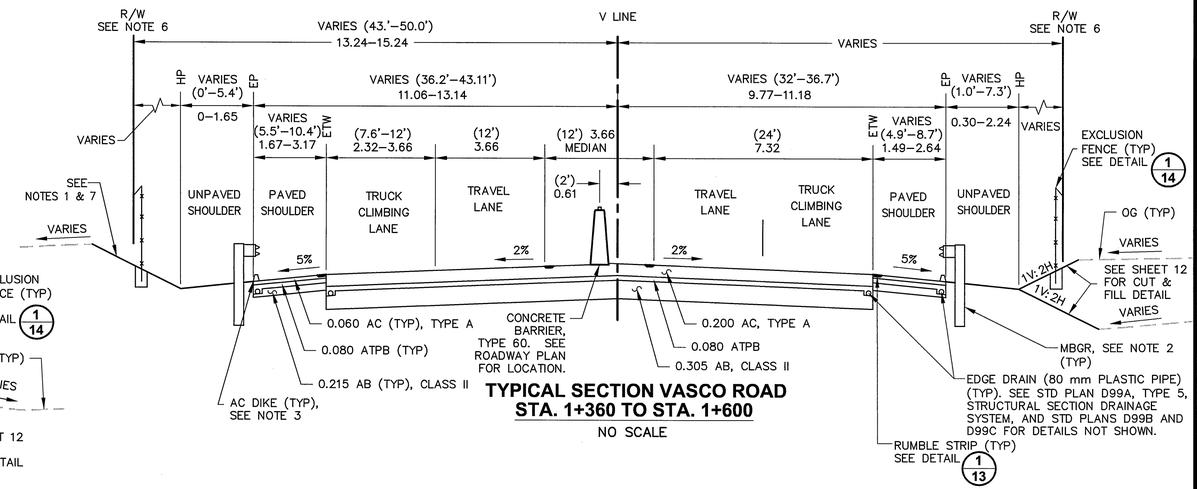
TYPICAL SECTION VASCO ROAD
STA. 0+000 TO STA. 0+250
NO SCALE



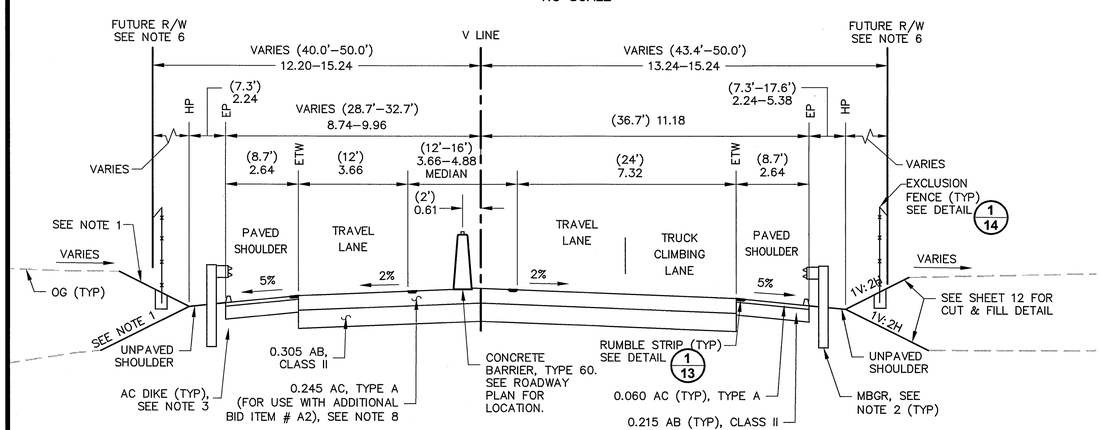
TYPICAL SECTION VASCO ROAD
STA. 1+220 TO STA. 1+360
NO SCALE



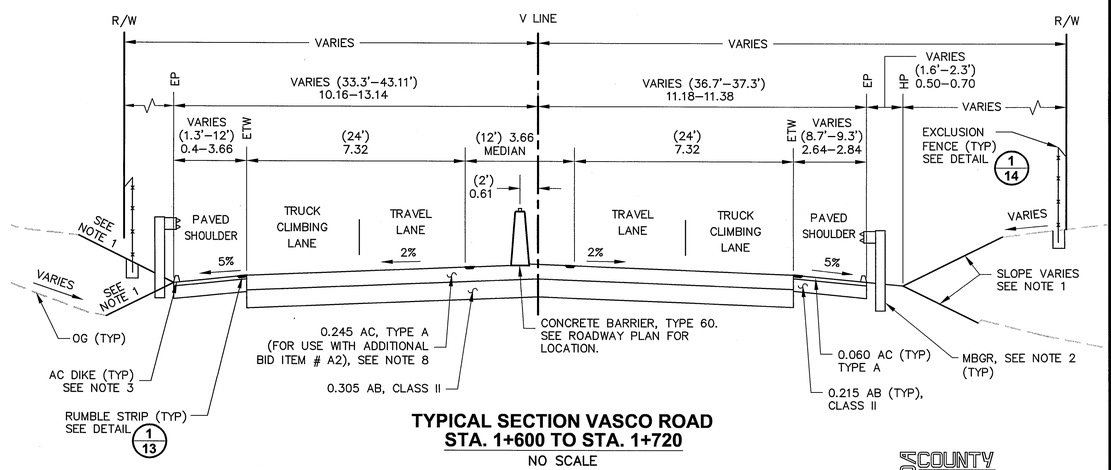
TYPICAL SECTION VASCO ROAD
STA. 0+250 TO STA. 0+370
NO SCALE



TYPICAL SECTION VASCO ROAD
STA. 1+360 TO STA. 1+600
NO SCALE



TYPICAL SECTION VASCO ROAD
STA. 0+370 TO STA. 1+220
NO SCALE



TYPICAL SECTION VASCO ROAD
STA. 1+600 TO STA. 1+720
NO SCALE

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
2				
3				
4				
5				

REVISIONS

REGISTERED PROFESSIONAL ENGINEER — STEVE W. FUNG — No. 38537 — Exp. 12/31/2009 — STATE OF CALIFORNIA — CIVIL

APPROVED

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TYPICAL SECTIONS AND MISCELLANEOUS DETAILS

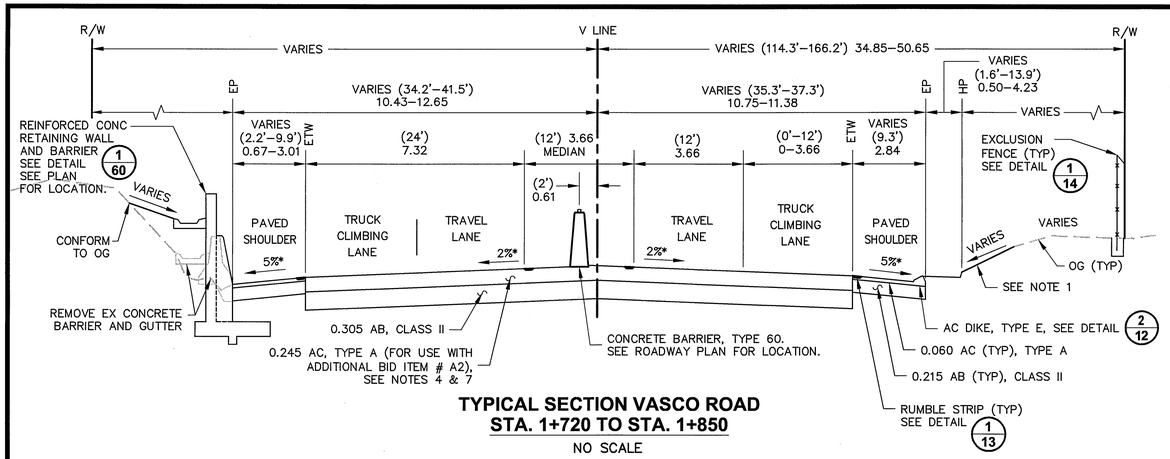
APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: JEFFREY C. PARKIN
DATE: JAN 2008
SCALE: NTS
DRAWN: AMBER LO, ANE RINDOT
DESIGNED: BRIAN ALLMARTON, MARAVILLA, AMBER LO
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 10 OF 145
FILE NO. U-357-6

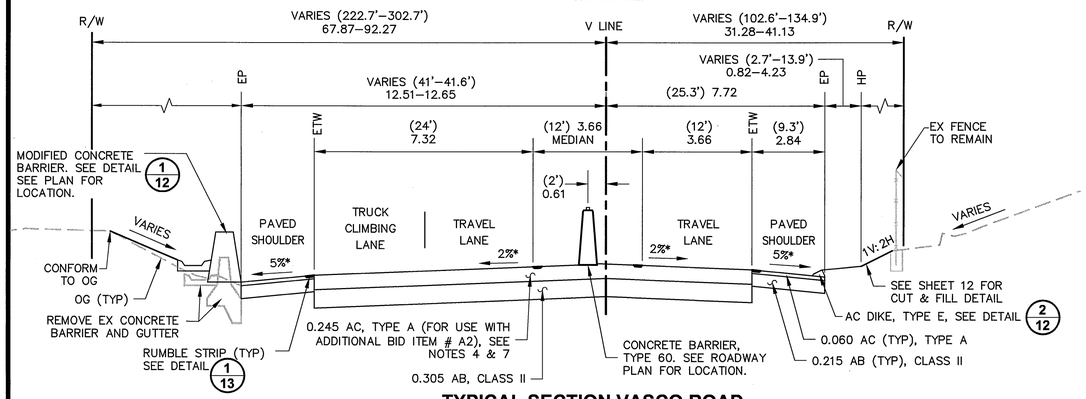
FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

CONSTRUCTION	MAINTENANCE	REAL ESTATE	REVIEWED BY:	DATE:	SURVEY	TRAFFIC	ENVIRONMENTAL	REVIEWED BY:	DATE:

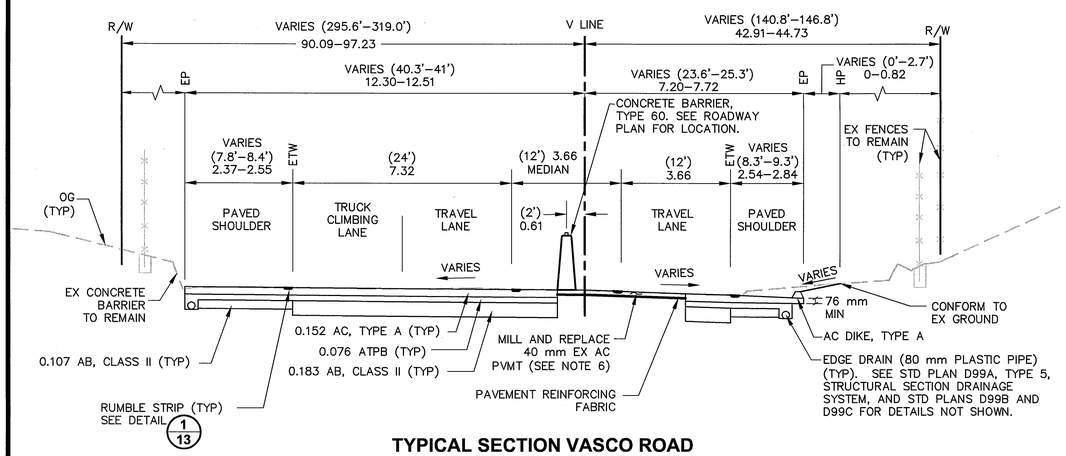
N:\ROAD\r23265\~Final Plan – Vasco Road 2007\Typical Sections.dwg 6-25-08 11:47:15 AM amberl



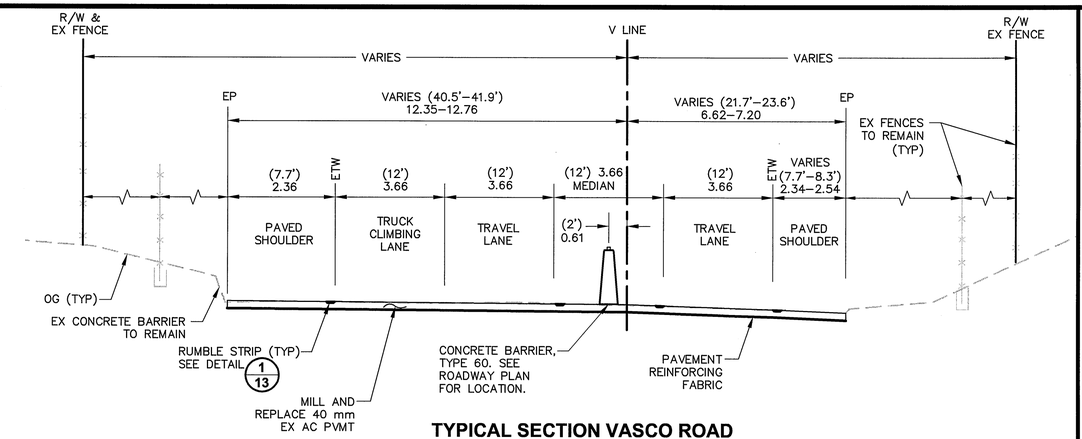
TYPICAL SECTION VASCO ROAD
STA. 1+720 TO STA. 1+850
NO SCALE



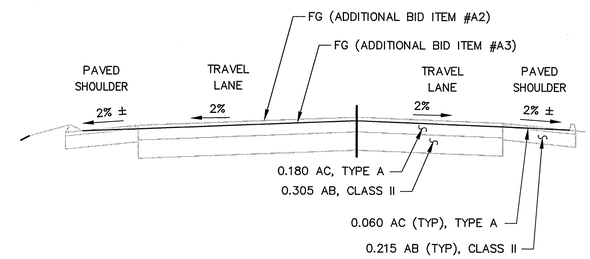
TYPICAL SECTION VASCO ROAD
STA. 1+850 TO STA. 2+100
NO SCALE



TYPICAL SECTION VASCO ROAD
STA. 2+100 TO STA. 2+180
NO SCALE

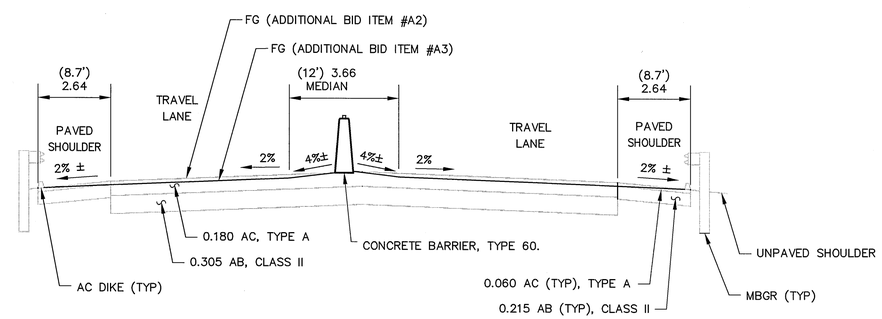


TYPICAL SECTION VASCO ROAD
STA. 2+180 TO STA. 2+230
NO SCALE



ALTERNATE ASPHALT CONCRETE PAVEMENT TYPICAL SECTION - VASCO ROAD
FOR USE WITH ADDITIONAL BID ITEM # A3 *
STA. 0+000 TO STA. 0+370
NO SCALE

* SEE NOTE 7



ALTERNATE ASPHALT CONCRETE PAVEMENT TYPICAL SECTION - VASCO ROAD
FOR USE WITH ADDITIONAL BID ITEM # A3 *
STA. 0+370 TO STA. 1+360
STA. 1+600 TO STA. 2+100
NO SCALE

* SEE NOTE 7

NOTES

1. CUT AND FILL SLOPES ARE 1V:2H AND VARIES (TYPICAL), SEE DRAINAGE & GRADING PLAN; SEE SHEET 12 FOR BENCH DETAILS.
2. GUARDRAILS TYPICALLY CONSTRUCTED ALONG FILL SLOPES. SEE ROADWAY PLAN FOR LOCATION.
3. SEE ROADWAY PLAN FOR AC DIKE TYPE AND LOCATION. SEE STD PLANS A77C4 AND A87B FOR DETAILS NOT SHOWN.
4. FROM STATION 1+720 TO STATION 1+840, EXISTING ASPHALT CONCRETE SHALL BE MILLED AND USED AS FILL FROM STATION 1+840 TO STATION 2+100 (SEE SECTION MILLING IN SPECIAL PROVISIONS FOR ADDITIONAL DETAILS). EXISTING ASPHALT CONCRETE FROM STATION 1+840 TO STATION 2+100 SHALL BE MILLED IN PLACE.
5. SEE SHEETS 26–34 FOR SUPERELEVATION DETAIL.
6. PAVING FOR AC OVERLAY SHALL COINCIDE WITH FINAL LIFT OF NEW STRUCTURAL AND WIDENING SECTIONS.
7. SEE TYPICAL SECTIONS ON THIS SHEET LABELED 'ALTERNATE ASPHALT CONCRETE PAVEMENT TYPICAL SECTIONS – VASCO ROAD FOR USE WITH ADDITIONAL BID ITEM # A3' FOR ALTERNATE ASPHALT CONCRETE PAVEMENT CONFIGURATION ONLY. SEE SHEETS 10 AND 11 FOR DETAILS NOT SHOWN ON THESE TYPICAL SECTIONS.

CONSTRUCTION		REVIEWED BY:	DATE:
MAINTENANCE			
REAL ESTATE			
	SURVEY	REVIEWED BY:	DATE:
	TRAFFIC		
	ENVIRONMENTAL		

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
2				
3				
4				
5				

APPROVED

REGISTERED PROFESSIONAL ENGINEER STEVEN W. FONG No. 39557 Exp. 12/31/2009 STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TYPICAL SECTIONS AND MISCELLANEOUS DETAILS

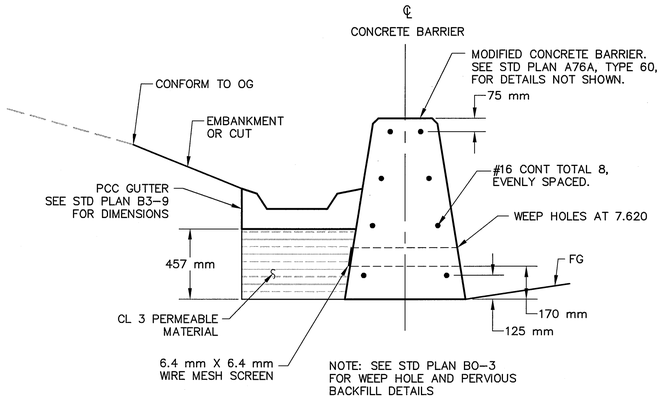
APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: AMBER LO/LANE RINGOT
APPROVAL RECOMMENDED: ROB THORTON MORAVILLA/AMBER LO
DRAWN: AMBER LO/LANE RINGOT
DESIGNED: ROB THORTON MORAVILLA/AMBER LO
CHECKED: JAMES CHU
DATE: JAN 2008
SCALE: NTS

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 11 OF 145
FILE NO. U-357-6

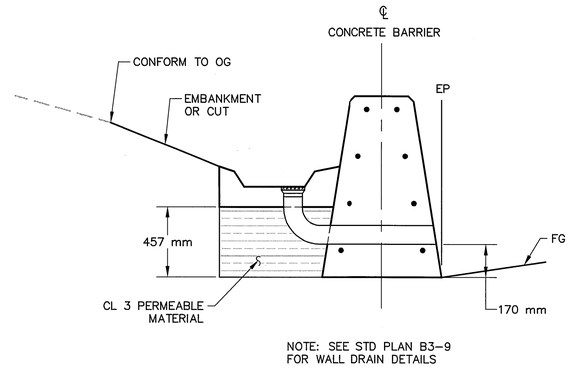
ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

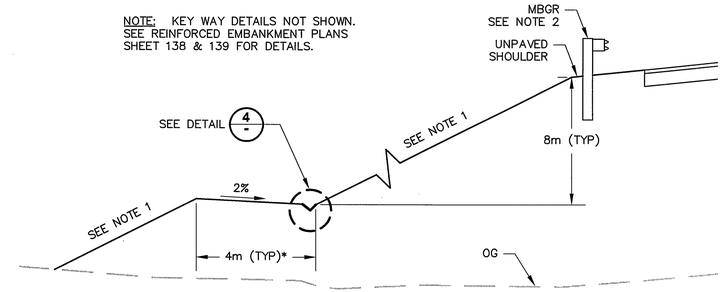
N:\ROAD\r23265\~Final Plan – Vasco Road 2007\Typical Sections.dwg 6-25-08 11:48:53 AM amberl



MODIFIED CONCRETE BARRIER (1 / -)
NO SCALE

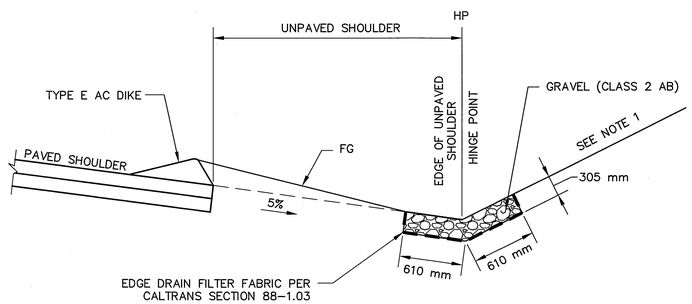


MODIFIED CONCRETE BARRIER WITH WALL DRAIN (1A / -)
NO SCALE

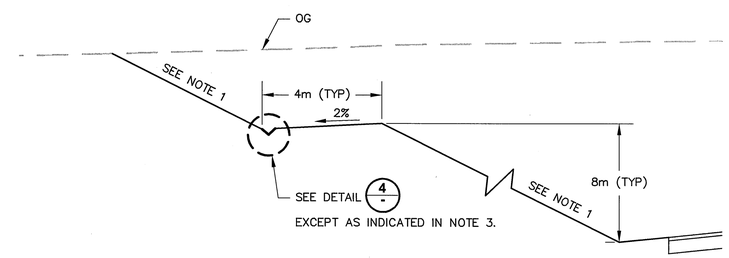


* FROM STATION 1+120 TO 1+360, TYPICAL BENCH WIDTH = 12.2± m (SEE DRAINAGE & GRADING PLAN)

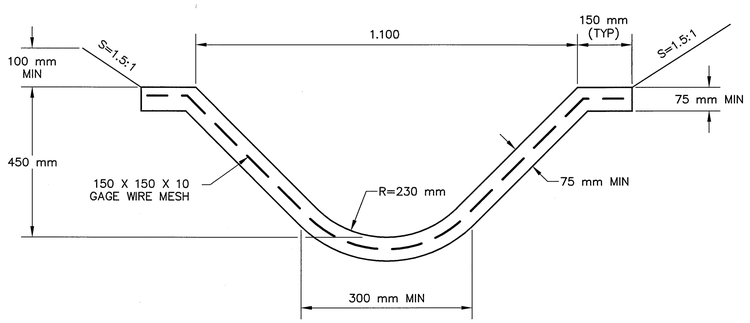
SLOPE BENCH DETAILS (FILL)
NO SCALE



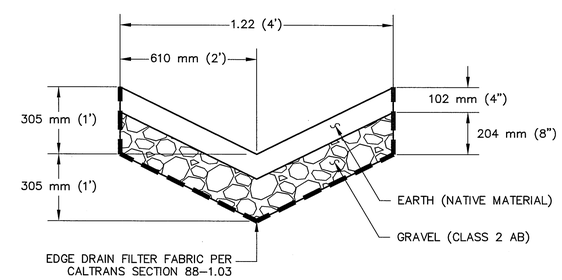
SHOULDER GRAVEL SWALE (2 / -)
NO SCALE



SLOPE BENCH DETAILS (CUT)
NO SCALE



CONCRETE "V" DITCH SECTION (3 / -)
NO SCALE



305 mm (12") GRAVEL AND EARTH SWALE (4 / -)
NO SCALE

NOTES

1. CUT AND FILL SLOPES ARE 1V:2H AND VARIES (TYPICAL). SEE DRAINAGE & GRADING PLAN.
2. GUARDRAILS TYPICALLY CONSTRUCTED ALONG FILL SLOPES. SEE PLAN FOR LOCATION.
3. STA 1+380 TO STA 1+610 CONSTRUCT CONCRETE "V" DITCH. SEE DETAIL (3 / -)

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D

APPROVED REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 38507 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

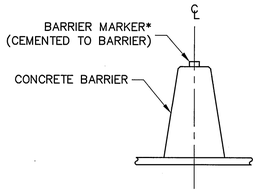
COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TYPICAL SECTIONS AND MISCELLANEOUS DETAILS

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: ARTHUR L. DAO
DRAWN: AMBER LO/JANE RINGOT
DESIGNED: BHAVIN MEHTA
CHECKED: JAMES CHU
DATE: JAN 2008
SCALE: NTS

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 12 OF 145
FILE NO. U-357-6

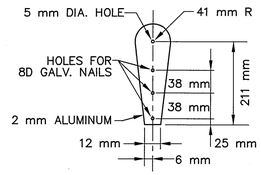
N:\ROAD\23265\~Final Plan - Vasco Road 2007\Typical Sections.dwg 6-25-08 11:58:01 AM amberl

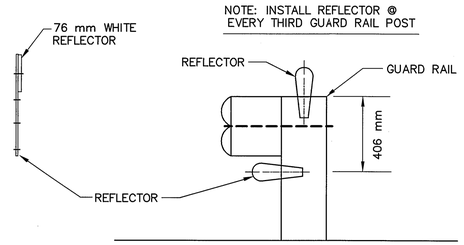


CONCRETE BARRIER MARKER

NO SCALE

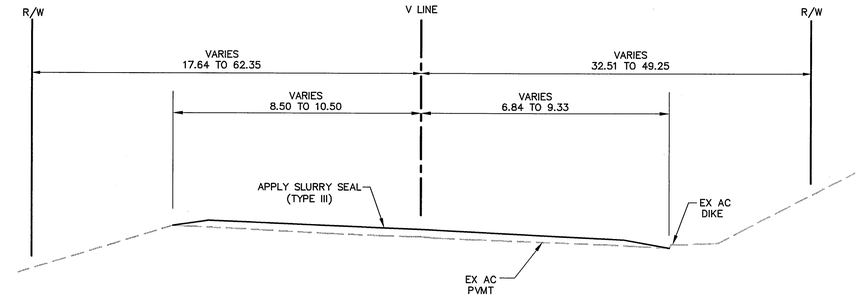
*SPACING OF BARRIER MARKERS TO MATCH SPACING OF RAISED PAVEMENT MARKERS ON THE ADJACENT MEDIAN EDGELINE DELINEATION.





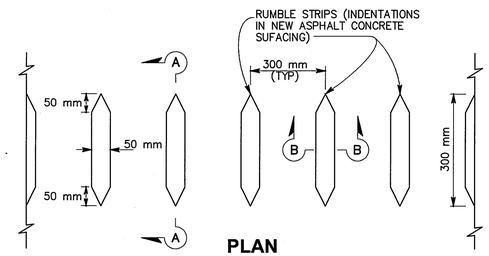
GUARDRAIL REFLECTOR ASSEMBLY

NO SCALE



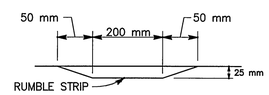
SLURRY SEAL VASCO ROAD
STA. 2+230 TO STA. 2+420

NO SCALE



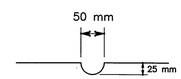
PLAN

ASPHALT CONCRETE SURFACING
ROLLED-IN INDENTATIONS
DETAIL A



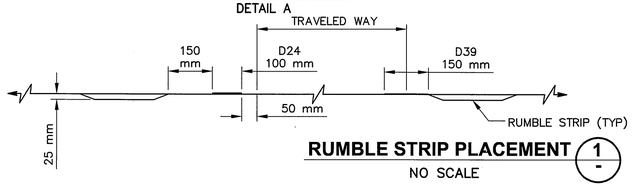
SECTION A-A

NO SCALE



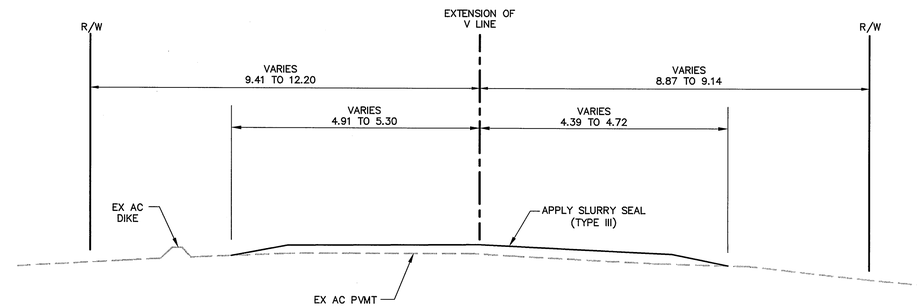
SECTION B-B

NO SCALE



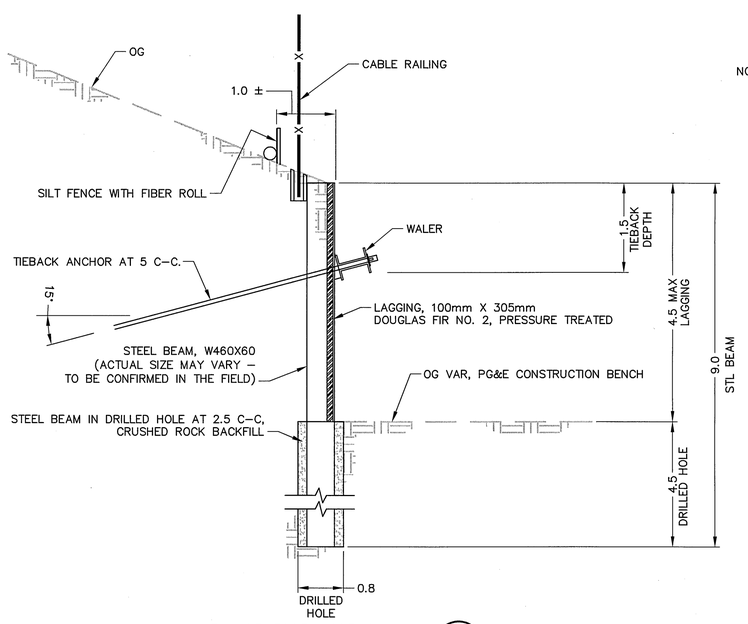
RUMBLE STRIP PLACEMENT (1)

NO SCALE



SLURRY SEAL VASCO ROAD
STA. -0+023± TO STA. 0+000

NO SCALE



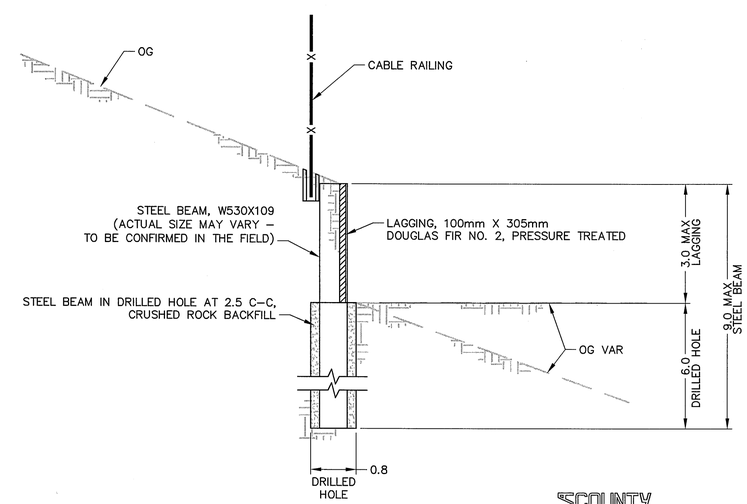
EXISTING SHORING, TYPE I (2)

NO SCALE

NOTE: EX SHORING AND CABLE RAILING FROM PG&E GAS LINE RELOCATION PROJECT AS SHOWN ON SHEET 59 SHALL BE SALVAGED FOR USE ON PERMANENT SHORING AND RETAINING WALL AS CALLED FOR ON SHEETS 140 AND 141.

STEEL BEAM IMPERIAL EQUIVALENTS

W530X109 = W21X73
W460X60 = W18X40



EXISTING SHORING, TYPES 2 & 3 (3)

NO SCALE

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

CONSTRUCTION	MAINTENANCE	REAL ESTATE	REVIEWED BY:	DATE:	SURVEY	TRAFFIC	ENVIRONMENTAL	REVIEWED BY:	DATE:

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
2				
3				
4				
5				

APPROVED
REGISTERED PROFESSIONAL ENGINEER
STEVEN W. FONG
No. 38557
Exp. 12/31/2009
STATE OF CALIFORNIA
CIVIL

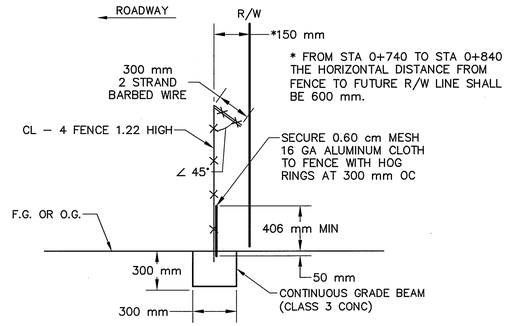
COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TYPICAL SECTIONS AND
MISCELLANEOUS DETAILS

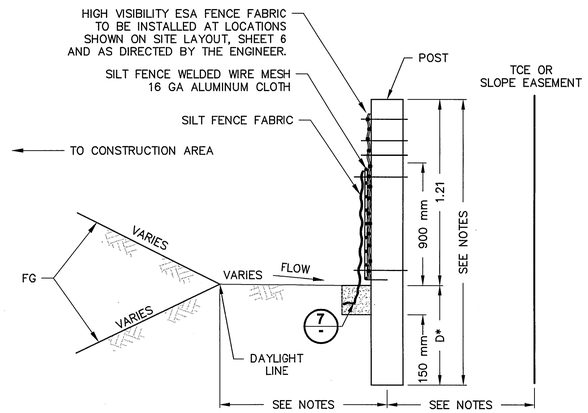
DRAWN: AMBER LO/JANE RINGOT
PROJECT ENGINEER: BRIAN MONTOYA/ARAVILLA
CHECKED: JAMES CHU
APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: ARSENIO MATIAS
DATE: JAN 2008
SCALE: NTS

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 13 OF 145
FILE NO. U-357-6

N:\ROAD\r23265\~Final Plan – Vasco Road 2007\Typical Sections.dwg 6-25-08 11:58:57 AM amberl



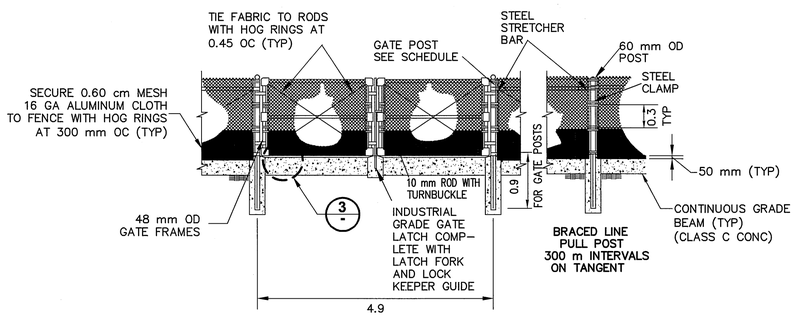
EXCLUSION FENCE (1 -)
NO SCALE



TEMPORARY PERIMETER/SILT FENCE (6 -)
NO SCALE

TEMPORARY PERIMETER/SILT FENCE NOTES

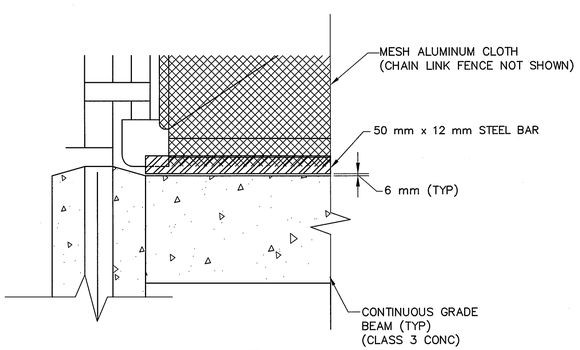
1. SILT FENCE REINFORCING MESH SHALL BE A MINIMUM OF 1.21 m (48") IN WIDTH AND SHALL HAVE A MAXIMUM MESH SPACING OF 150 mm (6") x 150 mm (6") x 16 GA.
2. STEEL POSTS SHALL BE 1.82 (6') IN HEIGHT AND BE OF THE SELF–FASTENER ANGLE STEEL TYPE. (STANDARD SPECIFICATION 80–3) (D* = 610 mm)
3. WOODEN POSTS SHALL BE A MINIMUM OF 7' IN HEIGHT AND 76 mm (3") TO 102 mm (4") IN DIAMETER. WIRE MESH SHALL BE FASTENED TO WOODEN POST WITH NOT LESS THAN NO. 9 WIRE STAPLES 1.5" LONG. POST SHALL BE REDWOOD CONSTRUCTION HEART. (D* = 915 mm)
4. SILT–CONTAINING FABRIC SHALL BE 1.12 (44") WIDE MINIMUM AND SHALL BE FASTENED TO FENCE USING TIE WIRE OR HOG RINGS.
5. SILT–CONTAINING FABRIC SHALL BE 915 mm (36") MINIMUM ABOVE GROUND LEVEL.
6. SILT–CONTAINING FABRIC SHALL BE BURIED APPROXIMATELY 204 mm (8") IN GROUND. FILL OVER TOE OF FABRIC SHALL BE COMPACTED IN PLACE.
7. METAL POSTS SHALL BE DRIVEN INTO PLACE. WOODEN POSTS SHALL BE INSTALLED IN DRILLED OR DUG HOLES AND BACKFILLED AND COMPACTED UNTIL SOLID.
8. SILT–CONTAINING FABRIC SHALL BE WOVEN POLYPROPYLENE WITH MAXIMUM APPARENT OPENING SIZE OF 20–40 (U.S. STANDARD SIEVE SIZE), SUCH AS CARTHAGE MILLS FX–11.
9. TEMPORARY SILT FENCE SHALL BE INSTALLED PARALLEL WITH THE SLOPE CONTOURS IN REACHES NOT TO EXCEED 150 m UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
10. TEMPORARY PERIMETER FENCE SHALL BE INSTALLED 3 m WITHIN THE TCE OR SLOPE EASEMENTLINE. WHERE THERE IS NO TCE OR SLOPE EASEMENT, TEMPORARY PERIMETER FENCE SHALL BE INSTALLED 6.1 m OUTSIDE THE DAYLIGHT LINE.
11. SEE STANDARD PLAN A86 FOR DETAILS NOT SHOWN HERE.



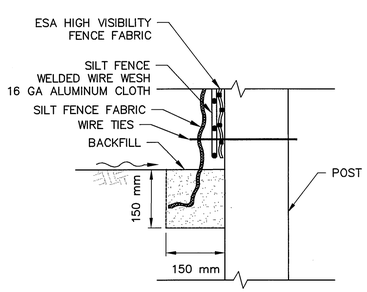
NOTES:

1. CENTER LINE OF ACCESS GATE SHALL BE 150 mm INSIDE RIGHT OF WAY UNLESS OTHERWISE INDICATED.
2. ALL HARDWARE SHALL BE INDUSTRIAL HARDWARE GRADE.
3. BRACING IS THE SAME ON BOTH SIDES OF CORNER POSTS.
4. INSTALL INDUSTRIAL GRADE GATE STOPS AS DIRECTED BY THE ENGINEER.
5. TIE WIRE AND HOG RINGS SHALL BE NO. 9 GAGE GALVANIZED STEEL, CLASS A.
6. ACCESS GATE LOCATIONS ARE APPROXIMATE AND WILL BE DETERMINED IN THE FEILD.

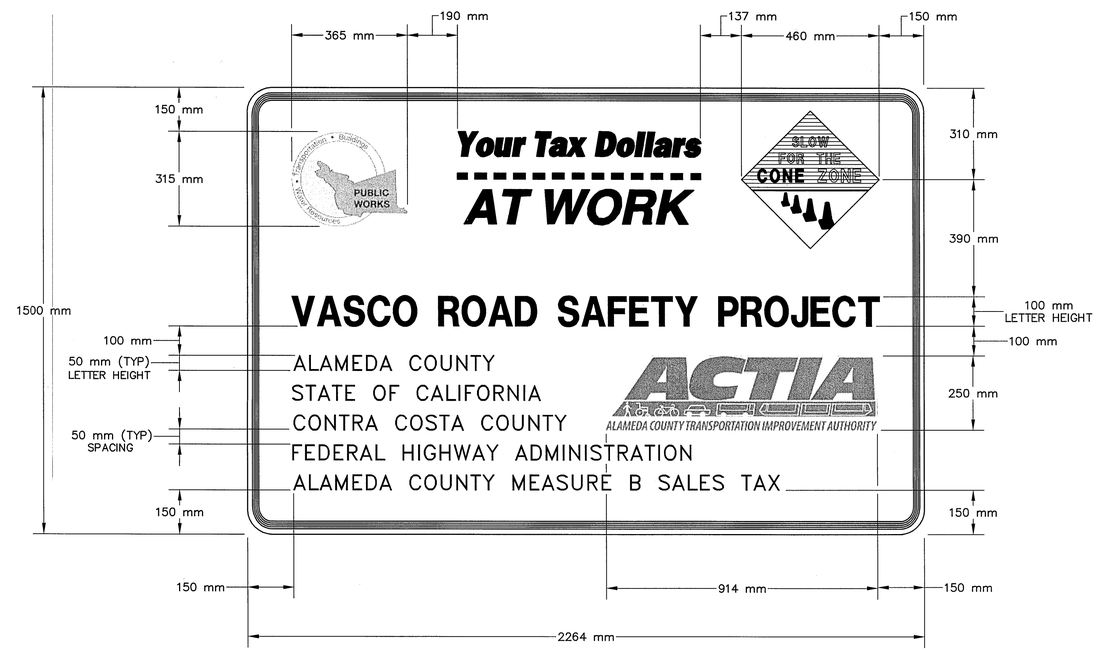
EXCLUSION FENCE ACCESS GATE (2 -)
NO SCALE



DETAIL (3 -)
NO SCALE



TRENCH DETAIL (7 -)
NO SCALE



NOTE:

1. SEE CALTRANS STD PLAN RSP T7 FOR DETAILS NOT SHOWN.
2. SEE ACTIA WEBSITE FOR ACTIA LOGO COLOR AND DETAILS.
3. SEE PWA WEBSITE FOR PUBLIC WORKS LOGO COLOR AND DETAILS.

PROJECT FUNDING IDENTIFICATION SIGN (8 -)
NO SCALE

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

REVIEWED BY:		DATE:	REVIEWED BY:		DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 38857 Exp. 12/31/2009 STATE OF CALIFORNIA CIVIL

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TYPICAL SECTIONS AND MISCELLANEOUS DETAILS

DRAWN: MARTON MARAVILLA/JANE RINGO
DESIGNED: BONO NGUYEN/MARTON MARAVILLA
CHECKED: JAMES CHU
APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: ARTHUR K. GRIFFIN
DATE: JAN 2008
SCALE: NTS

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 14 OF 145
FILE NO. U-357-6

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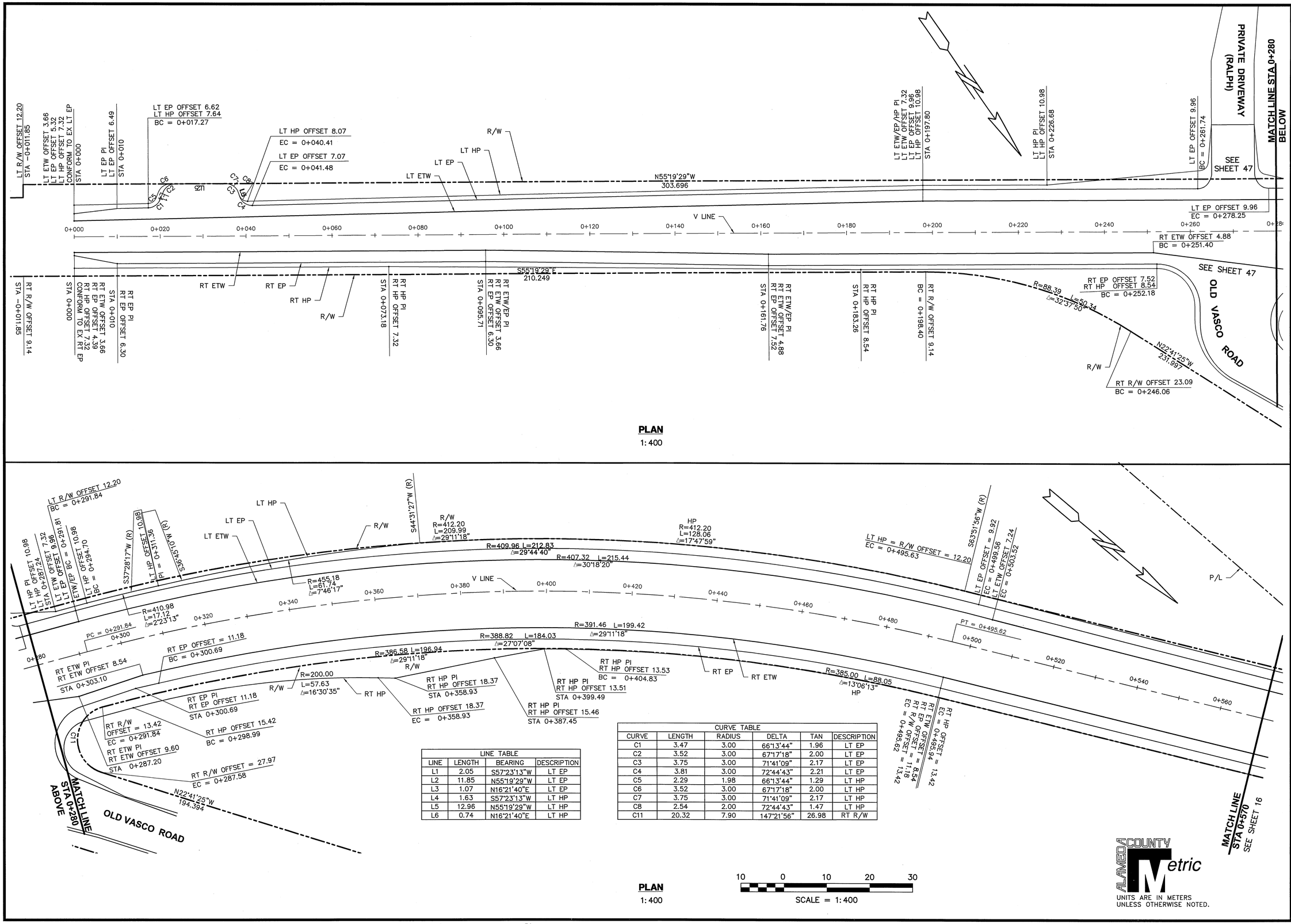
FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS
0 50 mm

	REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY	
MAINTENANCE			TRAFFIC	
REAL ESTATE			ENVIRONMENTAL	



LINE TABLE			
LINE	LENGTH	BEARING	DESCRIPTION
L1	2.05	S57°23'13"W	LT EP
L2	11.85	N55°19'29"W	LT EP
L3	1.07	N16°21'40"E	LT EP
L4	1.63	S57°23'13"W	LT HP
L5	12.96	N55°19'29"W	LT HP
L6	0.74	N16°21'40"E	LT HP

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	TAN	DESCRIPTION
C1	3.47	3.00	66°13'44"	1.96	LT EP
C2	3.52	3.00	67°17'18"	2.00	LT EP
C3	3.75	3.00	71°41'09"	2.17	LT EP
C4	3.81	3.00	72°44'43"	2.21	LT EP
C5	2.29	1.98	66°13'44"	1.29	LT HP
C6	3.52	3.00	67°17'18"	2.00	LT HP
C7	3.75	3.00	71°41'09"	2.17	LT HP
C8	2.54	2.00	72°44'43"	1.47	LT HP
C11	20.32	7.90	147°21'56"	26.98	RT R/W

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
2				
3				
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5				

APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY M. TONG No. 35457 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

ROADWAY STAKING PLAN

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: ARTHUR L. DAHMS
DATE: JAN 2008
SCALE: 1:400
DRAWN: JANE BINGHI
CHECKED: JAMES CHU
BRIDGE NO. 33C0139 (VASCO ROAD)

WORK ORDER NO. R23265
SPECIFICATION NO. 1903

FILE NO. U-357-6

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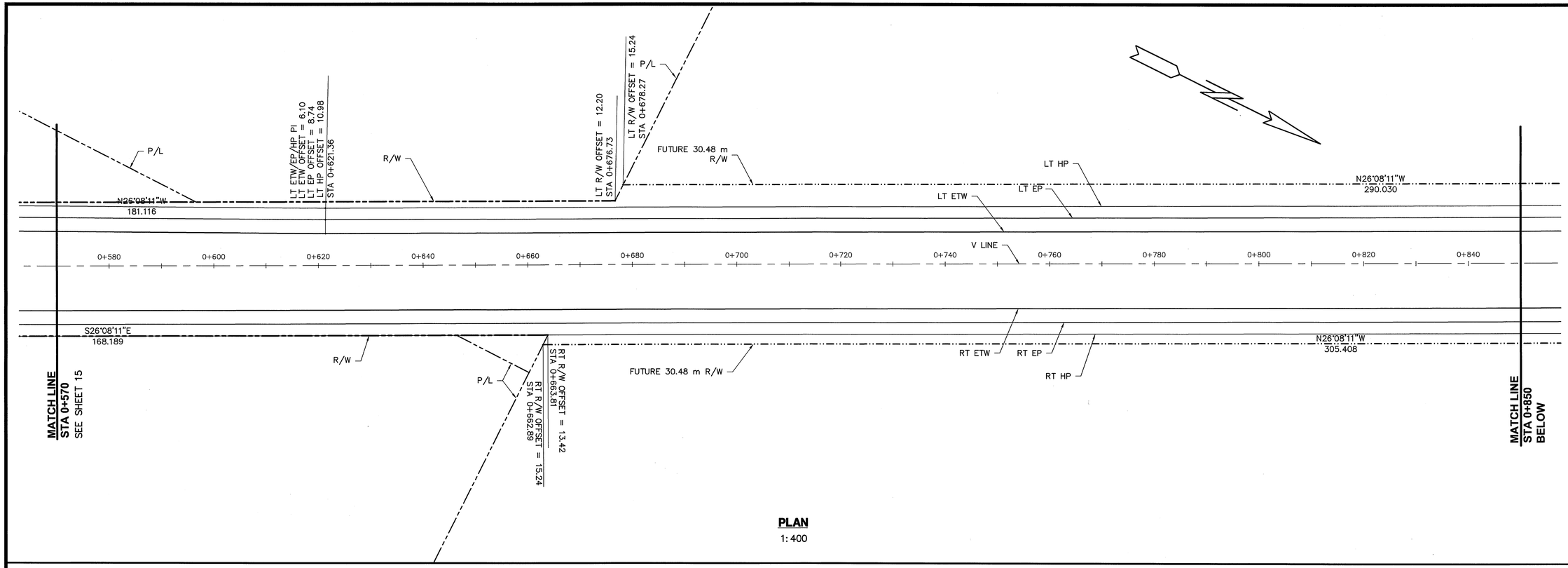
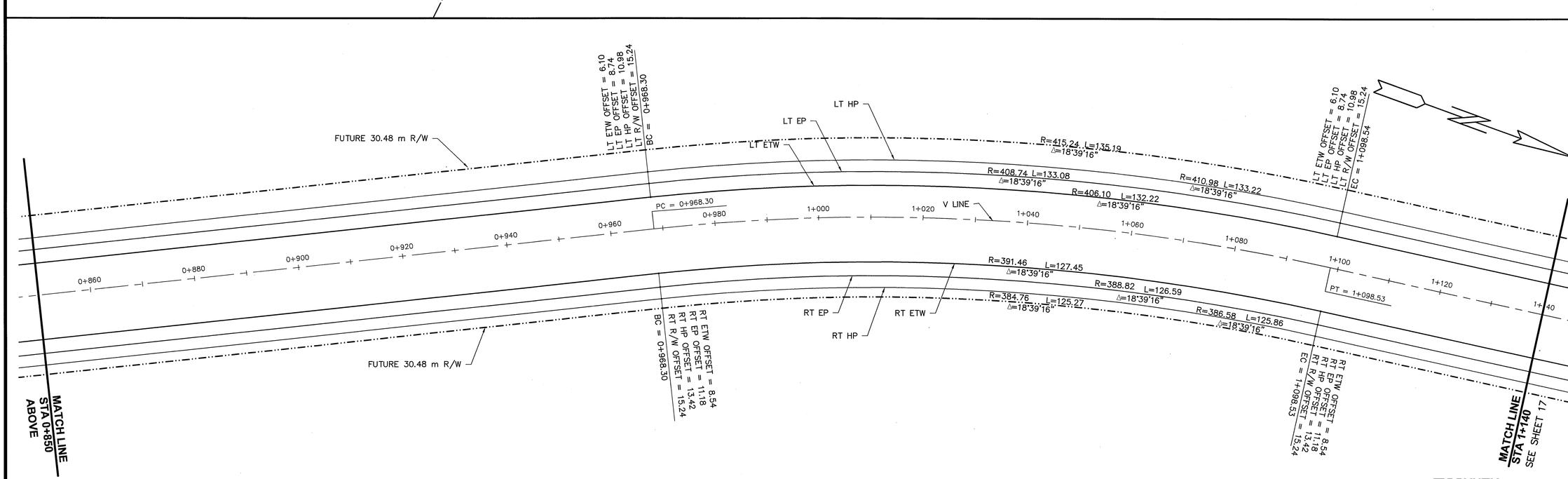
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



PLAN
1:400



PLAN
1:400

10 0 10 20 30
SCALE = 1:400

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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APPROVED
REGISTERED PROFESSIONAL ENGINEER
STANLEY W. TUNG
No. 39467
Exp. 12/31/2009
CIVIL
STATE OF CALIFORNIA

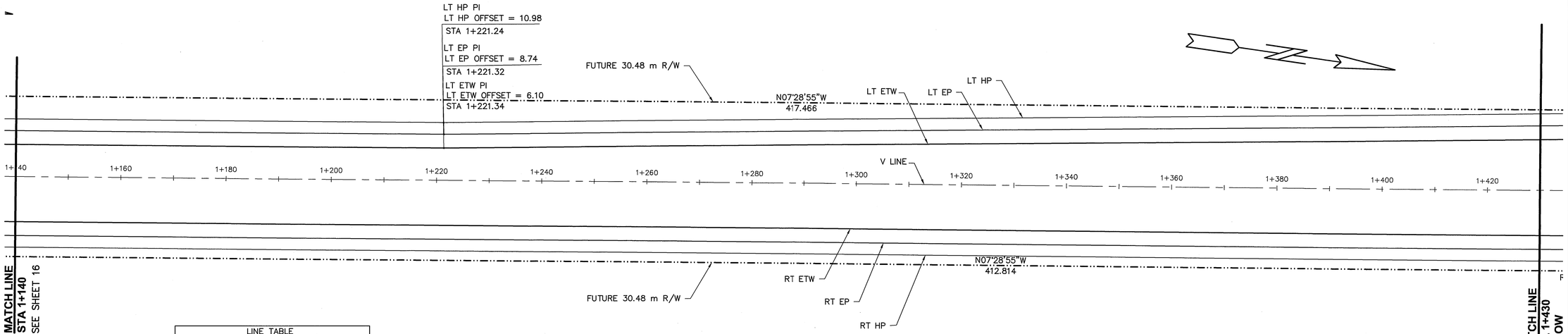
COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

ROADWAY STAKING PLAN

DRAWN JANE ENGLISH	APPROVAL RECOMMENDED JAMES CHU	SCALE 1:400
DESIGNED JANE ENGLISH	APPROVAL RECOMMENDED ARTHUR L. COLMENARES	DATE JAN 2008
CHECKED JAMES CHU		

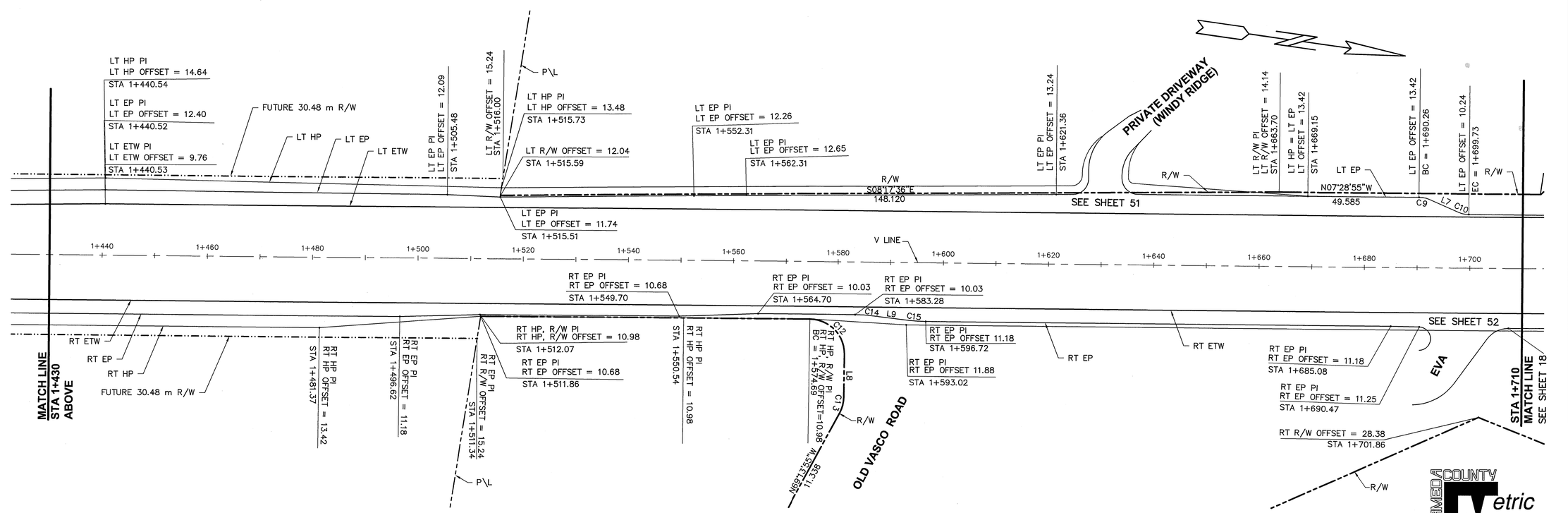
WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 16 OF 145
FILE NO. U-357-6



LINE TABLE			
LINE	LENGTH	BEARING	DESCRIPTION
L7	6.02	N15°42'55"E	LT EP
L8	8.14	N82°46'56"E	RT R/W

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	TAN	DESCRIPTION
C9	2.02	5.00	23°11'50"	1.03	LT EP
C10	2.01	5.00	23°01'08"	1.02	LT EP
C12	10.40	6.60	90°15'51"	6.63	RT R/W
C13	3.22	6.60	27°59'09"	1.64	RT R/W

PLAN
1: 400



PLAN
1: 400

10 0 10 20 30
SCALE = 1: 400

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

CONSTRUCTION	REVIEWED BY:	DATE:	
MAINTENANCE			
REAL ESTATE			

SURVEY	REVIEWED BY:	DATE:	
TRAFFIC			
ENVIRONMENTAL			

REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'D
1				
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3				
4				
5				

APPROVED
REGISTERED PROFESSIONAL ENGINEER
STANLEY W. FUNG
No. 39157
Exp. 12/31/2009
STATE OF CALIFORNIA
CIVIL

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

ROADWAY STAKING PLAN

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: JOHN C. DAVIS
DRAWN: JANE JIANG
DESIGNED: BOND HO/MAYTON MAKAWILA
CHECKED: JAMES CHU
DATE: JAN 2008
SCALE: 1: 400

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 17 OF 145
FILE NO. U-357-6

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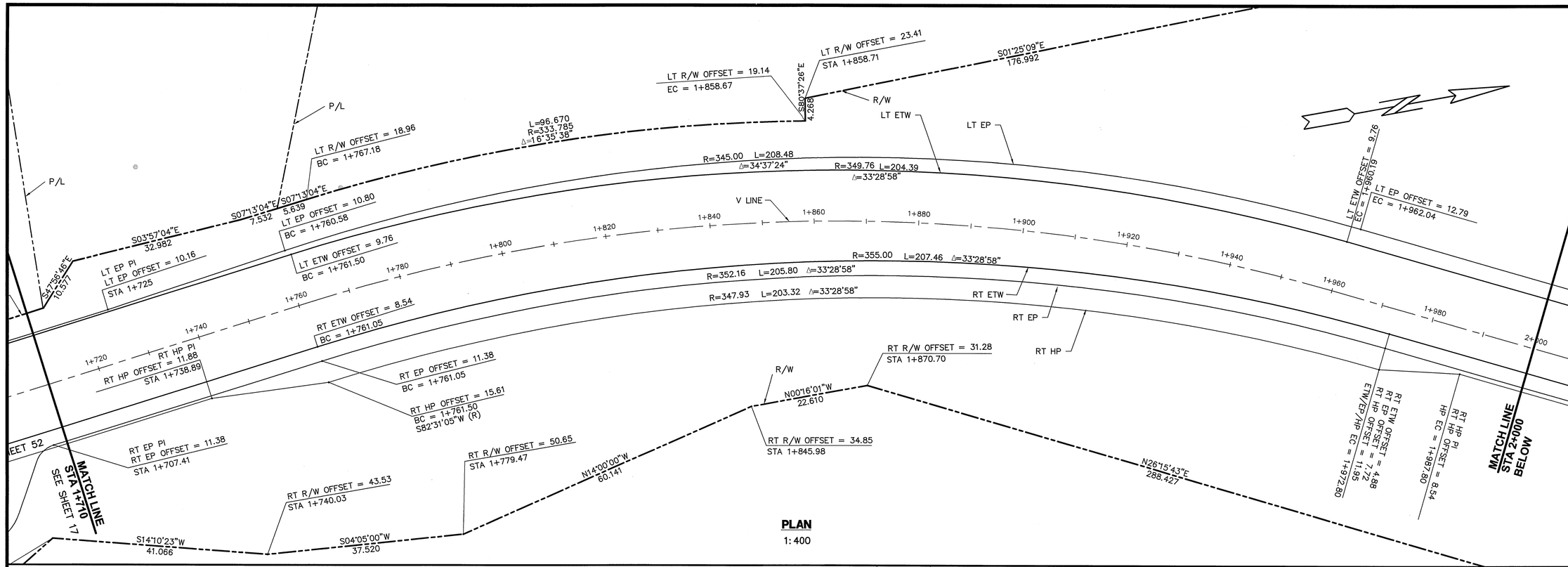
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



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FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
2				
3				
4				
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APPROVED

REGISTERED PROFESSIONAL ENGINEER
JANET W. FONG
No. 69657
Exp. 12/31/2009
CIVIL
STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

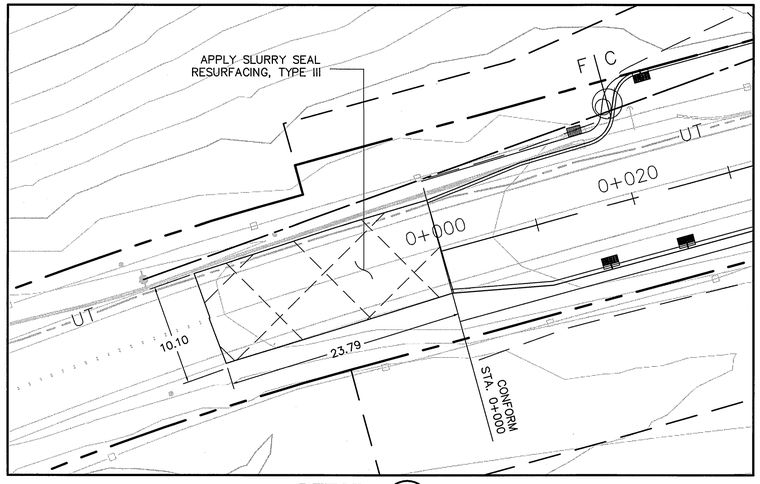
ROADWAY STAKING PLAN

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: JEFFREY C. LUGRES
DATE: JAN 2008
SCALE: 1:400

DRAWN: JANE TAYLOR
DESIGN: BERD INCORPORATION MARVELLA
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 18 OF 145
FILE NO. U-357-6

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.



DETAIL 1
SCALE 1:300

NOTES:

1. METAL BEAM GUARDRAIL OFFSETS ARE MEASURED TO THE CENTER OF THE GUARDRAIL POST.
2. LOCATION SHOWN IS APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. NEW UTILITY POLE, SEE UTILITY PLAN.
4. SEE UTILITY PLAN FOR POTHOLE INFORMATION.

WARNING: PG&E ELECTRICAL AERIAL LINE (TYP) - DO NOT DAMAGE

RALPH PROPERTIES II
APN 99B490100204

WARNING: NEW UTILITY AERIAL LINE (TYP) - DO NOT DAMAGE. SEE UTILITY PLAN

WARNING: UNDERGROUND SPRINT FIBER OPTIC LINE TO BE ADJUSTED. SEE UTILITY PLAN.

21kV E

PRIVATE DRIVEWAY (RALPH)

SLOPE EASEMENT

MATCH LINE
STA. 0+360 (V LINE)

EXCLUSION FENCE (TYP)

STA 0+358.9±
OFFSET 13.11RT
BEGIN CHAIN-LINK FENCE

INSTALL EXCLUSION FENCE ACCESS GATE, SEE NOTE 2 AND DETAIL 2/14

STA 0+334.64
OFFSET 12.62 RT
END MBGR

STA 0+230±
BEGIN EXCLUSION FENCE

SEE SHEET 48

VASCO ROAD

EXCLUSION FENCE (TYP)

STA 0+300.69
BEGIN 184 m
AC DIKE (TYPE C)

TOP OF BANK

INSTALL EXCLUSION FENCE ACCESS GATE, SEE NOTE 2 AND DETAIL 2/14

ALTERNATIVE IN-LINE TERMINAL SYSTEM

INSTALL 63± m CHAIN-LINK FENCE TYPE CL-1.8

SEE SHEET 49

SLOPE EASEMENT

DAYLIGHT

R/W

SEE NOTE 3

STA 0+250
END AC DIKE (TYPE C)

SEE NOTE 3

SEE NOTE 3

STA 0+041.48 BEGIN
15 m TRANSITION
TO AC DIKE (TYPE E)

SEE NOTE 3

STA 0+056.48
BEGIN 205 m
AC DIKE (TYPE E)

SEE DETAIL 1

STA 0+000 BEGIN
47 m AC DIKE
(TYPE A)

V LINE

STA 0+175.25 OFFSET 7.93 RT
BEGIN 118 m± MBGR

ALTERNATIVE IN-LINE TERMINAL SYSTEM

DAYLIGHT

STA 0+160 BEGIN 88 m AC DIKE (TYPE C)

STA 0+150 BEGIN
10 m TRANSITION TO
AC DIKE (TYPE C)

SEE NOTE 3

OLD VASCO ROAD

R/W

VASCO ROAD

0+000 0+020 0+040 0+060 0+080 0+100 0+120 0+140 0+160 0+180 0+200 0+220 0+240 0+260 0+280 0+300 0+320 0+340 0+360

UT

F C

BEGIN VASCO ROAD REALIGN
STA. 0+000 (V LINE)

STA 0+000 BEGIN
150 m AC DIKE (TYPE E)

SLOPE EASEMENT

RALPH PROPERTIES II
APN 099B492600302

PLAN
1:500

LEGEND:

- SLURRY SEAL SURFACING
- METAL BEAM GUARD RAIL
- AC DIKE (TYPES A, C, E, F)
- MEDIAN BARRIER
- CONCRETE BARRIER
- EXCLUSION FENCE
- BARBED WIRE FENCE

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS
0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'V'D
1				
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REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 38657 Exp. 12/31/2008 CIVIL STATE OF CALIFORNIA
APPROVED

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

ROADWAY PLAN

APPROVAL RECOMMENDED: Lang Chi
APPROVED: Stanley W. Fung
APPROVED: James Cheng
DATE: JAN 2008
SCALE: 1:500
DRAWN: JAME RIVOCA
DESIGNED: BRIAN MACINTOSH, MAJANILA
CHECKED: JAMES CHIU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 19 OF 145
FILE NO. U-357-6

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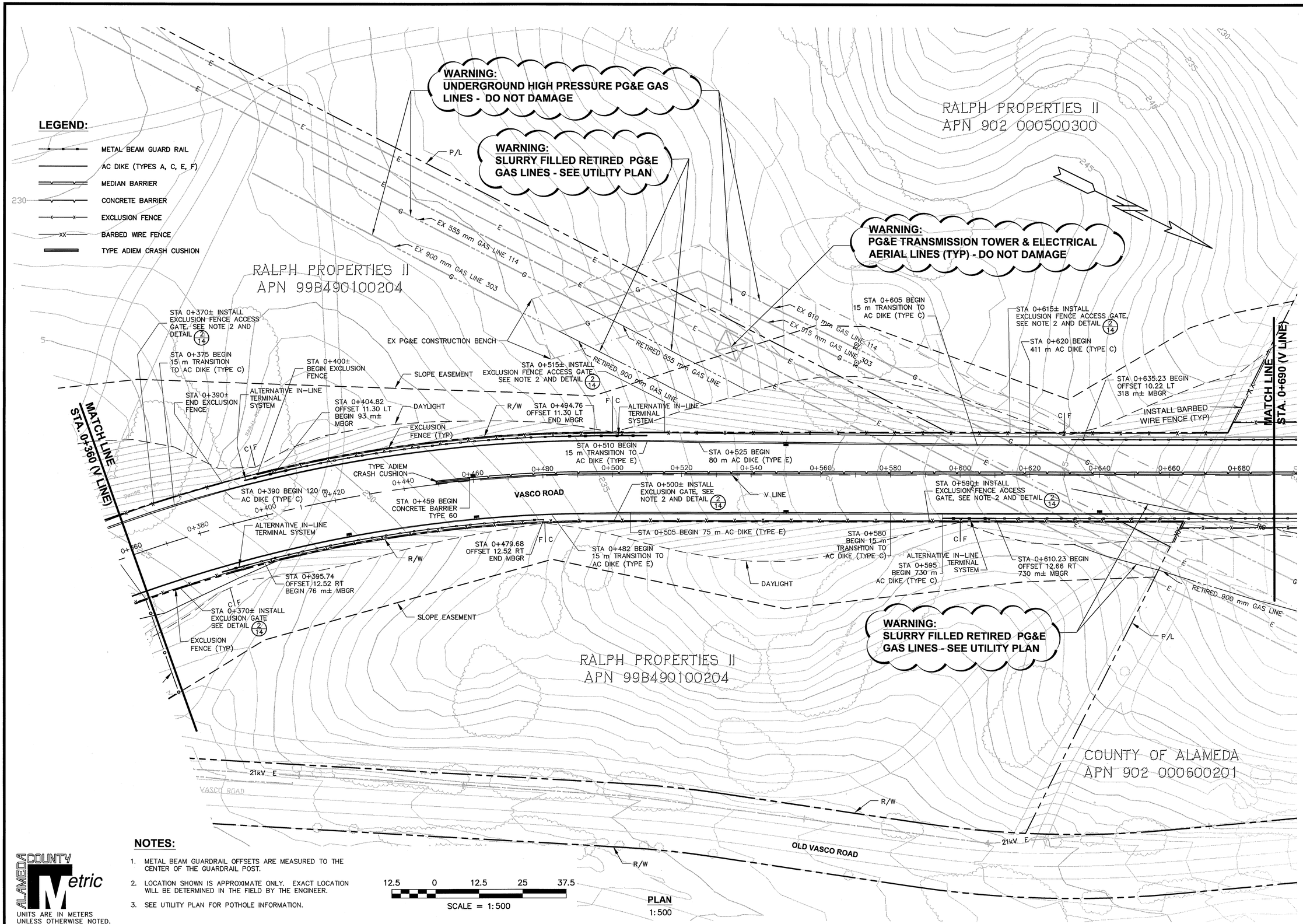
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



NOTES:

1. METAL BEAM GUARDRAIL OFFSETS ARE MEASURED TO THE CENTER OF THE GUARDRAIL POST.
2. LOCATION SHOWN IS APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. SEE UTILITY PLAN FOR POTHOLE INFORMATION.

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

12.5 0 12.5 25 37.5
SCALE = 1:500

PLAN
1:500

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
2				
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4				
5				

APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. T. LUNG No. 46967 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

ROADWAY PLAN

APPROVAL RECOMMENDED JAMES CHU
APPROVAL RECOMMENDED
APPROVED
DATE JAN 2008
SCALE 1:500
DRAWN JANE RHODY
DESIGN CONSULTANT
CHECKED JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 20 OF 145
FILE NO. U-357-6

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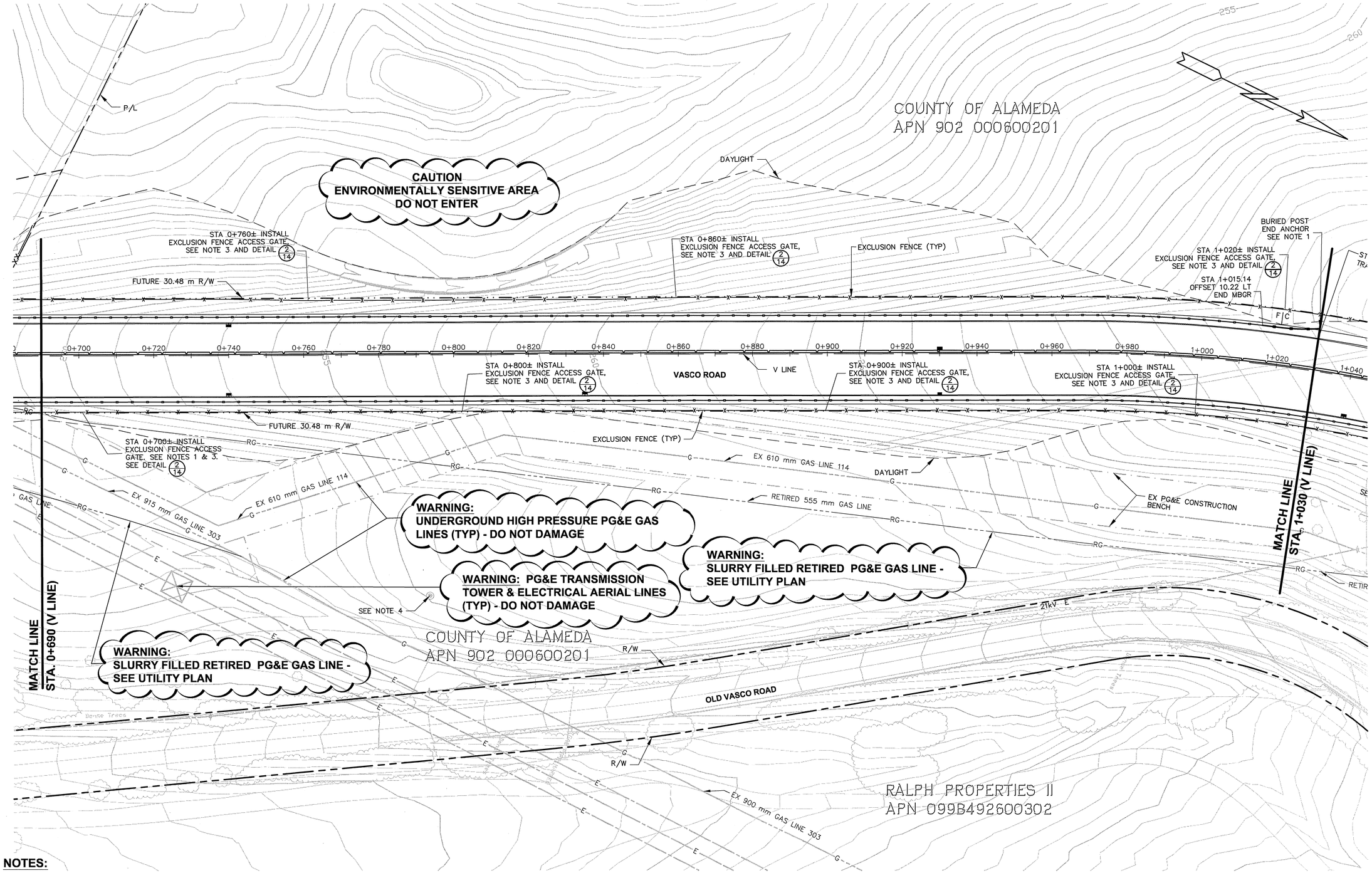
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



NOTES:

1. LOCATION SHOWN IS APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. METAL BEAM GUARDRAIL OFFSETS ARE MEASURED TO THE CENTER OF THE GUARDRAIL POST.
3. ACCESS GATE LOCATIONS ARE APPROXIMATE ONLY AND WILL BE DETERMINED IN THE FIELD.
4. THE CONTRACTOR SHALL NOT REMOVE OR DAMAGE EXISTING MONUMENT P1. SEE SHEET 5.
5. SEE UTILITY PLAN FOR POTHOLE INFORMATION.

LEGEND:

- METAL BEAM GUARD RAIL
- AC DIKE (TYPES A, C, E, F)
- MEDIAN BARRIER
- CONCRETE BARRIER
- EXCLUSION FENCE
- BARBED WIRE FENCE
- TYPE ADIEM CRASH CUSHION

PLAN
1:500

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D

APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 38659 Exp. 12/31/2009 STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

ROADWAY PLAN

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: JAMES CHU
APPROVED: ASSOCIATE ENGINEER
DATE: JAN 2008
SCALE: 1:500
DRAWN: JANE RIVERT
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 21 OF 145
FILE NO. U-357-6

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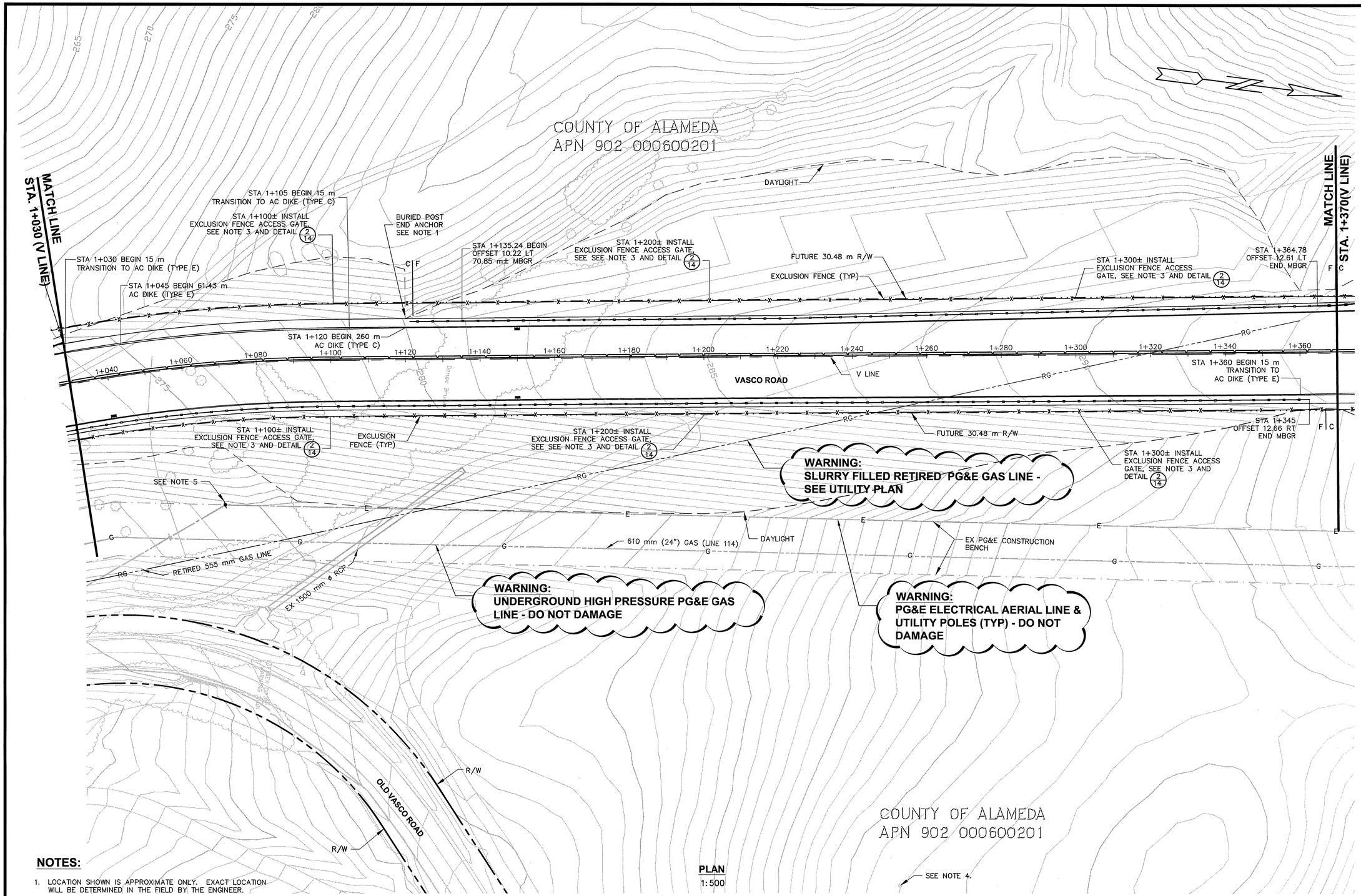
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



PLAN
1:500

NOTES:

1. LOCATION SHOWN IS APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. METAL BEAM GUARDRAIL OFFSETS ARE MEASURED TO THE CENTER OF THE GUARDRAIL POST.
3. ACCESS GATE LOCATIONS ARE APPROXIMATE ONLY AND WILL BE DETERMINED IN THE FIELD.
4. THE CONTRACTOR SHALL NOT REMOVE OR DAMAGE EXISTING SURVEY SET REBAR P3. SEE SHEET 5.
5. NEW UTILITY POLE, SEE UTILITY PLAN.

LEGEND:

- METAL BEAM GUARD RAIL
- AC DIKE (TYPES A, C, E, F)
- MEDIAN BARRIER
- CONCRETE BARRIER
- EXCLUSION FENCE
- BARBED WIRE FENCE

12.5 0 12.5 25 37.5
SCALE = 1:500

COUNTY OF ALAMEDA Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'D
1				
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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. LUNG No. 39657 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

ROADWAY PLAN

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: KEVIN C. DONNELLY
DATE: JAN 2008
SCALE: 1:500
DRAWN: JANE RINGOY
DESIGNED: BERD MARIANO MIRANILLA
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 22 OF 145
FILE NO. U-357-6

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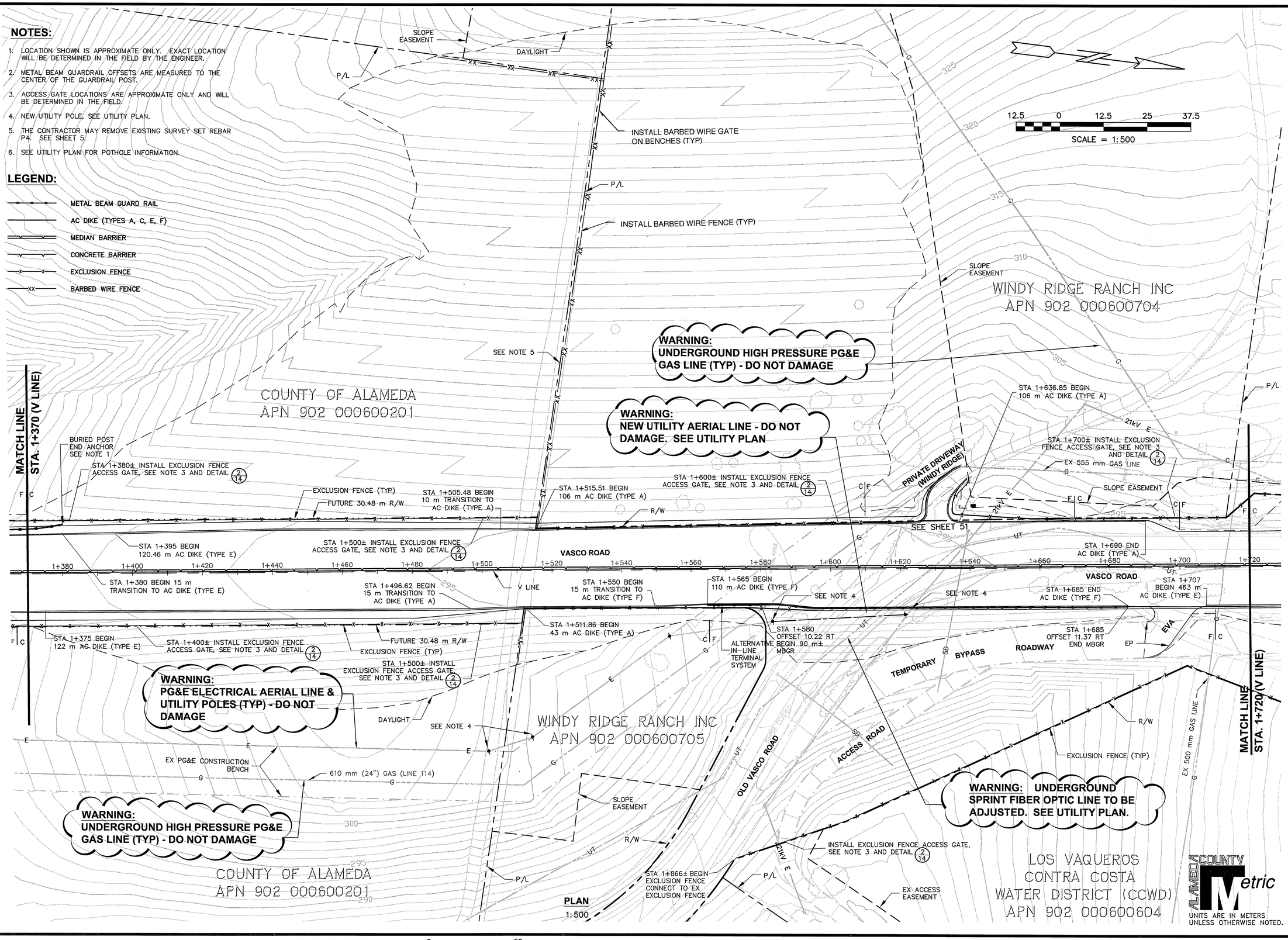
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

NOTES:

1. LOCATION SHOWN IS APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. METAL BEAM GUARDRAIL OFFSETS ARE MEASURED TO THE CENTER OF THE GUARDRAIL POST.
3. ACCESS GATE LOCATIONS ARE APPROXIMATE ONLY AND WILL BE DETERMINED IN THE FIELD.
4. NEW UTILITY POLE. SEE UTILITY PLAN.
5. THE CONTRACTOR MAY REMOVE EXISTING SURVEY SET REBAR P4. SEE SHEET 5.
6. SEE UTILITY PLAN FOR POTHOLE INFORMATION.

LEGEND:

- METAL BEAM GUARD RAIL
- AC DIKE (TYPES A, C, E, F)
- MEDIAN BARRIER
- CONCRETE BARRIER
- EXCLUSION FENCE
- BARBED WIRE FENCE



FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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REVISIONS

APPROVED: REGISTERED PROFESSIONAL ENGINEER STANLEY A. W. TUNG No. 38587 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

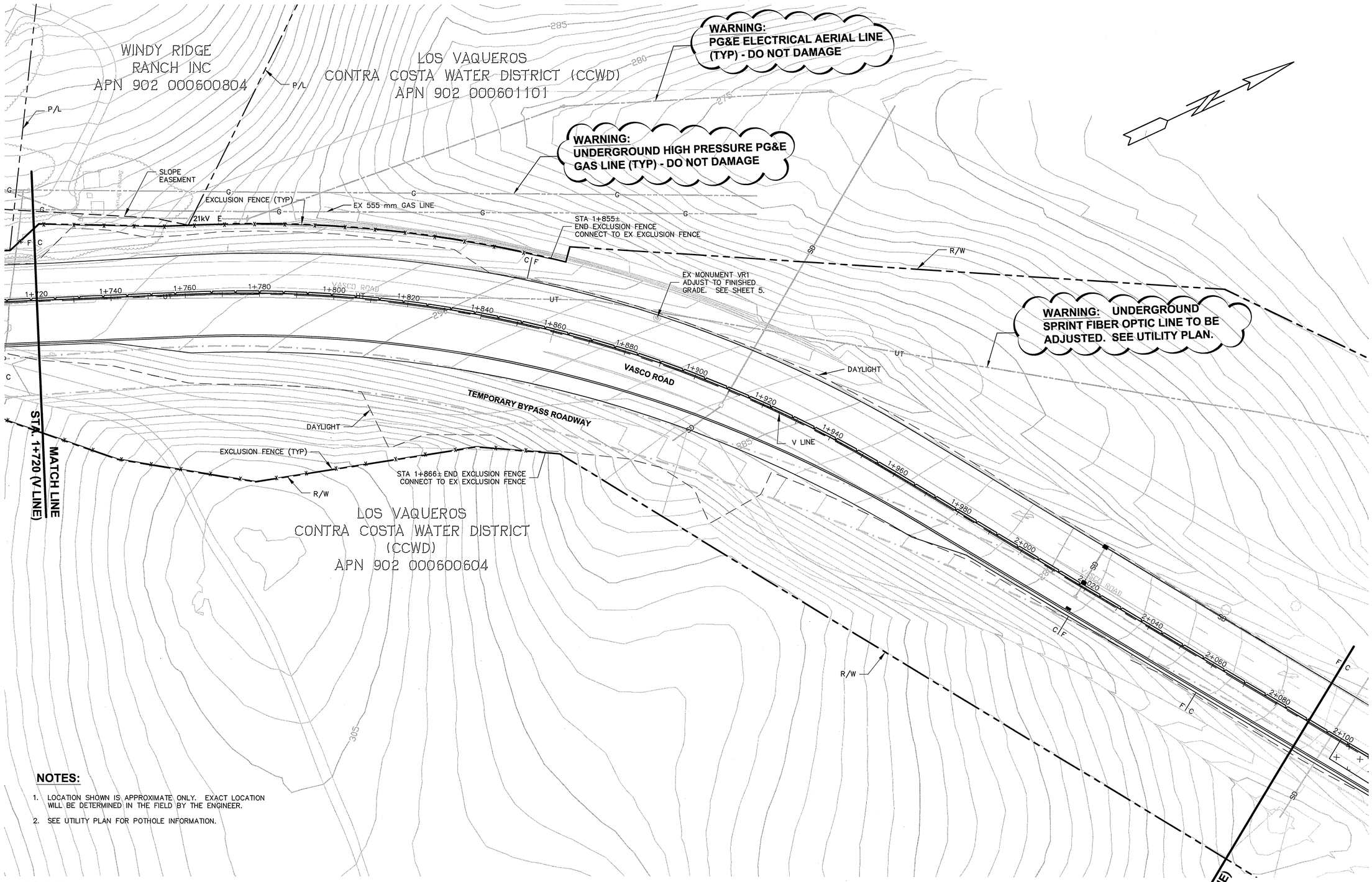
ROADWAY PLAN

APPROVAL RECOMMENDED: JAMES O'CONNOR
APPROVAL RECOMMENDED: ASHOK G. SHENOY
DATE: JAN 2008
SCALE: 1:500
DRAWN: JANE RINGOT
DESIGNED: BRIND YOVCHEVA MAVAKILA
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 23 OF 145
FILE NO. U-357-6

ALAMEDA COUNTY Metric

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



NOTES:

1. LOCATION SHOWN IS APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SEE UTILITY PLAN FOR POTHOLE INFORMATION.

LEGEND:

- METAL BEAM GUARD RAIL
- AC DIKE (TYPES A, C, E, F)
- MEDIAN BARRIER
- CONCRETE BARRIER
- EXCLUSION FENCE
- BARBED WIRE FENCE
- TYPE ADIEM CRASH CUSHION

PLAN
1:500

12.5 0 12.5 25 37.5
SCALE = 1:500

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS
0 50 mm

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

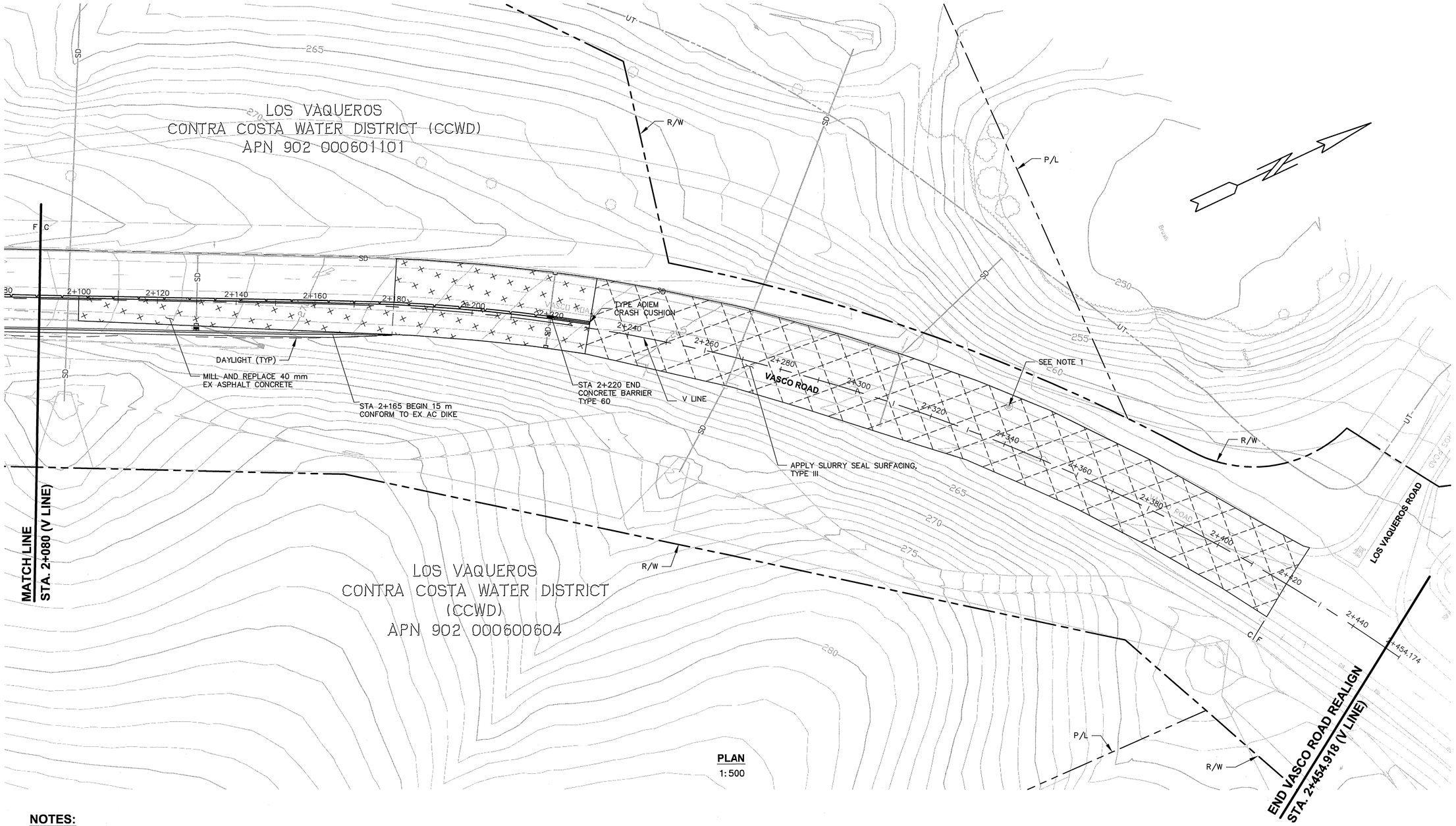
THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

ROADWAY PLAN

APPROVAL RECOMMENDED: JAMES CHU
APPROVED: JAMES CHU
APPROVED: STANLEY W. FUNG
DATE: JAN 2008
SCALE: 1:500
DRAWN: JAME RHODY
DESIGNED: JAME RHODY
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 24 OF 145
FILE NO. U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



PLAN
1:500

NOTES:

1. THE CONTRACTOR SHALL NOT REMOVE OR DAMAGE EXISTING SURVEY SET REBAR P6. SEE SHEET 5.
2. SEE UTILITY PLAN FOR POTHOLE INFORMATION.

LEGEND:

- SLURRY SEAL SURFACING
- MILL AND OVERLAY
- METAL BEAM GUARD RAIL
- AC DIKE (TYPES A, C, E, F)
- MEDIAN BARRIER
- CONCRETE BARRIER
- EXCLUSION FENCE
- BARBED WIRE FENCE
- TYPE ADIEM CRASH CUSHION

12.5 0 12.5 25 37.5
SCALE = 1:500

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 39457 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

ROADWAY PLAN

APPROVAL RECOMMENDED: JAMES SYKES
APPROVED: ASPHALT PAVEMENT ANALYST
DATE: JAN 2008
SCALE: 1:500
DRAWN: JANE RWOOT
DESIGNED: BORIS NOTKIN, MORAVILLA
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 25 OF 145
FILE NO. U-357-6

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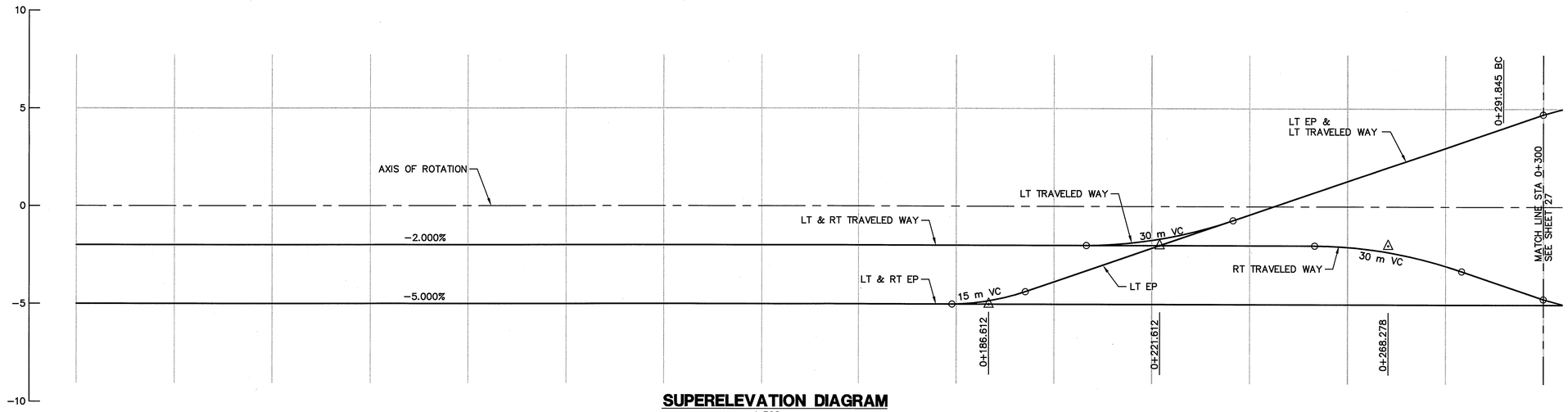
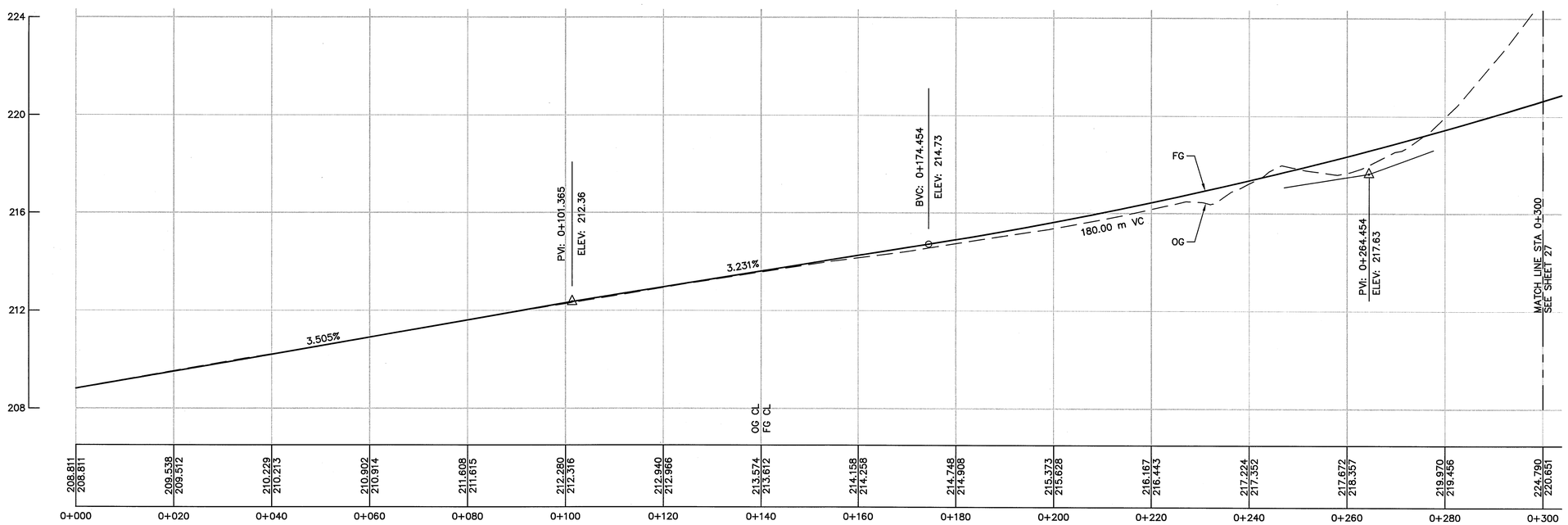
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



SUPERELEVATION DIAGRAM

1:500



PROFILE

HOR 1:500
VER 1:100

V LINE

2.5 0 2.5 5 7.5
VER SCALE = 1:100

12.5 0 12.5 25 37.5
HOR SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

REVISIONS			
NO.	DESCRIPTION	BY	DATE	APP'D
1				
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REGISTERED PROFESSIONAL ENGINEER THOMAS J. HILLERLAND No. 35200 CIVIL STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

Moffatt & Nichol

CHECKED: T. HILLERLAND
APPROVED: B. ZADNI
DRAWN: A. BOROVKOVA
DESIGNED: S. HO
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG
REVIEWED: JAMES CHU
REVIEWED: BOARD

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
PROFILE & SUPERELEVATION
V LINE

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 26 OF 145

FILE NO. U-357-6

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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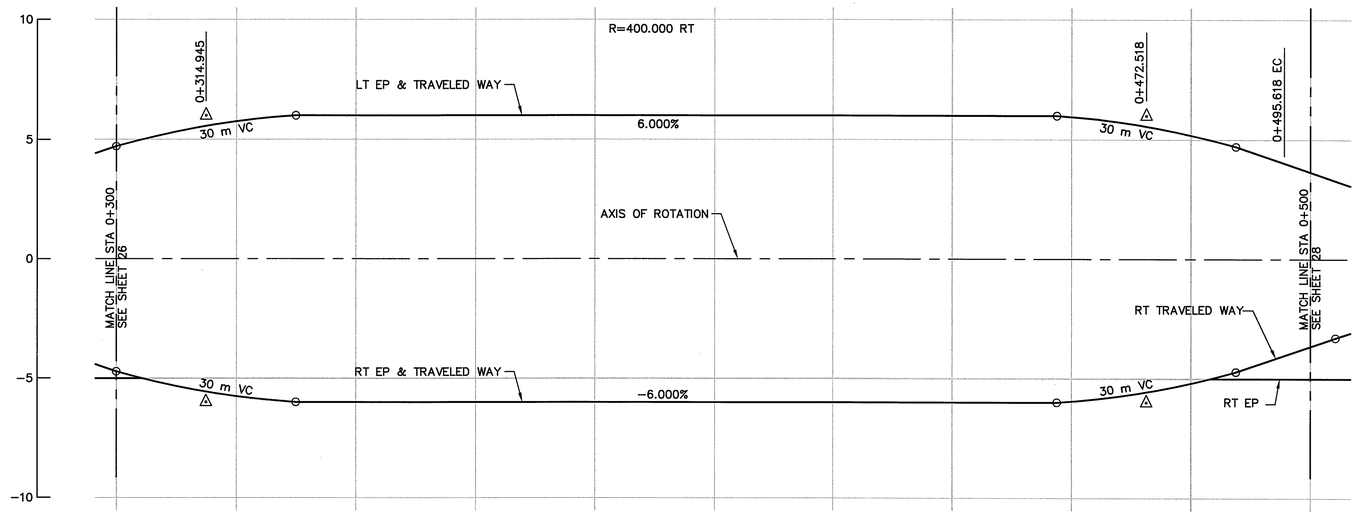
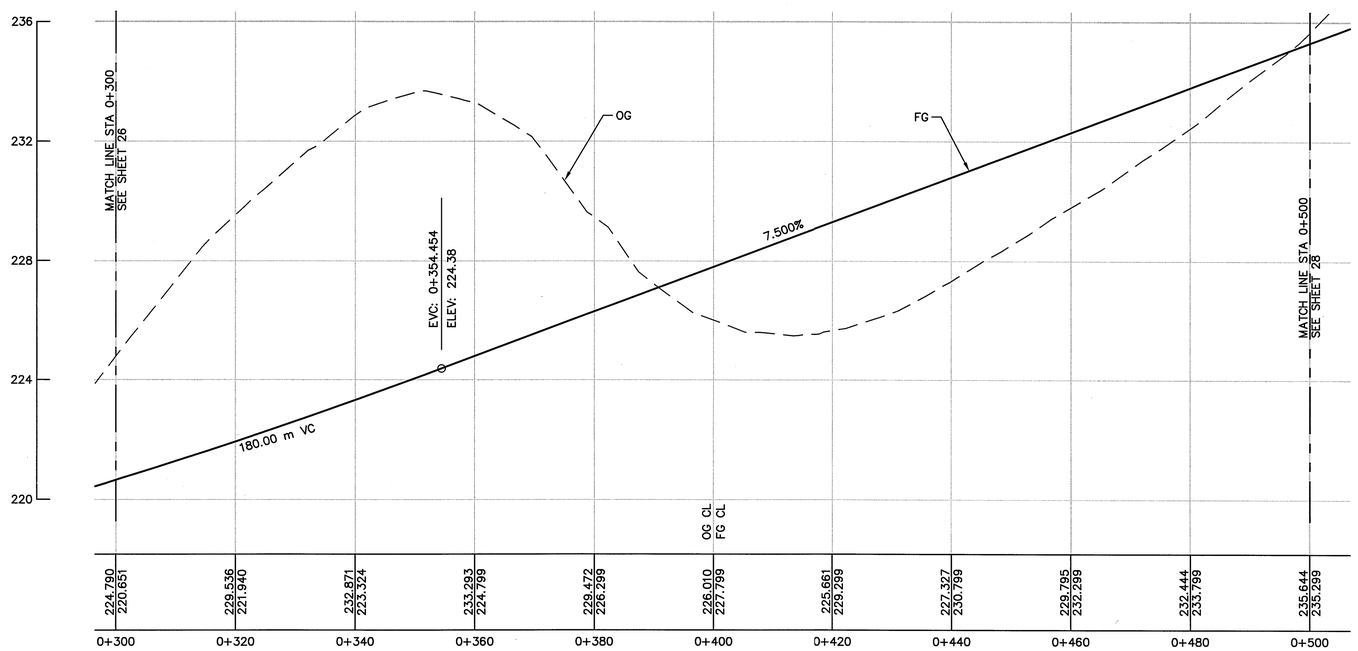
CONSTRUCTION		
MAINTENANCE		
REAL ESTATE		

	REVIEWED BY:	DATE:
SURVEY		
TRAFFIC		
ENVIRONMENTAL		



SUPERELEVATION DIAGRAM

1:500



PROFILE

HOR 1:500
VER 1:100

V LINE

2.5 0 2.5 5 7.5
VER SCALE = 1:100

12.5 0 12.5 25 37.5
HOR SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

REVISIONS			
NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS J. HILLESLAND No. C42400 CIVIL STATE OF CALIFORNIA
6-27-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVIKOVA
CHECKED: T. HILLESLAND
DESIGNED: S. HO
APPROVED: B. ZADNI
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG
REVIEWED: JAMES CHU
REVIEWED: BRAD HUNG

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

PROFILE & SUPERELEVATION

V LINE

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 27 OF 145	
FILE NO. U-357-6	

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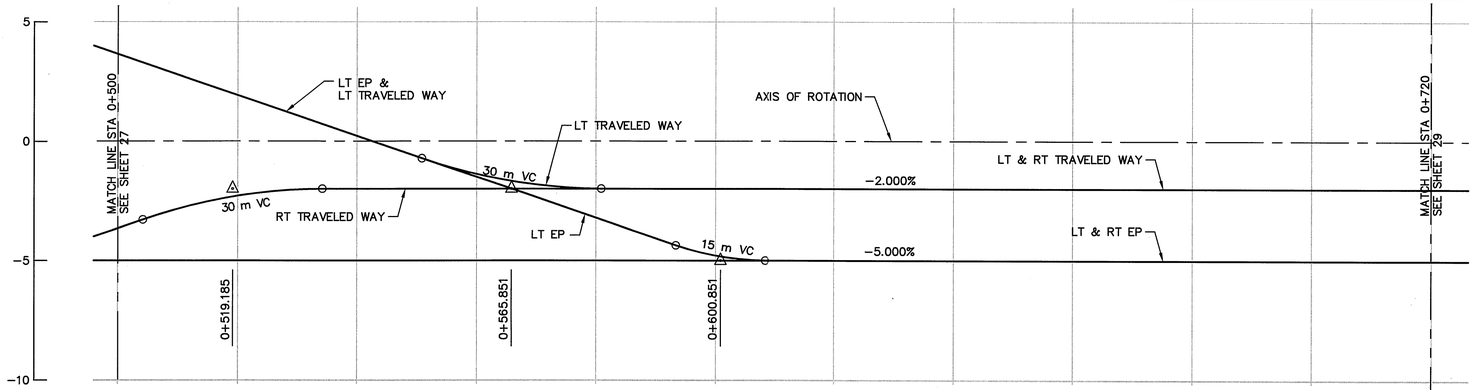
FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm



SUPERELEVATION DIAGRAM

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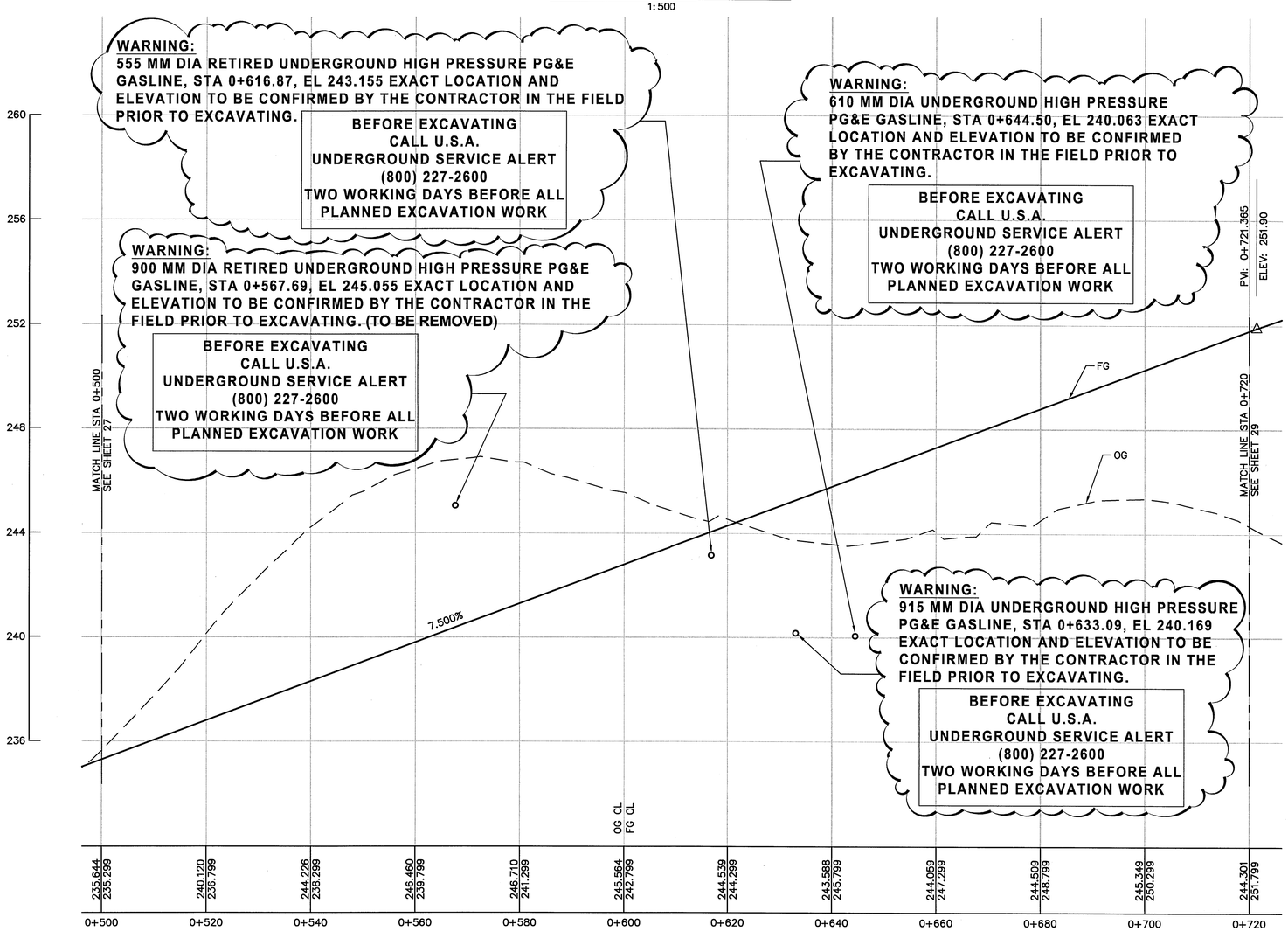

PROFILE

HOR 1:500
VER 1:100

V LINE

2.5 0 2.5 5 7.5
VER SCALE = 1:100

12.5 0 12.5 25 37.5
HOR SCALE = 1:500

ALAMEDA COUNTY Metric

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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REGISTERED PROFESSIONAL ENGINEER
THOMAS C. HILLESLAND
C 54700
Exp. 12-31-08
CIVIL
STATE OF CALIFORNIA
6-16-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZASNI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: ARTHUR G. CARREDA
REVIEWED: JAMES CHU
REVIEWED: BOND INT.
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
PROFILE & SUPERELEVATION
V LINE

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 28 OF 145

FILE NO. U-357-6

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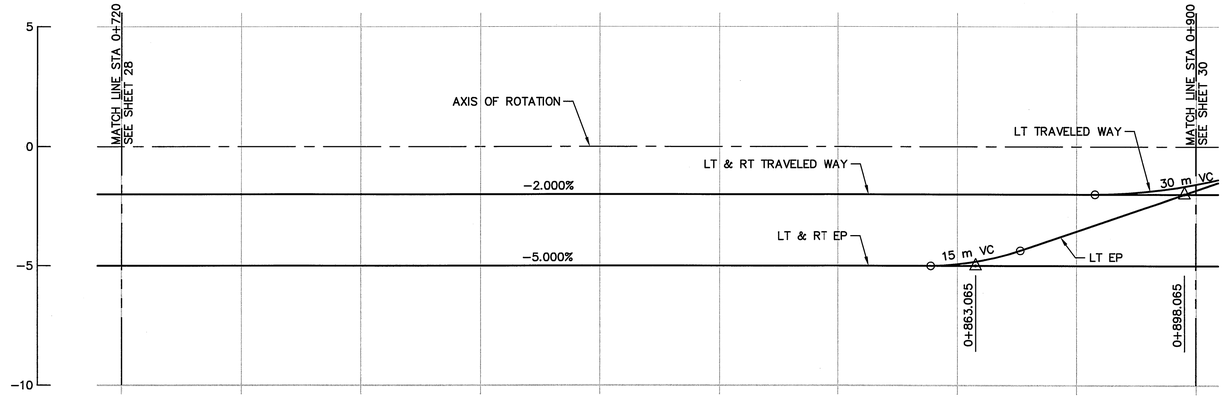
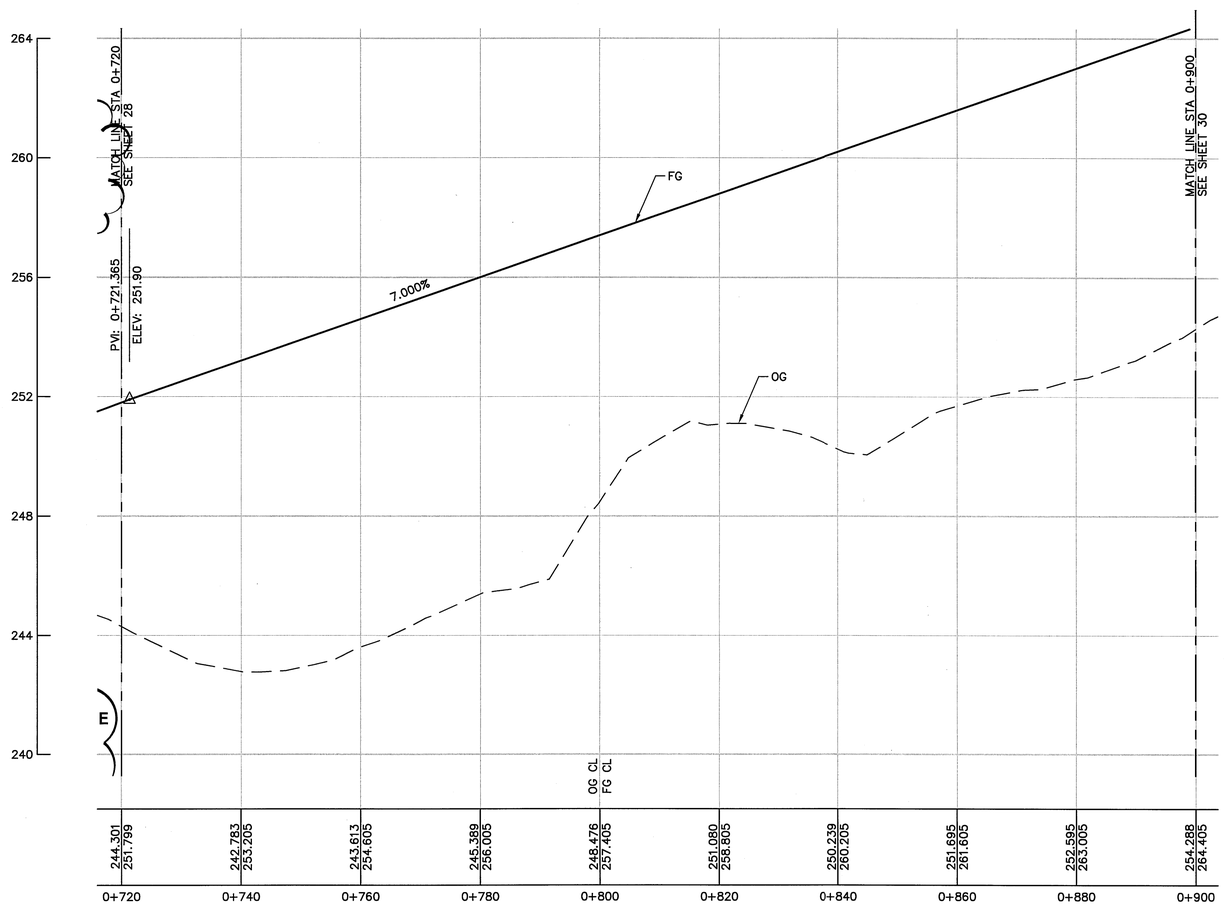
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		



SUPERELEVATION DIAGRAM
1:500



PROFILE
HOR 1:500
VER 1:100

V LINE

2.5 0 2.5 5 7.5
VER SCALE = 1:100

12.5 0 12.5 25 37.5
HOR SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

NO.	DESCRIPTION	BY	DATE	APPV'D

REVISIONS

REGISTERED PROFESSIONAL ENGINEER
THOMAS J. HILLESLAND
No. C 54200
Exp. 12-31-08
CIVIL
STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

Moffatt & Nichol

CHECKED: T. HILLESLAND
APPROVED: B. ZAENI
DRAWN: A. BOROVKOVA
DESIGNED: S. HO

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOB MEIER
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
PROFILE & SUPERELEVATION
V LINE

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 29 OF 145
FILE NO. U-357-6

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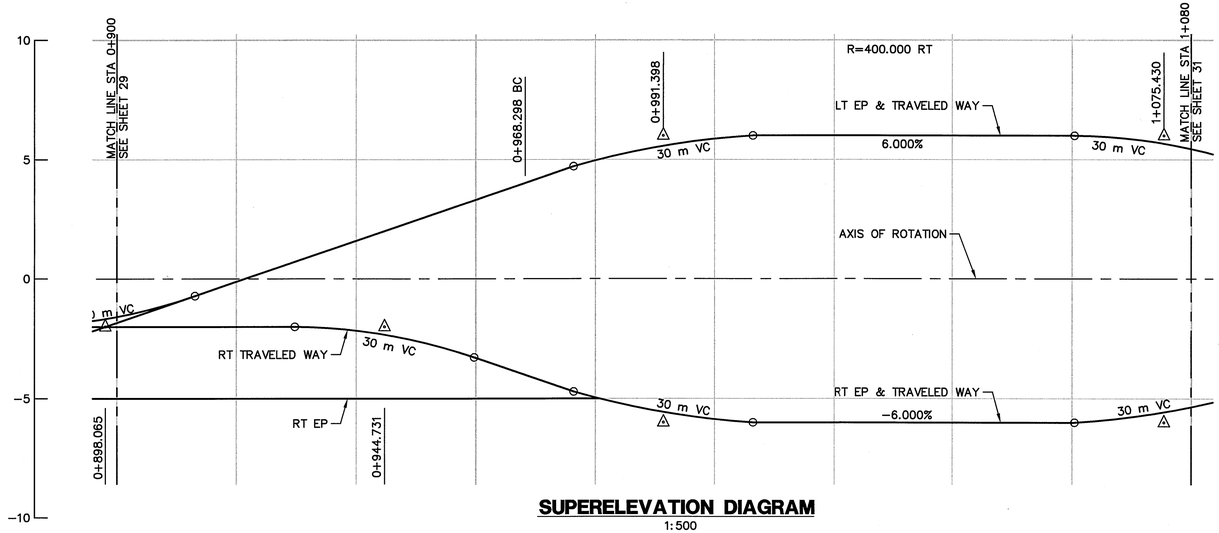
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



SUPERELEVATION DIAGRAM
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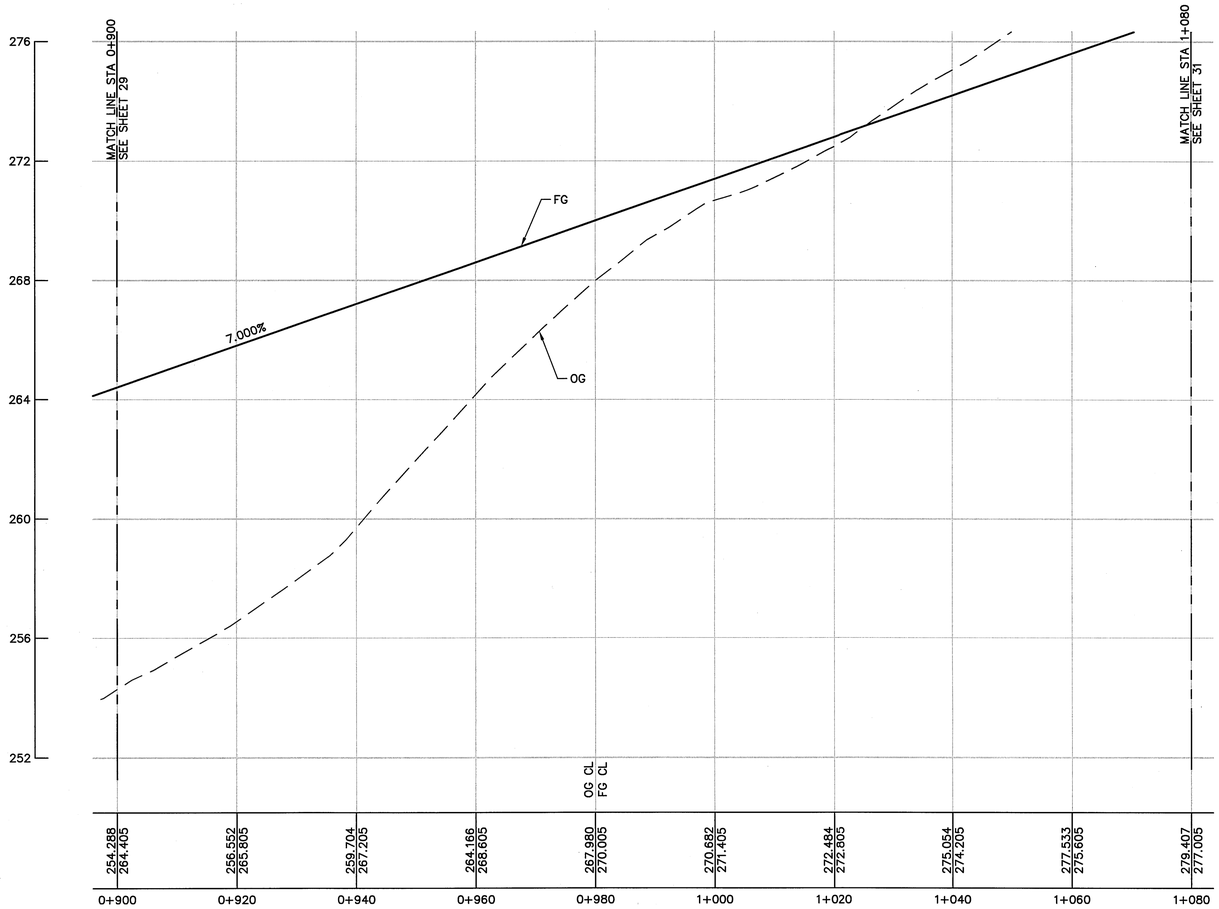
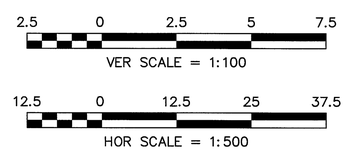


PROFILE
HOR 1:500
VER 1:100

V LINE



ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER
THOMAS J. HILLERLAND
No. C 42200
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

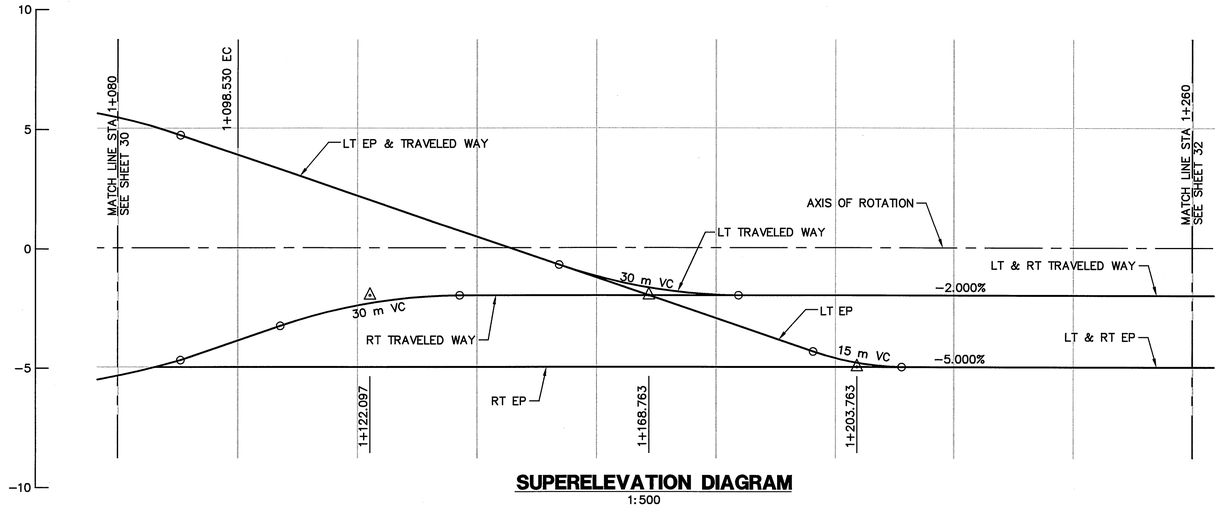
DRAWN: A. BOROVKOVA
DESIGNED: S. HO
CHECKED: T. HILLERLAND
APPROVED: B. ZADNI
APPROVAL RECOMMENDED: STANLEY W. FUNG
REVIEWED: ARTHUR G. CARRERA
REVIEWED: JAMES CHU
REVIEWED: BOB
BENCHTEC: Jan Ch

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

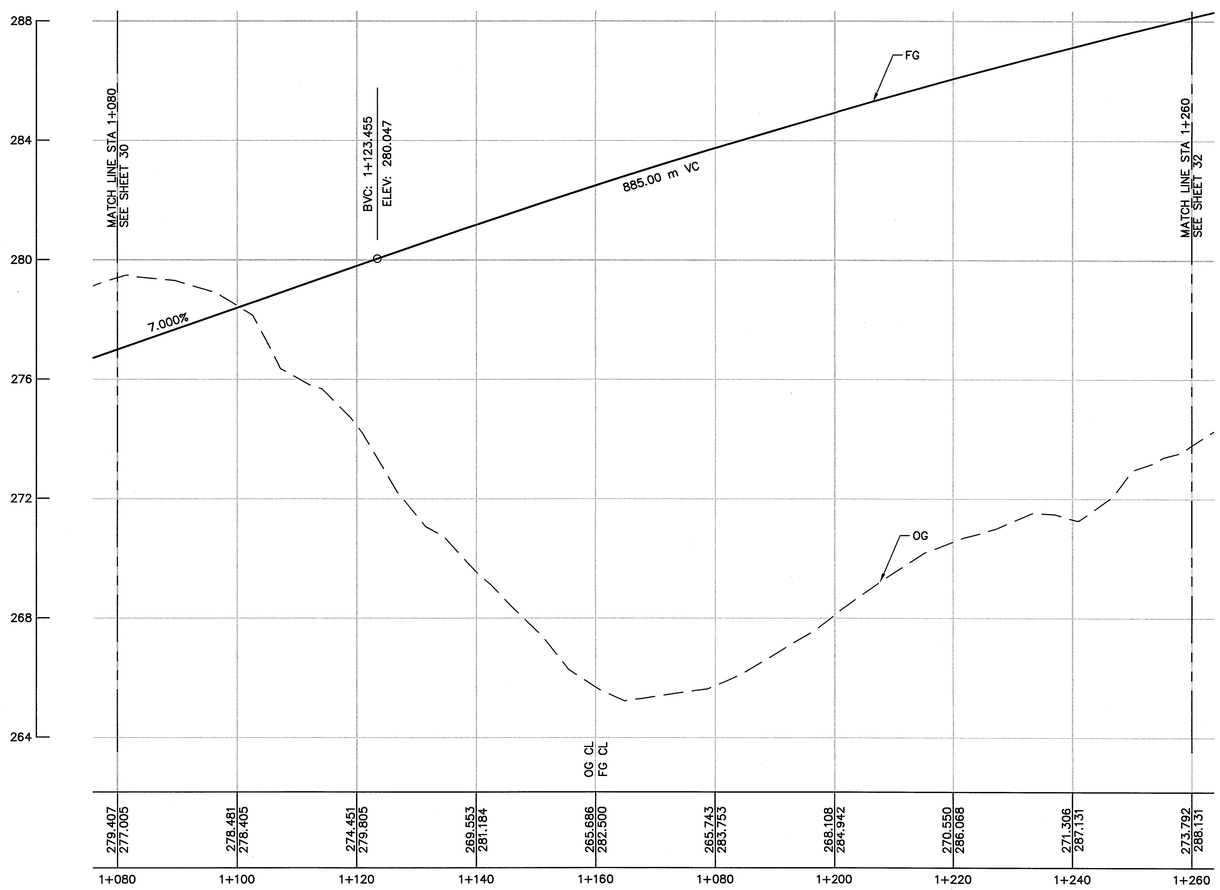
THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
PROFILE & SUPERELEVATION
V LINE

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 30 OF 145
FILE NO. U-357-6



SUPERELEVATION DIAGRAM
1:500



PROFILE
HOR 1:500
VER 1:100

V LINE

2.5 0 2.5 5 7.5
VER SCALE = 1:100

12.5 0 12.5 25 37.5
HOR SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		

REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'VD
1				
2				
3				
4				
5				

REGISTERED PROFESSIONAL ENGINEER
THOMAS J. HILLELAND
No. 54600
Exp. 12-31-08
STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
DESIGNED: S. HO
CHECKED: T. HILLELAND
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

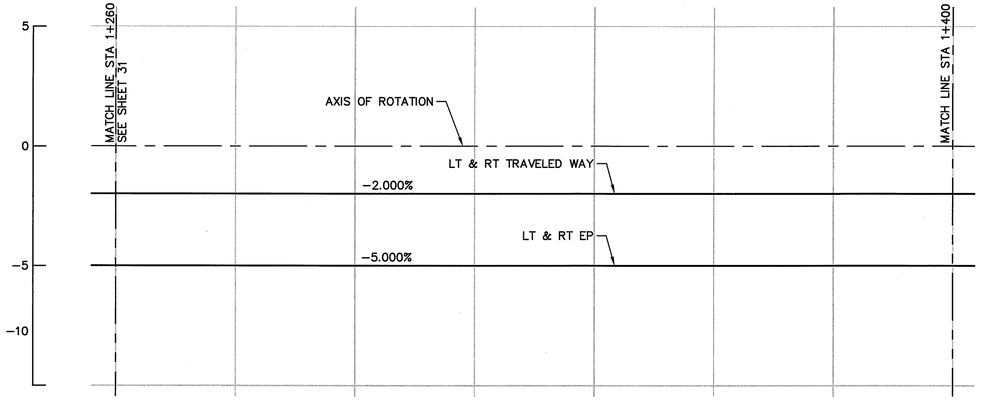
REVIEWED: BOND
REVIEWED: JAMES
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FING

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
PROFILE & SUPERELEVATION
V LINE

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 31 OF 145	
FILE NO. U-357-6	

N:\ROAD\r23265\r-Final Plan - Vasco Road 2007\Moffatt & Nichol\08Jun16 Plans\Profile\623801-Profile.dwg 6-25-08 10:39:33 AM janer

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm



SUPERELEVATION DIAGRAM
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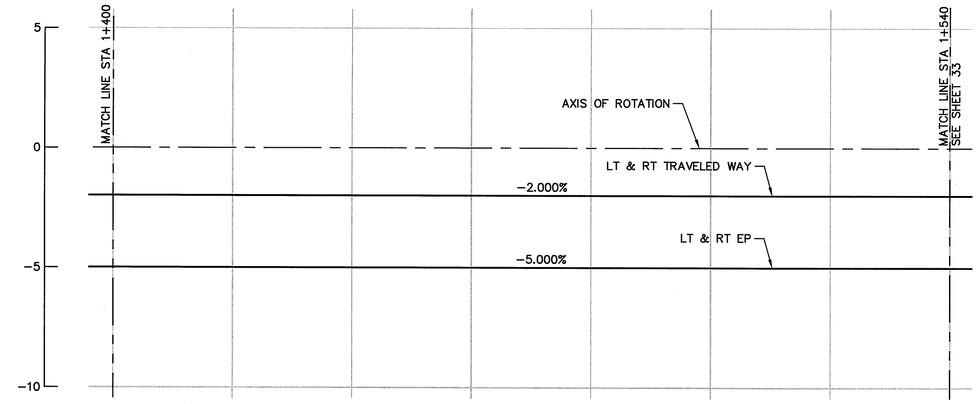
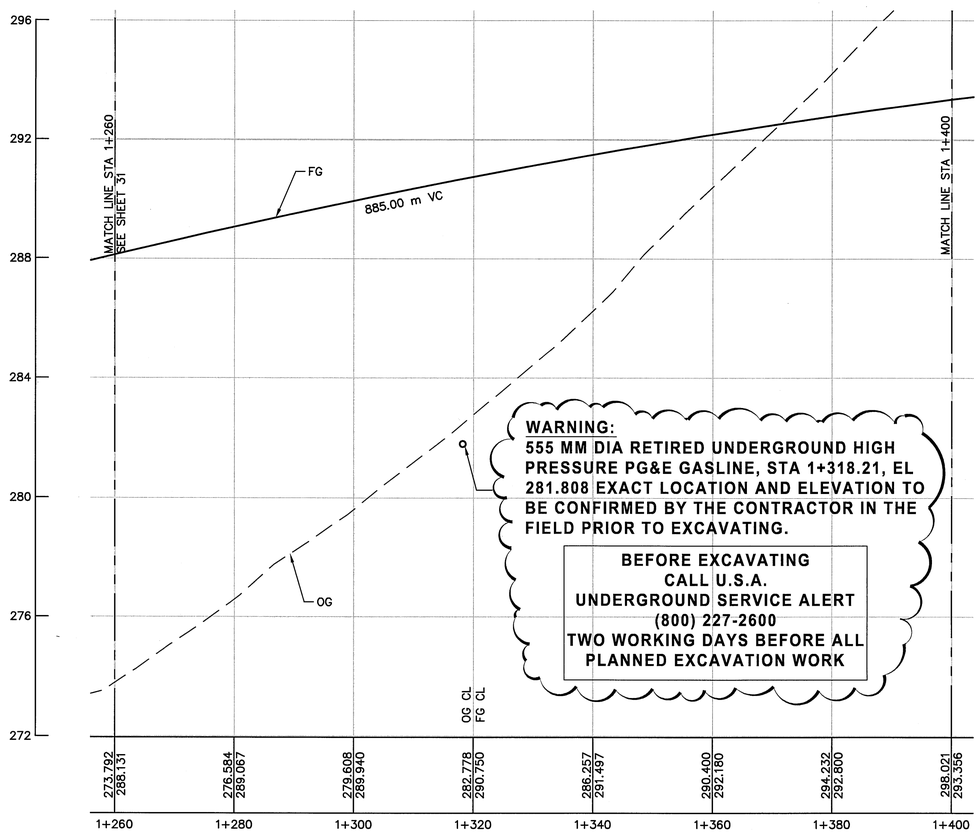


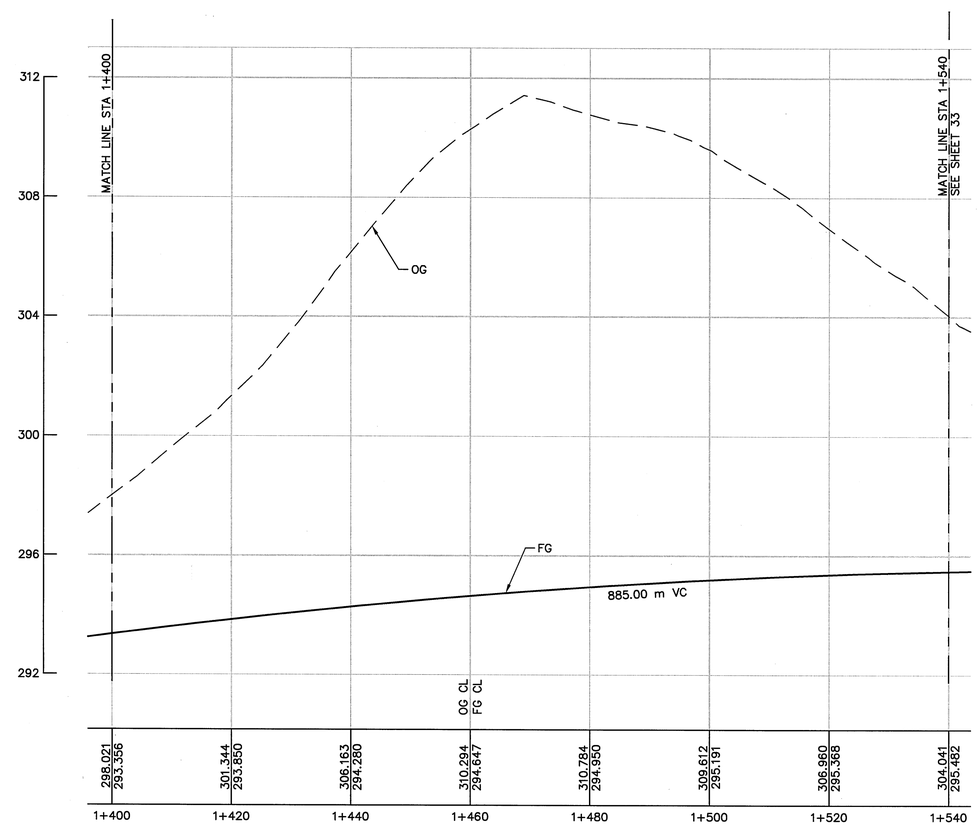
SUPERELEVATION DIAGRAM
1:500



WARNING:
555 MM DIA RETIRED UNDERGROUND HIGH PRESSURE PG&E GASLINE, STA 1+318.21, EL 281.808 EXACT LOCATION AND ELEVATION TO BE CONFIRMED BY THE CONTRACTOR IN THE FIELD PRIOR TO EXCAVATING.

BEFORE EXCAVATING
CALL U.S.A.
UNDERGROUND SERVICE ALERT
(800) 227-2600
TWO WORKING DAYS BEFORE ALL PLANNED EXCAVATION WORK

PROFILE
HOR 1:500
VER 1:100



PROFILE
HOR 1:500
VER 1:100

V LINE

2.5 0 2.5 5 7.5
VER SCALE = 1:100

12.5 0 12.5 25 37.5
HOR SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
2				
3				
4				
5				

REGISTERED PROFESSIONAL ENGINEER THOMAS E. HILLERLAND No. 35400 EXP. 12-31-08 STATE OF CALIFORNIA CIVIL
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROMKOVA
CHECKED: T. HILLERLAND
DESIGNED: S. HO
APPROVED: B. ZASNI

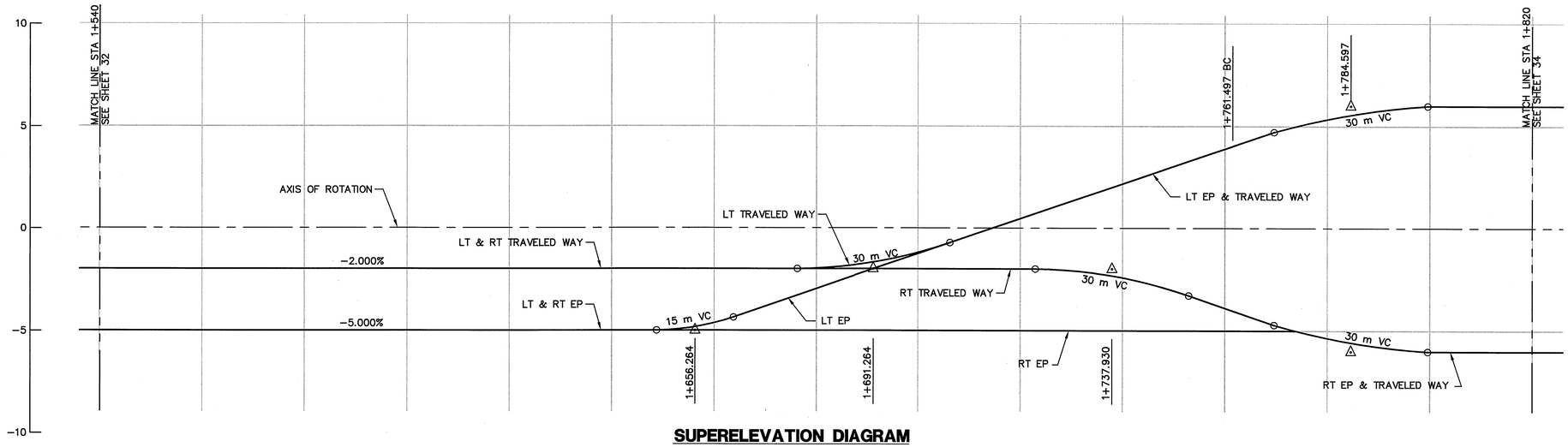
REVIEWED: BOND LAI
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
PROFILE & SUPERELEVATION
V LINE

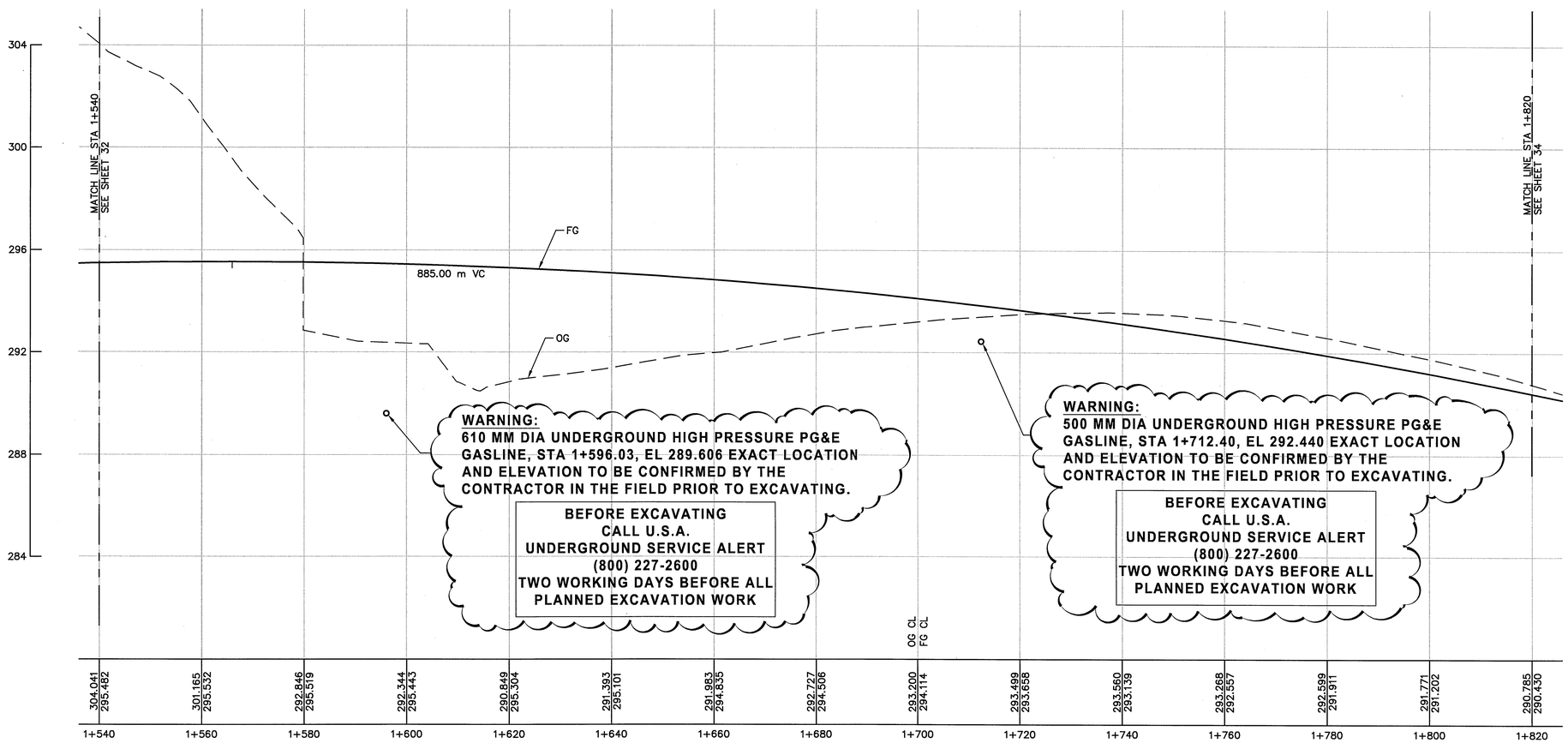
DATE: JAN 2008
SCALE: AS SHOWN
WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 32 OF 145
FILE NO. U-357-6

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		



SUPERELEVATION DIAGRAM

1:500



PROFILE

HOR 1:500
VER 1:100

V LINE

12.5 0 12.5 25 37.5
HOR SCALE = 1:500

2.5 0 2.5 5 7.5
VER SCALE = 1:100

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS C. HILLERLAND No. 54200 Exp. 31-08 STATE OF CALIFORNIA CIVIL

08-23-09

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238
Moffatt & Nichol

DRAWN: A. BOROVKOVA
DESIGNED: S. HO
CHECKED: T. HILLERLAND
APPROVED: B. ZADNI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND DEPUTY
RECOMMENDED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

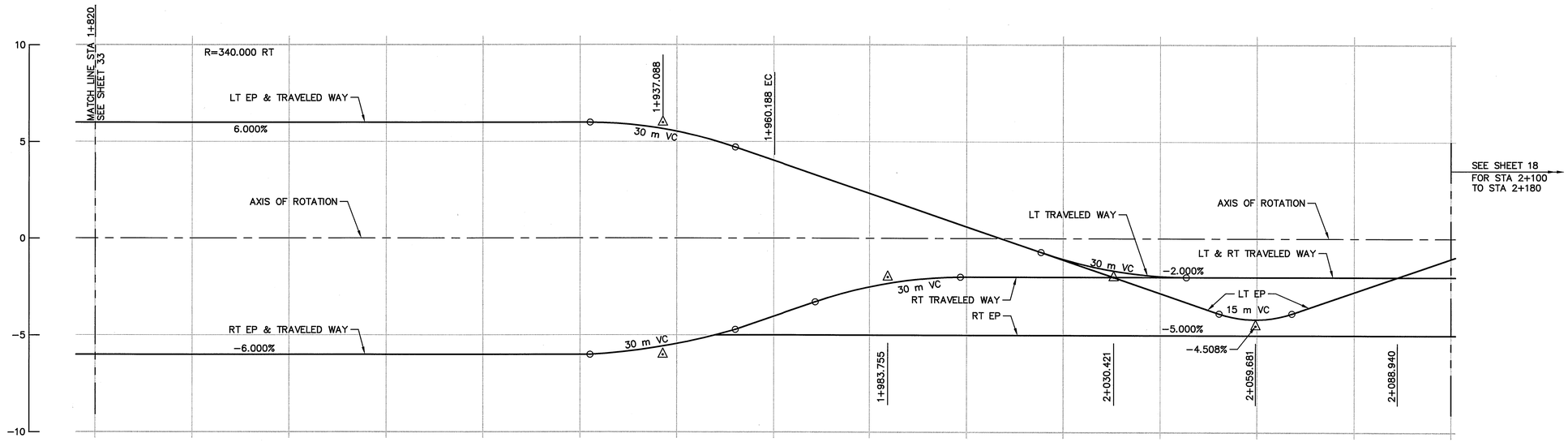
THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
PROFILE & SUPERELEVATION
V LINE

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 33 OF 145
FILE NO. U-357-6

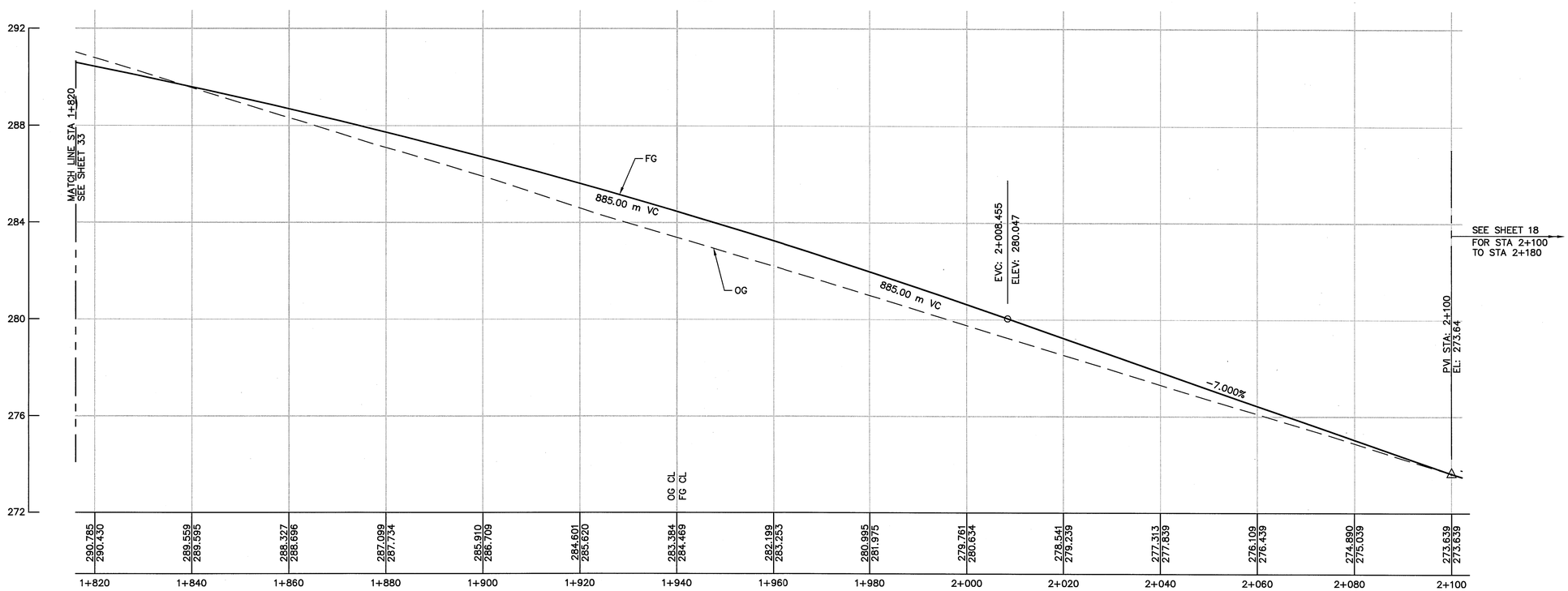
	REVIEWED BY:	DATE:
CONSTRUCTION		
MAINTENANCE		
REAL ESTATE		

	REVIEWED BY:	DATE:
SURVEY		
TRAFFIC		
ENVIRONMENTAL		



SUPERELEVATION DIAGRAM

1:500



PROFILE

HOR 1:500
VER 1:100

V LINE

2.5 0 2.5 5 7.5

VER SCALE = 1:100

12.5 0 12.5 25 37.5

HOR SCALE = 1:500

ALAMEDA COUNTY Metric

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS

0 50 mm

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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3				
4				
5				

REGISTERED PROFESSIONAL ENGINEER THOMAS HILLERLAND No. 45200 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA

6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BORDVAKOVA
CHECKED: T. HILLERLAND
DESIGNED: S. HO
APPROVED: B. ZADNI
REVIEWED: ARTHUR G. CARRERA
REVIEWED: JAMES CRU
APPROVAL RECOMMENDED: STANLEY W. FUNG

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
PROFILE & SUPERELEVATION
V LINE

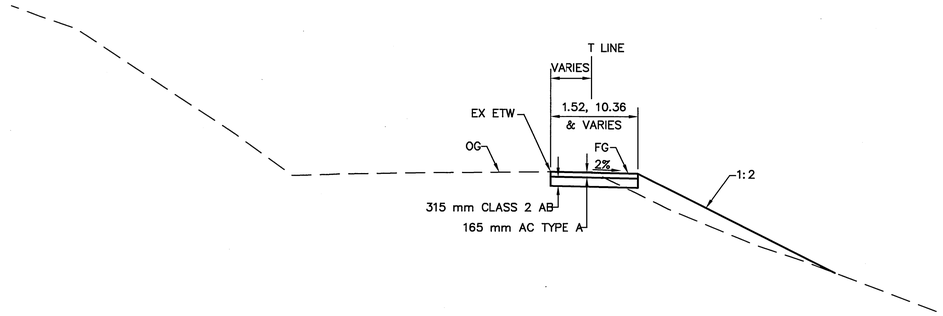
DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265

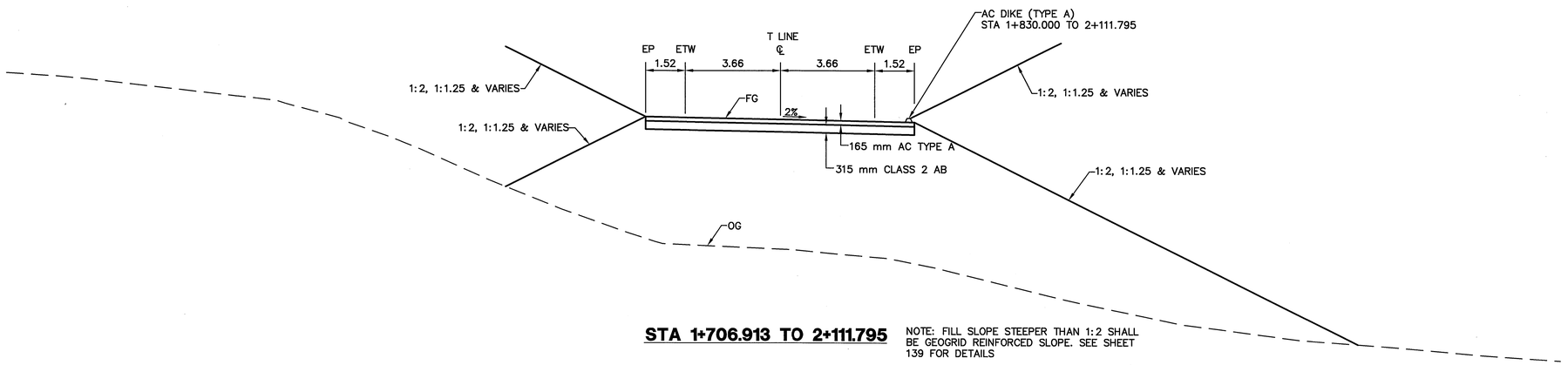
SPECIFICATION NO. 1903

SHEET NO. 34 OF 145

FILE NO. U-357-6

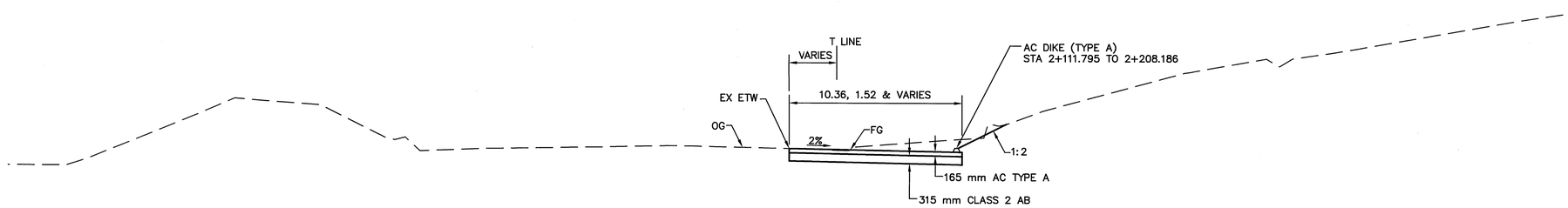


STA 1+665.444 TO STA 1+706.913



STA 1+706.913 TO 2+111.795

NOTE: FILL SLOPE STEEPER THAN 1:2 SHALL BE GEOGRID REINFORCED SLOPE. SEE SHEET 139 FOR DETAILS



STA 2+111.795 TO 2+208.186

T LINE

2.5 0 2.5 5 7.5

SCALE = 1:100

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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REGISTERED PROFESSIONAL ENGINEER THOMAS R. HILLESLAND C 64200 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA
6-16-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238
Moffatt & Nichol

DRAWN: N. KOBAYASHI
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND NG
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY BYPASS ROADWAY
TYPICAL SECTIONS

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265

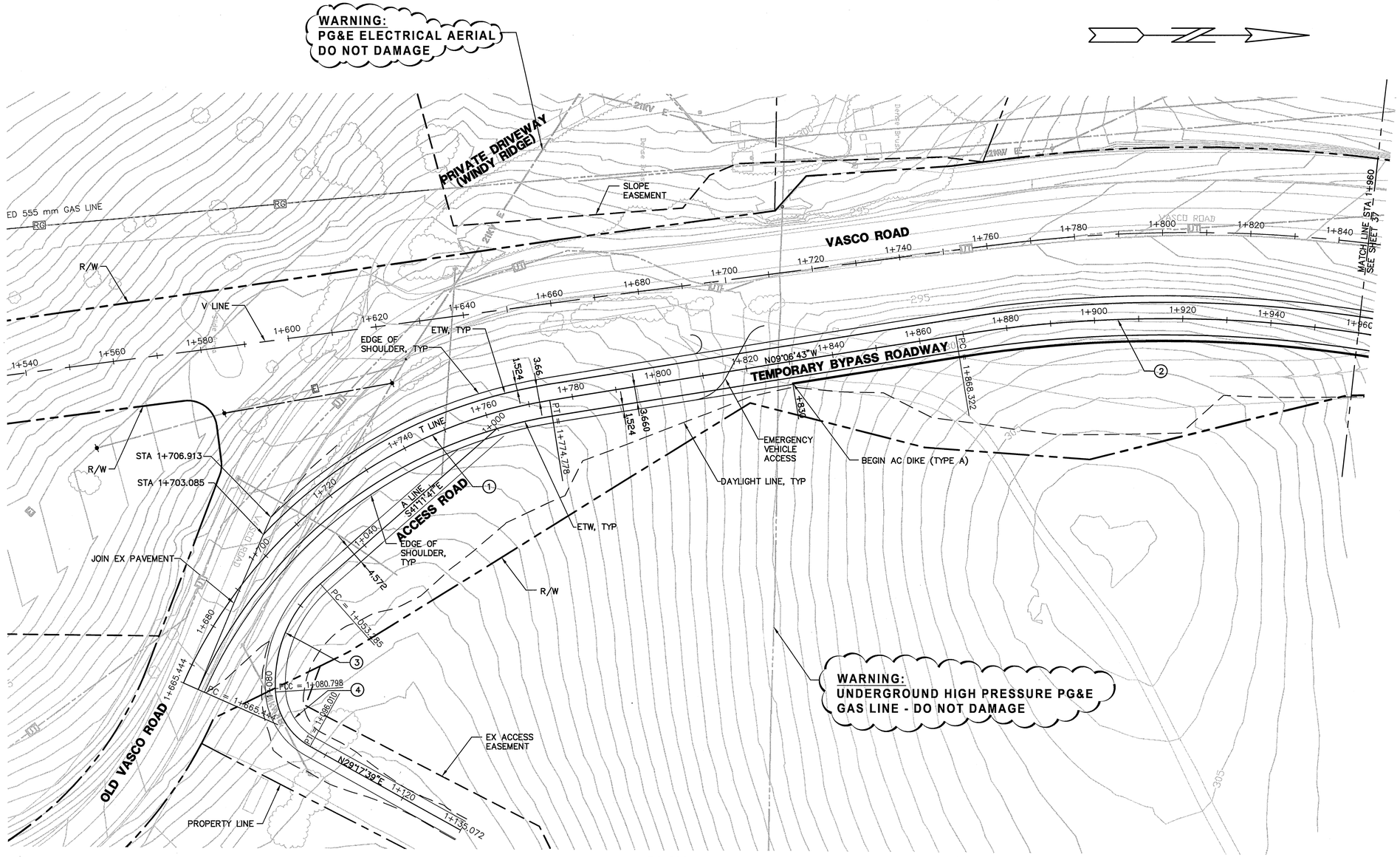
SPECIFICATION NO. 1903

SHEET NO. 35 OF 145

FILE NO. U-357-6

ALAMEDA COUNTY Metric

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



PLAN
1:500

CURVE DATA TABLE

	RADIUS	DELTA	TANGENT	LENGTH	PI NORTHING/EASTING
1	110.000	56°56'56"	59.662	109.334	N 640591.460 E 1891104.360
2	300.000	18°51'52"	49.838	98.775	N 640791.942 E 1891072.204
3	30.000	52°32'44"	14.809	27.513	N 640587.153 E 1891146.175
4	15.300	56°57'56"	8.301	15.212	N 640588.661 E 1891169.237

12.5 0 12.5 25 37.5
SCALE = 1:500

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
A				
A				
A				
A				
A				

REGISTERED PROFESSIONAL ENGINEER THOMAS F. HILLERLAND C 24000 EXP. 12-31-08 CIVIL STATE OF CALIFORNIA
08-12-6

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238
Moffatt & Nichol

DRAWN: A. BORDAKOVA
DESIGNED: S. HO
CHECKED: T. HILLERLAND
APPROVED: B. ZAEN
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG
REVIEWED: BOND YIP
REVIEWED: JAMES CHU
RELEASED:

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

TEMPORARY BYPASS ROADWAY AND ACCESS ROAD PLAN

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 36 OF 145
FILE NO. U-357-6

ALAMEDA COUNTY Metric

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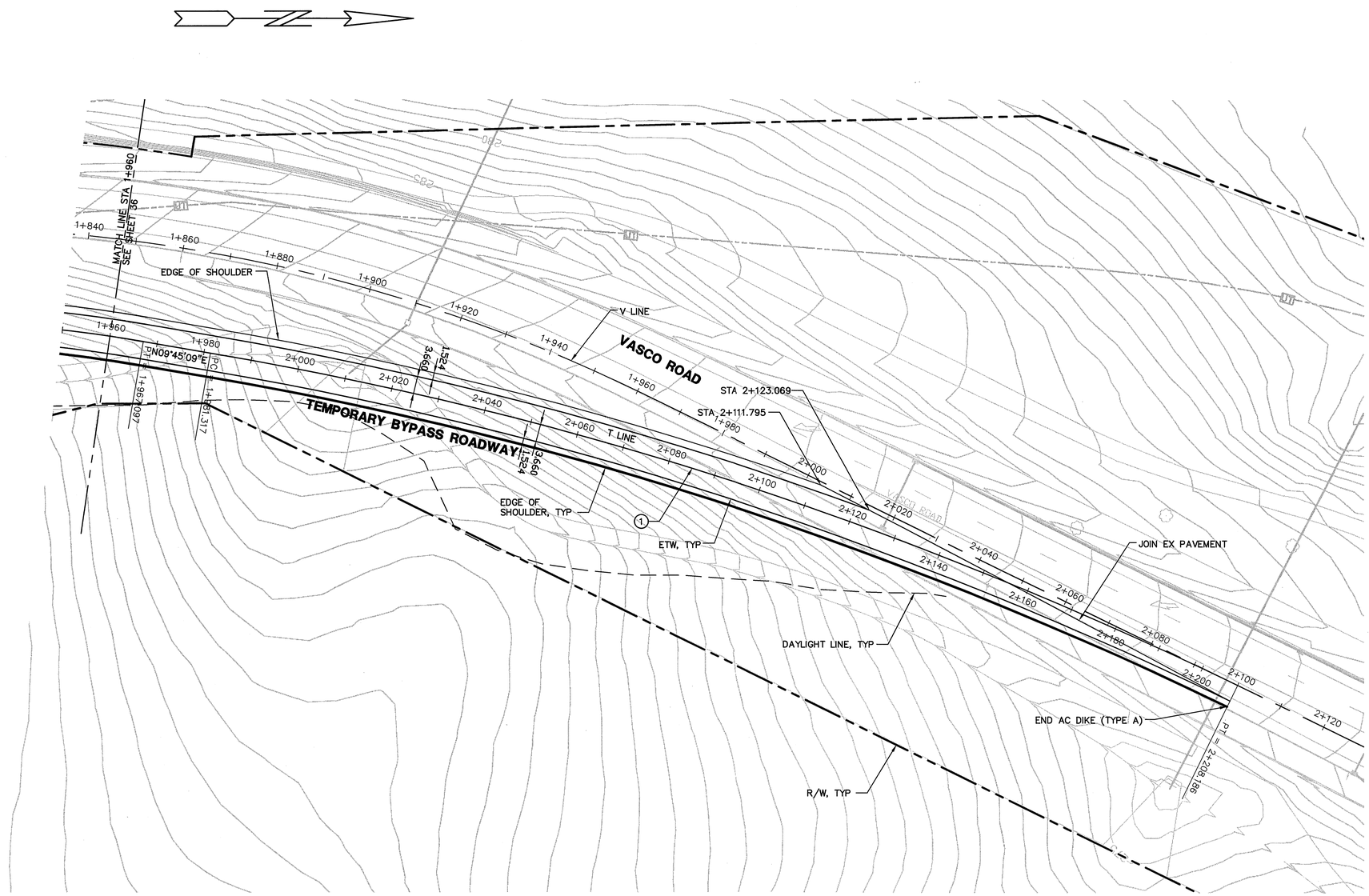
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		



PLAN
1:500

CURVE DATA TABLE

	RADIUS	DELTA	TANGENT	LENGTH	PI NORTHING/EASTING
1	800.000	16°14'54"	114.201	226.869	N 640967.625 E 1891102.400

12.5 0 12.5 25 37.5
SCALE = 1:500

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D

REGISTERED PROFESSIONAL ENGINEER THOMAS C. HILLERLAND No. C 42200 Exp. 12-31-09 STATE OF CALIFORNIA CIVIL
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
CHECKED: T. HILLERLAND
DESIGNED: S. HO
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REVIEWED: BOB FRIEDMAN
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

TEMPORARY BYPASS ROADWAY AND ACCESS ROAD PLAN

DATE: JAN 2008
SCALE: AS SHOWN
WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 37 OF 145
FILE NO. U-357-6

ALAMEDA COUNTY Metric

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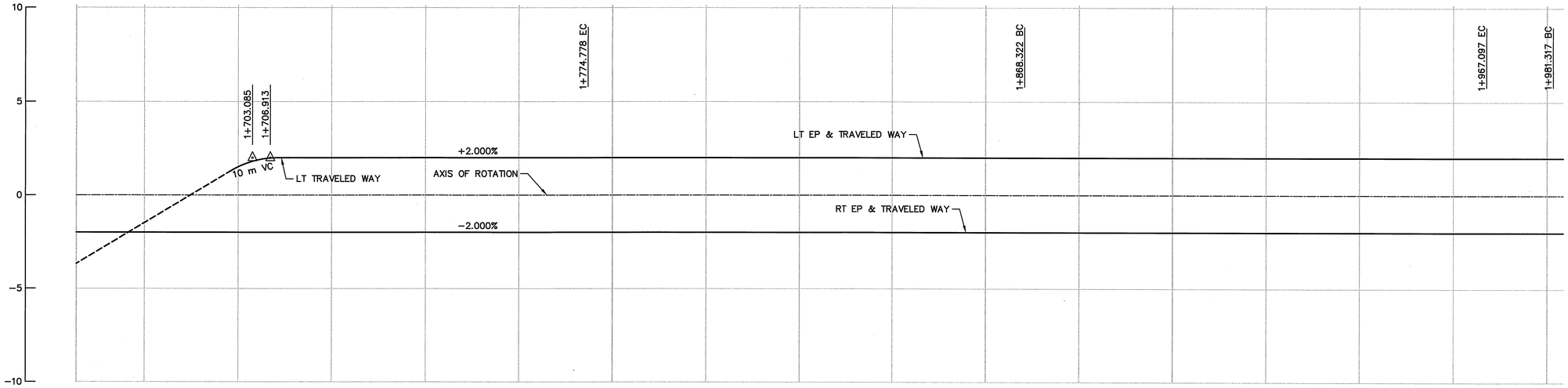
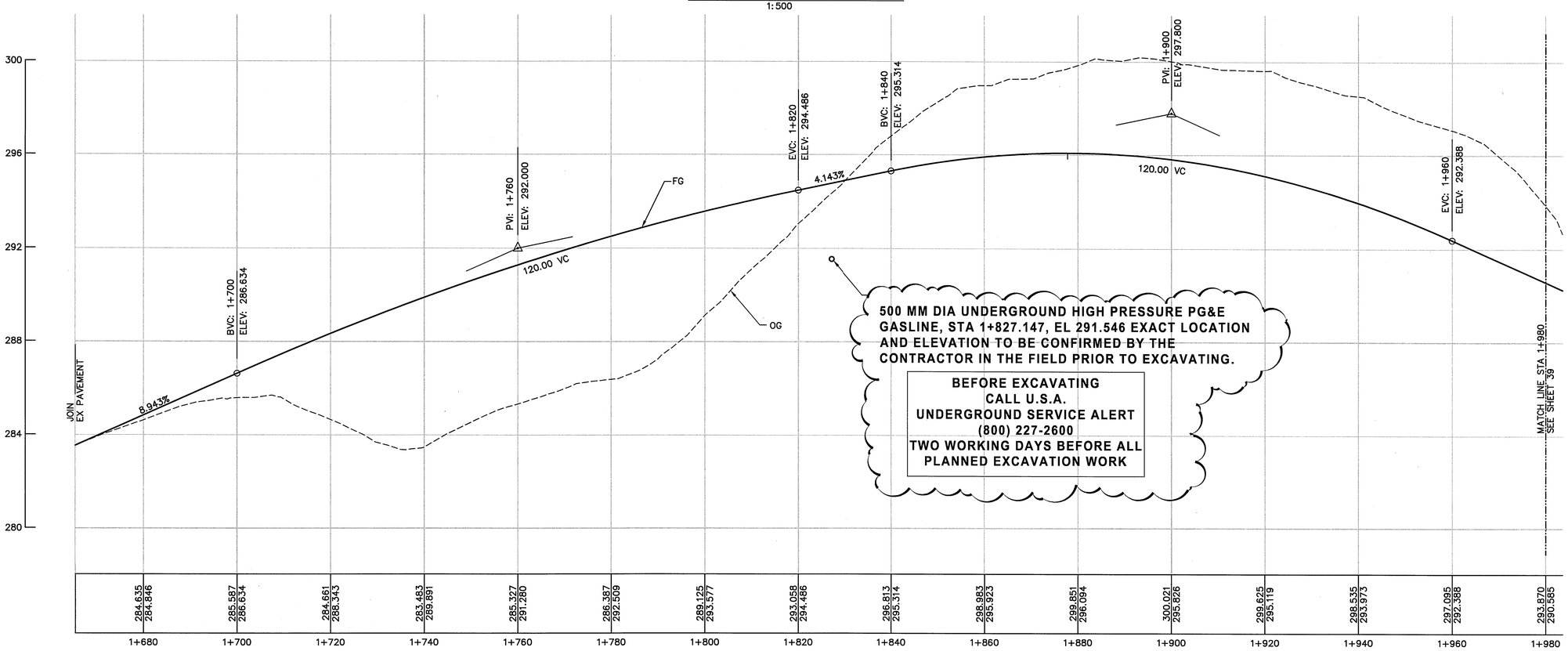


SUPERELEVATION DIAGRAM

1:500



500 MM DIA UNDERGROUND HIGH PRESSURE PG&E GASLINE, STA 1+827.147, EL 291.546 EXACT LOCATION AND ELEVATION TO BE CONFIRMED BY THE CONTRACTOR IN THE FIELD PRIOR TO EXCAVATING.

BEFORE EXCAVATING
CALL U.S.A.
UNDERGROUND SERVICE ALERT
(800) 227-2600
TWO WORKING DAYS BEFORE ALL
PLANNED EXCAVATION WORK

PROFILE

HOR 1:500
VER 1:100

T LINE

2.5 0 2.5 5 7.5
VER SCALE = 1:100

12.5 0 12.5 25 37.5
HOR SCALE = 1:500

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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4				
5				

REGISTERED PROFESSIONAL ENGINEER THOMAS T. HILLESLAND No. C 34200 CIVIL STATE OF CALIFORNIA
6-25-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

Moffatt & Nichol

CHECKED: T. HILLESLAND
APPROVED: B. ZAENI
DRAWN: A. BOROVKOVA
DESIGNED: S. HO
REVIEWED: BOND JOE
REVIEWED: JAMES CHO
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY BYPASS ROADWAY
PROFILE & SUPERELEVATION
T LINE

DATE: JAN 2008
SCALE: AS SHOWN
WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 38 OF 145
FILE NO. U-357-6

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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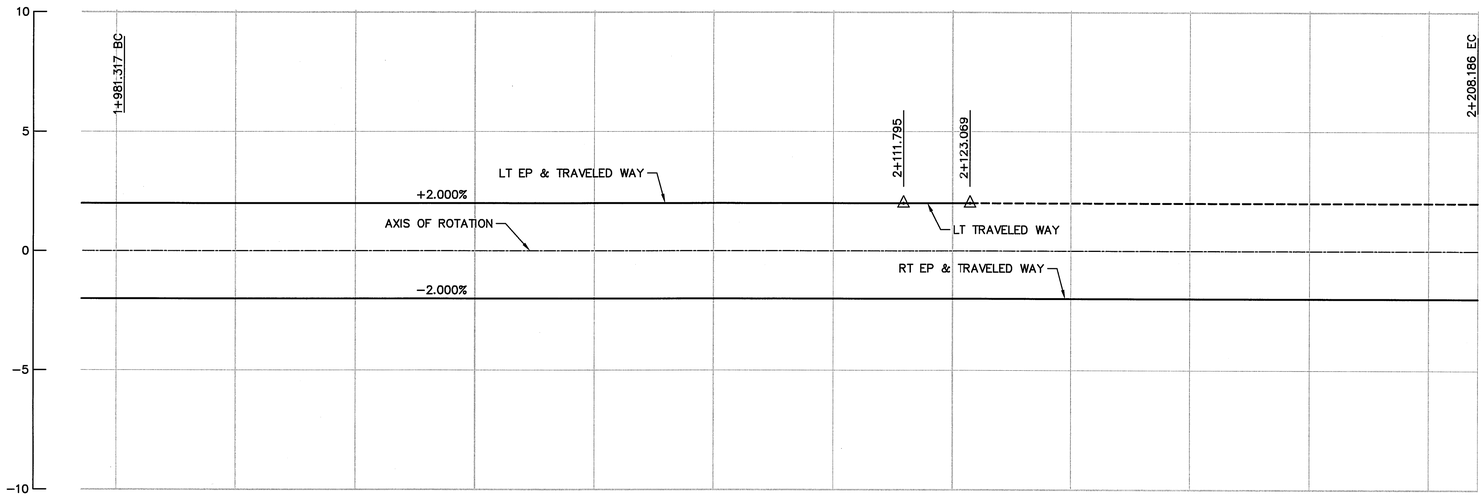
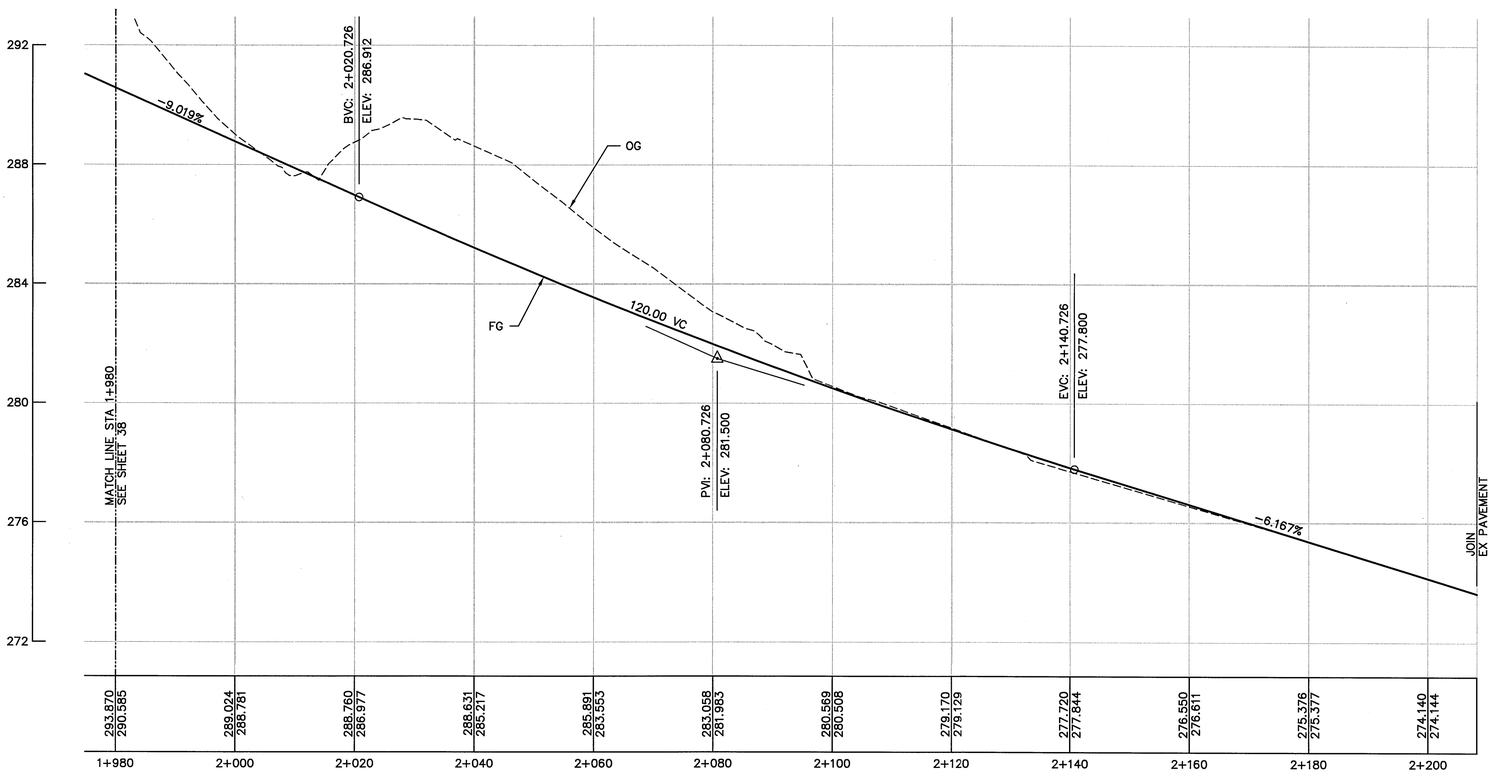


SUPERELEVATION DIAGRAM
1:500



PROFILE
HOR 1:500
VER 1:100

T LINE

2.5 0 2.5 5 7.5
VER SCALE = 1:100

12.5 0 12.5 25 37.5
HOR SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

CONSTRUCTION	REVIEWED BY:	DATE:	SURVEY	REVIEWED BY:	DATE:
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
5				
4				
3				
2				
1				

REGISTERED PROFESSIONAL ENGINEER THOMAS E. HILLES AND No. 32-2-09 CIVIL STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

Moffatt & Nichol

DRAWN: A. BORONKIVICH
DESIGNED: S. HO
CHECKED: T. HILLES, AND
APPROVED: B. ZAEN

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY BYPASS ROADWAY
PROFILE & SUPERELEVATION
T LINE

REVIEWED: BOND TRE
REVIEWED: JAMES CHU
REVIEWED: ARTHUR R. CARRIGAN
APPROVAL RECOMMENDED: STANLEY W. FUNG

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 39 OF 145	
FILE NO. U-357-6	

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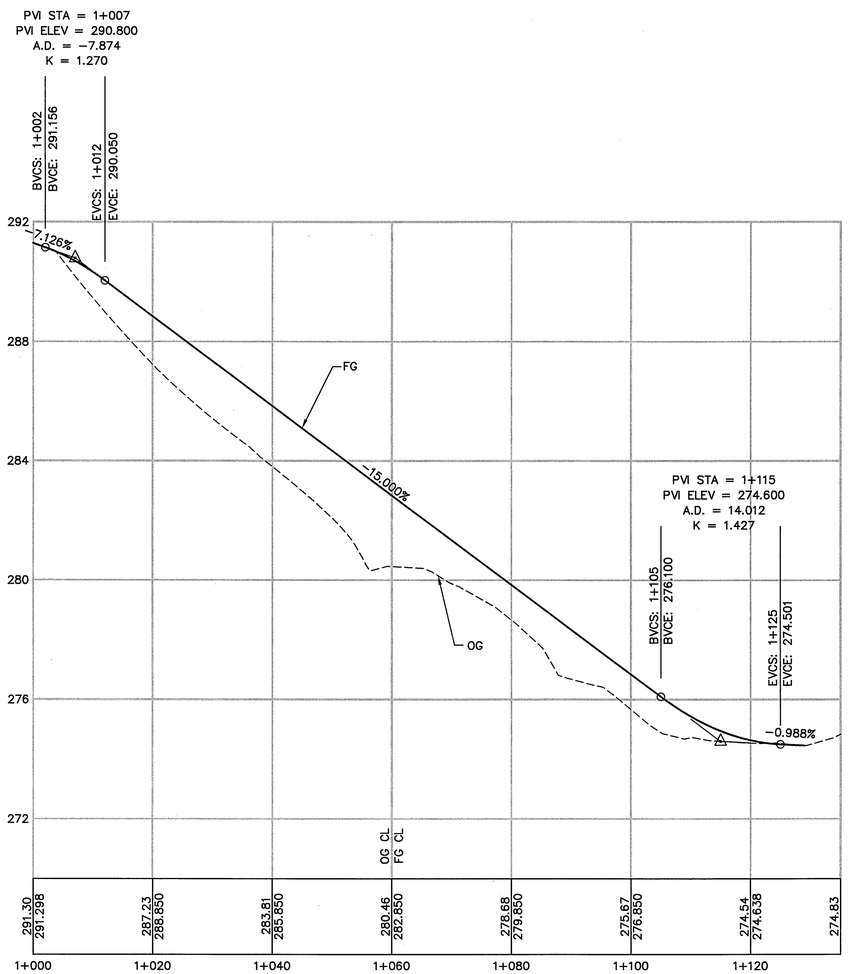
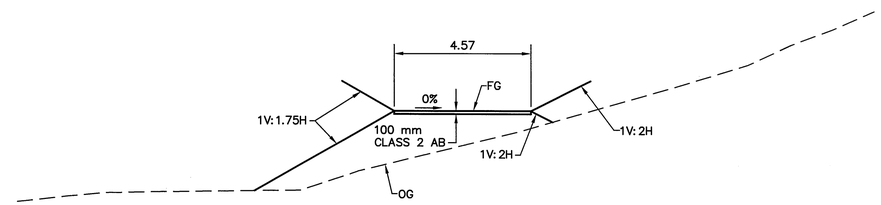


PROFILE
HOR 1:500
VER 1:100

A LINE



TYPICAL SECTION
1:100

NOTE: FILL SLOPE STEEPER THAN 1:2 SHALL BE GEOGRID REINFORCED SLOPE. SEE SHEET 139 FOR DETAILS.

A LINE

2.5 0 2.5 5 7.5
SCALE = 1:100

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
2				
3				
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5				

REGISTERED PROFESSIONAL ENGINEER THOMAS J. HILLERLAND No. C-45400 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

Moffatt & Nichol

DRAWN: A. BOROVIKOVA
DESIGNED: S. HO
CHECKED: T. HILLERLAND
APPROVED: B. ZASNI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOB FISH
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

ACCESS ROAD
PROFILE AND TYPICAL SECTIONS

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 40 OF 145
FILE NO. U-357-6

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		

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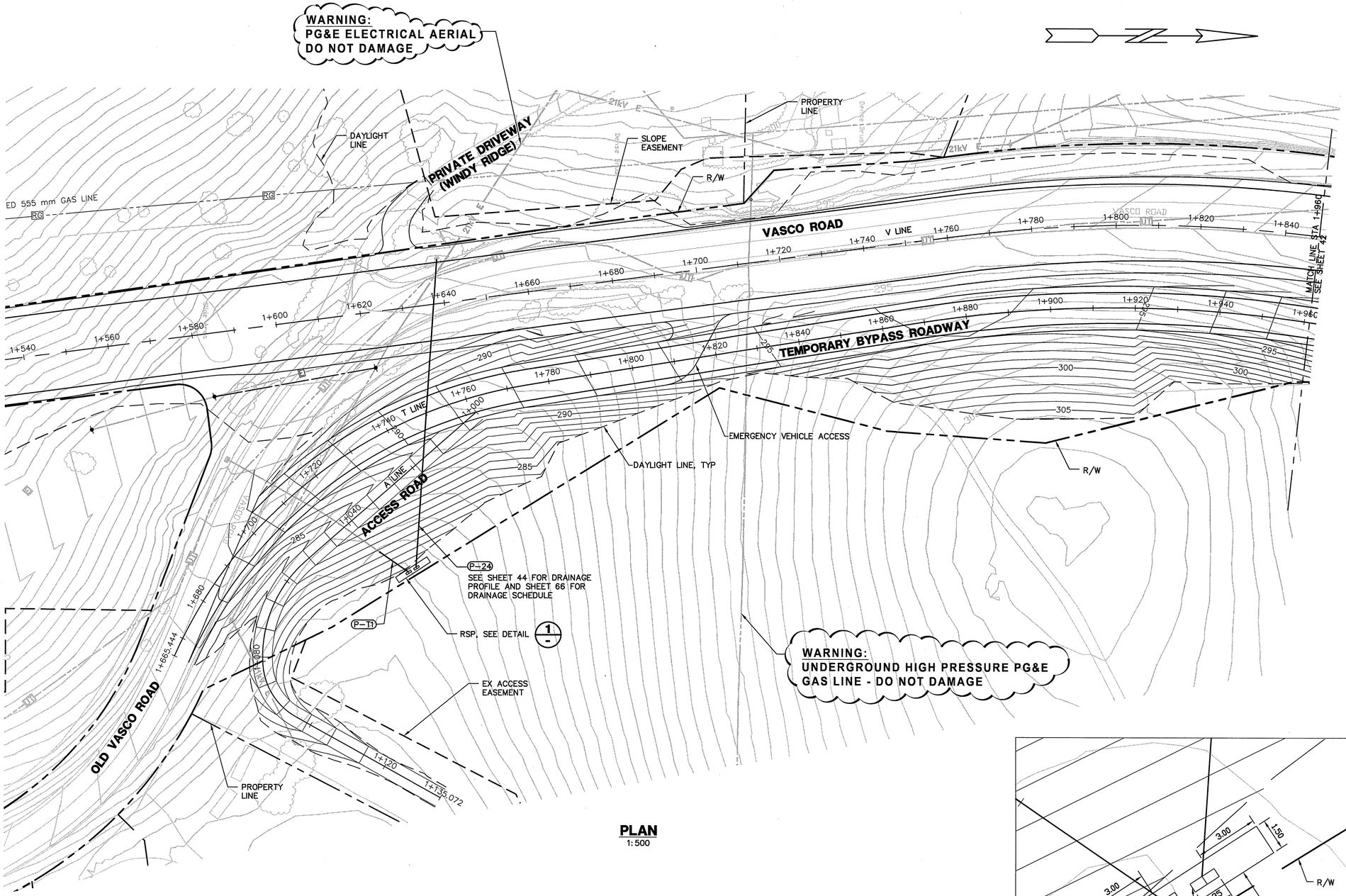
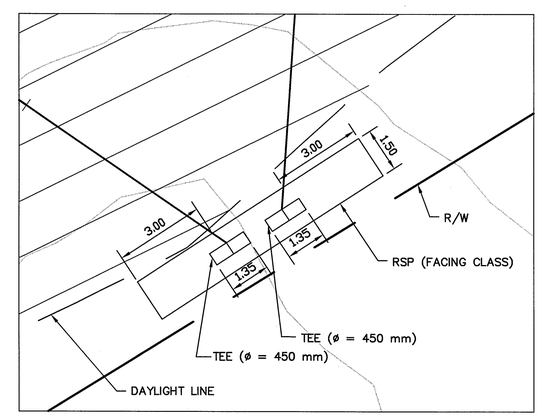


PLAN
1:500



RSP DETAIL 1
SCALE: 1:100

12.5 0 12.5 25 37.5
SCALE = 1:500

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'D
1				
2				
3				
4				
5				
6				

REGISTERED PROFESSIONAL ENGINEER THOMAS HILLESLAND C 54200 12-31-09 CIVIL STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BORDVIKOVA
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZASNI

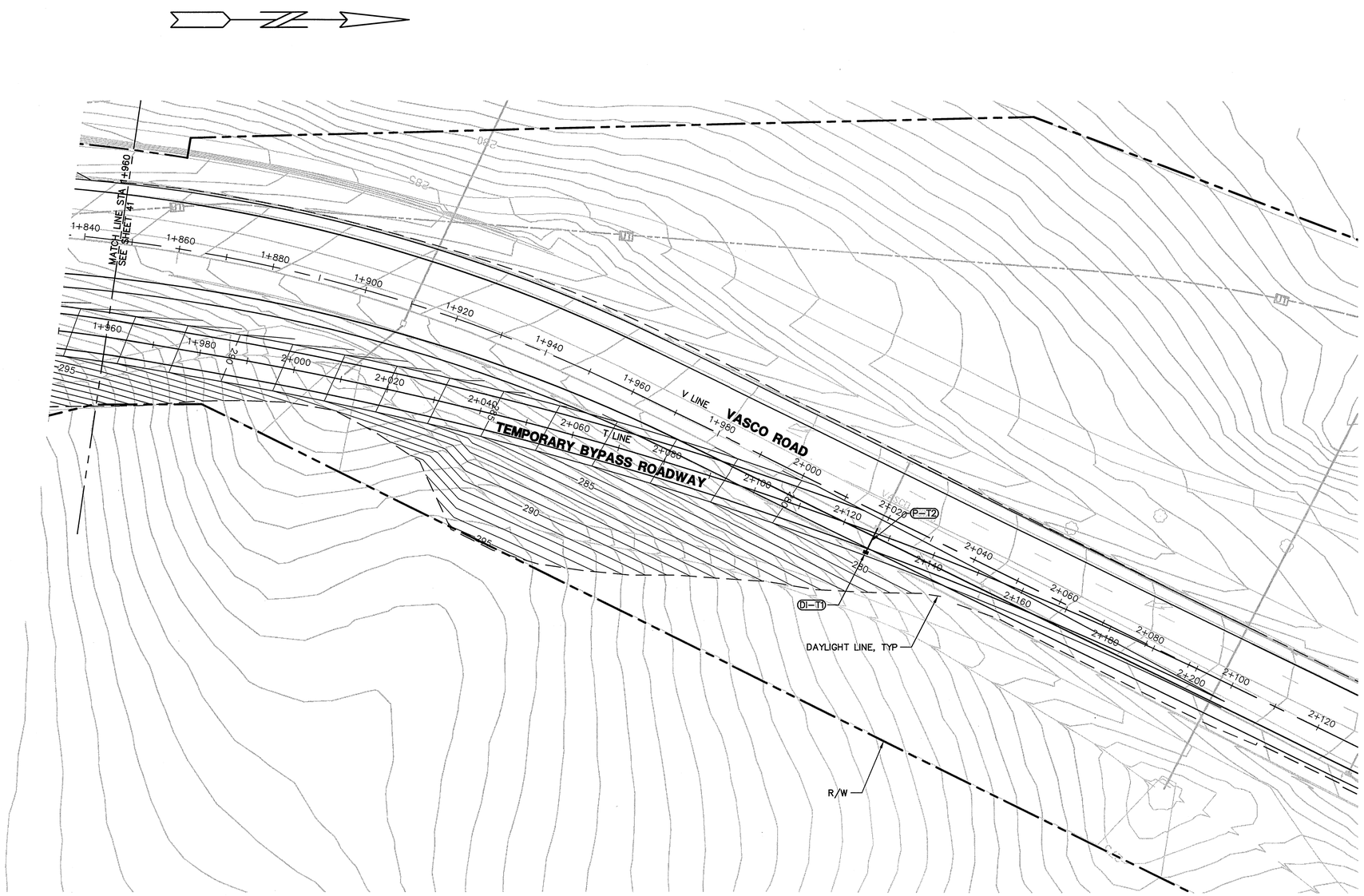
COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BRIAN RIF
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY BYPASS ROADWAY
DRAINAGE AND GRADING
PLANS

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 41 OF 145
FILE NO. U-357-6



PLAN
1:500

CURVE DATA TABLE

	RADIUS	DELTA	TANGENT	LENGTH	PI NORTHING/EASTING
1	800.000	16°14'54"	114.201	226.869	N 640967.625 E 1891102.400

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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REGISTERED PROFESSIONAL ENGINEER THOMAS C. HILLERSLAND No. 54200 Exp. 12-31-09 CIVIL AND STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
CHECKED: T. HILLERSLAND
DESIGNED: S. HO
APPROVED: B. ZASNI

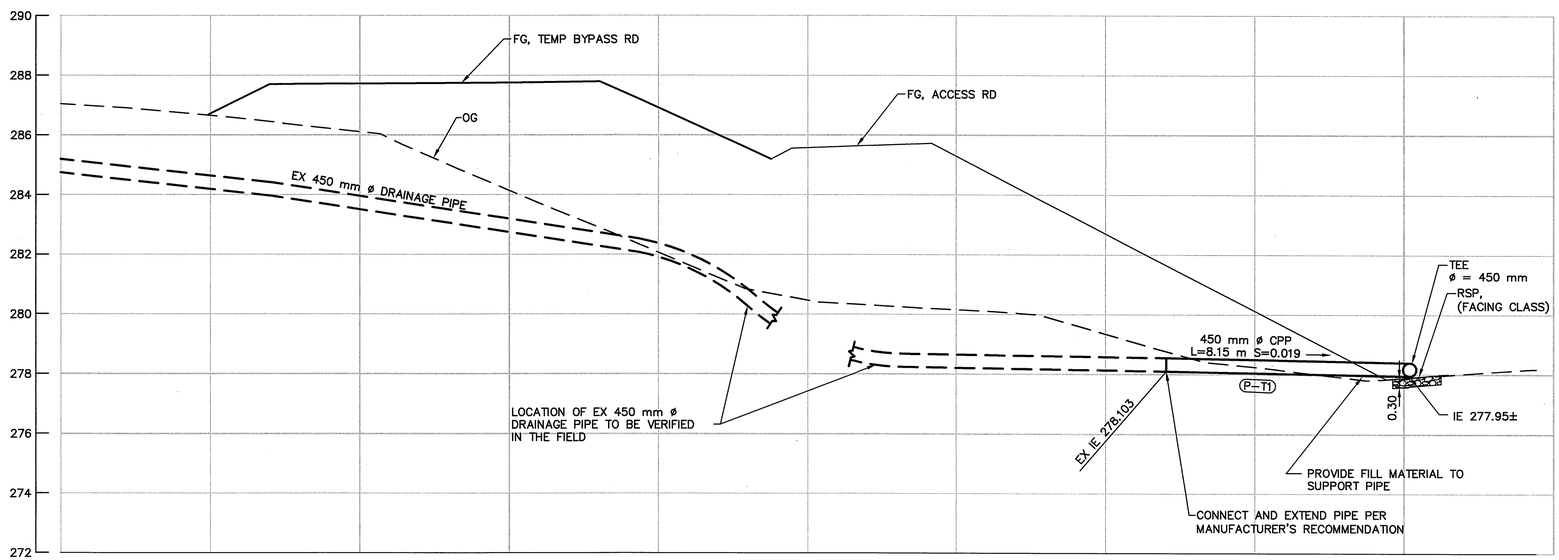
COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOARD 16-
REVIEWED: JAMES CH
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY BYPASS ROADWAY
DRAINAGE AND GRADING
PLANS

DATE: JAN 2008
SCALE: AS SHOWN
WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 42 OF 145
FILE NO. U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



DRAINAGE PROFILE P-T1 (T LINE STA 1+712.69)

HOR 1:100
VER 1:100

2.54 0 2.54 5.08 7.62

SCALE = 1:100

ALAMEDA COUNTY Metric

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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REGISTERED PROFESSIONAL ENGINEER THOMAS L. 3 3 3 54000 12-31-08 CIVIL STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

Moffatt & Nichol

DRAWN: N. KOBAYASHI
DESIGNED: S. HO
CHECKED: T. MILLESLAND
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND NO.
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARBERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY BYPASS ROADWAY
DRAINAGE PROFILE

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 43 OF 145

FILE NO. U-357-6

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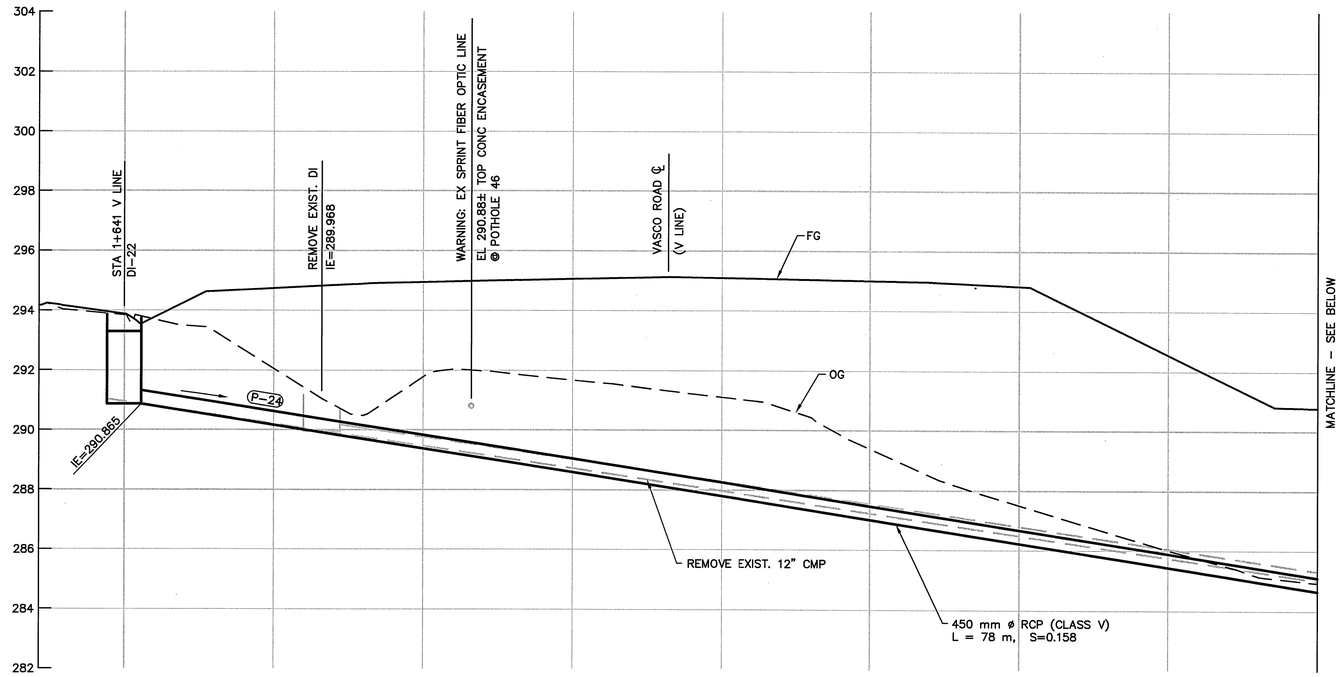
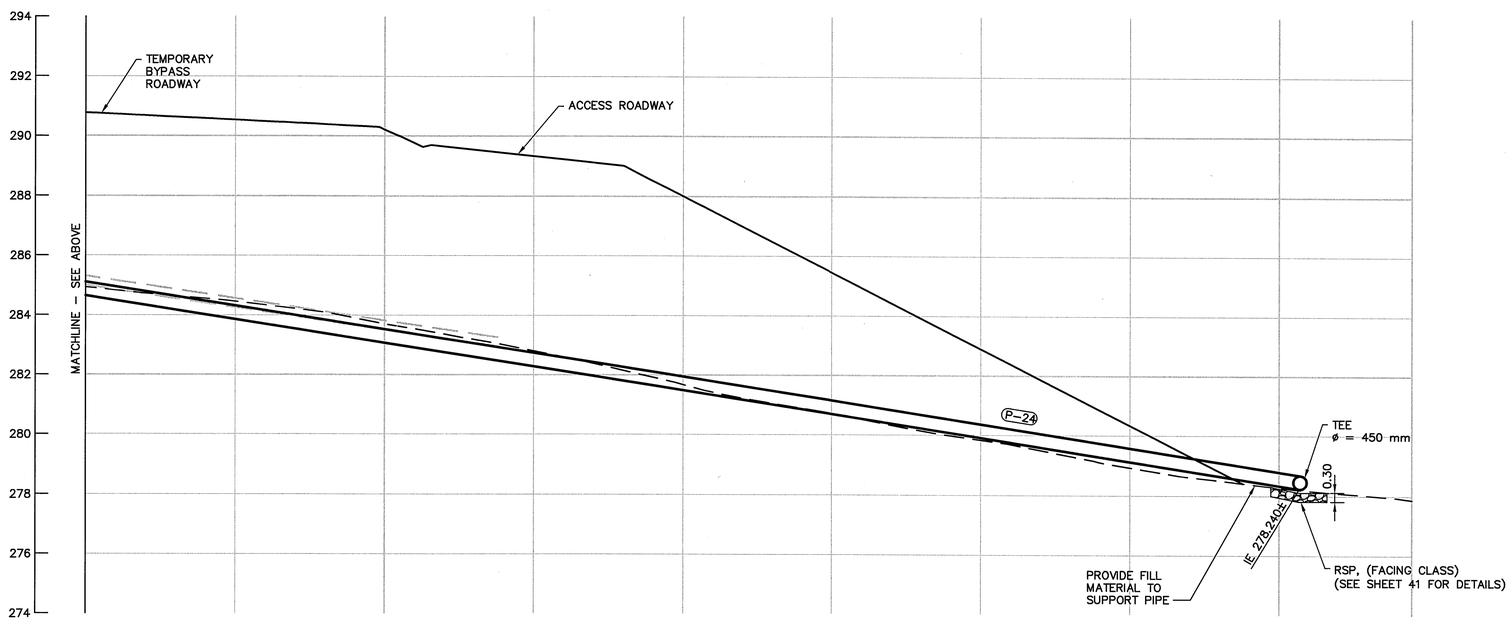
	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		





DRAINAGE PROFILE P-24 (T LINE STA 1+750.05)

HOR 1:100
VER 1:100

2.54 0 2.54 5.08 7.62
SCALE = 1:100

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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2				
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REGISTERED PROFESSIONAL ENGINEER THOMAS E. HILLESLAND CIVIL STATE OF CALIFORNIA
Exp. 12-31-09
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: N. KOBAYASHI
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZASNI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: ARTHUR G. CARRERA
REVIEWED: JAMES CHU
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY BYPASS ROADWAY
DRAINAGE PROFILE

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 44 OF 145
FILE NO. U-357-6

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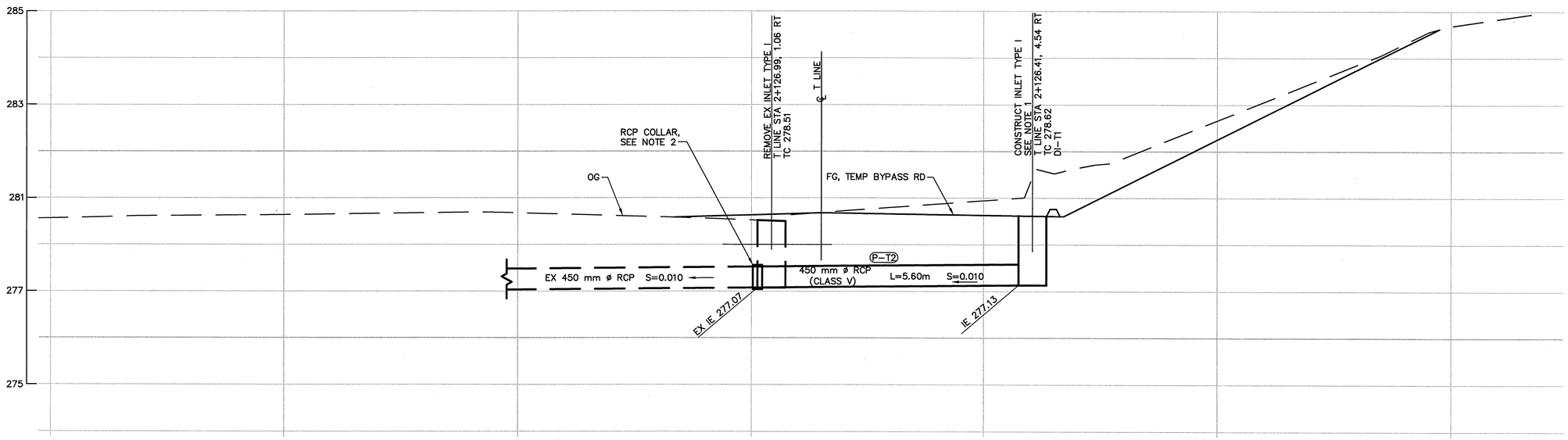

DRAINAGE PROFILE P-T2 (T LINE STA 2+126.88)

HOR 1:50
VER 1:50

NOTES:

1. FOR INLET TYPE I, SEE COUNTY METRIC DESIGN GUIDELINE DG-311.
2. FOR RCP COLLAR, SEE COUNTY METRIC DESIGN GUIDELINE DG-504.

1.25 0 1.25 2.50 3.75

SCALE = 1:50

ALAMEDA COUNTY Metric

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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3				
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5				

REGISTERED PROFESSIONAL ENGINEER THOMAS - TILLEY RCE 45400 EXP. 12-31-08 CIVIL STATE OF CALIFORNIA

6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: N. KOBAYASHI
CHECKED: T. HILLESLAND
DESIGNED: S. HO
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY BYPASS ROADWAY
DRAINAGE PROFILE

REVIEWED: BOND 16
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 45 OF 145
FILE NO. U-357-6

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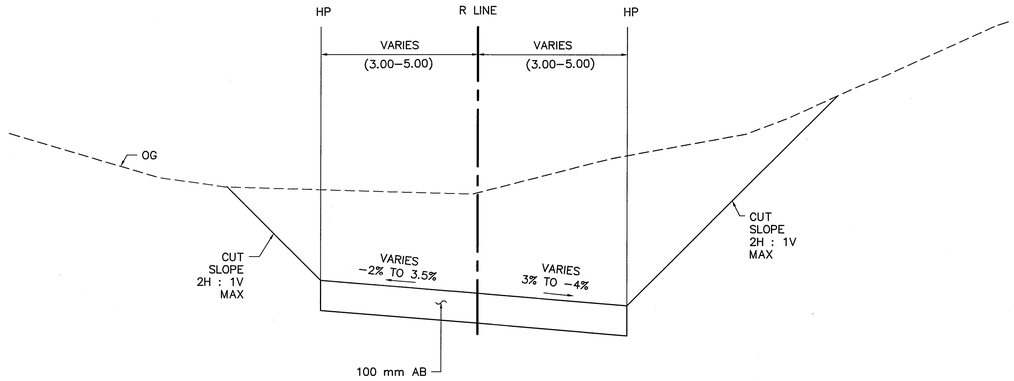
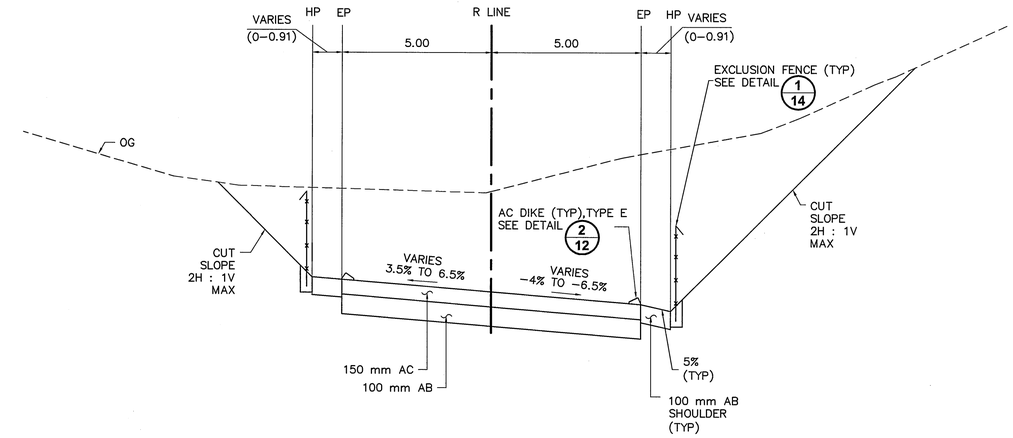
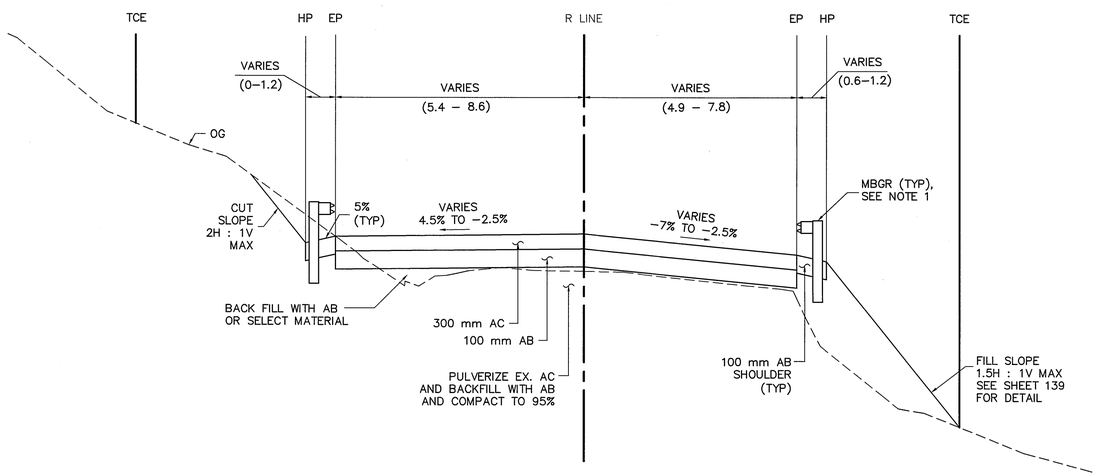
FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm



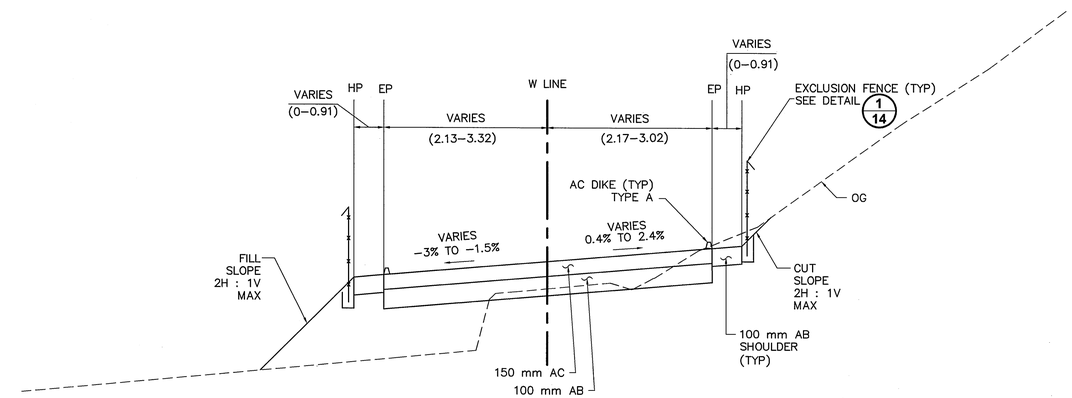
TYPICAL SECTION
PRIVATE DRIVEWAY (RALPH)
R-LINE
STA 0+000 TO 0+114
NO SCALE



TYPICAL SECTION
PRIVATE DRIVEWAY (RALPH)
R-LINE
STA 0+114 TO 0+129.065
NO SCALE



TYPICAL SECTION
SOUTH INTERSECTION (OLD VASCO ROAD)
R-LINE
STA 0+150 TO 0+200
NO SCALE



TYPICAL SECTION
PRIVATE DRIVEWAY (WINDY RIDGE)
W-LINE
STA 0+032 TO STA 0+049.661
NO SCALE

NOTES

1. GUARDRAILS TYPICALLY CONSTRUCTED ALONG FILL SLOPES. SEE PLAN SHEET 49 FOR LOCATION.
2. SEE PLAN SHEETS 48–51 FOR AC DIKE LOCATION. SEE STD PLANS A87B AND A77C4 FOR DETAILS NOT SHOWN.

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

	REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY	
MAINTENANCE			TRAFFIC	
REAL ESTATE			ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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4				
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APPROVED
REGISTERED PROFESSIONAL ENGINEER
STEVEN W. FONG
No. 38557
Exp. 12/31/2009
CIVIL
STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
SOUTH INTERSECTION & PRIVATE
DRIVEWAYS (RALPH & WINDY RIDGE)
TYPICAL SECTION & DETAILS

APPROVAL RECOMMENDED: JAMES CH
APPROVAL RECOMMENDED: ARMANDO C. VERGARA
DRAWN: JANE RIVOIR
CHECKED: TIM NEUVEN, JOHN P. BATES
SCALE: AS SHOWN
DATE: JAN 2008

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 46 OF 145
FILE NO. U-357-6

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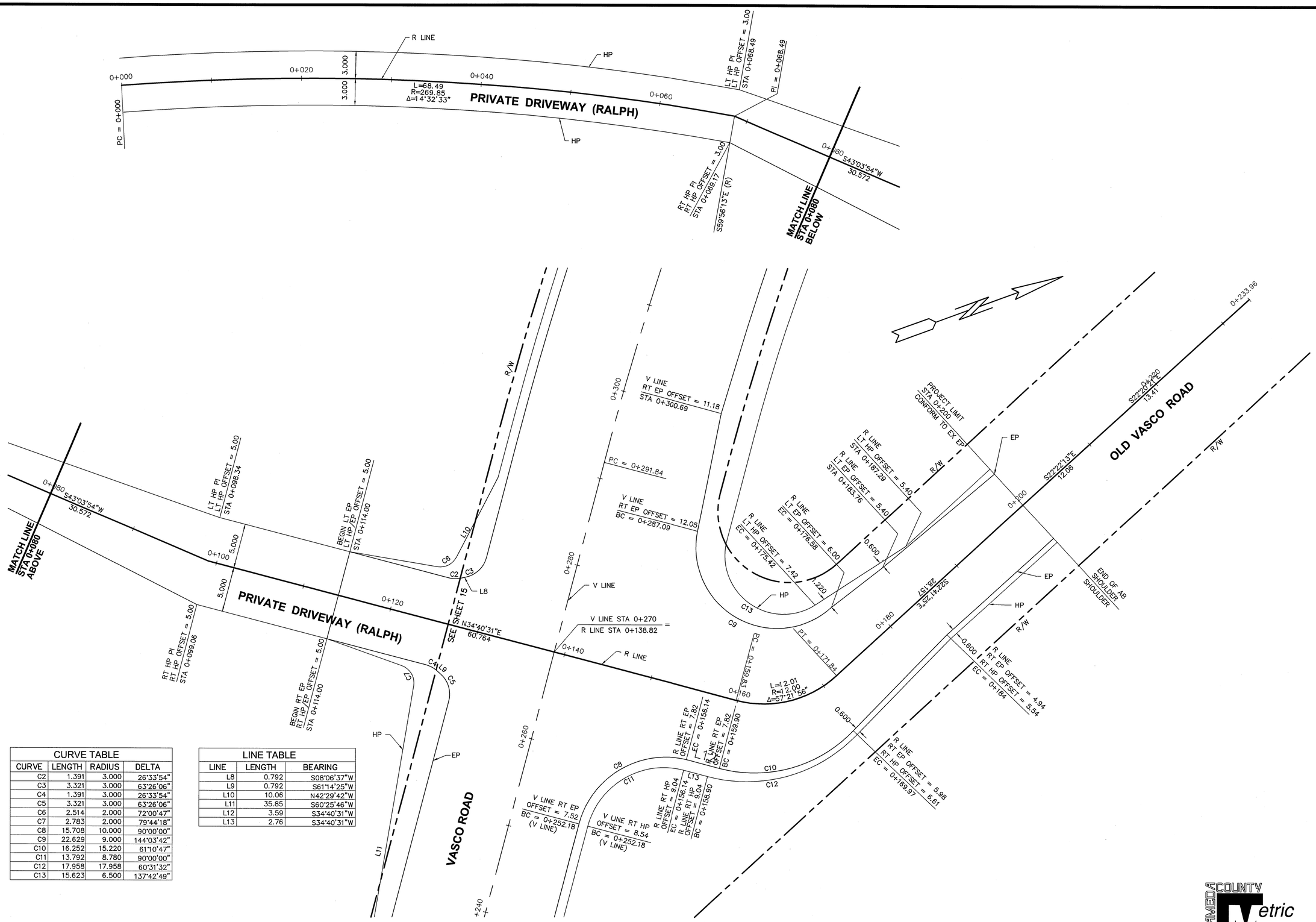
FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		



CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C2	1.391	3.000	26°33'54"
C3	3.321	3.000	63°26'06"
C4	1.391	3.000	26°33'54"
C5	3.321	3.000	63°26'06"
C6	2.514	2.000	72°00'47"
C7	2.783	2.000	79°44'18"
C8	15.708	10.000	90°00'00"
C9	22.629	9.000	144°03'42"
C10	16.252	15.220	61°10'47"
C11	13.792	8.780	90°00'00"
C12	17.958	17.958	60°31'32"
C13	15.623	6.500	137°42'49"

LINE TABLE		
LINE	LENGTH	BEARING
L8	0.792	S08°06'37"W
L9	0.792	S61°14'25"W
L10	10.06	N42°29'42"W
L11	35.85	S60°25'46"W
L12	3.59	S34°40'31"W
L13	2.76	S34°40'31"W

SOUTH INTERSECTION LAYOUT

1:200

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPVD
1				
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APPROVED
REGISTERED PROFESSIONAL ENGINEER
STANLEY W. TUNG
No. 38357
Exp. 12/31/2009
CIVIL
STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

SOUTH INTERSECTION
LAYOUT PLAN

APPROVAL RECOMMENDED: JAMES CAY
APPROVED: STANLEY W. TUNG
DRAWN: JANE INGUSAN
DESIGNED:
CHECKED: TAM NGUYEN
JOHN P. BATES
DATE: JAN 2008
SCALE: 1:200

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 47 OF 145
FILE NO. U-357-6

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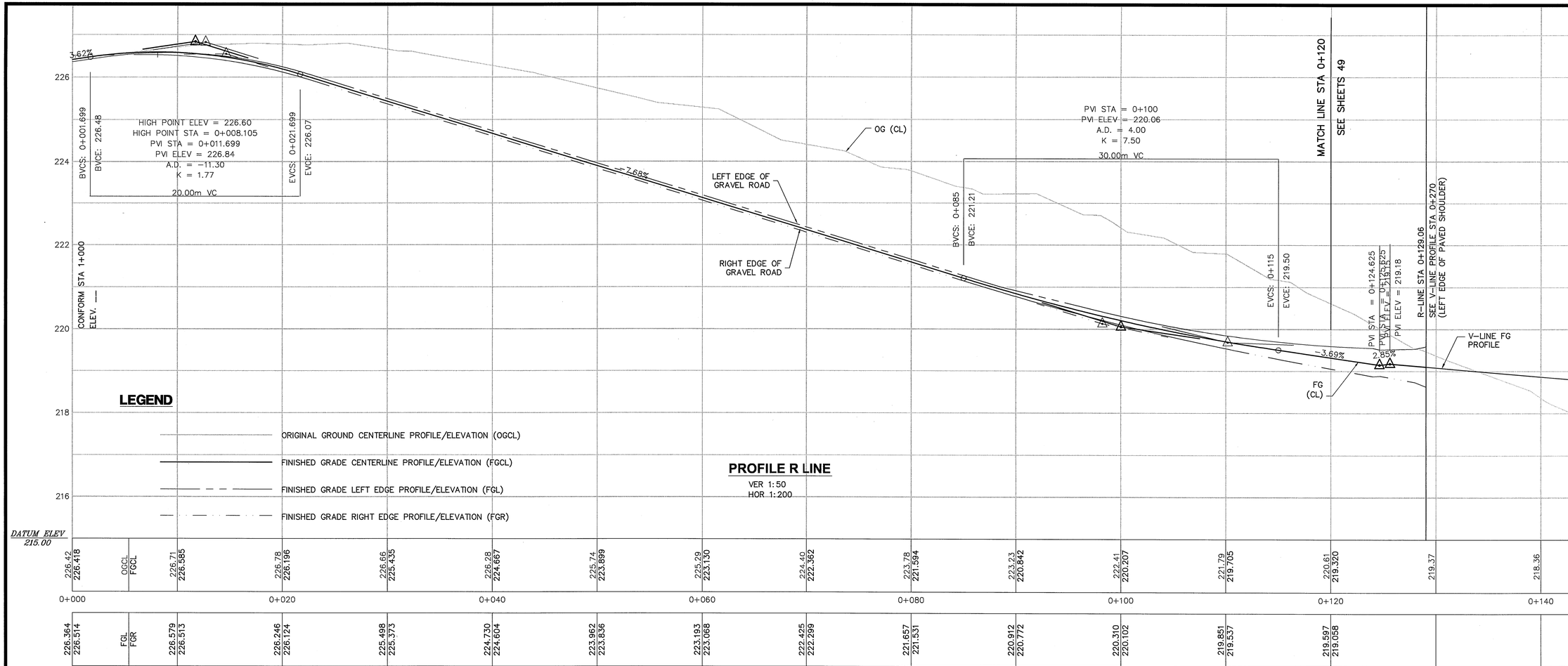
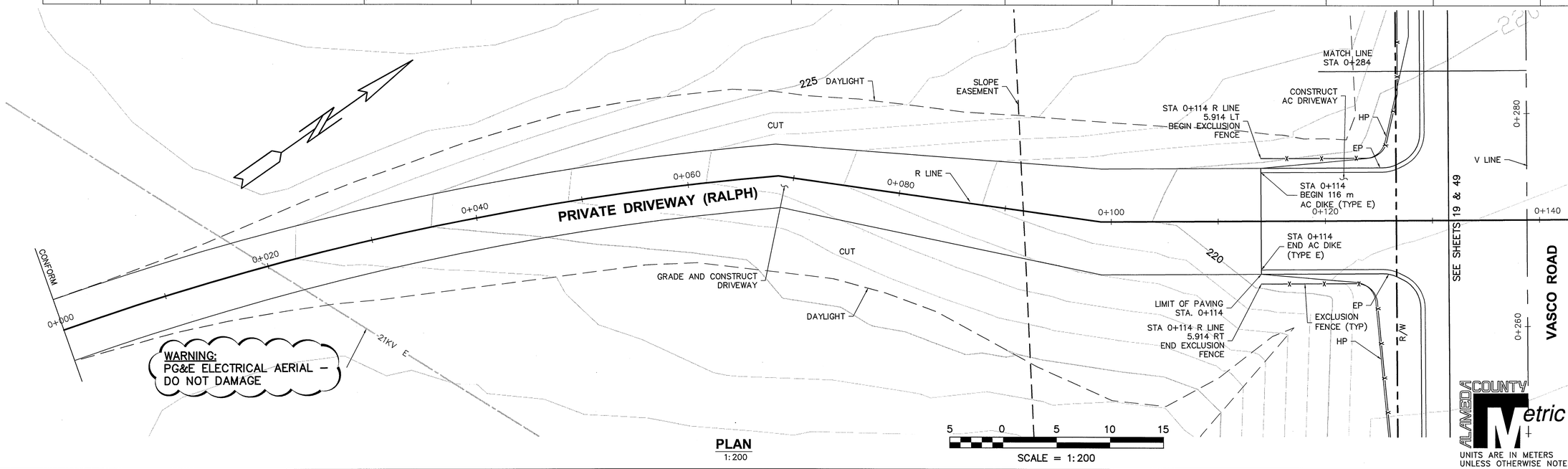
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	





FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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APPROVED REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 38651 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

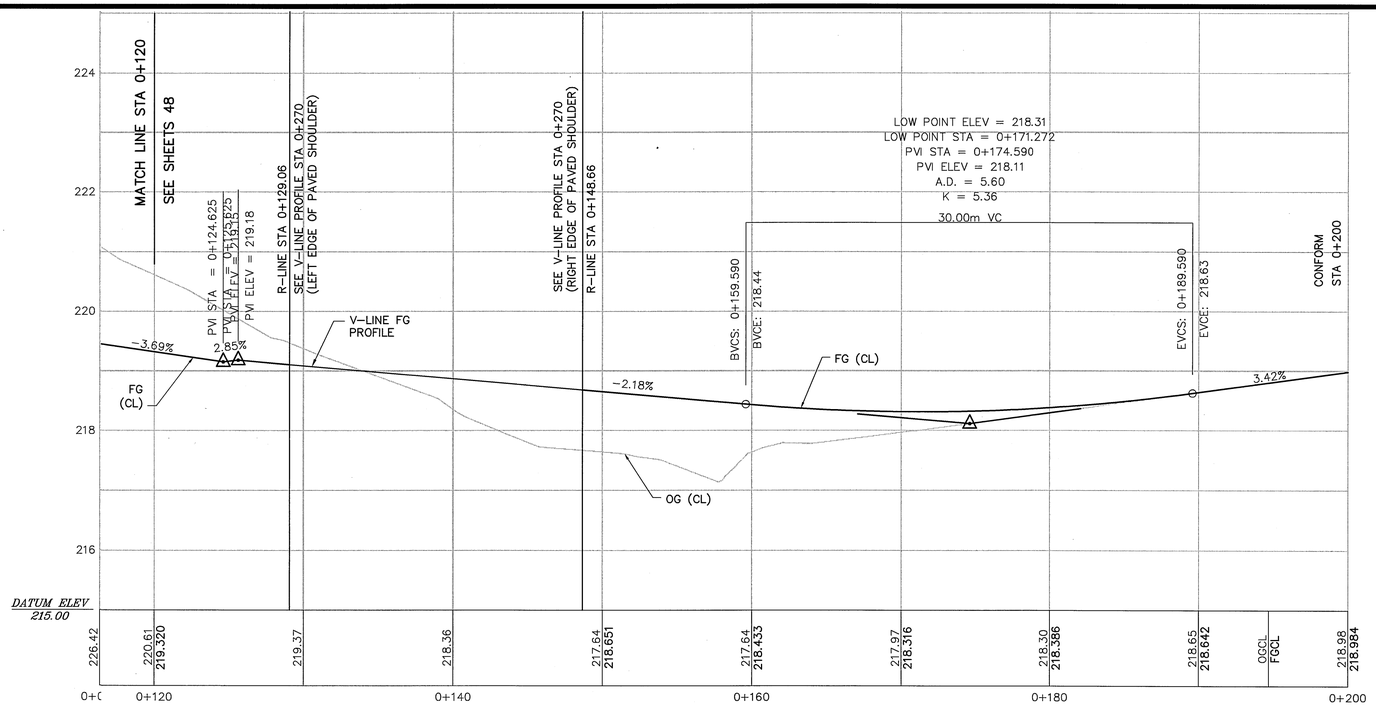
PRIVATE DRIVEWAY (RALPH) PLAN & PROFILE

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: ANDREW C. LEE
DATE: JAN 2008
SCALE: AS SHOWN
DRAWN: JANE ANDRADE
DESIGNED: TAM NGUYEN
CHECKED: JOHN P. BATES

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 48 OF 145
FILE NO. U-357-6

N:\ROAD\r23265\~Final Plan – Vasco Road 2007\South Intersection Plans.dwg 6-11-08 05:17:46 PM janer

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



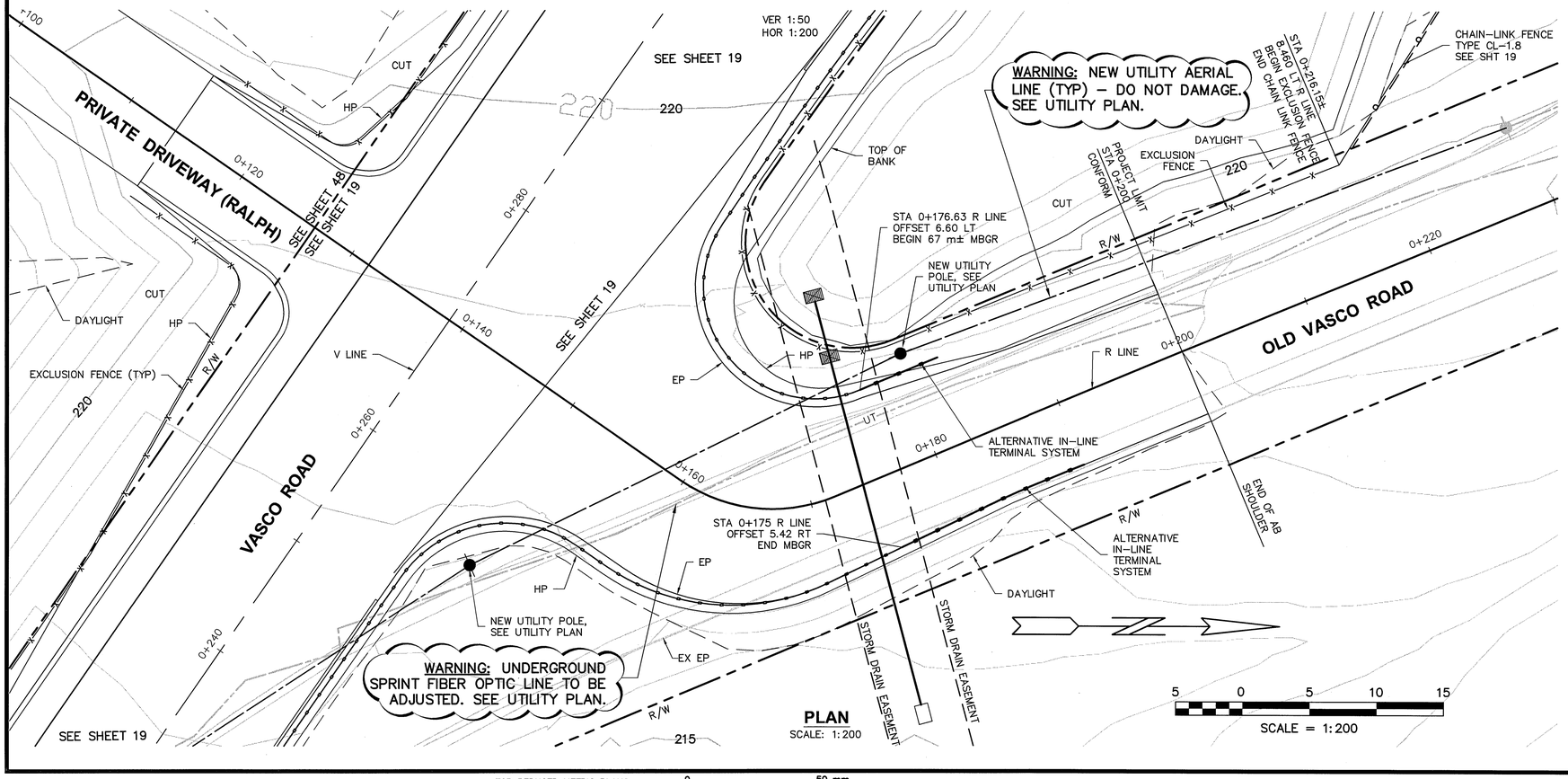
PROFILE R LINE

LEGEND

ORIGINAL GROUND CENTERLINE PROFILE/ELEVATION (OGCL)

FINISHED GRADE CENTERLINE PROFILE/ELEVATION (FGCL)

SEE SHEET 47 FOR LEFT AND RIGHT EP PROFILES



PLAN

SCALE: 1:200

ALAMEDA COUNTY Metric

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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5				

APPROVED

REGISTERED PROFESSIONAL ENGINEER STANLEY W. LUNG No. 34457 Exp. 12/31/2009 CIVIL ENGINEERING STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

SOUTH INTERSECTION PLAN & PROFILE

DRAWN: JANE WOOD	APPROVAL RECOMMENDED: JAMES A. CAMPBELL
DESIGNED: TAM NGUYEN	APPROVED: STANLEY W. LUNG
CHECKED: JOHN P. BATES	DATE: JAN 2008
	SCALE: AS SHOWN

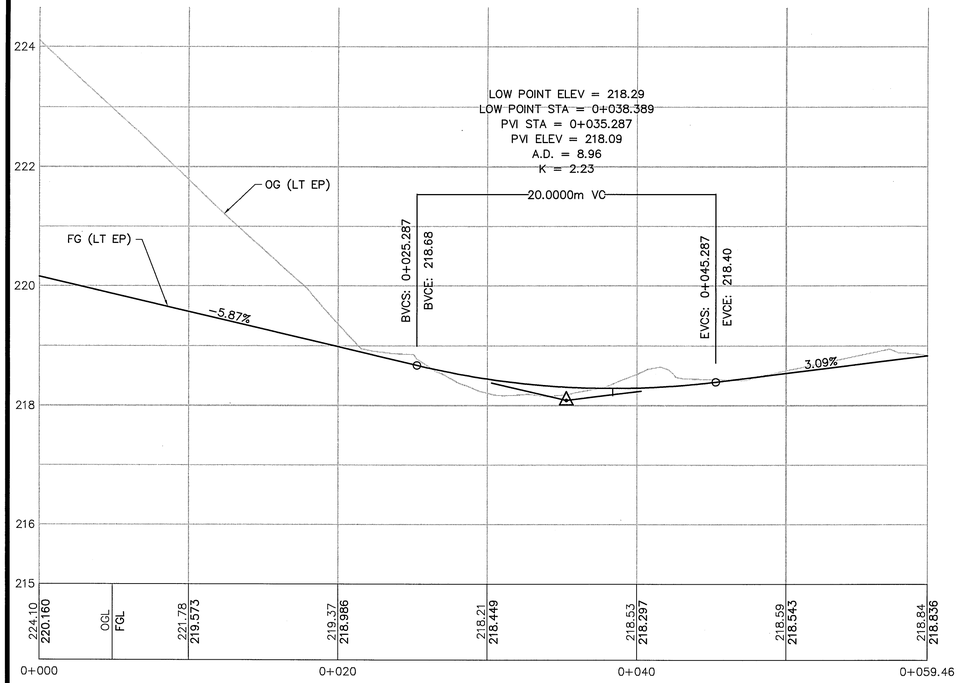
WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 49 OF 145

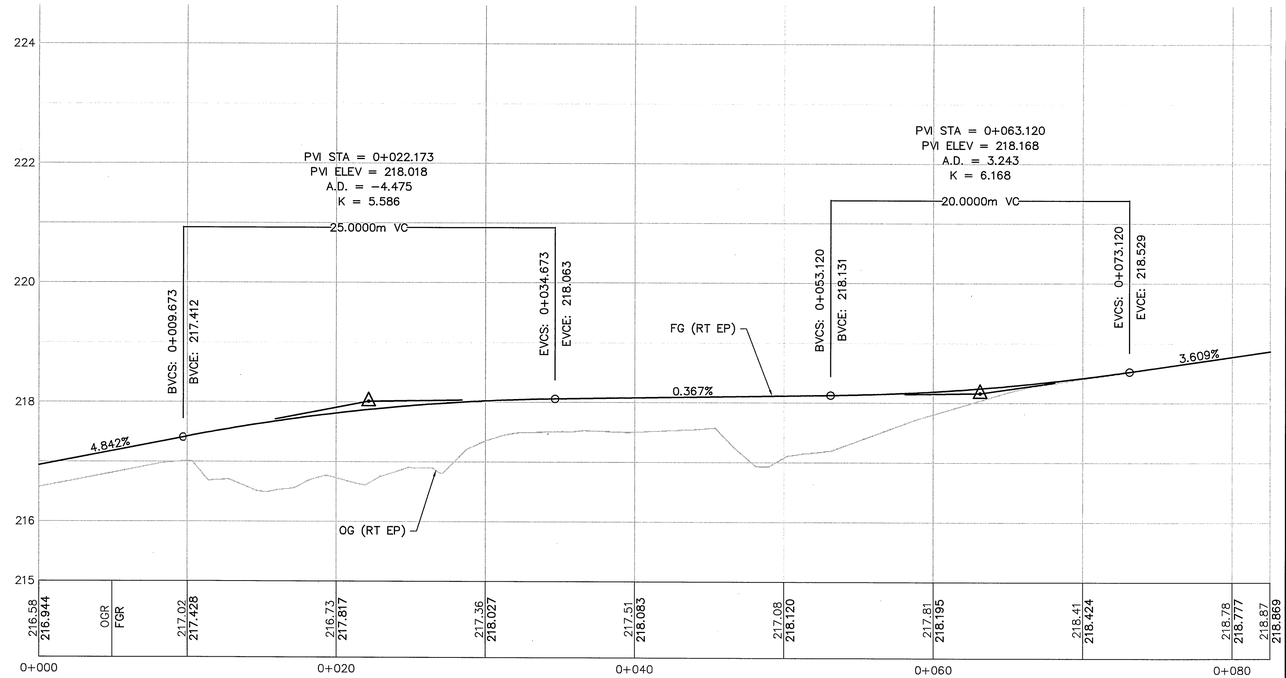
FILE NO. U-357-6

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		



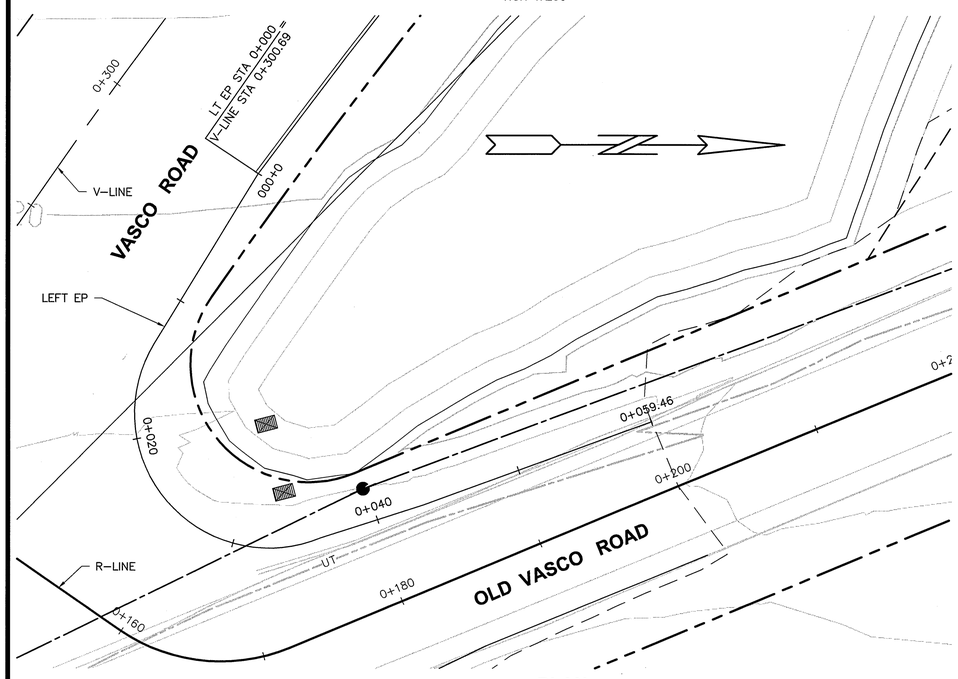
LEFT EP PROFILE

VER 1:50
HOR 1:200



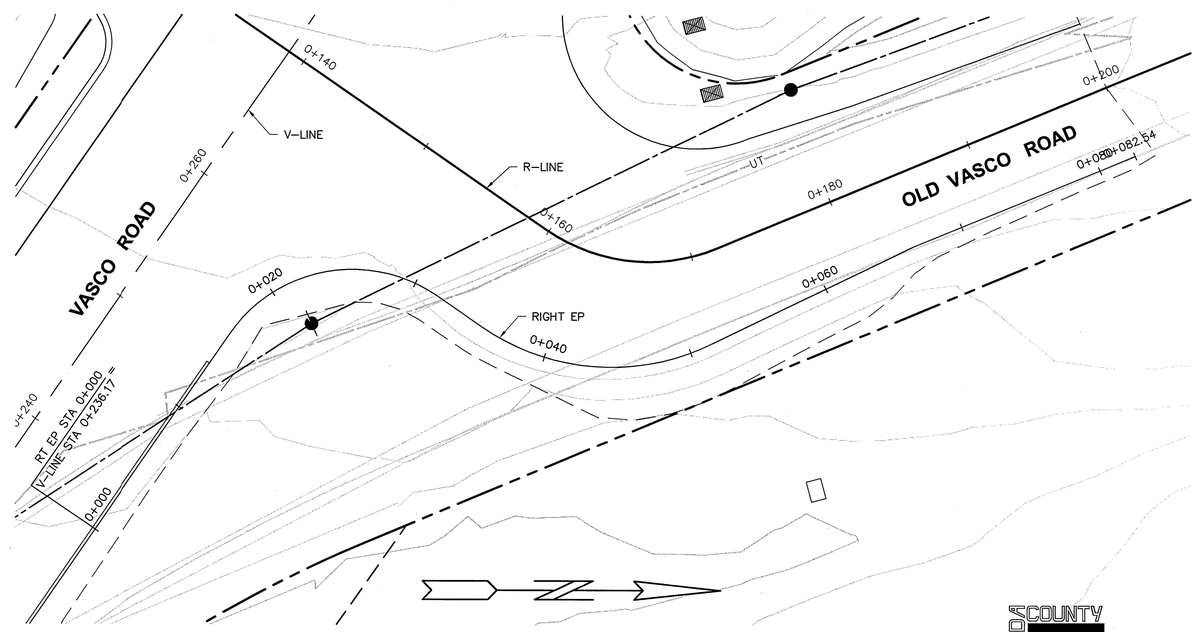
RIGHT EP PROFILE

VER 1:50
HOR 1:200



PLAN

1:200



PLAN

1:200

5 0 5 10 15

SCALE = 1:200

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS

0 50 mm

N:\ROAD\Y23265\Y-Final Plan - Vasco Road 2007\South Intersection Plans.dwg 6-11-08 05:20:39 PM janer

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
5				
4				
3				
2				
1				

APPROVED

REGISTERED PROFESSIONAL ENGINEER STANLEY W. LUNG No. 38457 Exp. 12/31/2009 CIVIL ENGINEERING STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

SOUTH INTERSECTION
PLAN & PROFILE

DRAWN	JAMY JAQUEZ
DESIGNED	TAM NGUYEN
CHECKED	JOHN P. BATES
APPROVAL RECOMMENDED	JOHN P. BATES
APPROVAL RECOMMENDED	STANLEY W. LUNG
DATE	JAN 2008
SCALE	AS SHOWN

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 50 OF 145

FILE NO. U-357-6

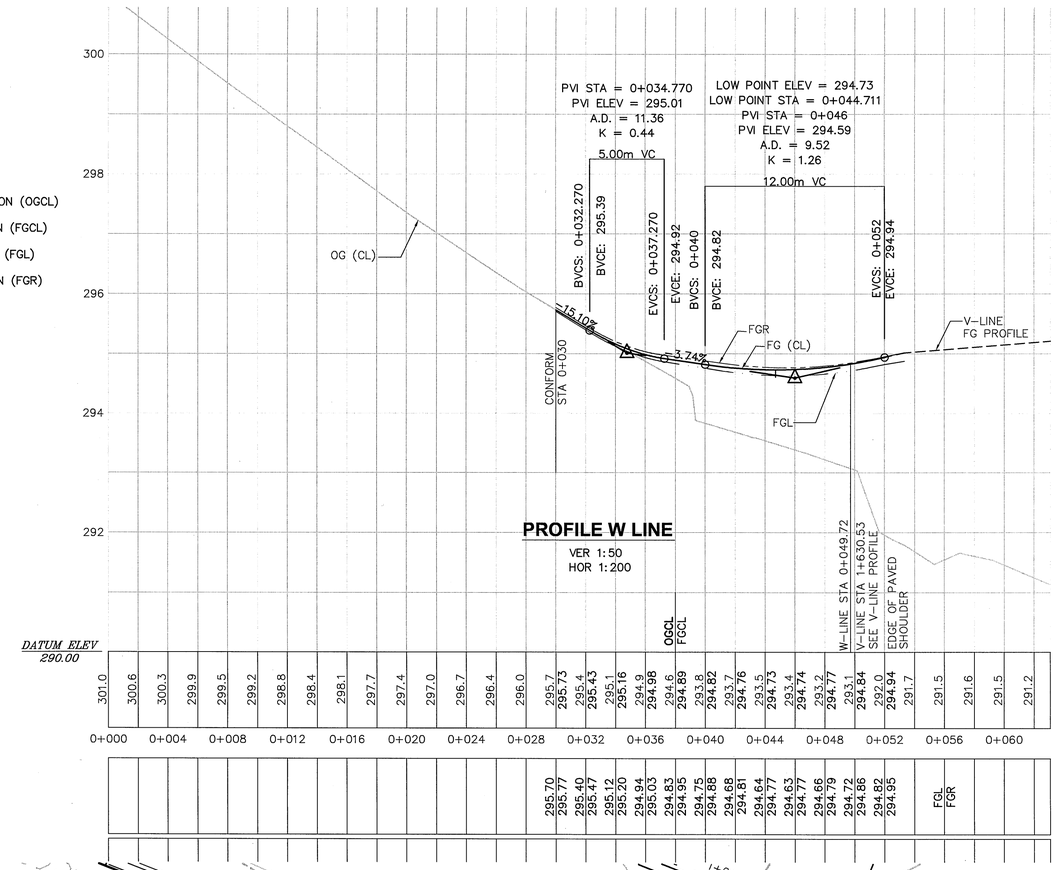
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

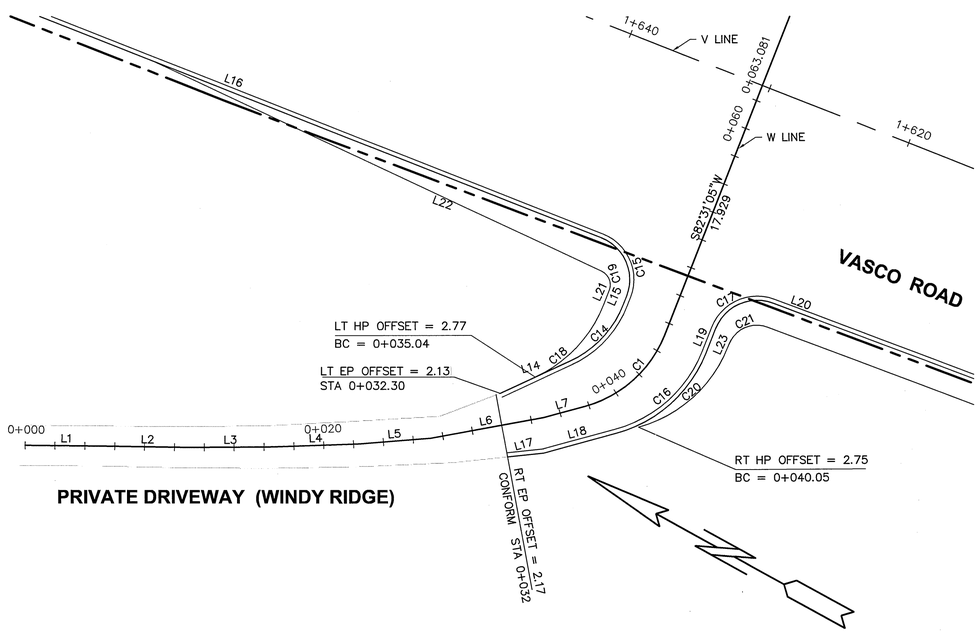
CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	DESCRIPTION
C1	7.416	8.000	53°06'48"	W LINE
C14	5.324	7.000	43°34'52"	(W LINE) LT EP
C15	4.712	3.000	90°00'00"	(W LINE) LT EP
C16	8.343	9.000	53°06'48"	(W LINE) RT EP
C17	4.670	3.000	89°11'19"	(W LINE) RT EP
C18	6.846	9.000	43°34'52"	(W LINE) LT HP
C19	1.508	1.000	86°25'07"	(W LINE) LT HP
C20	8.343	9.000	53°06'48"	(W LINE) RT HP
C21	3.116	2.000	89°15'14"	(W LINE) RT HP

LINE TABLE			
LINE	LENGTH	BEARING	DESCRIPTION
L1	5.458	S28°29'56"E	W LINE
L2	5.490	S28°05'55"E	W LINE
L3	5.625	S29°21'12"E	W LINE
L4	5.825	S30°59'24"E	W LINE
L5	4.780	S33°33'12"E	W LINE
L6	7.697	S39°19'48"E	W LINE
L7	2.862	S44°22'07"E	W LINE
L14	5.150	S53°54'03"E	(W LINE) LT EP
L15	0.624	N82°31'05"E	(W LINE) LT EP
L16	53.412	N07°28'55"W	(W LINE) LT EP
L17	2.448	N35°02'25"W	(W LINE) RT EP
L18	5.047	N44°22'07"W	(W LINE) RT EP
L19	1.763	S82°31'05"W	(W LINE) RT EP
L20	3.188	S08°17'36"E	(V LINE) LT EP
L21	1.034	S82°31'05"W	(W LINE) LT HP
L22	33.209	N03°54'02"W	(V LINE) LT HP
L23	0.229	N82°31'05"W	(W LINE) RT HP

PROFILE LEGEND

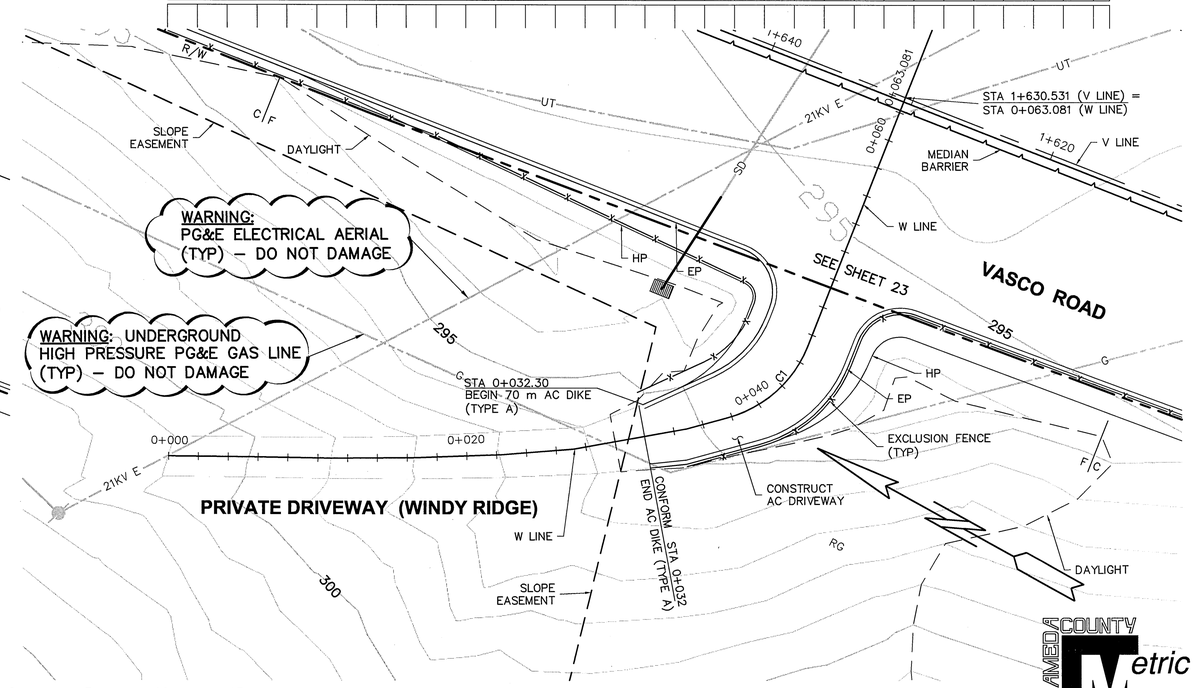
- ORIGINAL GROUND CENTERLINE PROFILE/ELEVATION (OGCL)
- FINISHED GRADE CENTERLINE PROFILE/ELEVATION (FGCL)
- FINISHED GRADE LEFT EDGE PROFILE/ELEVATION (FGL)
- FINISHED GRADE RIGHT EDGE PROFILE/ELEVATION (FGR)





PRIVATE DRIVEWAY (WINDY RIDGE) LAYOUT PLAN

1:200



PLAN

1:200

5 0 5 10 15

SCALE = 1:200

ALAMEDA COUNTY Metric

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS

0 50 mm

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
5				
4				
3				
2				
1				

APPROVED
REGISTERED PROFESSIONAL ENGINEER
STANLEY W. FUNG
No. 39457
Exp. 12/31/2009
CIVIL
STATE OF CALIFORNIA

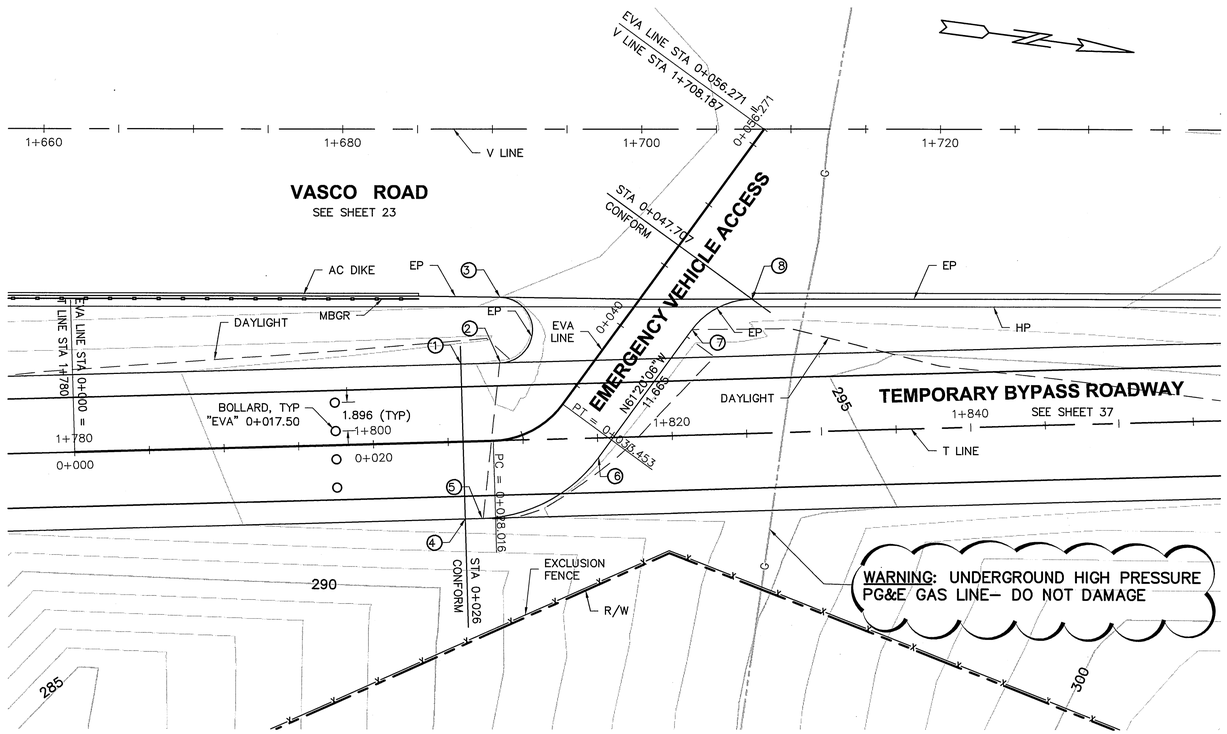
COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

PRIVATE DRIVEWAY (WINDY RIDGE)
PLAN & PROFILE

APPROVAL RECOMMENDED: JAMES SHI
APPROVAL RECOMMENDED: JOHN PAUL BATES
DRAWN: JANG WANG
DESIGNED:
CHECKED: TAM NGUYEN
CHECKED: JOHN P. BATES
DATE: JAN 2008
SCALE: AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 51 OF 145
FILE NO. U-357-6



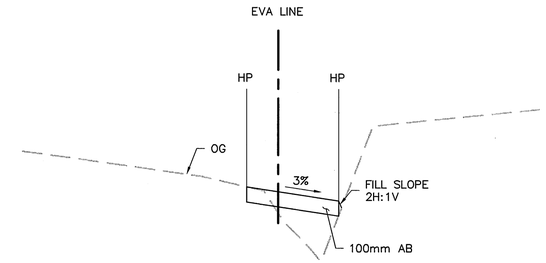
NORTHERN INTERSECTION (EVA) PLAN

1:200

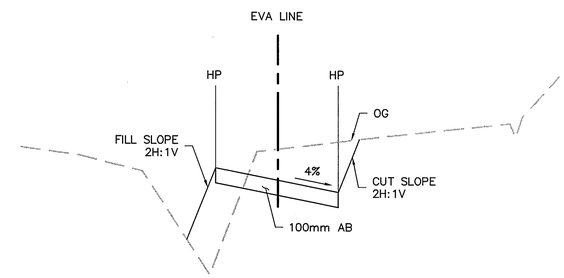
5 0 5 10 15

SCALE = 1:200

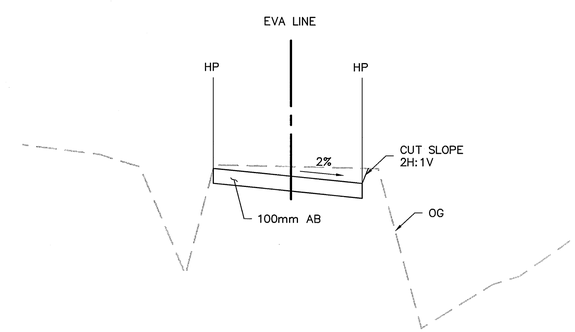
EMERGENCY VEHICLE ACCESS				CURVE DATA			REMARKS
PT NO.	EVA LINE STATION	OFFSET	ELEVATION	LENGTH	RADIUS	DELTA	
①	0+026	5.184 (LT)	294.071				CONFORM TO EX
②	0+032.057	4.963 (LT)	294.071				BC
②–③				6.850	2.210	177°35'54"	
③	0+036.769	7.623 (LT)	294.001				EC, CONFORM TO EX
④	0+026	5.184 (RT)	293.741				CONFORM TO EX
⑤	0+027.125	5.184 (RT)	293.791				BC
⑤–⑥				9.115	10.000	52°13'23"	
⑥	0+032.591	4.140 (RT)	293.811				EC
⑦	0+042.586	4.035 (RT)	293.676				BC
⑦–⑧				4.700	5.000	53°51'11"	
⑧	0+046.323	6.086 (RT)	293.638				EC, CONFORM TO EX



SECTION
NORTHERN INTERSECTION (EVA-LINE)
STA 0+040
NO SCALE



SECTION
NORTHERN INTERSECTION (EVA-LINE)
STA 0+036
NO SCALE



SECTION
NORTHERN INTERSECTION (EVA-LINE)
STA 0+030
NO SCALE

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
5				
4				
3				
2				
1				

APPROVED
REGISTERED PROFESSIONAL ENGINEER
STANLEY M. FUNG
No. 38473
Exp. 12/31/2009
CIVIL
STATE OF CALIFORNIA

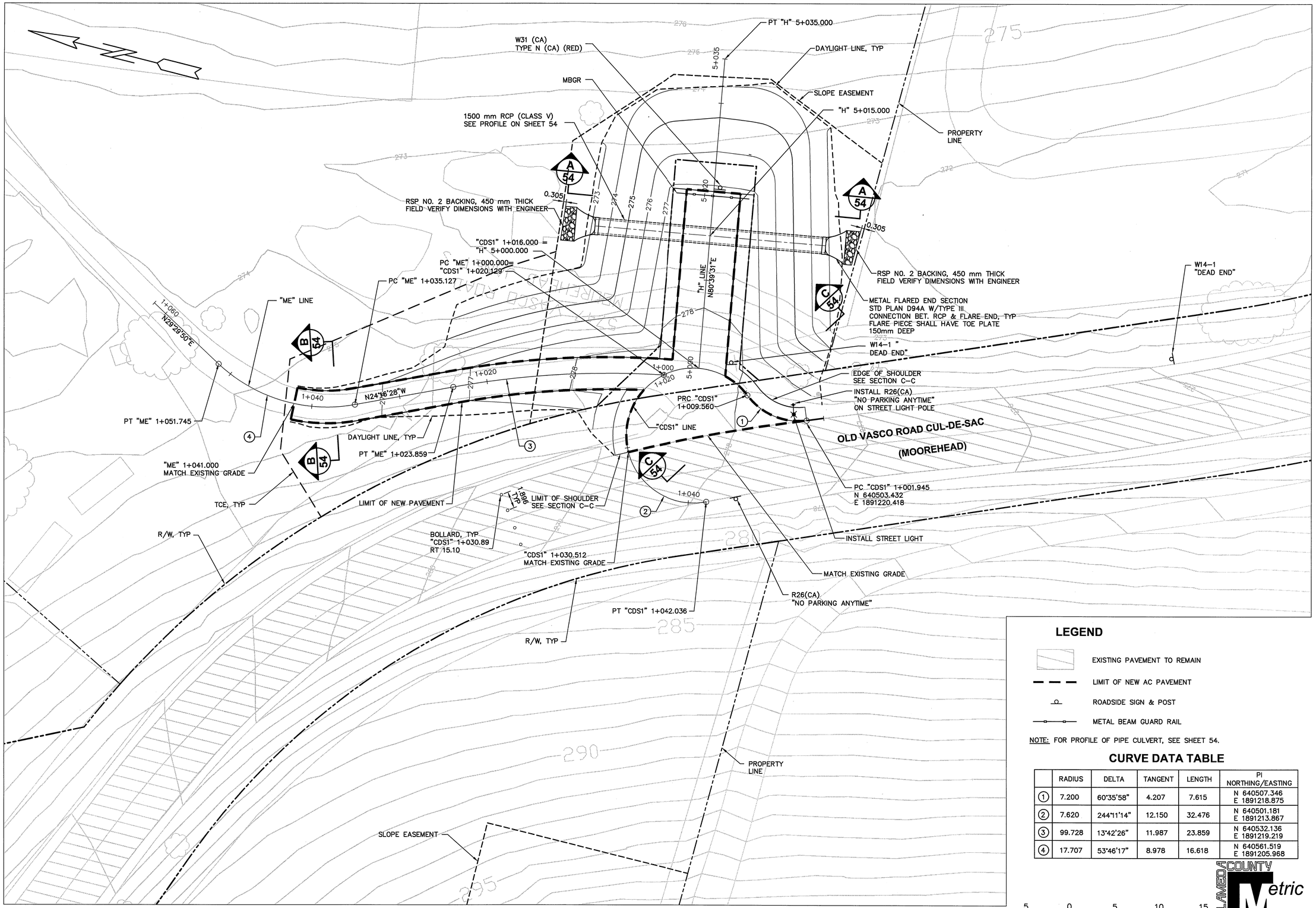
COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
NORTHERN INTERSECTION
(EMERGENCY VEHICLE ACCESS)
PLAN & TYPICAL SECTIONS

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL ACKNOWLEDGED: STANLEY M. FUNG
DATE: JAN 2008
SCALE: AS SHOWN
DRAWN: JOE GUSTAMEER LO
DESIGNED: AMBER LO
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 52 OF 145
FILE NO. U-357-6

N:\ROAD\23265\~Final Plan – Vasco Road 2007\Northern Intersection (Emergency Vehicle Access).dwg 6-25-08 01:10:50 PM amberl



PLAN
1:200

LEGEND

- EXISTING PAVEMENT TO REMAIN
- LIMIT OF NEW AC PAVEMENT
- ROADSIDE SIGN & POST
- METAL BEAM GUARD RAIL

NOTE: FOR PROFILE OF PIPE CULVERT, SEE SHEET 54.

CURVE DATA TABLE

	RADIUS	DELTA	TANGENT	LENGTH	PI NORTHING/EASTING
1	7.200	60°35'58"	4.207	7.615	N 640507.346 E 1891218.875
2	7.620	244°11'14"	12.150	32.476	N 640501.181 E 1891213.867
3	99.728	13°42'26"	11.987	23.859	N 640532.136 E 1891219.219
4	17.707	53°46'17"	8.978	16.618	N 640561.519 E 1891205.968

5 0 5 10 15
SCALE = 1:200

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D

REGISTERED PROFESSIONAL ENGINEER
BILL HILLESLAND
No. 34500
Exp. 12-31-08
STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

Moffatt & Nichol

DRAWN: A. BOROWKOVA
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZADNI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND INC
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

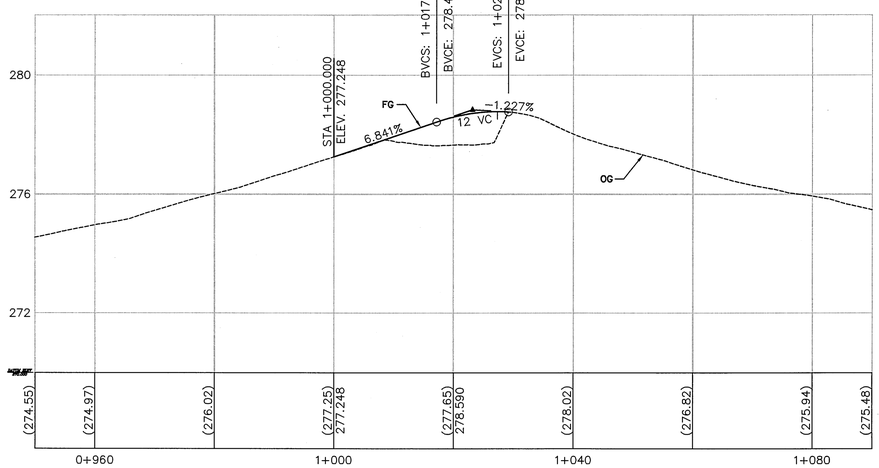
THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
OLD VASCO ROAD CUL-DE-SAC
(MOOREHEAD)

DATE: JAN 2008
SCALE: AS SHOWN
WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 53 OF 145
FILE NO. U-357-6

	REVIEWED BY:	DATE:
CONSTRUCTION		
MAINTENANCE		
REAL ESTATE		

	REVIEWED BY:	DATE:
SURVEY		
TRAFFIC		
ENVIRONMENTAL		

HIGH POINT ELEV = 278.771
HIGH POINT STA = 1+027.352
PVI STA = 1+023.176
PVI ELEV = 278.834
A.D. = −8.068
K = 1.487

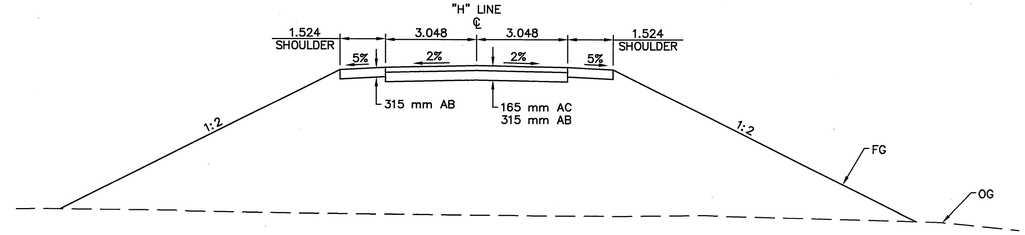


"CDS1" PROFILE

HOR 1:500
VER 1:100

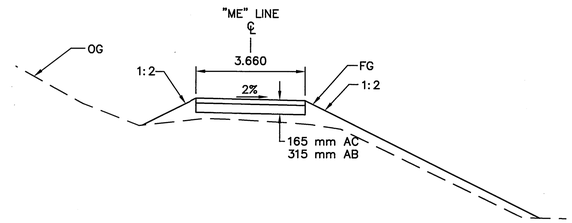
LEGEND

(XXX.XXX) EXIST ELEV
XXX.XXX FG ELEV



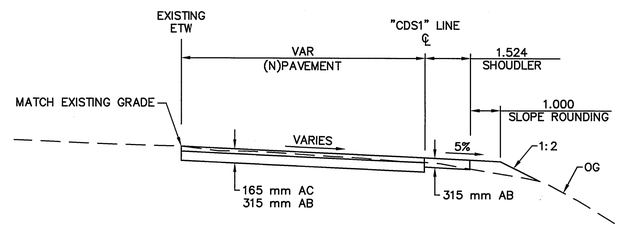
SECTION A-A

NTS



SECTION B-B

NTS

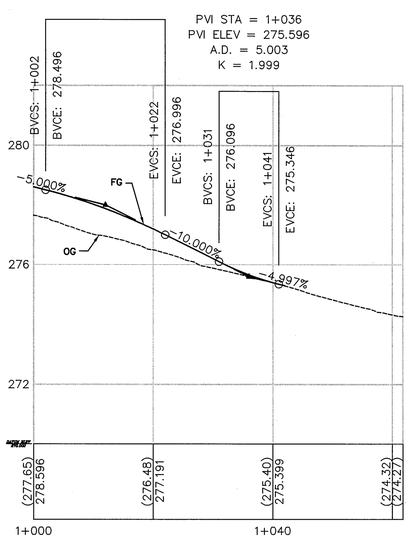


SECTION C-C

NTS

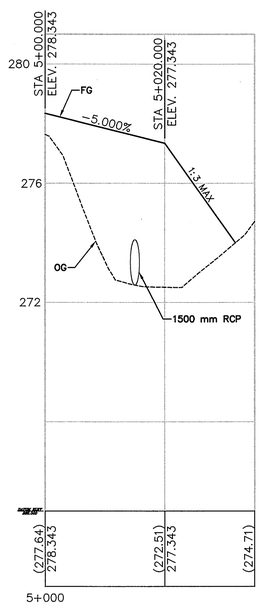
PVI STA = 1+012
PVI ELEV = 277.996
A.D. = −5.000
K = 4.000

PVI STA = 1+036
PVI ELEV = 275.596
A.D. = 5.003
K = 1.999



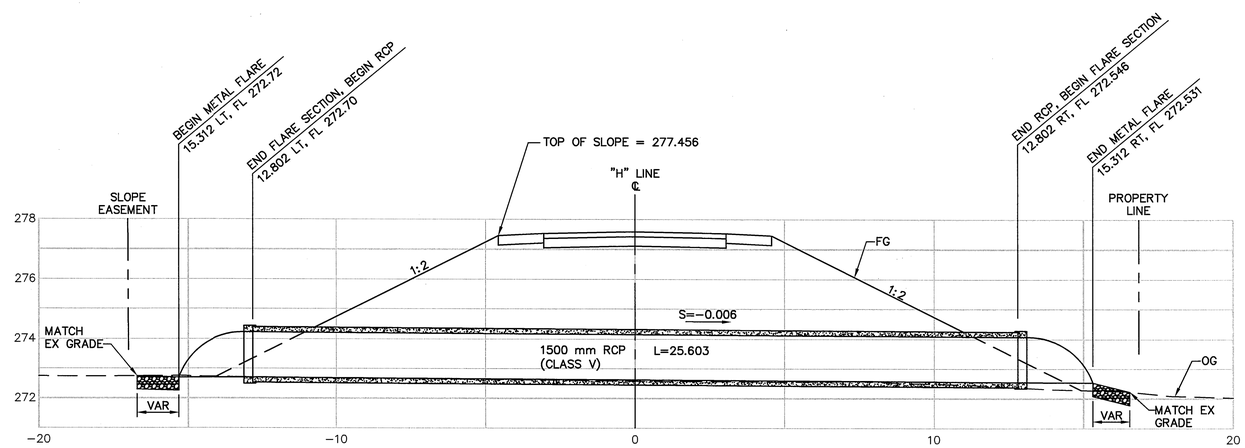
"ME" PROFILE

HOR 1:500
VER 1:100



"H" PROFILE

HOR 1:500
VER 1:100



PIPE CULVERT PROFILE

1:100

12.5 0 12.5 25 37.5

SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

NO.	DESCRIPTION	BY	DATE	APPV'D

REVISIONS

REGISTERED PROFESSIONAL ENGINEER THOMAS C. HILLESLAND STATE OF CALIFORNIA CIVIL
6-25-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: N. KOBAYASHI
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZAENI

COUNTY OF ALAMEDA PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
OLD VASCO ROAD CUL-DE-SAC
(MOOREHEAD)

REVIEWED: ARTHUR G. CARRERA
BOND NO.
REVIEWED: JAMES CHU
REVIEWED: STANLEY W. FUNG

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 54 OF 145
FILE NO. U-357-6

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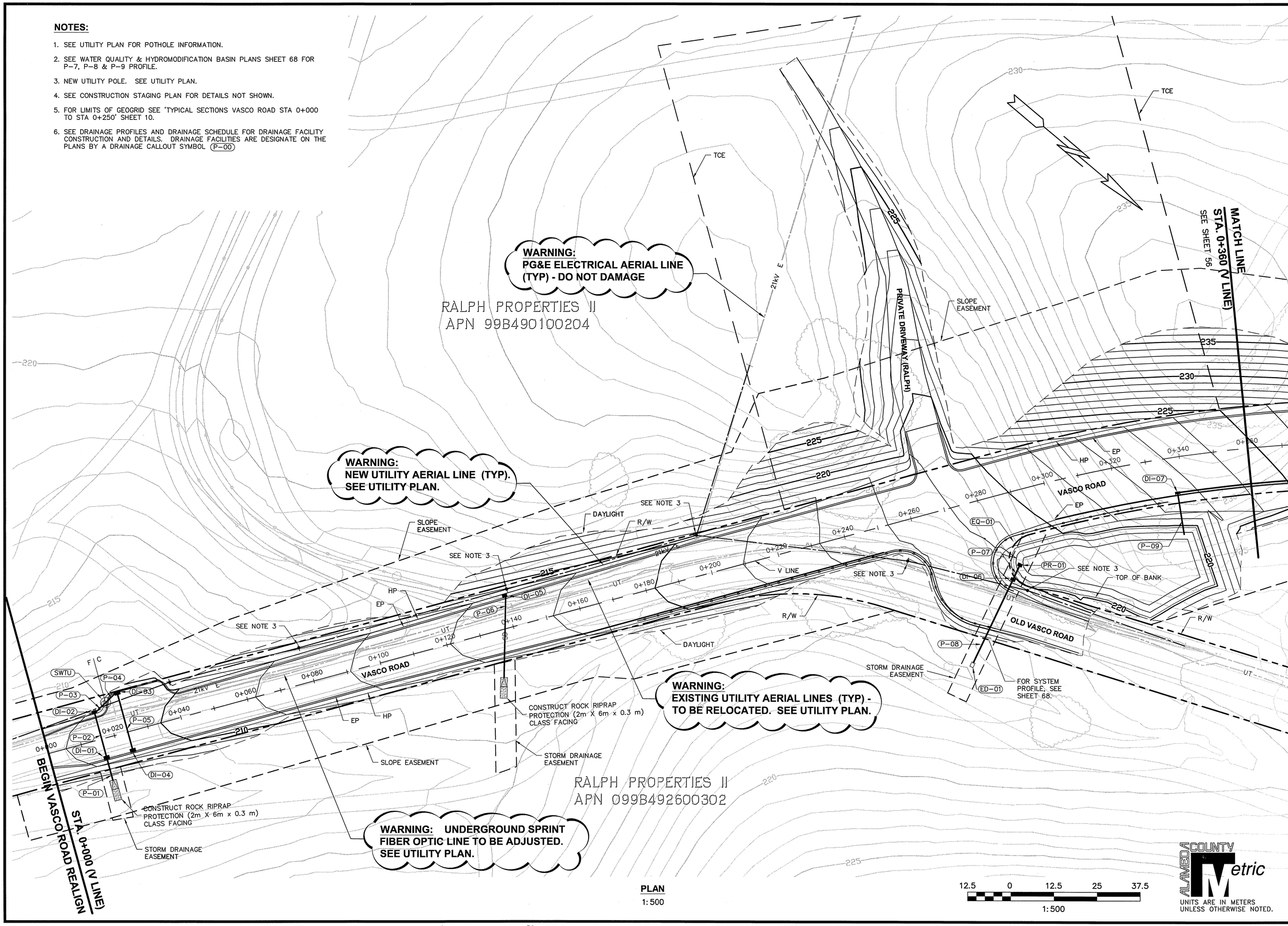
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

NOTES:

1. SEE UTILITY PLAN FOR POTHOLE INFORMATION.
2. SEE WATER QUALITY & HYDROMODIFICATION BASIN PLANS SHEET 68 FOR P-7, P-8 & P-9 PROFILE.
3. NEW UTILITY POLE. SEE UTILITY PLAN.
4. SEE CONSTRUCTION STAGING PLAN FOR DETAILS NOT SHOWN.
5. FOR LIMITS OF GEOGRID SEE 'TYPICAL SECTIONS VASCO ROAD STA 0+000 TO STA 0+250' SHEET 10.
6. SEE DRAINAGE PROFILES AND DRAINAGE SCHEDULE FOR DRAINAGE FACILITY CONSTRUCTION AND DETAILS. DRAINAGE FACILITIES ARE DESIGNATE ON THE PLANS BY A DRAINAGE CALLOUT SYMBOL (P-00)



PLAN
1:500

12.5 0 12.5 25 37.5
1:500

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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NO.	DESCRIPTION	BY	DATE	APPVD
1				
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REVISIONS

REGISTERED PROFESSIONAL ENGINEER STUART W. FUNG No. 35557 Exp. 12/31/2009 STATE OF CALIFORNIA CIVIL

APPROVED

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

DRAINAGE AND GRADING PLAN

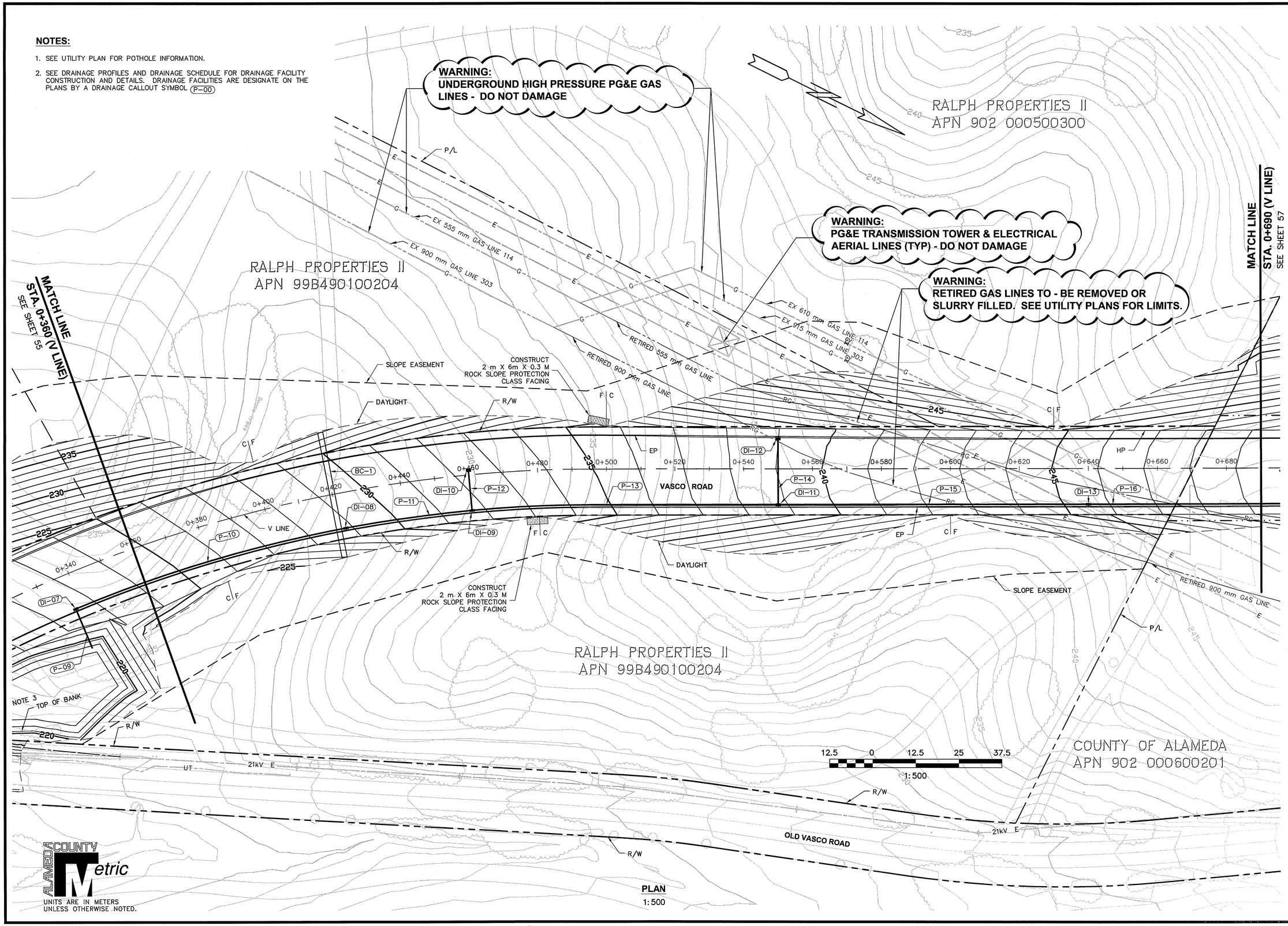
APPROVAL RECOMMENDED: JAMES SO
APPROVAL RECOMMENDED: STUART W. FUNG
DATE: JAN 2008
SCALE: 1:500
DRAWN: ALEX BAUTISTA
DESIGNED: L. ADMANDO, NG, K. KARAVILLA, E. DANFORTH
CHECKED: MOSES TSANG

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 55 OF 145
FILE NO. U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

NOTES:

1. SEE UTILITY PLAN FOR POTHOLE INFORMATION.
2. SEE DRAINAGE PROFILES AND DRAINAGE SCHEDULE FOR DRAINAGE FACILITY CONSTRUCTION AND DETAILS. DRAINAGE FACILITIES ARE DESIGNATE ON THE PLANS BY A DRAINAGE CALLOUT SYMBOL (P-00)



PLAN
1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

N:\ROAD\r23265\r-Final Plan - Vasco Road 2007\Drainage & Grading Plan-500 scale.dwg 6-11-08 05:49:59 PM janer

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPVD

REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 67967 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA
APPROVED

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

DRAINAGE AND GRADING PLAN

DRAWN: JAYE PINEDA/ALEX BAUTISTA	APPROVAL RECOMMENDED: JAMES CHU	SCALE: 1:500
DESIGNED: L. JOHANNA, B. TAN, D. JOHANNA, B. DANSFORTH	APPROVAL RECOMMENDED: ASSISTANT DIRECTOR	DATE: JAN 2008
CHECKED: MOSES TSANG		

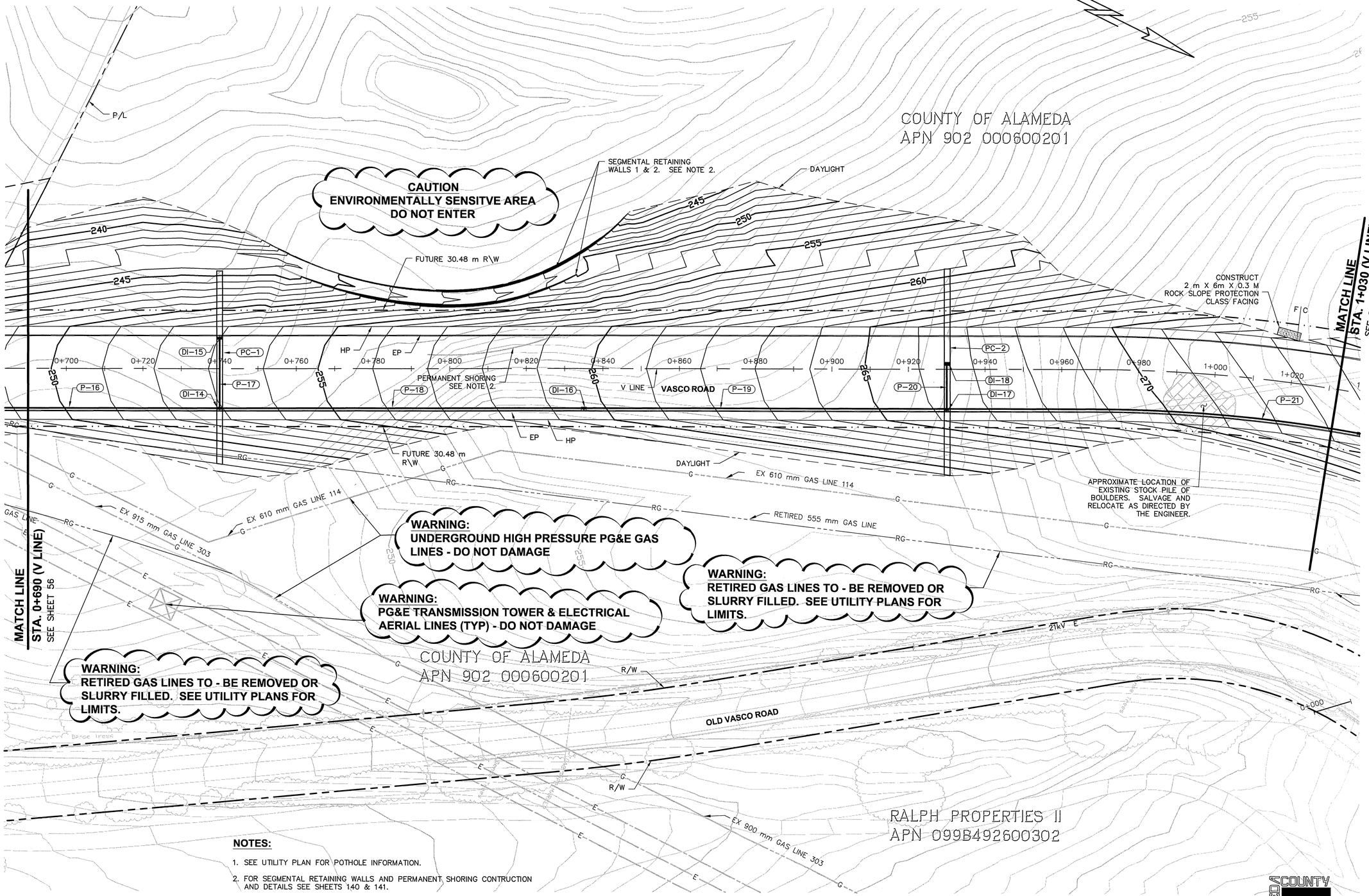
WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 56 OF 145

FILE NO. U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



NOTES:

1. SEE UTILITY PLAN FOR POTHOLE INFORMATION.
2. FOR SEGMENTAL RETAINING WALLS AND PERMANENT SHORING CONTRUCTION AND DETAILS SEE SHEETS 140 & 141.
3. SEE CONTRUSTION STAGING PLAN FOR DETAILS NOT SHOWN.
4. SEE DRAINAGE PROFILES AND DRAINAGE SCHEDULE FOR DRAINAGE FACILITY CONSTRUCTION AND DETAILS. DRAINAGE FACILITIES ARE DESIGNATE ON THE PLANS BY A DRAINAGE CALLOUT SYMBOL (P-00)

PLAN
1:500

12.5 0 12.5 25 37.5
1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D

APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 39457 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

DRAINAGE AND GRADING PLAN

APPROVAL RECOMMENDED: JAMES O. ...
APPROVAL RECOMMENDED: ...
APPROVAL RECOMMENDED: ... DIRECTOR
DATE: JAN 2008
SCALE: 1:500
DRAWN: ANG KIMHY-ALEX BAUTISTA
DESIGNED: L. JOHMANN, B. NG, D. MANYAGA, B. DANFORTH
CHECKED: MOSES TSANG

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 57 OF 145
FILE NO. U-357-6

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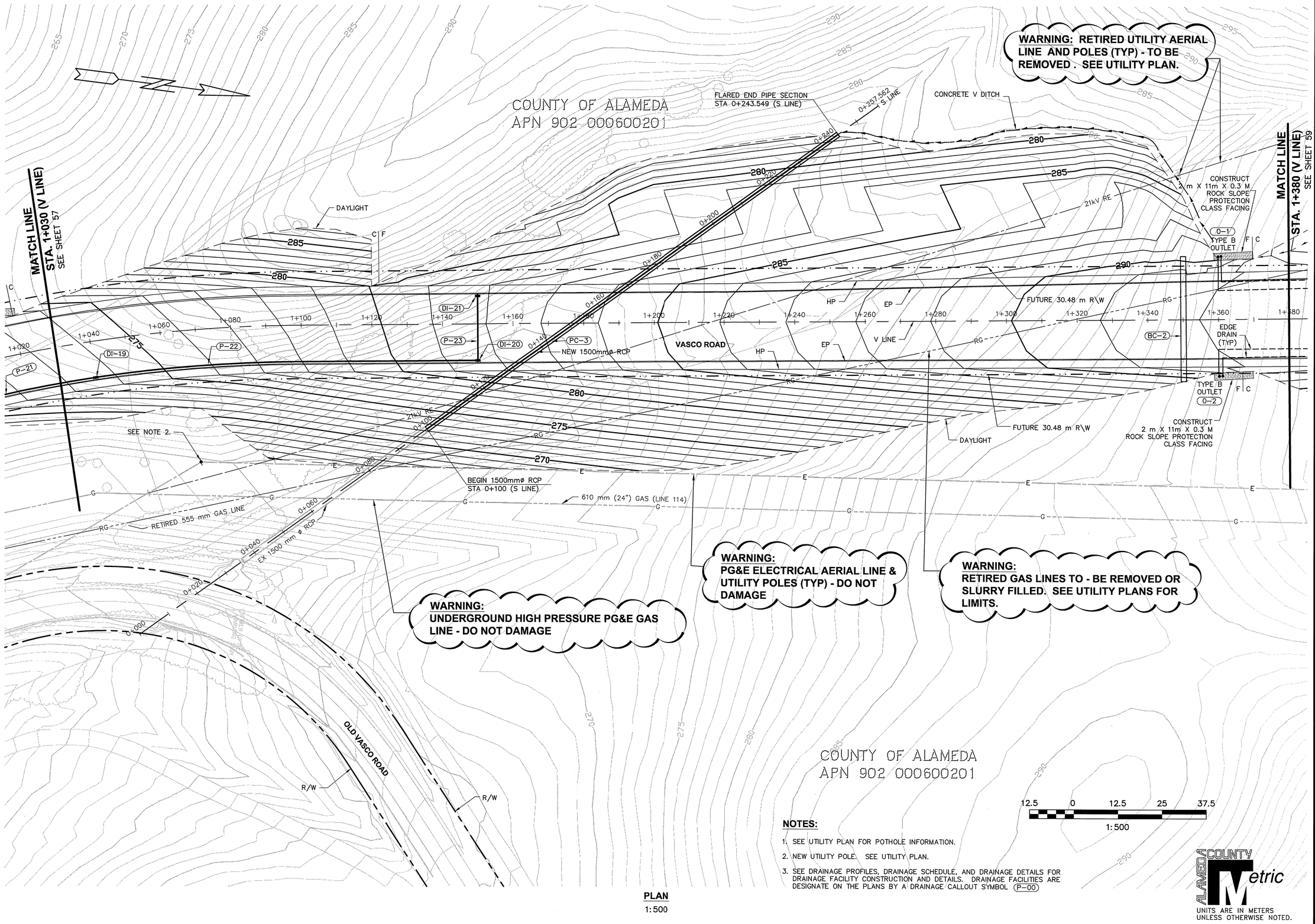
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



NOTES:

1. SEE UTILITY PLAN FOR POTHOLE INFORMATION.
2. NEW UTILITY POLE. SEE UTILITY PLAN.
3. SEE DRAINAGE PROFILES, DRAINAGE SCHEDULE, AND DRAINAGE DETAILS FOR DRAINAGE FACILITY CONSTRUCTION AND DETAILS. DRAINAGE FACILITIES ARE DESIGNATE ON THE PLANS BY A DRAINAGE CALLOUT SYMBOL (P-00)

PLAN
1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER STANLEY W. TUNG No. 39457 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA
APPROVED

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

APPROVAL RECOMMENDED: JAMES O'BRIEN
APPROVED: STANLEY W. TUNG
DATE: JAN 2008
SCALE: 1:500

DRAWN: ALEX BAUTISTA
DESIGNED: L. JOHANNES, C. N. MAURER, R. B. DANFORTH
CHECKED: MOSES YSAND

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

DRAINAGE AND GRADING PLAN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 58 OF 145
FILE NO. U-357-6

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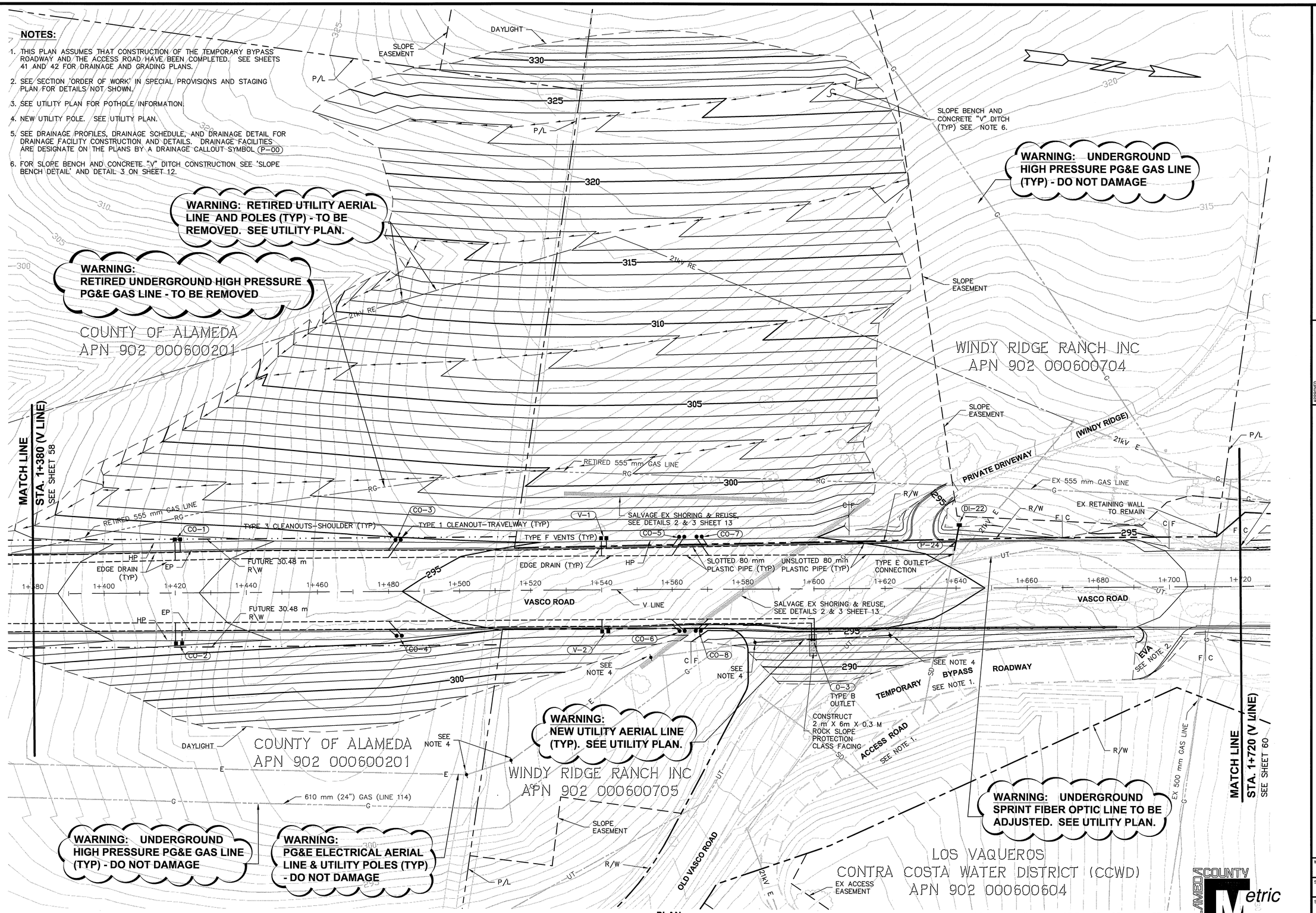
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

NOTES:

1. THIS PLAN ASSUMES THAT CONSTRUCTION OF THE TEMPORARY BYPASS ROADWAY AND THE ACCESS ROAD HAVE BEEN COMPLETED. SEE SHEETS 41 AND 42 FOR DRAINAGE AND GRADING PLANS.
2. SEE SECTION 'ORDER OF WORK' IN SPECIAL PROVISIONS AND STAGING PLAN FOR DETAILS NOT SHOWN.
3. SEE UTILITY PLAN FOR POTHOLE INFORMATION.
4. NEW UTILITY POLE. SEE UTILITY PLAN.
5. SEE DRAINAGE PROFILES, DRAINAGE SCHEDULE, AND DRAINAGE DETAIL FOR DRAINAGE FACILITY CONSTRUCTION AND DETAILS. DRAINAGE FACILITIES ARE DESIGNATE ON THE PLANS BY A DRAINAGE CALLOUT SYMBOL (P-00)
6. FOR SLOPE BENCH AND CONCRETE "V" DITCH CONSTRUCTION SEE 'SLOPE BENCH DETAIL' AND DETAIL 3 ON SHEET 12.



PLAN
1:500

12.5 0 12.5 25 37.5
1:500

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS				
NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 38327 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA
APPROVED

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

DRAINAGE AND GRADING PLAN

DRAWN: JAVIER JARAMILLO GAUTISTA
DESIGNED: L. JOHMANN, E.I.C. / R. MAHARIS
CHECKED: MOSES TSANG
APPROVAL RECOMMENDED: JAMES O'REILLY
APPROVED: STANLEY W. FUNG
DATE: JAN 2008
SCALE: 1:500

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 59 OF 145
FILE NO. U-357-6

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REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

WINDY RIDGE RANCH INC
APN 902 000600804

LOS VAQUEROS
CONTRA COSTA WATER DISTRICT (CCWD)
APN 902 000601101

WARNING:
PG&E ELECTRICAL AERIAL LINE (TYP) - DO NOT DAMAGE

WARNING:
UNDERGROUND HIGH PRESSURE PG&E GAS LINE (TYP) - DO NOT DAMAGE

P/L

RETURN WALL TYPE "D", STD PLAN B3-8, PLACE SACRETE TO CONFORM

FL, CONC GUTTER, SEE RETAINING WALL TYPICAL SECTION ON THIS SHEET

SLOPE EASEMENT

EX 555 mm GAS LINE

21kV E

DAYLIGHT

STA 1+830 TO 1+850, TRANSITION CONC GUTTER ELEV TO CONFORM TO MODIFIED CONCRETE BARRIER GUTTER AT END OF WALL.

REMOVE EX CONC BARRIER AND GUTTER, STA. 1+743.975 TO STA. 2+100

CONC RW WITH BARRIER (LOL), SEE TYPICAL SECTION ON THIS SHT

STA 1+850 TO STA 2+100, BEGIN 250 m± MODIFIED CONCRETE BARRIER. SEE DETAIL 1/12

R/W

1+720 1+740 1+760 1+780 1+800 1+820 1+840 1+860 1+880 1+900 1+920 1+940 1+960 1+980 2+000 2+020 2+040 2+060 2+080 2+100

V LINE

EP

VASCO ROAD

WARNING: UNDERGROUND SPRINT FIBER OPTIC LINE TO BE ADJUSTED. SEE UTILITY PLAN.

DAYLIGHT

MATCH LINE STA. 1+720 (V LINE) SEE SHEET 59

LOS VAQUEROS
CONTRA COSTA WATER DISTRICT (CCWD)
APN 902 000600604

TEMPORARY BYPASS ROADWAY

SEE NOTE 1

HP

DI-27

CONCRETE GUTTER WALL DRAIN INLET. SEE DETAILS 1/12 & 1A/12

DI-24

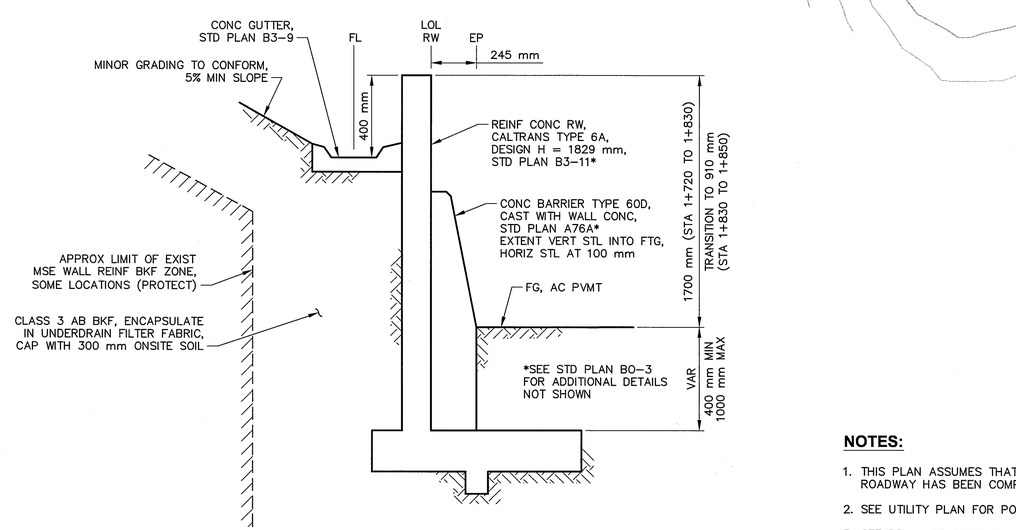
DI-23

P-25

MATCH LINE STA. 2+090 (V LINE) SEE SHEET 61

PLAN
1:500

12.5 0 12.5 25 37.5
1:500



RETAINING WALL TYPICAL SECTION
STA 1+720 TO 1+850
NO SCALE

NOTES:

1. THIS PLAN ASSUMES THAT CONSTRUCTION OF THE TEMPORARY BYPASS ROADWAY HAS BEEN COMPLETED.
2. SEE UTILITY PLAN FOR POTHOLE INFORMATION.
3. SEE DRAINAGE PROFILES AND DRAINAGE SCHEDULE FOR DRAINAGE FACILITY CONSTRUCTION AND DETAILS. DRAINAGE FACILITIES ARE DESIGNATE ON THE PLANS BY A DRAINAGE CALLOUT SYMBOL. (P-00)

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'D
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APPROVED
REGISTERED PROFESSIONAL ENGINEER STEPHEN W. FUNG No. 39850 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

DRAINAGE AND GRADING PLAN

APPROVAL RECOMMENDED: JAMES GAY
APPROVED: JERRY SAKAMOTO, P.E. DIRECTOR
DATE: JAN 2008
SCALE: 1:500
DRAWN: JAIME BARROS-VALES, BAUTISTA
DESIGNED: L. JOHANNA, C. M. MANRIQUEZ, B. SANFORTH
CHECKED: MOSES TSANG

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 60 OF 145
FILE NO. U-357-6

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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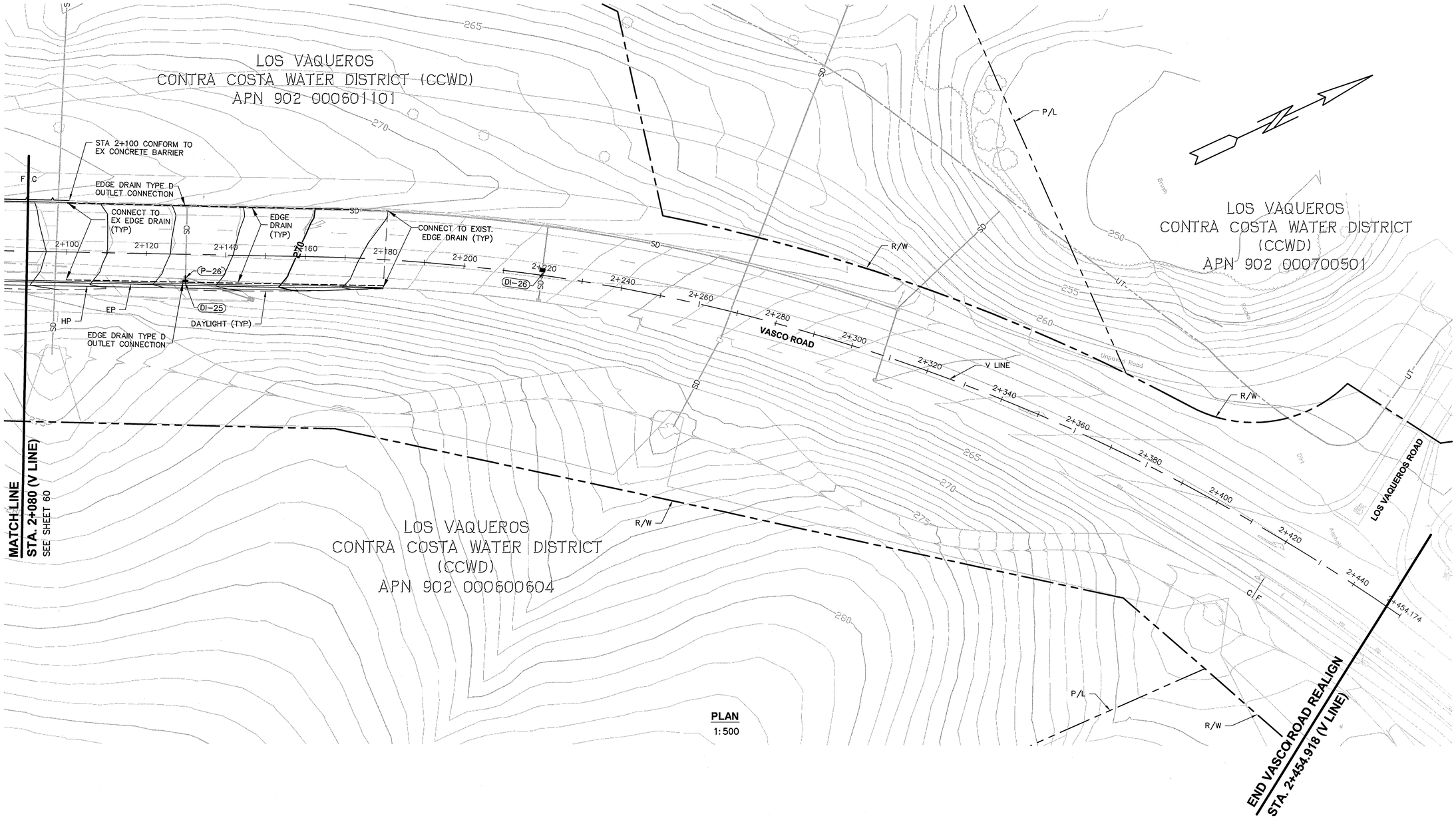
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



PLAN
1:500

NOTES:

1. SEE UTILITY PLAN FOR POTHOLE INFORMATION.
2. SEE DRAINAGE PROFILES AND DRAINAGE SCHEDULE FOR DRAINAGE FACILITY CONSTRUCTION AND DETAILS. DRAINAGE FACILITIES ARE DESIGNATE ON THE PLANS BY A DRAINAGE CALLOUT SYMBOL (P-00)

12.5 0 12.5 25 37.5
1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

NO.	DESCRIPTION	BY	DATE	APPV'D

REVISIONS

REGISTERED PROFESSIONAL ENGINEER STANLEY W. TUNG No. 39357 Exp.12/31/2009 CIVIL STATE OF CALIFORNIA

APPROVED

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

DRAINAGE AND GRADING PLAN

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: ASGHAR E. JAFFER
DATE: JAN 2008
SCALE: 1:500
DRAWN: JOSE ESTRADA/EX BAUTISTA
DESIGNED: L. JOHMAN, J.K. & MARVILLA B. DANFORTH
CHECKED: MOSES TENG

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 61 OF 145
FILE NO. U-357-6

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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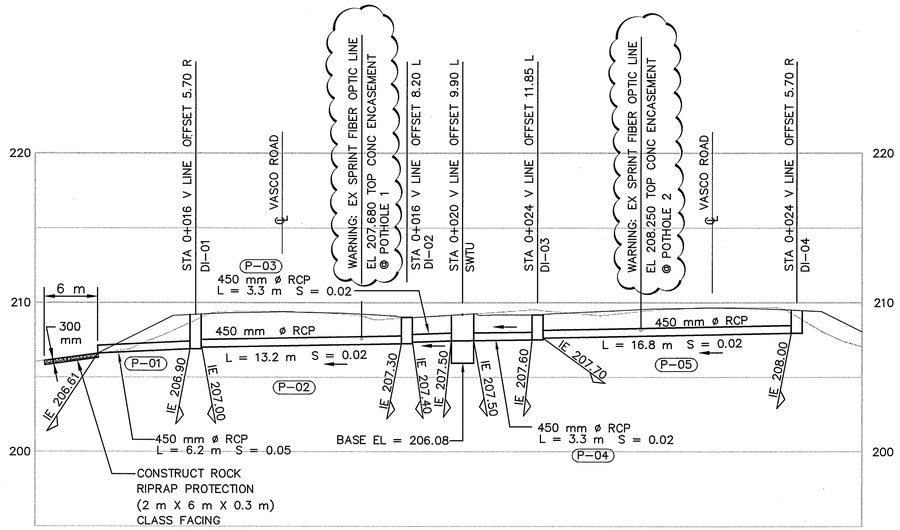
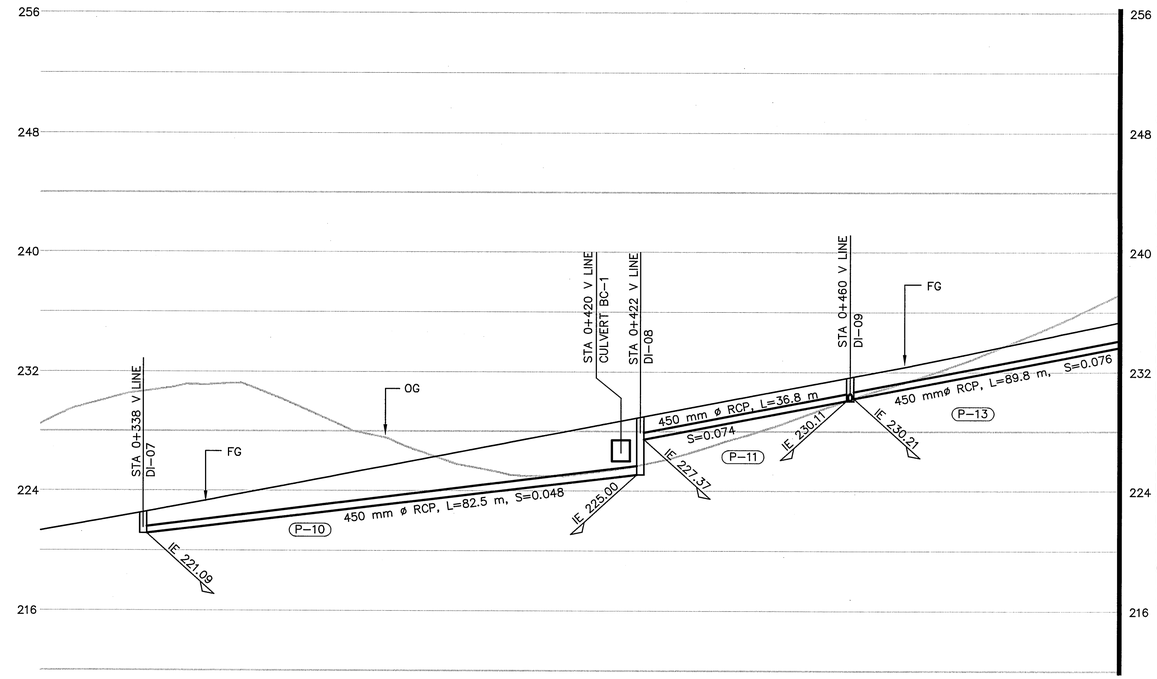
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



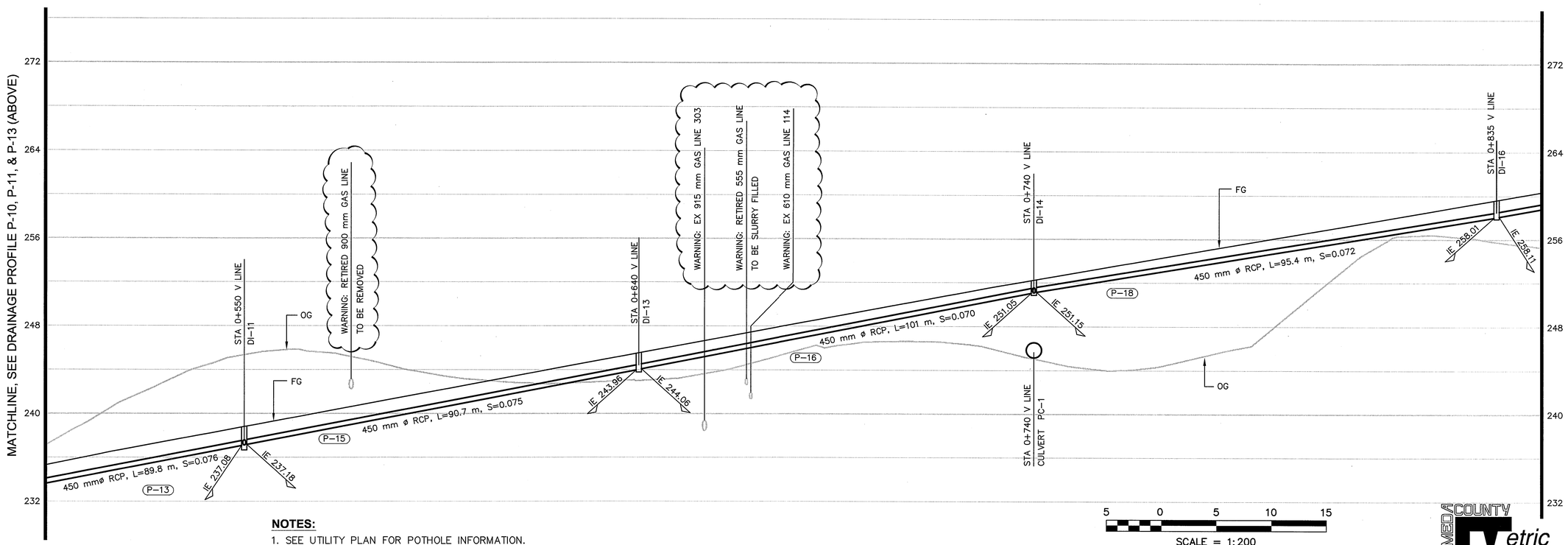
DRAINAGE PROFILE P-01, P-02, P-03, P-04 & P-05

SCALE: HOR=1:200; VER=1:200



DRAINAGE PROFILE P-10, P-11, & P-13

SCALE: HOR=1:500; VER=1:200



NOTES:

1. SEE UTILITY PLAN FOR POTHOLE INFORMATION.
2. SEE WATER QUALITY & HYDROMODIFICATION BASIN PLANS SHEET 68 FOR P-7, P-8 & P-9 PROFILE.

DRAINAGE PROFILE P-15, P-16, & P-18

SCALE: HOR=1:500; VER=1:200

5 0 5 10 15
SCALE = 1:200

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

MATCHLINE, SEE DRAINAGE PROFILE P-15, P-16 & P-18 (BELOW)

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPVD
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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. TUNG No. 39457 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

DRAINAGE PROFILES

DRAWN: ALEX BAUTISTA	APPROVAL RECOMMENDED: JAMES CHEN	SCALE: AS SHOWN	
DESIGNED: LARRY JOHMANN	APPROVAL RECOMMENDED: ASHOK K. SHAH	DATE: JAN 2008	
CHECKED: MOSES TSANG			

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 62 OF 145
FILE NO. U-357-6

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

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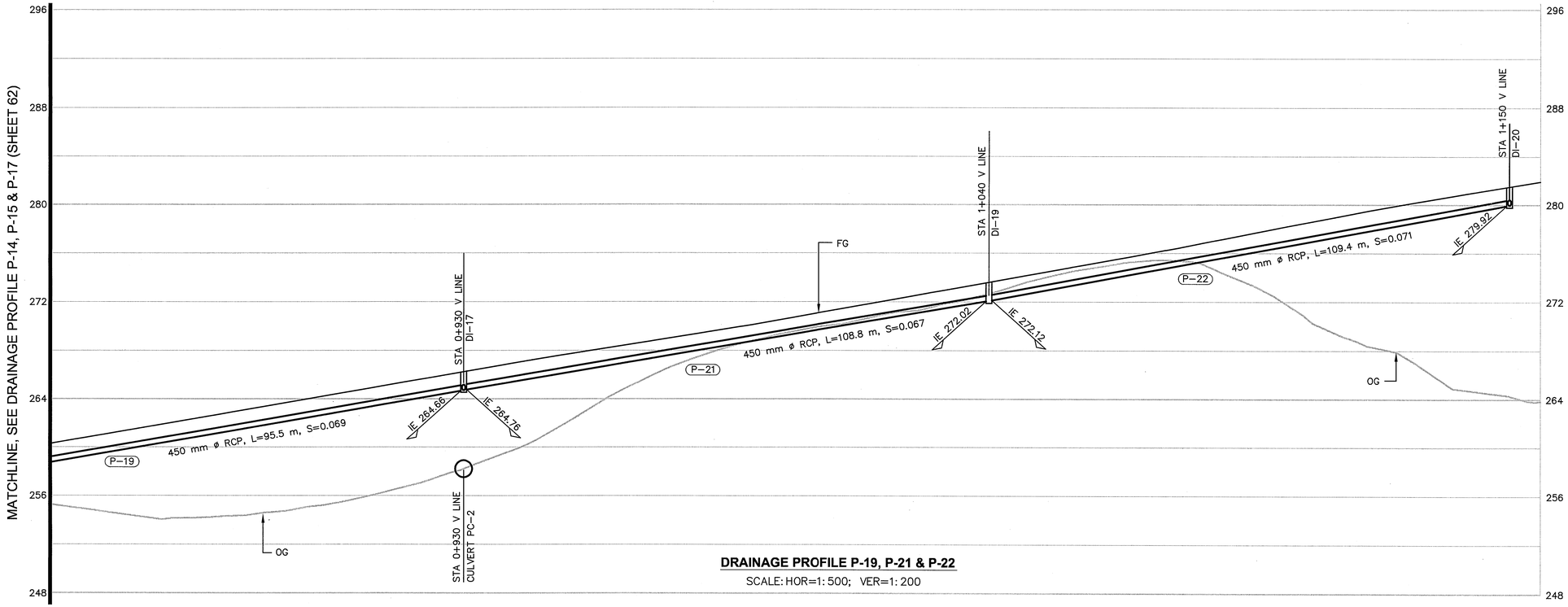
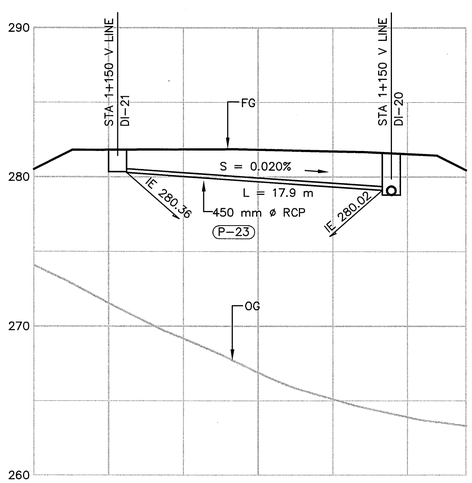
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		



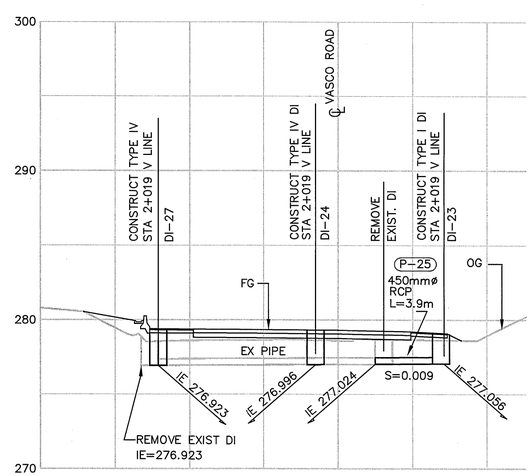
DRAINAGE PROFILE P-19, P-21 & P-22

SCALE: HOR=1:500; VER=1:200



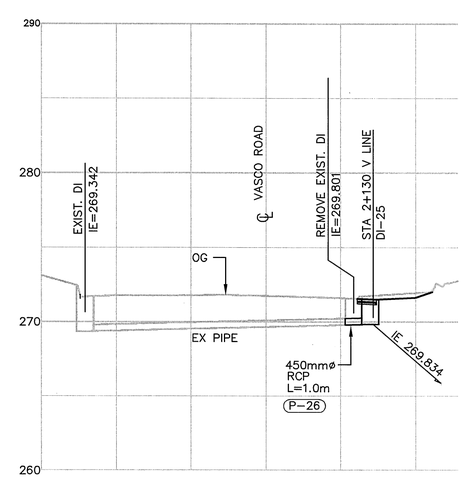
DRAINAGE PROFILE P-23 (STA 1+150 V LINE)

SCALE: HOR=1:200; VER=1:200



DRAINAGE PROFILE P-25 (STA 2+019 V LINE)

SCALE: HOR=1:200; VER=1:200



DRAINAGE PROFILE P-26 (STA 2+130 V LINE)

SCALE: HOR=1:200; VER=1:200

NOTES:

1. SEE UTILITY PLAN FOR POTHOLE INFORMATION.
2. SEE SHEET 44 FOR DRAINAGE PROFILE P-24.

5 0 5 10 15
SCALE = 1:200

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. LYNCH No. 35957 Exp. 12/31/2009 STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

DRAINAGE PROFILES

APPROVAL RECOMMENDED: JAMES CH
APPROVAL RECOMMENDED: LARRY JOHNMAN
DRAWN: ALEX BAUTISTA
DESIGNED:
CHECKED: MOSES TSANG
DATE: JAN 2008
SCALE: AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 63 OF 145
FILE NO. U-357-6

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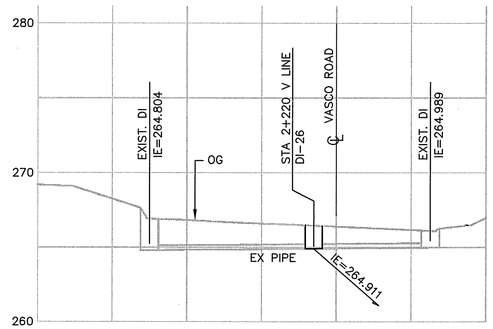
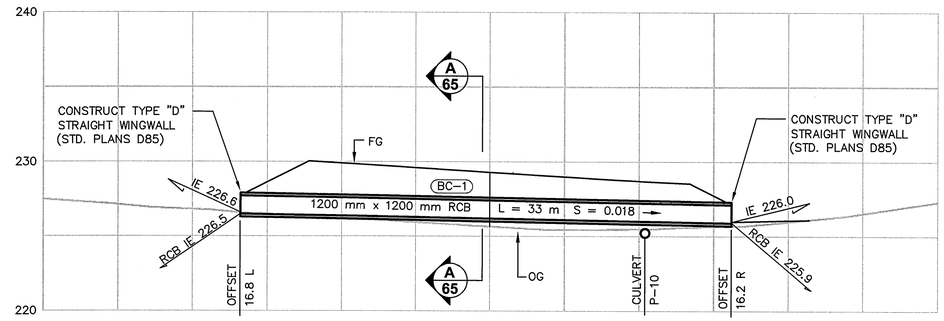
NOTES:

1. SEE UTILITY PLAN FOR POTHOLE INFORMATION.



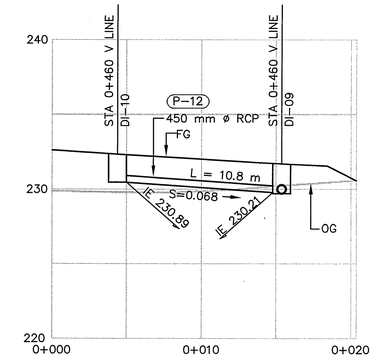
DRAINAGE INLET @ STA 2+220 V LINE

SCALE: HOR=1:200; VER=1:200



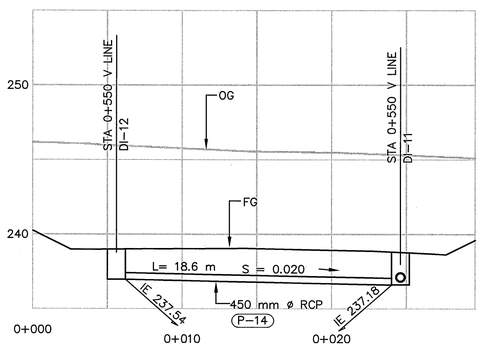
DRAINAGE PROFILE BC-1 (STA 0+420 V LINE)

SCALE: HOR=1:200; VER=1:200



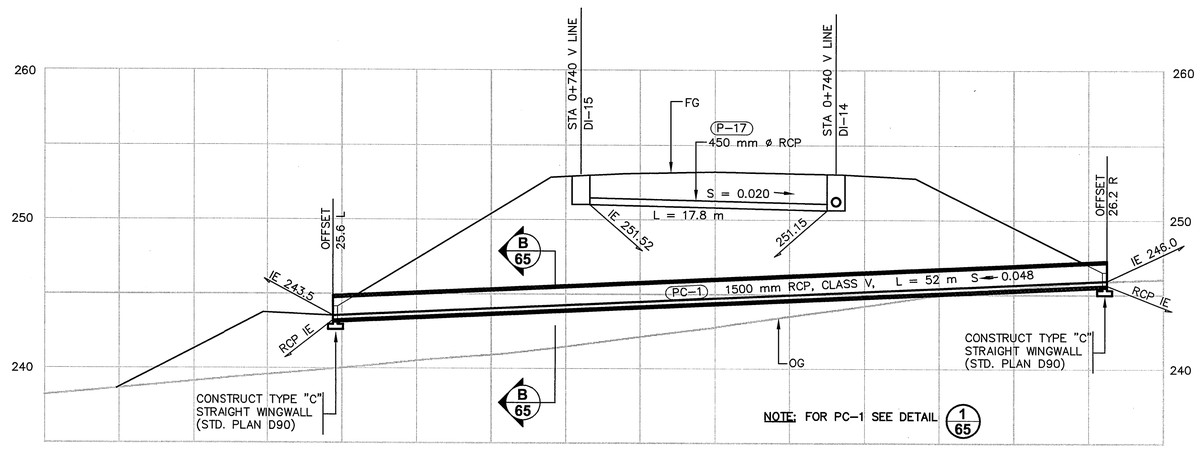
DRAINAGE PROFILE P-12 (STA 0+460 V LINE)

SCALE: HOR=1:200; VER=1:200



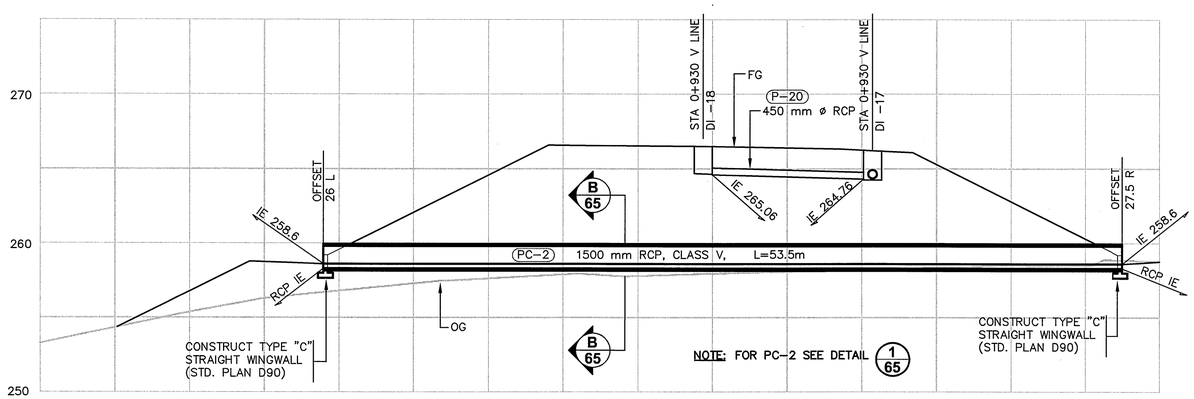
DRAINAGE PROFILE P-14 (STA 0+550 V LINE)

SCALE: HOR=1:200; VER=1:200



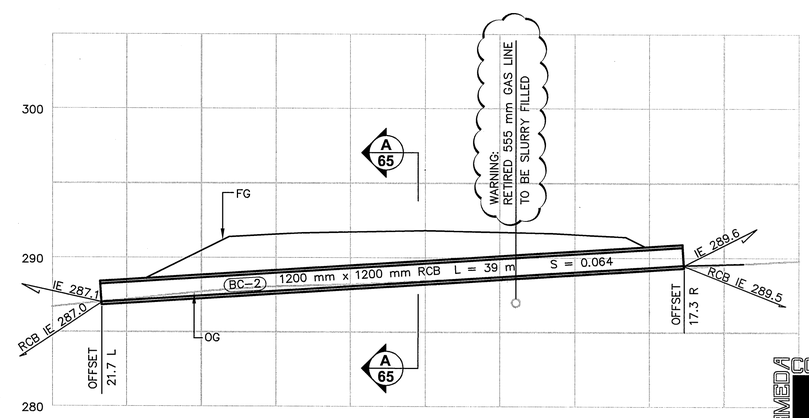
DRAINAGE PROFILE P-17 AND PC-1 (STA 0+740 V LINE)

SCALE: HOR=1:200; VER=1:200



DRAINAGE PROFILE P-20 AND PC-2 (STA 0+930 V LINE)

SCALE: HOR=1:200; VER=1:200



DRAINAGE PROFILE BC-2 (STA 1+350 V LINE)

SCALE: HOR=1:200; VER=1:200

5 0 5 10 15

SCALE = 1:200

ALAMEDA COUNTY Metric

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS

0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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REVISIONS

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APPROVED

REGISTERED PROFESSIONAL ENGINEER STANLEY W. TONGE No. 39521 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

DRAINAGE PROFILES

APPROVAL RECOMMENDED: JAMES CH
APPROVAL RECOMMENDED: STANLEY W. TONGE
SCALE: AS SHOWN
DATE: JAN 2008
DRAWN: ALEX BAUTISTA
DESIGNED: LARRY JONMANN
CHECKED: MOSES TSANG

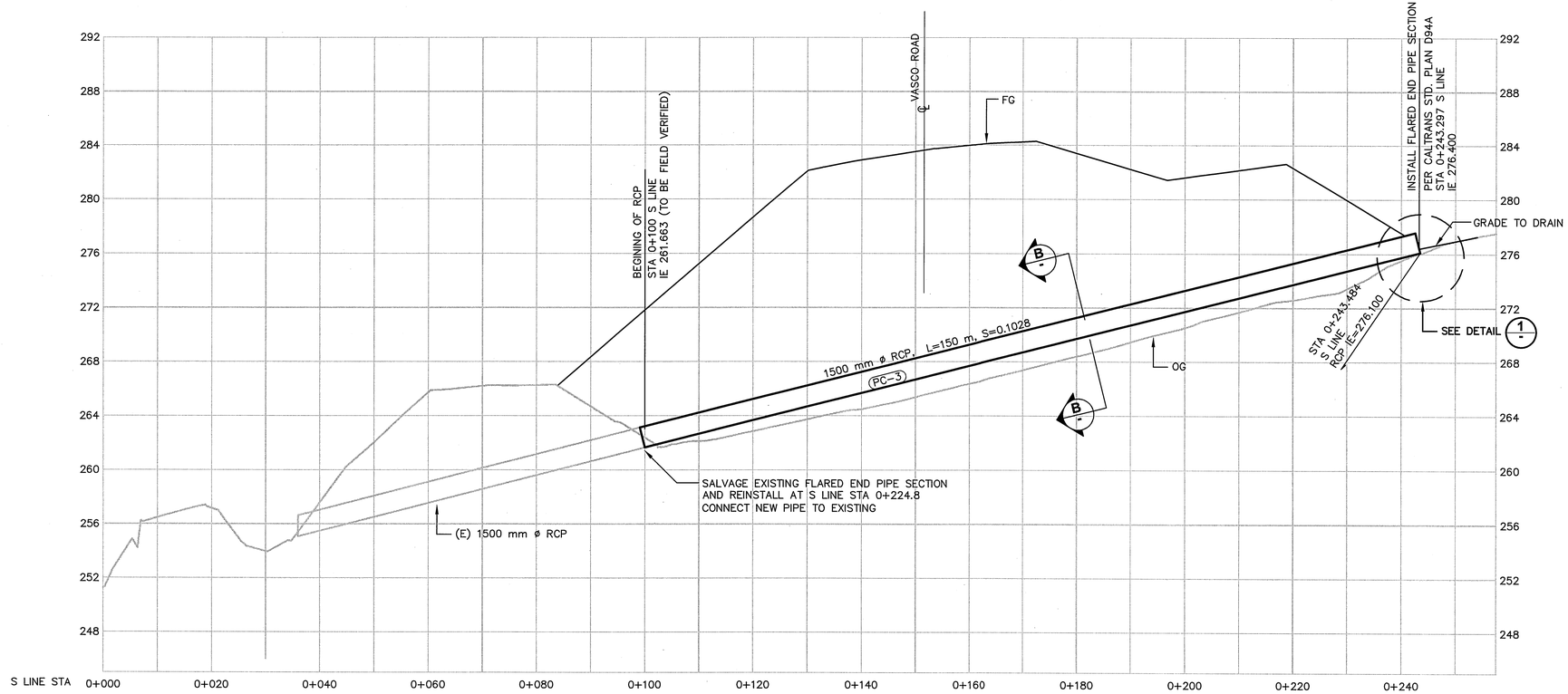
WORK ORDER NO. R23265

SPECIFICATION NO. 1903

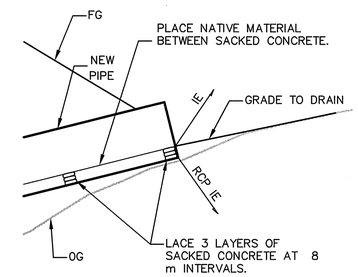
SHEET NO. 64 OF 145

FILE NO. U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



DRAINAGE PROFILE PC-3 (S LINE)
SCALE: HOR=1:500; VER=1:200



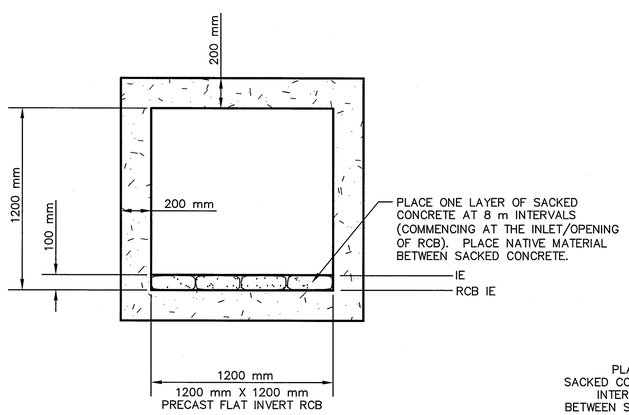
NOTE: THIS DETAIL SHALL ALSO APPLY TO PC-1 AND PC-2 ON SHEET 64

PIPE INLET WITH SACKED CONCRETE DETAIL 1

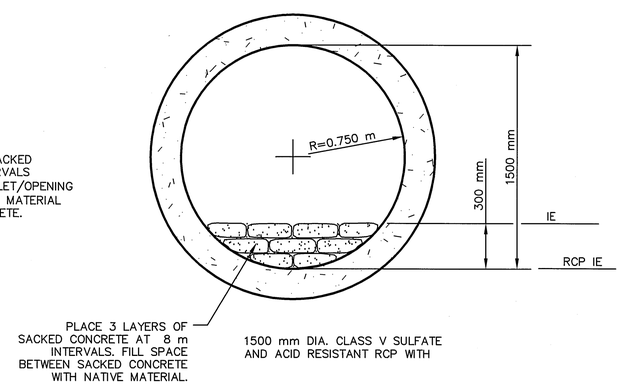
NO SCALE

NOTES:

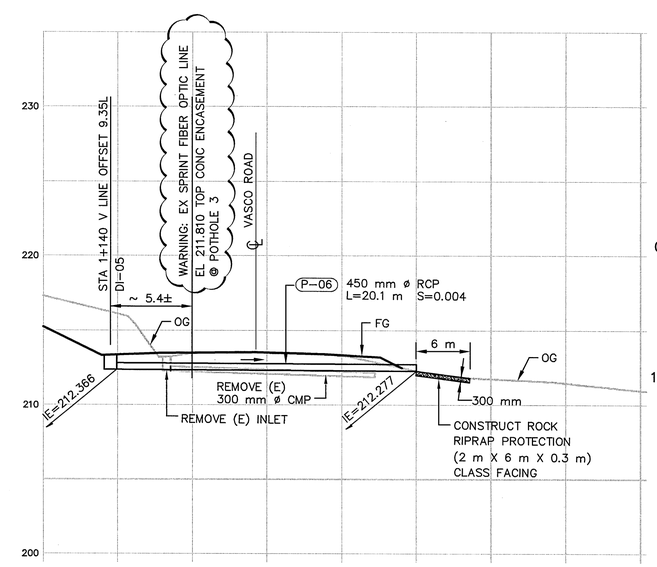
1. SEE UTILITY PLAN FOR POTHOLE INFORMATION.



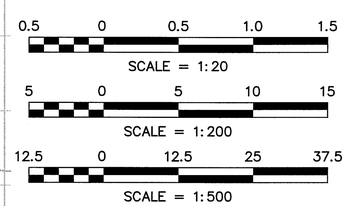
SECTION A
SCALE: 1:20



SECTION B
SCALE: 1:20



DRAINAGE PROFILE P-6 (STA 0+140 V LINE)
SCALE: HOR=1:200; VER=1:200



ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
2				
3				
4				
5				

APPROVED
REGISTERED PROFESSIONAL ENGINEER
STANLEY W. TUNG
No. 38457
Exp. 12/31/2009
CIVIL
STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

DRAINAGE PROFILE & SECTIONS

DRAWN: ALEX BAUTISTA	APPROVAL RECOMMENDED: James Chen	DATE: JAN 2008	SCALE: AS SHOWN
DESIGNED: LARRY JOHMANN	APPROVAL RECOMMENDED: Michael Carrington		
CHECKED: MOSES TSANG	APPROVED: Daniel Wu		

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 65 OF 145
FILE NO. U-357-6

N:\ROAD\r23265\r-Final Plan - Vasco Road 2007\Drainage-Flood Control drawings May 2008\R23265-drainage-prf.dwg 6-19-08 11:29:25 AM jamer

SPECIAL DRAINAGE STRUCTURE SCHEDULE

Id	Type	V Line Station	Offset to Center		Notes
ED-01	Energy Dissipator	0+265.93	45.76	R	
PR-01	Pipe Riser	0+286.93	21.27	R	
SWTU	Storm Water Treatment Unit	0+020	9.90	L	Construct right-handed CDS unit or equivalent. In/Out Invert = 207.5 Base El. = 206.8

DRAINAGE INLET SCHEDULE

Inlet Id	V Line Station	Offset to Inlet CL		Grate Type	Grate El.	Main Inlet FL El.	Lateral Inlet FL El.	Outlet FL El.	Notes	Type I (DG-308)	Type IV (DG-313)	Type VI (DG-309)	Type GDO
DI-01	0+016	5.70	R	DG-317	209.18	207.00	-	206.90	Construct Type I (DG-308, Curb Inlet Type 1) with outlet on back wall	1			
DI-02	0+016	8.20	L	DG-317	209.00	207.40	-	207.30	Remove Existing DI. Construct Type IV (DG-313, Inlet 3)		1		
DI-03	0+024	11.85	L	DG-317	209.26	207.70	-	207.60	Construct Type VI (DG-309, Curb Inlet Type 2)			1	
DI-04	0+024	5.70	R	DG-317	209.45	-	-	208.00	Construct Type I (DG-308, Curb Inlet Type 1)	1			
DI-05	0+140	9.35	L	DG-317	213.33	-	-	212.37	Remove Existing. DI. Construct Type IV (DG-313, Inlet Type 3) Add pipe segment P-06.		1		
DI-06	0+283.86	24.43	R				-		Construct Type				
DI-07	0+338	10.60	R	DG0317	222.54	221.09	-	220.99	Construct Type I (DG-308, Curb Inlet Type 1)with outlet on back	1			
DI-08	0+422	10.60	R	DG-317	228.82	227.37	-	225.00	Construct Type VI (DG-309, Curb Inlet Type 2)			1	
DI-09	0+460	10.60	R	DG-317	231.66	230.21	230.21	230.11	Construct Type VI (DG-309, Curb Inlet 2)			1	
DI-10	0+460	1.25	L	**600-12***	232.34	-	-	230.89	Construct Type IV (DG-313, Inlet Type 3)		1		
DI-11	0+550	10.60	R	DG-317	238.76	237.18	237.18	237.08	Construct Type VI (DG-309, Curb Inlet Type 2)			1	
DI-12	0+550	8.88	L	DG-317	238.99	-	-	237.54	Construct Type I (DG-308, Curb Inlet Type 1)	1			
DI-13	0+640	10.60	R	DG-317	245.51	244.06	-	243.96	Construct Type VI (DG-309, Curb Inlet Type 2)			1	
DI-14	0+740	10.60	R	DG-317	252.92	251.15	251.15	251.05	Construct Type VI (DG-309, Curb Inlet Type 2)			1	
DI-15	0+740	8.20	L	DG-317	252.97	-	-	251.52	Construct Type I DG-308, Curb Inlet Type 1)	1			
DI-16	0+835	10.60	R	DG-317	259.56	258.11	-	258.01	Construct Type VI (DG-309, Curb Inlet Type 2)			1	
DI-17	0+930	10.60	R	DG=317	266.21	264.76	264.76	264.66	Construct Type VI (DG-309, Curb Inlet Type 2)			1	
DI-18	0+930	1.25	L	**600-12***	266.51	-	-	265.06	Construct Type IV (DG-313, Inlet Type 3)		1		
DI-19	1+040	10.60	R	DG-317	273.57	272.12	-	272.02	Construct Type VI (DG-309, Curb Inlet Type 2)			1	
DI-20	1+150	10.60	R	DG-317	281.55	280.02	-	279.92	Construct Type VI (DG-309, Curb Inlet Type 2)			1	
DI-21	1+150	8.15	L	DG-317	281.81	-	-	280.36	Construct Type I (DG-308, Curb Inlet Type 1)	1			
DI-22	1+641	17.90	L	SDG-317	293.295	-	-	290.865	Remove Existing DI. Construct Type IV (DG-313, Inlet Type 3)		1		
DI-23	2+019	7.11	R	DG-317	279.100	-	-	277.052	Remove Existing DI. Construct Type I (DG-308, Curb Inlet Type 1)	1			
DI-24	2+019	1.50	L	**600-12***	279.318	277.000	-	276.992	Construct Type IV (DG-313, Inlet Type 3) with inlet on back wall		1		
DI-25	2+130	7.75	R	DG-317	271.513	-	-	269.815	Remove Existing DI. Construct Type 1 (DG-308, Curb Inlet Type 1)	1			
DI-26	2+220	1.15	L	**600-12***	266.459	264.915	-	264.907	Construct Type IV with inlet on back wall (DG-313, Inlet Type 3)		1		
DI-27	2+019	12.11	L	**DG-317**	279.383	276.927			Remove exist. DI, Construct Type IV (DG-313, Inlet Type 3) & trim exist pipe		1		
*** Standard Plans D77A**										8	8	10	0
									Total		**26**		

PIPE SCHEDULE

Pipe Id	Type: 450 mm CPP	Type: 450 mm CMP	Type: 450 mm RCP	Type: 600 mm RCP	Adjoining Structure Id: Lower	Adjoining Structure Id: Upper	Notes
	Approximate Length (m)						
P-01			6.2		-	DI-01	
P-02			13.2		DI-01	DI-02	Remove Existing Pipe. Beware of Underground Utility.
P-03			3.3		DI-02	SWTU	
P-04			3.3		SWTU	DI-03	
P-05			16.8		DI-03	DI-04	Beware of Underground Utility.
P-06			20.1		-	DI-05	
P-07				3.7	DI-06	PR-01	Class IV RCP; Pond Outfall Pipe
P-08				26.4	ED-01	DI-06	Class IV RCP; Pond Outfall Pipe
P-09		11.5			-	DI-07	Down Drain to Hydromodification Basin
P-10			82.5		DI-07	DI-08	STA. 0+412 TO 0+422 use Class V RCP
P-11			36.8		DI-08	DI-09	
P-12			10.8		DI-09	DI-10	
P-13			89.8		DI-09	DI-11	
P-14			18.6		DI-11	DI-12	
P-15			90.7		DI-11	DI-13	
P-16			101.0		DI-13	DI-14	
P-17			17.8		DI-14	DI-15	
P-18			95.4		DI-14	DI-16	
P-19			95.5		DI-16	DI-17	
P-20			10.8		DI-17	DI-18	
P-21			108.8		DI-17	DI-19	
P-22			109.4		DI-19	DI-20	
P-23			17.9		DI-20	DI-21	
P-24			77.9		-	DI-22	CLASS V RCP
P-25			3.9		DI-24	DI-23	
P-26			1.0		Ex. Pipe	DI-25	
P-T1	8.2				-	Ex. Pipe	
P-T2			5.6		Ex. Pipe	NEW INLET	INLET TYPE I
Total:	8.2	11.5	1,037.1	30.1			

PIPE CULVERT SCHEDULE
1500 mm Reinforced Concrete Pipe, Class V

Id	V Line Station	Left Offset	Invert El (m)	Right Offset	Invert El (m)	Length (m)	Notes
PC-1	0+740	25.6	243.5	26.2	246.0	51.8	Construct Type "C" Straight Wingwall (Std. Plans D90) at each end.
PC-2	0+930	26.1	258.6	27.5	258.6	53.6	Construct Type "C" Straight Wingwall (Std. Plans D90) at each end.
PC-3	1+177.51	53.1	276.4	29.8	276.1	150	Install salvaged flared end pipe section at end (pipe inlet).
------	------	12.8	272.7	15.3	272.5	25.6	Moorehead Cul-de-sac Culvert.
						255.4	**Total**

BOX CULVERT SCHEDULE
1200 mm x 1200 mm Reinforced Concrete Box

Id	V Line Station	Left Offset	Invert El (m)	Right Offset	Invert El (m)	Length (m)	Notes
BC-1	0+420	16.8	226.5	16.2	225.9	33.0	Construct Type "D" Straight Wingwall (Std. Plans D85) at each end.
BC-2	1+350	21.7	287.0	17.3	289.5	39.0	
						72	**Total**

ALAMEDA COUNTY Metric
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0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
2				
3				
4				
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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. TUNG No. 39557 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

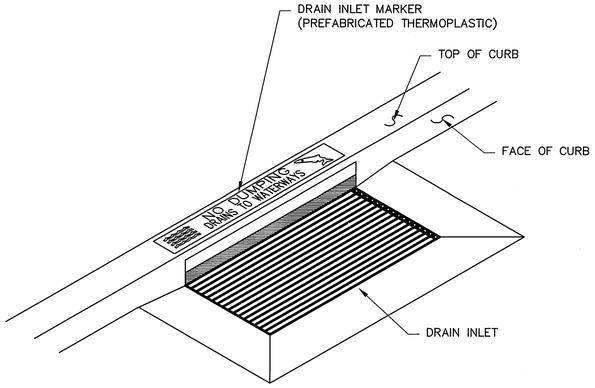
THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

DRAINAGE SCHEDULE

APPROVAL RECOMMENDED: JAMES GIBB
APPROVED/ACCEPTED: JOHN C. CULBERTSON
DATE: JAN 2008
SCALE: AS SHOWN
DRAWN: ALEX BAUTISTA
DESIGNED: LARRY JOHMANN
CHECKED: MOSES TSANG

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 66 OF 145
FILE NO. U-357-6

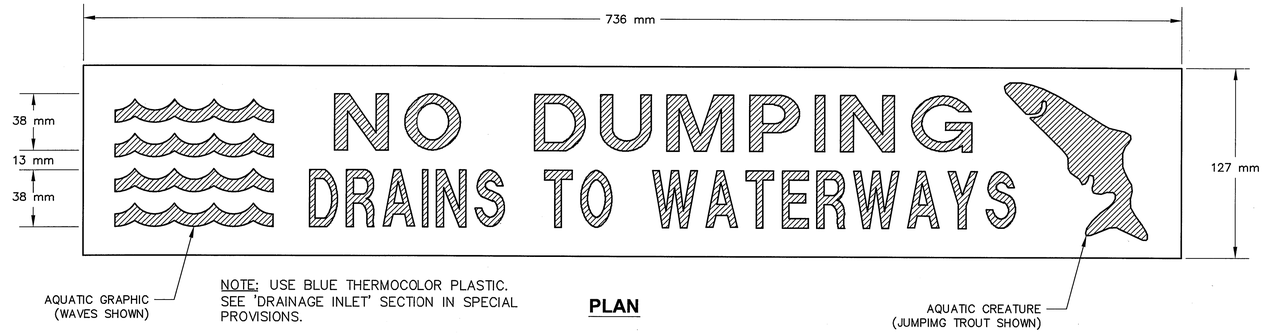
\\pwfile\drawings\ROAD\r23265\~Final Plan - Vasco Road 2007\Drainage-Flood Control drawings May 2008\R23265-DI-schedule.dwg 6-17-08 04:11:50 PM janer



PERSPECTIVE

DRAINAGE INLET MARKER ON DRAIN INLET (1 / -)

NO SCALE

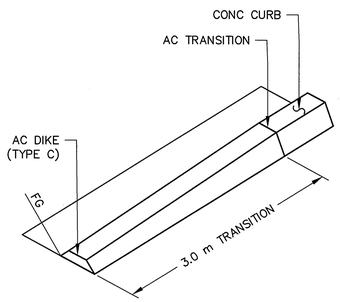


NOTE: USE BLUE THERMOCOLOR PLASTIC. SEE 'DRAINAGE INLET' SECTION IN SPECIAL PROVISIONS.

PLAN

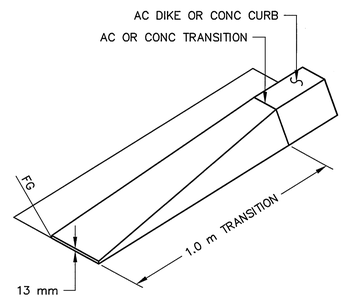
DRAINAGE INLET MARKING (PREFABRICATED THERMOPLASTIC) (2 / -)

NO SCALE



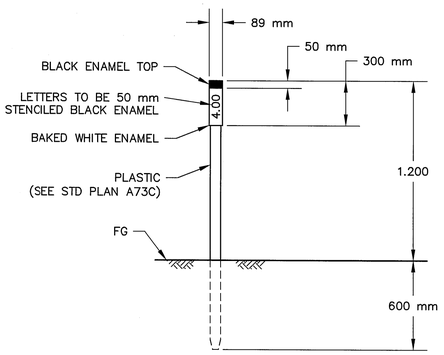
CONCRETE CURB TO AC DIKE (TYPE C) (4 / -)

NO SCALE



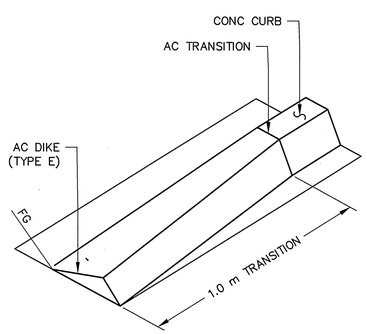
AC DIKE OR CONCRETE CURB TO FINISH GRADE (5 / -)

NO SCALE



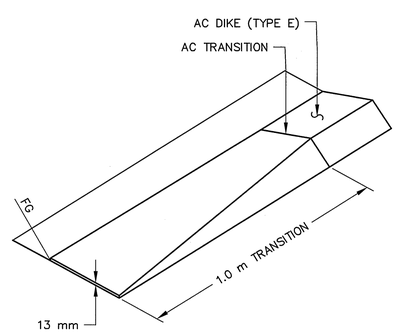
CULVERT/MILEPOST MARKER (3 / -)

NO SCALE



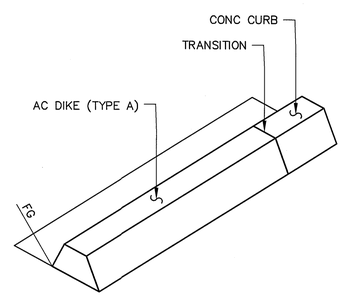
CONCRETE CURB TO AC DIKE (TYPE E) (6 / -)

NO SCALE



AC DIKE (TYPE E) TO FINISH GRADE (7 / -)

NO SCALE



CONTRETE CURB TO AC DIKE (TYPE A) (8 / -)

NO SCALE

CULVERT/MILEPOST MARKERS

DRAINAGE SYSTEM NO.	STATION V–LINE	OFFSET	POSTMILE	CULVERT MARKER EA.
DI–1	0+016.120	6.09 RT	3.05	1
DI–2	0+016.070	8.53 LT	3.05	1
DI–3	0+024.020	12.20 LT	3.06	1
DI–4	0+024.010	6.08 RT	3.06	1
DI–5	0+139.930	9.75 LT	3.13	1
DI–6	0+284.150	24.52 RT	3.22	1
EQ–1	0+286.930	14.19 RT	3.22 BK= 3.34 AH	1
PR–1*	0+287.220	20.94 RT	3.34	1
DI–7	0+337.950	10.10 RT	3.37	1
DI–8	0+422.06	10.98 RT	3.42	1
DI–9	0+460.000	10.98 RT	3.45	1
DI–10	0+460.050	1.82 LT	3.45	1
DI–11	0+550.000	10.98 RT	3.50	1
DI–12	0+550.000	9.23 LT	3.50	1
DI–13	0+640.000	10.98 RT	3.56	1
DI–14	0+740.000	10.98 RT	3.62	1
DI–15	0+740.000	8.54 LT	3.62	1
DI–16	0+835.000	10.98 RT	3.68	1
DI–17	0+930.010	11.08 RT	3.74	1
DI–18	0+930.050	1.82 LT	3.74	1
DI–19	1+040.000	10.98 RT	3.81	1
DI–20	1+150.000	10.98 RT	3.88	1
DI–21	1+150.000	8.54 LT	3.88	1
DI–22	1+641.010	18.00 LT	4.18	1
DI–23	2+018.860	7.32 RT	4.42	1
DI–24	2+018.830	0.94 LT	4.42	1
DI–25	2+129.980	7.32 RT	4.49	1
DI–26	2+219.700	0.83 LT	4.54	1
DI–27	2+018.820	13.13 LT	4.42	1
O–1	1+360.000	17.87 LT	4.01	2
O–2	1+360.000	16.06 RT	4.01	2
O–3	1+600.000	14.43 RT	4.16	2
CO–1	1+420.780	15.45 LT	4.04	2
CO–2	1+420.920	14.97 RT	4.04	2
CO–3	1+482.980	15.00 LT	4.08	2
CO–4	1+482.990	12.90 RT	4.08	2
CO–5	1+562.810	14.80 LT	4.13	2
CO–6	1+562.720	11.73 RT	4.13	2
CO–7	1+567.730	14.91 LT	4.14	2
CO–8	1+567.250	11.71 RT	4.14	2
V–1	1+540.530	15.13 LT	4.12	2
V–2	1+540.790	12.14 RT	4.12	2
			TOTAL	55

*CULVERT MARKER EQUATION: V LINE STA 0+286.93 AT PR–1
3.22 MM BACK = 3.34 MM AHEAD

ALAMEDA COUNTY Metric

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FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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4				
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APPROVED

REGISTERED PROFESSIONAL ENGINEER STANLEY W. TUCKER No. 39637 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

APPROVAL RECOMMENDED JAMES SWIFT

APPROVAL RECOMMENDED JAMES C. LAGRAS

DRAWN JANE KNIGHT

DESIGNED TONY TOVAR/ROD MANALO

CHECKED JAMES CHU

DATE JAN 2008

SCALE AS SHOWN

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

DRAINAGE DETAILS

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 67 OF 145

FILE NO. U-357-6

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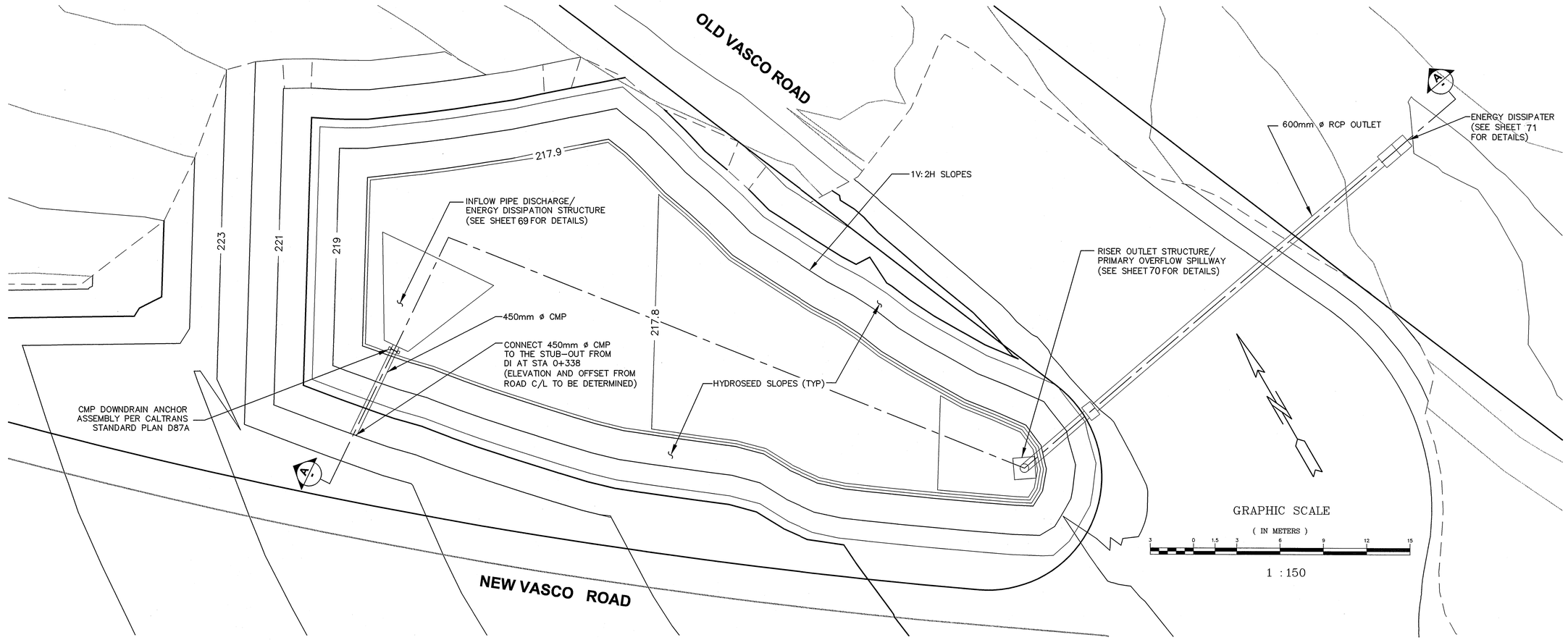
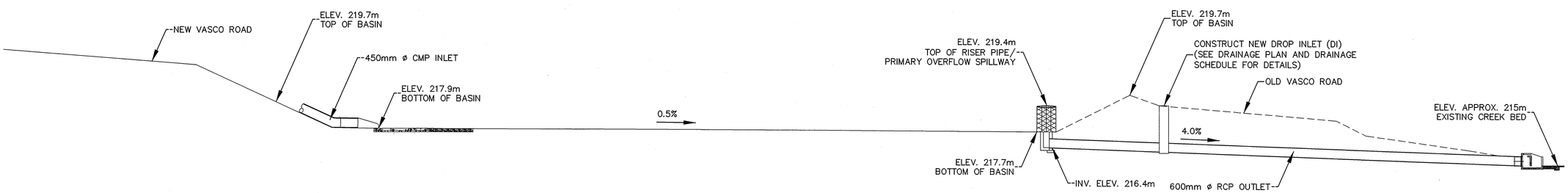
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



PLAN

SCALE: 1:150



INFLOW PIPE DISCHARGE/ ENERGY DISSIPATION STRUCTURE (1 / 69)

RISER OUTLET STRUCTURE PRIMARY OVERFLOW SPILLWAY (2 / 70)

IMPACT TYPE ENERGY DISSIPATER (3 / 71)

BASIN FLOW LINE SCHEMATIC SECTION (A / -)

NO SCALE

ALAMEDA COUNTY Metric

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
2				
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REVISIONS

REGISTERED PROFESSIONAL ENGINEER
PETER VANGARELLA
No. 28072
EXP. 3/31/08
CIVIL
STATE OF CALIFORNIA

Geosyntec consultants
4775 14th Street, Suite 400
Oakland, California 94612
(510) 839-3034
Fax (510) 839-3038

DRAWN: SASHA KHALAMEYZER
DESIGNED: CHRISTOPHER K. POTTER
CHECKED: CARLOS PALLEGOY
APPROVED: PETER VANGARELLA

FOR: LARRY SAHU
REVIEWED: MOSES TSANG
APPROVED: JASPREET SINGH

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
WATER QUALITY AND
HYDROMODIFICATION BASIN
PLAN AND PROFILE

DATE	SCALE
AUG 2007	AS SHOWN

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 68 OF 145

FILE NO. U-357-6

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS 0 50 mm

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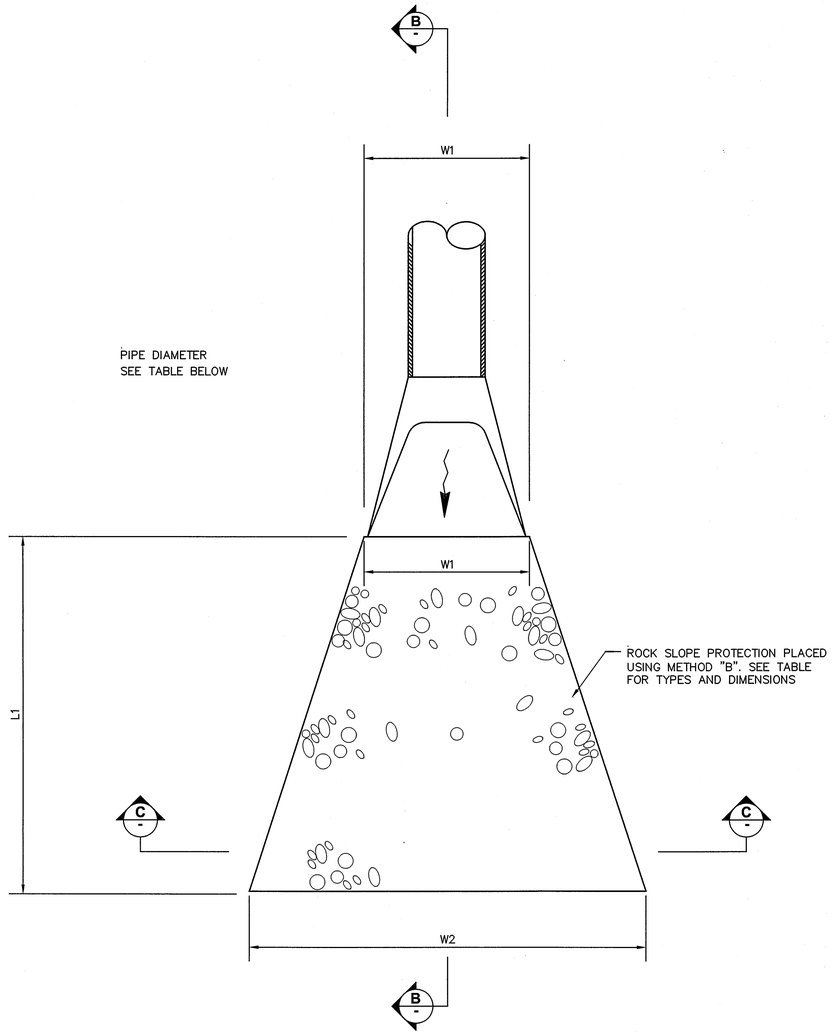
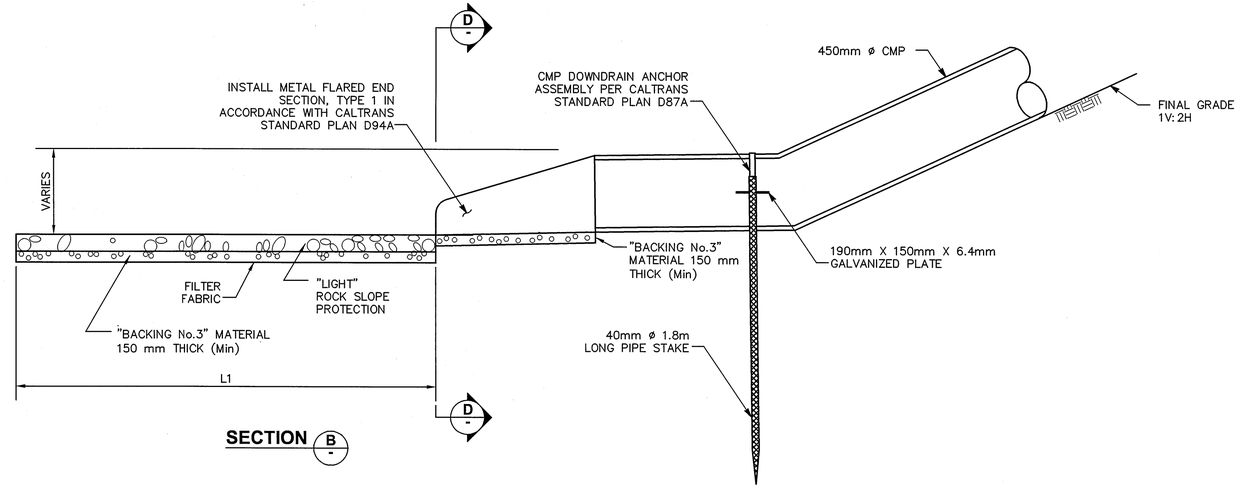
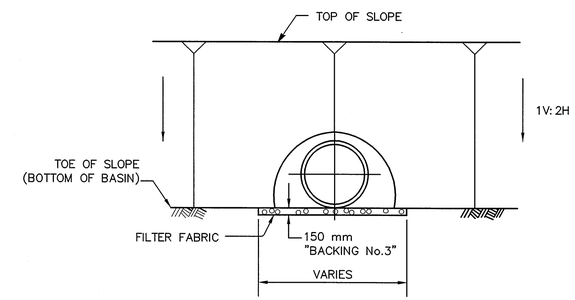
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		



PLAN



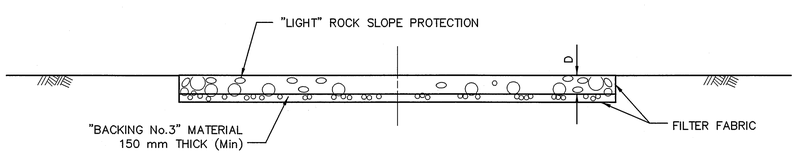
SECTION B



SECTION D

NOTE:

1. FILTER (ROCK SLOPE PROTECTION) FABRIC TO BE PLACED UNDER ALL ROCK SLOPE PROTECTION.



SECTION C

ROCK SLOPE PROTECTION DIMENSIONS TABLE

PIPE DIAMETER	WIDTH "W1"	WIDTH "W2"	LENGTH "L1"	ROCK SLOPE PROTECTION TYPE– "LIGHT"	ROCK SLOPE PROTECTION LAYER THICKNESS "D"	ROCK SLOPE PROTECTION TYPE– "BACKING No.3"	BACKING LAYER THICKNESS	LINING TYPE
450 mm	1.83 m	8.53 m	6.71 m		0.60 m		0.15 m	FILTER FABRIC

INFLOW PIPE DISCHARGE/ ENERGY DISSIPATION STRUCTURE 1

NOT TO SCALE

ALAMEDA COUNTY Metric

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

NO.	DESCRIPTION	BY	DATE	APPV'D

REVISIONS

REGISTERED PROFESSIONAL ENGINEER PETER MANGIRELLA No. 28072 EXP. 3/31/08 CIVIL STATE OF CALIFORNIA

Geosyntec consultants
475 14th Street, Suite 400
Oakland, California 94612
(510) 836-3034
Fax (510) 836-3036

DRAWN: SASHA KHALAMEYZER
CHECKED: GARY PARSONS
DESIGNED: CHRISTOPHER K. POTTER
PROJECT MANAGER: PETER MANGIRELLA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

WATER QUALITY AND HYDROMODIFICATION BASIN

INLET STRUCTURE

REVIEWED: LARRY WAHLER
REVIEWED: MOSES TSANG
APPROVED: ROY SCHUMANN
APPROVED: ALEX CHAN

DATE	SCALE
AUG 2007	AS SHOWN

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 69 OF 145

FILE NO. U-357-6

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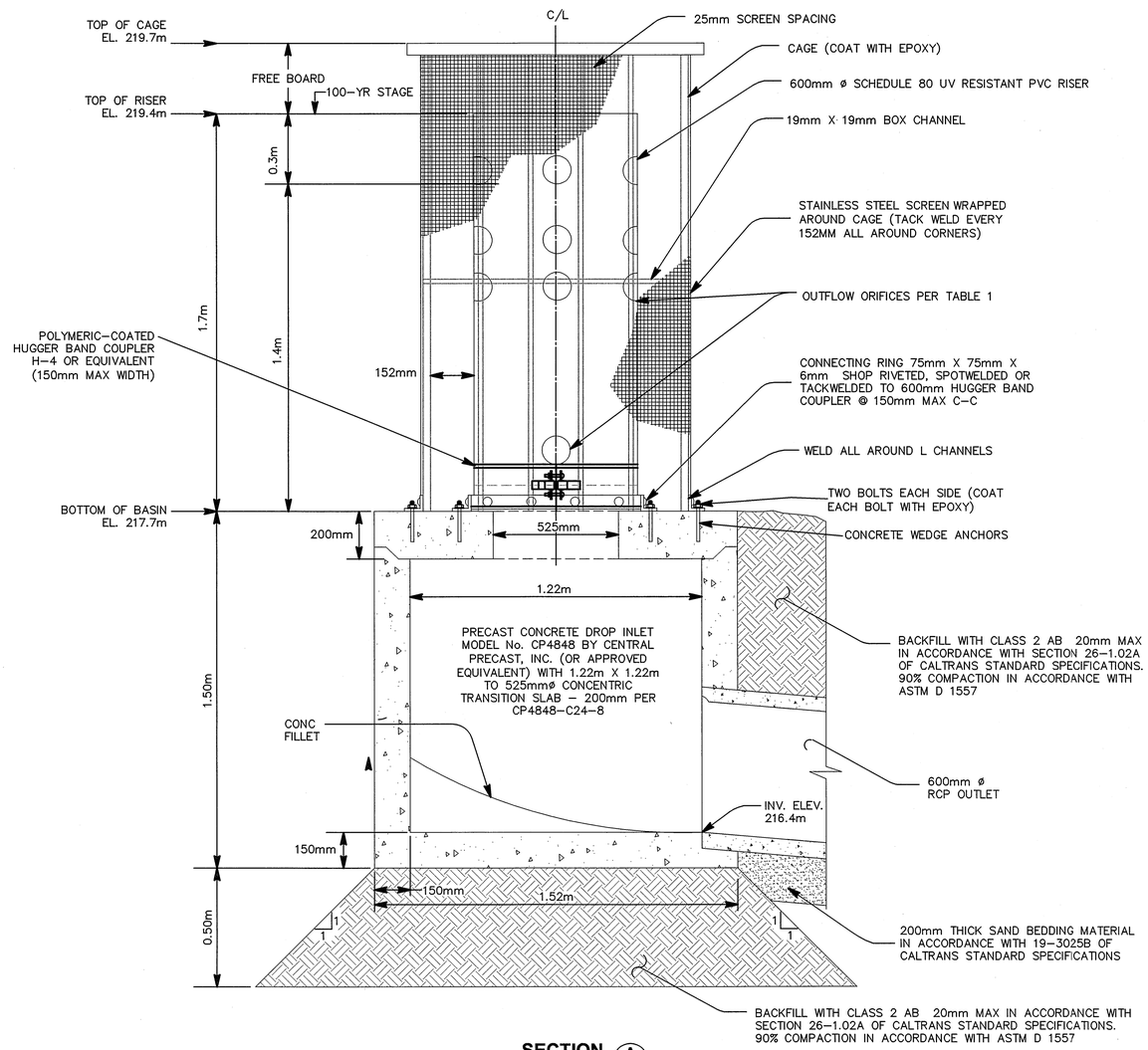


SECTION A

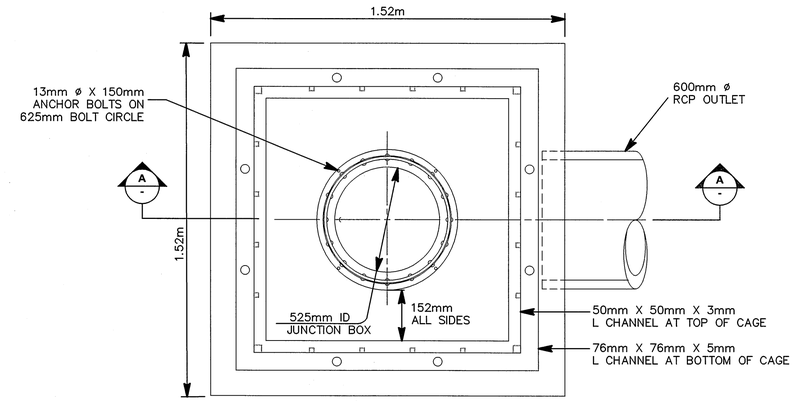
NOTE:

CAGE FRAME AND ANCHOR BOLTS SHALL BE COATED WITH CORROSION PREVENTIVE EPOXY SUCH AS:

1). FOX INDUSTRIES; FX-494 CORROSION RESISTANT EPOXY PRIMER AND COATING.
2). EPOXY SYSTEMS; #260 CORROSION RESISTANT EPOXY PRIMER AND COATING.
3). SHERWIN WILLIAMS; 235 DURA PLATE MULTI-PURPOSE EPOXY.
4). GRIGGS; DC733 EPOXY POLYAMINE COATING.
5). OR APPROVED EQUIVALENT.

APPLICATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

RISER OUTLET STRUCTURE/
PRIMARY OVERFLOW SPILLWAY (2)
NO SCALE



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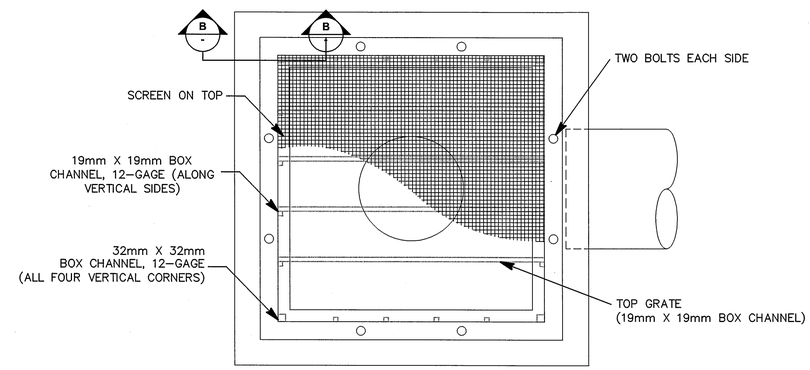
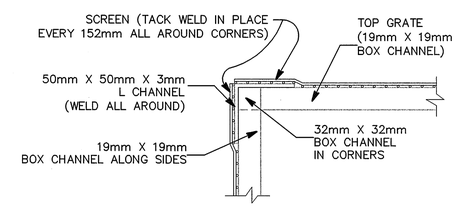


PLAN - SCREEN AND BOX CHANNELS



SECTION B

Table 1 ORIFICE SCHEDULE	
ELEVATION (m)	ORIFICE mm (COUNT O.C.)
219.70	TOP OF BASIN
219.40	TOP OF RISER
219.10	75 (8)
218.80	75 (8)
218.60	75 (8)
217.90	44.4 (1)
217.70	BOTTOM OF BASIN

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'D
1				
2				
3				
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REGISTERED PROFESSIONAL ENGINEER PETER MANGARELLA No. 28072 EXP. 3/31/08 CIVIL STATE OF CALIFORNIA

Geosyntec consultants
475 14th Street, Suite 400
Oakland, California 94612
(510) 836-3034
Fax (510) 836-3036

DRAWN: SASHA POMAMERTZEV
CHECKED: CHRISTOPHER KOTTKE
APPROVED: PETER MANGARELLA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
WATER QUALITY AND HYDROMODIFICATION BASIN
OUTLET STRUCTURE

REVIEWED: LARRY JOHMANN
REVIEWED: MOSES TSANG
APPROVED: PAUL KOMAREK

DATE	SCALE
AUG 2007	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 70 OF 145
FILE NO. U-357-6

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CONSTRUCTION			SURVEY		
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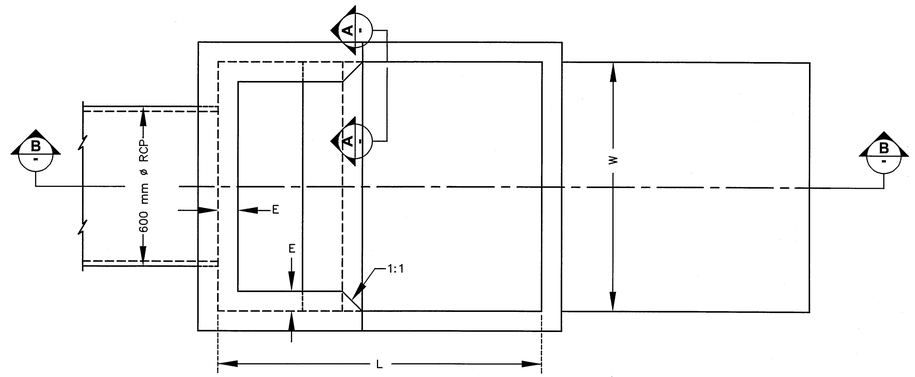
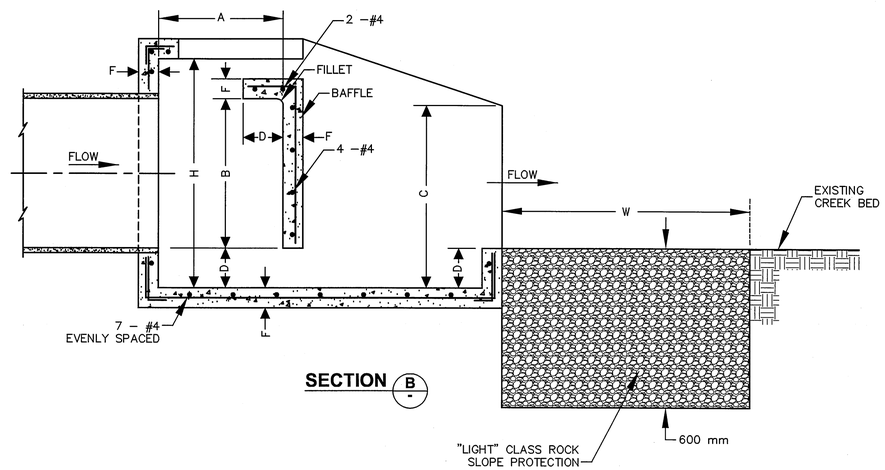
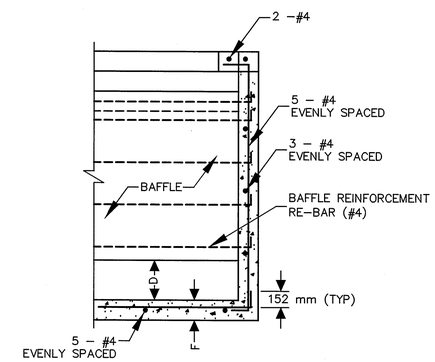


PLAN



SECTION B



SECTION A

DIMENSION	W	H	L	A	B	C	D	E	F
mm	1000	1000	1400	500	600	760	190	160	160

IMPACT TYPE ENERGY DISSIPATER (3)

NOT TO SCALE

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FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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REGISTERED PROFESSIONAL ENGINEER PETER MARGARELLA No. 20072 EXP. 3/31/08 CIVIL STATE OF CALIFORNIA

Geosyntec consultants
475 14th Street, Suite 400
Oakland, California 94612
(510) 836-3034
Fax (510) 836-3036

DRAWN: SARHA KHALIMEYZER
DESIGNED: CHRISTOPHER J. OTTER
CHECKED: PETER MARGARELLA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

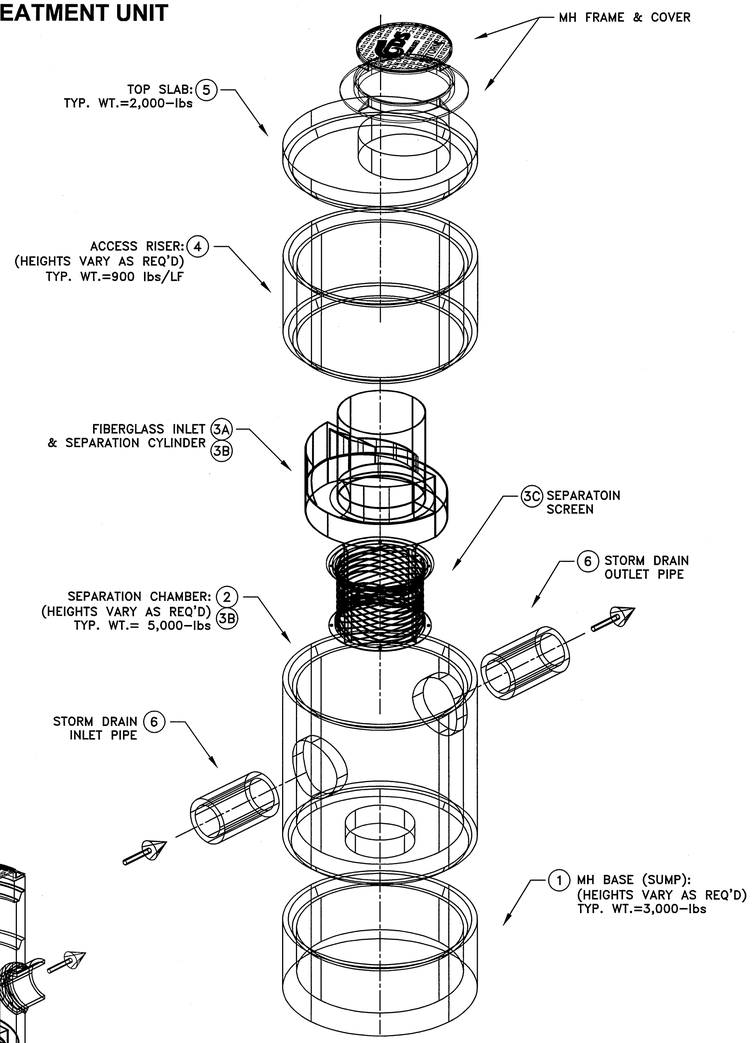
WATER QUALITY AND HYDROMODIFICATION BASIN ENERGY DISSIPATER

REVIEWED: LARRY JOHMANN
REVIEWED: MOSES TSANG
APPROVED: PETER MARGARELLA
APPROVED: JOSEPH C. CARRAS

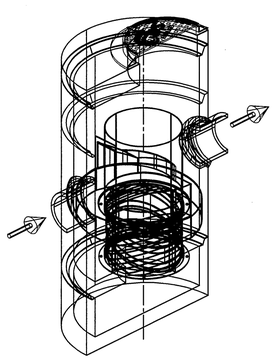
DATE AUG 2007	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 71 OF 145	
FILE NO. U-357-6	

CDS MODEL PMSU20_15_4

STORMWATER TREATMENT UNIT



CDS UNIT ASSEMBLY
(EXPLODED VIEW)
(RIGHT-HANDED UNIT SHOWN)



CDS UNIT ASSEMBLY
(CUTAWAY VIEW)
(RIGHT-HANDED UNIT SHOWN)

CDS INSTALLATION SPECIFICATIONS:

The CDS precast components will be delivered to the project site via a flatbed transport. The Contractor shall provide equipment at the site that has adequate lifting capacity to unload the precast components. The installation sequence requires the sump (MH BASE) to be installed first; separation slab properly aligned to match inlet and outlet pipes; installed CDS internals with separation screen and fiberglass inlet/separation cylinder fastened over the sump opening with the CDS inlet aligned with inlet (upstream) pipe; riser (separation chamber) sections; manhole cap with the appropriate traffic cover (to be placed in accordance with the manufacturer's specifications); and, if necessary, grade rings and/or grout to match grade.

General Finishing Requirements:

The precast components are delivered with lifting points cast into the various pieces. Where cavities were created for lifting, said cavities shall be mortar packed and finished to conform to the surface that would have otherwise existed had not the lifting point been cast. Where protruding rebar or fabricated cable loops have been used to provide for lifting, those protruding rebar or fabricated cable loops shall be cut flush with the normal finished surface. All work throughout the installation shall be done to a professional standard normally expected for the class of work being performed.

Excavation, Dewatering and Shoring:

The Contractor shall excavate, dewater and shore in accordance with the applicable project specifications for "Excavation and Back-fill", "Dewatering and Shoring", as provided by the Engineer to ensure a safe working environment.

IMPORTANT: AFTER EXCAVATION, AGGREGATE BASE COMPACTION AND PLACEMENT OF SUMP; PRIOR TO STACKING MANHOLE SECTIONS, CONFIRM DEPTH BELOW OUTLET PIPE INVERT TO INSIDE BOTTOM OF SUMP (4'-6" TYPICAL).
(SEE SITE SPECIFIC DRAWINGS FOR ACTUAL DIMENSION)!

1. Sump Installation

Subgrade shall be established as shown on the Drawings. The subgrade material shall be composed to withstand a design loading of 2,000 pounds per square foot (psf). It is recommended that the hole be over-excavated a minimum of 6" and backfilled with aggregate base and compacted to 95% to make subgrade. The backfill material around the base, shall be placed and compacted achieving a minimum compaction of 90% (or as specified by the Engineer) when tested by ASTM Designation A1557. Backfill material may be a "minimal compaction effort" material such as 3/8" pea gravel or clean fill sand. The Contractor may use native material if the material provides an allowable bearing pressure of 2,000 pounds per square foot and if approved by the Engineer. Said native material shall be compacted to a minimum relative density of 90% when tested by ASTM Designation A1557 or as specified by the Engineer. The sump shall be placed on the compacted base, elevation confirmed, plumbed and aligned to ensure that the balance of the unit will be properly aligned and situated as assembly of the rest of the precast pieces proceed.

2. Separation Chamber Installation

Prior to placement of the separation chamber riser section(s), the contractor shall place a layer of 3/4" inch x 1 1/2" inch minimum mastic rope or rubber gasket (delivered with the CDS Unit) on the tongue joint of the sump section. The separation chamber riser shall be set with the proper orientation to the storm drain to ensure correct alignment of the separation screen and fiberglass inlet.

3. Internal Component Assembly & Installation (if required)

A. Connect the fiberglass separation cylinder/inlet to the top of the expanded metal separation screen & fasten with the provided 1/2" diameter 316 stainless steel fasteners.

IMPORTANT: FOR PROPER UNIT OPERATION, THE EXPANDED METAL SEPARATION SCREEN SHALL BE PLACED WITH THE GREEN PAINTED FLANGE FACING UP FOR RIGHT-HANDED UNITS; FOR LEFT-HANDED CONFIGURED UNITS, REVERSE SCREEN ORIENTATION (RED FLANGE SHALL FACE UP).

B. Set the separation chamber assembly and fiberglass inlet to attain the correct alignment & to center the screen over the sump opening and fasten inlet flange to manhole with a minimum of 6x 3/8" diameter expansion anchors.

C. Fasten screen flange to separation slab with 4x 1/2" diameter expansion anchors.

4. Access Riser Installation

Prior to placement of additional riser sections, the Contractor shall place a layer of mastic rope or rubber gasket on the tongue joint of the separation chamber and subsequent riser sections in the manner described previously. At this point, the Contractor may elect to backfill in accordance with the following specification, or the Contractor may elect to continue with the installation of the top cap, as the Contractor deems appropriate. The backfill material around the separation chamber and the barrel sections shall be placed and compacted achieving a minimum compaction of 90% when tested by ASTM Designation A1557. Backfill material may be a "minimal compaction effort" material such as 3/8" pea gravel or clean fill sand. The Contractor may use native material if approved by the Engineer if said material provides an allowable bearing pressure of 2,000 pounds per square foot. Said native material shall be compacted to a minimum relative density of 90% when tested by ASTM Designation A1557.

5. Manhole Top Slab Installation

Upon installation of the barrel sections, the concrete manhole cap is installed. Mastic rope or rubber gasket is placed on the tongue and groove joint as described previously. The top cap is oriented in a fashion similar to the separation slab with the clear opening as centered as possible over the separation cylinder/screen assembly and sump opening unless indicated otherwise on the unit drawings. Use grout and manhole rings as necessary to match final grade and install the provided manhole frame and cover as shown on the drawings.

6. Storm Drain Connection

Seal storm drain inlet and outlet pipes to CDS unit using flexible gaskets or grout-fill manhole openings in accordance with project specifications.

7. Backfill

Upon completion of the CDS unit installation, the excavation shall be backfilled with an aggregate base material, pea gravel, or controlled density cement backfill. The aggregate base material shall be compacted to a minimum of 90% compaction or as specified by the Engineer when tested by ASTM Designation A1557, unless the CDS unit is to receive traffic loadings whereby the following conditions shall apply: For CDS units installed in a travel way, the upper two feet of backfill shall be aggregate base compacted to 95% (minimum).

8. Cleanout

Contractor shall remove all material and debris from the inlet, separation chamber and sump upon completion of installation.

PROJECT NAME: STORMWATER TREATMENT UNIT CDS MODEL PMSU20_15_4

LOCATION:

REFERENCE INFORMATION AND NOTES:

1. CDS UNIT PRECAST SECTIONS MANUFACTURED IN ACCORDANCE WITH ASTM C-478.
2. RIGHT-HAND UNIT SHOWN - ALSO AVAILABLE IN MIRROR IMAGE OF THAT SHOWN (LEFT-HANDED CONFIGURATION).
3. JOINT AND OTHER SECTION DETAILS PER LOCAL PRECASTERS SPECIFIC MANUFACTURING CAPACITIES. CONTACT CDS FOR LOCAL PRECASTER SPECIFIC DWGS.

CDS TECHNOLOGIES™
ENGINEERING HEALTHY WATERWAYS

NO.	DATE	DESCRIPTION
		REVISIONS

SCALE (FULL SIZE): AS INDICATED
SCALE (HALF SIZE):
DRAWN BY:
DESIGNED BY:
CHECKED BY:
ISSUE DATE:
PROJECT NO.:
SHEET TITLE: PMSU20_15_4
SHEET NUMBER:

REVISIONS

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6				
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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 39457 Exp.12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY
THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
STORMWATER TREATMENT UNIT

DRAWN: ALEX BAUTISTA	APPROVAL RECOMMENDED: JAMES SAUNDERS	
DESIGNED: LARRY JOHMANN	APPROVAL RECOMMENDED: STANLEY W. FUNG, P.E. 39457	DATE: JAN 2008
CHECKED: MOSES TSANG		SCALE: AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 72 OF 145
FILE NO. U-357-6

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS 0 50 mm

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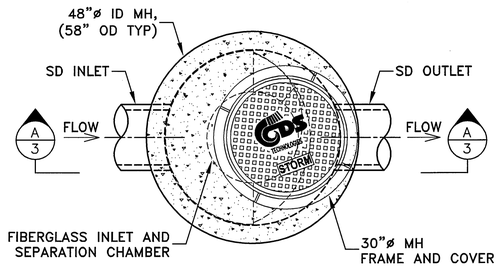
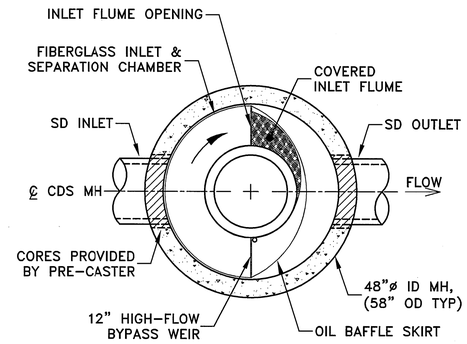
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

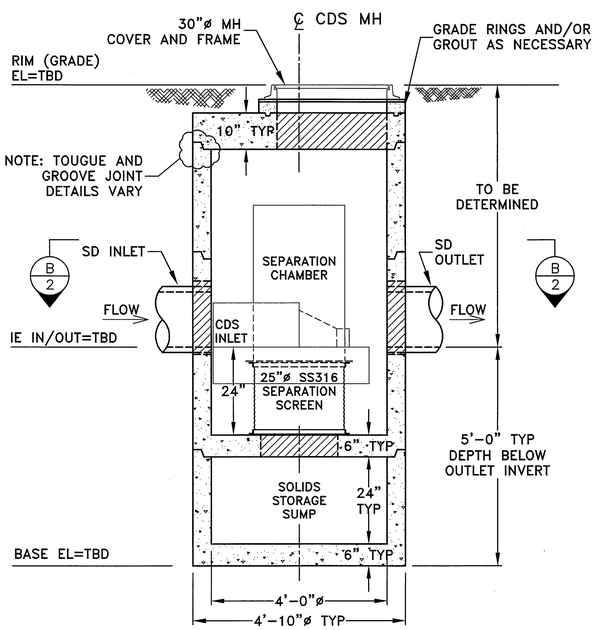
CDS MODEL PMSU20_15_4
STORMWATER TREATMENT UNIT



PLAN VIEW
(SCALE: 1"=18")



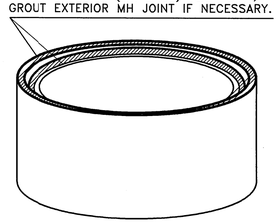
SECTION B–B
(SCALE: 1"=18")



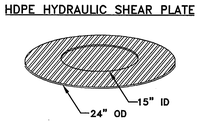
SECTION A–A
ELEVATION VIEW
(SCALE: 1"=18")

INSTALLATION INSTRUCTIONS & MISCELLANEOUS NOTES
(NOT TO SCALE)

PLACE 2x CONTINUOUS BANDS OF MASTIC ROPE ON VERTICAL AND HORIZONTAL SURFACES OF SUMP (MH BASE) T&G JOINT; GROUT EXTERIOR MH JOINT IF NECESSARY.



HDPE HYDRAULIC SHEAR PLATE



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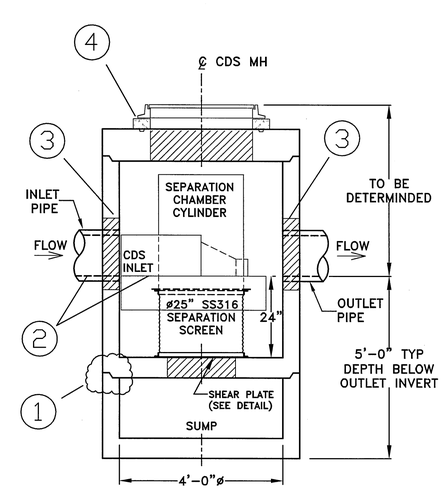

CONSTRUCTION NOTES:

1. APPLY BUTYL MASTIC TO SEAL JOINTS OF MANHOLE STRUCTURE (SEE INSET DETAIL DRAWING); APPLY GROUT TO EXTERIOR T&G JOINTS OF MH SECTIONS TO COMPLETELY SEAL IF NECESSARY (UNIT MUST BE WATER TIGHT, HOLDING WATER UP TO FLOWLINE INVERT, MINIMUM).
2. BEFORE PLACING MORE PRECAST COMPONENTS OR BACKFILLING, ENSURE FIBERGLASS INLET AND PIPE INLET INVERTS MATCH ELEVATIONS (CERTAIN JOBS WILL HAVE INLET PIPE HIGHER THAN FIBERGLASS INLET).
3. GROUT PIPE CONNECTIONS TO SEAL JOINT.
4. USE GRADE RINGS AND/OR GROUT TO MATCH FINISHED GRADE; SEAL AS NECESSARY.

GENERAL NOTES:

A. CDS UNIT TYPICALLY DELIVERED WITH THE STAINLESS STEEL SCREEN, FIBERGLASS SEPARATION CYLINDER/INLET AND OIL BAFFLE PRE-INSTALLED; FOR FIELD INSTALLATIONS, THE GREEN PAINTED SCREEN FLANGE SHALL FACE UP FOR RIGHT-HANDED UNITS AND RED FLANGE FACES UP FOR LEFT-HANDED CONFIGURATIONS.
B. HDPE HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING CLEANING.
C. INSTALL CDS UNIT PER CDS INSTALLATION SPECIFICATIONS.
D. ~~CONTRACTOR TO BE EQUIPPED TO LIFT THE HEAVIEST SECTION.~~

REFERENCE INFORMATION AND NOTES:

1. CDS UNIT PRECAST SECTIONS MANUFACTURED IN ACCORDANCE WITH ASTM C-478.
2. RIGHT-HAND UNIT SHOWN - ALSO AVAILABLE IN MIRROR IMAGE OF THAT SHOWN (LEFT-HANDED CONFIGURATION).
3. JOINT AND OTHER SECTION DETAILS PER LOCAL PRECASTERS SPECIFIC MANUFACTURING CAPACITIES. CONTACT CDS FOR LOCAL PRECASTER SPECIFIC DWGS.

PROJECT NAME:

LOCATION:

STORMWATER TREATMENT UNIT CDS MODEL PMSU20_15_4

CDS TECHNOLOGIES™
ENGINEERING HEALTHY WATERWAYS

NO.	DATE	DESCRIPTION
		REVISIONS

SCALE (FULL SIZE): AS INDICATED
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CHECKED BY:
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PROJECT NO.:

SHEET TITLE:
PMSU20_15_4

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REVISIONS

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APPROVED
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
No. 39857
Exp. 12/31/2009
CIVIL

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY
THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
STORMWATER TREATMENT UNIT

DRAWN: ALEX BAUTISTA	APPROVAL RECOMMENDED: JAMES SY	APPROVAL RECOMMENDED: JAMES SY	SCALE: AS SHOWN
DESIGNED: LARRY JOHMANN			
CHECKED: MOSES TSANG			

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 73 OF 145
FILE NO. U-357-6

CONSTRUCTION	REVIEWED BY:	DATE:	SURVEY	REVIEWED BY:	DATE:
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		

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FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		

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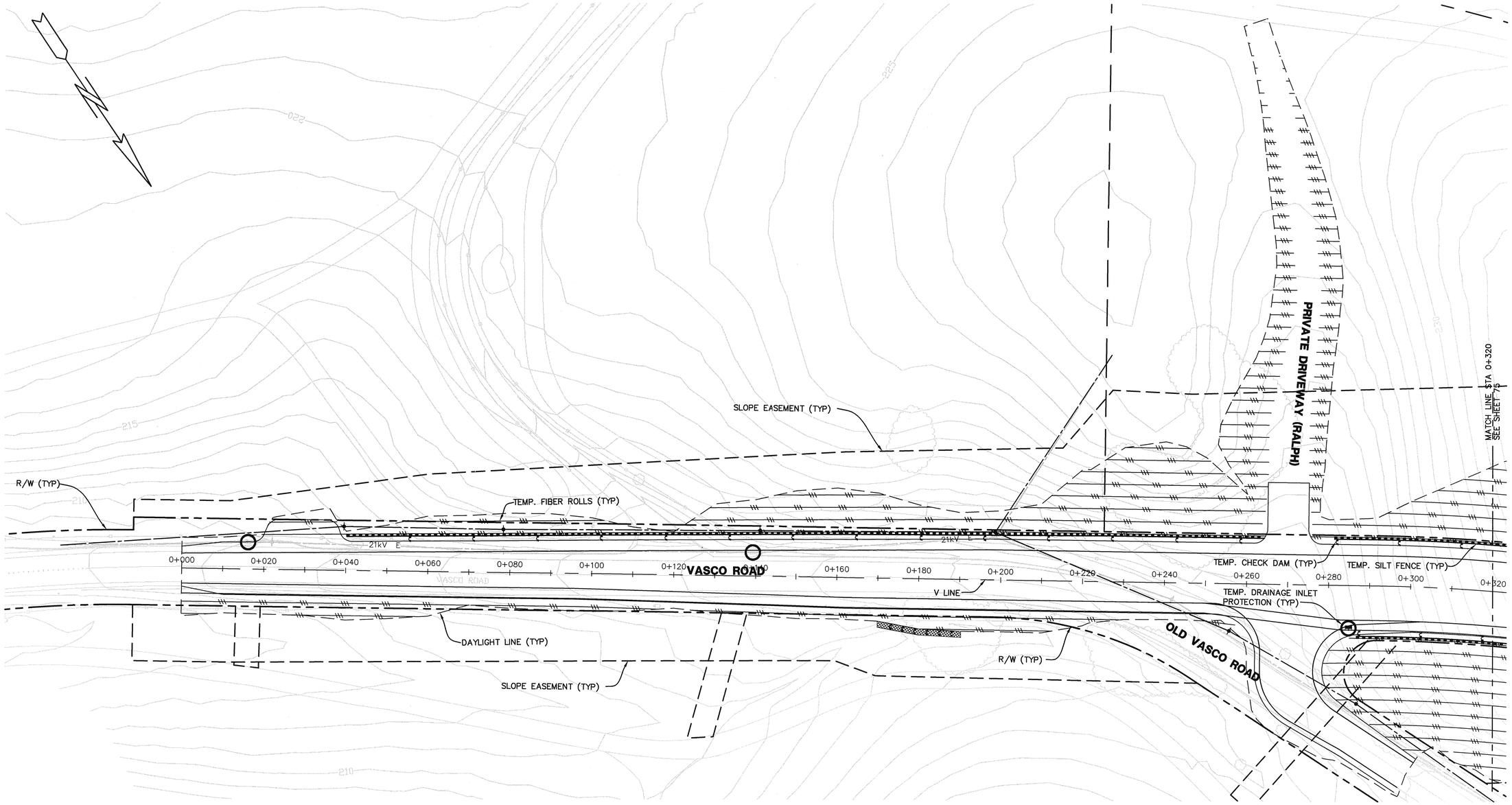

PLAN
1:500

LEGEND:

- TEMPORARY EROSION CONTROL BLANKET PER CALTRANS T54
- TEMPORARY FIBER ROLL PER CALTRANS NSP H51 & T56
- (DIRECTION OF FLOW) TEMPORARY CHECK DAM PER CALTRANS T57
- TEMPORARY SILT FENCE PER CALTRANS T51
- TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1, 3A, 4A, & 5) PER CALTRANS

NOTES:

1. AREAS RECEIVING EROSION CONTROL BLANKET WILL ALSO RECEIVE HYDROSEEDING.
2. THIS SHEET ACCURATE FOR TEMPORARY WATER POLLUTION CONTROL ONLY.
3. TEMPORARY WATER POLLUTION CONTROL MEASURES MAY BE ADJUSTED TO MEET FIELD CONDITIONS AS DIRECTED BY RESIDENT ENGINEER.

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS 0 50 mm
ORIGINAL SCALE IS IN METERS

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS E. HILLELAND No. C 54200 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238
Moffatt & Nichol

DRAWN: N. KOSAVASHI
DESIGNED: S. NG
CHECKED: T. HILLELAND
APPROVED: B. ZAEN

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

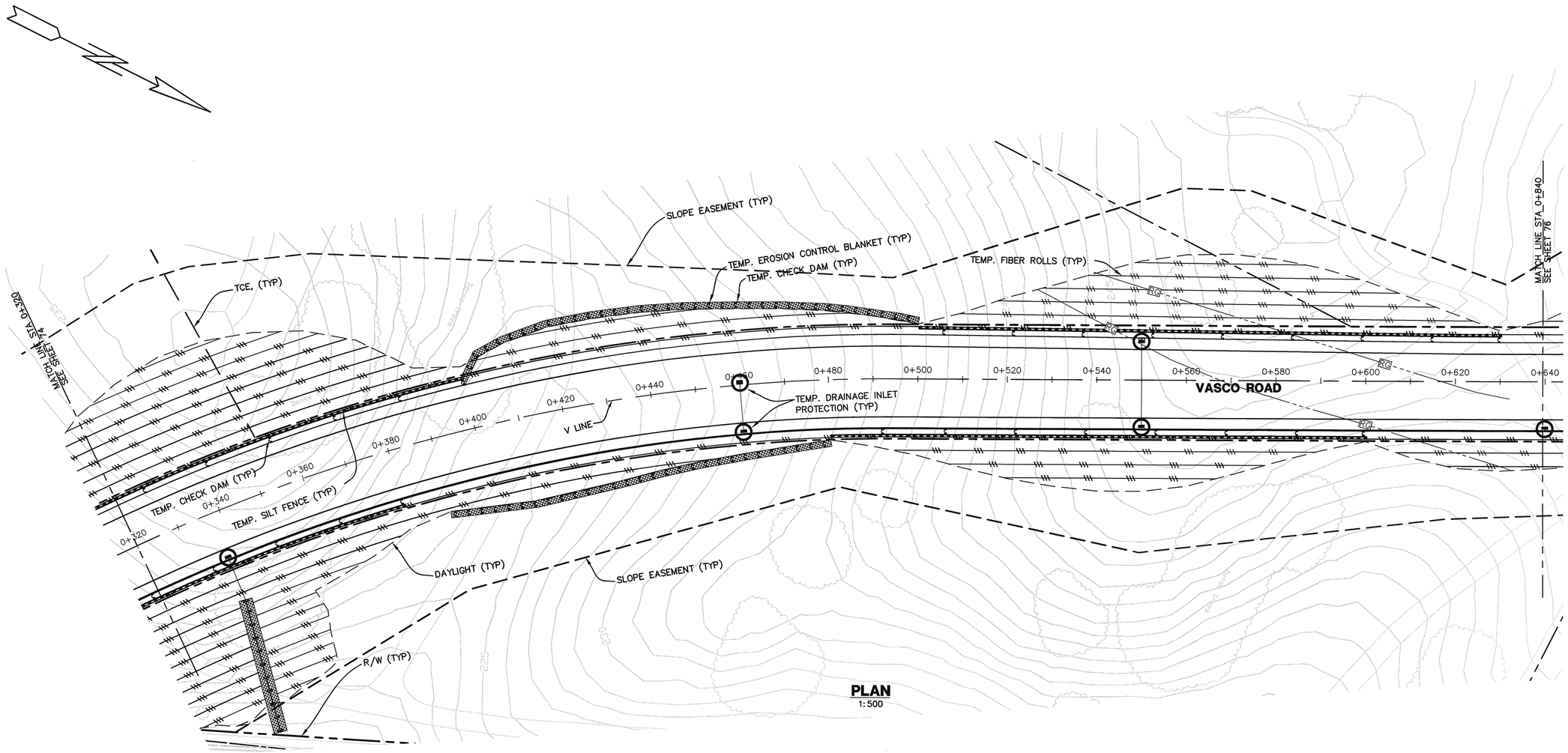
REVIEWED: BOND 196
REVIEWED: JAMES CHU
RECOMMENDED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY WATER POLLUTION CONTROL PLANS

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 74 OF 145
FILE NO. U-357-6

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		



PLAN
1:500

LEGEND:

- TEMPORARY EROSION CONTROL BLANKET PER CALTRANS T54
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12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS S. HILLESLAND C 54200 CIVIL STATE OF CALIFORNIA 6-24-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 845-1238
Moffatt & Nichol

DRAWN: N. KOBAYASHI
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND 16
REVIEWED: JAMES ORO
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY WATER POLLUTION CONTROL PLANS

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 75 OF 145
FILE NO. U-357-6

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MAINTENANCE			TRAFFIC		
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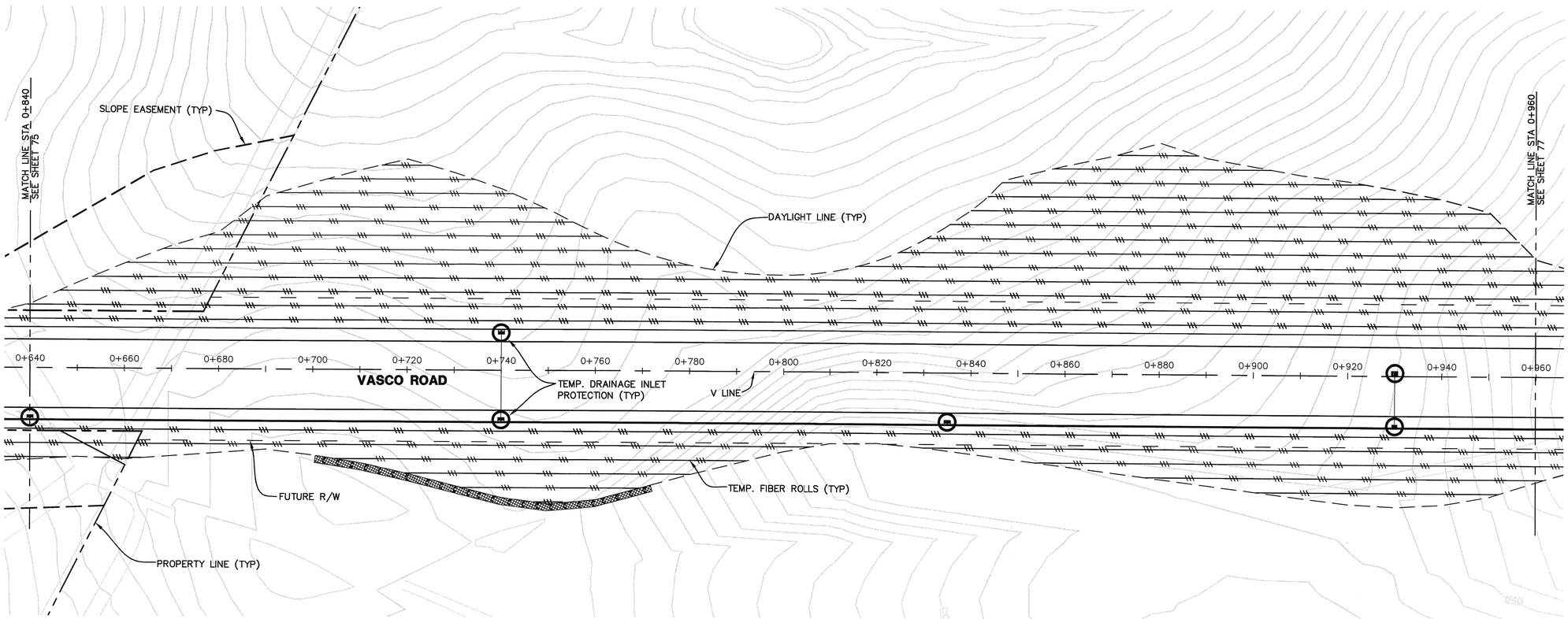

PLAN
1:500

LEGEND:

- TEMPORARY EROSION CONTROL BLANKET PER CALTRANS T54
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12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS J. HILLESLAND No. C-54200 CIVIL STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238
Moffatt & Nichol

CHECKED: T. HILLESLAND
APPROVED: B. ZASIN
DRAWN: N. KOBAYASHI
DESIGNED: S. HO

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND RIZ
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY WATER POLLUTION CONTROL PLANS

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 76 OF 145	
FILE NO. U-357-6	

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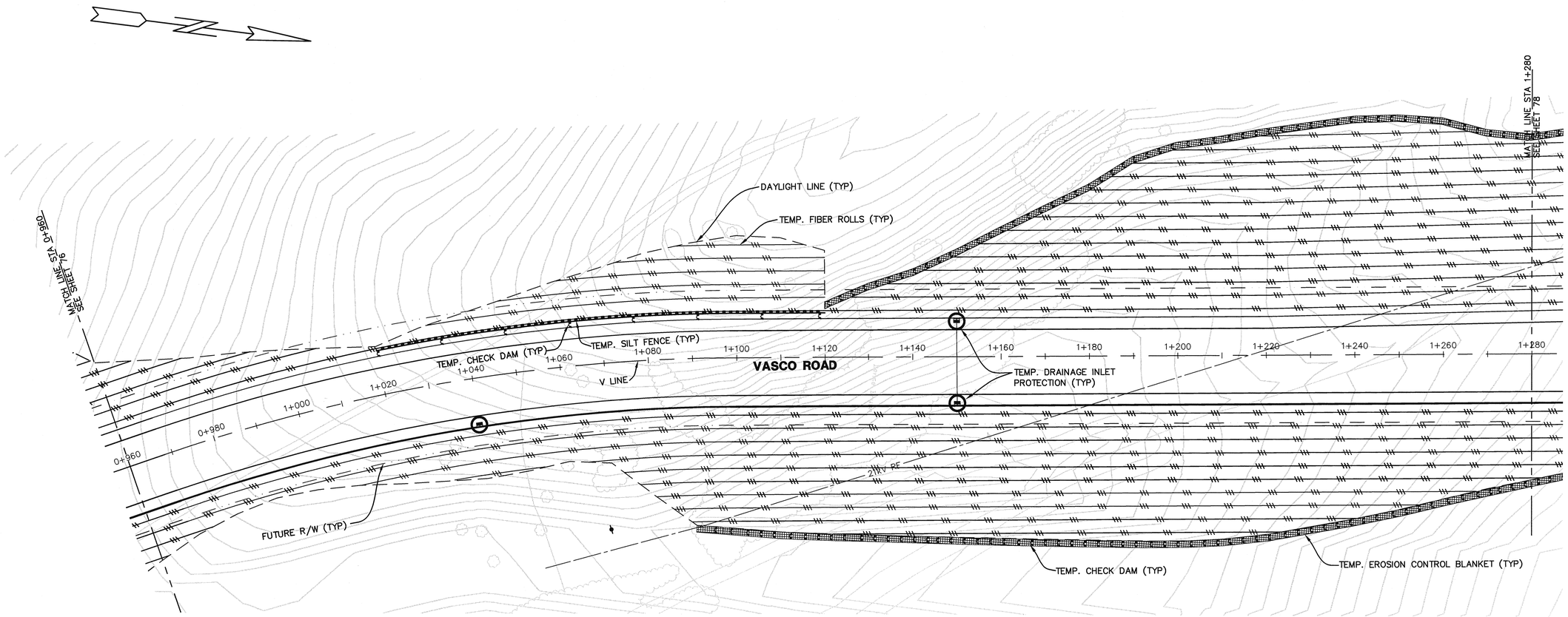
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



PLAN
1:500

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12.5 0 12.5 25 37.5
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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS C. HILLES AND CIVIL STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

Moffatt & Nichol

DRAWN: N. KOBAYASHI
DESIGNED: S. HO
CHECKED: T. HILLES, AND
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY WATER POLLUTION CONTROL PLANS

REVIEWED: ARTHUR C. CARRERA
BOND NO.
REVIEWED: JAMES CHU
APPROVAL RECOMMENDED: STANLEY W. FUNG

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 77 OF 145	
FILE NO. U-357-6	

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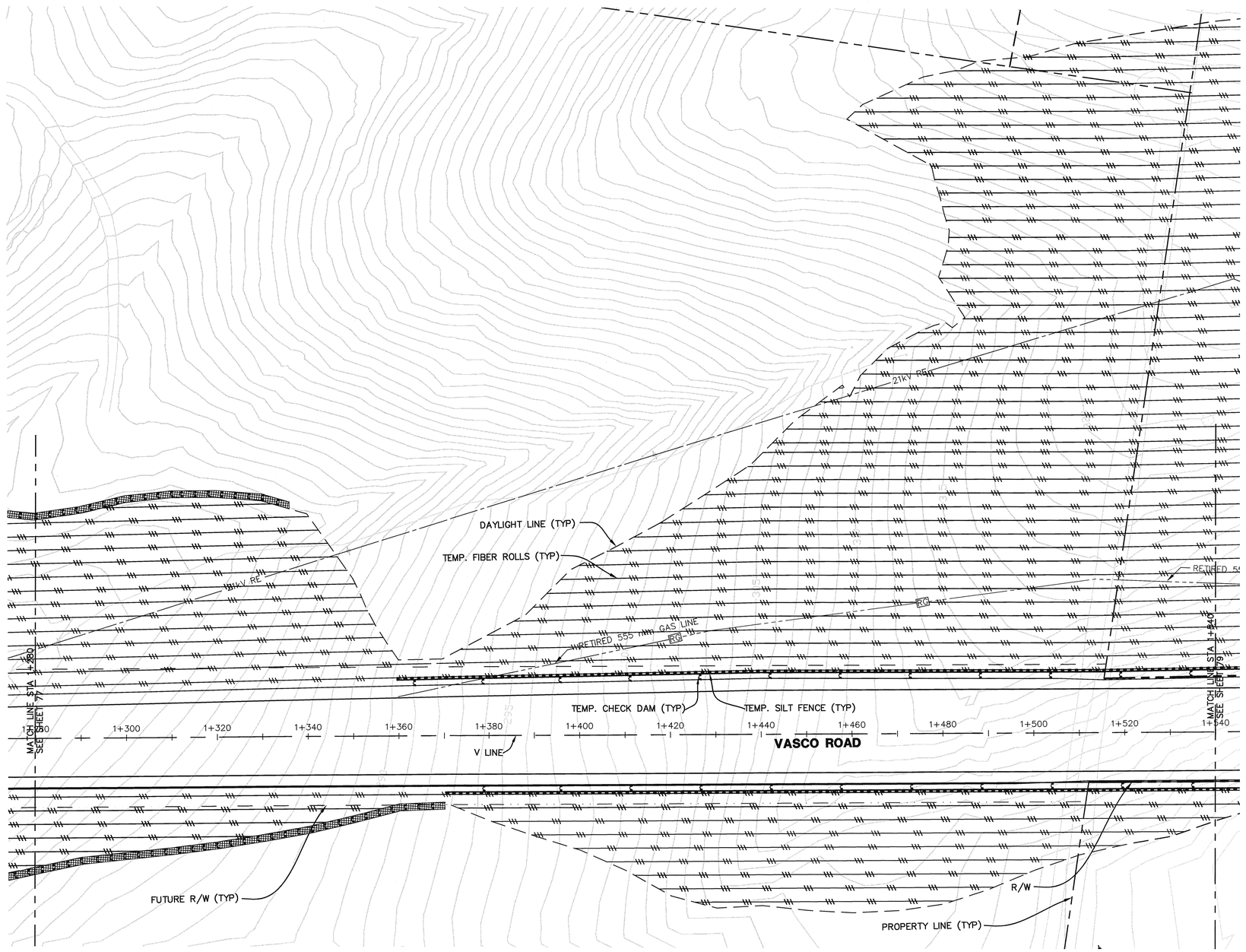
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		



PLAN
1:500

LEGEND:

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12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

REVISIONS

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REGISTERED PROFESSIONAL ENGINEER THOMAS S. HILLESLAND No. C 46200 CIVIL STATE OF CALIFORNIA
6-16-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 845-1238

DRAWN: N. KOBAYASHI
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BRIAN NG
REVIEWED: JAMES OLIVE
REVIEWED: ARTHUR G. CARDERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY WATER POLLUTION CONTROL PLANS

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 78 OF 145	
FILE NO. U-357-6	

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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REAL ESTATE			ENVIRONMENTAL		

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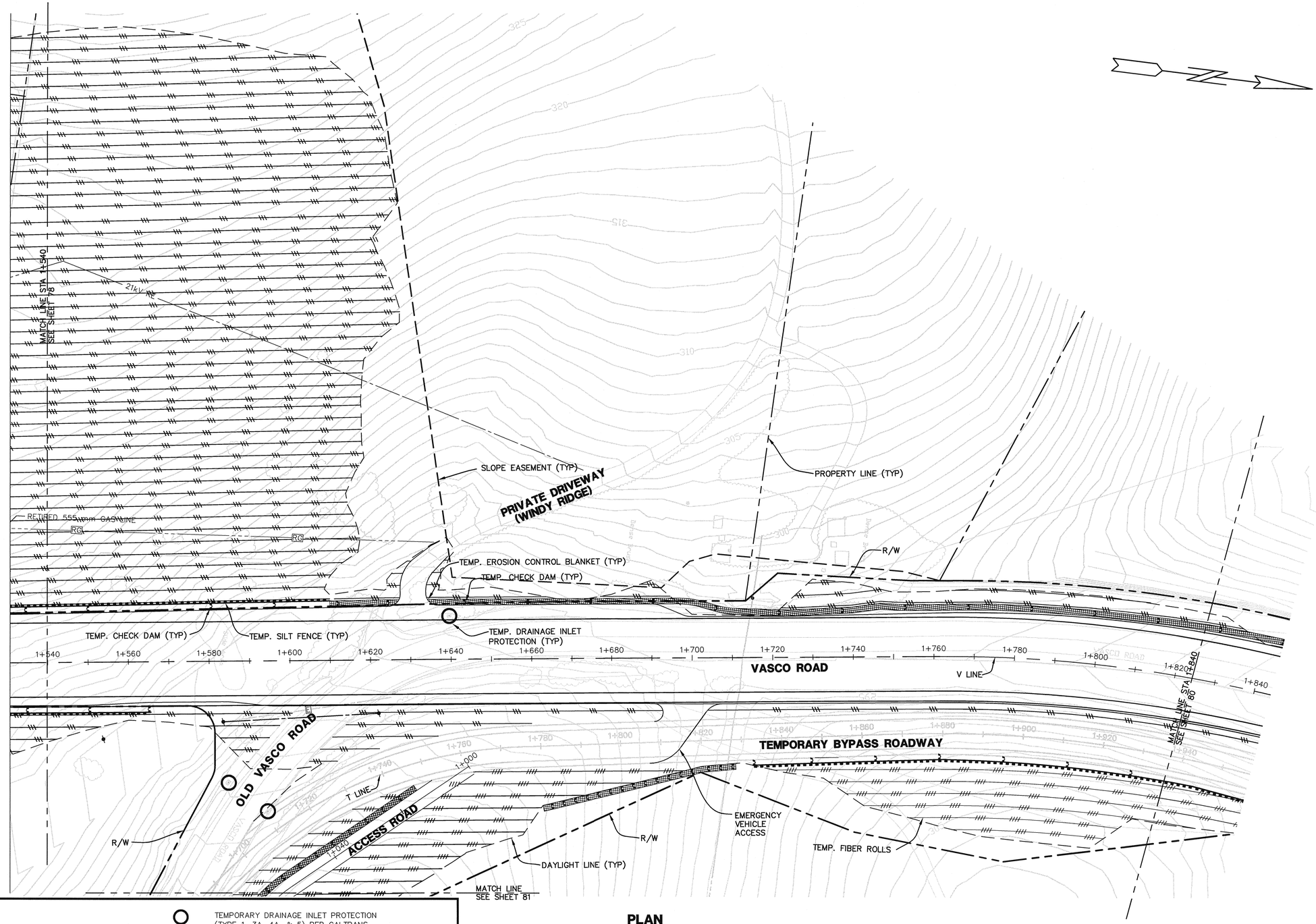

PLAN
1:500

LEGEND:

- TEMPORARY EROSION CONTROL BLANKET PER CALTRANS T54
- TEMPORARY FIBER ROLL (VASCO RD.) PER CALTRANS NSP H51 & T56
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12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS				
NO.	DESCRIPTION	BY	DATE	APP'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS E. HILLESLAND No. C 34100 EXP. 31-09 CIVIL STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

Moffatt & Nichol

DRAWN: N. KOBAYASHI
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZASNI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BRIAN WO
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY WATER POLLUTION
CONTROL PLANS

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 79 OF 145
FILE NO. U-357-6

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CONSTRUCTION		SURVEY	
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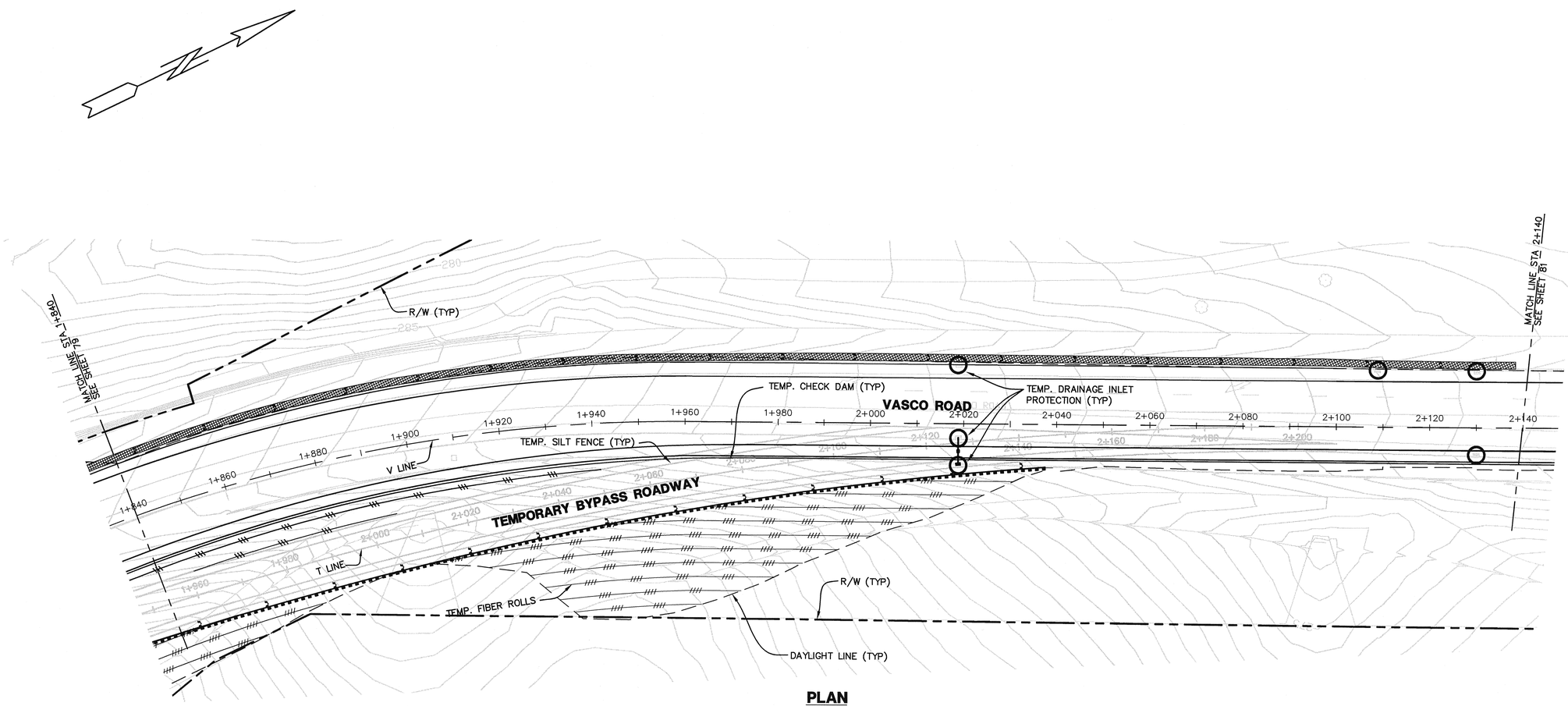

PLAN
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12.5 0 12.5 25 37.5
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REVISIONS

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REGISTERED PROFESSIONAL ENGINEER THOMAS J. HILLESLAND No. C 32-31-08 CIVIL STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: N. KOBAYASHI
CHECKED: T. HILLESLAND
DESIGNED: S. HO
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY WATER POLLUTION CONTROL PLANS

REVIEWED: ARTHUR G. CARRERA
BOND NO.
REVIEWED: JAMES CHU
APPROVAL RECOMMENDED: STANLEY W. FUNG

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 80 OF 145
FILE NO. U-357-6

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REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
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MAINTENANCE		TRAFFIC	
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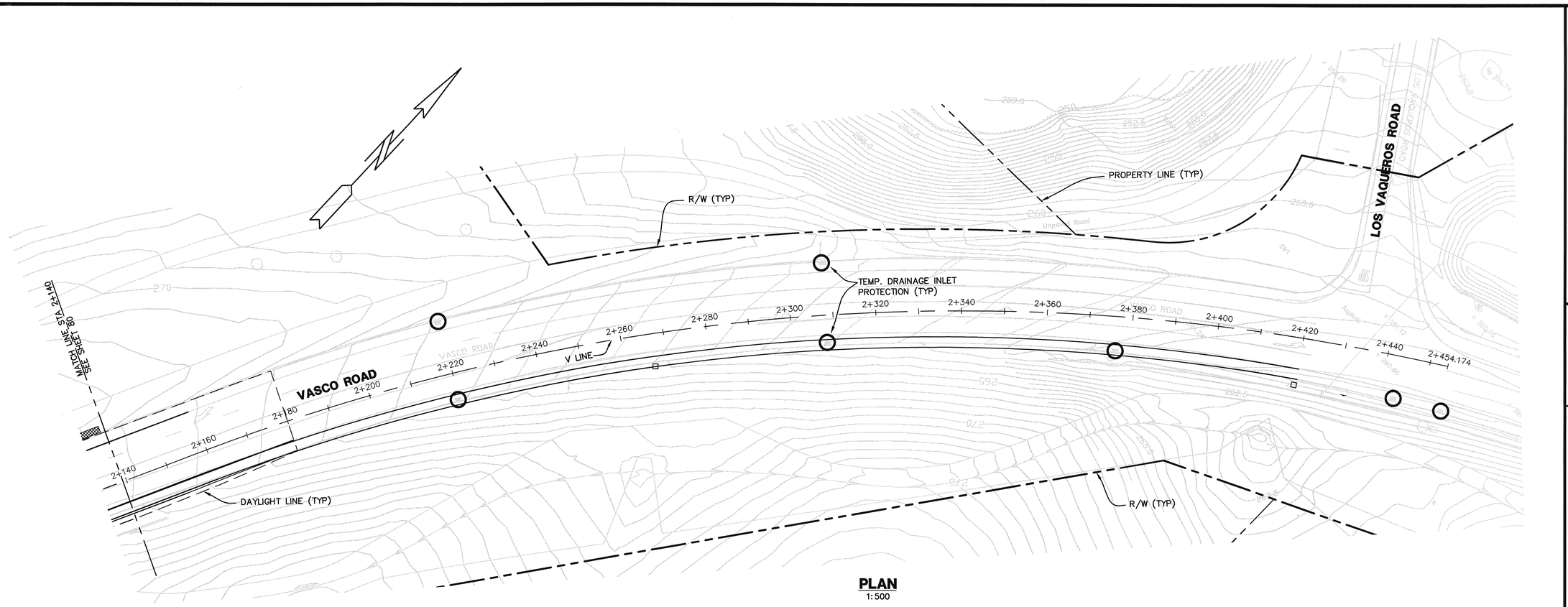

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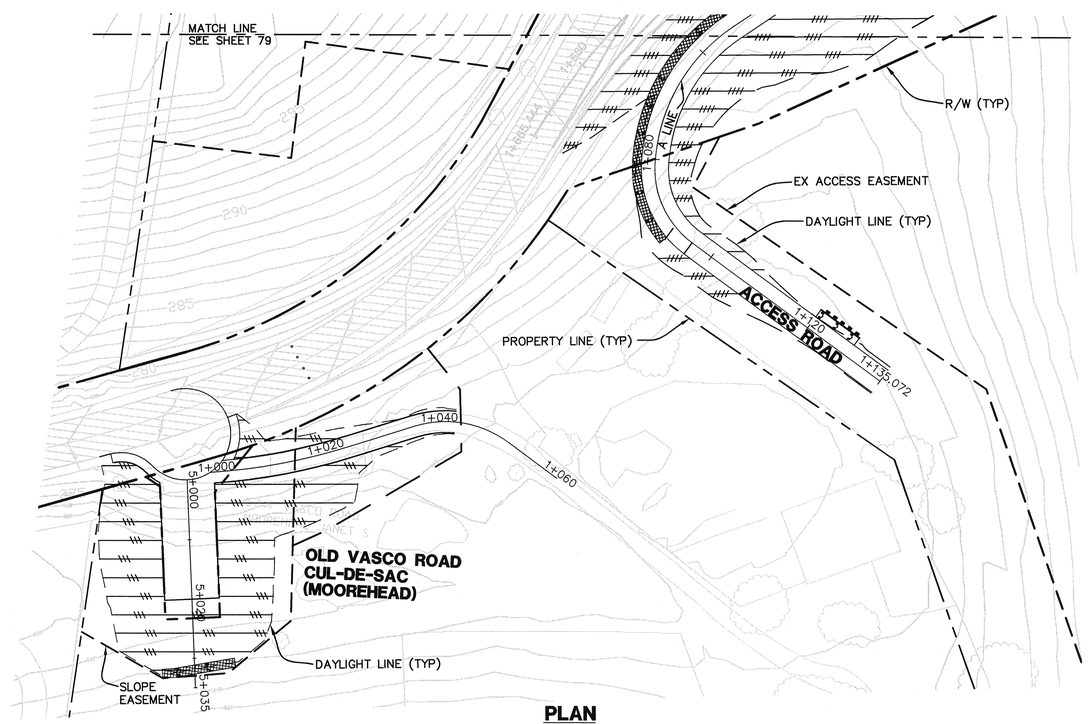

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LEGEND:

- TEMPORARY EROSION CONTROL BLANKET PER CALTRANS T54
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12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS E. HILLESLAND C 43420 CIVIL STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: N. KOBAYASHI
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
TEMPORARY WATER POLLUTION CONTROL PLANS

REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG
REVIEWED: BOND HU
REVIEWED: JAMES OH

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 81 OF 145
FILE NO. U-357-6

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	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
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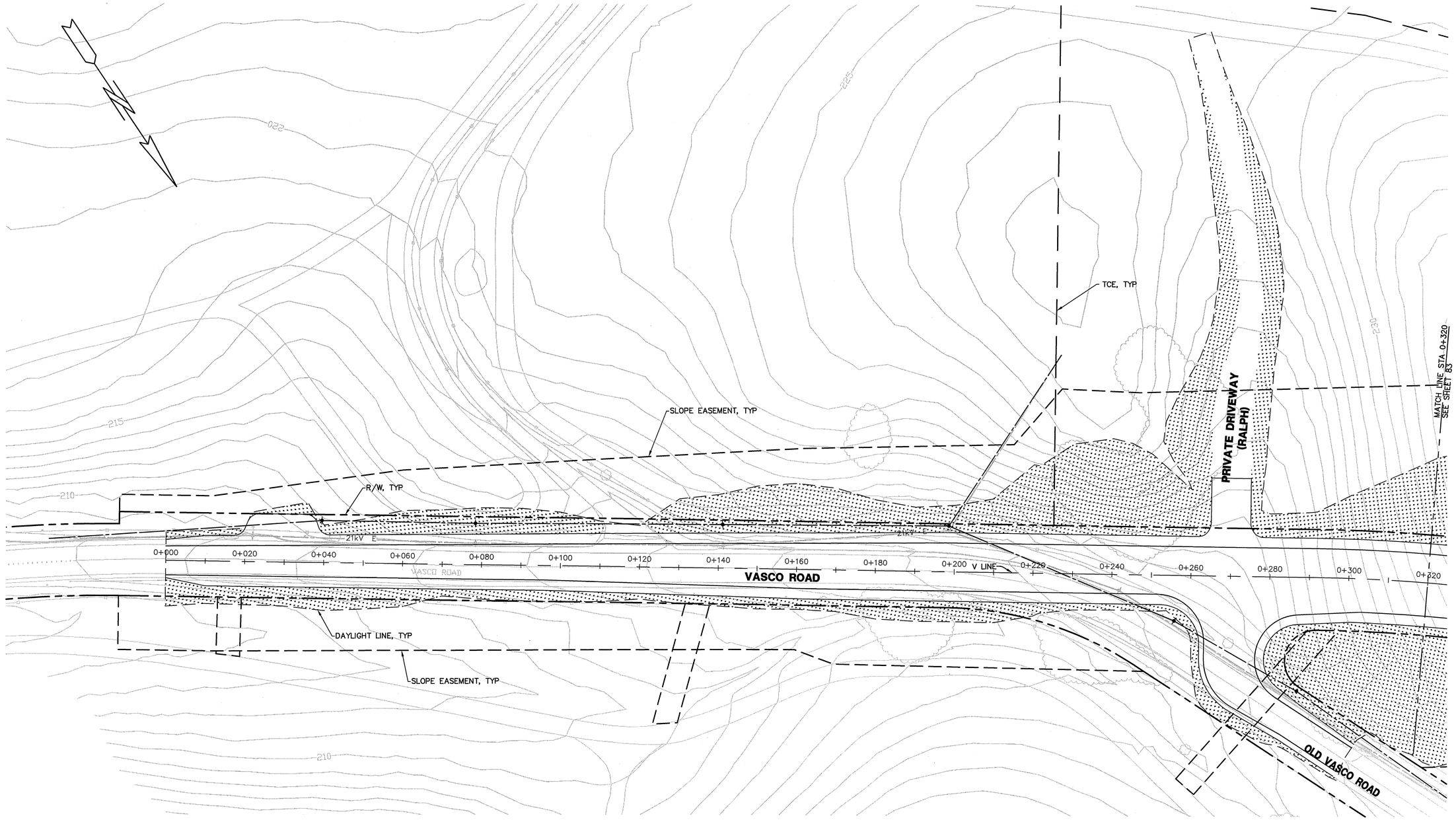

PLAN
1:500

LEGEND:

HYDROSEEDING

NOTES:

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REGISTERED PROFESSIONAL ENGINEER THOMAS C. HILLESLAND C 64000 Exp. 31-08 CIVIL STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

CHECKED: T. HILLESLAND
DRAWN: N. KOBAYASHI
APPROVED: B. ZAENI
DESIGNED: S. HO

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND HO
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CABRERA
APPROVAL RECOMMENDED: STANLEY W. KUNG

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

EROSION CONTROL PLANS

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 82 OF 145
FILE NO. U-357-6

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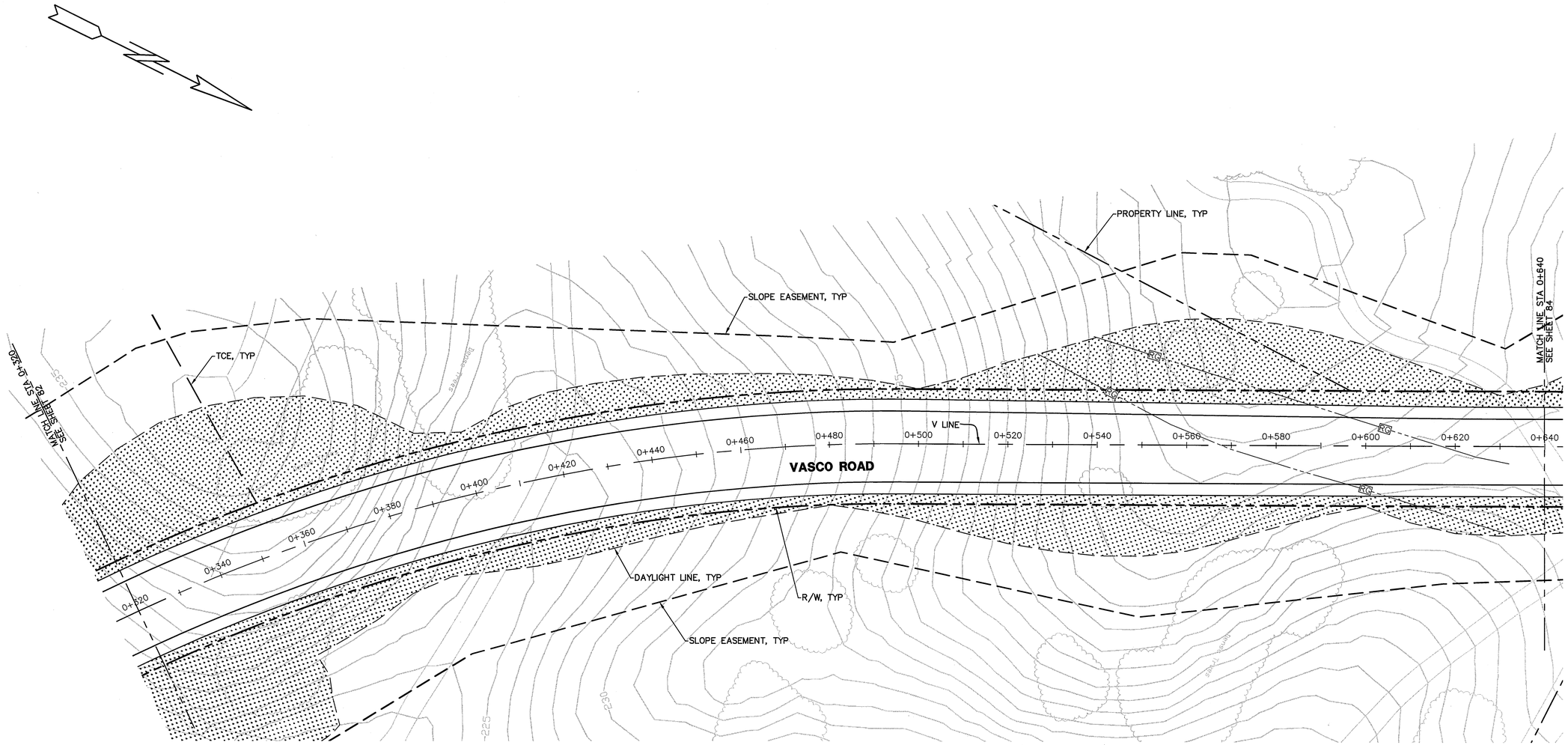
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



PLAN
1:500

LEGEND:

HYDROSEEDING

NOTES:

1. THIS SHEET ACCURATE FOR EROSION CONTROL ONLY.
2. EROSION CONTROL MEASURES MAY BE ADJUSTED TO MEET FIELD CONDITIONS AS DIRECTED BY RESIDENT ENGINEER.

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS E. HILLESLAND C 54200 12-31-09 CIVIL STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 845-1238

Moffatt & Nichol

CHECKED: T. HILLESLAND
DRAWN: N. KOBAYASHI
DESIGNED: S. HO
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

EROSION CONTROL PLANS

REVIEWED: BOND NG
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 83 OF 145	
FILE NO. U-357-6	

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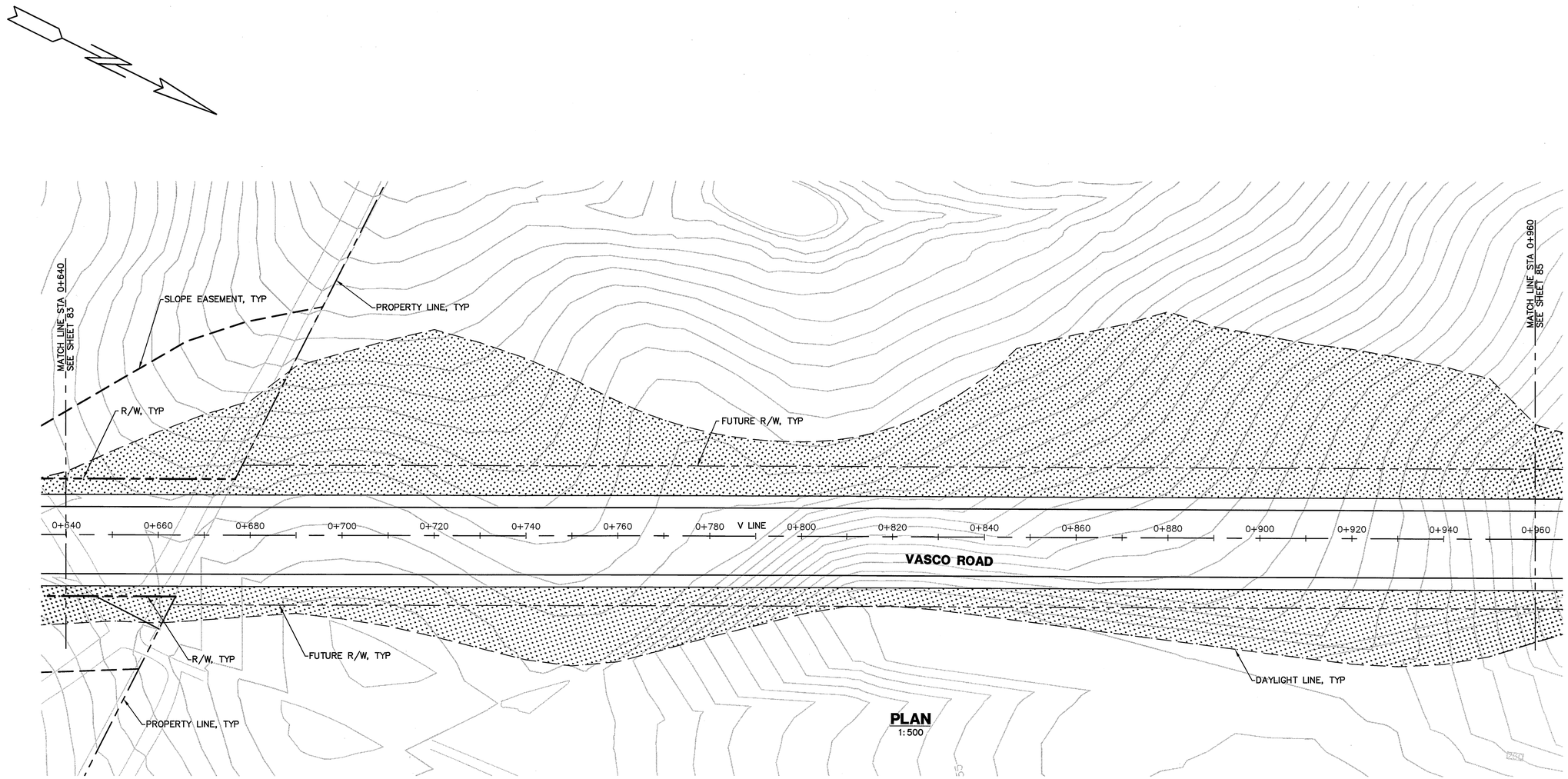
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



PLAN
1:500

LEGEND:

HYDROSEEDING

NOTES:

1. THIS SHEET ACCURATE FOR EROSION CONTROL ONLY.
2. EROSION CONTROL MEASURES MAY BE ADJUSTED TO MEET FIELD CONDITIONS AS DIRECTED BY RESIDENT ENGINEER.

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS 0 50 mm
ORIGINAL SCALE IS IN METERS

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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REGISTERED PROFESSIONAL ENGINEER THOMAS E. HILLESLAND No. 046205 CIVIL STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238
Moffatt & Nichol

CHECKED: T. HILLESLAND
APPROVED: B. ZAKNI
DRAWN: N. KOBAYASHI
DESIGNED: S. HO

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND
REVIEWED: JAMES CHO
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FENG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

EROSION CONTROL PLANS

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 84 OF 145
FILE NO. U-357-6

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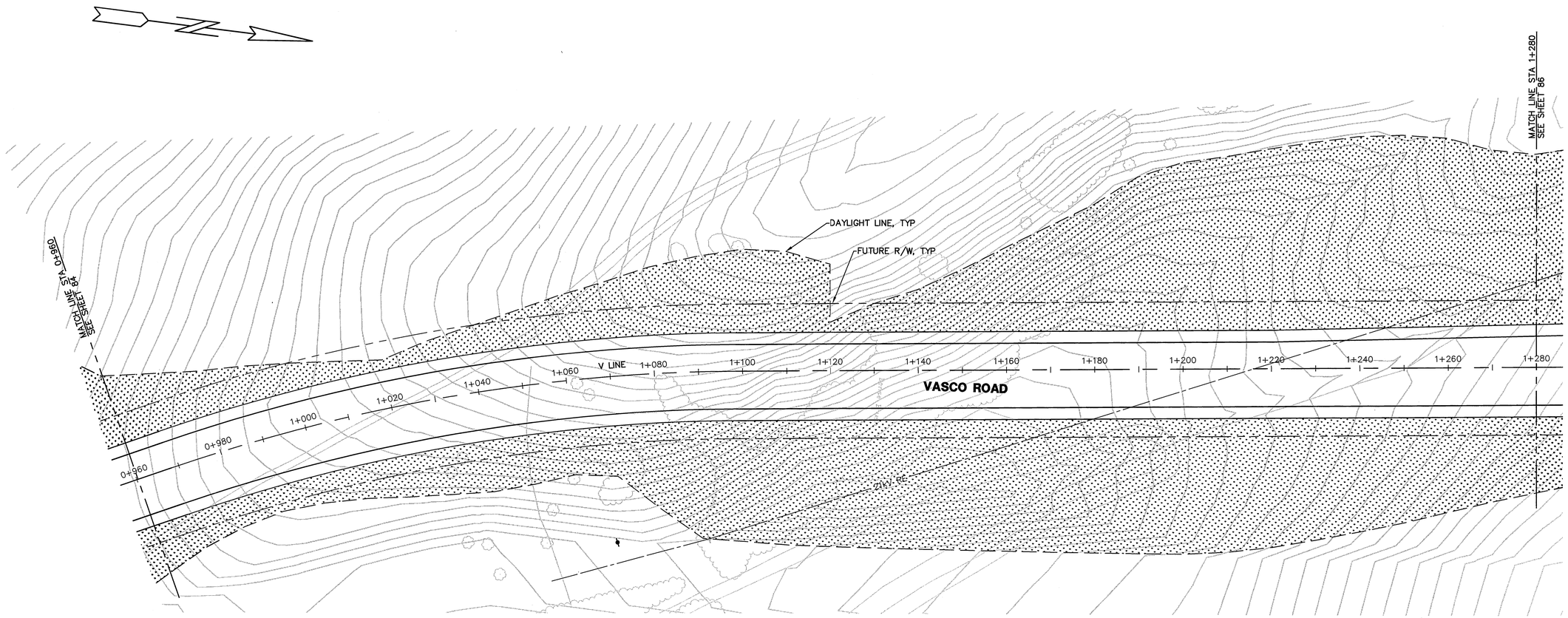

PLAN
1:500

LEGEND:

HYDROSEEDING

NOTES:

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12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	SURVEY	REVIEWED BY:	DATE:
CONSTRUCTION		TRAFFIC		
MAINTENANCE		ENVIRONMENTAL		
REAL ESTATE				

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REVISIONS

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REGISTERED PROFESSIONAL ENGINEER THOMAS J. HILLESLAND No. 42400 CIVIL STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: N. KOBAYASHI
CHECKED: T. HILLESLAND
DESIGNED: S. HO
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND TSU
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

EROSION CONTROL PLANS

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 85 OF 145
FILE NO. U-357-6

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CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		

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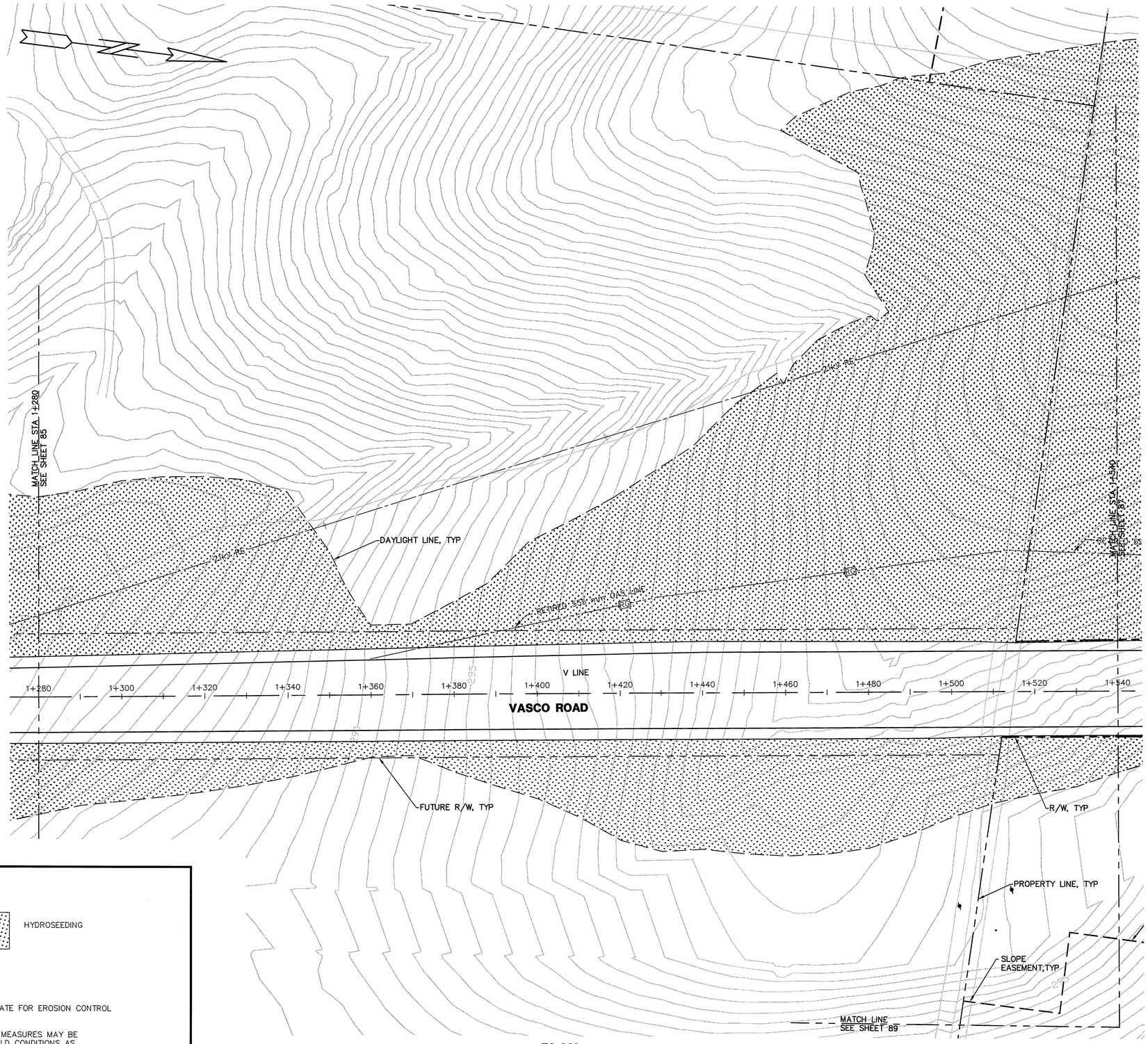

PLAN
1:500

12.5 0 12.5 25 37.5
SCALE = 1:500

LEGEND:

HYDROSEEDING

NOTES:

1. THIS SHEET ACCURATE FOR EROSION CONTROL ONLY.
2. EROSION CONTROL MEASURES MAY BE ADJUSTED TO MEET FIELD CONDITIONS AS DIRECTED BY RESIDENT ENGINEER.

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS - TYLER HILLESLAND No. 33-6800 CIVIL STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: N. KOBAYASHI
CHECKED: T. HILLESLAND
DESIGNED: S. HO
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND INC.
RECOMMENDED: JAMES GRU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

EROSION CONTROL PLANS

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 86 OF 145
FILE NO. U-357-6

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		

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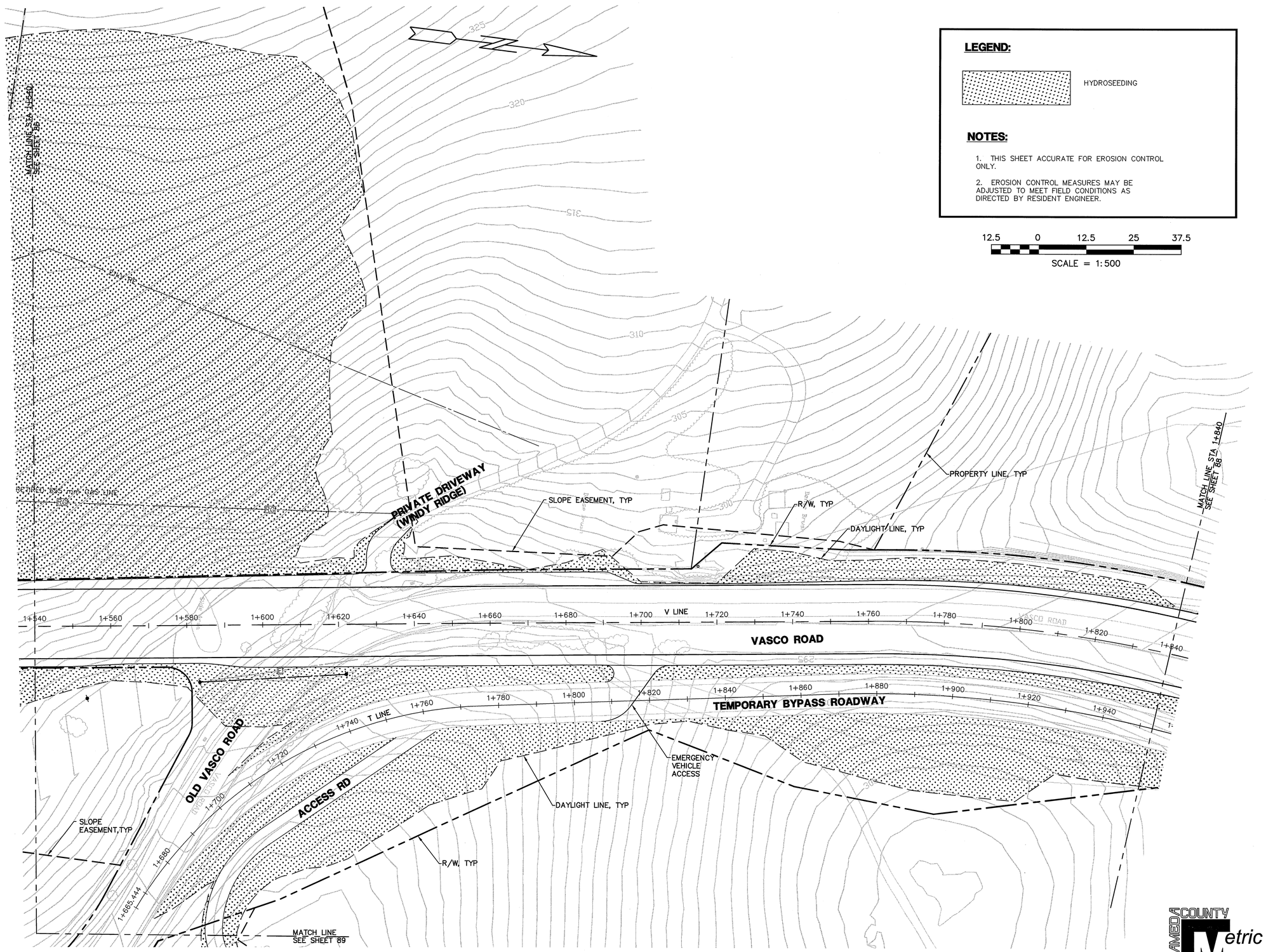

PLAN
1:500

LEGEND:

HYDROSEEDING

NOTES:

1. THIS SHEET ACCURATE FOR EROSION CONTROL ONLY.
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12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

REVISIONS

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REGISTERED PROFESSIONAL ENGINEER THOMAS E. HILLESLAND No. C 45200 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: N. KOBAYASHI
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZAENI
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG
BOND REVIEWED: JAMES CHU

COUNTY OF ALEMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

EROSION CONTROL PLANS

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 87 OF 145
FILE NO. U-357-6

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		

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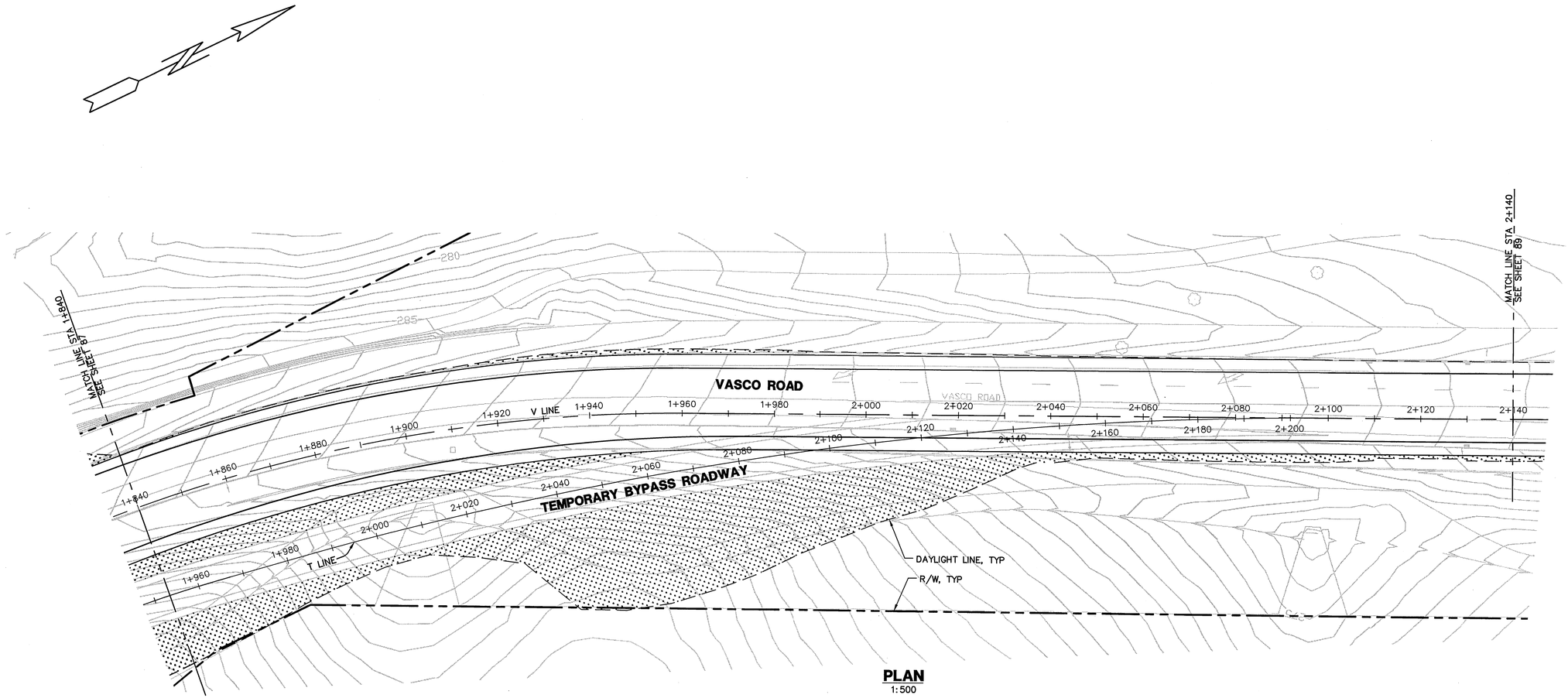

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HYDROSEEDING

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12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
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FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS				
NO.	DESCRIPTION	BY	DATE	APP'V'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS J. HILLESLAND CIVIL STATE OF CALIFORNIA 6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 845-1238

Moffatt & Nichol

DRAWN: N. KOBAYASHI
CHECKED: T. HILLESLAND
DESIGNED: S. HO
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND
REVIEWED: JAMES GHO
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

EROSION CONTROL PLANS

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 88 OF 145
FILE NO. U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

PLAN
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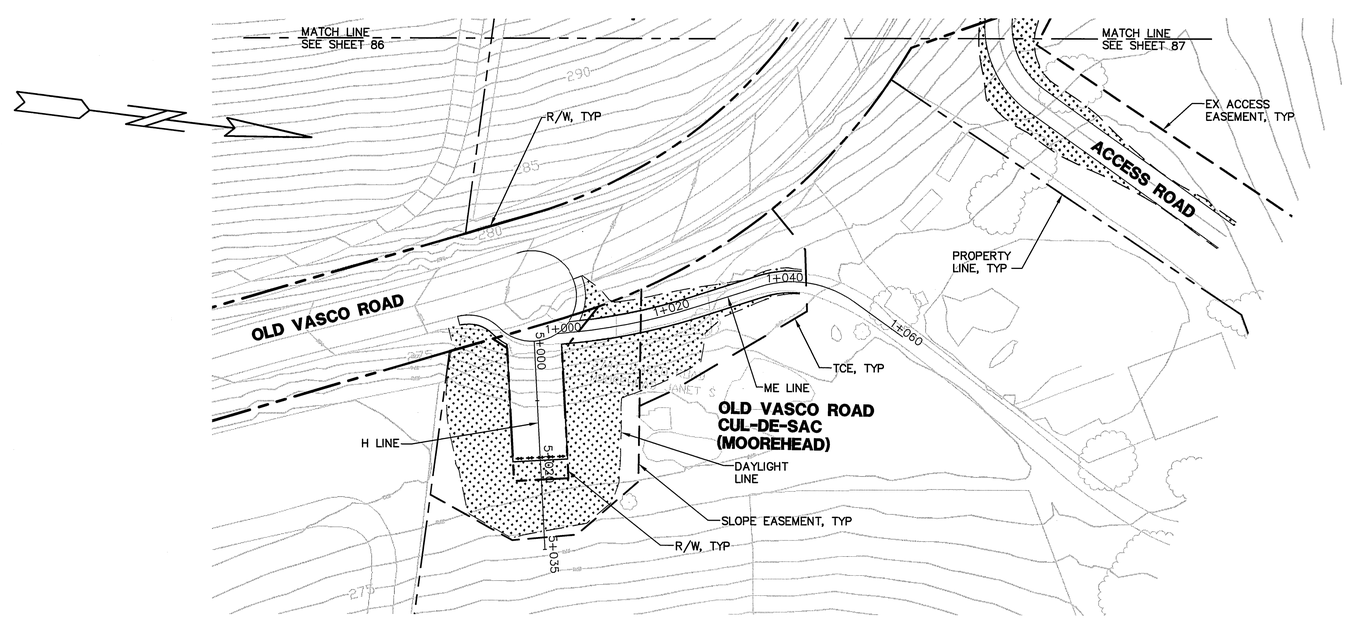

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LEGEND:

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NOTES:

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12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
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REVISIONS

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REGISTERED PROFESSIONAL ENGINEER THOMAS E. PHILLIPS No. 54200 12-31-08 CIVIL STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: N. KOBAYASHI
CHECKED: T. HILLESLAND
DESIGNED: S. HO
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

EROSION CONTROL PLANS

REVIEWED: BOND 6-26-08
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 89 OF 145
FILE NO. U-357-6

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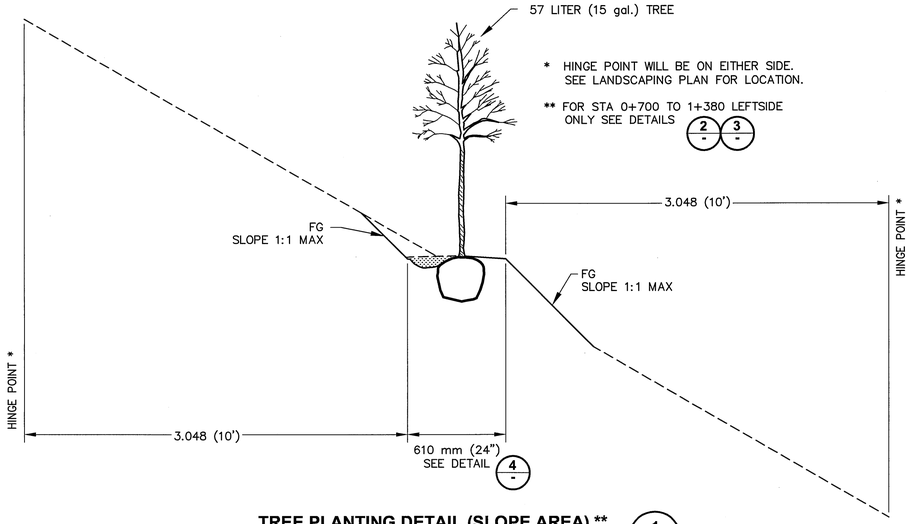
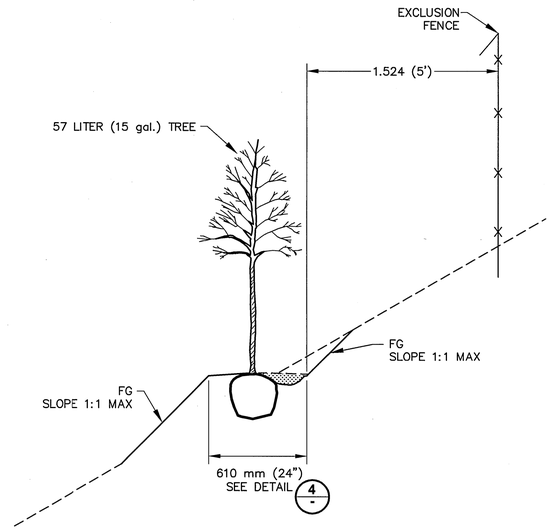


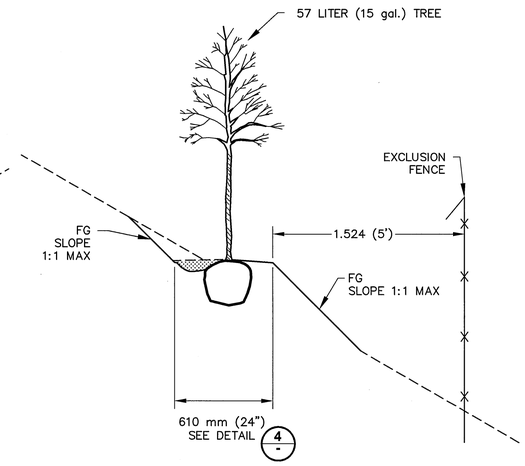
TREE PLANTING DETAIL (SLOPE AREA) ** 1

NOT TO SCALE



STA 0+700 TO 1+380 LEFT SIDE ONLY
TREE PLANTING DETAIL (FILL SLOPE AREA) 2

NOT TO SCALE



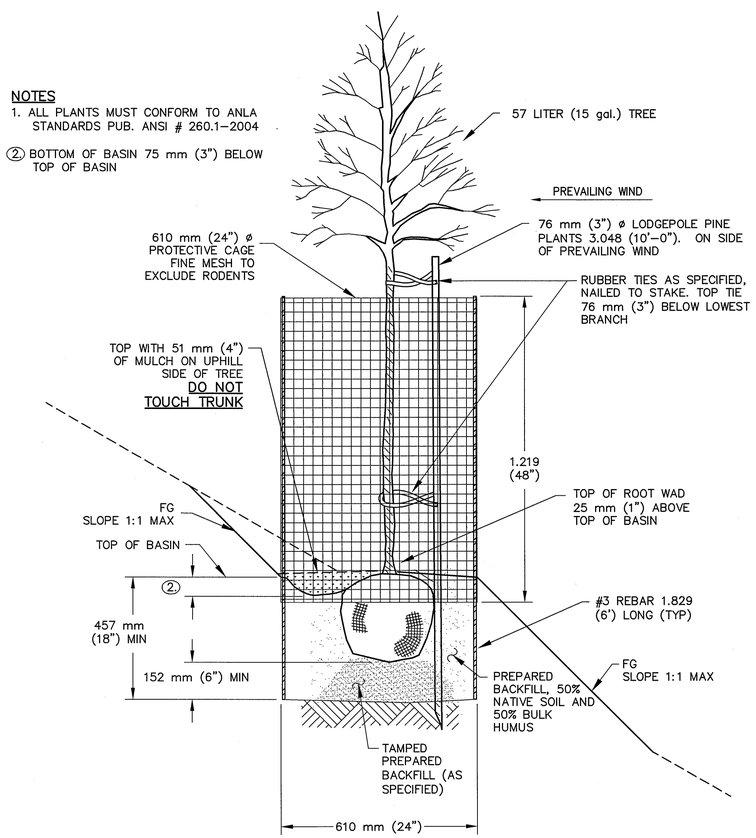
STA 0+700 TO 1+380 LEFT SIDE ONLY
TREE PLANTING DETAIL (CUT SLOPE AREA) 3

NOT TO SCALE

NOTES

1. ALL PLANTS MUST CONFORM TO ANLA STANDARDS PUB. ANSI # 260.1–2004

(2) BOTTOM OF BASIN 75 mm (3") BELOW TOP OF BASIN

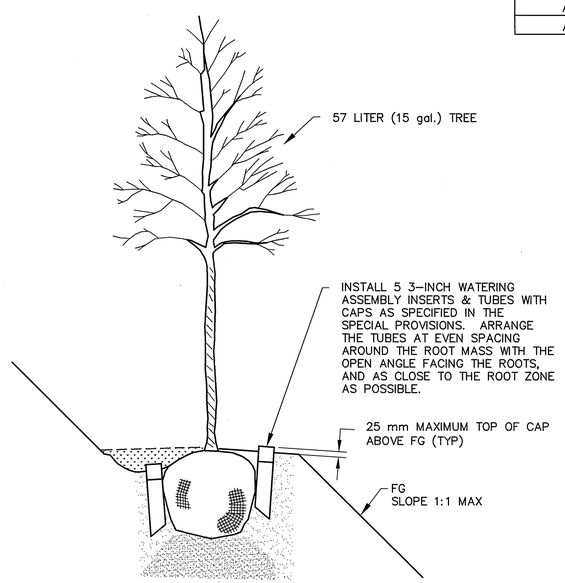


PLANTING DETAIL
TREE WITH STAKE AND CAGE (SLOPE AREA) 4

NOT TO SCALE

TREE SPECIES TABLE

ALT BID ITEM NO.	TREE NO.	SPECIES OF TREE	COMMON NAME	QUANTITY	SIZE
A4	1	AESCULUS CALIFORNICA	CALIFORNIA BUCKEYE	54	57 LITER (15 gal.)
A5	2	POPULUS NIGRA	LOMBARDI POPLAR	3	57 LITER (15 gal.)
A6	3	QUERCUS AGRIFOLIA	COAST LIVE OAK	69	57 LITER (15 gal.)
A7	4	QUERCUS LOBATA	VALLEY OAK	37	57 LITER (15 gal.)
A8	5	SEQUOIA SEMPERVIRENS	COAST REDWOOD	9	57 LITER (15 gal.)
A9	6	SEQUOIADENDRON GIGANTEUM	GIANT REDWOOD	3	57 LITER (15 gal.)
				175	



WATERING ASSEMBLY INSTALLATION DETAIL 5

NOT TO SCALE

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS				
NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 38957 Exp. 12/31/2008 CIVIL STATE OF CALIFORNIA

APPROVED

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

LANDSCAPING PLAN DETAILS & TABLES

APPROVAL RECOMMENDED: JAMES CW

APPROVAL RECOMMENDED: ARTHUR G. LORENZO

DATE: JAN 2007

SCALE: NTS

DRAWN: JANE RINGOY

DESIGNED: PAUL MORELL

CHECKED

ROAD NO.

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 90 OF 145

FILE NO. U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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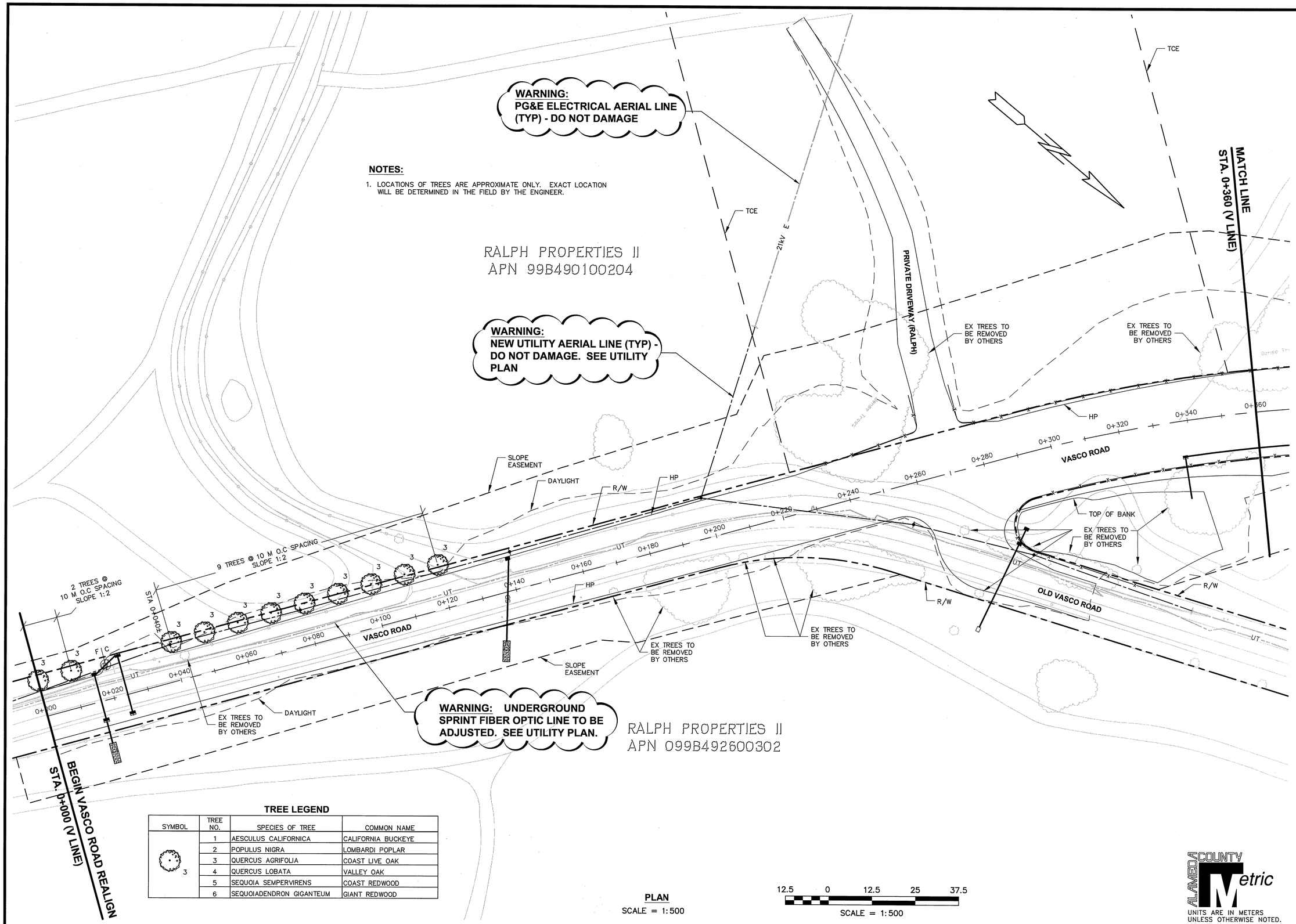
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

NOTES:

1. LOCATIONS OF TREES ARE APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.



TREE LEGEND

SYMBOL	TREE NO.	SPECIES OF TREE	COMMON NAME
3	1	AESCULUS CALIFORNICA	CALIFORNIA BUCKEYE
	2	POPULUS NIGRA	LOMBARDI POPLAR
	3	QUERCUS AGRIFOLIA	COAST LIVE OAK
	4	QUERCUS LOBATA	VALLEY OAK
	5	SEQUOIA SEMPERVIRENS	COAST REDWOOD
	6	SEQUOIADENDRON GIGANTEUM	GIANT REDWOOD

PLAN
SCALE = 1:500

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D

REGISTERED PROFESSIONAL ENGINEER STANLEY W. FURGER No. 38557 Exp. 12/31/2008 CIVIL STATE OF CALIFORNIA

APPROVED

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

LANDSCAPING PLAN

APPROVAL RECOMMENDED: JAMES CIRY
APPROVAL RECOMMENDED: DENISE DUFFY & ASSOCIATES
DATE: JAN 2007
SCALE: 1:500
DRAWN: JANE RINDSY
DESIGNED:
CHECKED: PAUL MORRELL
BOND NO.

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 91 OF 145
FILE NO. U-357-6

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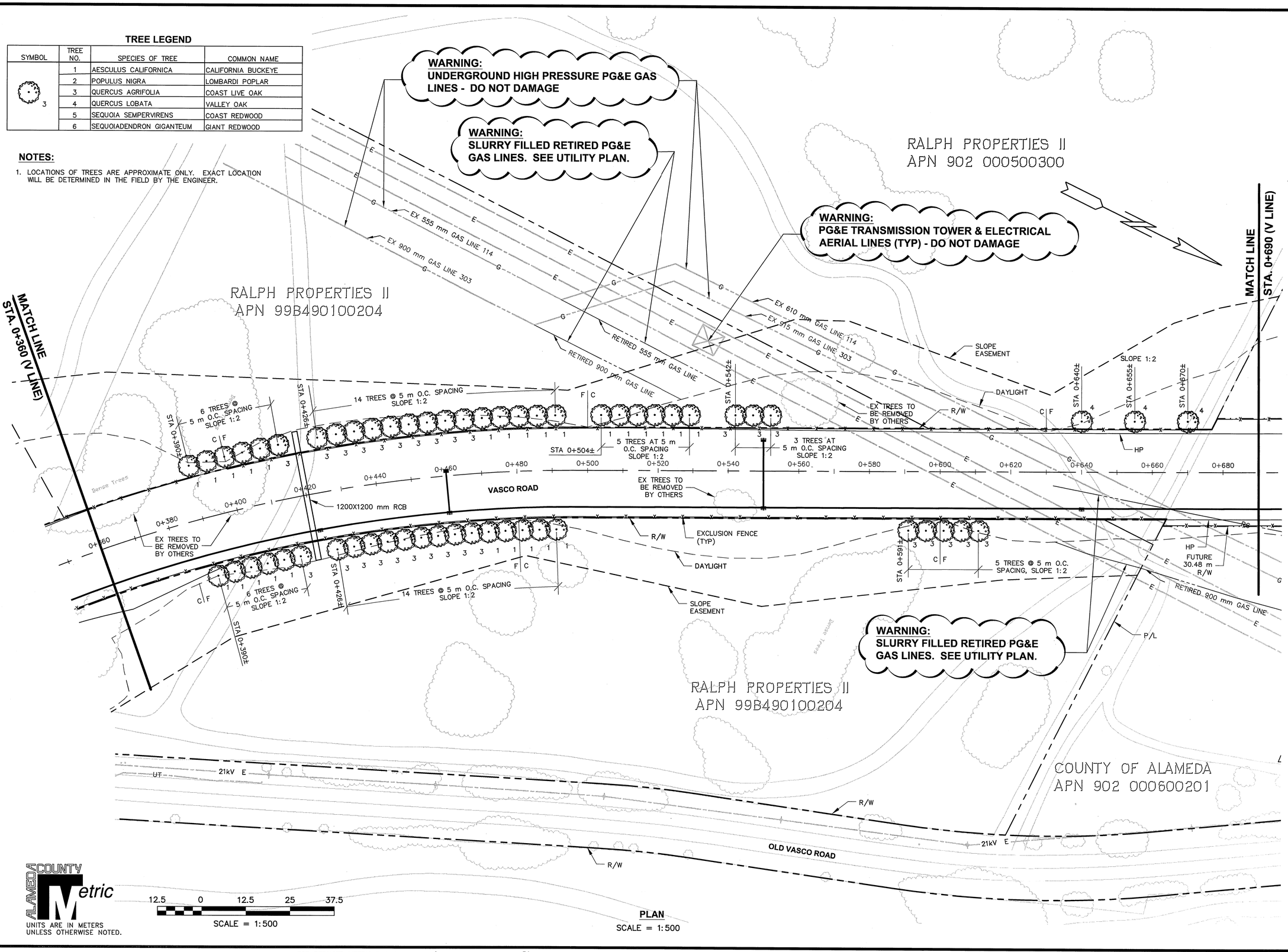
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

TREE LEGEND

SYMBOL	TREE NO.	SPECIES OF TREE	COMMON NAME
3	1	AESCULUS CALIFORNICA	CALIFORNIA BUCKEYE
	2	POPULUS NIGRA	LOMBARDI POPLAR
	3	QUERCUS AGRIFOLIA	COAST LIVE OAK
	4	QUERCUS LOBATA	VALLEY OAK
	5	SEQUOIA SEMPERVIRENS	COAST REDWOOD
	6	SEQUOIADENDRON GIGANTEUM	GIANT REDWOOD

NOTES:

1. LOCATIONS OF TREES ARE APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.



ALAMEDA COUNTY Metric

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER STANLEY W. LUND No. 38657 Exp. 12/31/2009 CIVIL ENGINEERING STATE OF CALIFORNIA

APPROVED

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

LANDSCAPING PLAN

APPROVAL RECOMMENDED: JAMES O. ROSS
APPROVED: STANLEY W. LUND
APPROVED: PAUL MURRELL
DATE: JAN 2007
SCALE: 1:500
DRAWN: LANE RINGO
DESIGNED: PAUL MURRELL
CHECKED:
BOND NO.

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 92 OF 145

FILE NO. U-357-6

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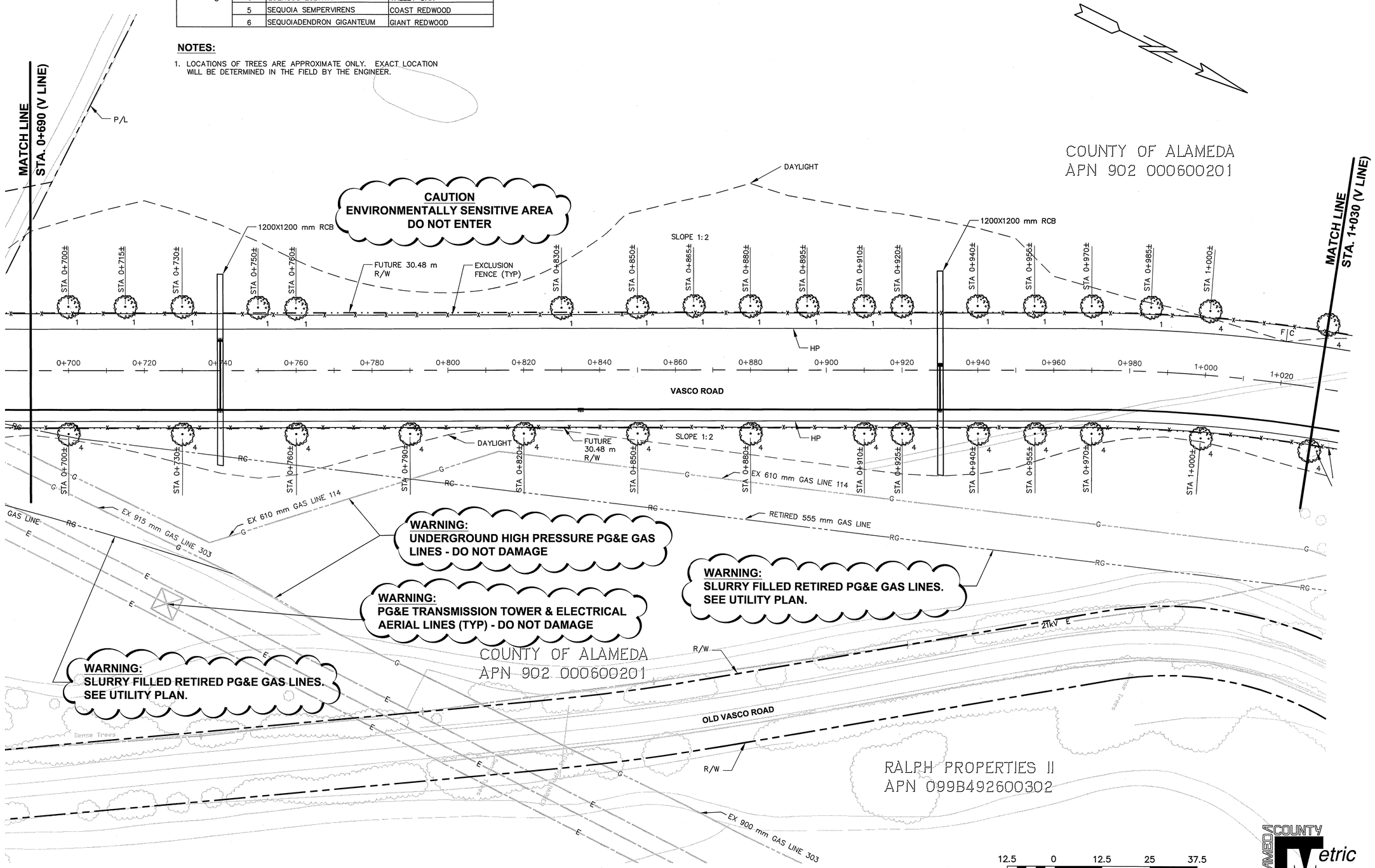
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

TREE LEGEND

SYMBOL	TREE NO.	SPECIES OF TREE	COMMON NAME
3	1	AESCULUS CALIFORNICA	CALIFORNIA BUCKEYE
	2	POPULUS NIGRA	LOMBARDI POPLAR
	3	QUERCUS AGRIFOLIA	COAST LIVE OAK
	4	QUERCUS LOBATA	VALLEY OAK
	5	SEQUOIA SEMPERVIRENS	COAST REDWOOD
	6	SEQUOIADENDRON GIGANTEUM	GIANT REDWOOD

NOTES:

1. LOCATIONS OF TREES ARE APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.



PLAN
SCALE = 1:500

12.5 0 12.5 25 37.5
SCALE = 1:500

UNITS ARE IN METRIC
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METRES
0 50 mm

NO.	DESCRIPTION	BY	DATE	APPV'D

REVISIONS

APPROVED
REGISTERED PROFESSIONAL ENGINEER
STANLEY W. LUNG
No. 34734
Exp. 12/31/2009
CIVIL
STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

LANDSCAPING PLAN

APPROVAL RECOMMENDED: JAMES O'BRIEN
APPROVED: STANLEY W. LUNG
DATE: JAN 2007
SCALE: 1:500
DRAWN: JANE RIVIOT
DESIGNED: PAUL MORELLI
CHECKED:
BOND NO.

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 93 OF 145
FILE NO. U-357-6

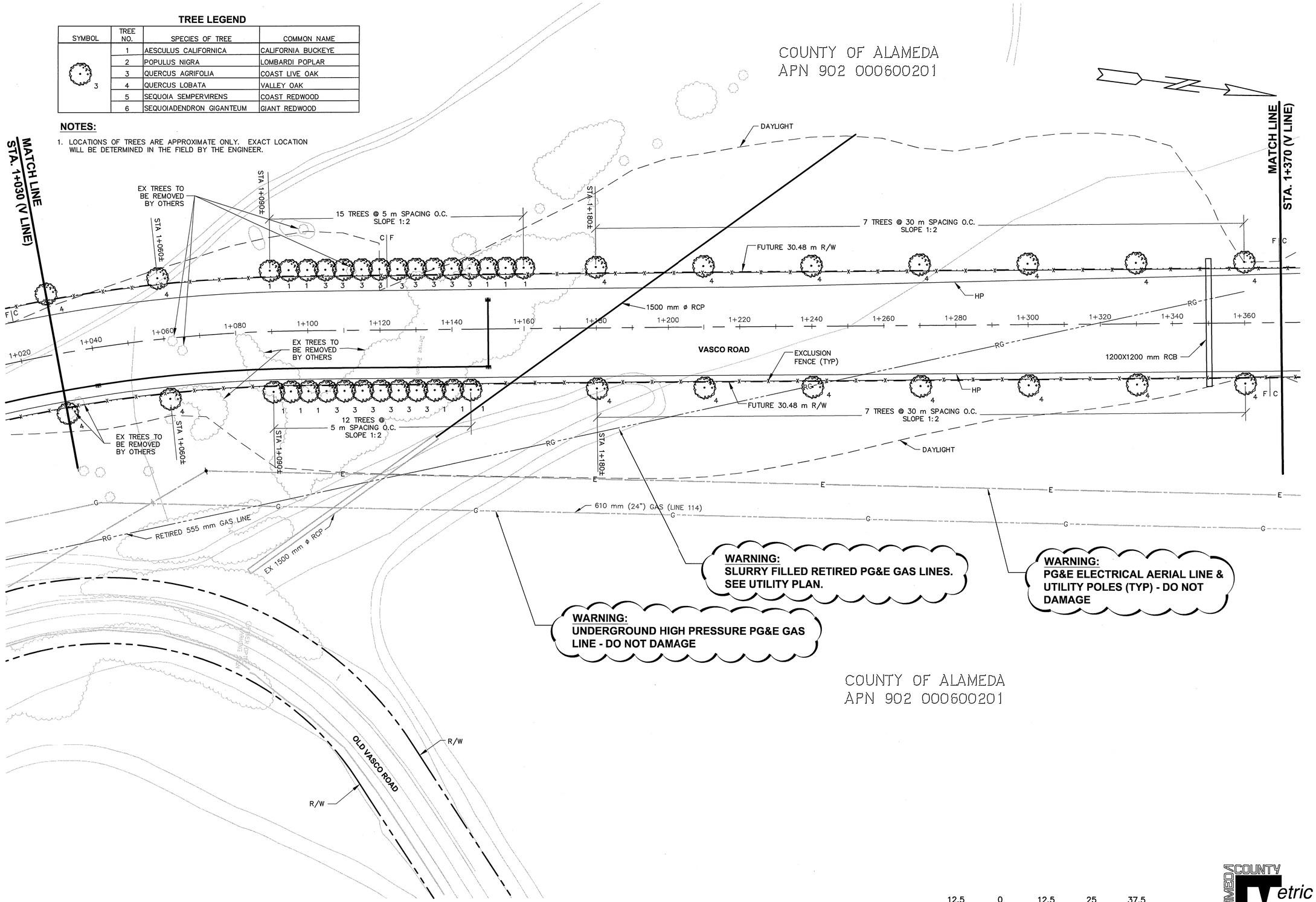
N:\ROAD\r23265\r-Final Plan – Vasco Road 2007\Landscaping Plan-500 scale.dwg 6-16-08 02:50:36 PM janer

TREE LEGEND

SYMBOL	TREE NO.	SPECIES OF TREE	COMMON NAME
3	1	AESCULUS CALIFORNICA	CALIFORNIA BUCKEYE
	2	POPULUS NIGRA	LOMBARDI POPLAR
	3	QUERCUS AGRIFOLIA	COAST LIVE OAK
	4	QUERCUS LOBATA	VALLEY OAK
	5	SEQUOIA SEMPERVIRENS	COAST REDWOOD
	6	SEQUOIADENDRON GIGANTEUM	GIANT REDWOOD

NOTES:

1. LOCATIONS OF TREES ARE APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.



PLAN
SCALE = 1:500

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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APPROVED REGISTERED PROFESSIONAL ENGINEER STANLEY M. T. TONG No. 39457 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

LANDSCAPING PLAN

APPROVAL RECOMMENDED: JAMES PAPPAS
APPROVAL RECOMMENDED: STANLEY TONG
DATE: JAN 2007
SCALE: 1:500
DRAWN: JANE ENGER
DESIGNED: PAUL MORRILL
CHECKED: BONG TAO

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 94 OF 145
FILE NO. U-357-6

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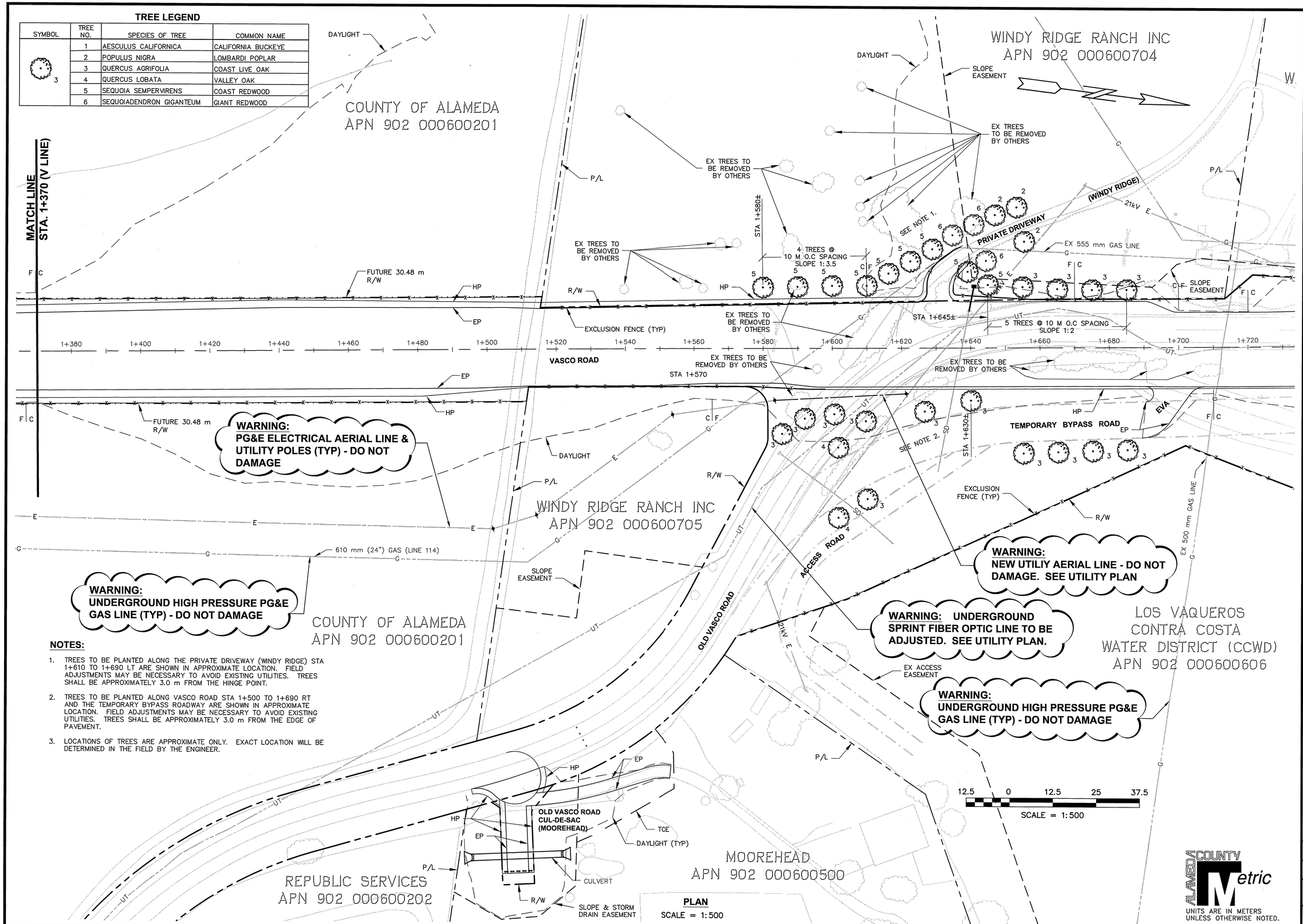
TREE LEGEND

SYMBOL	TREE NO.	SPECIES OF TREE	COMMON NAME
3	1	AESCULUS CALIFORNICA	CALIFORNIA BUCKEYE
	2	POPULUS NIGRA	LOMBARDI POPLAR
	3	QUERCUS AGRIFOLIA	COAST LIVE OAK
	4	QUERCUS LOBATA	VALLEY OAK
	5	SEQUOIA SEMPERVIRENS	COAST REDWOOD
	6	SEQUOIADENDRON GIGANTEUM	GIANT REDWOOD



NOTES:

1. TREES TO BE PLANTED ALONG THE PRIVATE DRIVEWAY (WINDY RIDGE) STA 1+610 TO 1+690 LT ARE SHOWN IN APPROXIMATE LOCATION. FIELD ADJUSTMENTS MAY BE NECESSARY TO AVOID EXISTING UTILITIES. TREES SHALL BE APPROXIMATELY 3.0 m FROM THE HINGE POINT.
2. TREES TO BE PLANTED ALONG VASCO ROAD STA 1+500 TO 1+690 RT AND THE TEMPORARY BYPASS ROADWAY ARE SHOWN IN APPROXIMATE LOCATION. FIELD ADJUSTMENTS MAY BE NECESSARY TO AVOID EXISTING UTILITIES. TREES SHALL BE APPROXIMATELY 3.0 m FROM THE EDGE OF PAVEMENT.
3. LOCATIONS OF TREES ARE APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

PLAN
SCALE = 1:500

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 38457 Exp.12/31/2008 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

LANDSCAPING PLAN

APPROVAL RECOMMENDED: JAMES CH
APPROVAL RECOMMENDED: ASST. DIRECTOR
DATE: JAN 2007
SCALE: 1:500
DRAWN: JANE RINDOY
DESIGNED: PAUL MORRELL
CHECKED:
BDND NO.

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 95 OF 145
FILE NO. U-357-6

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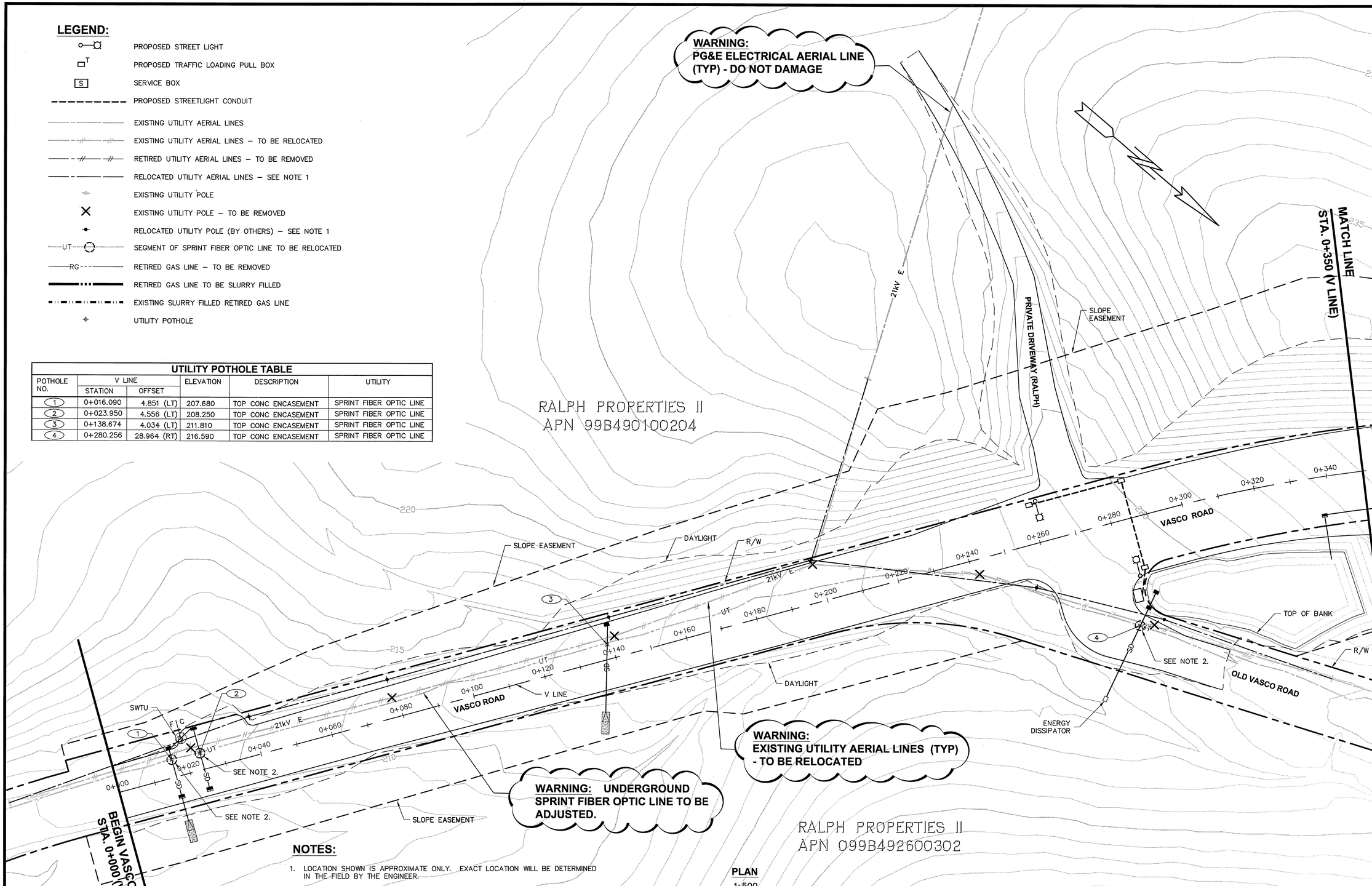
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

LEGEND:

- PROPOSED STREET LIGHT
- PROPOSED TRAFFIC LOADING PULL BOX
- SERVICE BOX
- PROPOSED STREETLIGHT CONDUIT
- EXISTING UTILITY AERIAL LINES
- EXISTING UTILITY AERIAL LINES – TO BE RELOCATED
- RETIRED UTILITY AERIAL LINES – TO BE REMOVED
- RELOCATED UTILITY AERIAL LINES – SEE NOTE 1
- EXISTING UTILITY POLE
- EXISTING UTILITY POLE – TO BE REMOVED
- RELOCATED UTILITY POLE (BY OTHERS) – SEE NOTE 1
- UT – SEGMENT OF SPRINT FIBER OPTIC LINE TO BE RELOCATED
- RG – RETIRED GAS LINE – TO BE REMOVED
- RETIRED GAS LINE TO BE SLURRY FILLED
- EXISTING SLURRY FILLED RETIRED GAS LINE
- UTILITY POTHOLE

UTILITY POTHOLE TABLE

POTHOLE NO.	V LINE STATION	V LINE OFFSET	ELEVATION	DESCRIPTION	UTILITY
1	0+016.090	4.851 (LT)	207.680	TOP CONC ENCASEMENT	SPRINT FIBER OPTIC LINE
2	0+023.950	4.556 (LT)	208.250	TOP CONC ENCASEMENT	SPRINT FIBER OPTIC LINE
3	0+138.674	4.034 (LT)	211.810	TOP CONC ENCASEMENT	SPRINT FIBER OPTIC LINE
4	0+280.256	28.964 (RT)	216.590	TOP CONC ENCASEMENT	SPRINT FIBER OPTIC LINE



PLAN
1:500

NOTES:

1. LOCATION SHOWN IS APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SPRINT FIBER OPTIC CABLE TO BE RELOCATED BY OTHERS.
3. ALL PIPELINES AND OTHER UNDERGROUND FACILITIES MAY NOT BE SHOWN. EXISTING UNDERGROUND FACILITIES AS SHOWN ARE APPROXIMATE ONLY AND WERE OBTAINED FROM AVAILABLE UTILITY RECORDS. HOWEVER, THE COUNTY ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY OR COMPLETENESS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITIES AND TO HAVE ALL FACILITIES LOCATED IN THE FIELD PRIOR TO THE START OF ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT AT 1-800-642-2444 AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION.

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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APPROVED
REGISTERED PROFESSIONAL ENGINEER
STANLEY M. LUNDY
No. 38453
Exp. 12/31/2009
CIVIL
STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

UTILITY PLAN

APPROVAL RECOMMENDED: JAMES GU
APPROVED: STANLEY M. LUNDY
DATE: JAN 2008
SCALE: 1:500
DRAWN: JANE WANG
DESIGNED: SAYLITHON BOUNALIA
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 96 OF 145
FILE NO. U-357-6

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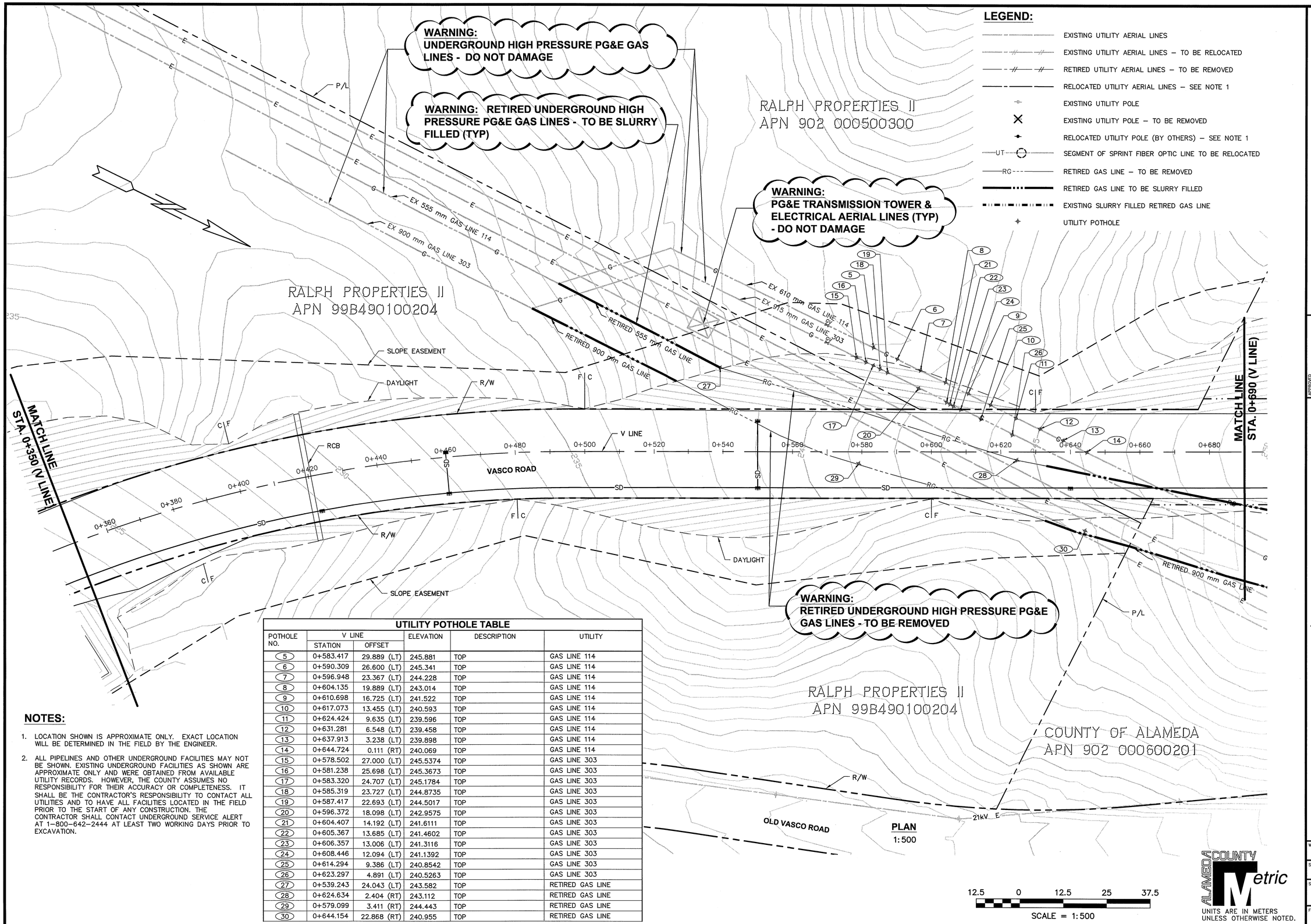
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



NOTES:

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UTILITY POTHOLE TABLE

POTHOLE NO.	V LINE STATION	V LINE OFFSET	ELEVATION	DESCRIPTION	UTILITY
5	0+583.417	29.889 (LT)	245.881	TOP	GAS LINE 114
6	0+590.309	26.600 (LT)	245.341	TOP	GAS LINE 114
7	0+596.948	23.367 (LT)	244.228	TOP	GAS LINE 114
8	0+604.135	19.889 (LT)	243.014	TOP	GAS LINE 114
9	0+610.698	16.725 (LT)	241.522	TOP	GAS LINE 114
10	0+617.073	13.455 (LT)	240.593	TOP	GAS LINE 114
11	0+624.424	9.635 (LT)	239.596	TOP	GAS LINE 114
12	0+631.281	6.548 (LT)	239.458	TOP	GAS LINE 114
13	0+637.913	3.238 (LT)	239.898	TOP	GAS LINE 114
14	0+644.724	0.111 (RT)	240.069	TOP	GAS LINE 114
15	0+578.502	27.000 (LT)	245.5374	TOP	GAS LINE 303
16	0+581.238	25.698 (LT)	245.3673	TOP	GAS LINE 303
17	0+583.320	24.707 (LT)	245.1784	TOP	GAS LINE 303
18	0+585.319	23.727 (LT)	244.8735	TOP	GAS LINE 303
19	0+587.417	22.693 (LT)	244.5017	TOP	GAS LINE 303
20	0+596.372	18.098 (LT)	242.9575	TOP	GAS LINE 303
21	0+604.407	14.192 (LT)	241.6111	TOP	GAS LINE 303
22	0+605.367	13.685 (LT)	241.4602	TOP	GAS LINE 303
23	0+606.357	13.006 (LT)	241.3116	TOP	GAS LINE 303
24	0+608.446	12.094 (LT)	241.1392	TOP	GAS LINE 303
25	0+614.294	9.386 (LT)	240.8542	TOP	GAS LINE 303
26	0+623.297	4.891 (LT)	240.5263	TOP	GAS LINE 303
27	0+539.243	24.043 (LT)	243.582	TOP	RETIRED GAS LINE
28	0+624.634	2.404 (RT)	243.112	TOP	RETIRED GAS LINE
29	0+579.099	3.411 (RT)	244.443	TOP	RETIRED GAS LINE
30	0+644.154	22.868 (RT)	240.955	TOP	RETIRED GAS LINE

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. TUNG No. 39957 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

UTILITY PLAN

APPROVAL RECOMMENDED: JAMES O'DAY
APPROVAL RECOMMENDED: ARPORT C. LOERA
DATE: JAN 2008
SCALE: 1:500
DRAWN: JANE RINGOT
DESIGNED: BOND MCCANTON MCAVELA
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 97 OF 145
FILE NO. U-357-6

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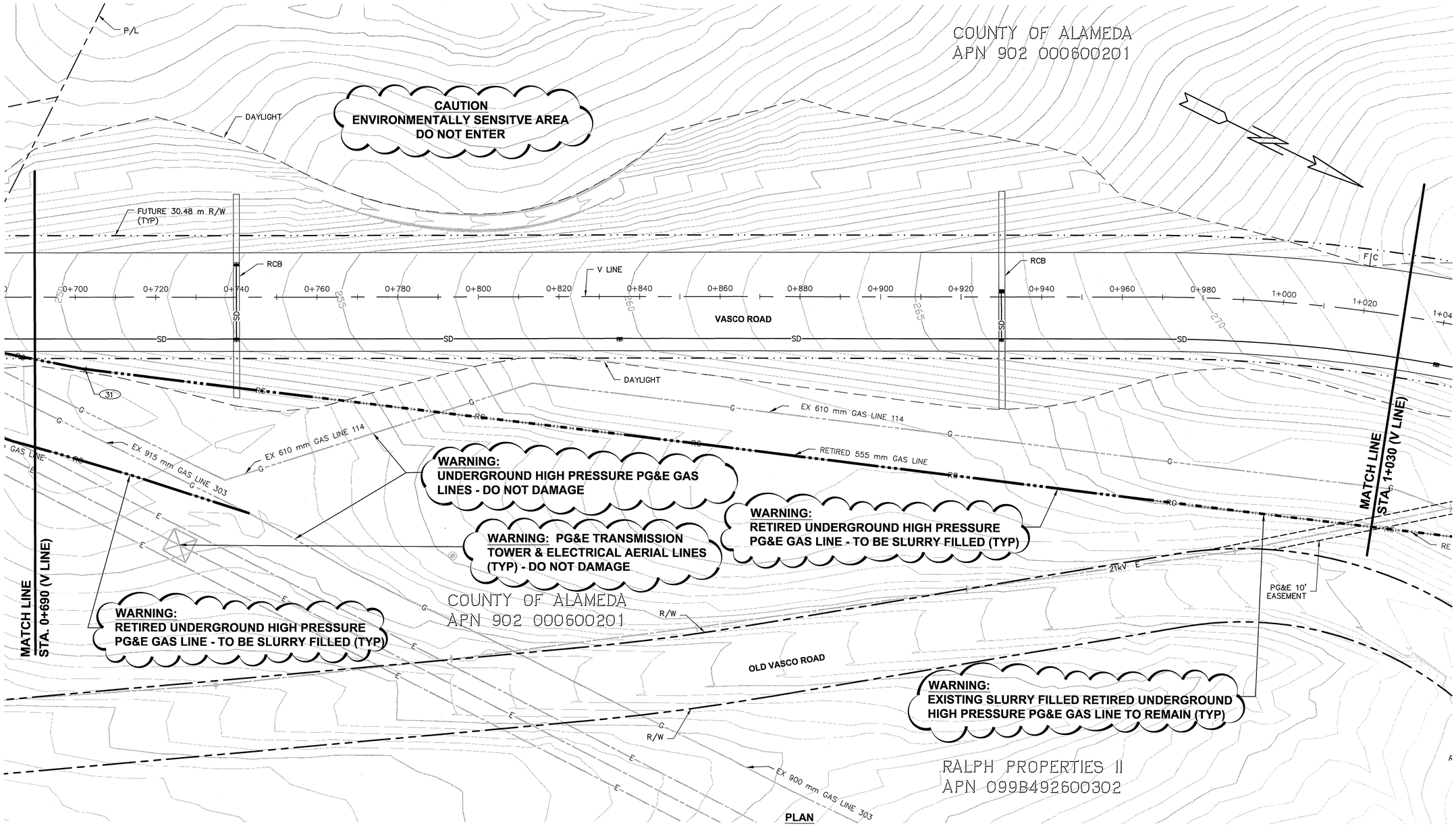
UTILITY POTHOLE TABLE					
POTHOLE NO.	V LINE		ELEVATION	DESCRIPTION	UTILITY
	STATION	OFFSET			
31	0+702.429	17.933 (RT)	246.769	TOP	RETIRED GAS LINE



PLAN
1:500

NOTES:

1. LOCATION SHOWN IS APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. ALL PIPELINES AND OTHER UNDERGROUND FACILITIES MAY NOT BE SHOWN. EXISTING UNDERGROUND FACILITIES AS SHOWN ARE APPROXIMATE ONLY AND WERE OBTAINED FROM AVAILABLE UTILITY RECORDS. HOWEVER, THE COUNTY ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY OR COMPLETENESS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITIES AND TO HAVE ALL FACILITIES LOCATED IN THE FIELD PRIOR TO THE START OF ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT AT 1-800-642-2444 AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION.

LEGEND:

- EXISTING UTILITY AERIAL LINES
- EXISTING UTILITY AERIAL LINES – TO BE RELOCATED
- RETIRED UTILITY AERIAL LINES – TO BE REMOVED
- RELOCATED UTILITY AERIAL LINES – SEE NOTE 1
- EXISTING UTILITY POLE
- EXISTING UTILITY POLE – TO BE REMOVED
- RELOCATED UTILITY POLE (BY OTHERS) – SEE NOTE 1
- UT — SEGMENT OF SPRINT FIBER OPTIC LINE TO BE RELOCATED
- RG — RETIRED GAS LINE – TO BE REMOVED
- RETIRED GAS LINE TO BE SLURRY FILLED
- EXISTING SLURRY FILLED RETIRED GAS LINE
- UTILITY POTHOLE

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS
0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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APPROVED
REGISTERED PROFESSIONAL ENGINEER
SHANE W. FUNG
No. 39457
Exp. 12/31/2009
STATE OF CALIFORNIA
CIVIL

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

UTILITY PLAN

DRAWN: JANE PINTO
CHECKED: BOND NGUYEN/TON MANALILA
APPROVAL RECOMMENDED: JAMES CRU
APPROVED: AGRICE C. LAMBERT
DATE: JAN 2008
SCALE: 1:500

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 98 OF 145
FILE NO. U-357-6

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REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

LEGEND:

- EXISTING UTILITY AERIAL LINES
- EXISTING UTILITY AERIAL LINES – TO BE RELOCATED
- RETIRED UTILITY AERIAL LINES – TO BE REMOVED
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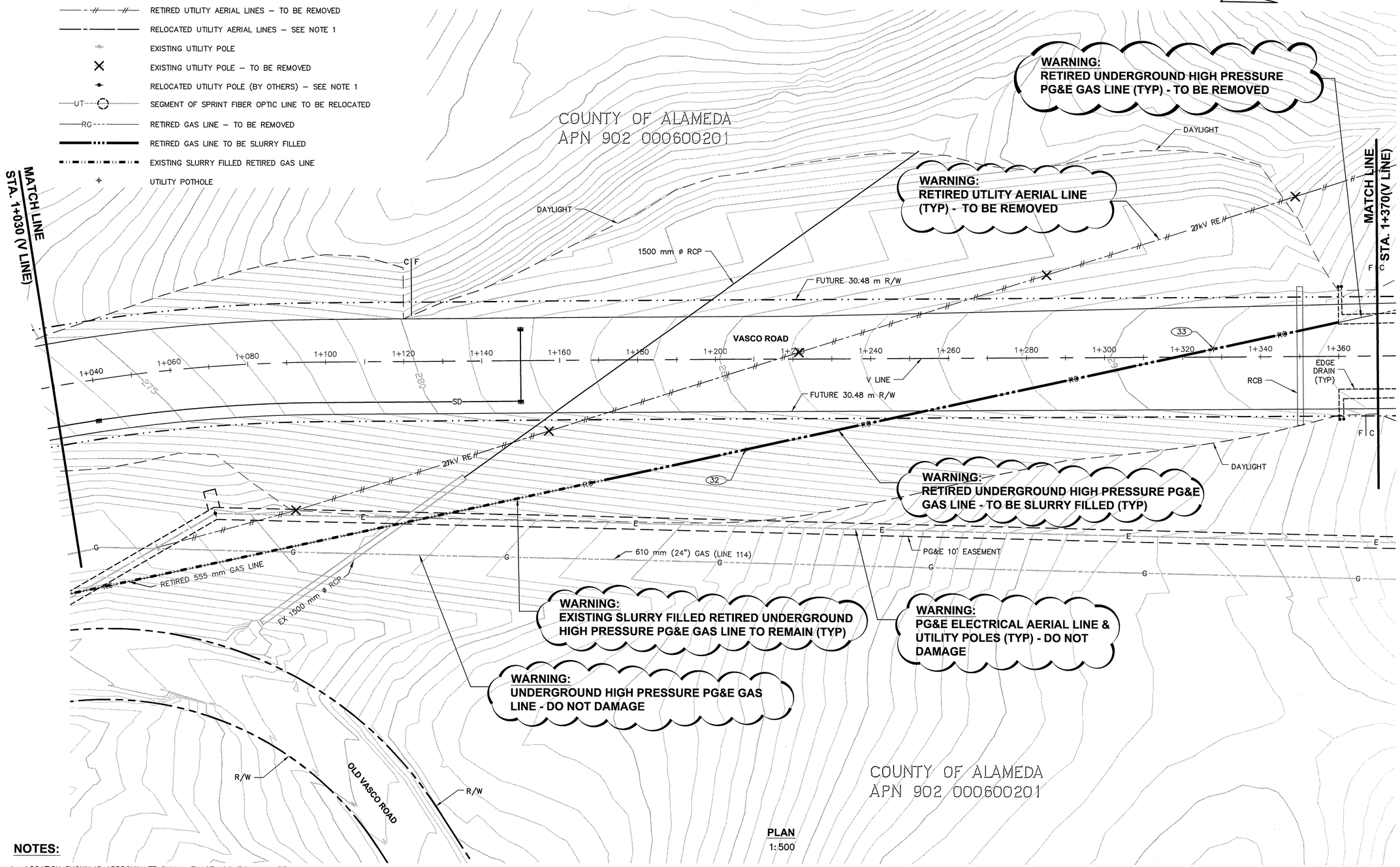
- RETIRED GAS LINE TO BE SLURRY FILLED
- EXISTING SLURRY FILLED RETIRED GAS LINE
- UTILITY POTHOLE



PLAN
1:500

NOTES:

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UTILITY POTHOLE TABLE

POTHOLE NO.	V LINE STATION	V LINE OFFSET	ELEVATION	DESCRIPTION	UTILITY
32	1+207.619	23.251 (RT)	268.046	TOP	RETIRED GAS LINE
33	1+327.965	2.051 (LT)	283.022	TOP	RETIRED GAS LINE

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY STEVEN W. FUNG No. 34957 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

UTILITY PLAN

APPROVAL RECOMMENDED: JAMES CHU
APPROVED: ASSOCIATE CIVIL ENGINEER
DATE: JAN 2008
SCALE: 1:500
DRAWN: JANE RINGO
DESIGNED: CONSULTANT: MORAGA
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 99 OF 145
FILE NO. U-357-6

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REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

UTILITY POTHOLE TABLE

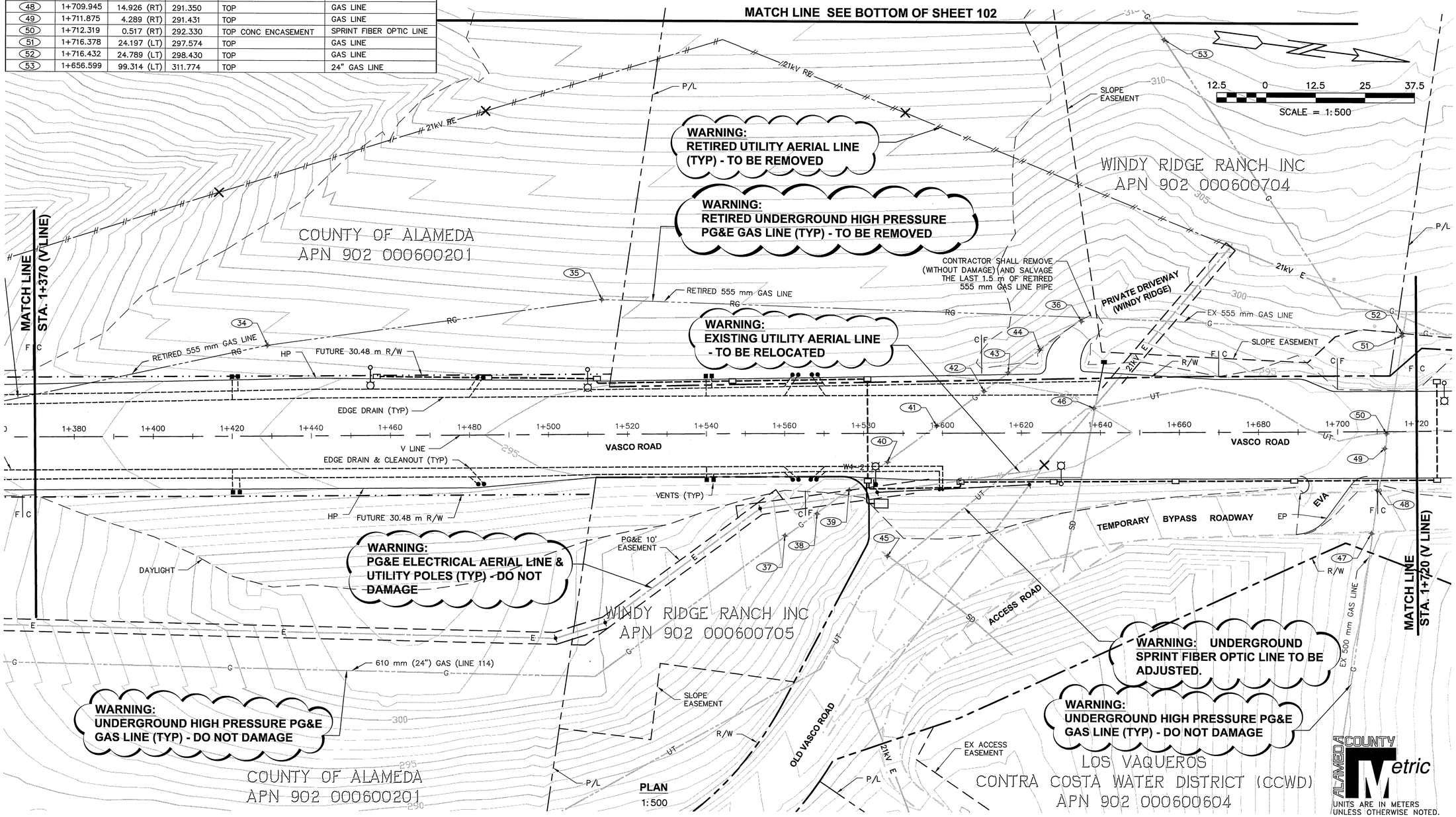
POTHOLE NO.	V LINE STATION	V LINE OFFSET	ELEVATION	DESCRIPTION	UTILITY
34	1+429.034	23.033 (LT)	302.414	TOP	RETIRED GAS LINE
35	1+513.718	34.072 (LT)	315.863	TOP	RETIRED GAS LINE
36	1+635.345	28.217 (LT)	294.001	TOP	RETIRED GAS LINE
37	1+559.917	25.957 (RT)	292.581	TOP	GAS LINE 114
38	1+568.106	20.394 (RT)	291.079	TOP	GAS LINE 114
39	1+576.246	14.430 (RT)	290.207	TOP	GAS LINE 114
40	1+586.041	7.272 (RT)	289.660	TOP	GAS LINE 114
41	1+598.539	1.826 (LT)	289.593	TOP	GAS LINE 114
42	1+610.597	10.630 (LT)	290.175	TOP	GAS LINE 114
43	1+616.703	15.247 (LT)	290.567	TOP	GAS LINE 114
44	1+624.759	21.014 (LT)	291.130	TOP	GAS LINE 114
45	1+585.893	31.265 (RT)	286.270	TOP CONC ENCASEMENT	SPRINT FIBER OPTIC LINE
46	1+638.375	6.194 (LT)	290.880	TOP CONC ENCASEMENT	SPRINT FIBER OPTIC LINE
47	1+708.426	25.926 (RT)	291.750	TOP	GAS LINE
48	1+709.945	14.926 (RT)	291.350	TOP	GAS LINE
49	1+711.875	4.289 (RT)	291.431	TOP	GAS LINE
50	1+712.319	0.517 (RT)	292.330	TOP CONC ENCASEMENT	SPRINT FIBER OPTIC LINE
51	1+716.378	24.197 (LT)	297.574	TOP	GAS LINE
52	1+716.432	24.789 (LT)	298.430	TOP	GAS LINE
53	1+656.599	99.314 (LT)	311.774	TOP	24" GAS LINE

LEGEND:

- PROPOSED STREET LIGHT
- PROPOSED TRAFFIC LOADING PULL BOX
- SERVICE BOX
- PROPOSED STREETLIGHT CONDUIT
- EXISTING UTILITY AERIAL LINES
- EXISTING UTILITY AERIAL LINES – TO BE RELOCATED
- RETIRED UTILITY AERIAL LINES – TO BE REMOVED
- RELOCATED UTILITY AERIAL LINES – SEE NOTE 1
- EXISTING UTILITY POLE
- EXISTING UTILITY POLE – TO BE REMOVED
- RELOCATED UTILITY POLE (BY OTHERS) – SEE NOTE 1
- SEGMENT OF SPRINT FIBER OPTIC LINE TO BE RELOCATED
- RETIRED GAS LINE – TO BE REMOVED
- RETIRED GAS LINE TO BE SLURRY FILLED
- EXISTING SLURRY FILLED RETIRED GAS LINE
- UTILITY POTHOLE

NOTES:

1. LOCATION SHOWN IS APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. ALL PIPELINES AND OTHER UNDERGROUND FACILITIES MAY NOT BE SHOWN. EXISTING UNDERGROUND FACILITIES AS SHOWN ARE APPROXIMATE ONLY AND WERE OBTAINED FROM AVAILABLE UTILITY RECORDS. HOWEVER, THE COUNTY ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY OR COMPLETENESS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITIES AND TO HAVE ALL FACILITIES LOCATED IN THE FIELD PRIOR TO THE START OF ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT AT 1-800-642-2444 AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION.



FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

NO.	DESCRIPTION	BY	DATE	APPV'D

REVISIONS

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

UTILITY PLAN

APPROVED: REGISTERED PROFESSIONAL ENGINEER STANLEY W. TONG No. 34357 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

APPROVAL RECOMMENDED: JAMES CHU

APPROVAL RECOMMENDED: ASHWIN C. PATEL

DATE: JAN 2008

SCALE: 1:500

DRAWN: JANE RINGIT

DESIGNED: JANE RINGIT

BUILT BY: MARTIN MARAVILLA

CHECKED: JAMES CHU

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 100 OF 145

FILE NO. U-357-6

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REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
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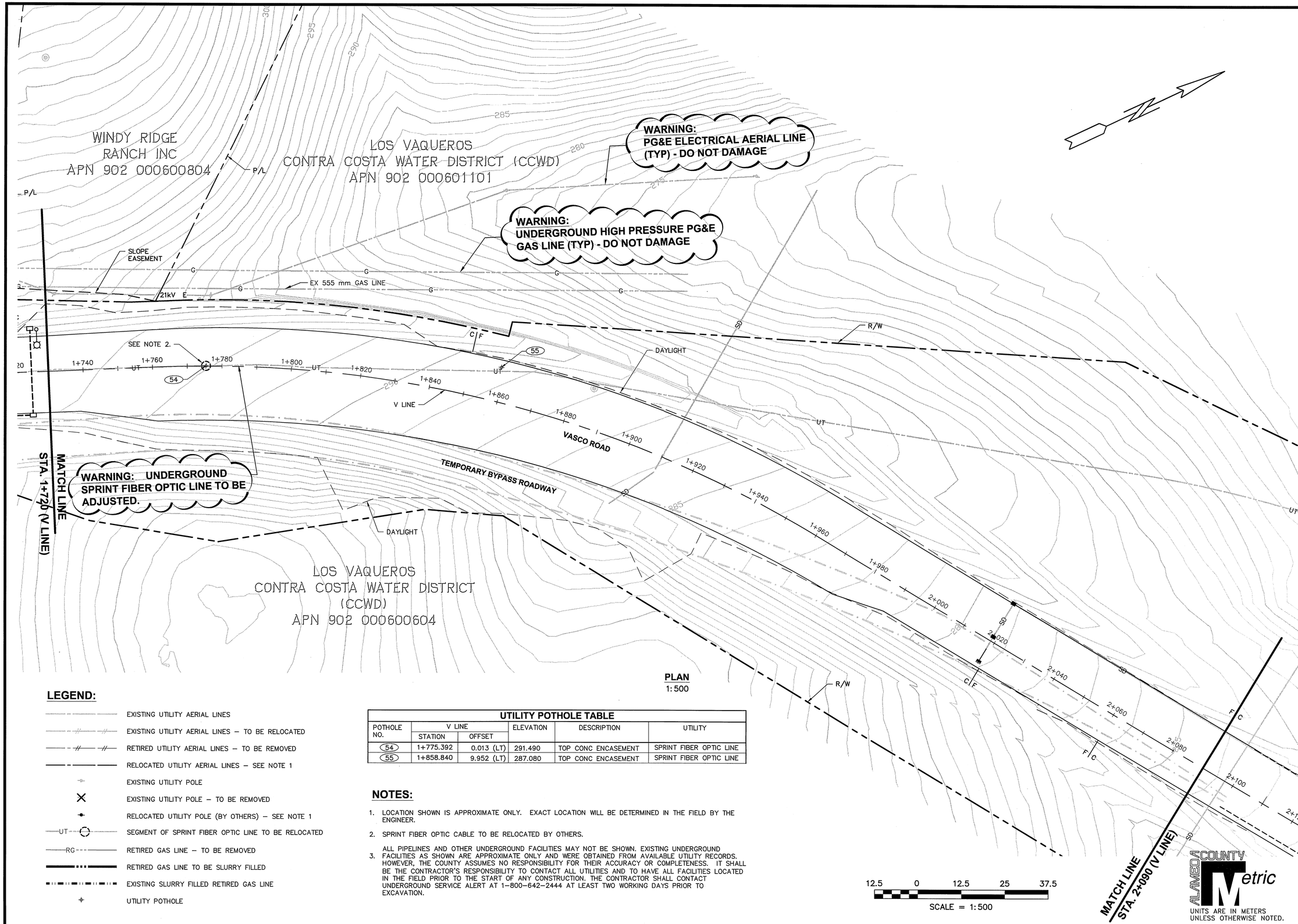
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



LEGEND:

- EXISTING UTILITY AERIAL LINES
- EXISTING UTILITY AERIAL LINES – TO BE RELOCATED
- RETIRED UTILITY AERIAL LINES – TO BE REMOVED
- RELOCATED UTILITY AERIAL LINES – SEE NOTE 1
- EXISTING UTILITY POLE
- EXISTING UTILITY POLE – TO BE REMOVED
- RELOCATED UTILITY POLE (BY OTHERS) – SEE NOTE 1
- UT — SEGMENT OF SPRINT FIBER OPTIC LINE TO BE RELOCATED
- RG — RETIRED GAS LINE – TO BE REMOVED
- RETIRED GAS LINE TO BE SLURRY FILLED
- EXISTING SLURRY FILLED RETIRED GAS LINE
- UTILITY POTHOLE

UTILITY POTHOLE TABLE

POTHOLE NO.	V LINE STATION	V LINE OFFSET	ELEVATION	DESCRIPTION	UTILITY
54	1+775.392	0.013 (LT)	291.490	TOP CONC ENCASEMENT	SPRINT FIBER OPTIC LINE
55	1+858.840	9.952 (LT)	287.080	TOP CONC ENCASEMENT	SPRINT FIBER OPTIC LINE

NOTES:

1. LOCATION SHOWN IS APPROXIMATE ONLY. EXACT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. SPRINT FIBER OPTIC CABLE TO BE RELOCATED BY OTHERS.
3. ALL PIPELINES AND OTHER UNDERGROUND FACILITIES MAY NOT BE SHOWN. EXISTING UNDERGROUND FACILITIES AS SHOWN ARE APPROXIMATE ONLY AND WERE OBTAINED FROM AVAILABLE UTILITY RECORDS. HOWEVER, THE COUNTY ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY OR COMPLETENESS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITIES AND TO HAVE ALL FACILITIES LOCATED IN THE FIELD PRIOR TO THE START OF ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT AT 1–800–642–2444 AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION.

NO.	DESCRIPTION	BY	DATE	APPV'D

REVISIONS

APPROVED REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 38557 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

UTILITY PLAN

DRAWN JAKE RINGOY
DESIGNED BONG GUANSON MARAVILLA
CHECKED JAMES CHU
APPROVAL RECOMMENDED JAMES CHU
APPROVAL RECOMMENDED JAMES C. CARPENTER
DATE JAN 2008
SCALE 1:500

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 101 OF 145
FILE NO. U-357-6

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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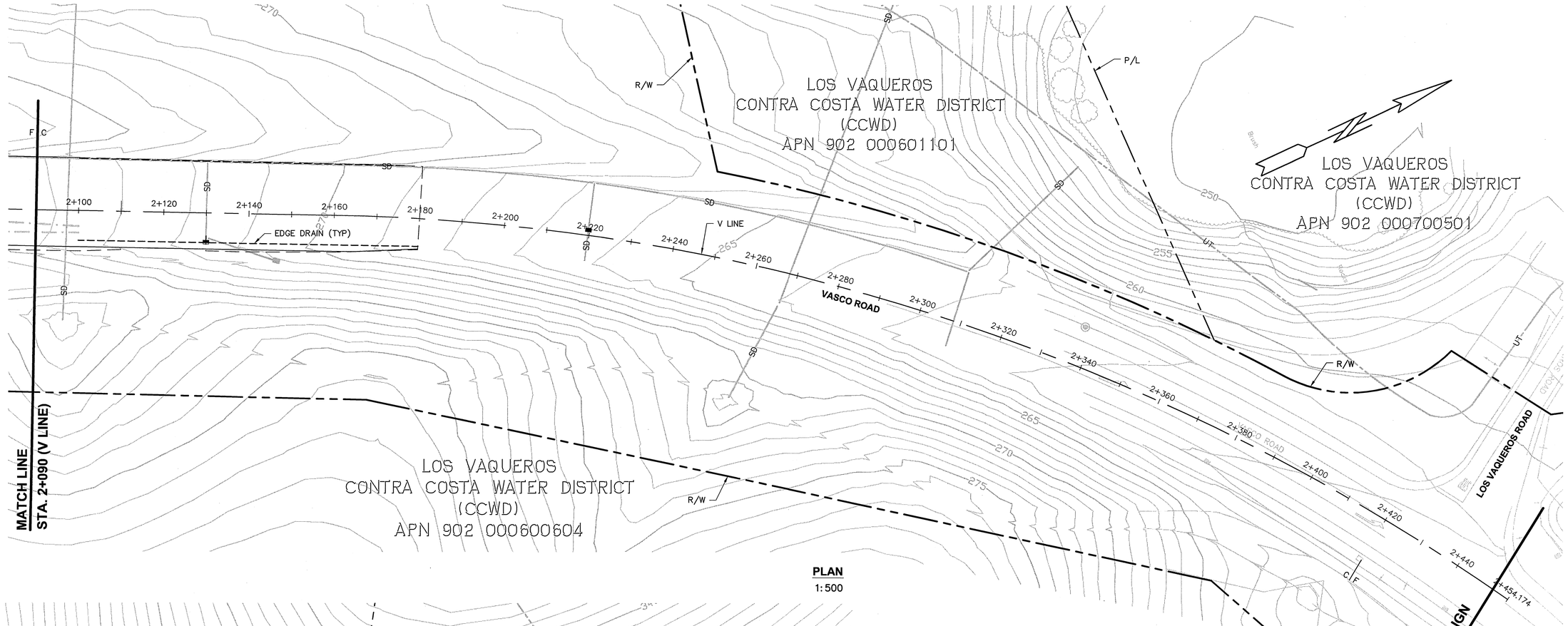
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



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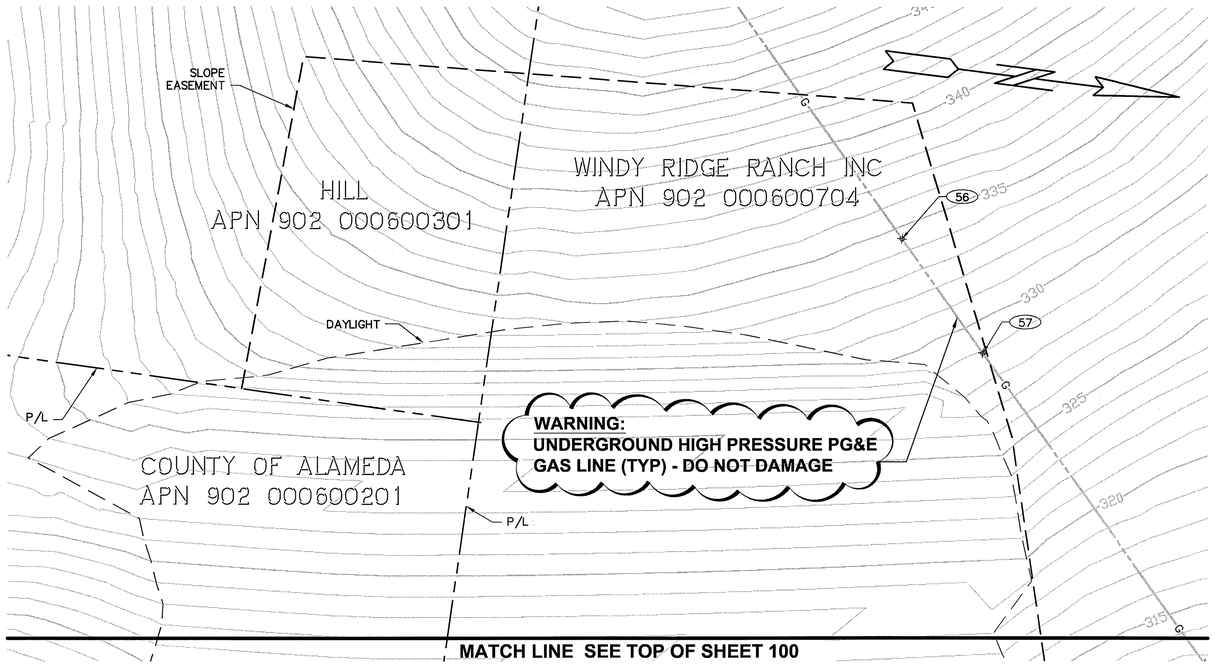

PLAN
1:500

LEGEND:

- EXISTING UTILITY AERIAL LINES
- EXISTING UTILITY AERIAL LINES – TO BE RELOCATED
- RETIRED UTILITY AERIAL LINES – TO BE REMOVED
- RELOCATED UTILITY AERIAL LINES – SEE NOTE 1
- EXISTING UTILITY POLE
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- UT — SEGMENT OF SPRINT FIBER OPTIC LINE TO BE RELOCATED
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- RETIRED GAS LINE TO BE SLURRY FILLED
- EXISTING SLURRY FILLED RETIRED GAS LINE
- UTILITY POTHOLE

NOTES:

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12.5 0 12.5 25 37.5
SCALE = 1:500

UTILITY POTHOLE TABLE

POTHOLE NO.	V LINE STATION	V LINE OFFSET	ELEVATION	DESCRIPTION	UTILITY
56	1+606.352	171.120 (LT)	333.769	TOP	24" GAS LINE
57	1+619.733	151.836 (LT)	328.195	TOP	24" GAS LINE

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER STANLEY R. TUNG No. 34457 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA
APPROVED

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

UTILITY PLAN

APPROVAL RECOMMENDED: James Ohr, Manager, Design Division
APPROVED: Agnes Stubblefield, Director of Public Works
DRAWN: JAME RIVAS
DESIGNED: Brian Kolstad, Associate Engineer
CHECKED: JAMES CHU
SCALE: 1:500
DATE: JAN 2008

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 102 OF 145
FILE NO. U-357-6

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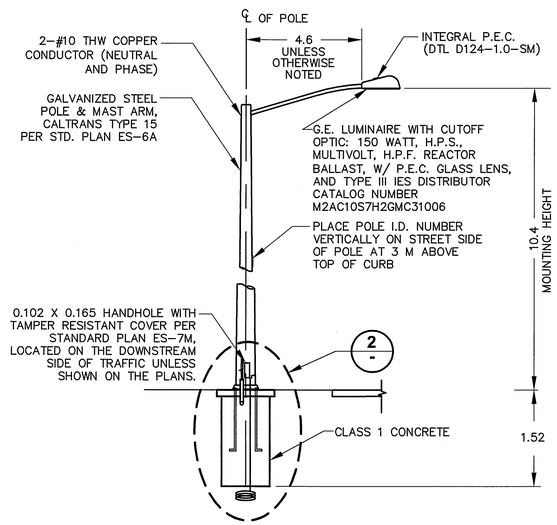
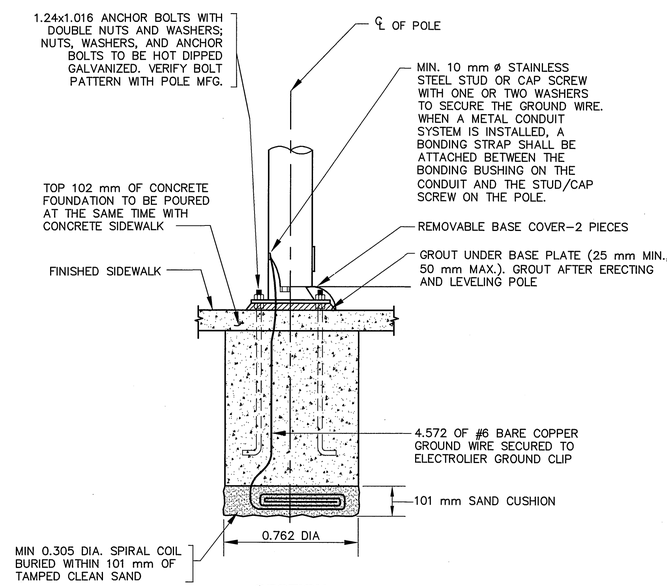
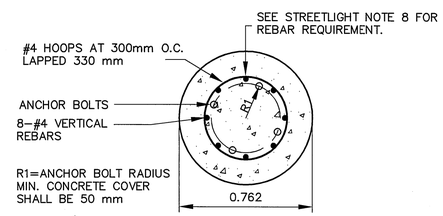
FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm



ELECTROLIER DETAIL 1 -
NO SCALE



SECTION



PLAN

ELECTROLIER CONCRETE FOOTING DETAIL 2 -
NO SCALE

STREETLIGHT NOTES:

1. ALL MATERIAL AND WORKMANSHIP SHALL FULLY CONFORM WITH THE LATEST EDITIONS OF THE NATIONAL ELECTRIC CODE, STATE STANDARD SPECIFICATIONS, AND THE COUNTY OF ALAMEDA STREET LIGHT DESIGN GUIDELINES. WHERE THERE IS A CONFLICT, CONTACT THE COUNTY REPRESENTATIVE AT (510) 670– 5537
2. THE STREET LIGHT STANDARDS SHALL BE KEPT A MINIMUM OF 1.0 METER AWAY FROM DRIVEWAY FLARES AND 1.52 METERS (5 FEET) FROM FIRE HYDRANTS.
3. WIRE: WIRE SHALL BE UL LISTED 600 VOLT AWG NO. 10 OR LARGER WITH 7–STRAND SOFT COPPER, TYPE THW OR RHW WITH MINIMUM 1.5 mm (0.06") (60 MIL) POLYVINYL CHLORIDE INSULATION. NO MECHANICAL MEANS SHALL BE USED TO PULL WIRES.
4. CERTIFICATE OF COMPLIANCE AND INVOICES: MANUFACTURER'S CERTIFICATE OF COMPLIANCE AND INVOICES SHALL BE PROVIDED TO THE COUNTY INSPECTOR PRIOR TO INSTALLATION OF ALL POLES, MAST ARMS, LUMINARES, PHOTOCELLS, CONDUIT AND WIRING.
5. ALL EQUIPMENT TO BE INSTALLED THAT CONFLICT WITH EXISTING AERIAL UTILITY FACILITIES SHALL BE COORDINATED WITH UTILITY COMPANIES.
6. ALL EQUIPMENT LOCATIONS SHALL BE SUBJECT TO VERIFICATION BY THE ENGINEER IN THE FIELD.
7. FOR TYPE 15 SB. USE 15 STANDARD WITH TYPE 30 SLIP BASE PLATE DETAIL. SEE STANDARD PLAN ES–6F.
8. FOUNDATION STEEL IS ONLY REQUIRED IF THE COUNTY INSPECTOR/ENGINEER DETERMINES IT IS NECESSARY DUE TO THE FOUNDATION EXCAVATION BEING LARGER THAN NEEDED AND/OR UNSUITABLE MATERIAL IS ENCOUNTERED.

GENERAL NOTES:

1. CONTACT TRAFFIC SIGNAL SUPERVISOR, (ALAMEDA COUNTY MAINTENANCE OPERATIONS) AT (510) 670–5537 AT LEAST 9 WORKING DAYS PRIOR TO ANY CONSTRUCTION.
2. STREET LIGHTING PLAN IS SCHEMATIC AND ACCURATE FOR ELECTRICAL WORK ONLY.
3. LOCATIONS OF STANDARDS, AND PULL BOXES ARE SCHEMATIC ONLY AND SHALL BE VERIFIED IN THE FIELD BY THE ENGINEER PRIOR TO INSTALLATION.
4. STANDARD LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION OF FOUNDATIONS.
5. PULL BOXES SHALL BE NO. 5 (TRAFFIC) UNLESS OTHERWISE NOTED ON PLANS. ALL NEW PULL BOXES SHALL BE SPACED NO MORE THAN 30 METERS UNLESS OTHERWISE NOTED ON PLANS.
6. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLAN ARE APPROXIMATE ONLY. CONTACT U.S.A. (800) 642–2444 FOR UTILITY LOCATING SERVICES 48 HOURS PRIOR TO DOING ANY WORK.
7. ALL STANDARD CONDUIT RUNS ARE SCHEMATIC ONLY. ALL CONDUIT FROM STREET LIGHT STANDARD TO ADJACENT PULL BOX SHALL BE 50 mm DIAMETER.

STREETLIGHT TABLE

NO.	V LINE STATION	V LINE OFFSET	REMARK	STREET LIGHT BASE
1	0+261±	11.20 LT	SEE SHEET 104	TYPE 15 SB, SEE STREETLIGHT NOTE 7
2	0+283±	15.89 RT	SEE SHEET 104	TYPE 15 STANDARD
3	1+455±	17.24 LT	SEE SHEET 105	TYPE 15 STANDARD
4	1+510±	16.40 LT	SEE SHEET 105	TYPE 15 STANDARD
5	1+583±	12.98 RT	SEE SHEET 105	TYPE 15 STANDARD
6	1+630±	12.98 RT	SEE SHEET 105	TYPE 15 STANDARD
7	1+727±	12.24 LT	SEE SHEET 105	TYPE 15 STANDARD
	COORDINATE NORTHING	COORDINATE EASTING		
8	640506.121	1891222.126	SEE SHEET 105	TYPE 15 SB, SEE STREETLIGHT NOTE 7

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

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APPROVED REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 39127 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
STREET LIGHTING & ELECTRICAL PLAN

APPROVAL RECOMMENDED JAMES SHU
APPROVED STANLEY W. FUNG
DATE JAN 2008
SCALE AS SHOWN
DRAWN BRIND NGUYEN
DESIGNED
ESTIMATED
CHECKED JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 103 OF 145
FILE NO. U-357-6

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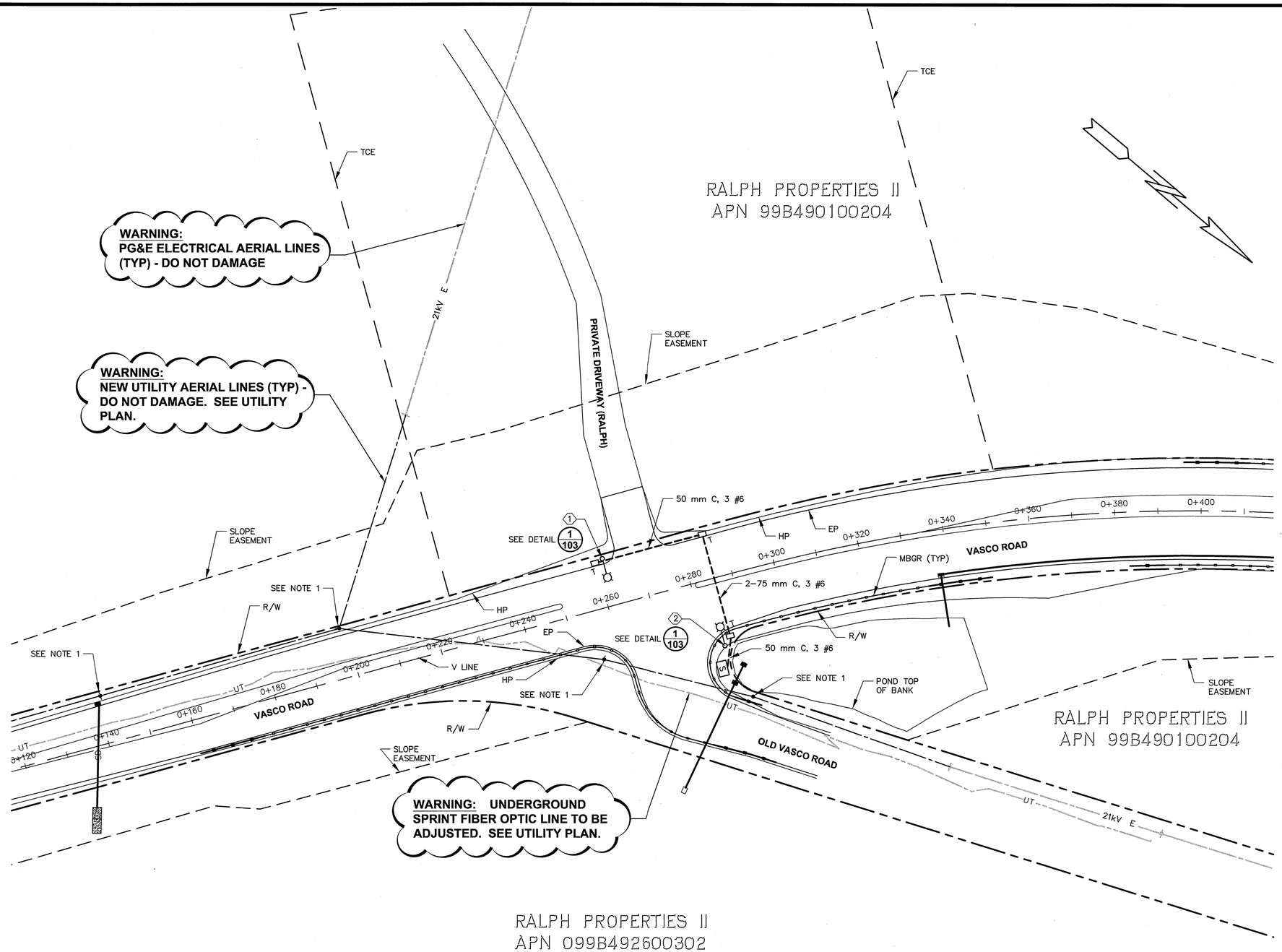
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		



NOTE:

1. NEW UTILITY POLE, SEE UTILITY PLAN.

LEGEND:

- NEW STREET LIGHT
- NEW PULL BOX (TRAFFIC)
- NEW SERVICE BOX
- NEW STREETLIGHT CONDUIT

PLAN
1:500

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
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FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. LUND No. 39453 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

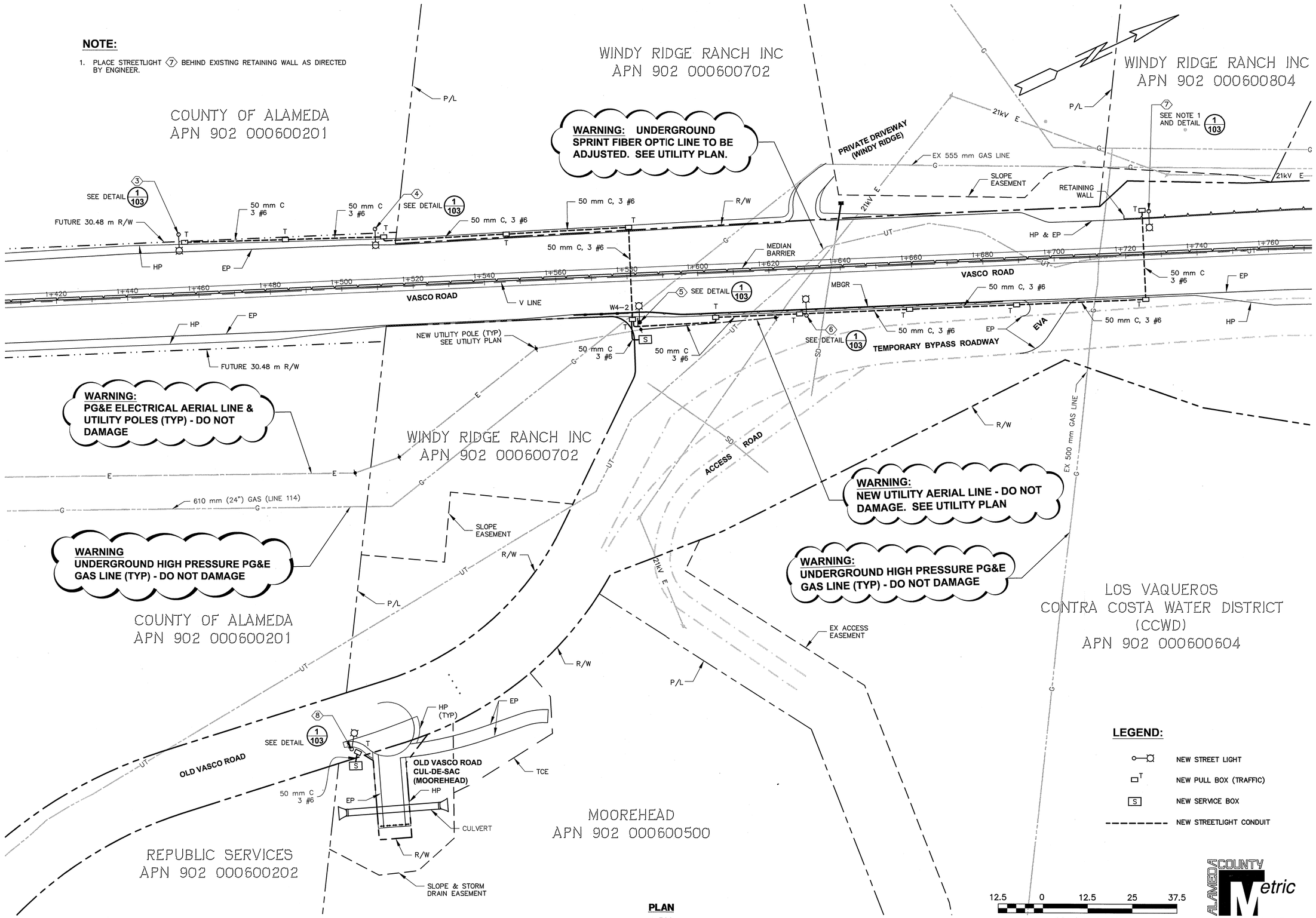
STREET LIGHTING & ELECTRICAL PLAN

APPROVAL RECOMMENDED: JAMES City
APPROVAL RECOMMENDED: [illegible]
DATE: JAN 2008
SCALE: 1:500
DRAWN: BONG NO./JAE RINGOT
DESIGNED: [illegible]
REVIEWED: [illegible]
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 104 OF 145
FILE NO. U-357-6

NOTE:

1. PLACE STREETLIGHT (7) BEHIND EXISTING RETAINING WALL AS DIRECTED BY ENGINEER.



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	SURVEY	REVIEWED BY:	DATE:
	TRAFFIC		
	ENVIRONMENTAL		

REVISIONS

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APPROVED REGISTERED PROFESSIONAL ENGINEER STEVEN W. FUNG No. 39859 Exp. 12/31/2009 STATE OF CALIFORNIA CIVIL

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

STREET LIGHTING & ELECTRICAL PLAN

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: ASHAR C. JORDAN
DATE: JAN 2008
SCALE: 1:500
DRAWN: BOND-TRAVIS & NGOT
DESIGNED: BOND TRAVIS
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 105 OF 145
FILE NO. U-357-6

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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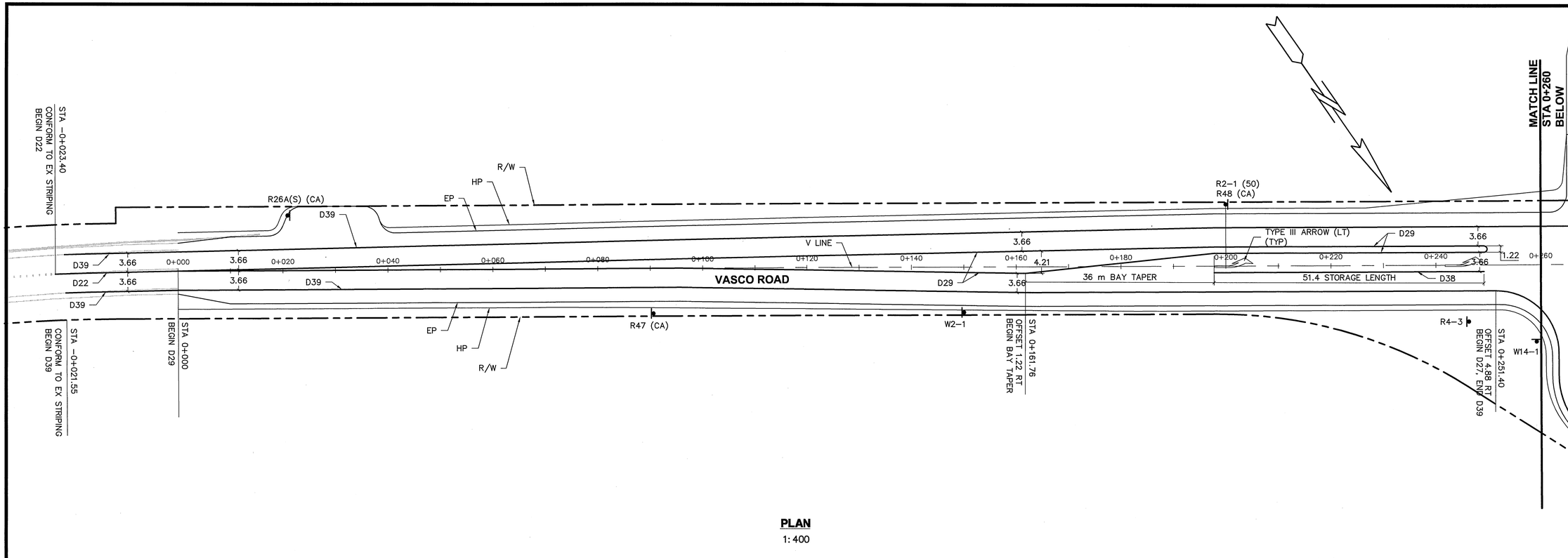

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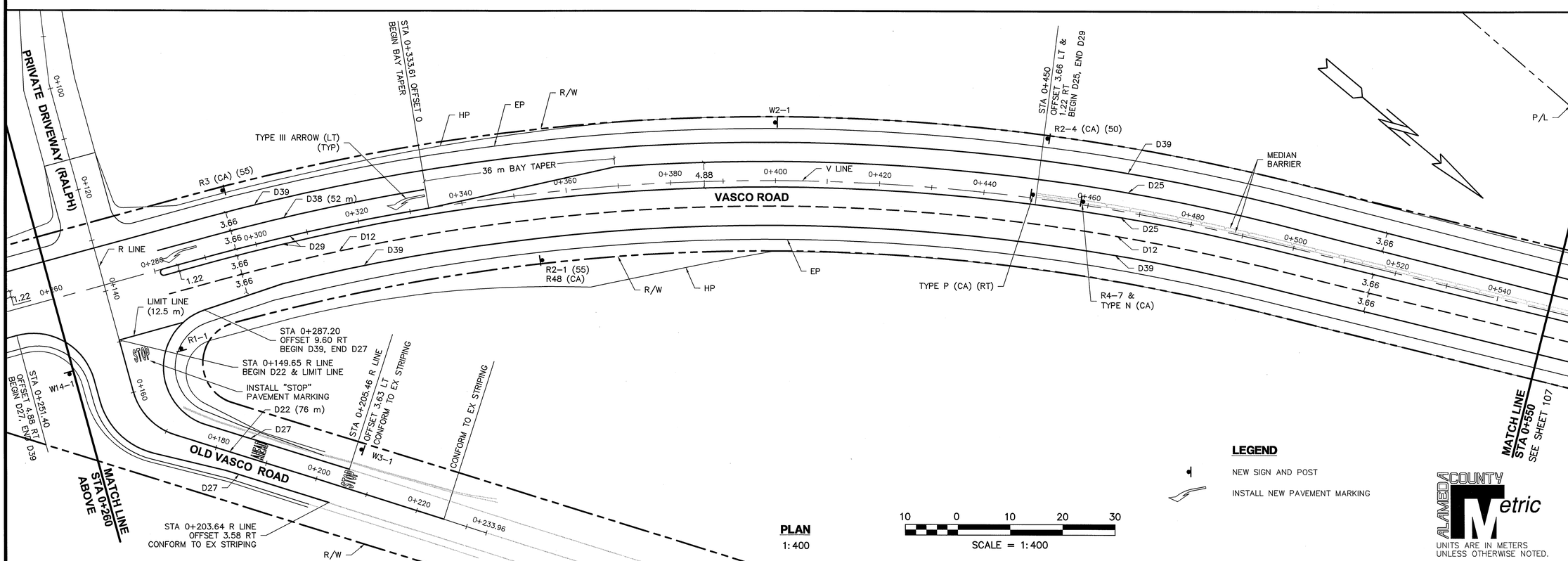

PLAN
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LEGEND

NEW SIGN AND POST

INSTALL NEW PAVEMENT MARKING

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SCALE = 1:400

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

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NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER
STANLEY W. FUNG
No. 39457
Exp. 12/31/2009
STATE OF CALIFORNIA
CIVIL ENGINEERING
APPROVED

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

SIGNING & STRIPING PLAN

APPROVAL RECOMMENDED: JAMES CHY
APPROVAL RECOMMENDED: ANDREW C. WONG
DATE: JAN 2008
DRAWN: JANE BUSCH
DESIGNED: TAM NGUYEN
CHECKED: JOHN P. BATES
SCALE: 1:400

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 106 OF 145
FILE NO. U-357-6

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MAINTENANCE		TRAFFIC	
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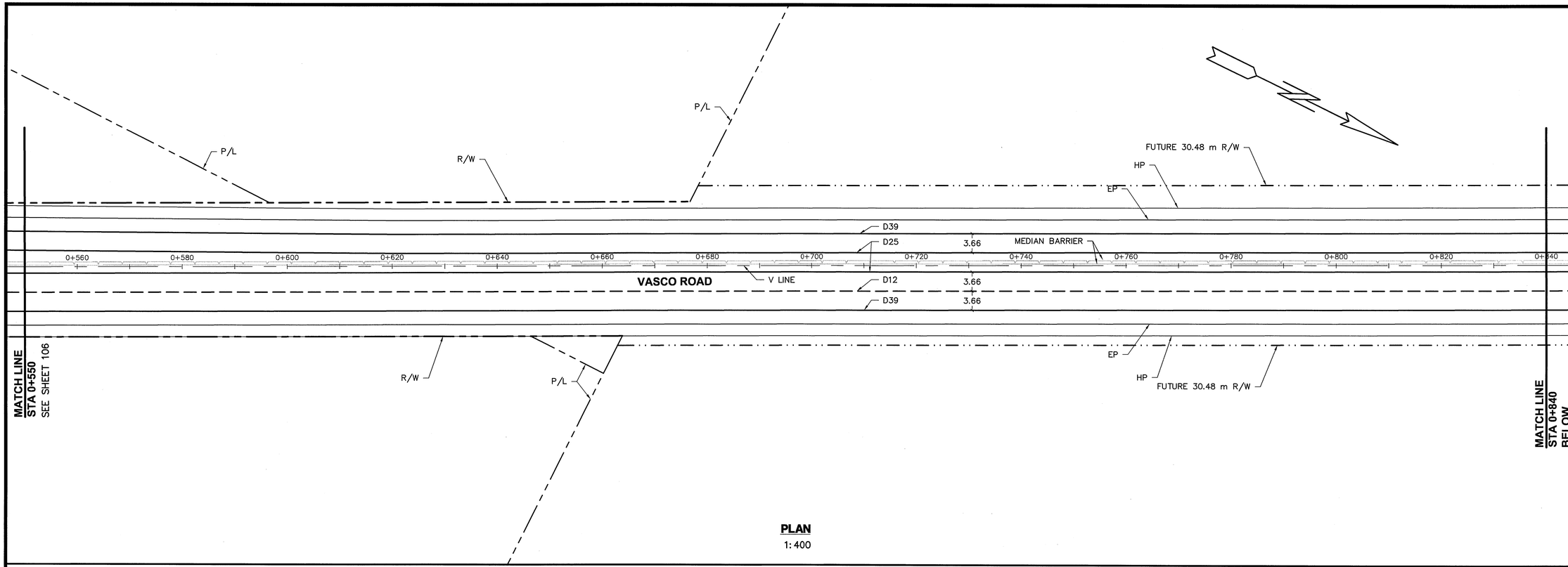

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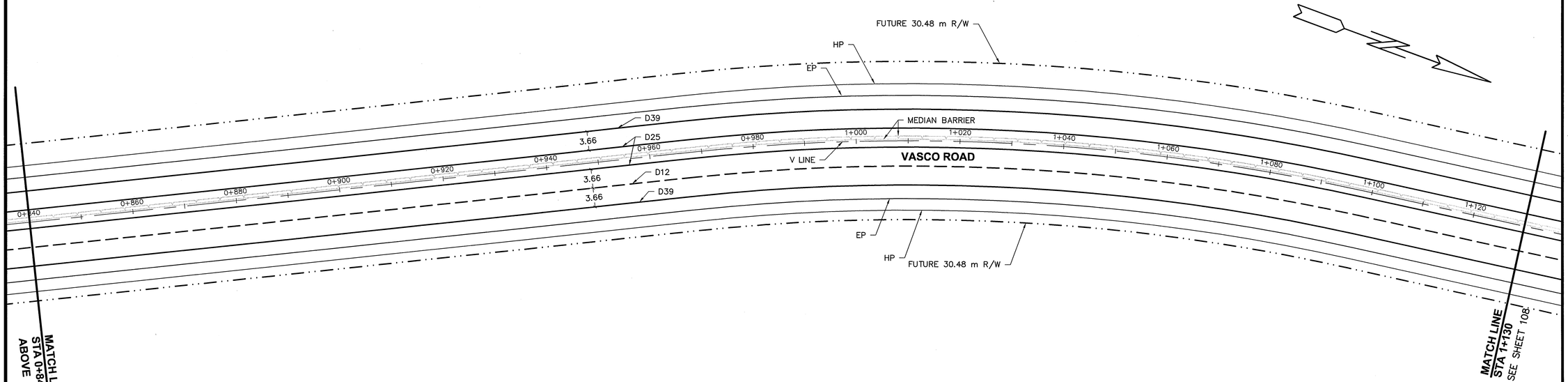

PLAN
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SCALE = 1:400

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

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REVISIONS

APPROVED
REGISTERED PROFESSIONAL ENGINEER
STANLEY W. TUNG
No. 39522
Exp. 12/31/2009
CIVIL
STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

SIGNING & STRIPING PLAN

APPROVAL RECOMMENDED: JAMES CH
APPROVAL RECOMMENDED: ARNOLD C. WONG
DRAWN: JANE RAVOUT
ISSUED: TIM NGUYEN
CHECKED: JOHN P. BATES
DATE: JAN 2008
SCALE: 1:400

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 107 OF 145
FILE NO. U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
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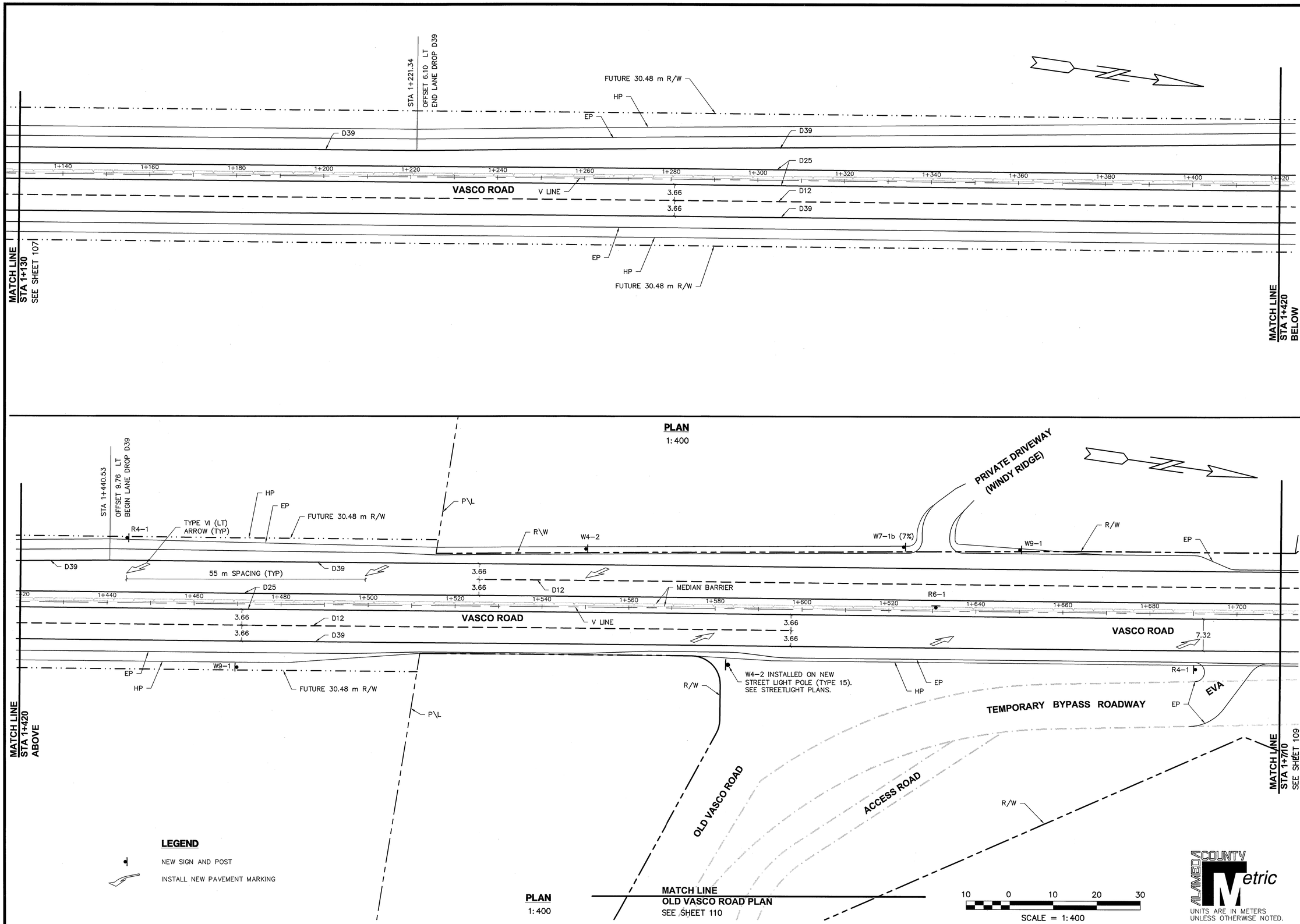

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

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REVISIONS

APPROVED
REGISTERED PROFESSIONAL ENGINEER
STANLEY R. FUNGER
No. 35157
Exp. 12/31/2009
STATE OF CALIFORNIA CIVIL ENGINEER

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

SIGNING & STRIPING PLAN

APPROVAL RECOMMENDED: JOHN P. BATES
APPROVED: STANLEY R. FUNGER
DRAWN: JAMIE SPIVEY
DESIGNED: JAMIE SPIVEY
CHECKED: TAM NGUYEN
JOHN P. BATES
DATE: JAN 2008
SCALE: 1:400

WORK ORDER NO. R23265
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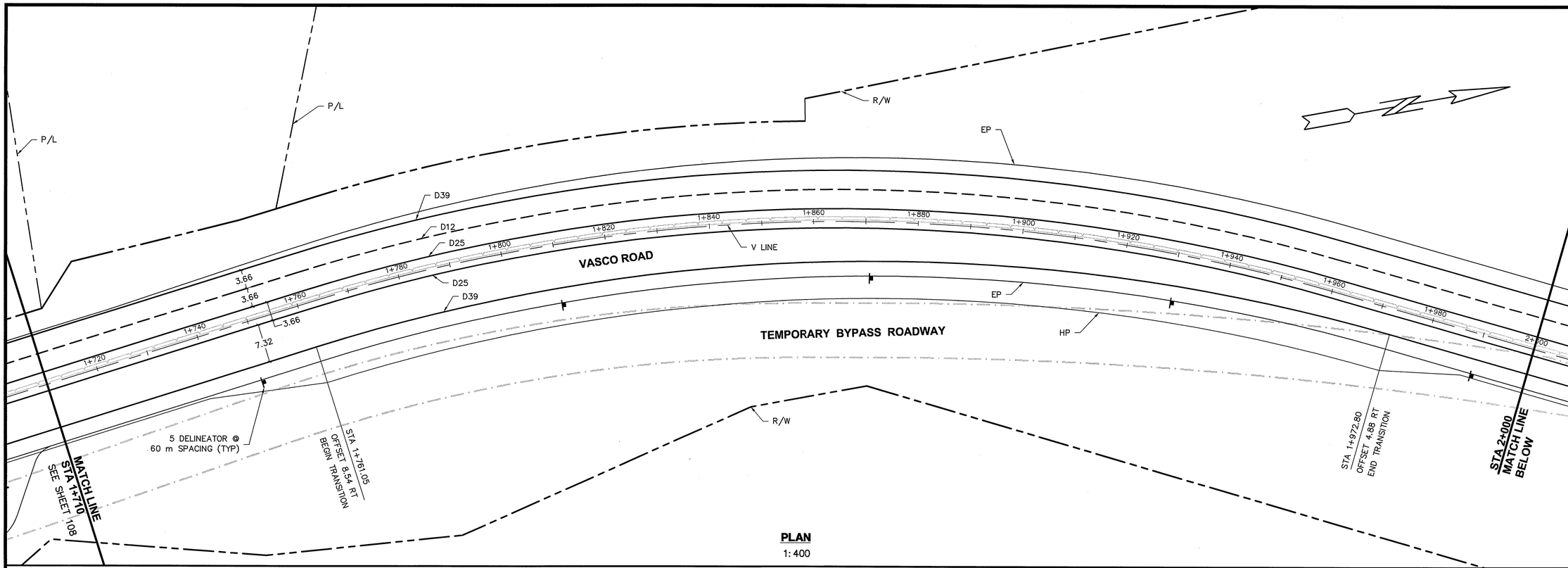
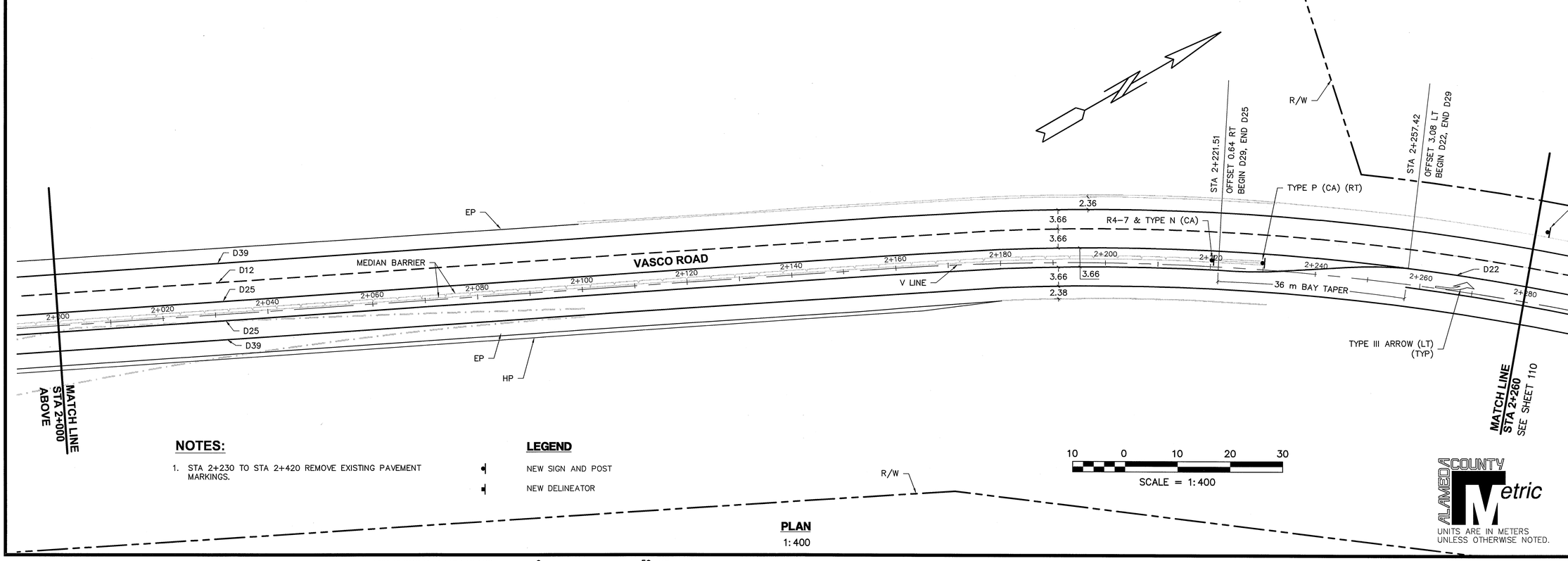
MAINTENANCE		TRAFFIC		
REAL ESTATE		ENVIRONMENTAL		



PLAN
1:400



PLAN
1:400

NOTES:

1. STA 2+230 TO STA 2+420 REMOVE EXISTING PAVEMENT MARKINGS.

LEGEND

NEW SIGN AND POST

NEW DELINEATOR

10 0 10 20 30
SCALE = 1:400

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

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REVISIONS			
NO.	DESCRIPTION	BY	DATE	APPVD
1				
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3				
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5				

APPROVED
REGISTERED PROFESSIONAL ENGINEER
STANLEY W. TUNG
No. 35487
Exp. 12/31/2009
STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

SIGNING & STRIPING PLAN

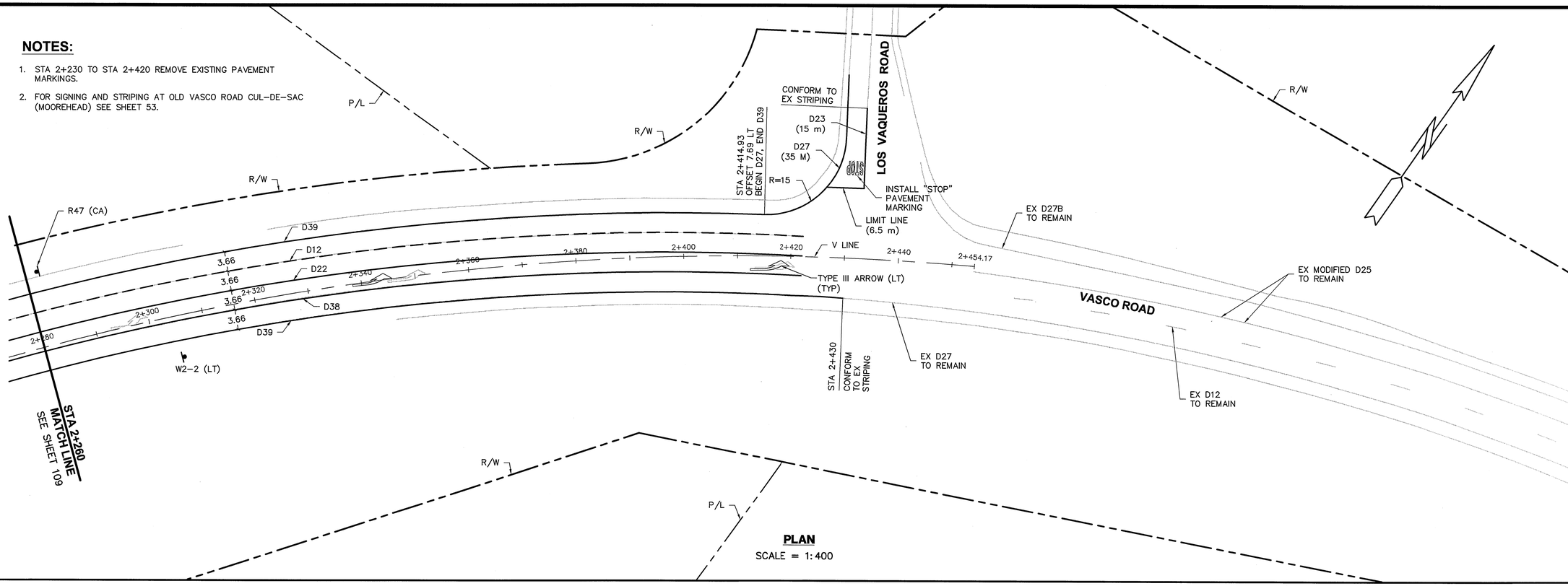
APPROVAL RECOMMENDED: JAMES SCHWARZ
APPROVED: ARSENIO C. CURAMEN
DRAWN: JANE NGUYEN
DESIGNED: TAM NGUYEN
CHECKED: JOHN P. BATES
DATE: JAN 2008
SCALE: 1:400

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 109 OF 145
FILE NO. U-357-6

ALAMEDA COUNTY Metric

NOTES:

1. STA 2+230 TO STA 2+420 REMOVE EXISTING PAVEMENT MARKINGS.
2. FOR SIGNING AND STRIPING AT OLD VASCO ROAD CUL-DE-SAC (MOOREHEAD) SEE SHEET 53.

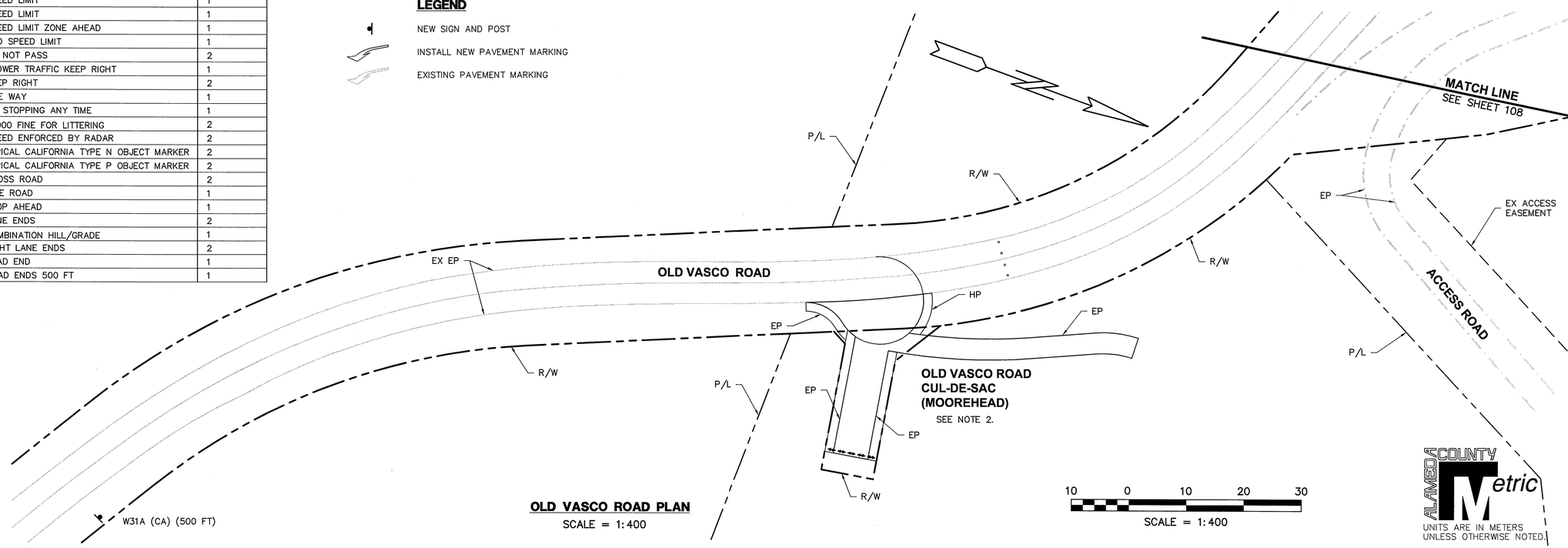


PLAN
SCALE = 1:400

SIGN TABLE		
SIGN CODE	SIGN TITLE	# OF SIGNS
R1-1	STOP	1
R2-1 (50)	SPEED LIMIT	1
R2-1 (55)	SPEED LIMIT	1
R2-4 (CA) (50)	SPEED LIMIT ZONE AHEAD	1
R3 (CA) (55)	END SPEED LIMIT	1
R4-1	DO NOT PASS	2
R4-3	SLOWER TRAFFIC KEEP RIGHT	1
R4-7	KEEP RIGHT	2
R6-1	ONE WAY	1
R26A(S) (CA)	NO STOPPING ANY TIME	1
R47 (CA)	$1000 FINE FOR LITTERING	2
R48 (CA)	SPEED ENFORCED BY RADAR	2
TYPE N (CA)	TYPICAL CALIFORNIA TYPE N OBJECT MARKER	2
TYPE P (CA) (RT)	TYPICAL CALIFORNIA TYPE P OBJECT MARKER	2
W2-1	CROSS ROAD	2
W2-2 (LT)	SIDE ROAD	1
W3-1	STOP AHEAD	1
W4-2	LANE ENDS	2
W7-1b (7%)	COMBINATION HILL/GRADE	1
W9-1	RIGHT LANE ENDS	2
W14-1	DEAD END	1
W31A (CA) (500 FT)	ROAD ENDS 500 FT	1

LEGEND

- NEW SIGN AND POST
- INSTALL NEW PAVEMENT MARKING
- EXISTING PAVEMENT MARKING



OLD VASCO ROAD PLAN
SCALE = 1:400

10 0 10 20 30
SCALE = 1:400

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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4				
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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 39551 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: ARTHUR E. GARRETT
DRAWN: JANE JINGSONG
DESIGNED: TIM NGUYEN
CHECKED: JOHN P. BATES
DATE: JAN 2008
SCALE: 1:400

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

SIGNING & STRIPING PLAN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 110 OF 145
FILE NO. U-357-6

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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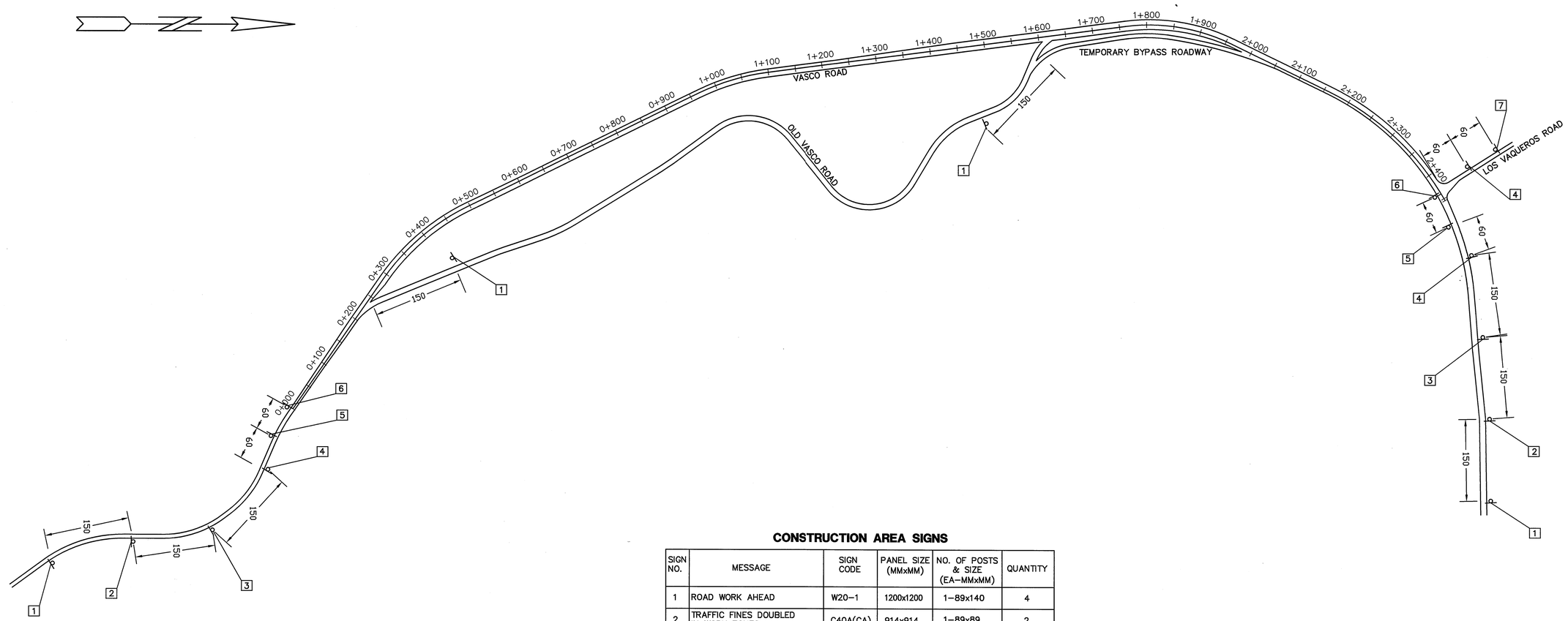

CONSTRUCTION AREA SIGNS

SIGN NO.	MESSAGE	SIGN CODE	PANEL SIZE (MMxMM)	NO. OF POSTS & SIZE (EA–MMxMM)	QUANTITY
1	ROAD WORK AHEAD	W20–1	1200x1200	1–89x140	4
2	TRAFFIC FINES DOUBLED IN WORK ZONES	C40A(CA)	914x914	1–89x89	2
3	25 MPH SPEED ZONE AHEAD	W3–5A	1200x1200	1–89x140	2
4	ROAD WORK/SPEED LIMIT 25	C17(CA)	610x610	1–89x89	3
5	END 25 SPEED LIMIT	C17(CA)	610x610	1–89x89	2
6	END ROAD WORK	G20–2	900x450	1–89x89	2
7	ROAD WORK AHEAD	W20–1	900x900	1–89x89	1

LEGEND

[X] CONSTRUCTION AREA SIGN NUMBER

100 0 100 200 300

SCALE = 1:4000

ALAMEDA COUNTY Metric

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'D
1				
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6				

REGISTERED PROFESSIONAL ENGINEER THOMAS C. HILLESLAND No. 34200 CIVIL STATE OF CALIFORNIA 6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

Moffatt & Nichol

DRAWN: N. KOBAYASHI
CHECKED: T. HILLESLAND
DESIGNED: S. HO
APPROVED: B. ZASNI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG
REVIEWED: JAMES CRU
BOND NO.
REVIEWED:

CONSTRUCTION AREA SIGNS

DATE	SCALE
AUG 2007	AS SHOWN

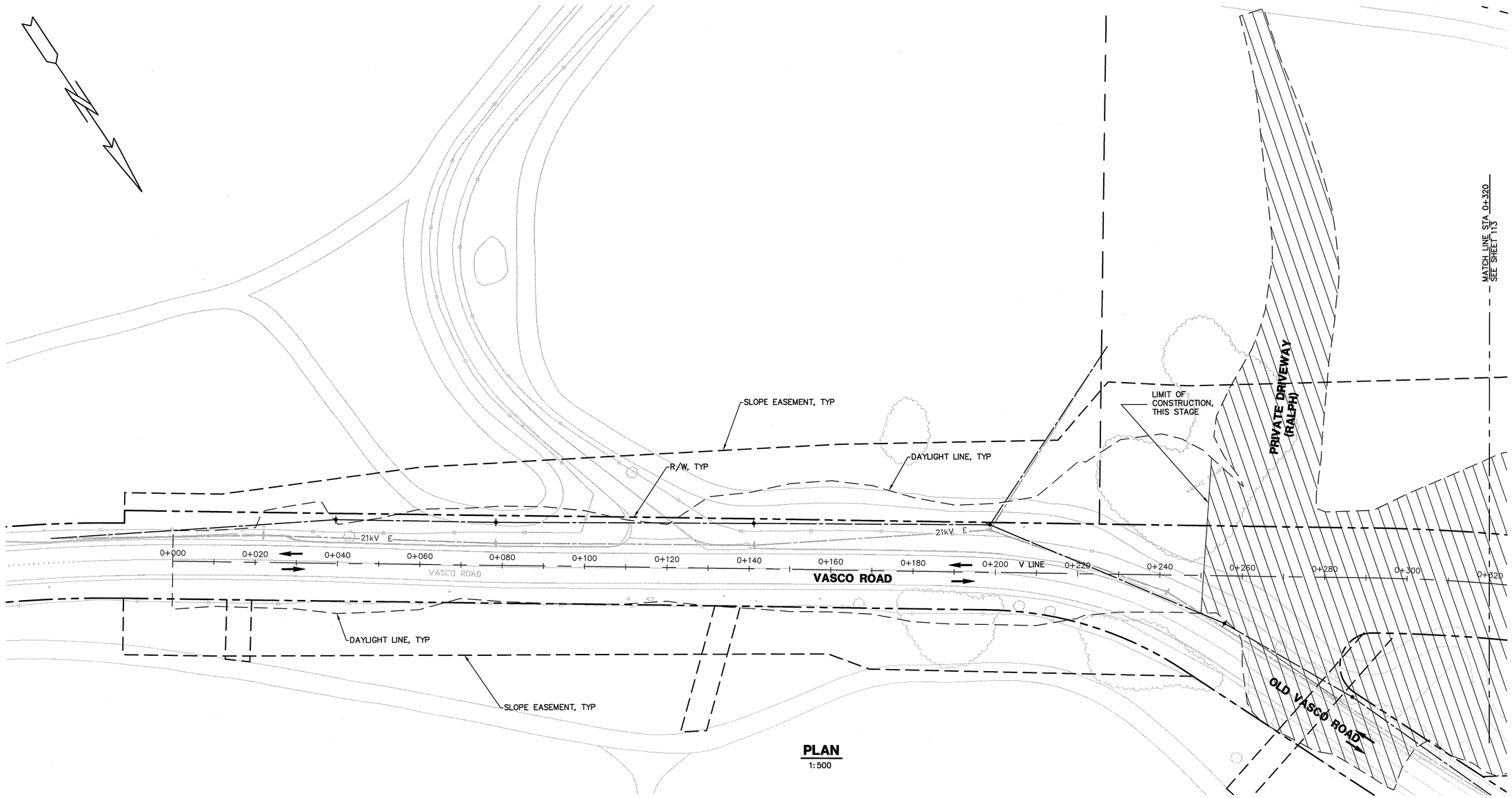
WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 111 OF 145

FILE NO. U-357-6

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		



PLAN
1:500

NOTES:

STAGE 1 CONSTRUCTION

1. CONSTRUCT NEW REALIGNMENT PORTION OF VASCO ROAD
2. CONSTRUCT TEMPORARY BYPASS ROAD
3. CONSTRUCT MAINTENANCE ACCESS ROAD
4. CONSTRUCT PORTION OF NEW SOUTH INTERSECTION
5. CONSTRUCT RALPH ROAD DRIVEWAY ENTRANCE

STAGE 1 TRAFFIC

1. TRAFFIC WILL REMAIN ON EXISTING VASCO ROAD.
2. AT THE NORTHERN PORTION OF THE PROJECT, BOTH THE NB AND SB TRAFFIC WILL BE SHIFTED TO THE SB SIDE OF THE EXISTING VASCO ROAD.

LEGEND:

CONSTRUCT THIS STAGE

DIRECTIONAL ARROW

12.5 0 12.5 25 37.5

SCALE = 1:500

ALAMEDA COUNTY Metric

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS E. HILLESLAND No. 54200 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA

6-16-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REVIEWED: BOND NO. 1
REVIEWED: JAMES ORTA

REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

CONSTRUCTION STAGING PLAN - STAGE 1

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 112 OF 145	
FILE NO. U-357-6	

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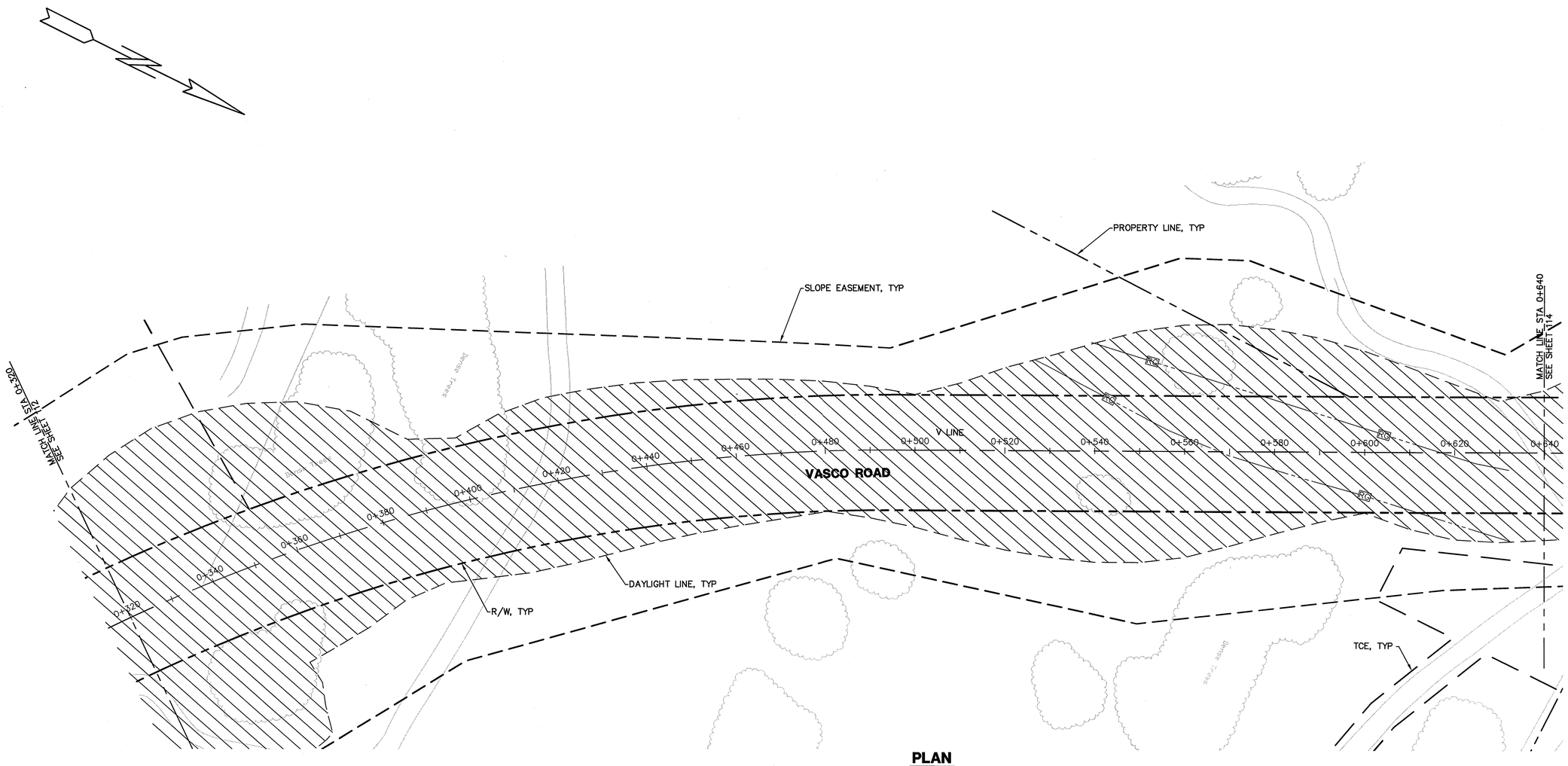
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



PLAN
1:500

LEGEND:

CONSTRUCT THIS STAGE

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS L. HILLESLAND No. 35300 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA
6-16-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
CHECKED: T. HILLESLAND
DESIGNED: S. HO
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND HO
REVIEWED: JAMES OH
REVIEWED: ARTHUR C. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

CONSTRUCTION STAGING PLAN - STAGE 1

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 113 OF 145
FILE NO. U-357-6

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CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
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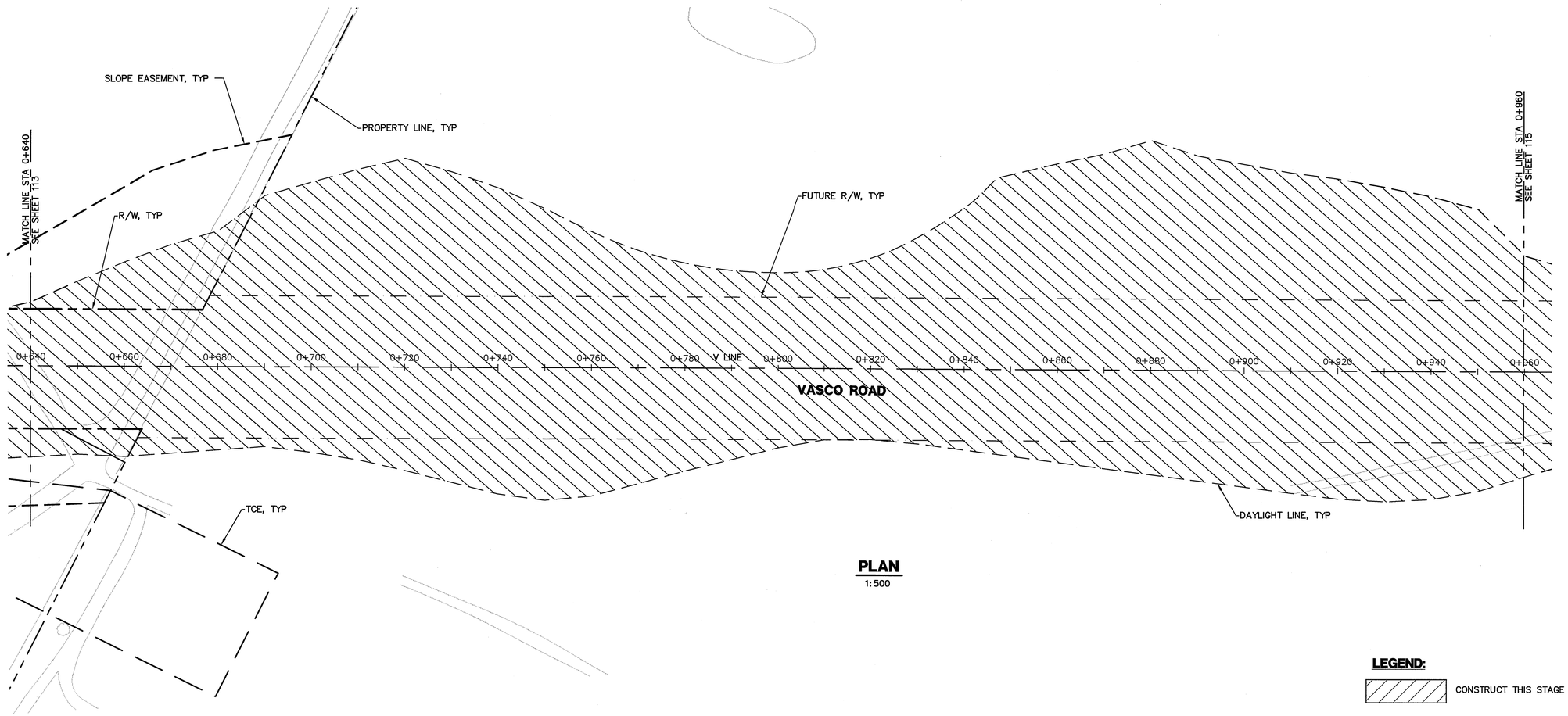

PLAN
1:500

LEGEND:

CONSTRUCT THIS STAGE

12.5 0 12.5 25 37.5
SCALE = 1:500

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER
THOMAS E. HILLESLAND
C 34200
EXP. 12-31-09
CIVIL
STATE OF CALIFORNIA
6-16-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
CHECKED: T. HILLESLAND
DESIGNED: S. HO
APPROVED: B. ZASNI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REVIEWED: BOB LEE
REVIEWED: JAMES GIU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

CONSTRUCTION STAGING PLAN - STAGE 1

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 114 OF 145
FILE NO. U-357-6

ALAMEDA COUNTY Metric

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CONSTRUCTION			SURVEY		
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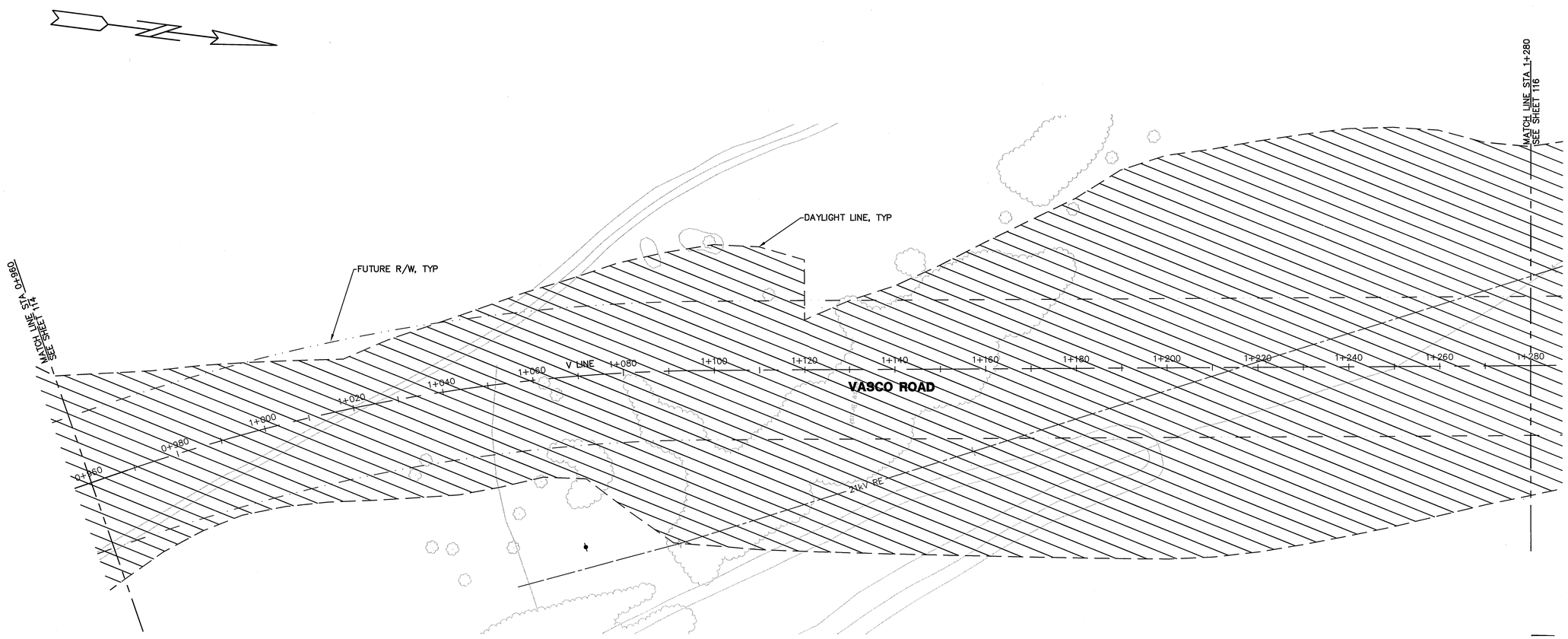

PLAN
1:500

LEGEND:

CONSTRUCT THIS STAGE

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

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REGISTERED PROFESSIONAL ENGINEER THOMAS R. FLYNN No. C 54200 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REVIEWED: BOND WU
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CABRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

CONSTRUCTION STAGING PLAN - STAGE 1

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 115 OF 145	
FILE NO. U-357-6	

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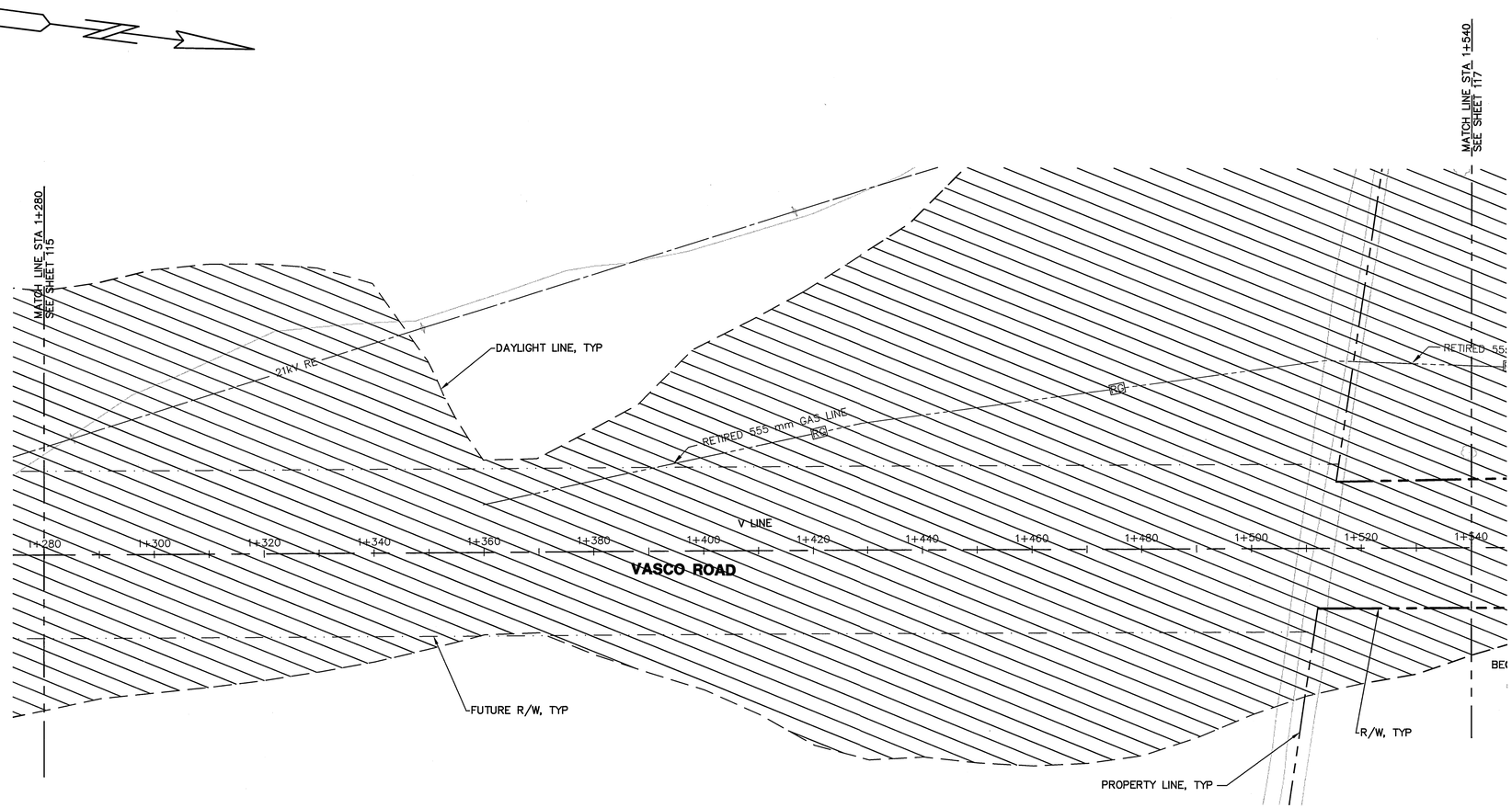
	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		



PLAN
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LEGEND:

CONSTRUCT THIS STAGE

12.5 0 12.5 25 37.5
SCALE = 1:500

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

NO.	DESCRIPTION	BY	DATE	APPV'D
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REVISIONS

REGISTERED PROFESSIONAL ENGINEER
THOMAS H. HILLESLAND
No. C-35200
Exp. 12-31-08
CIVIL
STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
CHECKED: T. HILLESLAND
DESIGNED: S. HO
APPROVED: B. ZASIN

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND NO.
REVIEWED: JAMES OHI
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

CONSTRUCTION STAGING PLAN - STAGE 1

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 116 OF 145	
FILE NO. U-357-6	

ALAMEDA COUNTY Metric

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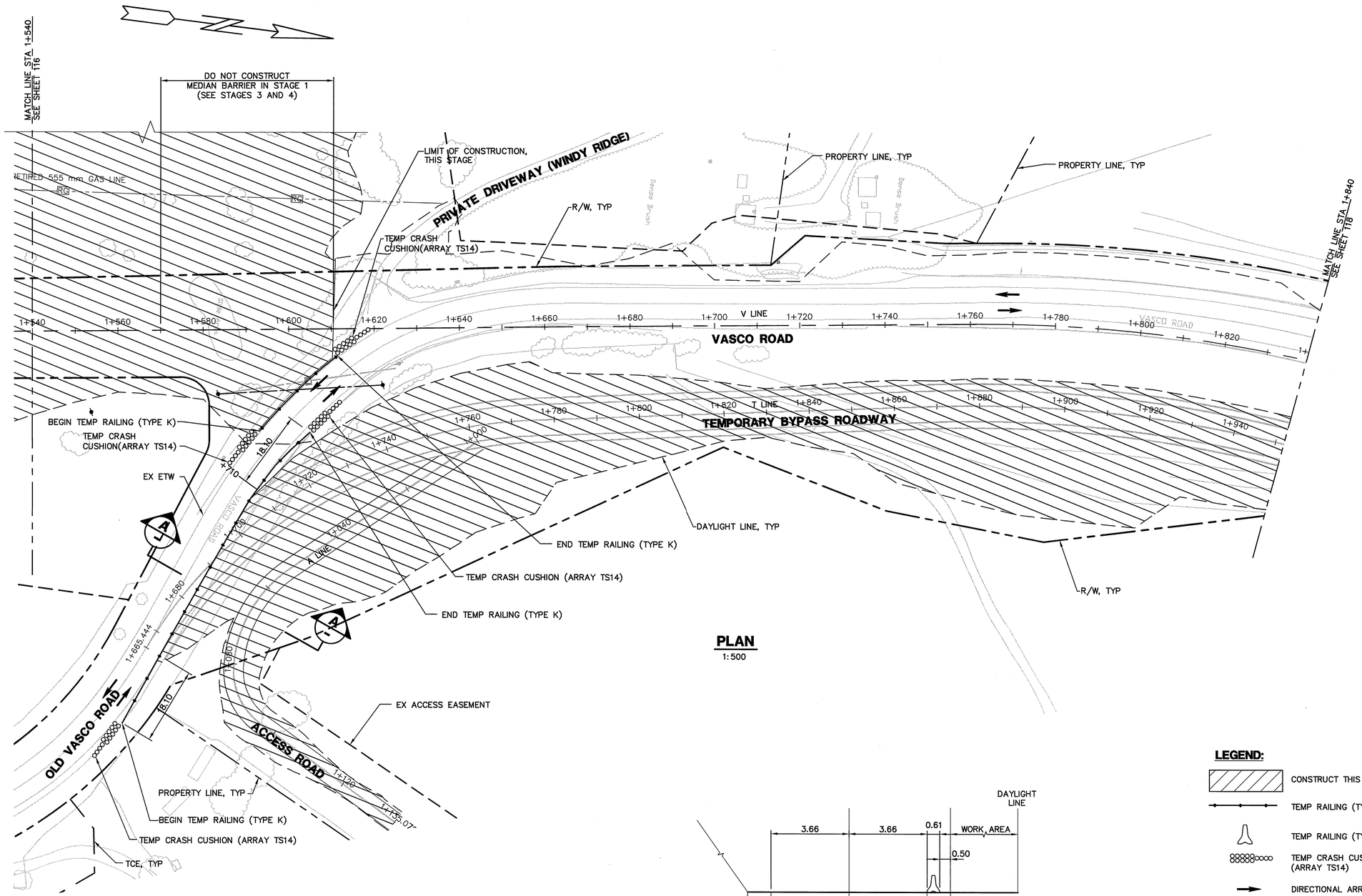
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



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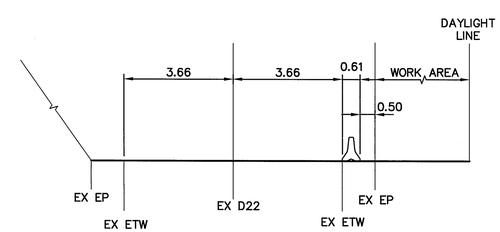

SECTION A
SCALE 1:100
(T LINE STA 1+665.444 TO STA 1+705)

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP RAILING (TYPE K)
- TEMP RAILING (TYPE K)
- TEMP CRASH CUSHION (ARRAY TS14)
- DIRECTIONAL ARROW

12.5 0 12.5 25 37.5
SCALE = 1:500

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS E. HILLESLAND No. C 44600 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

Moffatt & Nichol

CHECKED: T. HILLESLAND
DRAWN: A. BOROVIKOVA
APPROVED: B. ZADNI
DESIGNED: S. HO

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

CONSTRUCTION STAGING PLAN - STAGE 1

REVIEWED: BOND NG
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 117 OF 145	
FILE NO. U-357-6	

ALAMEDA COUNTY Metric

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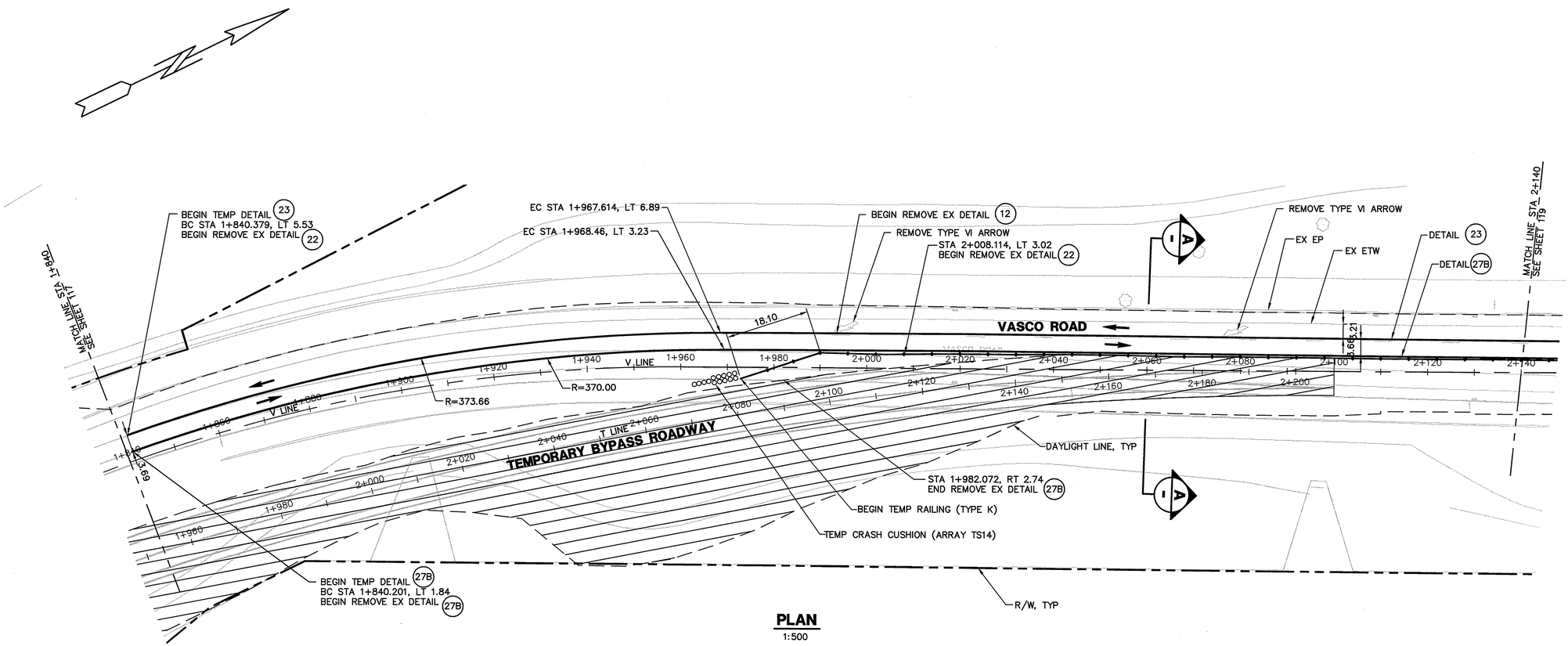

PLAN
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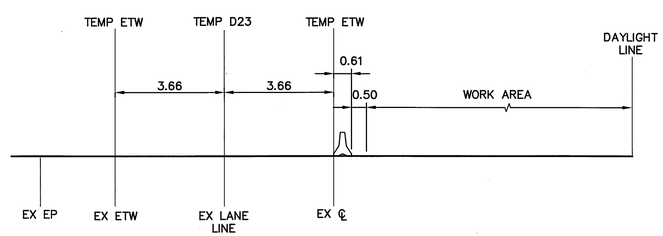

SECTION A
SCALE 1:100
(V LINE STA 2+060)

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP RAILING (TYPE K)
- TEMP RAILING (TYPE K)
- TEMP CRASH CUSHION (ARRAY TS14)
- DIRECTIONAL ARROW

12.5 0 12.5 25 37.5
SCALE = 1:500

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'VD
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REGISTERED PROFESSIONAL ENGINEER THOMAS E. FLINN No. 34200 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
CHECKED: T. HILLERLAND
DESIGNED: S. HO
APPROVED: B. ZADNI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

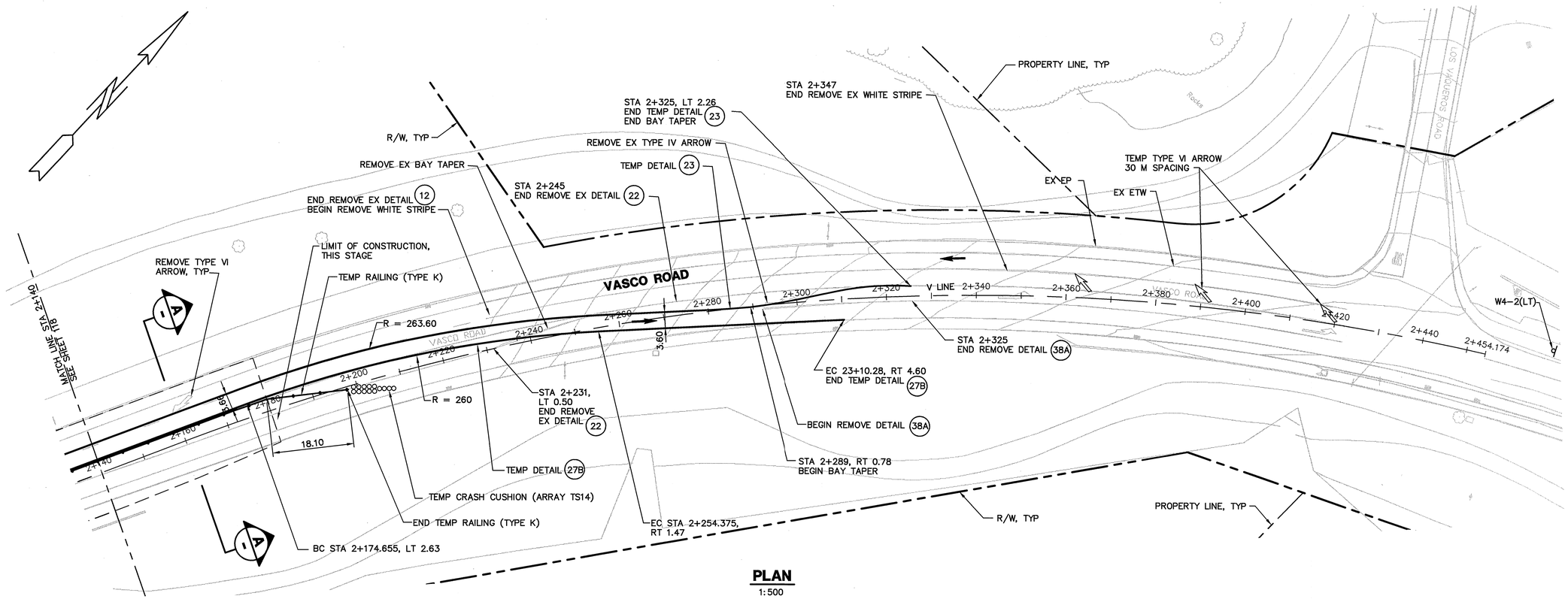
THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REVIEWED: ARTHUR G. CARRERA
BOND NO.
REVIEWED: JAMES CHU
APPROVAL RECOMMENDED: STANLEY W. FUNG

CONSTRUCTION STAGING PLAN - STAGE 1

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 118 OF 145
FILE NO. U-357-6



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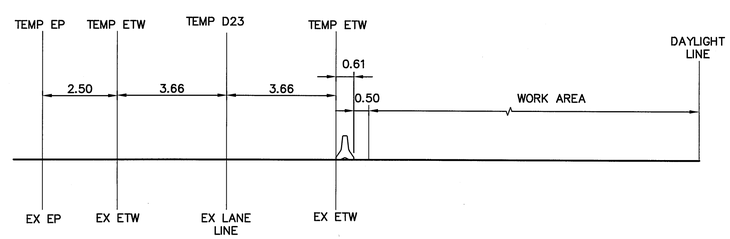

SECTION A
SCALE 1:100
(V LINE STA 2+160)

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP RAILING (TYPE K)
- TEMP SIGN
- TEMP RAILING (TYPE K)
- TEMP CRASH CUSHION (ARRAY TS14)
- DIRECTIONAL ARROW

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

	REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY	
MAINTENANCE			TRAFFIC	
REAL ESTATE			ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS C. HILLESLAND No. C 34200 Exp. 12-31-09 CIVIL STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
CHECKED: T. HILLESLAND
DESIGNED: S. HO
APPROVED: B. ZASNI

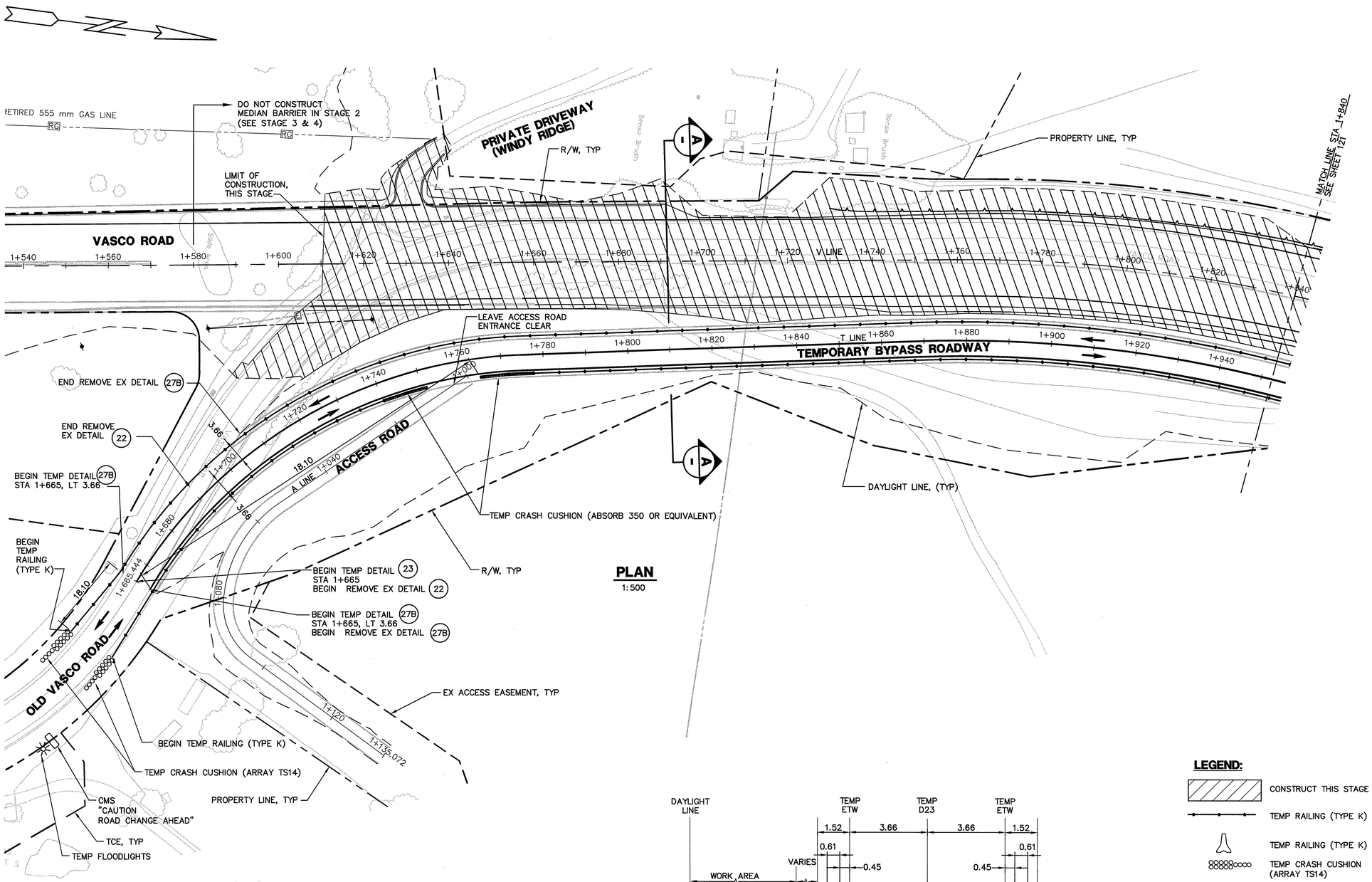
COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: ARTHUR G. CARREDA
BOND NO.
REVIEWED: JAMES CHU
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

CONSTRUCTION STAGING PLAN - STAGE 1

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 119 OF 145	
FILE NO. U-357-6	



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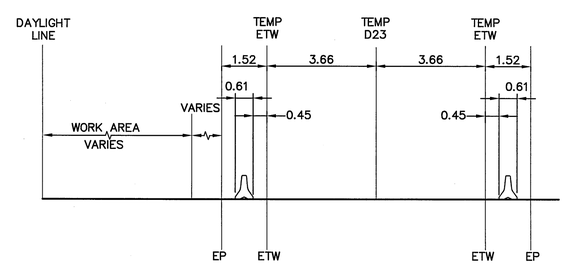
1:500



SECTION A
SCALE 1:100
(T LINE STA 1+810)

NOTES:

STAGE 2 CONSTRUCTION

1. CONSTRUCT NORTHERN PORTION OF VASCO ROAD FROM THE LIMIT OF THE REALIGNMENT TO LOS VAQUEROS ROAD.
2. CONSTRUCT WINDY RIDGE DRIVEWAY IMPROVEMENTS.

STAGE 2 TRAFFIC

1. TRAFFIC ON THE NORTHERN PORTION OF VASCO ROAD IS SHIFTED TO THE TEMPORARY BYPASS ROAD
2. PROVIDE OPENING IN TEMPORARY RAILING (TYPE K) ON THE TEMPORARY BYPASS ROAD FOR THE MAINTENANCE ACCESS ROAD
3. PROVIDE SAFE ACCESS TO WINDY RIDGE DRIVEWAY AT ALL TIMES DURING CONSTRUCTION.

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP RAILING (TYPE K)
- TEMP RAILING (TYPE K)
- TEMP CRASH CUSHION (ARRAY TS14)
- TEMP FLOOD LIGHTS
- (CMS) CHANGEABLE MESSAGE SIGN
- DIRECTIONAL ARROW
- TEMP CRASH CUSHION (ABSORB 350 OR EQUIVALENT)

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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3				
4				
5				

REGISTERED PROFESSIONAL ENGINEER THOMAS W. HILLESLAND C 34200 CIVIL STATE OF CALIFORNIA 6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
CHECKED: T. HILLESLAND
DESIGNED: S. HO
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

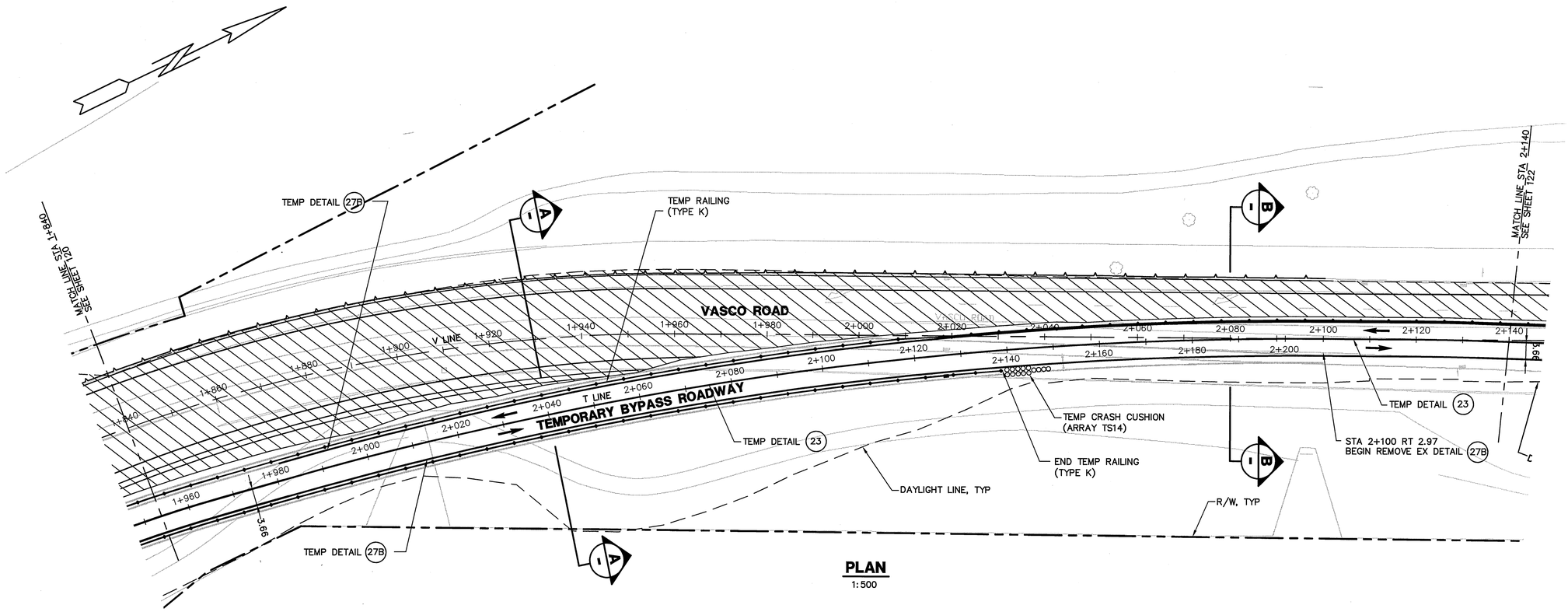
REVIEWED: BOND MS
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

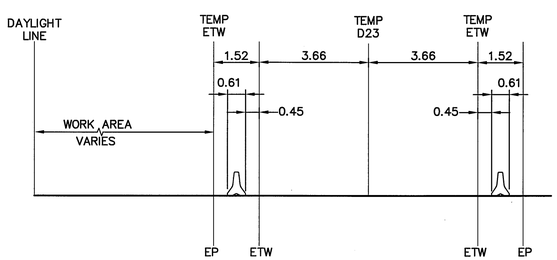
CONSTRUCTION STAGING PLAN - STAGE 2

DATE	SCALE
JAN 2008	AS SHOWN

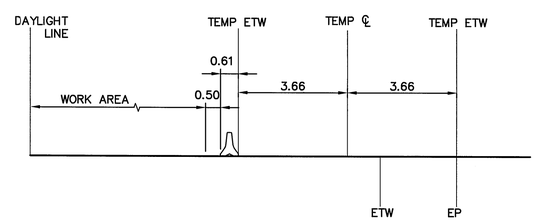
WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 120 OF 145
FILE NO. U-357-6



PLAN
1:500



SECTION A
SCALE 1:100 (T LINE STA 2+040)



SECTION B
SCALE 1:100 (V LINE STA 2+080)

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP RAILING (TYPE K)
- TEMP RAILING (TYPE K)
- TEMP CRASH CUSHION (ARRAY TS14)
- DIRECTIONAL ARROW

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

	REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY	
MAINTENANCE			TRAFFIC	
REAL ESTATE			ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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4				
5				

REGISTERED PROFESSIONAL ENGINEER THOMAS T. HILLESLAND No. 35200 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZABNI

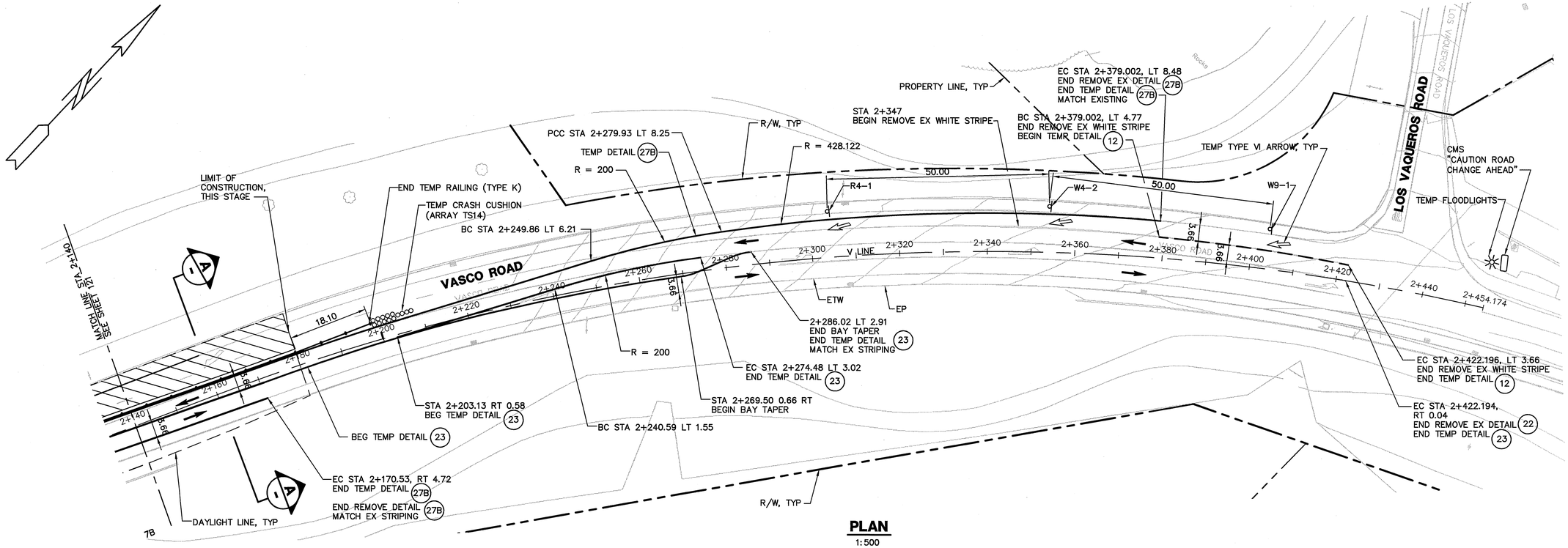
COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REVIEWED: BOND NO.
REVIEWED: JANICE CHIU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

CONSTRUCTION STAGING PLAN - STAGE 2

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 121 OF 145	
FILE NO. U-357-6	



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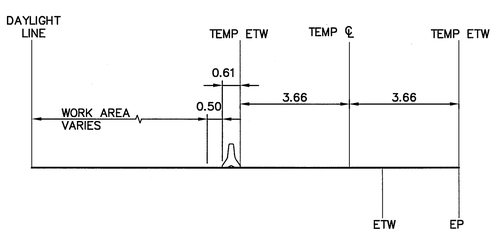
1:500



SECTION A
SCALE 1:100
(V LINE STA 2+160)

NOTES:

1. STAGE 1 TEMPORARY STRIPING AND MARKINGS ARE NOT SHOWN.
2. REMOVE CONFLICTING STAGE 1 TEMPORARY STRIPING AND MARKINGS.

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP RAILING (TYPE K)
- TEMP SIGN
- TEMP RAILING (TYPE K)
- TEMP FLOOD LIGHTS
- (CMS) CHANGEABLE MESSAGE SIGN
- TEMP CRASH CUSHION (ARRAY TS14)
- DIRECTIONAL ARROW

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS C. HILLESLAND No. C 42400 CIVIL STATE OF CALIFORNIA 6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

CHECKED: T. HILLESLAND
APPROVED: B. ZAEN
DRAWN: A. BORDVIKOVA
DESIGNED: S. HO

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

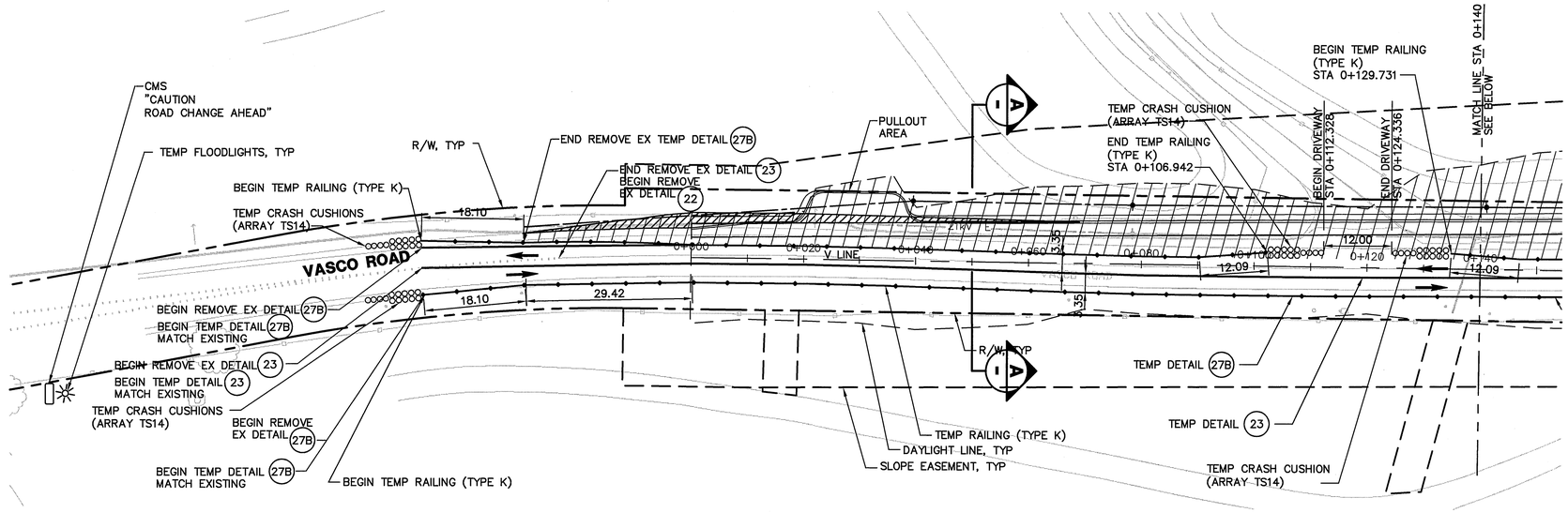
THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

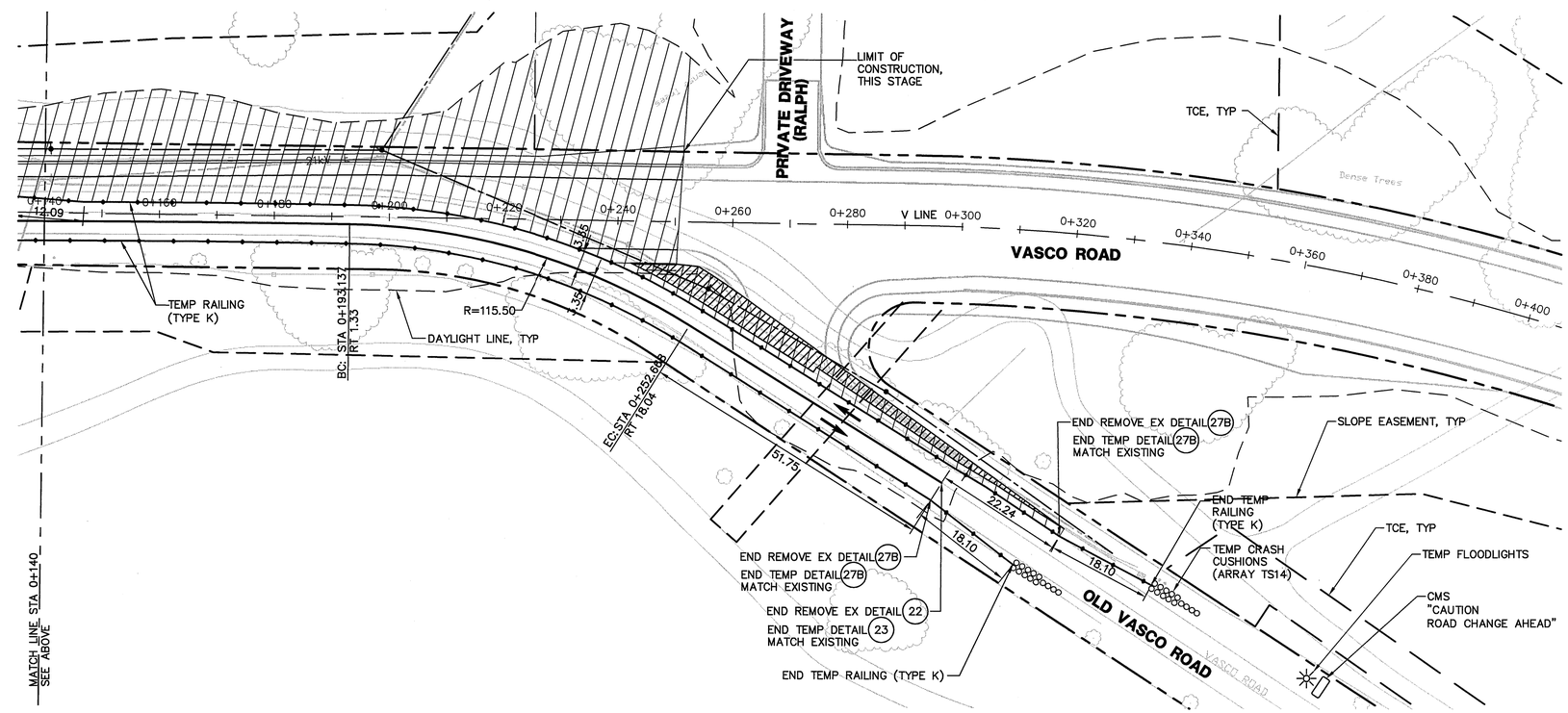
REVIEWED: BRIAN HO
REVIEWED: JAMES GIU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

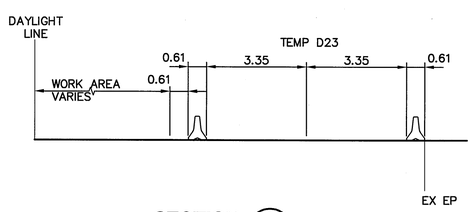
CONSTRUCTION STAGING PLAN - STAGE 2

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 122 OF 145
FILE NO. U-357-6







SECTION A (STA 0+050)
SCALE 1:100

PLAN
1:500

NOTES:

STAGE 2A CONSTRUCTION

1. RECONSTRUCT THE SB SIDE OF EXISTING VASCO ROAD FROM THE SOUTHERN PROJECT LIMIT TO THE BEGINNING OF THE REALIGNMENT.
2. CONSTRUCT TEMPORARY PAVEMENT TO ACCOMMODATE TRAFFIC FOR FUTURE STAGE 2B CONSTRUCTION WORK.

STAGE 2A TRAFFIC

1. NB AND SB TRAFFIC ARE SHIFTED TO THE NB SIDE OF EXISTING VASCO ROAD.
2. MAINTAIN EXISTING DRIVEWAY ACCESS.

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP PAVEMENT
- TEMP RAILING (TYPE K)
- TEMP RAILING (TYPE K)
- TEMP CRASH CUSHION (ARRAY TS14)
- TEMP FLOOD LIGHTS
- (CMS) CHANGEABLE MESSAGE SIGN
- DIRECTIONAL ARROW

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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REGISTERED PROFESSIONAL ENGINEER THOMAS R. HILLESLAND C 34000 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA 6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZASNI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

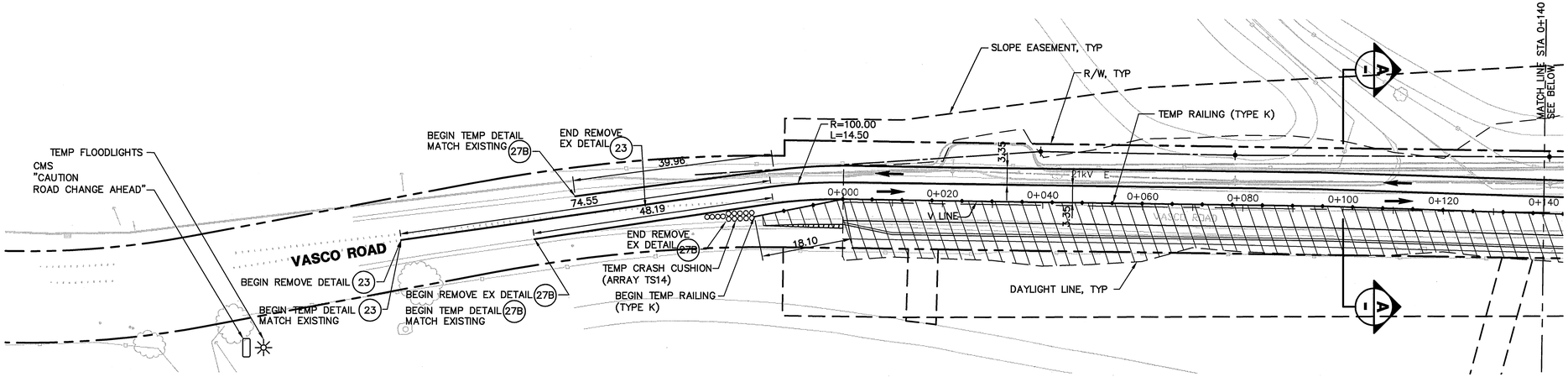
REVIEWED: BOND NO.
REVIEWED: JAMES CHU
RECMENDED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

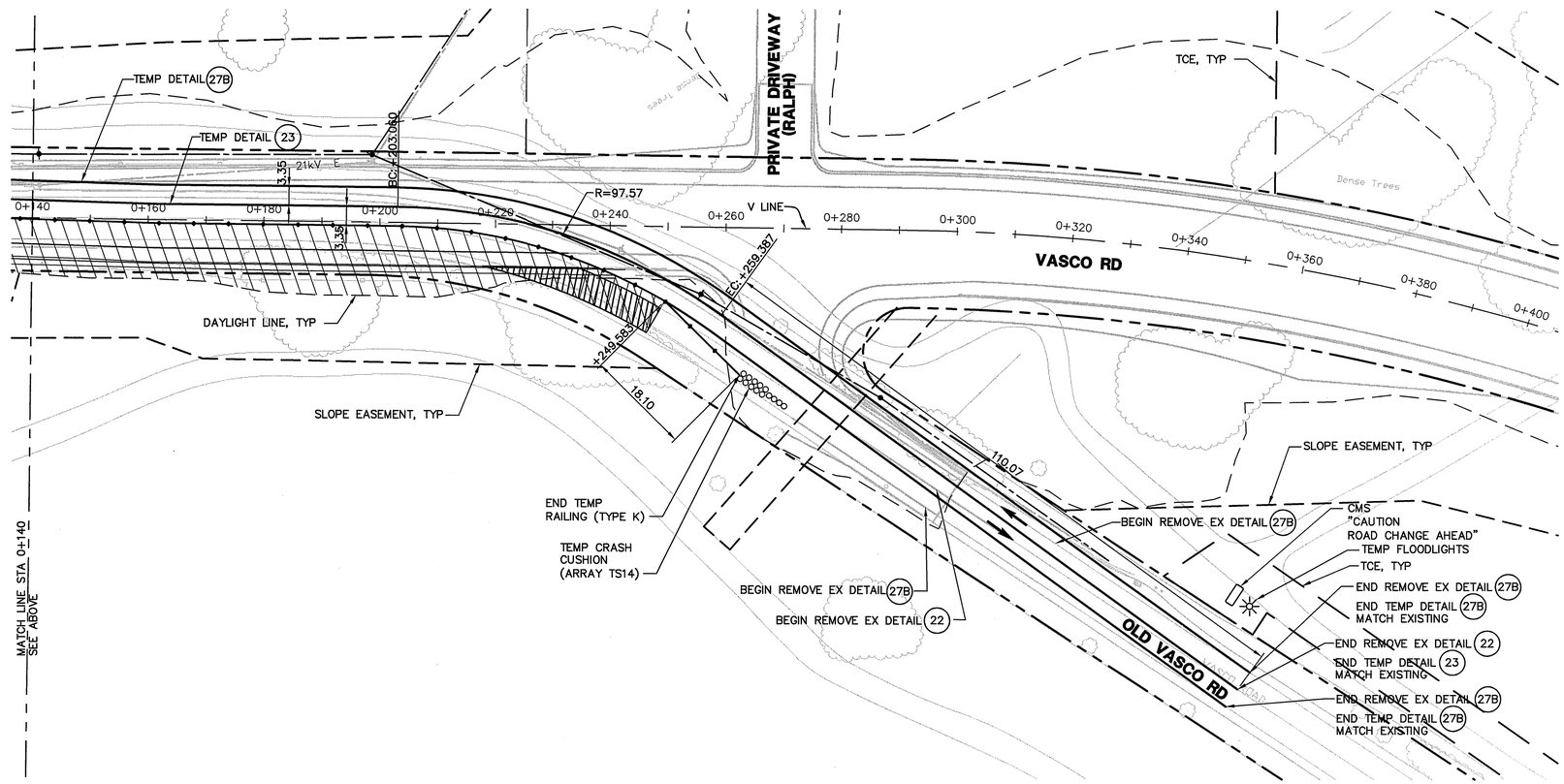
THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

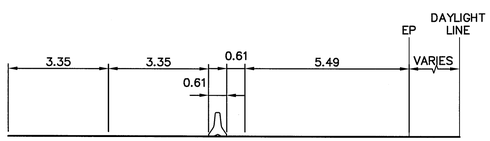
CONSTRUCTION STAGING PLAN - STAGE 2A

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 123 OF 145
FILE NO. U-357-6







SECTION A (STA 0+100)
SCALE 1:100

NOTES:

STAGE 2B CONSTRUCTION

1. RECONSTRUCT NB SIDE OF EXISTING VASCO ROAD FROM SOUTHERN PROJECT LIMIT TO THE BEGINNING OF THE REALIGNMENT.
2. CONSTRUCT TEMPORARY PAVEMENT TO ACCOMMODATE TRAFFIC FOR FUTURE STAGE 2C CONSTRUCTION WORK.
3. STAGE 2A TEMPORARY STRIPING NOT SHOWN.
4. REMOVE CONFLICTING STAGE 2A TEMPORARY STRIPING.

STAGE 2B TRAFFIC

1. NB AND SB TRAFFIC ARE SHIFTED TO THE SB SIDE OF EXISTING VASCO ROAD.

PLAN
1:500

12.5 0 12.5 25 37.5
SCALE = 1:500

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP PAVEMENT
- TEMP RAILING (TYPE K)
- TEMP RAILING (TYPE K)
- TEMP CRASH CUSHION (ARRAY TS14)
- TEMP FLOOD LIGHTS
- (CMS) CHANGEABLE MESSAGE SIGN
- DIRECTIONAL ARROW

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS J. HILLESLAND No. 54200 Exp. 12-31-08 STATE OF CALIFORNIA CIVIL
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZASNI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND NO.
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

STAGE 2B CONSTRUCTION

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 124 OF 145
FILE NO. U-357-6

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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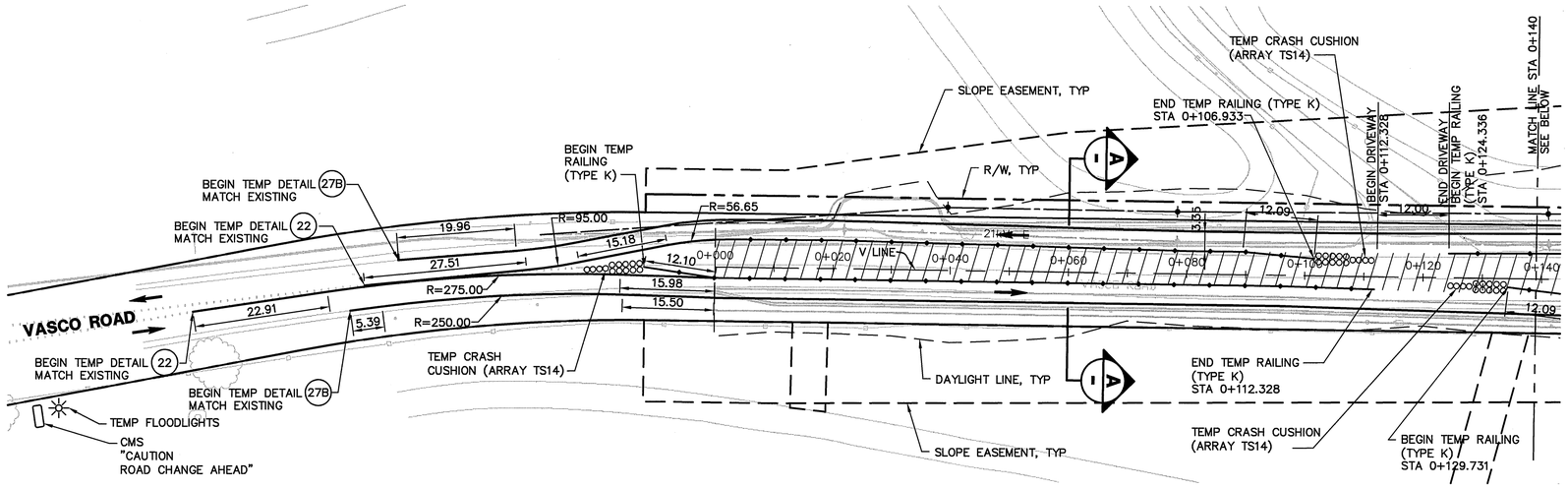

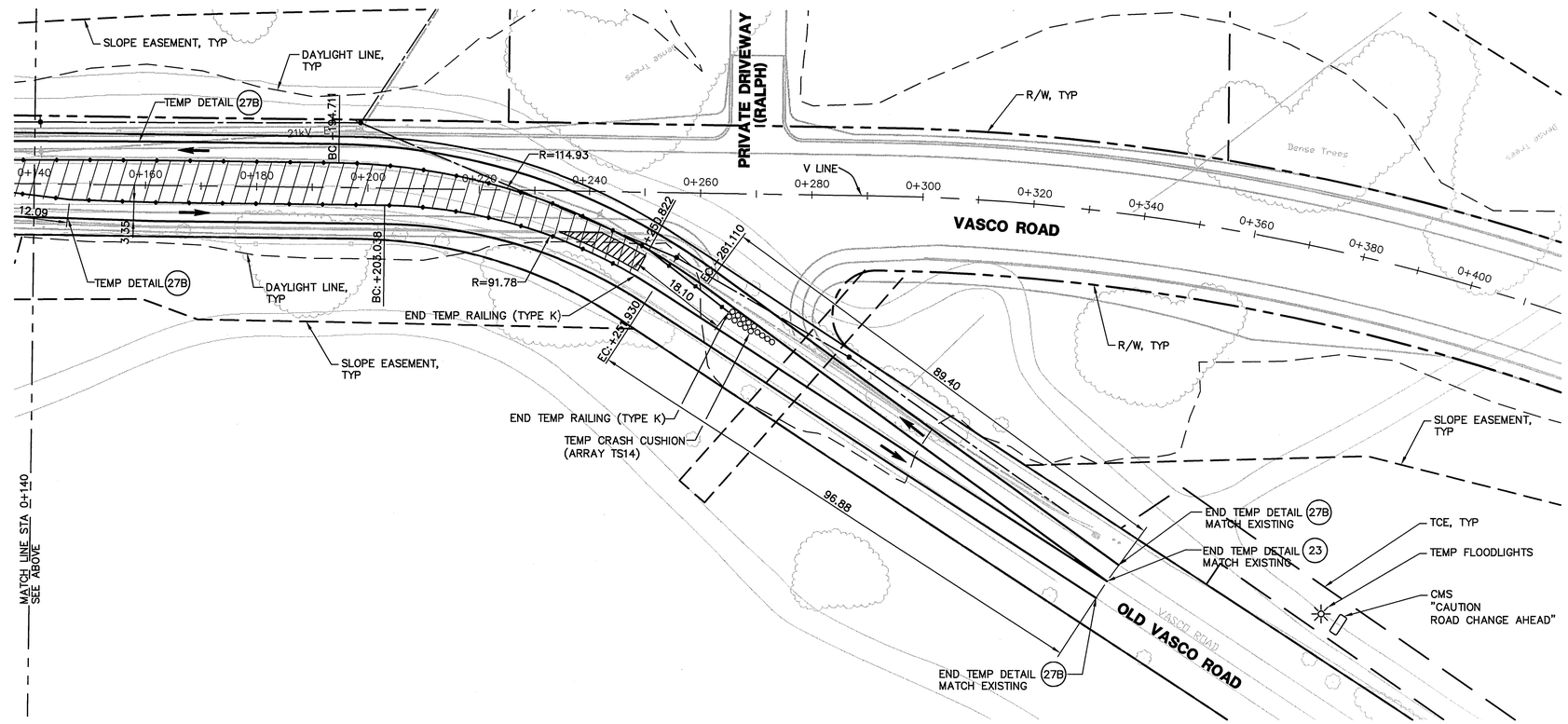

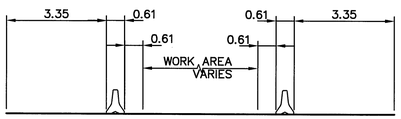

SECTION A (STA 0+060)
SCALE 1:100

PLAN
1:500

NOTES:

STAGE 2C CONSTRUCTION

1. RECONSTRUCT REMAINING CENTER PORTION OF EXISTING VASCO ROAD FROM SOUTHERN PROJECT LIMIT TO THE BEGINNING OF THE REALIGNMENT.
2. STAGE 2B TEMPORARY STRIPING NOT SHOWN.
3. REMOVE CONFLICTING STAGE 2A AND 2B TEMPORARY STRIPING.

STAGE 2C TRAFFIC

1. NB AND SB TRAFFIC IS SPLIT AROUND THE CENTER CONSTRUCTION AREA.
2. MAINTAIN EXISTING DRIVEWAY ACCESS.

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP PAVEMENT
- TEMP RAILING (TYPE K)
- TEMP RAILING (TYPE K)
- TEMP CRASH CUSHION (ARRAY TS14)
- TEMP FLOOD LIGHTS
- (CMS) CHANGEABLE MESSAGE SIGN
- DIRECTIONAL ARROW

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

	REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY	
MAINTENANCE			TRAFFIC	
REAL ESTATE			ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D

REGISTERED PROFESSIONAL ENGINEER THOMAS J. HILLES STATE OF CALIFORNIA C 42-34-08 6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238
Moffatt & Nichol

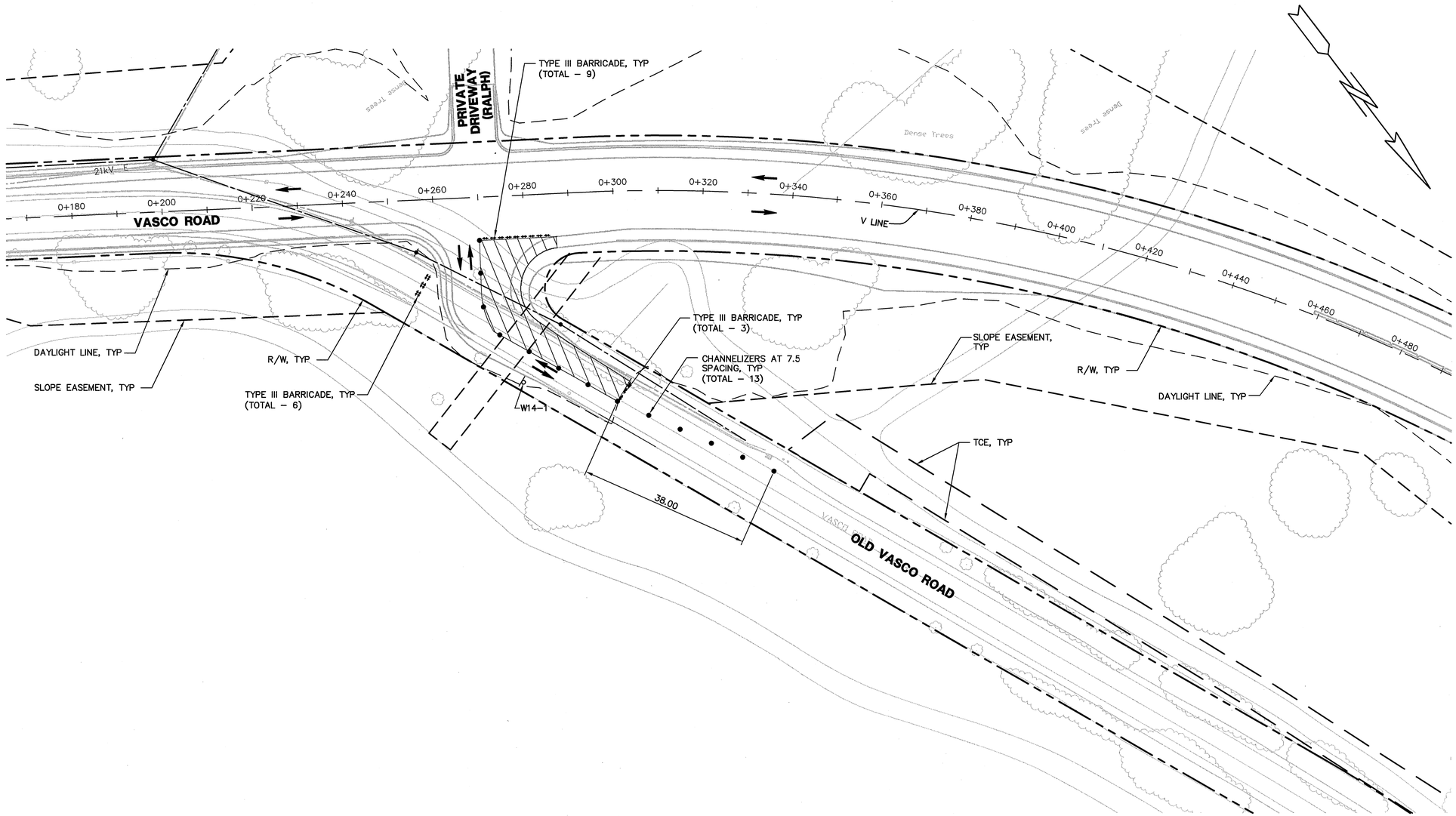
DRAWN: A. BOROVKOVA
DESIGNED: S. HO
CHECKED: T. HILLES/AND
APPROVED: B. ZASNI
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG
REVIEWED: JAMES DAO
REVIEWED: BOND NO.

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

CONSTRUCTION STAGING PLAN - STAGE 2C

DATE	JAN 2008
SCALE	AS SHOWN
WORK ORDER NO.	R23265
SPECIFICATION NO.	1903
SHEET NO.	125 OF 145
FILE NO.	U-357-6



PLAN
1:500

NOTES:

STAGE 3 CONSTRUCTION

1. CONSTRUCT CONCRETE BARRIER ON NORTHERN PORTION OF VASCO ROAD.
2. CONSTRUCT NORTHBOUND SIDE ON THE NORTHERN PORTION OF VASCO ROAD, INCLUDING CATCH SLOPES IN THE AREA OF TEMPORARY BYPASS ROAD.
3. CONSTRUCT OLD VASCO ROAD CUL-DE-SAC (MOOREHEAD).
4. CONSTRUCT EMERGENCY VEHICLE ACCESS ROAD (EVA) CONNECTION FROM TEMPORARY BYPASS ROAD TO VASCO ROAD.
5. CONSTRUCT PORTION OF SOUTH INTERSECTION.
6. REMOVE CONFLICTING STAGE 2A, 2B AND 2C TEMPORARY STRIPING.

STAGE 3 TRAFFIC

1. RESTRIPE AND SHIFT NB AND SB TRAFFIC ONTO REALIGNED VASCO ROAD.
2. AT NORTHERN END, SHIFT NB AND SB TRAFFIC ONTO SB SIDE OF VASCO ROAD.
3. MAINTAIN LOCAL ACCESS TO SOUTH INTERSECTION AT ALL TIMES.

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP RAILING (TYPE K)
- TEMP SIGN
- CHANNELIZER
- DIRECTIONAL ARROW
- TYPE III BARRICADE

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS W. HILLESLAND No. C 34200 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA 6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOBOVKOVA
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZAEN

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REVIEWED: BOND NG
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

CONSTRUCTION STAGING PLAN - STAGE 3

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 126 OF 145
FILE NO. U-357-6

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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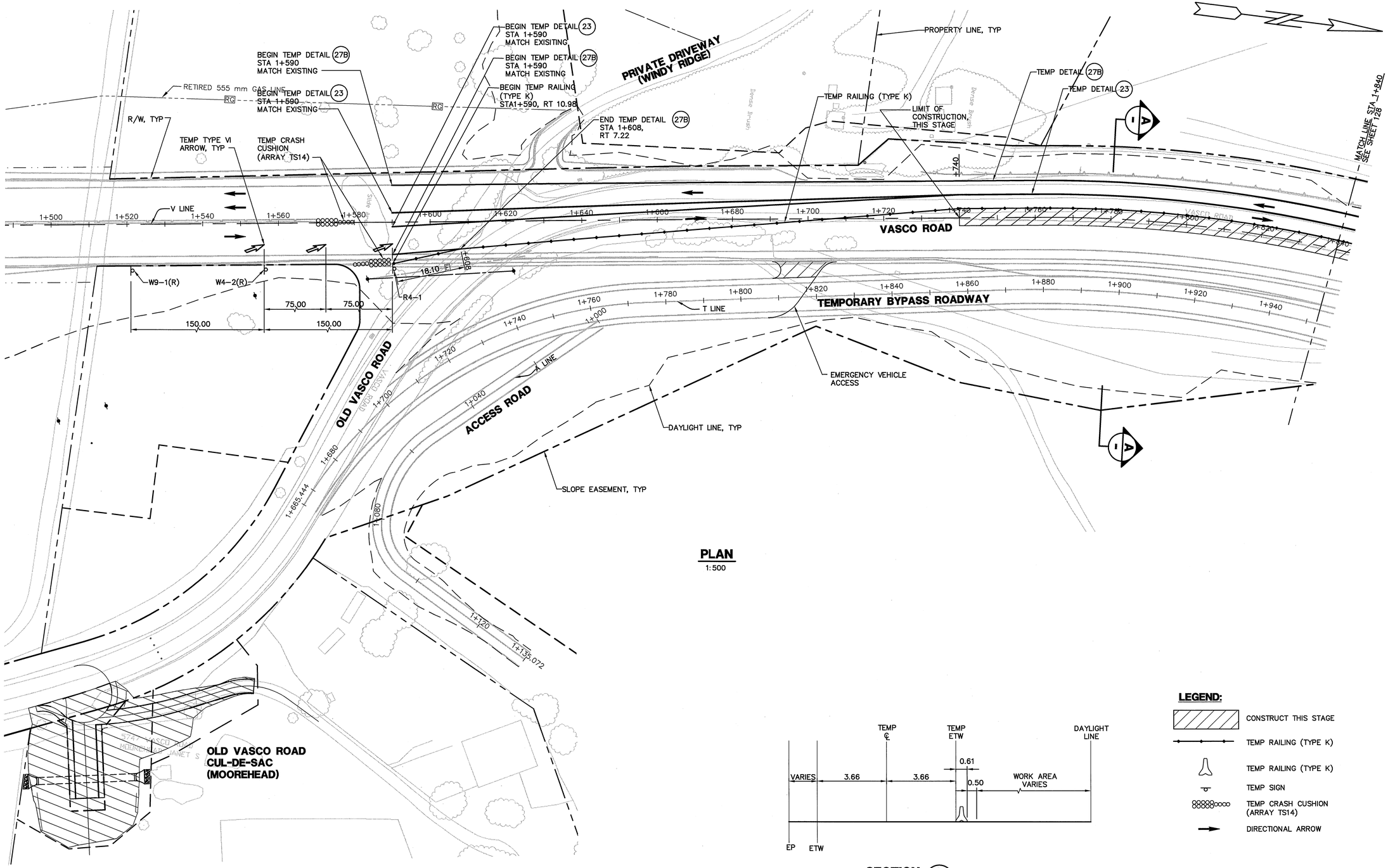

PLAN
1:500

SECTION A
SCALE 1:100 (STA 1+780)

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP RAILING (TYPE K)
- TEMP RAILING (TYPE K)
- TEMP SIGN
- TEMP CRASH CUSHION (ARRAY TS14)
- DIRECTIONAL ARROW

12.5 0 12.5 25 37.5
SCALE = 1:500

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS
0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'VD
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REGISTERED PROFESSIONAL ENGINEER
THOMAS E. HILLESLAND
No. C 54200
Exp. 12-31-09
CIVIL
STATE OF CALIFORNIA
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 845-1238

CHECKED: T. HILLESLAND
APPROVED: B. ZAENI
DRAWN: A. BOROVIKOVA
DESIGNED: S. HO

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOARD MO
REVIEWED: JAMES GU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

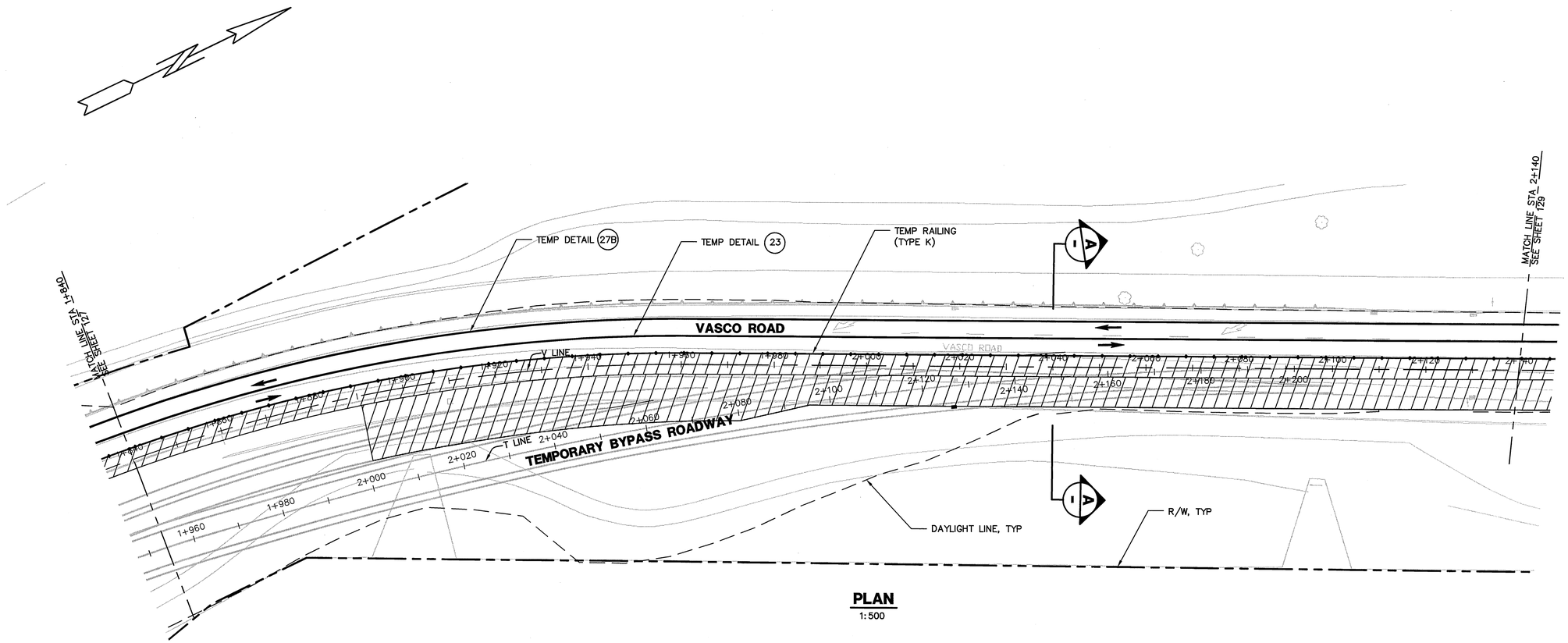
THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

CONSTRUCTION STAGING PLAN - STAGE 3

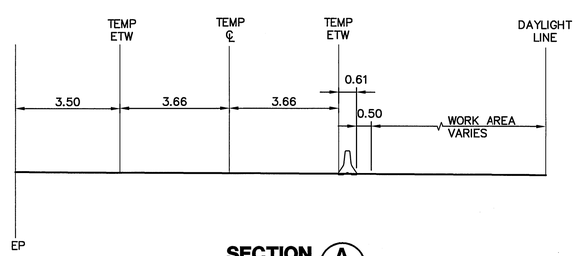
DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 127 OF 145
FILE NO. U-357-6

ALAMEDA COUNTY Metric



PLAN
1:500



SECTION A (STA 2+040)
SCALE 1:100

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP RAILING (TYPE K)
- TEMP RAILING (TYPE K)
- DIRECTIONAL ARROW

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER T. HILLESLAND No. C 54200 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238
Moffatt & Nichol

DRAWN: A. BOROVKOVA
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZASNI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

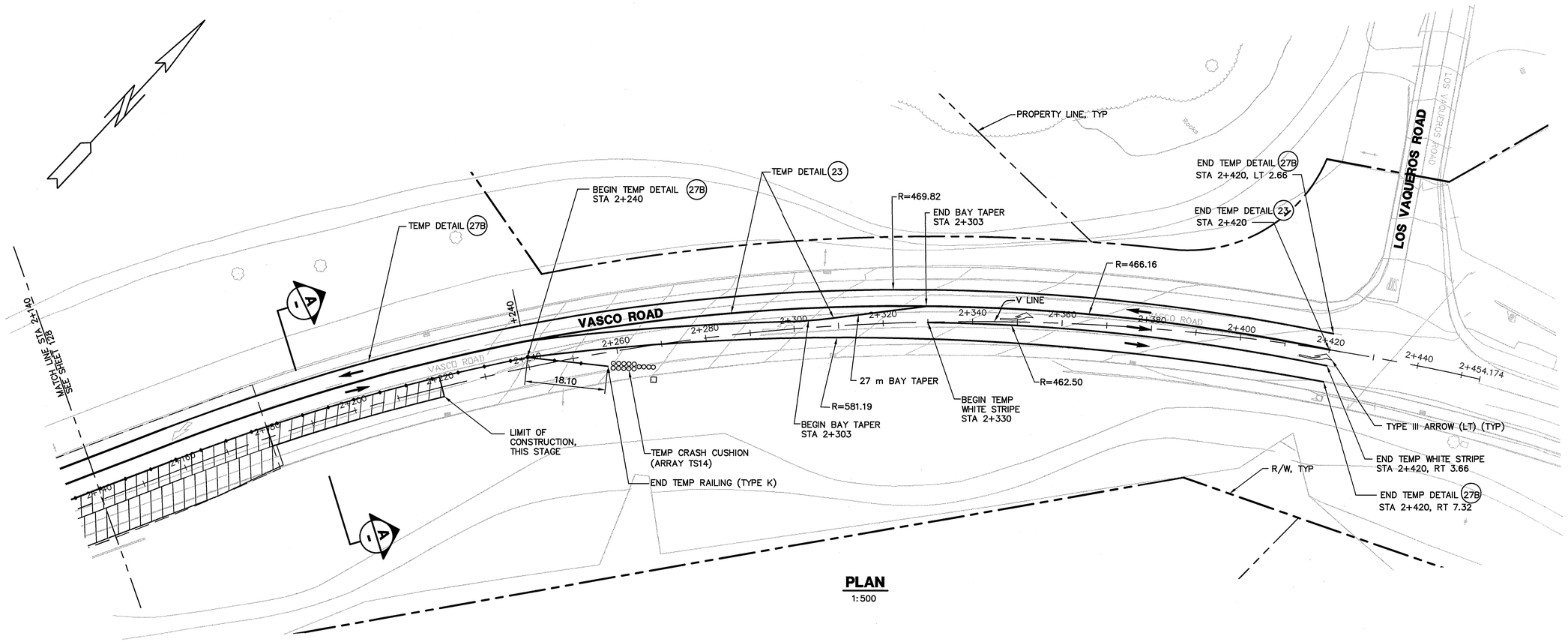
REVIEWED: RENE ORTIZ
REVIEWED: JAMES GIU
REVIEWED: ARTHUR G. CABRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

CONSTRUCTION STAGING PLAN - STAGE 3

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 128 OF 145
FILE NO. U-357-6



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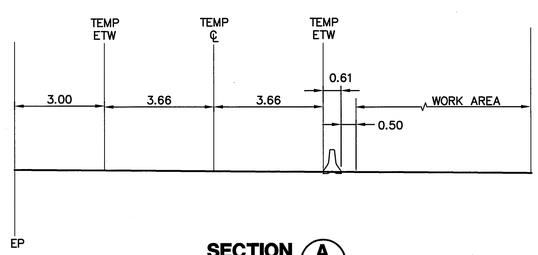

SECTION A
SCALE 1:100 (STA 2+190)

NOTES

1. STAGE 1 AND 2 TEMPORARY STRIPING AND MARKINGS NOT SHOWN.
2. REMOVE CONFLICTING EXISTING, STAGE 1 AND 2 TEMPORARY STRIPING AND MARKINGS.

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP RAILING (TYPE K)
- TEMP RAILING (TYPE K)
- TEMP CRASH CUSHION (ARRAY TS14)
- DIRECTIONAL ARROW
- TYPE III ARROW (LT)

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS HILLESLAND No. 42400 CIVIL STATE OF CALIFORNIA 6-27-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BOROVKOVA
DESIGNED: S. HO
CHECKED: T. HILLESLAND
APPROVED: B. ZAENI

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

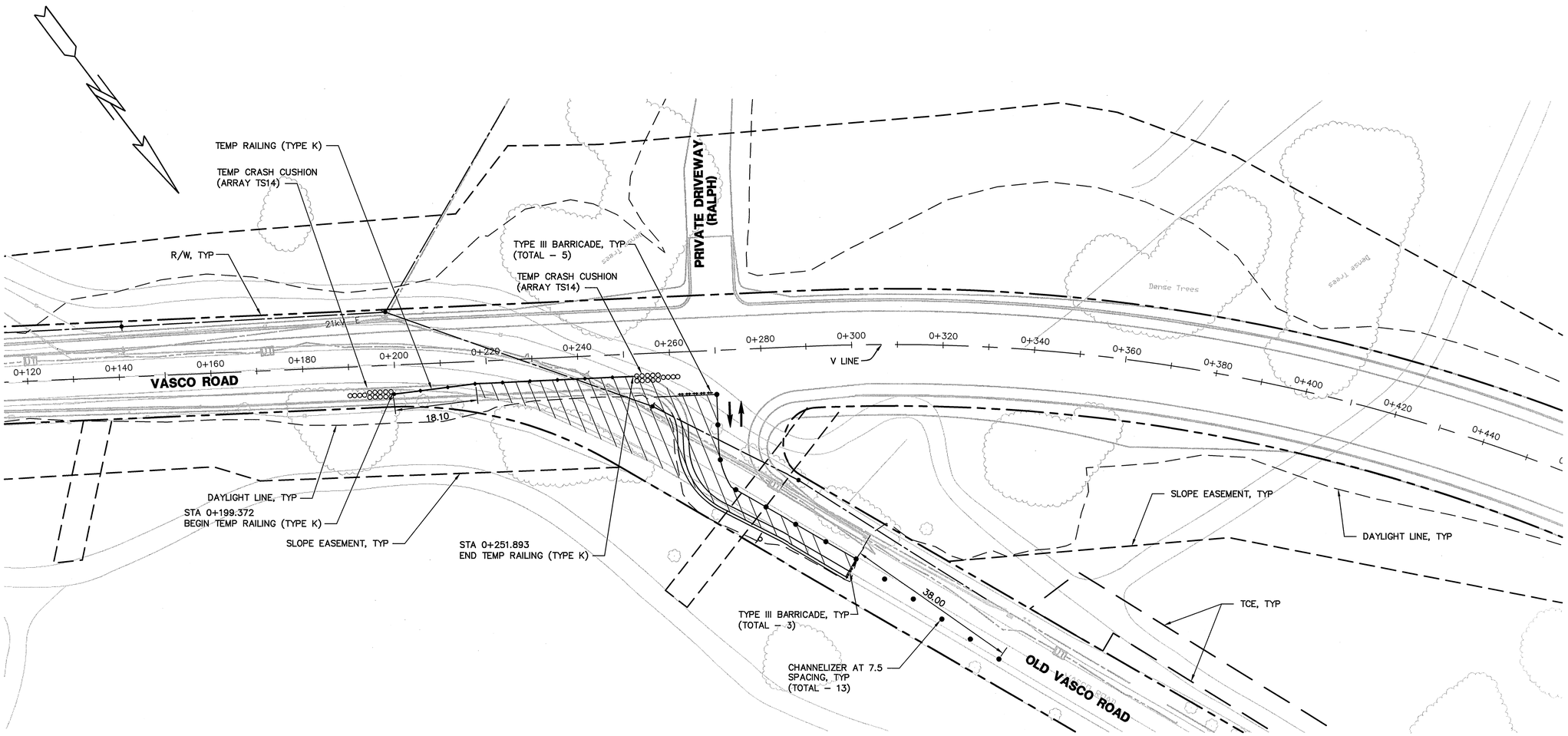
THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REVIEWED: BOND NIPP
REVIEWED: JAMES CHU
REVIEWED: ARTHUR C. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

CONSTRUCTION STAGING PLAN - STAGE 3

DATE	JAN 2008
SCALE	AS SHOWN
WORK ORDER NO.	R23265
SPECIFICATION NO.	1903
SHEET NO.	129 OF 145
FILE NO.	U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



PLAN
1:500

LEGEND:

STAGE 4 CONSTRUCTION:

1. REGRADE THE TEMPORARY BYPASS ROAD (STEEP) EMBANKMENT SLOPES TO 1H:2V.
2. CONSTRUCT REMAINING CONCRETE BARRIER ON NORTHERN END OF PROJECT.
3. AT THE TEMPORARY BYPASS ROAD, REMOVE BASE AND SURFACING FROM THE EVA CONNECTION AT VASCO ROAD TO THE NORTHERN CONFORM OF THE TEMPORARY BYPASS ROAD.
4. ADJACENT TO THE SOUTH INTERSECTION, REMOVE BASE AND SURFACING OF TEMPORARY PAVEMENT AND EXISTING OLD VASCO ROAD PAVEMENT NOT USED.
5. CONSTRUCT REMAINING PORTION OF SOUTH INTERSECTION.

STAGE 4 TRAFFIC:

1. NB AND SB TRAFFIC REMAINS ON REALIGNED VASCO ROAD.
2. NB AND SB TRAFFIC IS SPLIT AROUND THE BARRIER CONSTRUCTION AREA.
3. MAINTAIN LOCAL ACCESS TO THE SOUTH INTERSECTION AT ALL TIMES

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP RAILING (TYPE K)
- TEMP SIGN
- TEMP CRASH CUSHION (ARRAY TS14)
- CHANNELIZER
- DIRECTIONAL ARROW

12.5 0 12.5 25 37.5

SCALE = 1:500

ALAMEDA COUNTY Metric

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS 0 50 mm

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'D
1				
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REGISTERED PROFESSIONAL ENGINEER AND CIVIL STATE OF CALIFORNIA
STANLEY W. FUNG C 54000 Exp. 12-31-09
6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

DRAWN: A. BIRYUKOVA
DESIGNED: S. HO
CHECKED: T. HILLES AND
APPROVED: B. ZAEN

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REVIEWED: BOND INC
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

CONSTRUCTION STAGING PLAN - STAGE 4

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 130 OF 145

FILE NO. U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
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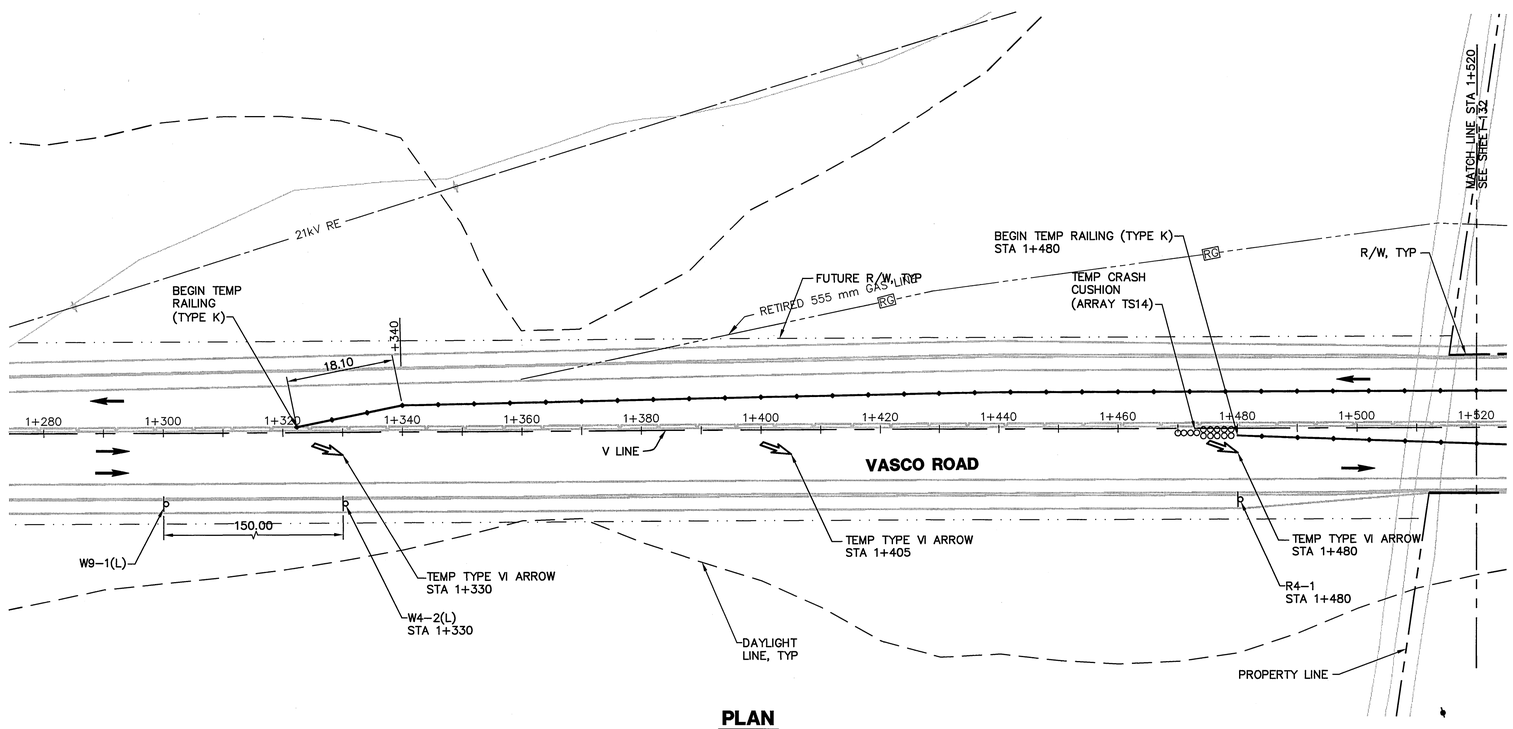

PLAN
1:500

LEGEND:

- TEMP RAILING (TYPE K)
- TEMP SIGN
- TEMP CRASH CUSHION (ARRAY TS14)
- DIRECTIONAL ARROW

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

NO.	DESCRIPTION	BY	DATE	APPV'D
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REVISIONS

REGISTERED PROFESSIONAL ENGINEER THOMAS J. HILLERSLAND CIVIL STATE OF CALIFORNIA No. C 54200 Exp. 12-31-08
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238
Moffatt & Nichol

CHECKED: T. HILLERSLAND
APPROVED: B. ZASNI
DRAWN: A. BOROVKOVA
DESIGNED: S. HO

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REVIEWED: BRIAN HO
REVIEWED: JAMES CHU
REVIEWED: ARTHUR A. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

CONSTRUCTION STAGING PLAN - STAGE 4

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 131 OF 145	
FILE NO. U-357-6	

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REVIEWED BY:	DATE:	REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
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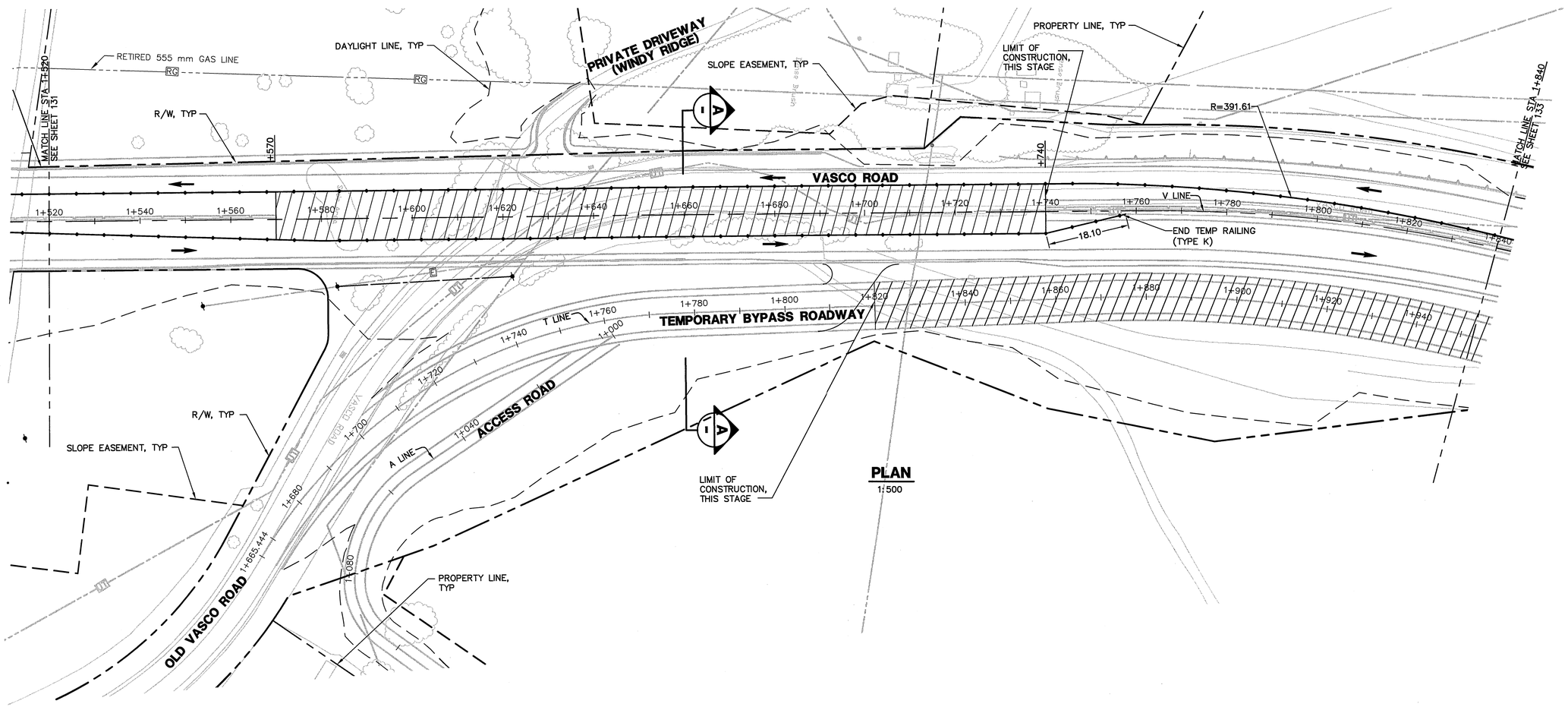
MAINTENANCE				TRAFFIC	
REAL ESTATE				ENVIRONMENTAL	



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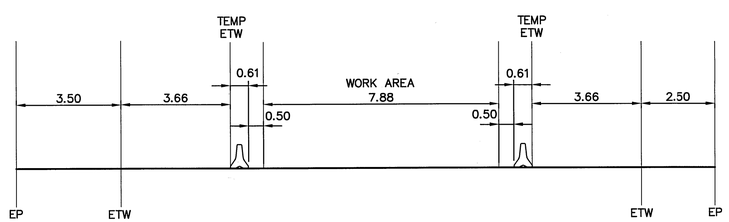

SECTION A (STA 1+660)
SCALE 1:100

LEGEND:

- CONSTRUCT THIS STAGE
- TEMP RAILING (TYPE K)
- TEMP RAILING (TYPE K)
- DIRECTIONAL ARROW

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
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REVISIONS

REGISTERED PROFESSIONAL ENGINEER THOMAS J. HILLESLAND CIVIL STATE OF CALIFORNIA 6-26-08

Moffatt & Nichol
1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238

CHECKED: T. HILLESLAND
APPROVED: B. ZAEIN
DRAWN: A. BOROVKOVA
DESIGNED: S. HO

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND NG
REVIEWED: JAMES GHI
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

CONSTRUCTION STAGING PLAN - STAGE 4

DATE	JAN 2008
SCALE	AS SHOWN
WORK ORDER NO.	R23265
SPECIFICATION NO.	1903
SHEET NO.	132 OF 145
FILE NO.	U-357-6

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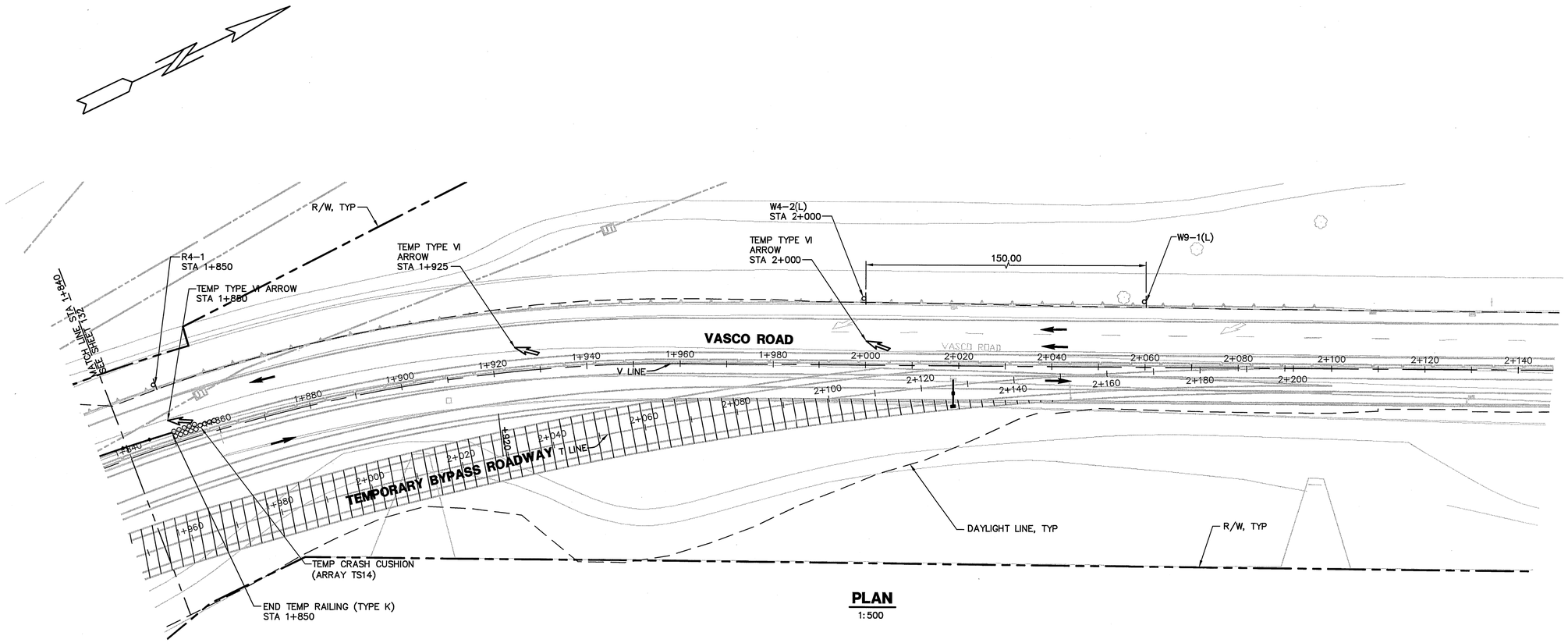

PLAN
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LEGEND:

- CONSTRUCT THIS STAGE
- TEMP RAILING (TYPE K)
- TEMP SIGN
- TEMP CRASH CUSHION (ARRAY TS14)
- DIRECTIONAL ARROW

12.5 0 12.5 25 37.5
SCALE = 1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER THOMAS J. HILLESLAND No. C 54200 Exp. 12-31-08 CIVIL STATE OF CALIFORNIA
6-26-08

1300 CLAY STREET, SUITE 550
OAKLAND, CALIFORNIA 94612
(510) 645-1238
Moffatt & Nichol

CHECKED: T. HILLESLAND
APPROVED: B. ZAENI
DRAWN: A. BOROVKOVA
DESIGNED: S. HO

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

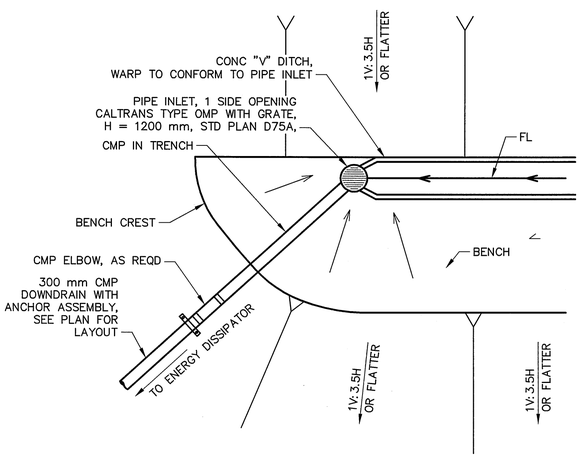
REVIEWED: BRIAN GIU
REVIEWED: JAMES GAU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

CONSTRUCTION STAGING PLAN - STAGE 4

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 133 OF 145
FILE NO. U-357-6

	REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION			SURVEY		
MAINTENANCE			TRAFFIC		
REAL ESTATE			ENVIRONMENTAL		

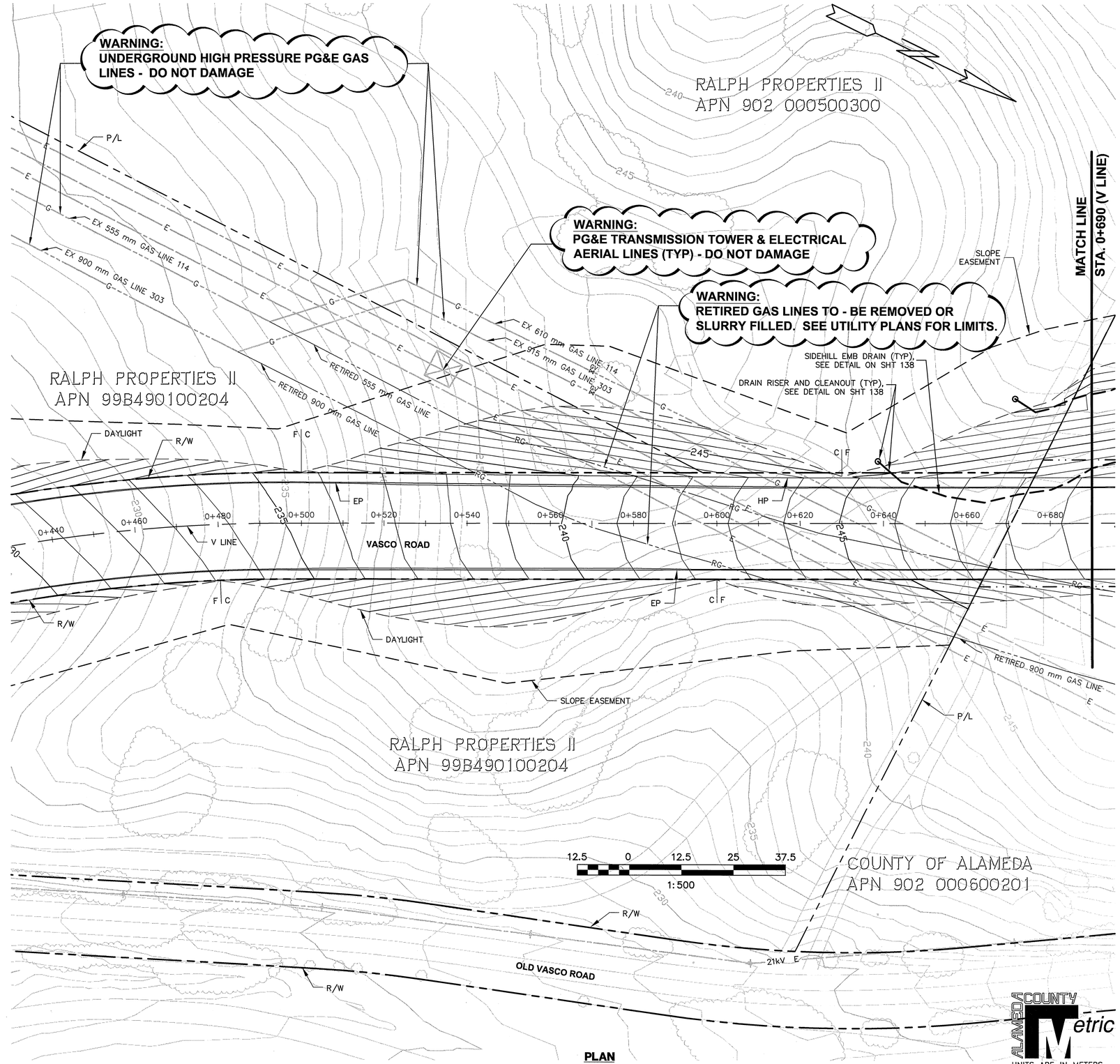


DOWNDRAIN AND INLET (1 / -)

NO SCALE

NOTES

1. EMBANKMENT SUBDRAINS SHOWN ON THIS PLAN ARE APPROXIMATE. ACTUAL LOCATION SHALL BE DETEREMINED IN THE FIELD BY THE ENGINEER.



PLAN

1:500

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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REVISIONS

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APPROVED REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 61345 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

EMBANKMENT SUBDRAINAGE LAYOUT

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: ASSISTANT DIRECTOR
DATE: JAN 2008
SCALE: AS SHOWN
DRAWN: JANE ENGEL
CHECKED: JAMES CHU
ROAD DESIGN SUPERVISOR: EDWARD MUNIZ

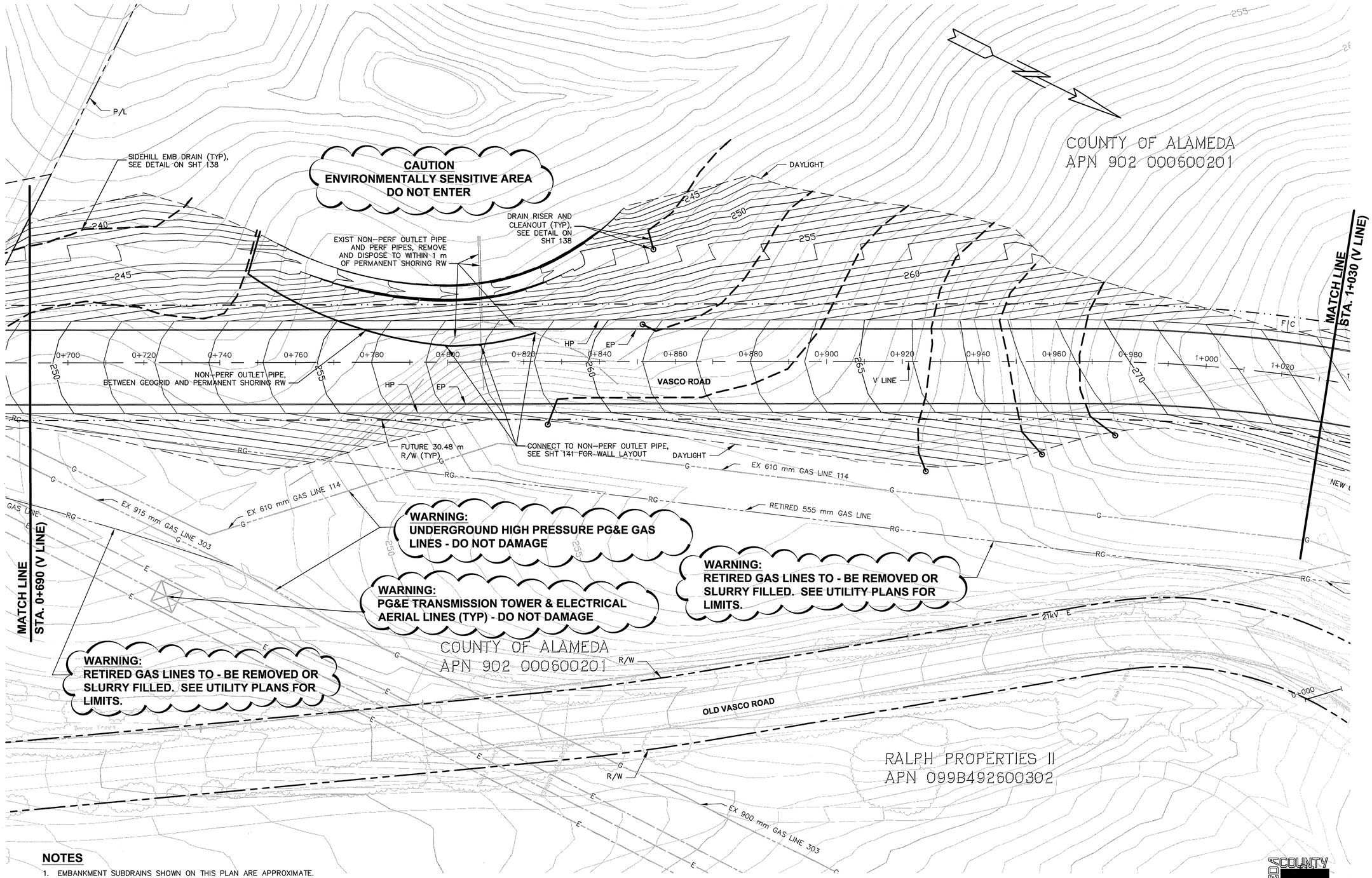
WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 134 OF 145

FILE NO. U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



NOTES

1. EMBANKMENT SUBDRAINS SHOWN ON THIS PLAN ARE APPROXIMATE. ACTUAL LOCATION SHALL BE DETEREMINED IN THE FIELD BY THE ENGINEER.

PLAN
1:500

12.5 0 12.5 25 37.5
1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

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APPROVED
REGISTERED PROFESSIONAL ENGINEER STANLEY W. LUNG No. 39587 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
EMBANKMENT SUBDRAINAGE LAYOUT

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED: JAMES CHU
APPROVED: CHIEF, CONSTRUCTION & MAINTENANCE
DATE: JAN 2008
SCALE: 1:500
DRAWN: JANE RIGGS
DESIGNED: CONSTRUCTION & MAINTENANCE
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 135 OF 145
FILE NO. U-357-6

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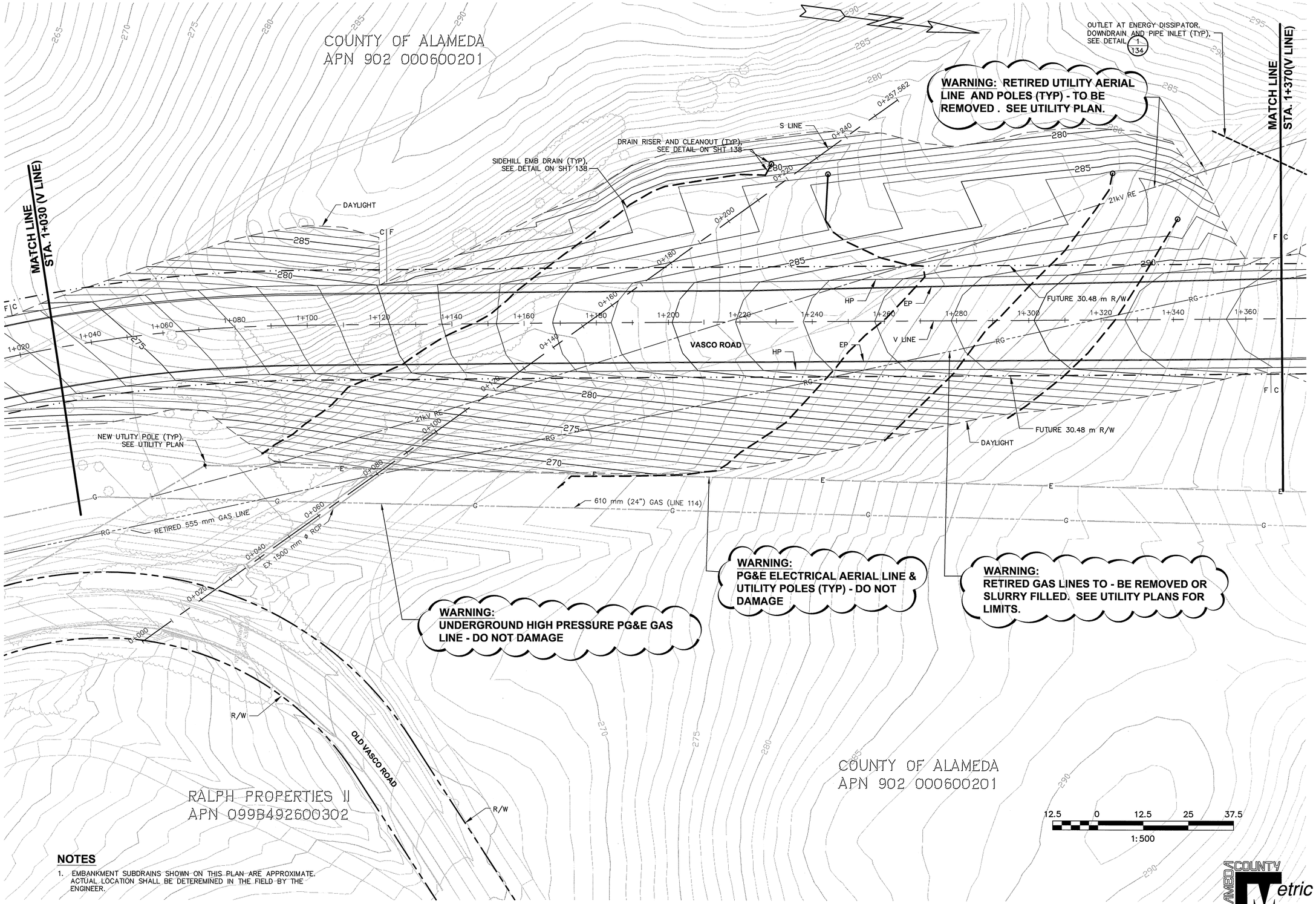
REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



NOTES

1. EMBANKMENT SUBDRAINS SHOWN ON THIS PLAN ARE APPROXIMATE. ACTUAL LOCATION SHALL BE DETEREMINED IN THE FIELD BY THE ENGINEER.

PLAN
1:500

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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REVISIONS

NO.	DESCRIPTION	BY	DATE
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APPROVED REGISTERED PROFESSIONAL ENGINEER STEVEN W. TUNG No. 38657 Exp. 12/31/2009 STATE OF CALIFORNIA CIVIL

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
EMBANKMENT SUBDRAINAGE LAYOUT

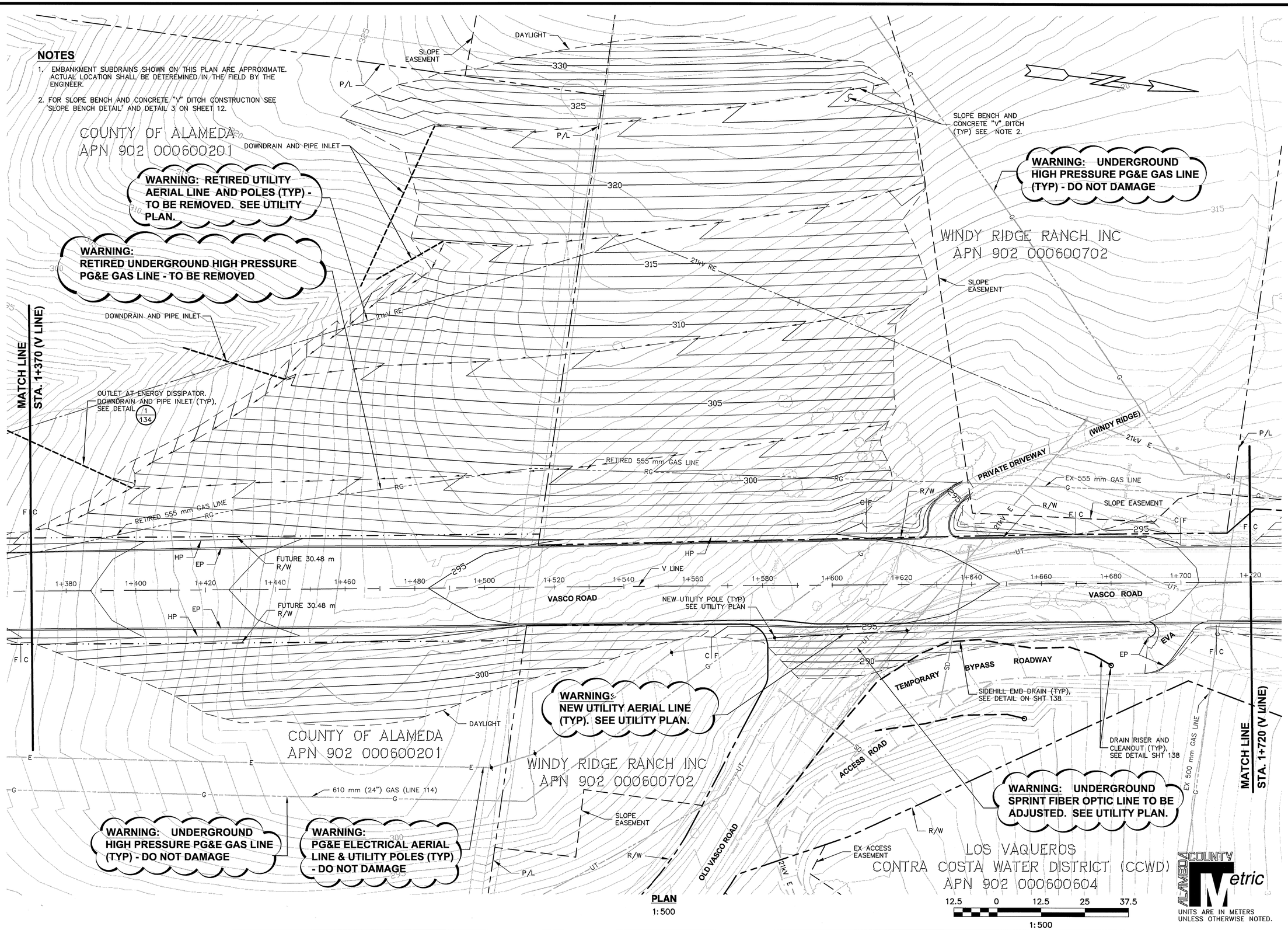
APPROVAL RECOMMENDED: JAMES SCHUTZ
APPROVED: ANDREW C. CLARK
DATE: JAN 2008
SCALE: 1:500
DRAWN: JANE ZONOT
DESIGN: RODRIGO MARTINEZ MARAVILLA
CHECKED: JAMES CHU

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 136 OF 145
FILE NO. U-357-6

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

NOTES

1. EMBANKMENT SUBDRAINS SHOWN ON THIS PLAN ARE APPROXIMATE. ACTUAL LOCATION SHALL BE DETEREMINED IN THE FIELD BY THE ENGINEER.
2. FOR SLOPE BENCH AND CONCRETE "V" DITCH CONSTRUCTION SEE 'SLOPE BENCH DETAIL' AND DETAIL 3 ON SHEET 12.



PLAN
1:500

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

NO.	DESCRIPTION	BY	DATE	APP'V'D
1				
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4				
5				

REVISIONS

APPROVED REGISTERED PROFESSIONAL ENGINEER STANLEY W. FUNG No. 39572 Exp. 12/31/2009 STATE OF CALIFORNIA CIVIL

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
EMBANKMENT SUBDRAINAGE LAYOUT

APPROVAL RECOMMENDED: Jim Cook, PROJECT MANAGER
APPROVED: Stanley W. Fung, ASSISTANT DIRECTOR
DRAWN: JAMES CHU
CHECKED: JAMES CHU
BOND COORDINATOR/MANAGER: Mamania
SCALE: 1:500
DATE: JAN 2008

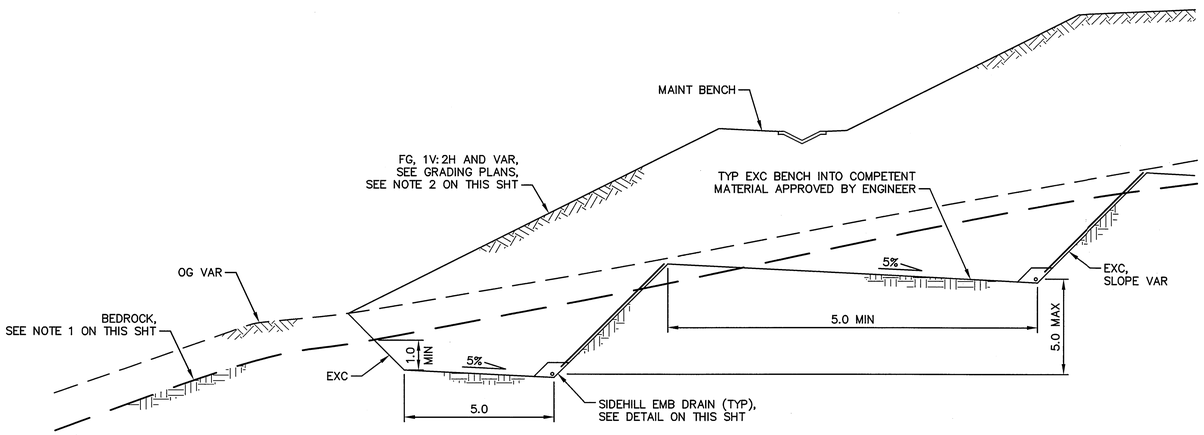
WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 137 OF 145
FILE NO. U-357-6

N:\ROAD\r23265\r-Final Plan - Vasco Road 2007\Embankment Subdrainage Layout.dwg 6-25-08 04:56:18 PM janer

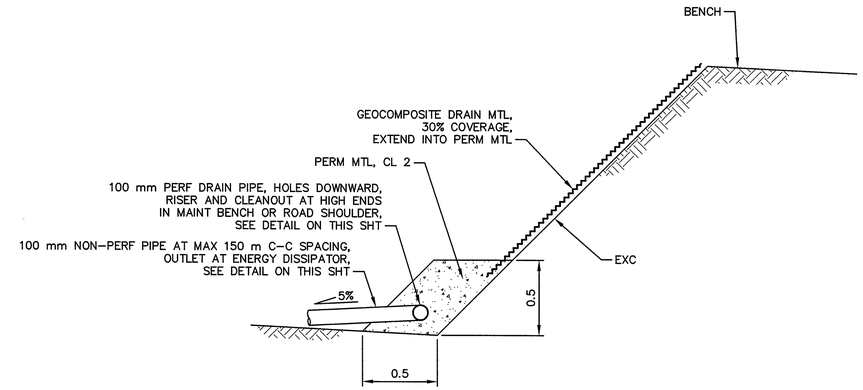
REVIEWED BY:	DATE:		REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY		
MAINTENANCE		TRAFFIC		
REAL ESTATE		ENVIRONMENTAL		

NOTES

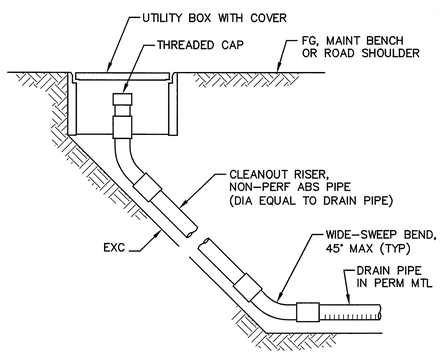
1. KEYWAY AND BENCH CONFIGURATIONS SHOWN WILL BE CONFIRMED BY THE ENGINEER AFTER INITIAL EXCAVATION HAS BEEN COMPLETED. BOTTOM OF KEYWAY SHALL BE LOCATED ENTIRELY IN BEDROCK. ELEVATIONS SHALL VARY TO ACHIEVE THE REQUIRED 2% EMBANKMENT DRAIN GRADIENT.
2. TO OBTAIN REQUIRED COMPACTION AT THE SLOPE FACE, EARTH FILL MATERIAL SHALL BE PLACED AND COMPACTED BEYOND THE FINISH GRADE LINES SHOWN ON THE PLANS AND THE EXCESS FILL MATERIAL TRIMMED BACK TO THE GRADES SHOWN.



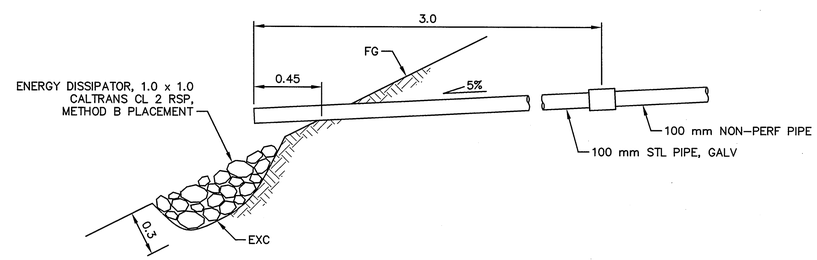
TYPICAL SIDEHILL EMBANKMENT DETAIL
NO SCALE



SIDEHILL EMBANKMENT DRAIN
NO SCALE



DRAIN RISER AND CLEANOUT
NO SCALE



ENERGY DISSIPATOR
NO SCALE

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
5				
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PROFESSIONAL ENGINEER O. GODFREY No. Exp. 9/31/09 CIVIL STATE OF CALIFORNIA

CE&G
CAL ENGINEERING & GEOLOGY
119 Filbert St.
Oakland, CA 94607
Phone: (510) 451-2350

DRAWN: CHRIS HOCKETT
DESIGNED: CHRIS HOCKETT / MARK MYERS
CHECKED: PHIL GODFREY
APPROVED: PHIL GODFREY

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REVIEWED: BOND NO.
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

EMBANKMENT DETAILS

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 138 OF 145
FILE NO. U-357-6

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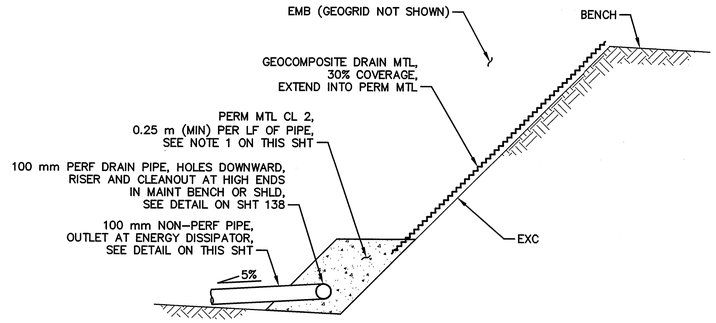


EMBANKMENT DRAIN

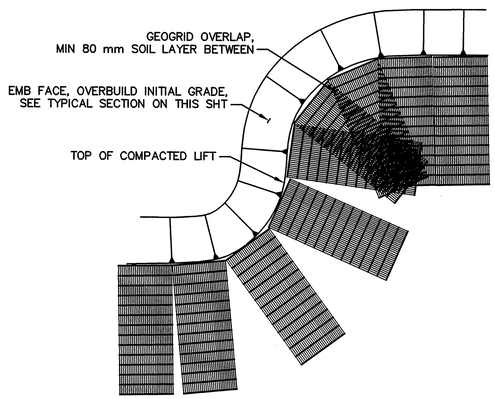
NO SCALE

NOTES

1. LOCATION AND CONFIGURATION OF THE EMBANKMENT BACK EXCAVATION AND EMBANKMENT DRAIN LAYOUT SHALL BE CONFIRMED BY THE PROJECT GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL MAINTAIN SAFE EXCAVATION CONDITIONS AT ALL TIMES.
2. TO OBTAIN REQUIRED COMPACTION AT THE SLOPE FACE, EARTH FILL MATERIAL SHALL BE PLACED AND COMPACTED A MINIMUM OF 200 MILLIMETERS BEYOND THE FINISH GRADE LINES SHOWN ON THE PLANS AND THE EXCESS FILL MATERIAL SHALL BE TRIMMED BACK TO THE GRADES SHOWN (EXPOSING ALL LAYERS OF GEOGRID).
3. SPECIAL INSPECTION IS REQUIRED FOR THE COMPACTED FILL AND GEOGRID PLACEMENT AND LAYOUT.
4. HOLES FOR MBGR SHALL BE PREDRILLED TO 90% OF THE GREATEST POST CROSS SECTIONAL DIMENSION PRIOR TO DRIVING TO FINAL DEPTH.
5. REDUCE SPACING AND ADD LAYER AS NEEDED SO THAT UPPERMOST PRIMARY GEOGRID LAYER IS 0.8 m BELOW TOP OF SLOPE

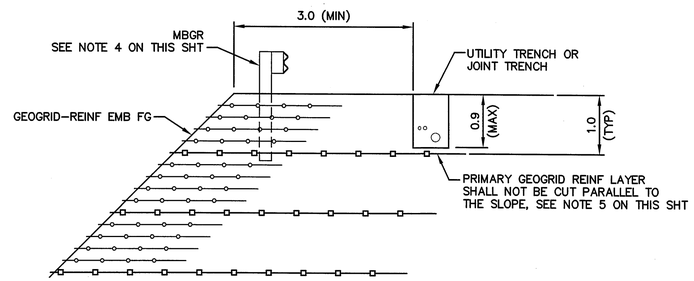
GENERAL NOTES REINFORCED EMBANKMENT DESIGN

DESIGN H:
1 m TO 12 m (1H:1.3V MAX SLOPE)
BACKFILL: Ø=26, C=7.17 kPa
SURCHARGE: 18.9 kPa
SEISMIC COEFFICIENT: 0.15
GEOGRID LONG TERM DESIGN STRENGTHS (LTDS):
TYPE 1 = 10.0 kN/m
TYPE 3 = 34.2 kN/m
TYPE 4 = 61.5 kN/m
FACTORS OF SAFETY:
GLOBAL=1.5



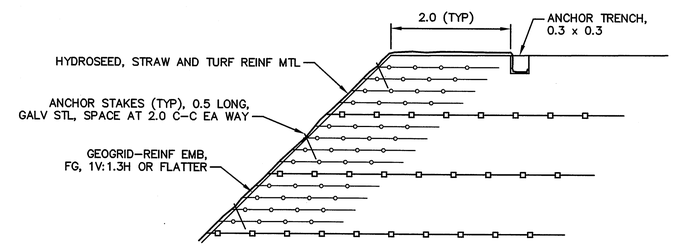
GEOGRID PLACEMENT ON CURVES

NO SCALE



GEOGRID PENETRATION RESTRICTIONS ALONG CREST

NO SCALE



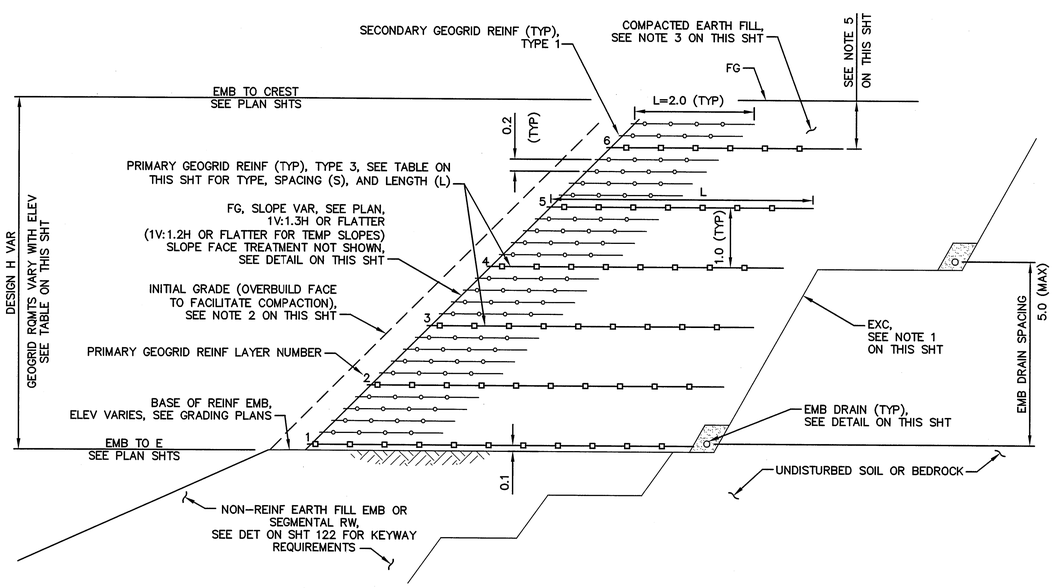
SLOPE FACE TREATMENT

NO SCALE

GEOGRID REINFORCEMENT DATA

DESIGN H	GEOGRID LENGTH (L) AT LAYER																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.0	3.0																			
2.0	3.0	3.0																		
3.0	3.0	3.0	3.0																	
4.0	4.0	4.0	4.0	4.0																
5.0	6.0	5.0	4.0	4.0	4.0															
6.0	7.0	6.0	5.0	5.0	4.0	4.0														
7.0	8.0	7.0	7.0	6.0	6.0	5.0	5.0													
8.0	9.0	9.0	8.0	8.0	7.0	7.0	6.0	6.0												
9.0	12.0	11.0	11.0	10.0	10.0	9.0	9.0	8.0	8.0											
10.0	13.0	13.0	12.0	12.0	11.0	11.0	10.0	10.0	9.0	9.0										
11.0	14.0	13.0	13.0	12.0	12.0	11.0	11.0	10.0	10.0	9.0	9.0									
12.0	15.0	15.0	14.0	14.0	13.0	13.0	12.0	12.0	11.0	11.0	10.0	10.0								
14.0	18.0	18.0	17.0	17.0	16.0	16.0	15.0	15.0	14.0	14.0	13.0	13.0	12.0	12.0						
16.0	21.0	21.0	20.0	20.0	19.0	19.0	18.0	18.0	17.0	17.0	16.0	16.0	15.0	15.0	14.0	14.0				
18.0	24.0	24.0	23.0	23.0	22.0	22.0	21.0	21.0	20.0	20.0	19.0	19.0	18.0	18.0	17.0	17.0	16.0	16.0		
20.0	25.0*	25.0*	25.0*	25.0*	23.0	23.0	22.0	22.0	21.0	21.0	20.0	20.0	19.0	19.0	18.0	18.0	17.0	17.0	16.0	16.0
	GEOGRID TYPE 4								GEOGRID TYPE 3											
	* ADDITIONAL GEOGRID OF SAME LENGTH AND TYPE SHALL BE INSTALLED BETWEEN LAYERS 1, 2, 3, AND 4																			

NOTE: GEOGRID TYPE 4 SHALL BE USED FOR ONLY DESIGN H=20.0 AND GEOGRID LAYERS 1 THRU 8.
ALL OTHER DESIGN Hs AND GEOGRID LAYERS SHALL USE GEOGRID TYPE 3.



GEOGRID-REINFORCED SLOPE TYPICAL SECTION

NO SCALE
RT "V" 0+600 TO 0+800

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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CE&G
CAL ENGINEERING & GEOLOGY
119 Filbert St.
Oakland, CA 94607
Phone: (510) 451-2350

DRAWN: CHRIS HOCKETT
DESIGNED: CHRIS HOCKETT
CHECKED: PHIL GOTSCHY
APPROVED: Sam Ghosh
REVIEWED: BOND HO
REVIEWED: JAMES CHU
APPROVAL RECOMMENDED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. ING

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REINFORCED EMBANKMENT

DATE: JAN 2008
SCALE: AS SHOWN
WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 139 OF 145
FILE NO. U-357-6

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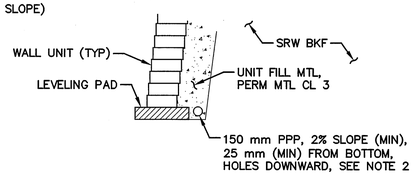
CHRIS HOCKETT / MARK MYERS

GENERAL NOTES RETAINING WALL DESIGN

DESIGN: FHWA MSE WALL DESIGN PROCEDURES (NHI-043)
DESIGN H:
0.4 m TO 12 m (WITH 9.5 m MAX EMBANKMENT, 1H:1.3V MAX SLOPE)
BACKFILL: ϕ=34, C=0 kPa
TRAFFIC SURCHARGE: 12.0 kPa
SEISMIC COEFFICIENT: 0.29
WALL UNIT CONCRETE (PRECAST): F'C=20.7 MPa
GEOGRID LONG TERM DESIGN STRENGTHS (LTDS):
TYPE 1 = 10.0 kN/m
TYPE 2 = 23.5 kN/m
TYPE 3 = 34.2 kN/m
FACTORS OF SAFETY:
SLIDING=1.5
OVERTURNING=2.0
BEARING CAPACITY=3.0
GLOBAL=1.5
GEOGRID PULLOUT=1.5



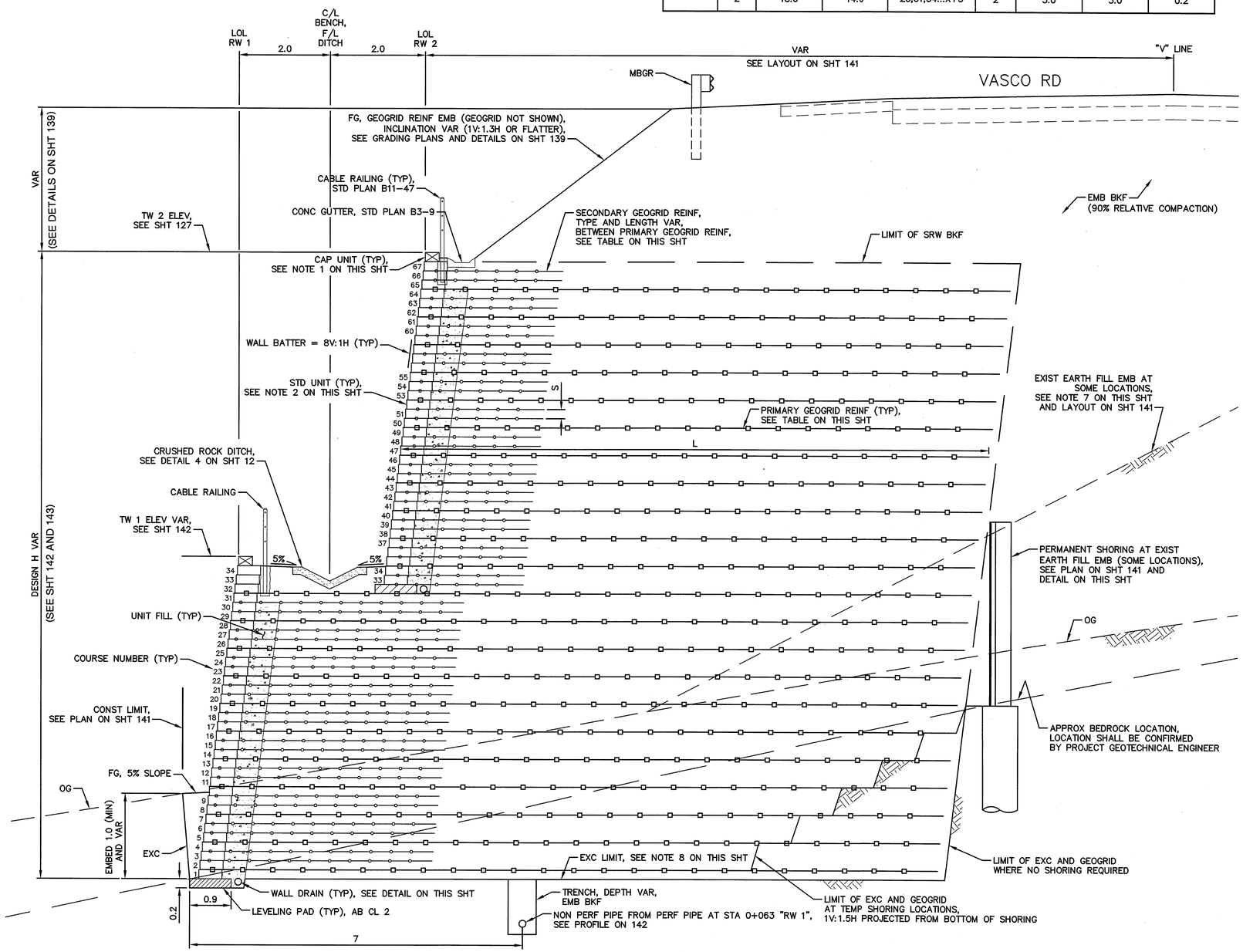
WALL DRAIN
NO SCALE

SEGMENT RETAINING WALL DATA

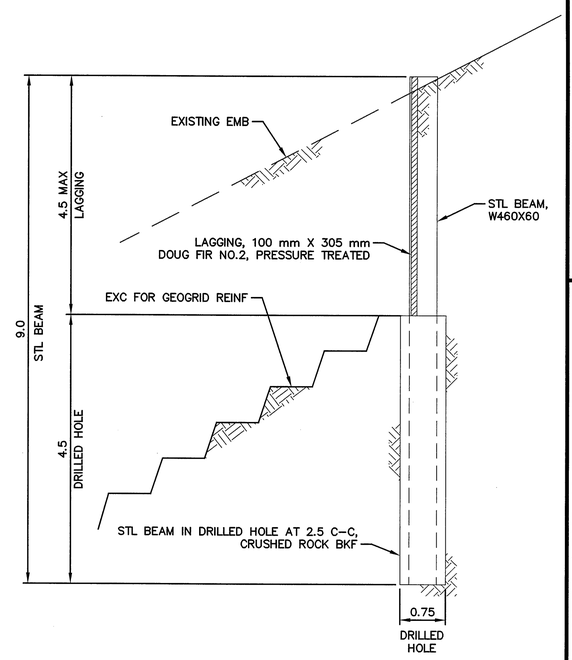
DESIGN H	PRIMARY GROGRID				SECONDARY GEOGRID			
	TYPE	LENGTH (L) RW 1	LENGTH (L) RW 2	LOCATION (TOP OF COURSE)	TYPE	LENGTH (L), RW 1	LENGTH (L), RW 2	SPACING (S) RW 1, RW 2
9	3	16.0	12.0	1,4,7	2	5.0	3.0	0.2
	2	16.0	12.0	10,13,16...X+3	1	5.0	3.0	0.2
12	3	18.0	14.0	1,4,7	2	5.0	3.0	0.2
	2	18.0	14.0	10,13,16...X+3	1	5.0	3.0	0.2
14	3	18.0	14.0	1,4,7,10,13, 16,19,22,25	3	5.0	3.0	0.2
	2	18.0	14.0	28,31,34...X+3	2	5.0	3.0	0.2

NOTES

1. NOMINAL DIMENSIONS OF STANDARD WALL UNITS: 200 mm HIGH, 460 mm WIDE, AND 500 mm DEEP (MIN). NOMINAL DIMENSIONS OF CAP UNITS: 200 mm HIGH, 460 mm WIDE, 300 mm DEEP. CAP UNITS SHALL BE SECURED IN PLACE WITH ADHESIVE.
2. WALL DRAIN SYSTEM SHALL DISCHARGE AT LOW POINT(S) THROUGH 150 mm DIA NON-PERFORATED PLASTIC PIPE (PP) PROTECTED WITH 3 m LONG 200 mm DIA CORRUGATED METAL PIPE (CMP) SLEEVE. INSTALL PP RISERS AND CLEANOUTS AT HIGH END OF DRAIN AND AT 30 m SPACING ALONG WALL. CAP RISERS WITH THREADED PLASTIC PLUGS AND PROTECT WITH 1 m LONG CMP RISERS WITH BOLTED COVERS (STD PLAN D102).
3. DESIGN H IDENTIFIED BY STATION ON RETAINING WALL PROFILE SHEETS 142 AND 143.
4. REQUIRED LONG TERM DESIGN STRENGTH (LTDS) APPLIES TO GEOGRID ORIENTATION INTO EMBANKMENT.
5. GEOGRID LENGTHS ARE MEASURED FROM FRONT FACE OF WALL UNIT.
6. GEOGRID SPACING SPECIFIED IS TYPICAL MAXIMUM VERTICAL SPACING OF LAYERS. BOTTOM LAYER OF GEOGRID SHALL BE PLACED ON THE TOP OF THE LOWEST WALL UNIT (200 mm ABOVE THE BOTTOM OF THE EXCAVATION). TOP LAYER OF GEOGRID SHALL BE PLACED 0.6 m BELOW THE TOP OF WALL ELEVATION. GEOGRID SHALL NOT BE PLACED UNDER CAP UNITS.
7. TEMPORARY SHORING SHALL BE INSTALLED WHERE EXISTING EARTH FILL EMBANKMENT CONFLICTS WITH GEOGRID REINFORCEMENT INSTALLATION.
8. EXCAVATION FOR SEGMENTAL RETAINNIG WALL BACKFILL SHALL BE FOUNDED ON BEDROCK AS DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER. THE GEOGRIDS SHALL EXTEND TO THE BACK OF THE EXCAVATION.



RETAINING WALL TYPICAL SECTION
NO SCALE



PERMANENT SHORING
NO SCALE

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
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REGISTERED PROFESSIONAL ENGINEER PHILLIP G. GREGORY No. Geo GE 2193 Exp. 6/30/09 CALIFORNIA

CE&G
CAL ENGINEERING & GEOLOGY
119 Filbert St. Oakland, CA 94607
Phone: (510) 451-2350

DRAWN: CHRIS HOCKETT
DESIGNED: CHRIS HOCKETT / MARK MYERS
CHECKED: PHIL GREGORY 6-27-08
APPROVED: PHIL GREGORY 6-27-08

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY
THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3
RETAINING WALL DETAILS

REVIEWED: BOND NO.
REVIEWED: JAMES OTT
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265
SPECIFICATION NO. 1903
SHEET NO. 140 OF 145
FILE NO. U-357-6

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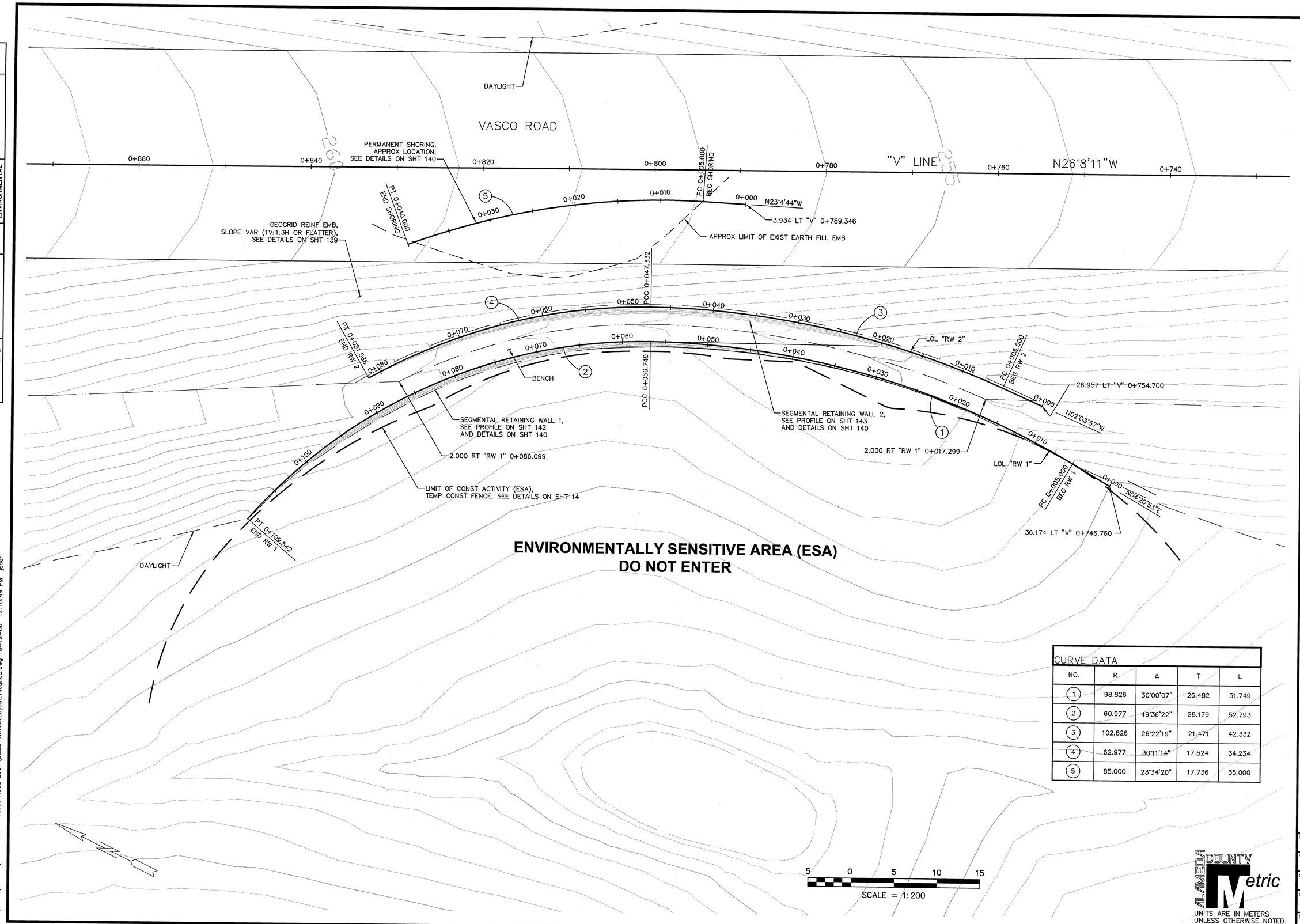
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	



CURVE DATA

NO.	R	Δ	T	L
1	98.826	30°00'07"	26.482	51.749
2	60.977	49°36'22"	28.179	52.793
3	102.826	26°22'19"	21.471	42.332
4	62.977	30°11'14"	17.524	34.234
5	85.000	23°34'20"	17.736	35.000

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'VD
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REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA — No. Geo GE 2183 — No. Civil C 40793 — No. Str. S 3141 — STATE OF CALIFORNIA — CHRIS O. GIBSONY

CE&G
CAL ENGINEERING & GEOLOGY
119 Filbert St.
Oakland, CA 94607
Phone: (510) 451-2350

CHECKED: PHIL. GEOLOGY
APPROVED: PHIL. GEOLOGY
DRAWN: CHRIS HOCKETT
DESIGNED: CHRIS HOCKETT

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

REVIEWED: JAMES, CHIEF
REVIEWED: ARTHUR, C. CARRERA
APPROVAL RECOMMENDED: STANLEY W. FUNG

RETAINING WALL LAYOUT

DATE JAN 2008	SCALE AS SHOWN
WORK ORDER NO. R23265	
SPECIFICATION NO. 1903	
SHEET NO. 141 OF 145	
FILE NO. U-357-6	

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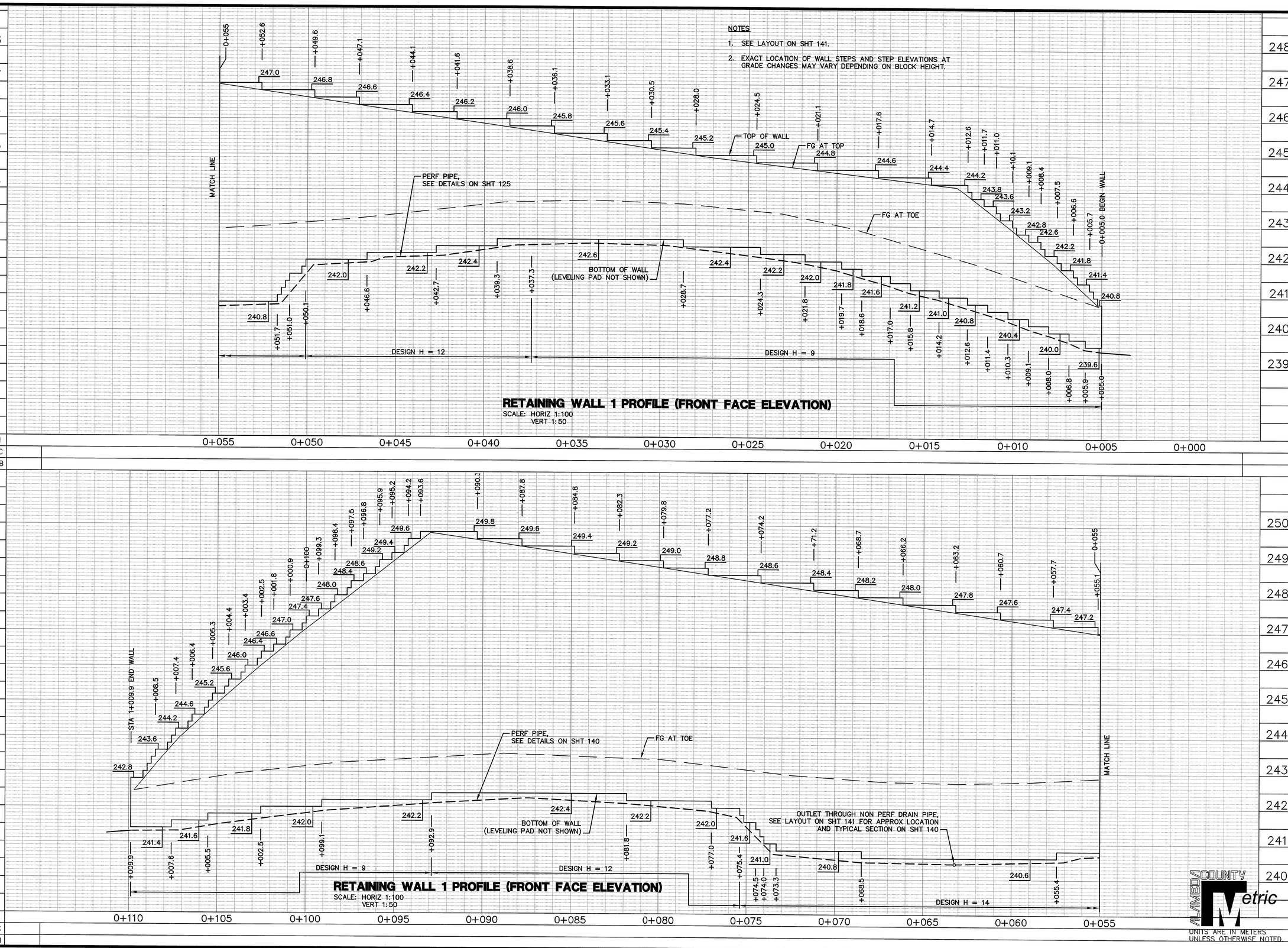
NOTES

1. SEE LAYOUT ON SHT 141.
2. EXACT LOCATION OF WALL STEPS AND STEP ELEVATIONS AT GRADE CHANGES MAY VARY DEPENDING ON BLOCK HEIGHT.



RETAINING WALL 1 PROFILE (FRONT FACE ELEVATION)
SCALE: HORIZ 1:100
VERT 1:50

RETAINING WALL 1 PROFILE (FRONT FACE ELEVATION)
SCALE: HORIZ 1:100
VERT 1:50

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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4				
5				

REGISTERED PROFESSIONAL ENGINEER STEVEN O. GREGORY No. Geo GE 2199 Exp. 9/01/08 CIVIL GEOTECHNICAL STATE OF CALIFORNIA

CAL ENGINEERING & GEOLOGY
119 Filbert St.
Oakland, CA 94607
Phone: (510) 451-2350

DESIGNED: PHIL GREGORY
APPROVED: PHIL GREGORY
DRAWN: CHRIS HOCKETT
DESIGNED: CHRIS HOCKETT
APPROVED: MARK MYERS

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND HC
REVIEWED: JAMES CHU
REVIEWED: ARTHUR G. CARRERA
APPROVAL RECOMMENDED: STANLEY W. TUNG

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

RETAINING WALL 1 PROFILE

DATE	JAN 2008
SCALE	AS SHOWN
WORK ORDER NO.	R23265
SPECIFICATION NO.	1903
SHEET NO.	142 OF 145
FILE NO.	U-357-6

ALAMEDA COUNTY Metric
UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

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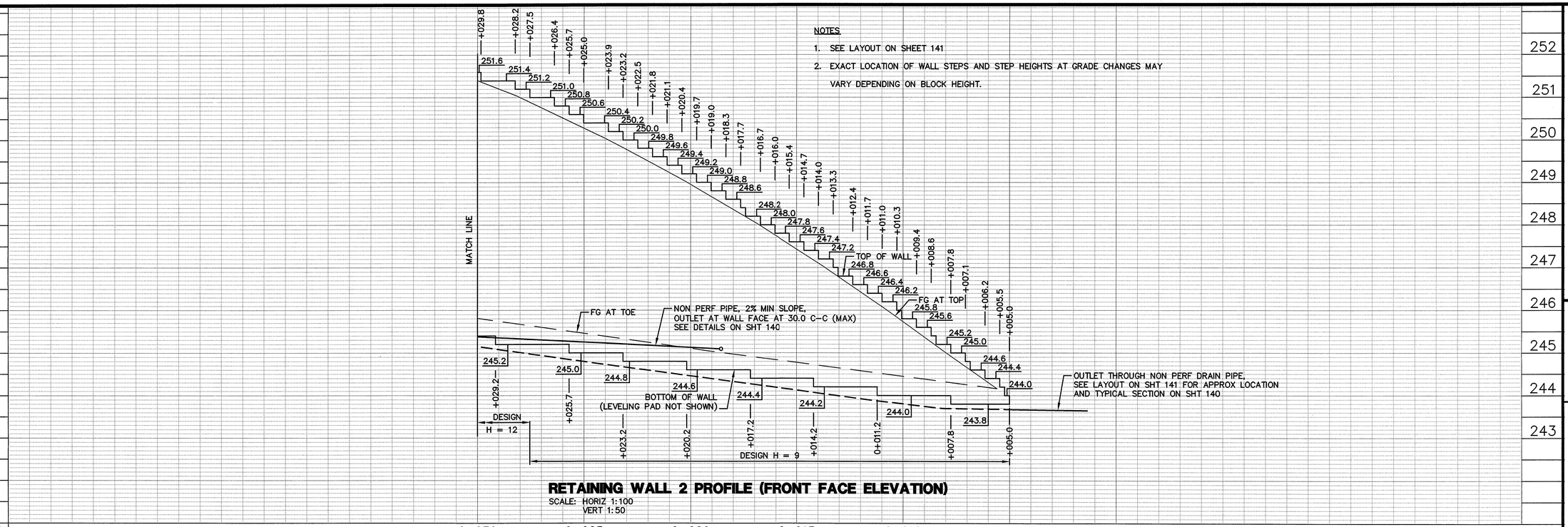
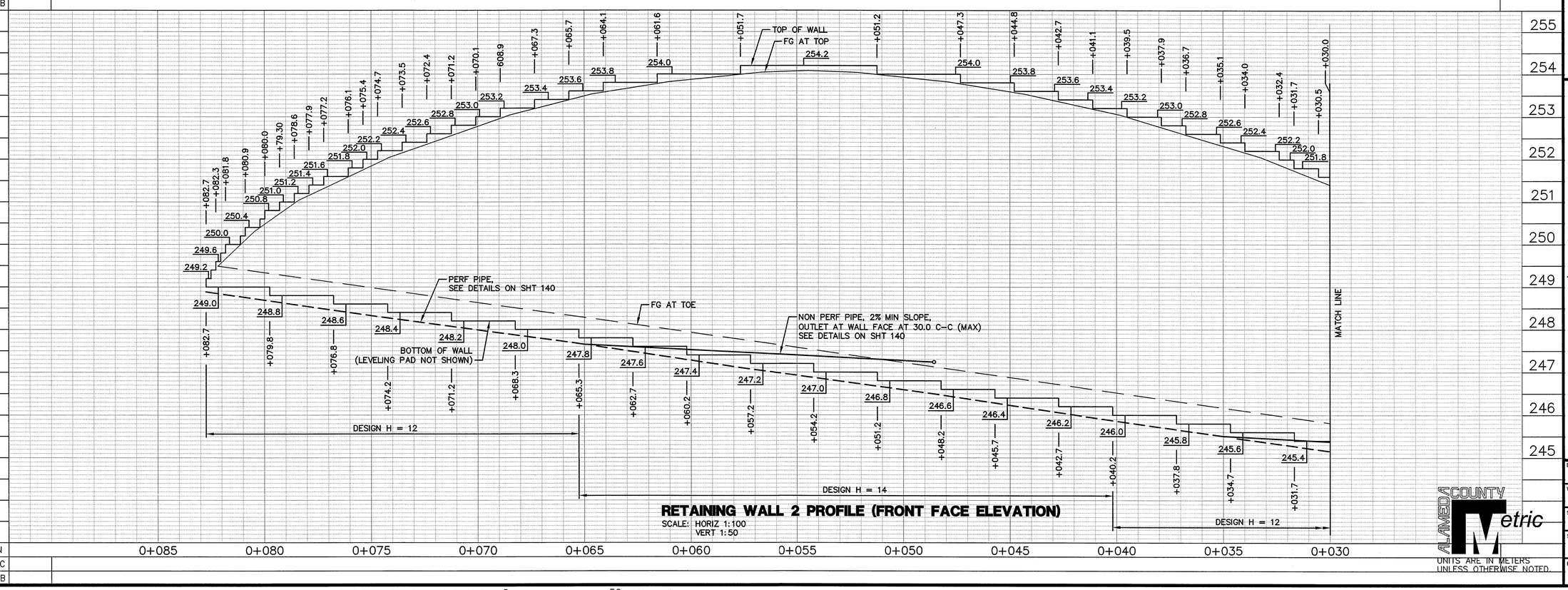
NOTES

1. SEE LAYOUT ON SHEET 141
2. EXACT LOCATION OF WALL STEPS AND STEP HEIGHTS AT GRADE CHANGES MAY VARY DEPENDING ON BLOCK HEIGHT.



RETAINING WALL 2 PROFILE (FRONT FACE ELEVATION)

SCALE: HORIZ 1:100
VERT 1:50



RETAINING WALL 2 PROFILE (FRONT FACE ELEVATION)

SCALE: HORIZ 1:100
VERT 1:50

UNITS ARE IN METERS UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS ORIGINAL SCALE IS IN METERS 0 50 mm

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
5				
4				
3				
2				
1				

REGISTERED PROFESSIONAL ENGINEER PHIL GRAGNANI No. 6xx GE 2195 Exp. 6/31/09 CIVIL STATE OF CALIFORNIA

CE&G
CAL ENGINEERING & GEOLOGY
119 Filbert St.
Oakland, CA 94607
Phone: (510) 451-2350

CHECKED: PHIL GRAGNANI
APPROVED: PHIL GRAGNANI
DRAWN: CHRIS HOCKETT
DESIGNED: CHRIS HOCKETT
MARK MYERS

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

REVIEWED: BOND NO.
REVIEWED: JAMES CHU
REVIEWED:
ARTHUR G. CARRERA
APPROVAL RECOMMENDED:
STANLEY W. FUNG

THE RELOCATION OF VASCO ROAD FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

RETAINING WALL 2 PROFILE

DATE	SCALE
JAN 2008	AS SHOWN

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

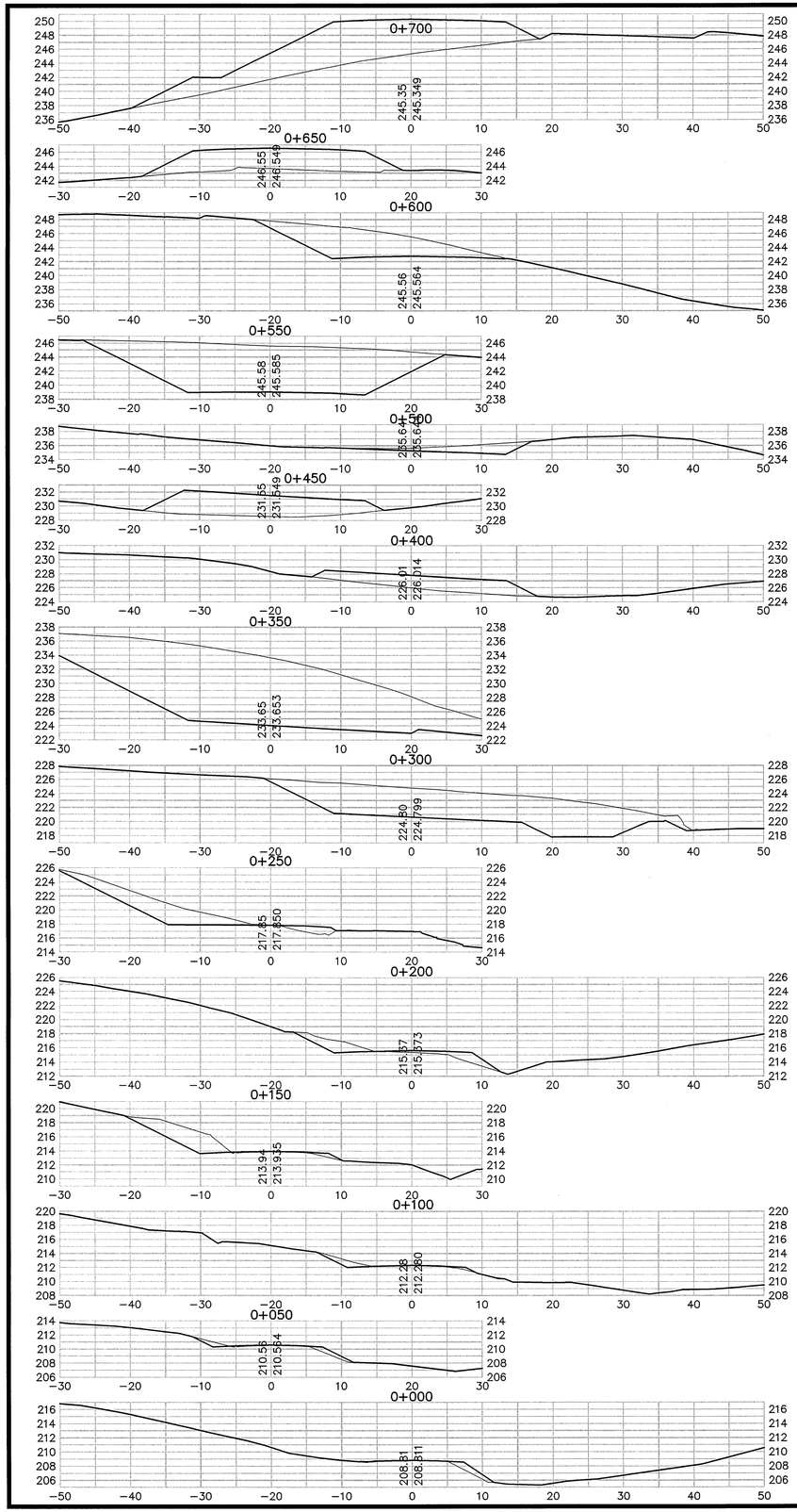
SHEET NO. 143 OF 145

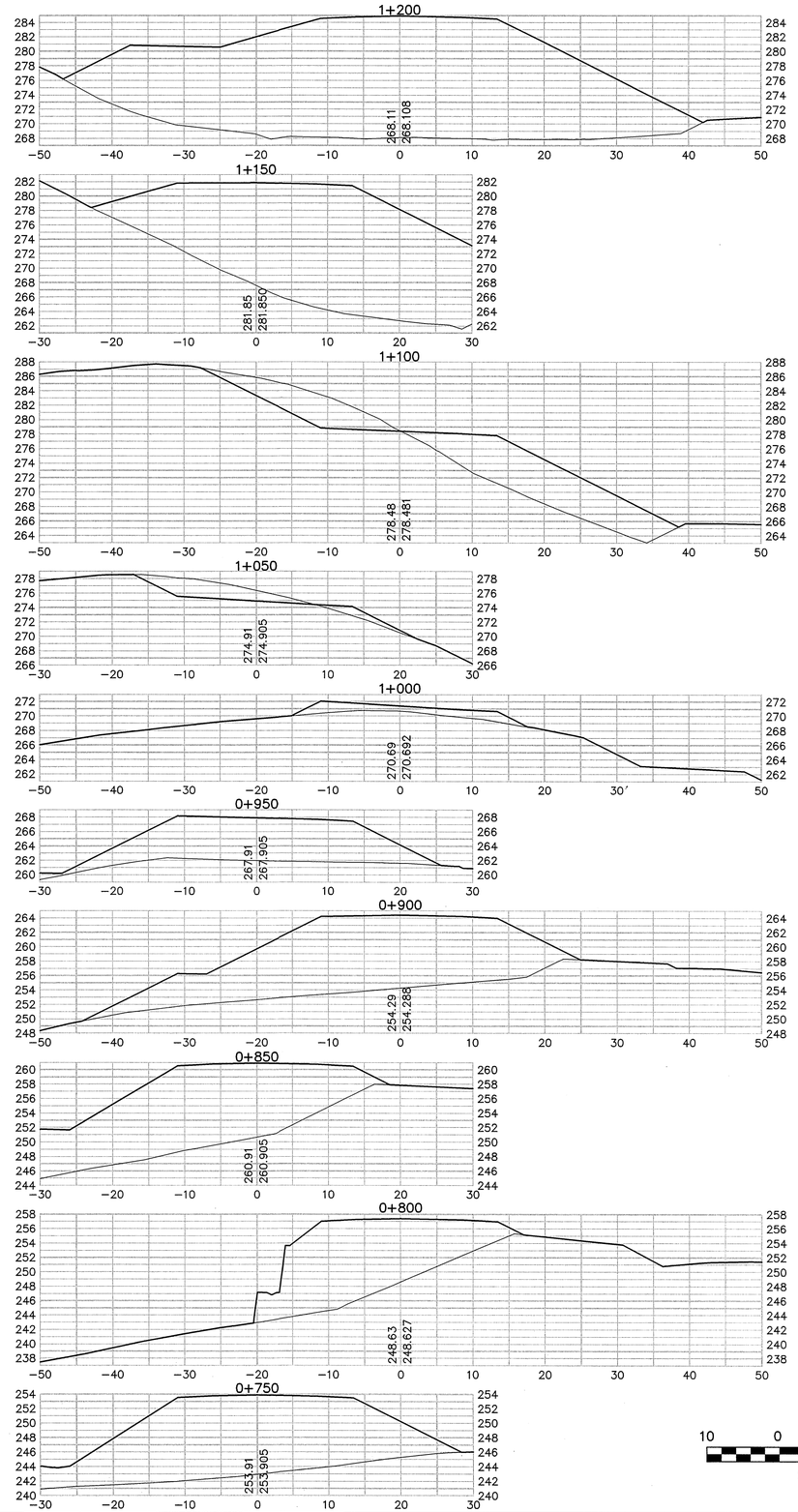
FILE NO. U-357-6

ALAMEDA COUNTY Metric

N:\ROAD\r23265\-Final Plan - Vasco Road 2007\CE&G-Profile.14Jan08.dwg 2-08-08 05:49:17 PM janer

REVIEWED BY:	DATE:	REVIEWED BY:	DATE:
CONSTRUCTION		SURVEY	
MAINTENANCE		TRAFFIC	
REAL ESTATE		ENVIRONMENTAL	

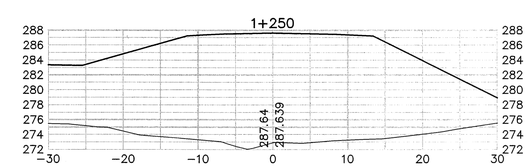




LEGEND

FINISHED GRADE

ORIGINAL GROUND



10 0 10 20 30

SCALE = 1:400

ALAMEDA COUNTY Metric

UNITS ARE IN METERS
UNLESS OTHERWISE NOTED.

FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS

0 50 mm

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
1				
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APPROVED

REGISTERED PROFESSIONAL ENGINEER
STANLEY W. FUNG
No. 38527
Exp. 12/31/2009
CIVIL
STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

CROSS SECTIONS - V LINE

APPROVAL RECOMMENDED: JAMES CHU
APPROVAL RECOMMENDED:
APPROVED: STANLEY W. FUNG
DATE: JAN 2008
SCALE: 1:400

DRAWN: BOBO RIO/ARNOLD
DESIGNED: BOB HU
CHECKED: JAMES CHU

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 144 OF 145

FILE NO. U-357-6

REVIEWED BY:	DATE:
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REAL ESTATE	

REVIEWED BY:	DATE:
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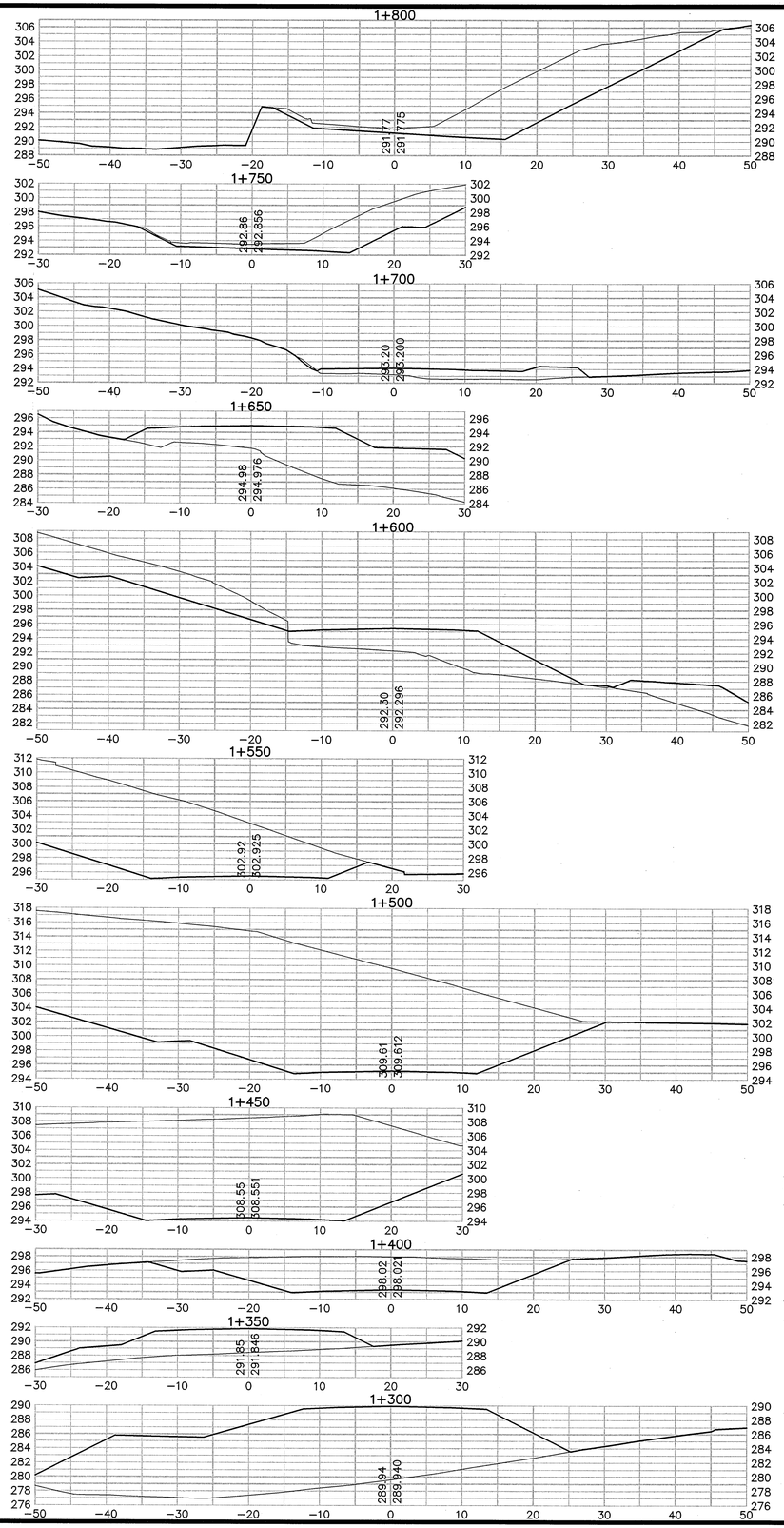
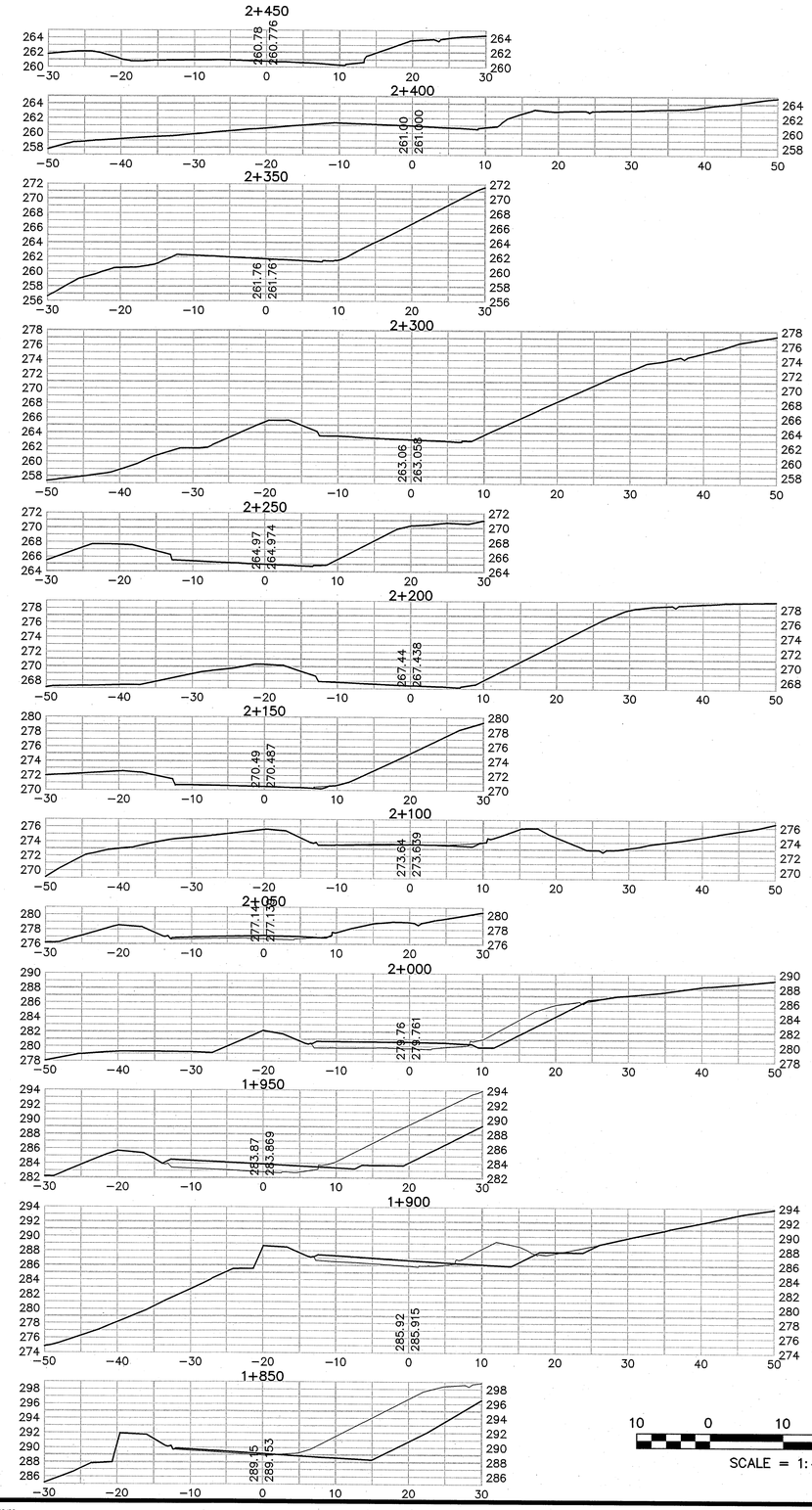
TRAFFIC	
ENVIRONMENTAL	





LEGEND

FINISHED GRADE

ORIGINAL GROUND

10 0 10 20 30

SCALE = 1:400

ALAMEDA COUNTY Metric

UNITS ARE IN METERS
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FOR REDUCED METRIC PLANS
ORIGINAL SCALE IS IN METERS

0 50 mm

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REVISIONS

NO.	DESCRIPTION	BY	DATE	APPV'D
5				
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2				
1				

APPROVED

REGISTERED PROFESSIONAL ENGINEER STANLEY W. TONG No. 38507 Exp. 12/31/2009 CIVIL STATE OF CALIFORNIA

COUNTY OF ALAMEDA ☆ PUBLIC WORKS AGENCY

APPROVAL RECOMMENDED: JAMES CHU

APPROVAL RECOMMENDED: ASHOK G. PATEL

DATE: JAN 2008

SCALE: 1:400

DRAWN: CHRISTINA DELA CRUZ

DESIGNED: BILL CHU

CHECKED: JAMES CHU

THE RELOCATION OF VASCO ROAD
FROM THE VICINITY OF MILEPOSTS 3.0 TO 4.3

CROSS SECTIONS - V LINE

WORK ORDER NO. R23265

SPECIFICATION NO. 1903

SHEET NO. 145 OF 145

FILE NO. U-357-6