OF SHEET	rs	COUNTY OF SANTA CRUZ
NO.	DESCRIPTION	
	TITLE QUEET	DEPARTMENT OF PUBLIC WORKS

PROJECT PLANS FOR CONSTRUCTION OF A REDEVELOPMENT AGENCY FUNDED PROJECT

EAST CLIFF DRIVE BLUFF PROTECTION 32nd to 36th Avenues and 41st Avenue

ABBREVIATIONS

AGGREGATE SUBBASE BEGIN CURVE BEGIN CURVE RETURN BEGIN VERTICAL CURV BOTTOM OF WALL

CABLE TELEVISION

CORRUGATE DROP INLET DRIVEWAY END CURVE

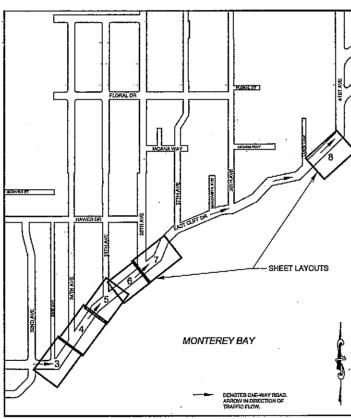
EACH WAY

INVERT JOINT POLE

PROPERTY LINE, PLATE

STORM DRAIN DROP INLET STORM DRAIN MANHOLE SANITARY SEWER SANITARY SEWER MANHOL

VERTICAL VERTICAL CURVE



SHEET LAYOUT PLAN

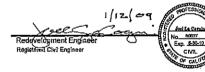
COUNTY OF SANTA CRUZ

33

PROJECT BENCHMARK

VERTICAL DATUM:
NAVD86, US SURVEY FEET BASED ON BENCH MARK 61.84 (PID GUZZ88);
-ELEV-64.79. -A SURVEY DISK-SET-IN-THE TOP OF A CONCRETE MONUMENT FLEV-64.78. A-SURVEY DISK-SET-IN-THE TOP OF A CONCRETE MONUMENT STAMPED TELEV 81.94 I COATED 6.4 MR J.38 MIR DASTERLY A LONG THE SULTHERN PACIFIC RALLROAD FROM THE JUNCTION OF THE RALLROAD AND WEST CLIFF DRIVE IN SANTA GRUZ. 12.6 M (4.10 FT) WEST OF THE CENTERLINE OF 41ST AVENUE, 3.0 M (8.04 FT) SOUTH OF THE NEAR RAIL, 8.7 M (21.98 FT) WEST-ANDITHMEST OF INTUITY POLE NUMBER 1075 WITH TRANSFORMER, 1.8 M (6.84 FT) WEST OF A UTILITY POLE WITH A METER ATTACKED, 0.5 M (1.94 FT) WEST OF A WITNESS POST, LEVEL WITH THE TRACK AND IN A CONCRETE MONUMENT THAT PROJECTS 0.1 M (0.33 FT) ABOVE THE GROUND SURFACE.

HORIZONTALONTAL DATUM: STATE PLANE, NAD83, CALIFORNIA 3-0403, US SURVEY FEET





heares Chair, Board of Supervis

January 27, 2008 Plans Approval Date

Bids Open: March 5, 2009

ROBAL DR	MANAGET BY SHEET LAYOUTS
3	MONTEREY BAY
	DENOTES ONE-WAY ROAD. ARROW IN DIRECTION OF TRAFFIC FLOW.

EROSION CONTROL MEASURES WILL CONTROL SITE EROSION, PREVENT SEDIMENT TRANSPORT OFF THE SITE, CONFORM WITH THE SANTA CRUZ COUNTY EROSION CONTROL ORDINANCE AND BE COMPLETE BY OCTOBER 16.

NOTES SITE PLAN AT 23RD AVENUE SITE PLAN AT 34TH AVENUE SITE PLAN AT 35TH AVENUE

SITE PLAN AT 36TH AVENUE

STATIONS 2+60 TO 6+50

TYPICAL DETAILS

SITE PLAN BETWEEN 35TH AND 36TH AVENUES

SITE PLAN AT 41ST AVENUE (THE HOCK)
BLUFF PROTECTION WALL CROSS SECTIONS

BULLE PROTECTION WALL CROSS SECTIONS

BLUFF PROTECTION WALL CROSS SECTIONS
STATIONS 1-4-00 TO 154-00
BLUFF PROTECTION WALL CROSS SECTIONS
STATIONS 11-50 AND 26-100 TO 26-100
BLUFF PROTECTION WALL TYPICAL SECTIONS
BOTTOM AND END OF WALL DETAILS
STAIRWAY TYPICAL SECTIONS AND DETAILS
STAIRWAY 21 LAYOUT AND PROFILE
STAIRWAY 22 LAYOUT AND PROFILE
STAIRWAY 23 LAYOUT AND PROFILE
STAIRWAY 25 LAYOUT AND PROFILE

EXAMPLE STAIRWAY AESTHETIC DETAILS MSE BUILD-OUT TYPICAL DETAILS

TRAFFIC CONTROL & STAGING AREA PLAN TRAFFIC CONTROL & STAGING AREA PLAN TRAFFIC CONTROL & STAGING AREA PLAN

MBE BUILD-OUT #1, #2, AND #3 LAYOUTS AND PROFILES MSE BUILD-OUT #4 AND #5 LAYOUTS AND PROFILES PLANTER LEDGE AND TREE ROOT PROTECTION

TYPICAL DETAILS
PLANTER LEDGE LAYOUTS
HIGH RELIEF AREA TYPICAL DETAILS
SOIL NAIL WALL TYPICAL DETAILS
MISCELLANEOUS DETAILS 1
MISCELLANEOUS DETAILS 1
MISCELLANEOUS DETAILS 2
MISCELLANEOUS DETAILS 2
MISCH STORTER TEXTURING AND STAINING DETAILS
DEMOLITION PLAN - EAST CLIFF DRIVE BETWEEN 32ND
AND SITH AVENUES
DEMOLITION PLAN - EAST CLIFF DRIVE AT 41ST AVENUE
OF THE HOOK

- 2, OISTURBANCE TO NATURAL VEGETATION WILL BE MINIMIZED WITHIN THE AREA
- IF THE CONSTRUCTION PERIOD IS ANTICIPATED TO EXTEND INTO THE WINTER MONTHS THEN PRIOR TO OCTOBER 15 AND UNTIL APRIL 15, THE FOLLOWING MEASURES SHALL BE INCORPORATED. A. PLACE STRAWBALE BARRIERS AROUND ALL INLETS TO CONTROL THE TRANSPORT OF SEDIMENT.
 - INVANSPORT OF SEDIMENT.

 B. IMPLEMENT SITE EROSION CONTROL MEASURES FOLLOWING COUNTY-APPROVED STORMWATER POLLUTION PREVENTION PLAN.
- ALL DISTURBED AREAS SHALL BE PROTECTED FROM EROSION AS FOLLOWS:

 A. REMOVE ALL VEGETATIVE DESRIS FROM SURFACE.

 B. HANDRIAKE TO SMOOTH OUT THE SOIL SURFACE.

 C. PLACE COUNTY-APPROVED PHOTODEGRADEABLE EROSION CONTROL MATTING OVER SOIL SURFACE.

 D. BROADCAST COUNTY-APPROVED NATIVE SEED MIX OVER SOIL.

1.0 GENERAL NOTES

- 1.1 IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF EXISTING UTILITIES, INCLUDING POTHOLING. CONTRACTOR SHALL NOTITY ENGINEER OF ANY POTENTIAL COMPLICES ENTIRED MOST OR CURRENTLY PROPOSED UTILITIES AND ANY PROPOSED WALL ELECTROPS. TEMPORATY CONSTRUCTION WORS, OR ANY OTHER ASPECTS OF THE CONTRACTOR'S WORK.
- 1.2 SITE CONDITIONS MAY HAVE CHANGED SINCE DATES OF TOPOGRAPHY (JAMUARY 2008) AND PHOTO BASE (AUGUST 2007). CONTRACTOR SHALL NOTIFY ENGINEER OF ANY SIGNIFICANT CHANGES TO SITE CONDITIONS PRIOR TO START OF WORK.
- 1.3 INDICATED LOCATIONS OF EXERGENCY REPAIR WALLS (2004) ARE APPROXIMATE.
- 1.4 CENTERLINE OF EAST CLIFF DRIVE TO BE STAKED BY THE COUNTY AS INDICATED. FINAL LOCATION MAY BE ADJUSTED BY ENGINEER.
- 1.5 ALL ELEVATIONS RELATIVE TO NAVD88 UNLESS OTHERWISE NOTED.
- 1.0 MHW LINE REPRESENTS THE ESTIMATED INTERSECTION OF THE 4.7 FT ELEVATION PLANE WITH EXISTING BEACH FEATURES AT TIME OF SURVEY.
- 1.7 THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL MONITOR ALL ADJACENT PROPERTY OF SURVEYING OR OTHER RECORDABLE METHODS, AND TAKE ACTION TO PREVENT ADJACENT PROPERTY OR UTILITY DAMAGE.

2.0 SOIL NAIL DESIGN NOTES

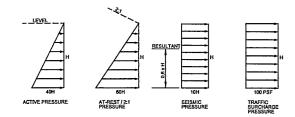
- 2.1 THE SOIL NAIL WALL STRUCTURES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE SLD (BERVICE LOAD DESIGN) PROCEDURES CONTAINED IN THE FHWA TAMINIAL FOR DESIGN AND CONSTRUCTION MONITORING OF SOIL NAIL WALLS, REPORT NO, PHWA-9A-9009, AND THE CALTRANS SMALE? DESIGN PROGRAMA STRUCTURAL DESIGN OF ANY MONITORING HELEMENTS NOT COVERED IN THE THYM AMMILL HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 1996 AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES AND LATEST INTERM REFERRICATIONS.
- 2.2 REFERENCE MATERIALS:
- GEOTECHNICAL INVESTIGATION FOR COASTAL BLUFF PROTECTION, EAST CLIFF DRIVE (PROJECT NO. SCSIO4) BY HARO, KASUNICH & ASSOCIATES, BHC., DATED JUNE 1897.
- B. ADDENDUM TO GEOTECHNICAL INVESTIGATION BY HARO, KASUNICH & ASSOCIATES, INC., DATED MAY 1998.
- C. TOPOGRAPHIC BASE MAP BY ANDREGG GEOMATICS, INC., DATED MAY 2008.
- GEOTECHNICAL INVESTIGATION REPORT, EAST CLIFF DRIVE BLUFF PROTECTION & PARKWAY PROJECT, EAST CLIFF DRIVE BETWEEN 32ND & 41ST AVENUE, SANTA CRUZ COUNTY, CA, PREPARED BY SAGE, PROJECT NO. SESS-03 SCPW8 TASK 2, DATED OCTOBER 13, 2008.

2.3 DESIGN SOIL / ROCK PARAMETERS:

J	DESIGN BOIL / ROCK PAROMETE	ns.			
	SOIL/ROCK TYPE	FRICTION ANGLE (DEGREES)	COHESION (PSF)	WEIGHT (PCF)	ULTIMATE BOND STRESS* (PSI)
	UPPER TERRACE DEPOSITS	24	400	125	10
	LOWER TERRACE DEPOSITS	41	0	125	15
	UPPER PURISIMA FORMATION	41	1000	115	40
	LOWER PURISIMA FORMATION	43	100	115	25

- •ULTIMATE BOND TO BE VERIFIED BY VERIFICATION AND PROOF TESTING DURING CONSTRUCTION.
- 2.4 SEISMIC COEFFICIENT = 0.20g.

3.0 DESIGN SOIL PRESSURES



4.0 SOIL NAIL CONSTRUCTION NOTES

4.1 LAYOUT OF SOIL NAILS TO BE PERFORMED BY THE CONTRACTOR BASED ON THE TYPICAL SECTIONS AND SOIL NAIL SCHEDULE. ADJUSTMENTS MAY BE MADE TO ACCOMMODATE FIELD CONDITIONS AS APPROVED BY SAGE OR THE ENGINEER.

5.0 PRIMARY & SECONDARY SHOTCRETE NOTES

- 5.2 WATER-TO-CEMENT (W/C) RATIO SHALL NOT EXCEED 0.4 BY WEIGHT.
- 5.3 SEE SPECIAL PROVISIONS FOR COMPLETE REQUIREMENTS.

6.0 STRUCTURAL OBSERVATION AND SPECIAL INSPECTIONS

- 8.1 SAGE OR QUALIFIED, LICENSED INSPECTOR SHALL OBSERVE ALL EXCAVATIONS BEFORE CONCRETE OR SHOTCRETE IS PLACED.
- 8.2 SAGE OR QUALIFIED, LICENSED INSPECTOR SHALL OBSERVE ALL TESTING OF PROOF AND VERIFICATION NAILS.
- 8.3 SAGE OR QUALIFIED, LICENSED INSPECTOR SHALL INSPECT ALL REINFORCEMENT PRIOR TO PLACEMENT OF SHOTCRETE OR CONCRETE,
- 6.4 THE CONTRACTOR IS RESPONSIBLE FOR TESTING OF SHOTCRETE IN ACCORDANCE WITH THE PROCEDURES PROVIDED IN THE SPECIAL PROVISIONS.
- 6.5 THE CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS PRIOR TO REQUIRED INSPECTIONS.

CONVENTIONAL SYMBOLS

APPROXIMATE PROPERTY UNE (PL), AND RIGHT OF WAY (RW) EAST CLIFF DRIVE & STATIONING ROAD EDGE OF PAVEMENT GUARD RAIL TEMPORARY FENCE CHAINLINK FENCE BLUFF PROTECTION WALL CROSS SECTION	5-00 6-00	SHRUBBERY SECTION DETAIL 2. SHEET 6 DETAIL 2. CURRENT SHEET BOTTOM OF WALL N 1809065.85 E 6131723-10 EEV 4/22:	2 6 2 FEATURE DESCRIPTION NORTHERNS EASTING ELEVATION	EXISTING UTILITIES: WATER GAS SANTIARY SEWER STORIA DRAIN DROP INLET MANHOLE WATER METER WATER VALVE SANTIARY SEWER (SECTION) AREA DRAIN	
				AREA DRAIN	0

PRODUCTION	TE NUMBER OF SOIL NAILS PER DCK TYPE
SOIL/ROCK TYPE	ESTIMATED
AT NAIL HEAD	QUANTITY
TERRACE DEPOSITS	650
PURISIMA FORMATION	550
TOTAL	1200

APPROXIMATE SHOTCRETE	FACING CONTACT AREAS
WALL DESIGNATION	ESTIMATED AREA
33RD TO 36TH AVENUES	38,600 FT ²
41ST AVENUE (THE HOOK)	13,200 FT ²
TOTAL	51,800 FT ²

4180 Douglas BL, Sle. 100 Granle Bay, CA 95746 P (916) 729-8050 F (916) 729-7706



East Cliff | 32nd to 36th A ATE: 01/27/09

DESIGNED BY: WLM DRAFTED BY: GJB/DGD HECKED BY: SHS/DGK

DB NO.: SE99-033 SCPW8 Task ILE: BLUFF-1-POST100-A 2

