



RMATION 8 sq ft 1 sq ft	Existing Bldg; Type 5 NR, no sprinkle 2 stories; R-3 over S New Bldg; Type 5A, 2 stories, R-3,1hr Fully sprinklered per NFPA 13D New Unit #1 size (rear porch removed) : <b>896 sq ft</b>	 r 
3 sq ft 1 sq ft	Existing Bldg; Type 5 NR, no sprinkle 2 stories; R-3 over S New Bldg; Type 5A, 2 stories, R-3,1hr Fully sprinklered per NFPA 13D New Unit #1 size (rear porch removed) : <b>896 sq ft</b>	
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3 sq ft 1 sq ft	New Unit #1 size (rear porch removed) : 896 sq ft	
1 sq ft		_
	NEW ground floor (New Bedrooms/Baths) <b>1209 sq ft</b>	
Remove rear porch - 153 sq ft New 2nd Unit: 1 bed, den, 1 bath + <b>594 sq ft</b> New 3rd Unit: 1 bed, den, 1 bath + <b>615 sq ft</b>		ns welling
H LOCAL AME WITH LOCAL A NITH LOCAL A TH LOCAL AMI CAL AMENDMI	NDMENTS MENDMENTS MENDMENTS ENDMENTS ENTS ENTS	<b>IS &amp; Addit</b> <b>gle family</b> It Reyes Station,
P	roject Description	
to the exist lifted appro- expanded at the front The new fir and the ex the interior 4 bedroom CLA affordability catering sp less than 8	project involves alterations and additions ing single family house. The house will be eximately 36", the lower floor will be with additions and side of the existing building outline. rst floor will be level with the adjacent grade sting house will be largely unchanged at . The resulting house will have s and 3 baths. .M commits to ensuring the perpetual y of its housing units, ecifically to households earning 0% of the area median income	Project Tite Alterat Alterat to existing \$
		CEU ARCO
		JUDISCO ANTA
	Existing lot area = 5792 sq ft	$\left( \left( \star \begin{pmatrix} \widetilde{S} & \widetilde{O} & \widetilde{O} \\ \widetilde{S} & \operatorname{NO. C14386} & \widetilde{O} \\ \end{array} \right) \star \right)$
C-2.0 Grading & Drainage Plan C-2.1 Grading & Drainage Detail Plans C-3.0 Utility Plan C-4.0 Construction BMPs		Architect Stephen Antonaros Architect (415) 864-2261 santonaros@gmail.com Point Reyes Station California 94956
Applicant	Existing Lot Coverage: Impervious = 1444 sq ft Pervious = 4348 sq ft Proposed Lot Coverage: Impervious = 1520 sq ft Pervious = 4272 sq ft	Consultant
of West Main A 94956	Existing Parking = 0 Proposed Parking = 3 Minimum Setbacks = Front: 25 ft Sides: 10 ft Rear: 20% of lot depth(max) or 25 ft max Height Limit: 35 feet	REV. DATE DESCRIPTION
		NO.       DATE       ISSUE NOTE         Project Manager       Drawn By         Date       Reviewed By         March 2024       Reviewed By         Project ID       LFT.35         Sheet Title       Existing+New Site Plans         Sheet No.       AQ.1
	WITH LOCAL AMENDANE CAL AMENDANE CAL AMENDANE CAL AMENDANE CAL AMENDANE P fo The to the exist lifted appro- expanded v at the front The new fir and the exist the interior. 4 bedroom CLA affordability catering sp less than 8 X Applicant of West Main CA 94956	WITH LOCAL AMENDMENTS ITH LOCAL AMENDMENTS ICAL AMENDMENTS ICAL AMENDMENTS ICAL AMENDMENTS ICAL AMENDMENTS ICAL AMENDMENTS ICAL AMENDMENTS ICAL AMENDMENTS ITH or With Devisiting on the adjacent sprate and the existing single family house. The house will be lifted approximately 36", the lower floor will be expanded with additions at the front and side of the existing building outline. The new first floor will be leavely with the adjacent grade and the existing house will be largely unchanged at the interior. The resulting house will be adjacent grade and the existing house will be leavely unchanged at the interior. The resulting house will have 4 bedrooms and 3 baths. CLAM commits to ensuring the perpetual affordability of its housing units, catering specifically to households earning less than 80% of the area median income x x x x x x x x x x x x x x x x x x





![](_page_3_Figure_0.jpeg)

![](_page_4_Figure_0.jpeg)

# ONSITE WASTEWATER TREAMENT SYSTEM DESIGN 60 JRD ST. POINT REYES STATION, CA 94956

![](_page_4_Figure_3.jpeg)

SHEET INDEX			
C-0	TITLE SHEET		
C-1	OWTS SITE PLAN		
C-1.1	DRIP FIELD SCHEMATIC		
C-2	TANK AND PRE-TREATMENT DETAILS		
C-3	ASSORTED DETAILS		
C-4	OWTS NOTES		
C-5	CONSTRUCTION BMPS		
ATTACHED	RECORD OF SURVEY		
DEVELOPER/APPLICANT			
COMMUNITY LAND TRUST OF WEST MARIN			
SCOPE OF WORK			
1. NEW OWTS AND DRIP FIELD			
SITE INFO			
60 3rd St, Point Reyes Station, CA 94956			

![](_page_5_Figure_0.jpeg)

![](_page_6_Figure_0.jpeg)

![](_page_6_Figure_1.jpeg)

<u>DRIP FIELD SCHEMATIC</u> SCALE: N/A

# LEGEND

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 $\bowtie$ 

- HW HEADWORKS
- FLOW METER
- VACUUM BREAKER A
  - PRESSURE REGULATOR
  - CHECK VALVE
- SOLENOID VALVE
- $\mathbf{X}$ MONITORING WELL

![](_page_6_Figure_13.jpeg)

ALL CONTRACTORS WILL BE RESPONSIBLE	SOFORE CO
FOR THE VERIFICATION OF THE LOCATIONS	YAEF
OF ALL EXISTING UTILITIES IN THE FIELD. ALL	/JAN Kanda
CONTRACTORS SHALL CALL U.S.A AT	3/2020
(800-227-2600) 48 HOURS BEFORE DIGGING,	
AND OBTAIN AN IDENTIFICATION NUMBER	
(SECTION 4210.1 OF THE GOVERNMENT CODE).	TOPOUNO SERVICE

NOTE: THESE NOTES ARE INTENDED TO BE USED AS A GENERAL GUIDELINE. THE REFERENCED SOILS REPORT FOR THE PROJECT AND GOVERNING AGENCY GRADING ORDINANCE SHALL SUPERSEDE THESE NOTES. THE SOILS ENGINEER MAY MAKE ON-SITE RECOMMENDATIONS DURING GRADING OPERATIONS.

![](_page_7_Figure_0.jpeg)

![](_page_8_Figure_1.jpeg)

### GENERAL CONSTRUCTION NOTES

- 1. THE DESIGNING ENGINEER/SANITARIAN SHALL OBSERVE THE SITE AND WEATHER CONDITIONS PRIOR TO CONSTRUCTION OF THE SYSTEM. HE/SHE MUST VERIFY DRY AND ACCEPTABLE SOIL AND WEATHER CONDITIONS FOR CONSTRUCTION, AND DECIDE IF THE CONDITIONS ARE SUITABLE TO BEGIN CONSTRUCTION.
- 2. THE DESIGNING ENGINEER/SANITARIAN SHALL VERIFY (WITH THE CONTRACTOR) THE PROPER STAKING OF THE SYSTEM PRIOR TO ANY CONSTRUCTION. THE SYSTEM DETAILS, CONFIGURATION, LOCATION, CONTOUR, PERCOLATION AREA, EXPANSION AREA, ETC. SHALL BE VERIFIED.
- 3. THE CONTRACTOR SHALL NOTIFY THE SBCWD SERVICES ( ) A MINIMUM OF 24 HOURS IN ADVANCE OF WHEN CONSTRUCTION IS TO TAKE PLACE AND VERIFY THAT THE DESIGNING ENGINEER/SANITARIAN HAS STATED THAT SOIL CONDITIONS ARE ACCEPTABLE FOR CONSTRUCTION PURPOSES AND THAT THE STAKING OF THE SYSTEM HAS BEEN ACCOMPLISHED AND VERIFIED.
- 4. ALL CONSTRUCTION SHALL BE IN ACCORD WITH CURRENT SBCWD SERVICES GUIDELINES AND THE CURRENTLY ADOPTED EDITION OF THE UPC. ANY DISCREPANCIES BETWEEN THOSE CODES AND THESE PLANS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.
- 5. ONLY THE PRIMARY SYSTEM IS TO BE CONSTRUCTED AT THIS TIME. THE RESERVE AREAS ARE TO BE HELD FOR FUTURE REPAIRS AND POTENTIAL REPLACEMENT OF THE PRIMARY SYSTEM 6. THE PRIMARY, RESERVE AND AREAS WITHIN 50 FEET SHALL NOT BE ENCUMBERED BY PERMANENT STRUCTURES, OR DISTURBED BY GRADING, DISCING, TILLING
- OR EXCAVATION PRIOR TO CONSTRUCTION OF THE SYSTEM AND SHALL BE PROTECTED FROM SUCH DISTURBANCE FOLLOWING CONSTRUCTION OF THE SYSTEM, EXCEPT AS INDICATED ON THIS PLAN.
- 7. CONSTRUCTION OF THE SYSTEM IS TO MINIMIZE GROUNDWATER INTRUSION INTO TANKS, RISERS AND VALVE BOXES. FINISH GRADING SHALL DIRECT SURFACE WATER AWAY FROM THE SYSTEM AND MINIMIZE PONDING WITHIN 50 FEET OF THE SYSTEM.

### INSPECTION SCHEDULE

- A. PRE-CONSTRUCTION CONFERENCE TO REVIEW THE PLANS AND SYSTEM STAKEOUT PRIOR TO CONSTRUCTION.
- B. INTERIM OBSERVATION(S), PERFORMED PRIOR TO COVERING ANY ELEMENTS OF THE SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE COUNTY ENVIRONMENTAL HEALTH SPECIALIST A MINIMUM OF 48 HOURS IN ADVANCE.
- C. A START-UP INSPECTION SHALL BE CONDUCTED AFTER THE SEPTIC ELECTRICAL INSPECTION HAS BEEN SIGNED OFF. CONTRACTOR, ENGINEER, SYSTEM OPERATOR AND SBCWD COUNTY REP.
- D. FINAL OBSERVATION OF COMPLETED SYSTEM AND ALL RELATED ITEMS PER THE CONSTRUCTION DOCUMENTS.
- (A). AT THE PRE-CONSTRUCTION CONFERENCE, THE FOLLOWING ITEMS SHALL BE REVIEWED. CONSTRUCTION MAY PROCEED IF THE CONTRACTOR NOTIFIES THE COUNTY ENVIRONMENTAL HEALTH SPECIALIST VERBALLY THAT ALL ELEMENTS APPEAR TO CONFORM TO THE FOLLOWING REQUIREMENTS:
- 1. SOIL MOISTURE AT THE APPROPRIATE DEPTHS ARE NOT SO HIGH AS TO HAVE THE SOIL SMEAR OR COMPACT DUE TO CONSTRUCTION ACTIVITIES. 2. IMMINENT WEATHER CONDITIONS APPEAR THAT THEY WILL NOT CREATE UNSUITABLE SOIL MOISTURE CONDITIONS DURING THE COURSE OF CONSTRUCTION.
- 3. LAYOUT AND STAKING OF THE PRIMARY SYSTEM AND THE EXPANSION / RESERVE AREAS SUBSTANTIALLY CONFORMS TO THE APPROVED CONSTRUCTION DOCUMENTS
- 4. FOR MOUNDS: THE SOURCE OF THE COVER SOIL AND MOUND SAND SHALL BE DESIGNATED AND REPRESENTATIVE SAMPLES PROVIDED FOR THE DESIGN ENGINEER'S APPROVAL
- (B) AT THE INTERIM OBSERVATION(S), THE FOLLOWING ELEMENTS SHALL BE VERIFIED BY VISUAL OBSERVATION AND OPERATION OF THE SYSTEM. NO ELEMENTS OF THE SYSTEM SHALL BE BACKFILLED OR COVERED UNTIL THE COUNTY ENVIRONMENTAL HEALTH SPECIALIST AND DESIGN ENGINEER'S APPROVAL IS GIVEN WHEN ALL REQUIRED ITEMS ARE COMPLETED AND APPROVED, THE DISPOSAL FIELD, PRETREATMENT UNITS, PIPELINE TRENCHES AND TANKS MAY BE COVERED OR BACKFILLED.
- 1. LINE AND GRADE OF ALL EXCAVATIONS AND FILLS AS APPLICABLE.
- 2. FUNCTION AND SETTING OF ANY CONTROL DEVICES, INCLUDING BUT NOT LIMITED TO VALVES, SWITCHES AND ALARMS.
- 3. HYDRAULIC TESTING OF ANY PUMP AND DISTRIBUTION SYSTEM TO ASSURE THAT THE PUMP IS ADEQUATE FOR DESIGN FLOWS.
- 4. THE SEPTIC AND SUMP TANKS SHALL BE TESTED FOR WATER TIGHTNESS. THERE SHALL BE NO DETECTABLE DROP IN WATER LEVEL WITHIN THE RISERS DURING A 30 MINUTE TEST
- 5. ALL THE REMAINING ELEMENTS REQUIRED TO COMPLETE THE SYSTEM SHALL BE ON SITE AT THIS TIME FOR VERIFICATION AND APPROVAL BY THE DESIGN ENGINEER FOR CONFORMANCE WITH THE PLANS AND SPECIFICATIONS.
- (A) A START-UP INSPECTION SHALL BE CONDUCTED AFTER THE SEPTIC ELECTRICAL INSPECTION HAS BEEN SIGNED OFF. CONTRACTOR, ENGINEER, SYSTEM OPERATOR AND COUNTY REP. SHALL BE PRESENT.
- (B) AT THE FINAL OBSERVATION, THE DESIGN ENGINEER SHALL VERIFY THAT ALL CONSTRUCTION IS IN GENERAL CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. A FINAL LETTER FROM THE DESIGNER TO THE SBCWD SERVICES SHALL STATE THAT ALL CONSTRUCTION HAS BEEN COMPLETED, APPROVED, AND IS IN CONFORMANCE WITH ALL SPECIFICATIONS.
- NOTE: SBCWD SERVICES WILL NOT SIGN OFF THE PERMIT OR JOB CARD UNTIL THE DESIGN ENGINEER HAS SUBMITTED A CONSTRUCTION OBSERVATION LETTER AND THE BUILDING IS READY FOR OCCUPANCY.
- 8. ADVANTEX FILTER CONSTRUCTION CONSTRUCTION OF THE ADVANTEX AX20-RT TREATMENT SYSTEM SHALL BE BY AN ORENCO SYSTEMS AUTHORIZED INSTALLER PER INSTALLATION MANUAL ADVANTEX AX-RT TREATMENT SYSTEMS - RESIDENTIAL APPLICATIONS REV 3.0 OR MOST CURRENT.
- 9. DISPOSAL FIELD CONSTRUCTION INSTALLATION GUIDELINES
- A. EXCAVATION, FILLING AND GRADING SHOULD HAVE BEEN FINISHED BEFORE INSTALLATION OF THE SUBSURFACE DRIP SYSTEM.
- B. BE SURE YOU HAVE EVERYTHING REQUIRED FOR THE INSTALLATION BEFORE OPENING TRENCHES. PREASSEMBLE AS MANY SETS OF COMPONENTS AS PRACTICAL ABOVE GROUND AND IN A COMFORTABLE PLACE. COMPRESSION ADAPTERS SHOULD BE GLUED TO PVC TEES, RISER UNITS SHOULD BE PREASSEMBLED, THE SUB MAIN MANIFOLD WITH TEES CAN BE PRE ASSEMBLED AND USED TO MARK THE BEGINNING AND END OF WASTEFLOW ETC. DO NOT START OPENING TRENCHES UNTIL YOU ARE SURE YOU HAVE ALL THE MATERIALS REQUIRED.

C .CONDITION SOIL MOISTURE THE DAY BEFORE OPENING TRENCHES OR INSTALLING WASTEFLOW. REMEMBER, IT IS MUCH EASIER TO INSTALL THE SYSTEM IN MOIST SOIL. THE SOIL SHOULD BE MOIST BUT STILL SHOULD ALLOW THE PROPER OPERATION OF THE INSTALLATION EQUIPMENT. THE BEST PREPARATION IS TO MOISTEN THE SOIL SEVERAL DAYS BEFORE THE INSTALLATION OF THE WASTEFLOW, SO THE SOIL HAS TIME TO DRAIN AND WILL NOT SMEAR WHEN EXCAVATED. THE SOIL SURFACE SHOULD BE DRY

- D. INSTALL THE SYSTEM HEAD FIRST: TANKS, RECIRCULATING TEXTILE FILTER, PUMPS, CONTROL VALVES, DISC FILTERS, CHEMICAL INJECTOR, PRESSURE REGULATORS, PRESSURE GAGES AND WATER METER (AS APPLICABLE). THEN INSTALL THE PRESSURE MAIN AND BACKFLUSH RETURN LINES. THESE SHOULD BE BURIED AT A DEPTH OF 18 INCHES, WELL BELOW THE DEPTH OF THE WASTEFLOW LINES (12 INCHES). AT ALL TIMES, AVOID GETTING DEBRIS INTO THE SYSTEM. FLUSH MAIN LINES, TEST FOR LEAKS (HYDROSTATICALLY FOR 2 HRS @ 150 PSI) AND LEAVE THEM FULL OF WATER.
- E. OPEN TRENCHES FOR THE FEEDER AND BACKFLUSH MANIFOLDS. THESE TRENCHES SHOULD BE 18 INCHES INTO NATIVE SOIL. F. CLEAN FEEDER AND BACKFLUSH MANIFOLD TRENCHES, MOISTEN AND COMPACT THE BOTTOM OF THE TRENCH. (IF THIS IS NOT DONE, THE MANIFOLDS MAY "SETTLE DOWN" AND SLOWLY PULL OUT THE COMPRESSION COUPLINGS). ASSEMBLE THE FEEDER MANIFOLD OUTSIDE THE TRENCH IF PRACTICAL. CONNECT TO PRESSURE MAIN LINES AND TO THE SYSTEM HEAD. FLUSH THESE LINES. A HIGH WATER VELOCITY IS REQUIRED TO CARRY AWAY DEBRIS WHICH MAY HAVE ENTERED THE PIPES BEFORE OR DURING INSTALLATION. PLACE THE FEEDER AND BACKFLUSH MANIFOLDS INTO THE TRENCHES.
- G. THE PRIMARY DISPOSAL FIELD AND ALL AREAS OF DISTURBED SOILS SHALL BE SEEDED WITH A BLEND OF ANNUAL & PERENNIAL GRASSES AND ROSE CLOVER. IRRIGATION SHALL BE PROVIDED TO GERMINATE THE SEED AND ESTABLISH A WELL DEVELOPED VEGETATIVE STAND.

### INSTALLATION METHOD

- A. TRENCHING BY HAND OR WITH A CHAIN TRENCHER MOST SUITABLE FOR THIS INSTALLATION.
- B. COVER ALL OPEN ENDS INCLUDING DRIP LINES TO AVOID GETTING DEBRIS INTO THE SYSTEM.
- C. LEAVE ENOUGH LENGTH AT THE BEGINNING AND END FOR CONNECTIONS. IT IS CONVENIENT TO FINISH THE LAST FOOT OF THE TRENCH BY HAND. THIS GIVES MORE ROOM FOR CONNECTIONS. BEWARE OF BENDING THE DRIP TUBING TOO TIGHT DURING INSTALLATION.
- D. DO NOT BEND TUBING. USE PVC IPS TUBING AND PVC FITTINGS TO CONFIGURE LOOPS.
- E. THE PIPE PULLER TYPE MACHINE SHOULD NOT BE USED IN CLAY SOILS, AS IT FORMS AN UNDERGROUND "PIPE" AND THE WATER APPLIED BY THE SYSTEM TENDS TO RUN IN THE DOWNHILL DIRECTION.
- 10. CONCRETE SEPTIC TANK, HOLDING TANK, SEEPAGE PIT ABANDONMENT NOTES:
- A. THE EXISTING SEPTIC TANK SHALL BE ABANDONED AS FOLLOWS: \* THE TANKS SHALL BE PUMPED BY A LICENSED SEPTIC TANK PUMPER.
- \* THE TANK LIDS SHALL BE REMOVED, AND DISPOSED OF IN A SANITARY LANDFILL.
- \* THE FLOOR OF THE TANKS SHALL BE RUPTURED IN BOTH TANK CHAMBERS.
- \* THE TANKS SHALL BE COLLAPSED, AND THE REMAINING VOID FILLED WITH RIVER RUN MATERIAL TO WITHIN 12 INCHES OF FINISH GRADE.
- \* THE REMAINING VOID SHALL BE FILLED WITH COMPACTED NATIVE SOIL MATERIAL.
- B. ALTERNATELY THE TANK MAY BE RUPTURED AND FILLED COMPLETELY WITH CONTROLLED DENSITY CONCRETE FILL. C. ALL AT BOTH ENDS BURIED SEWER PIPES AND LEACH LINES, TO OR FROM THE OLD SEPTIC TANK SHALL BE CUT AND PLUGGED.

# EROSION CONTROL NOTES:

- 1. ALL AREAS OF DISTURBED OR BARE SOIL SHALL BE SEEDED WITH A BLEND OF ANNUAL GRASSES AND CLOVERS. ALL SEEDED AREAS SHALL BE MULCHED
- WITH A GENEROUS LAYER OF WEED FREE STRAW. SEED AND MULCH SHALL BE AVAILABLE ONSITE BY OCTOBER 15 FOR APPLICATION PRIOR TO RAIN EVENT. 2. ANY RAIN CAUSED EROSION OCCURRING OVER THE COURSE OF THE FIRST RAINY SEASON, SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE.

### OPERATING PERMITS: (EXCERPTED FROM MARIN COUNTY )

- A. IN ADDITION TO A CONSTRUCTION PERMIT, AN OPERATING PERMIT IS REQUIRED FOR ALL ALTERNATIVE SYSTEMS, WITH THE EXCEPTION OF THOSE INSTALLED SOLELY FOR THE REPAIR OF EXISTING SYSTEMS FOR SINGLE FAMILY RESIDENCES. THE HEALTH OFFICER RESERVES THE RIGHT TO REQUIRE AN OPERATING PERMIT FOR REPAIR SYSTEMS WHERE, IN HIS/HER JUDGMENT, SUCH A PERMIT IS NECESSARY TO ASSURE PROTECTION OF WATER QUALITY AND PUBLIC HEALTH. ALSO, AN OPERATING PERMIT WILL BE REQUIRED FOR ANY REPAIR UTILIZING A NEW ALTERNATIVE SYSTEM WHICH IS NOT CLASSIFIED AS A CATEGORY 2 OR 3 SYSTEM; THESE CASES WILL REQUIRE REGIONAL BOARD REVIEW. THE OPERATING PERMIT PROVISIONS OUTLINED IN THIS SECTION ALSO APPLY TO ANY STANDARD SYSTEMS REQUIRING OPERATING PERMITS, AS DETERMINED BY THE HEALTH OFFICER.
- B. OPERATING PERMITS SHALL BE ISSUED BY THE HEALTH OFFICER AT THE TIME OF INITIAL CONSTRUCTION OF THE SYSTEM; AND THEY ARE REQUIRED TO BE RENEWED AT LEAST EVERY TWO YEARS OR AS OTHERWISE SPECIFIED BY THE HEALTH OFFICER ON A CASE-BY-CASE BASIS. THE HEALTH OFFICER MAY REDUCE THE RENEWAL FREQUENCY TO ONCE EVERY THREE OR FOUR YEARS AFTER SUCCESSFUL PERFORMANCE IS DEMONSTRATED; ALSO, ANNUAL RENEWAL MAY BE REQUIRED FOR CERTAIN TYPES OF SYSTEMS OR SITUATIONS AS DEEMED NECESSARY BY THE HEALTH OFFICER. OPERATING PERMITS MUST ALSO BE RENEWED AT THE TIME OF SALE OR, IN THE CASE OF COMMERCIAL PROPERTIES, UPON CHANGE OF OCCUPANTS
- C. OPERATING PERMITS ARE INTENDED TO SERVE AS THE BASIS FOR VERIFYING THE ADEQUACY OF ALTERNATIVE SYSTEM PERFORMANCE AND MAINTENANCE. PERMIT CONDITIONS SHALL INCLUDE MONITORING AND INSPECTION REQUIREMENTS, PERMIT DURATION, AND OTHER PROVISIONS DEEMED APPROPRIATE BY THE HEALTH OFFICER
- D. RENEWAL OF AN OPERATING PERMIT REQUIRES THE SUBMISSION OF AN APPLICATION, A FEE, AND THE RESULTS OF REQUIRED SYSTEM INSPECTION AND MONITORING (PER SECTION 804 BELOW).
- E. FAILURE TO SUBMIT A RENEWAL APPLICATION, THE REQUIRED FEE OR SPECIFIED MONITORING AND INSPECTION DATA, OR FAILURE TO UNDERTAKE ANY REQUIRED CORRECTIVE WORK SPECIFIED BY THE HEALTH OFFICER MAY BE CAUSE FOR NON-RENEWAL OR REVOCATION OF THE OPERATING PERMIT BY THE HEALTH OFFICER
- F. CERTIFIED COPIES OF OPERATING PERMITS AND NOTICES OF WITHDRAWAL OF OPERATING PERMITS, WHEN ISSUED, WILL BE RECORDED IN THE OFFICE OF THE COUNTY RECORDER OF MARIN COUNTY.

### REQUIRED ELECTRICAL FEATURES

- A. ALL MATERIALS, CONNECTIONS, AND SPECIFICATIONS SHALL MEET THE MARIN COUNTY/NATIONAL ELECTRICAL CODE: 1. IN ALL CASES IN WHICH A SUMP WITH A. PUMP IS USED FOR A SEWAGE DISPOSAL SYSTEM, THE CONTRACTOR/OWNER SHALL OBTAIN AN ELECTRICAL PERMIT PROM THE MARIN COUNTY BLDG. DEPT.
- 2. THE BUILDING DFFICIAL SHALL BE RESPONSIBLE FOR INSPECTION AND APPROVAL OF ALL ELECTRICAL FEATURES OF ALL PUMP AND ELECTRICAL PARTS
- 3. A DISCONNECTING MEANS SHALL BE LOCATED IN SIGHT FROM THE PUMP LOCATION PER THE COUNTY ADOPTED ELECTRICAL CODE.
- B. A "WIDE ANGLE" MERCURY/MECHANICAL. C.S.H. INC., DR SJ ELECTRD SYSTEMS SUPER SINGLE DR EQUAL, FLDAT SWITCH SHALL BE USED TO ACTIVATE THE PUMP. THE ALARM/CONTROL BOX SHALL BE EQUIPPED WITH A MOTOR CONTRACTOR FOR THE PUMP AND A MOMENTARY CONTACT 'PUMP TEST' SWITCH TO MANUALLY RUN THE PUMP BYPASSING THE CONTROL PANEL AUTOMATIC MODE
- C. ELECTRICAL SERVICE TO THE ALARM/CONTROL PANEL SHALL BE EQUIPPED WITH A BREAKER OR FUSE AT THE POWER SOURCE WHICH IS LARGER THAN THE CIRCUIT BREAKER FOR THE PUMP IN THE ALARM/CONTROL PANEL.
- 1. THE ALARM/CONTROL PANEL SHALL BE EQUIPPED INTERNALLY WITH SEPARATE CIRCUIT PROTECTION FOR THE CONTROL AND PUMP CIRCUITRY 2. PUMP PROTECTION SHALL BE PROVIDED BY A THERMAL MAGNETIC CIRCUIT BREAKER FOR OVERLOAD AND SHORT CIRCUIT PROTECTION.
- 3. THE PUMP POWER LEAD AND THE FLOAT SWITCH CONTROL WIRES SHALL NOT BE RUN IN A COMMON CONDUIT. 4. ALL WIRES GDING INTO THE SUMP SHALL. BE, INDIVIDUALLY SEALED WITH PVC GAS TIGHT FITTINGS IN EITHER THE JUNCTION BOX
- OR ALARM/CONTROL PANEL AS APPROPRIATE.
- 5. METALLIC GAS TIGHT FITTINGS ARE NOT ALLOWED.

D. A NON-RE-SETTABLE DOSE COUNTER SHALL BE INSTALLED IN CONTROL BOXES UTILIZED FOR MOUND, SHALLOW TRENCH PRESSURE DISTRIBUTION, AND OTHER NON-STANDARD, SYSTEMS

- NOTE: CONTROL BOXES THAT MUST BE OPENED TO VIEW THE DOSE COUNTER SHALL BE EQUIPPED WITH A CLEAR PLASTIC OR PYREX SAFETY SHIELD INSIDE THE CONTROL BOX. THE CONTROL BOX SHALL HAVE A LABEL PLACED ON IT STATING "CAUTION - ELECTRICAL HAZARD".
- E. ALARM/CONTROL, PANEL ENCLOSURE SHALL BE NEMA TYPE 4. A REMOTE ALARM WITH AN ADDITIONAL LIGHT AND HORN SHALL BE PROVIDED WITHIN THE STRUCTURE SERVED.
- 1. ENCLOSURE FOR THE REMOTE AND AUDIO/VISUAL ALARM SHALL BE NEMA TYPE I, IF MOUNTED INDOORS.
- 2. EMERGENCY DISCONNECT FOR THE ALARM/CONTROL PANEL IS PROVIDED FOR BY THE INTERNAL FUSED DISCONNECT AND PUMP CIRCUIT BREAKER.

### SYSTEM OPERATION AND MAINTENANCE

### GENERAL SYSTEM DESCRIPTION:

THIS SEWAGE TREATMENT AND DISPOSAL SYSTEM CONSISTS OF A GRAVITY FLOW SEWER THAT TERMINATES AT A SEPTIC TANK. THE SEWAGE RECEIVES PRIMARY TREATMENT IN THE SEPTIC TANK. SEPTIC TANK EFFLUENT RECEIVES ADDITIONAL TREATMENT IN A SECOND TANK AS IT IS RE-CIRCULATED THROUGH THE ADVANTEX FILTER VIA A PUMP IN THE SECOND SEPTIC TANK. THE FILTERED EFFLUENT FLOWS TO AN ADJACENT SUMP TANK WHICH HOUSES A PUMP THAT DELIVERS THE EFFLUENT TO THE DRIP DISPERSAL FIELD. ADDITIONAL TREATMENT (PHYSICAL FILTRATION AND BIOLOGICAL REDUCTION OF THE WASTE LOAD) IS ACCOMPLISHED IN THE SOIL SYSTEM.

THE PUMP AND ALARM FUNCTIONS ARE CONTROLLED BY A CONTROL PANEL LOCATED NEAR THE SUMP TANK. NORMAL OPERATIONS ARE AUTOMATIC. THE OWNER OR OPERATOR NEED ONLY RESPOND TO ROUTINE MAINTENANCE ITEMS AND ALARM EVENTS AS INDICATED BY THE AUDIBLE AND VISUAL INDICATORS IN THE CONTROL PANEL.

### SAFETY:

EXPOSURE TO WASTEWATER IS A BIOLOGICAL HAZARD. SYSTEM OPERATORS AND OTHERS EXPOSED TO WASTEWATER SHALL WEAR APPROPRIATE PROTECTIVE GEAR, RUBBER GLOVES, COVERALLS, EYE PROTECTION AND A PARTICULATE MASK. FOLLOWING EXPOSURE TO WASTEWATER, WASH THOROUGHLY AND CLEAN ALL PROTECTIVE GEAR WITH DISINFECTANT.

WORKING IN SEPTIC AND SUMP TANKS CONSTITUTES A CONFINED SPACE HAZARD. PROPER SUPERVISION AND VENTILATION EQUIPMENT SHALL BE PROVIDED TO COMPLY WITH ALL APPLICABLE OCCUPATIONAL SAFETY GUIDELINES.

ALL ELECTRICAL COMPONENTS POSE AN ELECTRICAL HAZARD. EXERCISE CAUTION TO AVOID ELECTRICAL SHOCK.

### SYSTEM DESIGN FLOW:

DESIGN FLOW: THE DISPOSAL FIELD IS DESIGNED TO ACCOMMODATE A PEAK DAILY FLOW OF 420 GALLONS PER DAY (GPD). AVERAGE DAILY FLOW AT FULL OCCUPANCY SHOULD BE LESS THAN 65% OF THE PEAK DAILY FLOW. THE HOMEOWNER OR DESIGNATED OPERATOR SHALL MONITOR THE QUANTITY OF WATER PROCESSED THROUGH THE SYSTEM. IF ACTUAL FLOW RATES EXCEED THESE VALUES A FLOW AUDIT SHALL BE CONDUCTED.

### ROUTINE OPERATION AND MAINTENANCE TASKS:

MEASURE WATER LEVELS IN DISPERSAL FIELD MONITORING WELLS.

### QUARTERLY:

GENERALLY OBSERVE CONDITIONS OF SEWAGE DISPERSAL FIELD: LOOK FOR EVIDENCE OF PONDING OR SURFACING EFFLUENT, AREAS OF LUSH VEGETATIVE GROWTH AND OFFENSIVE ODORS.

### SEMI ANNUAL:

CHECK AVERAGE DISPOSAL FIELD LOADING RATE USING THE DOSE COUNTER IN THE PUMP CONTROL PANEL. TEST AUDIBLE & VISUAL ALARM USING A TEST SWITCH IN THE CONTROL PANEL.

### ANNUALLY:

OWNER OR DESIGNATED OPERATOR SHALL REVIEW THE PLAN AND OPERATION AND MAINTENANCE REQUIREMENTS. CHECK SLUDGE & SCUM ACCUMULATION IN SEPTIC TANKS, CLEANOUT IF NECESSARY.

RINSE SEPTIC TANK EFFLUENT FILTER INTO THE FIRST CHAMBER OF THE TANK WITH FRESHWATER.

### PERFORMANCE MONITORING AND REPORTING: (EXCERPTED FROM MARIN COUNTY )

- A. A MONITORING PROGRAM WILL BE ESTABLISHED INDIVIDUALLY FOR EACH ALTERNATIVE SYSTEM AT THE TIME OF ISSUANCE OF THE OPERATING PERMIT; IT MAY BE AMENDED AT THE TIME OF PERMIT RENEWAL. SAID MONITORING SHALL BE PERFORMED TO ENSURE THAT THE ALTERNATIVE SYSTEM IS FUNCTIONING SATISFACTORILY TO PROTECT PUBLIC HEALTH AND SAFETY. THE SPECIFIC REQUIREMENTS WILL INCORPORATE RECOMMENDATIONS OF THE SYSTEM DESIGNER ALONG WITH GENERAL MONITORING CRITERIA DEVELOPED BY THE HEALTH OFFICER.
- B. MONITORING REQUIREMENTS WILL VARY DEPENDING UPON THE SPECIFIC TYPE OF ALTERNATIVE SYSTEM; BUT, IN GENERAL, THEY WILL INCLUDE THE FOLLOWING: 1. RECORDING OF WASTEWATER FLOW BASED ON WATER METER READINGS, PUMP EVENT COUNTERS, ELAPSED TIME METERS OR OTHER APPROVED METHODS;
- 2. INSPECTION AND RECORDING OF WATER LEVELS IN MONITORING WELLS IN THE DISPOSAL FIELD;
- 3. WATER QUALITY TASTING OF SELECTED WATER SAMPLES TAKEN FROM POINTS IN THE TREATMENT PROCESS, FROM MONITORING WELLS, OR FROM SURFACE

STREAMS OR DRAINAGE; ATYPICAL WATER QUALITY PARAMETERS TO BE ANALYZED FOR MAY INCLUDE TOTAL AND FECAL COLIFORM, NITRATE, BIOCHEMICAL OXYGEN DEMAND (BOD), AND SUSPENDED SOLIDS; 4. INSPECTION AND OBSERVATION OF PUMP OPERATION OR OTHER MECHANICAL EQUIPMENT; AND, 5. GENERAL INSPELLION OF TREATMENT AND DISPOSAL AREA FOR EVIDENCE OF SEEPAGE, EFFLUENT SURFACING, EROSION OR OTHER INDICATORS OF SYSTEM MALFUNCTION.

C. THE REQUIRED FREQUENCY OF MONITORING FOR EACH INSTALLATION WILL GENERALLY BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE, ASSUMING A RECORD OF SUITABLE PERFORMANCES ESTABLISHED:

MONITORING FREQUENCY MAY BE INCREASED IF SYSTEM PROBLEMS ARE EXPERIENCED. MONITORING FREQUENCY FOR EACH SYSTEM OR TYPE OF SYSTEM WILL BE ESTABLISHED BY THE HEALTH OFFICER

THE COUNTY SHALL CONDUCT SPOT-CHECK INSPECTIONS OF ALTERNATIVE SYSTEMS ON THEIR OWN AND MAY ALSO BE PRESENT TO OBSERVE THE PERFORMANCE OF MONITORING ACTIVITIES BY OTHERS. THE COUNTY WILL ORDINARILY INSPECT ABOUT 20 PERCENT OF THE ALTERNATIVE SYSTEMS IN A GIVEN YEAR. COUNTY INSPECTIONS WILL BE MADE AS A QUALITY CONTROL CHECK AND TO ASSURE COUNTY STAFF MAINTAIN PERSONAL FAMILIARITY WITH THE OPERATION OF VARIOUS TYPES OF ALTERNATIVE SYSTEMS. APPROVED FOR USE IN THE COUNTY. ADDITIONALLY, THE HEALTH OFFICER RESERVES THE RIGHT TO REQUIRE, ON A CASE-BY-CASE BASIS, "THIRD PARTY" OR COUNTY INSPECTION AND MONITORING OF ANY ALTERNATIVE SYSTEM WHERE DEEMED NECESSARY BECAUSE OF THE COMPLEXITY OF THE SYSTEM OR THE SENSITIVE NATURE OF THE SITE.

### CONTINGENCY PLAN:

1. SYSTEM REPAIRS GENERALLY REQUIRE A PERMIT FROM SBCWD SERVICES. AN EXPERIENCED SEWAGE DISPOSAL CONTRACTOR WILL BE ABLE TO PROVIDE ASSISTANCE WITH BASIC SYSTEM REPAIRS AND MAINTENANCE. IF SUBSTANTIAL REPAIRS ARE NECESSARY, THE DESIGN ENGINEER SHALL BE CONTACTED.

# SUGGESTED ALTERNATIVES:

AVOID MOISTURIZING SOAPS. AND CLEANSING CREAMS (E.G.: DOVE) FOR REGULAR USE. THE SOFTENING AGENTS ARE OILS, MOST OF WHICH END UP DOWN THE DRAIN. YOUR SEPTIC SYSTEM WILL BE MUCH HAPPIER IF YOU USE A SEPARATE AFTER SHOWER MOISTURIZER.

# STAY TOGETHER.

INTERCEPTOR TANKS.

COMPANY.

-YEARS 1 AND 2 OPERATION - QUARTERLY MONITORING -YEARS 3 AND 4 OPERATION - SEMIANNUAL MONITORING

-YEARS 5 AND BEYOND - ANNUAL MONITORING

D. MONITORING OF ALTERNATIVE SYSTEMS SHALL BE CONDUCTED BY OR UNDER THE SUPERVISION OF ONE OF THE FOLLOWING: 1) REGISTERED CIVIL ENGINEER OR 2) REGISTERED ENVIRONMENTAL HEALTH SPECIALIST.

2. IF THE HOMEOWNER NOTICES ANYTHING UNUSUAL IN HOW THE SYSTEM OPERATES (HIGH LIQUID LEVELS IN THE MONITORING WELLS, SPONGY EARTH AT THE TOE OF THE FIELD, ALARM EVENTS OR UNPLEASANT ODORS) THE OWNER SHOULD KEEP A LOG OF OCCURRENCES AND OBSERVATIONS. THE LOG SHOULD ALSO INCLUDE A RECORD OF FREQUENT DO& COUNTER READINGS. EVEN IF THE PROBLEM CORRECTS ITSELF, THESE RECORDS SHOULD BE KEPT ON FILE IN THE EVENT THAT THE PROBLEM RETURNS.

3. IF PROBLEMS PERSIST MORE THAN TWO WEEKS, OR IF THE OWNER BELIEVES THE SYSTEM IS IN FAILURE, THE OWNER SHOULD CONTACT THE DESIGNING ENGINEER OR OTHER QUALIFIED CONSULTANT TO ASSIST IN DIAGNOSING THE PROBLEM.

4. IN THE EVENT THAT A REPAIR OR REPLACEMENT OF THE DISPOSAL FIELD IS NECESSARY, WATER USE WITHIN THE STRUCTURES SERVED SHOULD BE REDUCED IMMEDIATELY. LAUNDRY SHOULD BE DONE OFF SITE. PUMPING AND HAULING OF SEWAGE MAY BE NECESSARY TO DRY OUT THE DISPOSAL FIELD FOR REPAIRS.

5. IN THE EVENT OF SYSTEM FAILURE, IT MAY BE NECESSARY TO REPLACE OR EXPAND THE SYSTEM. THE OWNER SHALL INVOLVE A QUALIFIED DESIGN ENGINEER IN THE REPAIR, REPLACEMENT EXPANSION PROCESS. THE OWNER IS RESPONSIBLE FOR NOTIFYING THE COUNTY HEALTH SPECIALIST OF NECESSARY REPAIRS, REPLACEMENT OR EXPANSION, AND FOR OBTAINING ALL NECESSARY PERMITS.

<u>USE AND CARE OF YOUR SEPTIC SYSTEM - A GUIDE FOR USERS:</u>

ONSITE SEWAGE TREATMENT AND DISPERSAL SYSTEMS INVOLVE BIOLOGICAL PROCESSES THAT ARE SUBJECT TO UPSET UNDER CERTAIN CONDITIONS. THIS GUIDE PROVIDED GUIDELINES FOR MAINTAINING PROPER BALANCE IN THE SYSTEM.

PRODUCTS THAT SHALL BE AVOIDED OR USED SPARINGLY INCLUDE: ANTIBACTERIAL SOAPS, LAUNDRY DETERGENTS WITH BLEACH, TOILET TISSUE THAT DISSOLVES READILY, GARBAGE DISPOSAL, AUTO DISPENSING TOILET CLEANERS, CHEMICAL DRAIN CLEANERS, MOISTURIZING SOAPS / CLEANSING CREAMS.

FLUSH ONLY: HUMAN WASTE & TOILET PAPER

DON'T FLUSH THESE ITEMS OR DUMP THEM DOWN THE DRAIN: TAMPONS OR SANITARY NAPKINS, PAPER TOWELS, CONDOMS, FATS, OILS & GREASE.

REDUCE USE OF ANTIBACTERIAL SOAPS OR CLEANERS. THESE PRODUCTS DO LITTLE TO PROTECT YOUR HEALTH. YOUR SEPTIC SYSTEM WILL BE MUCH HAPPIER IF YOU SIMPLY WASH THOROUGHLY WITH A REGULAR SOAP AND THOROUGHLY RINSE WITH AMPLE RUNNING WATER.

AVOID LAUNDRY DETERGENTS WITH BLEACH; USE A NON-BLEACH DETERGENT AND ADD BLEACH ONLY WHEN NECESSARY.

DON'T USE TOILET TISSUE THAT DISSOLVES READILY. TO TEST IF YOUR BRAND IS APPROPRIATE FOR SEPTIC SYSTEMS, PLACE A FEW SHEETS IN A JAR OF WATER & SHAKE. AFTER A FEW MINUTES SHAKE AGAIN. IF THE TISSUE BREAKS UP INTO SMALL PIECES, TRY ANOTHER BRAND. A GOOD TISSUE FOR SEPTIC SYSTEMS WILL

DON'T USE AUTOMATIC DISPENSING TYPE TOILET BOWL CLEANERS (I.E.: TIDY BOWL, 2000 FLUSHES). THESE CONTAIN BLEACH, WHICH INTERRUPTS DIGESTION IN THE

DON'T DUMP FATS, OILS & GREASE DOWN THE DRAIN, DISPOSE OF THEM IN THE GARBAGE.

DON'T USE DRANO OR SIMILAR DRAIN CLEANING CHEMICALS. CALL THE PARK MANAGER OR A PLUMBER FOR DRAIN CLEANING SERVICE.

USE GARBAGE DISPOSAL SPARINGLY. MUCH OF WHAT YOU COULD PUT DOWN THE SINK SHALL GO IN THE GARBAGE. RESERVE THE GARBAGE DISPOSAL FOR FOOD SCRAPS THAT CANNOT BE SCRAPED FROM DISHES, POTS AND PANS.

DON'T FLUSH OR DUMP ANY SOIVENTS, CHEMICALS OR HIGH STRENGTH WASTES DOWN THE DRAINS. DISPOSE OF THESE PROPERLY AS ADVISED BY YOUR GARBAGE

DON'T LEAVE INSIDE FIXTURES RUNNING DURING FREEZING WEATHER, IF NECESSARY CRACK HOSE BIB OUTSIDE.

FOLLOW-UP ON UNUSUAL OBSERVATIONS OR OCCURRENCES TO FIND OUT THE MUSE AND A PROPER SOLUTION.

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AC ENGINEERING INC.	CIVIL & GEOTECHNICAL CONSULTANTS	454 LAS GALLINAS AVE. SUITE 1047 SAN RAFAEL, CA 94903 PH: 415-868-5532 FAX: 415-472-0603 ADMIN@AGNEWCIVIL.COM
OWTS NOTES		60 Jrd St, Point Reyes Station, CA 94956 119-226-13
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# **Construction Best Management Practices (BMPs)** Construction projects are required to implement the stormwater best management practices (BMP) on this page, as

# Materials & Waste Management

![](_page_10_Picture_3.jpeg)

# Non-Hazardous Materials

- Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- Use (but don't overuse) reclaimed water for dust control.

# Hazardous Materials

- □ 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 water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- □ 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.
- Arrange for appropriate disposal of all hazardous wastes.

# Waste Management

- Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

## **Construction Entrances and Perimeter**

- Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

# **Equipment Management & Spill Control**

![](_page_10_Picture_22.jpeg)

# Maintenance and Parking

- Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage. □ Perform major maintenance, repair jobs, and vehicle
- and equipment washing off site.
- □ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- □ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

## **Spill Prevention and Control**

- □ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- □ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- □ Clean up spills or leaks immediately and dispose of cleanup materials properly.
- Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them. Clean up spills on dirt areas by digging up and
- properly disposing of contaminated soil.
- □ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

# Storm drain polluters may be liable for fines of up to \$10,000 per day!

they apply to your project, all year long.

# Earthmoving

□ Schedule grading and excavation work

□ Stabilize all denuded areas, install and

maintain temporary erosion controls (such

as erosion control fabric or bonded fiber

matrix) until vegetation is established.

absolutely necessary, and seed or plant

□ Prevent sediment from migrating offsite

and protect storm drain inlets, gutters,

ditches, and drainage courses by installing

and maintaining appropriate BMPs, such

as fiber rolls, silt fences, sediment basins.

□ Keep excavated soil on site and transfer it

to dump trucks on site, not in the streets.

□ If any of the following conditions are

contact the Regional Water Quality

- Abandoned underground tanks.

- Buried barrels, debris, or trash

observed, test for contamination and

- Unusual soil conditions, discoloration,

gravel bags, berms, etc.

**Contaminated Soils** 

Control Board:

or odor.

- Abandoned wells

vegetation for erosion control on slopes

or where construction is not immediately

□ Remove existing vegetation only when

![](_page_10_Picture_42.jpeg)

during dry weather.

planned

# **Paving/Asphalt Work**

![](_page_10_Picture_49.jpeg)

- □ Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- Do not use water to wash down fresh asphalt concrete pavement.

# Sawcutting & Asphalt/Concrete Removal

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

![](_page_10_Picture_58.jpeg)

- □ Store concrete, grout, and mortar away rain, runoff, and wind.
- □ Wash out concrete equipment/trucks offsite or in a designated washout that will prevent leaching into the garbage.
- □ When washing exposed aggregate, drains. Block any inlets and vacuum and disposed of properly.

![](_page_10_Picture_63.jpeg)

- tarps all year-round. □ Stack bagged material on pallets and
- under cover.

# **Concrete, Grout & Mortar** Application

from storm drains or waterways, and on pallets under cover to protect them from

area, where the water will flow into a temporary waste pit, and in a manner underlying soil or onto surrounding areas. Let concrete harden and dispose of as

prevent washwater from entering storm gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped

□ Protect stockpiled landscaping materials from wind and rain by storing them under

Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

![](_page_10_Picture_74.jpeg)

# **Painting & Paint Removal**

![](_page_10_Picture_76.jpeg)

# **Painting Cleanup and Removal**

- □ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- □ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- □ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- □ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a statecertified contractor.

# Dewatering

![](_page_10_Picture_84.jpeg)

- Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.
- Divert run-on water from offsite away from all disturbed areas.
- □ When dewatering, notify and obtain approval from the local municipality 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 or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

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![](_page_11_Figure_0.jpeg)

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$\mathbb{R}^{\mathcal{D} \wedge \mathcal{V}}$ R.W. DAVIS & ASSOCIATES, INC.	CITY POINT REYES STATION	60.3
LAND SURVEYORS	COUNTY	00 5
45 Leveroni Court Tel. (415) 883-9099	MARIN	TOPOGRAF
Novato CA 94949 Email: rwdavis@rwdavis-survey.com	STATE	
© 2013	CALIFORNIA	

![](_page_12_Figure_0.jpeg)

![](_page_12_Figure_4.jpeg)

(800–227–2600) 48 HOURS BEFORE DIGGING, AND OBTAIN AN IDENTIFICATION NUMBER (SECTION 4210.1 OF THE GOVERNMENT CODE).

NOTE: THESE NOTES ARE INTENDED TO BE USED AS A GENERAL GUIDELINE. THE REFERENCED SOILS REPORT FOR THE PROJECT AND GOVERNING AGENCY GRADING ORDINANCE SHALL SUPERSEDE THESE NOTES. THE SOILS ENGINEER MAY MAKE ON-SITE DECOMMENDATIONS DUPING OF ADDING OPERATIONS RECOMMENDATIONS DURING GRADING OPERATIONS.

## GENERAL NOTES

ALL GENERAL NOTES, SHEET NOTES, AND LEGEND NOTES FOUND IN THESE DOCUMENTS SHALL APPLY TYPICALLY THROUGHOUT. IF INCONSISTENCIES ARE FOUND IN THE GRADING AND DRAINAGE NOTES VARIOUS NOTATIONS, NOTIFY THE ENGINEER IMMEDIATELY IN WRITING REQUESTING CLARIFICATION.

THESE DRAWINGS AND THEIR CONTENT ARE AND SHALL REMAIN THE PROPERTY OF AGNEW CIVIL ENGINEERING WHETHER THE PROJECT FOR WHICH THEY ARE PREPARED IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY ANY PERSONS ON OTHER PROJECTS OR EXTENSIONS OF THE PROJECT EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION TO THE ENGINEER.

ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND TRADE STANDARDS WHICH GOVERN EACH PHASE OF WORK INCLUDING, BUT NOT LIMITED TO, CALIFORNIA MECHANICAL CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, CALTRANS STANDARDS AND SPECIFICATIONS, AND ALL APPLICABLE STATE AND/OR LOCAL CODES AND/OR LEGISLATION.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND ALL SUBCONTRACTORS TO CHECK AND VERIFY ALL CONDITIONS, DIMENSIONS, LINES AND LEVELS INDICATED. PROPER AT AND ATTACHMENT OF ALL PARTS IS REQUIRED. SHOULD THERE BE ANY DISCREPANCIES, IMMEDIATELY NOTIFY THE ENGINEER FOR CORRECTION OR ADJUSTMENT THE EVENT OF FAILURE TO DO SO. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTION OF ANY ERROR.

ALL DIMENSIONS AND CONDITIONS SHALL BE CHECKED AND VERIFIED ON THE JOB BY EACH SUBCONTRACTOR BEFORE HE/SHE BEGINS HIS/HER WORK. ANY ERRORS, OMISSION, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER/CONTRACTOR BEFORE CONSTRUCTION BEGINS. COMMENCEMENT OF WORK BY THE CONTRACTOR AND/OR ANY SUBCONTRACTOR SHALL INDICATE KNOWLEDGE AND ACCEPTANCE OF ALL CONDITIONS DESCRIBED IN THESE CONSTRUCTION DOCUMENTS, OR EXISTING ON SITE, WHICH COULD AFFECT THEIR WORK.

### <u>WORK SEQUENCE</u>

IN THE EVENT ANY SPECIAL SEQUENCING OF THE WORK IS REQUIRED BY THE OWNER OR THE CONTRACTOR, THE CONTRACTOR SHALL ARRANGE A CONFERENCE BEFORE ANY SUCH WORK IS BEGUN.

SITE EXAMINATION: THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL THOROUGHLY EXAMINE THE SITE AND FAMILIARIZE HIM/HERSELF WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL VERIFY AT THE SITE ALL MEASUREMENTS AFFECTING HIS/HER WORK AND SHALL BE RESPONSIBLE FOR THE CORRECTIONS OF THE SAME. NO EX1RA COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR EXPENSES DUE TO HIS/HER NEGLECT TO EXAMINE, OR FAILURE TO DISCOVER. CONDITIONS WHICH AFFECT HIS/HER WORK.

AGNEW CIVIL ENGINEERING EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF AGNEW CIVIL ENGINEERING IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD HARMLESS AGNEW CIVIL ENGINEERING

CONSTRUCTION IS ALWAYS LESS THAN PERFECT SINCE PROJECTS REQUIRE THE COORDINATION AND INSTALLATION OF MANY INDIVIDUAL COMPONENTS BY VARIOUS CONSTRUCTION INDUSTRY TRADES. THESE DOCUMENTS CANNOT PORTRAY ALL COMPONENTS OR ASSEMBLES EXACTLY. IT IS THE INTENTION OF THESE ENGINEERING DOCUMENTS THAT THEY REPRESENT A REASONABLE STANDARD OF CARE IN THEIR CONTENT. IT IS ALSO PRESUMED BY THESE DOCUMENTS THAT CONSTRUCTION REVIEW SERVICES WILL BE PROVIDED BY THE ENGINEER. SHOULD THE OWNER NOT RETAIN THE ENGINEER TO PROVIDE SUCH SERVICES, OR SHOULD HE/SHE RETAIN THE ENGINEER TO PROVIDE ONLY PARTIAL OR LIMITED SERVICES, THEN IT SHALL BE THE OWNER'S AND CONTRACTOR'S RESPONSIBILITY TO FULLY RECOGNIZE AND PROVIDE THAT STANDARD OF CARE.

IF THE OWNER OR CONTRACTOR OBSERVES OR OTHERWISE BECOMES AWARE OF ANY FAULT OR DEFECT IN THE PROJECT OR NONCONFORMANCE WITH THE CONTRACT DOCUMENTS, PROMPT WRITTEN NOTICE THEREOF SHALL BE GIVEN BY THE OWNER AND/OR CONTRACTOR TO THE ENGINEER.

THE ENGINEER SHALL NOT HAVE CONTROL OF OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

### 2. <u>SITE PROTECTION</u>

PROTECT ALL LANDSCAPING THAT IS TO REMAIN. ANY DAMAGE OR LOSS RESULTING FROM EXCAVATION, GRADING, OR CONSTRUCTION WORK SHALL BE CORRECTED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING SITE UTILITIES AND SHALL COORDINATE THEIR REMOVAL OR MODIFICATIONS (IF ANY) TO AVOID ANY INTERRUPTION OF SERVICE TO ADJACENT AREAS. THE GENERAL CONTRACTOR SHALL INFORM HIM/HERSELF OF MUNICIPAL REGULATIONS AND CARRY OUT HIS/HER WORK IN COMPLIANCE WITH ALL FEDERAL AND STATE REQUIREMENTS TO REDUCE FIRE HAZARDS AND INJURIES TO THE PUBLIC.

### GENERAL GRADING NOTES

CONTRACTOR SHALL OBTAIN THE PROPER PERMITS PRIOR TO ANY GRADING.

A SEPARATE PERMIT IS REQUIRED FOR ANY AND ALL WORK WITHIN THE CITY RIGHT—OF—WAY. THE CONTRACTOR(S) SHALL OBTAIN AN APPROVED STREET WORK (ENCROACHMENT PERMIT) PERMIT FROM THE PUBLIC WORKS DEPARTMENT PRIOR TO THE COMMENCEMENT OF THIS WORK WITHIN THE CITY RIGHT-OF-WAY.

CONTRACTOR SHALL PROVIDE AND MAINTAIN APPROVED EROSION AND SEDIMENTATION CONTROL MEASURES DURING RAINY SEASON PER CITY AND CALIFORNIA REGIONAL STANDARDS — REFER TO EROSION AND SEDIMENTATION CONTROL PLAN.

ALL GRADED SLOPES SHALL BE PLANTED WITH FAST GROWING, DEEP ROOTED GROUND COVER TO REDUCE THE EROSION DURING HEAVY RAINS.

SLOPE FINISHED GRADES A MINIMUM OF 5%, FOR AT LEAST THE 5 FEET TO 10 FEET FROM BUILDING PERIMETER WHERE EVER IT IS PHYSICALLY POSSIBLE. DIRECT SURFACE DRAINAGE RUNOFF TO DISPERSE ON-SITE.

PROVIDE 2% SLOPE ACROSS FLATWORK AND/OR PAVING AND SLOPE TO DAYLIGHT. REFER TO ARCHITECTS PLANS FOR PAVEMENT TYPE, LAYOUT, AND FINISH - TYP.

CONSTRUCT EARTHEN SWALES AT 2% - TYP. (1% MIN.) & BERMS AS REQUIRED TO DIRECT FLOWS TO DAYLIGHT. SLOPE FINISHED GRADES TO DAYLIGHT, TO ACCOMMODATE POSITIVE DRAINAGE AND AVOID PONDING. FOR FLOWLINE'S GREATER THAN 5%, PROVIDE LINED DITCH - TYP.

REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION, INCLUDING BUT NOT LIMITED TO: ADDITIONAL UTILITY SERVICES, DIMENSION CONTROL DEMOLITION, DETAILS, TREE PROTECTION MEASURES, AND LANDSCAPING.

PROVIDE TREE PROTECTION AS REQUIRED FOR TREES TO REMAIN.

THE CONTRACTOR SHALL OBTAIN THE PROPER TREE REMOVAL PERMIT AS REQUIRED.

CONTRACTOR SHALL NOTIFY THE OWNER AND/OR MAINTENANCE STAFF IN WRITING OF THE NEED OF PERIODIC MAINTENANCE OF THE DRAINAGE SYSTEM AND STRUCTURES.

DEMOLISH (E) STRUCTURE(S) AS REQUIRED. NO DEMOLITION SHALL COMMENCE WITHOUT REQUIRED CITY DEMOLITION PERMIT.

FINISHED GRADE ELEVATIONS NOTED AS [FG (MAX.)] ARE THE MAXIMUM ALLOWABLE GRADE AT THE BUILDING PERIMETER PER C.B.C. SECTION 2304.11.2.2 TO PROVIDE 8" MIN. CLEARANCE. THESE GRADES MAY BE LOWER PROVIDED THAT PROPER FLOW AWAY FROM THE FOUNDATION IS ACHIEVED. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR SPECIAL DETAILS AS REQUIRED.

DIRECT ROOF DOWNSPOUT (DS) LEADERS TO SPLASH BLOCKS, PROVIDE 2' LONG SPLASH BLOCKS TO BE USED BELOW RAIN WATER LEADERS IN PERVIOUS AREAS. STORMWATER POLLUTION PREVENTION NOTES

1. STORE, HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES PROPERLY, SO AS TO PREVENT THEIR CONTACT WITH STORMWATER.

CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING SOLID WASTES, PAINTS, CONCRETE, PETROLEUM PRODUCTS, CHEMICALS, WASH WATER OR SEDIMENT, AND NON-STORMWATER DISCHARGES TO STORM DRAINS AND WATER COURSES.

USE SEDIMENT CONTROL OR FILTRATION TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.

4. AVOID CLEANING, FUELING, OR MAINTAINING VEHICLES ON SITE, EXCEPT IN A DESIGNATED AREA IN WHICH RUNOFF IS CONTAINED AND TREATED.

DELINEATE CLEARING LIMITS, EASEMENTS, SETBACKS, SENSITIVE OR CRITICAL AREAS, BUFFER ZONES, TREES AND DISCHARGE COURSE WITH FIELD MARKERS.

PROTECT ADJACENT PROPERTIES AND UNDISTURBED AREAS FROM CONSTRUCTION IMPACTS USING VEGETATIVE BUFFER STRIPS, SEDIMENT BARRIERS OF FILTERS, DIKES, MULCHING, OR OTHER MEASURES AS APPROPRIATE.

PERFORM CLEARING AND EARTH MOVING ACTIVITIES DURING DRY WEATHER TO THE MAXIMUM EXTENT PRACTICAL

8. LIMIT AND TIME APPLICATIONS OF PESTICIDES AND FERTILIZERS TO PREVENT POLLUTED RUNOFF.

9. LIMIT CONSTRUCTION ACCESS ROUTES AND STABILIZE DESIGNATED ACCESS POINTS.

10. AVOID TRACKING DIRT OR MATERIALS OFF-SITE; CLEAN OFF-SITE PAVED AREAS AND SIDEWALKS USING DRY SWEEPING METHODS TO THE MAXIMUM EXTENT PRACTICAL. SUPPLEMENTAL MEASURES

A. THE PHRASE 'NO DUMPING – DRAINS TO BAY' OR EQUALLY EFFECTIVE PHRASE MUST BE LABELED ON STORM DRAIN INLETS (BY STENCILING, BRANDING, OR PLAQUES) TO ALERT THE PUBLIC TO THE DESTINATION OF STORM WATER AND TO PREVENT DIRECT DISCHARGE OF POLLUTANTS INTO THE STORM DRAIN.

B. USING FILTRATION MATERIALS ON STORM DRAIN COVERS TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.

STABILIZING ALL DEMUDED AREAS AND MAINTAINING EROSION CONTROL MEASURES CONTINUOUSLY FROM OCTOBER 1 TO APRIL 30.

REMOVING SPOILS PROMPTLY, AND AVOID STOCKPILING OF ALL MATERIALS, WHEN RAIN IS FORECAST. IF RAIN THREATENS, STOCKPILED SOILS AND OTHER MATERIALS SHALL BE COVERED WITH A TARP OR OTHER WATERPROOF MATERIAL

E. STORING, HANDLING, AND DISPOSING OF CONSTRUCTION MATERIALS AND WASTES SO AS TO AVOID THEIR ENTRY TO THE STORM DRAIN SYSTEMS OR WATER BODY.

<u>SCOPE OF WORK</u>

<u>GENERAL</u> ORDINANCE.

ALL FILL MATERIALS SHALL BE DENSIFIED SO AS TO PRODUCE A DENSITY NOT LESS THAN 90% RELATIVE COMPACTION BASED UPON ASTM)A TEST DESIGNATION D155 FIELD DENSITY TEST WILL BE PERFORMED IN ACCORDANCE WITH ASTM TEST DESIGNATION 2922 AND 3017. THE LOCATION AND FREQUENCY OF THE FIELD DENSITY TEST WILL BE AS DETERMINED BY THE SOIL ENGINEER. THE RESULTS OF THESE TEST AND COMPLIANCE WITH THE SPECIFICATIONS WILL BE THE BASIS UPON WHICH SATISFACTORY COMPLETION OF THE WORK WILL BE JUDGED BY THE SOIL ENGINEER. ALL CUT AND ALL SLOPES SHALL BE CONSTRUCTED AS SHOWN ON PLANS, BUT NO STEEPER THAN TWO (2) HORIZONTAL TO ONE (1) VERTICAL

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SATISFACTORY COMPLETION OF ALL THE EARTHWORK IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS NO DEVIATION FROM THESE SPECIFICATIONS SHALL BE MADE EXCEPT UPON WRITTEN APPROVAL BY THE SOILS ENGINEER. BOTH CUT AND ALL AREAS SHALL BE SURFACE COMPLETED TO THE SATISFACTION OF THE SOILS ENGINEER AT THE CONCLUSION OF ALL GRADING OPERATIONS AND PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL NOTIFY THE SOILS ENGINEER AT LEAST TWO (2) WORKING DAYS PRIOR TO DOING ANY SITE GRADING AND EARTHWORK INCLUDING CLEARING.

CLEARING AND GRUBBING

THE CONTRACTOR SHALL ACCEPT THE SITE IN ITS PRESENT CONDITION. ALL EXISTING PUBLIC IMPROVEMENTS SHALL BE PROTECTED. ANY IMPROVEMENTS DAMAGED SHALL BE REPLACED BY THE CONTRACTOR AS DIRECTED BY THE COUNTY OF MARIN WITH NO EXTRA COMPENSATION.

ALL ABANDONED BUILDINGS AND FOUNDATIONS, TREE (EXCEPT THOSE SPECIFIED TO REMAIN FOR LANDSCAPING PURPOSES), FENCES, VEGETATION AND ANY SURFACE DEBRIS SHALL BE REMOVED AND DISPOSED OF OFF THE SITE BY THE CONTRACTOR.

ALL ABANDONED SEPTIC TANKS AND ANY OTHER SUBSURFACE STRUCTURES EXISTING IN PROPOSED DEVELOPMENT AREAS SHALL BE REMOVED PRIOR TO ANY GRADING OR FILL OPERATION. ALL APPURTENANT DRAIN FIELDS AND OTHER CONNECTING LINES MUST ALSO BE TOTALLY REMOVED.

BE USED:

EXCAVATE AND CRUSH THE UTILITY LINE IN THE TRENCH. MINIMUM SHRINKAGE.

B. UPON THE COMPLETION OF THE ORGANIC STRIPPING OPERATION, THE GROUND SURFACE (NATIVE SOIL SUBGRADE) OVER THE ENTIRE AREA OF ALL BUILDING PADS, STREET AND PAVEMENT AREAS AND ALL AREAS TO RECEIVE COMPACTED FILL SHALL BE PLOWED OR SCARIFIED UNTIL THE SURFACE IS FREE OF RUTS, HUMMOCKS OR OTHER UNEVEN FEATURES WHICH MAY INHIBIT UNIFORM SOIL COMPACTION. THE GROUND SURFACE SHALL THEN BE DISCED OR BLADED TO A DEPTH OF AT LEAST 6 INCHES. UPON ENGINEER'S SATISFACTION, THE NEW SURFACE SHALL BE WATER CONDITIONED AND RECOMPACTED PER REQUIREMENTS FOR COMPACTING FILL MATERIAL

# EXCAVATION

B. EXCAVATED MATERIALS SUITABLE FOR COMPACTED FILL MATERIAL SHALL BE UTILIZED IN MAKING THE REQUIRED COMPACTED FILLS. THOSE NATIVE MATERIALS CONSIDERED UNSUITABLE BY THE SOILS ENGINEER SHALL BE DISPOSED OF OFF THE SITE BY THE CONTRACTOR.

FILL MATERIALS

THE MATERIALS PROPOSED FOR USE AS COMPACTED FILL SHALL BE APPROVED BY THE SOILS ENGINEER BEFORE COMMENCEMENT OF GRADING OPERATIONS. THE NATIVE MATERIAL IS CONSIDERED SUITABLE FOR FILL; HOWEVER, ANY NATIVE MATERIAL DESIGNATED UNSUITABLE BY THE SOILS ENGINEER SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. ANY IMPORTED MATERIAL SHALL BE APPROVED FOR USE BY THE SOILS ENGINEER. IN WRITING, BEFORE BEING IMPORTED TO THE SITE AND SHALL POSSESS SUFFICIENT FINES TO PROVIDE A COMPETENT SOIL MATRIX AND SHALL BE FREE OF VEGETATIVE AND ORGANIC MATTER AND OTHER DELETERIOUS MATERIALS. ALL FILL VOIDS SHALL BE RUED AND PROPERLY COMPACTED. NO ROCKS LARGER THAN THREE INCHES IN DIAMETER SHALL BE PERMITTED.

FILL CONSTRUCTION THE SOILS ENGINEER SHALL APPROVE THE NATIVE SOIL SUBGRADE BEFORE PLACEMENT OF ANY COMPACTED ALL MATERIAL. UNACCEPTABLE NATIVE SOIL SHALL BE REMOVED AS DIRECTED BY THE SOILS ENGINEER. THE RESULTING GROUND LINE SHALL BE SCARIFIED MOISTURE CONDITIONED AND RECOMPACTED AS SPECIFIED IN SECTION 4 OF THESE SPECIFICATIONS. COMPACTED FILL MATERIAL SHALL BE PLACED TO BRING GROUND LEVEL BACK TO DESIGN GRADE. GROUND PREPARATION SHALL BE FOLLOWED CLOSELY BY FILL PLACEMENT TO PREVENT DRYING OUT OF THE SUBSOIL BEFORE PLACEMENT OF THE ALL.

THE APPROVED FILL MATERIALS SHALL BE PLACED IN UNIFORM HORIZONTAL LAYERS NO THICKER THAN 8" IN LOOSE THICKNESS. LAYERS SHALL BE SPREAD EVENLY AND SHALL BE THOROUGHLY BLADE MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. THE SCARIFIED SUBGRADE AND FILL MATERIAL SHALL BE MOISTURE CONDITIONED TO AT LEAST OPTIMUM MOISTURE. WHEN THE MOISTURE CONTENT OF THE FILL IS BELOW THAT SPECIFIED, WATER SHALL BE ADDED UNTIL THE MOISTURE DURING THE COMPACTION PROCESS. WHEN THE MOISTURE CONTENT OF THE FILL IS ABOVE THAT SPECIFIED, THE ALL MATERIAL SHALL BE AERATED BY BLADING OR OTHER SATISFACTORY METHODS UNTIL THE MOISTURE CONTENT IS AS SPECIFIED.

COMPACTION EQUIPMENT SHALL BE OF SUCH DESIGN THAT IT WILL BE ABLE TO COMPACT THE FILL TO THE SPECIFIED MINIMUM COMPACTION WITHIN THE SPECIFIED MOISTURE CONTENT RANGE. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER ITS ENTIRE AREA UNTIL THE REQUIRED MINIMUM DENSITY HAS BEEN OBTAINED.

<u>CUT OR FILL SLOPES</u> ALL CONSTRUCTED SLOPES, BOTH CUT AND FILL, SHALL BE NO STEEPER THAN 2 TO 1 (HORIZONTAL TO VERTICAL). DURING THE GRADING OPERATION, COMPACTED ALL SLOPES SHALL BE OVERFILLED BY AT LEAST ONE FOOT HORIZONTALLY AT THE COMPLETION OF THE GRADING OPERATIONS, THE EXCESS ALL DOMING ON THE SLOPES SHALL BE BLADED OFF TO CREATE THE FINISHED SLOPE EMBANKMENT. ALL CUT AND FILL SLOPES SHALL BE TRACK WALKED AFTER BEING BROUGHT TO FINISH GRADE AND THEN BE PLANTED WITH EROSION CONTROL SLOPE PLANTING. THE SOILS ENGINEER SHALL REVIEW ALL CUT SLOPES TO DETERMINE IF ANY ADVERSE GEOLOGIC CONDITIONS ARE EXPOSED. IF SUCH CONDITIONS DO OCCUR, THE SOILS ENGINEER SHALL RECOMMEND THE APPROPRIATE MITIGATION MEASURES AT THE TIME OF THEIR DETECTION.

SEASONAL LIMITS AND DRAINAGE CONTROL FILL MATERIALS SHALL NOT BE PLACED, SPREAD OR COMPACTED WHILE IT IS AT AN UNSUITABLY HIGH MOISTURE CONTENT OR DURING OTHERWISE UNFAVORABLE CONDITIONS. WHEN THE WORK IS INTERRUPTED FOR ANY REASON THE ALL OPERATIONS SHALL NOT BE RESUMED UNTIL FIELD TEST PERFORMED BY THE SOILS ENGINEER INDICATE THAT THE MOISTURE CONDITIONS IN AREAS TO BE FILLED ARE AS PREVIOUSLY SPECIFIED. ALL EARTH MOVING AND WORKING OPERATIONS SHALL BE CONTROLLED TO PREVENT WATER FROM RUNNING INTO EXCAVATED AREAS. ALL EXCESS WATER SHALL BE PROMPTLY REMOVED AND THE SITE KEPT DRY.

THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY FOR THE ALLEVIATION OR PREVENTION OF ANY DUST NUISANCE ON OR ABOUT THE SITE CAUSED BY THE CONTRACTOR'S OPERATION EITHER DURING THE PERFORMANCE OF THE GRADING OR RESULTING FROM THE CONDITION IN WHICH THE CONTRACTOR LEAVES THE SITE. THE CONTRACTOR SHALL ASSUME ALL LIABILITY INCLUDING COURT COST OF CO-DEFENDANTS FOR ALL CLAIMS RELATED TO DUST OR WIND-BLOWN MATERIALS ATTRIBUTABLE TO HIS WORK. COST FOR THIS ITEM OF WORK IS TO BE INCLUDED IN THE EXCAVATION ITEM AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

10. <u>INDEMNIT</u> THE CONTRACTOR WILL HOLD HARMLESS, INDEMNIFY AND DEFEND THE ENGINEER, THE OWNER AND HIS CONSULTANTS AND EACH OF THEIR OFFICERS AND EMPLOYEES AND AGENTS, FROM ANY AND ALL LIABILITY CLAIMS, LOSSES OR DAMAGE ARISING OR ALLEGED TO HEREIN, BUT NOT INCLUDING THE SOLE NEGLIGENCE OF THE OWNER, THE ARCHITECT, THE ENGINEER AND HIS CONSULTANTS AND EACH OF THEIR OFFICERS AND EMPLOYEES AND AGENTS.

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR 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 UNITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEERS TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES. IN. ON OR NEAR THE CONSTRUCTION SITE

NEITHER THE FINAL PAYMENT, NOR THE PROVISIONS IN THE CONTRACT, NOR PARTIAL, NOR ENTIRE USE OR OCCUPANCY OF THE PREMISES BY THE OWNER SHALL CONSTITUTE AN ACCEPTANCE OF THE WORK NOT DONE IN ACCORDANCE WITH THE CONTRACT OR RELIEVES THE CONTRACTOR OF LIABILITY IN RESPECT TO ANY EXPRESS WARRANTIES OR RESPONSIBILITY FOR FAULTY MATERIAL OR WORKMANSHIP. THE CONTRACTOR SHALL REMEDY ANY DEFECTS IN WORK AND PAY FOR ANY DAMAGE TO OTHER WORK RESULTING THERE FROM WHICH SHALL APPEAR WITHIN A PERIOD OF ONE (1) CALENDAR YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK.

### THESE SPECIFICATIONS AND APPLICABLE PLANS PERTAIN TO AND INCLUDE ALL SITE GRADING AND EARTHWORK ASSOCIATED WITH THE PROJECT INCLUDING, BUT NOT LIMITED TO THE FURNISHING OF ALL LABOR, TOOLS AND EQUIPMENT NECESSARY FOR SITE CLEARING AND GRUBBING, SITE PREPARATION, DISPOSAL OF EXCESS OR UNSUITABLE MATERIAL STRIPPING, KEYING, EXCAVATION, OVER EXCAVATION, RECOMPACTION PREPARATION FOR SOIL RECEIVING FILL, PAVEMENT, FOUNDATION OF SLABS, EXCAVATION, IMPORTATION OF ANY REQUIRED FILL MATERIAL PROCESSING, PLACEMENT AND COMPACTION OF FILL AND SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING TO CONFORM TO THE LINES, GRADING AND SLOPE SHOWN ON THE PROJECT GRADING PLANS.

ALL SITE GRADING AND EARTHWORK SHALL CONFORM TO THE RECOMMENDATIONS OF THESE SPECIFICATIONS AND SOILS REPORT AND THE MARIN COUNTY GRADING

ALL ABANDONED UNDERGROUND IRRIGATION OR UTILITY LINES SHALL BE REMOVED OR DEMOLISHED. THE APPROPRIATE FINAL DISPOSITION OF SUCH LINES DEPEND UPON THEIR DEPTH AND LOCATION AND THE METHOD OF REMOVAL OR DEMOLITION SHALL BE DETERMINED BY THE SOILS ENGINEER. ONE OF THE FOLLOWING METHODS WILL

### EXCAVATE AND TOTALLY REMOVE THE UTILITY LINE FROM THE TRENCH.

CAP THE ENDS OF THE UTILITY LINE WITH CONCRETE TO PREVENT THE ENTRANCE OF WATER. THE LOCATIONS AT WHICH THE UTILITY LINE WILL BE CAPPED WILL BE DETERMINED BY THE COUNTY OF MARIN ENGINEER. THE LENGTH OF THE CAP SHALL NOT BE LESS THAN FIVE FEET, AND THE CONCRETED MIX EMPLOYED SHALL HAVE

### SITE PREPARATION AND STRIPPING

A. ALL SURFACE ORGANICS SHALL BE STRIPPED AND REMOVED FROM BUILDING PADS, AREAS TO RECEIVE COMPACTED FILL AND PAVEMENT AREAS.

UPON COMPLETION OF THE CLEARING AND GRUBBING, SITE PREPARATION AND STRIPPING, THE CONTRACTOR SHALL MAKE EXCAVATIONS TO LINES AND GRADES NOTED ON THE PLAN. WHERE REQUIRED BY THE SOILS ENGINEER, UNACCEPTABLE NATIVE SOILS OR UNENGINEERED FILL SHALL BE OVER EXCAVATED BELOW THE DESIGN GRADE. CONTACT CITY ENGINEER FOR DISCUSSION OF OVER EXCAVATION OF THE UNACCEPTABLE MATERIAL RESULTING GROUND LINE SHALL BE SCARIFIED, MOISTURE-CONDITIONED AND RECOMPACTED AS SPECIFIED IN SECTION 4 OF THESE SPECIFICATIONS. COMPACTED FILL MATERIAL SHALL BE PLACED TO BRING GROUND LEVEL BACK TO DESIGN GRADE.

## 6. PLACING. SPREADING AND COMPACTING FILL MATERIAL

AFTER EACH LAYER HAS BEEN PLACED, MIXED, SPREAD EVENLY AND MOISTURE CONDITIONED, IT SHALL BE COMPACTED TO AT LEAST THE SPECIFIED DENSITY.

THE FILL OPERATION SHALL BE CONTINUED IN COMPACTED LAYERS AS SPECIFIED ABOVE UNTIL THE FILL HAS BEEN BROUGHT TO THE FINISHED SLOPES AND GRADES AS SHOWN ON THE PLANS, NO LAYER SHALL BE ALLOWED TO DRY OUT BEFORE SUBSEQUENT LAYERS ARE PLACED.

13. <u>TRENCH BACKFILL</u> EITHER THE ON-SITE INORGANIC SOIL OR APPROVED IMPORTED SOIL MAY BE USED AS TRENCH BACKFILL THE BACKFILL MATERIAL SHALL BE MOISTURE CONDITIONED PER THESE SPECIFICATIONS AND SHALL BE PLACED IN LIFTS OF NOT MORE THAN SIX INCHES IN HORIZONTAL UNCOMPACTED LAYERS AND BE COMPACTED BY MECHANICAL MEANS TO A MINIMUM OF 90% RELATIVE COMPACTION. IMPORTED SAND MAY BE USED FOR TRENCH BACKFILL MATERIAL PROVIDED IT IS COMPACTED TO AT LEAST 90% RELATIVE COMPACTION. WATER JETTING ASSOCIATED WITH COMPACTION USING VIBRATORY EQUIPMENT WILL BE PERMITTED ONLY WITH IMPORTED SAND BACKFILL WITH THE APPROVAL OF THE SOILS ENGINEER. ALL PIPES SHALL BE BEDDED WITH SAND EXTENDING FROM THE TRENCH BOTTOM TO TWELVE INCHES ABOVE THE PIPE. SAND BEDDING IS TO BE COMPACTED AS SPECIFIED ABOVE FOR SAND BACKFILL

EROSION CONTROL ALL GRADING, EROSION AND SEDIMENT CONTROL AND RELATED WORK UNDERTAKEN ON THIS SITE IS SUBJECT TO ALL TERMS AND CONDITIONS OF THE COUNTY A. GRADING ORDINANCE AND MADE A PART HEREOF BY REFERENCE.

B. THE CONTRACTOR WILL BE LIABLE FOR ANY AND ALL DAMAGES TO ANY PUBLICLY OWNED AND MAINTAINED ROAD CAUSED BY THE AFORESAID CONTRACTOR'S GRADING ACTIVITIES, AND SHALL BE RESPONSIBLE FOR THE CLEANUP OF ANY MATERIAL SPILLED ON ANY PUBLIC ROAD ON ME HAUL ROUTE. C. THE EROSION CONTROL MEASURES ARE TO BE OPERABLE DURING THE RAINY SEASON, OCTOBER FIRST TO APRIL THIRTIETH. EROSION CONTROL PLANTING IS TO BE COMPLETED BY OCTOBER FIRST. NO GRADING OR UTILITY TRENCHING SHALL OCCUR BETWEEN OCTOBER FIRST AND APRIL FIRST UNLESS AUTHORIZED BY THE COUNTY ENGINEER.

D. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED AND CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE SOILS ENGINEER.

DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM.

ALL EROSION CONTROL FACILITIES MUST BE INSPECTED AND REPAIRED AT THE END OF EACH WORKING DAY DURING THE RAINY SEASON. WHEN NO LONGER NECESSARY AND PRIOR TO ANY ACCEPTANCE OF DEVELOPMENT, SEDIMENT BASINS SHALL BE REMOVED OR OTHERWISE DEACTIVATED AS REQUIRED BY THE COUNTY.

H. A CONSTRUCTION ENTRANCE SHALL BE PROVIDED AT ANY POINT OF EGRESS FROM THE SITE TO ROADWAY. A CONSTRUCTION ENTRANCE SHOULD BE COMPOSED OF COARSE DRAIN ROCK (2' TO 3') MINIMUM DIAMETER) AT LEAST EIGHT INCHES THICK BY FIFTY (50) FEET LONG BY TWENTY (20) FEET WIDE UNLESS SHOWN OTHERWISE ON PLAN AND SHALL BE MAINTAINED UNTIL THE SITE IS PAVED.

ALL AREAS SPECIFIED FOR HYDROSEEDING SHALL BE NOZZLE PLANTED WITH STABILIZATION MATERIAL CONSISTING OF FIBER, SEED, FERTILIZER AND WATER, MIXED AND APPLIED IN THE FOLLOWING PROPORTIONS: FIBER, 2000 LBS/ACRE SEED, 200 LBS/ACRE (SEE NOTE J, BELOW) FERTILIZER (11-8-4), 500 LBS/ACRE WATER, AS REQUIRED FOR APPLICATION

J. SEED MIX SHALL BE PER CALTRANS STANDARDS.

FREE OF POLLUTANT MATERIALS AND WEED SEED.

CALIFORNIA DEPARTMENT OF TRANSPORTATION, AS LAST REVISED.

M. A DISPERSING AGENT MAY BE ADDED TO THE HYDROSEEDING MATERIAL, PROVIDED THAT THE CONTRACTOR FURNISHES SUITABLE EVIDENCE THAT THE ADDITIVE WILL NOT ADVERSELY AFFECT THE PERFORMANCE OF THE SEEDING MIXTURE.

N. STABILIZATION MATERIALS SHALL BE APPLIED AS SOON AS PRACTICAL AFTER COMPLETION OF GRADING OPERATIONS AND PRIOR TO THE ONSET OF WINTER RAINS, OR AT SUCH OTHER TIME AS DIRECTED BY THE COUNTY ENGINEER. THE MATERIAL SHALL BE APPLIED BEFORE INSTALLATION OF OTHER LANDSCAPING MATERIALS SUCH AS TREES, SHRUBS AND GROUND

0. THE STABILIZATION MATERIAL SHALL BE APPLIED WITHIN 4-HOURS AFTER MIXING. MIXED MATERIAL NOT USED WITHIN 4-HOURS SHALL BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL MAINTAIN THE SOIL STABILIZATION MATERIAL AFTER PLACEMENT. THE COUNTY ENGINEER MAY REQUIRE SPRAY APPLICATION OF WATER OR OTHER MAINTENANCE ACTIVITIES TO ASSURE THE EFFECTIVENESS OF THE STABILIZATION PROCESS. APPLICATION OF WATER SHALL BE ACCOMPLISHED USING NOZZLES THAT PRODUCE A SPRAY THAT DOES NOT CONCENTRATE OR WASH AWAY THE STABILIZATION MATERIALS.

15. <u>CLEANUP</u>

THE CONTRACTOR MUST MAINTAIN THE SITE CLEAN, SAFE AND IN USABLE CONDITION. ANY SPILLS OF SOIL, ROCK OR CONSTRUCTION MATERIAL MUST BE REMOVED FROM 1HE SITE BY THE CONTRACTOR DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. COST FOR THIS ITEM OF WORK SHALL BE INCLUDED IN THE EXCAVATION AND COMPACTION ITEM AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

ABBREVIA	TIONS		
AB	AGGREGATE BASE	MAX	MAXIMUM
AC	ASPHALT CONCRETE	ΜΗ	MANHOLE
ACC	ACCESSIBLE	MIN	MINIMUM
AD	AREA DRAIN	MON.	MONUMENT
BC	BEGINNING OF CURVE	(N)	NEW
B&D	BEARING & DISTANCE	NO	NUMBER
BM	BENCHMARK	NTS	NOT TO SCALE
BW/FG	BOTTOM OF WALL/FINISH GRADE	0.C.	ON CENTER
CB	CATCH BASIN	0/	OVER
C&G	CURB AND GUTTER	(P)	PROPOSED
C	CENTER LINE		PLANTING AREA
			PEDESTRIAN
			POST INDICATOR VALVE
COTC		PSS	PUBLIC SERVICES EASEMENT
	CONCRETE	Г 33 Ф	
CONST		יL חח	
	CONCRETE CORNER		PUWER PULE
וח			RADIUS REINEORCED CONCRETE DIDE
חוס			REINFORCED CONCRETE PIPE
	DOWN SPOLIT		
FΔ	FACH		RAINWATER DICHT OF WAY
FC		κ/w	
FG	EXISTING GRADE	2	
FI	ELEVATIONS	S.A.D.	SEE ARCHITECTURAL DRAWINGS
FP	EDGE OF PAVEMENT	SAN	
FO	FOUIPMENT	SDMU	STORM DRAIN MANUOLE
FW	FACH WAY		STURM DRAIN MANHULE
(F)	FXISTING	SID	
	FACE OF CURB	SDEC	SEE LANDSCAPE DRAWINGS
FF	FINISHED FLOOR	SEC	SANITADY SEWED
FG	FINISHED GRADE	22	SEE STRUCTURAL DRAWINGS
FH	FIRE HYDRANT	5.5.D 5500	SANITARY SEWER CLEANOUT
FI	FLOW LINE	2200 2200	SANITARY SEWER MANHOLE
FS	FINISHED SURFACE	ST	STREET
G	GAS	STA	STATION
GA	GAGE OR GAUGE	STA	STANDARD
GB	GRADE BREAK	STRUCT	STRUCTURAL
HDPE	HIGH DENSITY CORRUGATED POLYETHYLENE PIPE	Т	TELEPHONE
HORIZ	HORIZONTAL	TC	TOP OF CURB
HI PT	HIGH POINT	TEMP	TEMPORARY
H&T	HUB & TACK	TP	TOP OF PAVEMENT
ID	INSIDE DIAMETER	TW/FG	TOP OF WALL /FINISH GRADE
INV	INVERT ELEVATION	TYP	
JB	JUNCTION BOX	VC	
JT	JOINT TRENCH	VCP	
JP	JOINT UTILITY POLE	VERT	VERTICAL
L	LENGTH	w/	WITH
LNDG	LANDING	₩/ \\/ \\/I	
LF	LINEAL FEET	₩, ₩∟ \\/\\ <i>\</i>	WATER METER
			WEIDED WIRE EARRIG
		** **!	HELDED MILL I ADILIO

K. WATER UTILIZED IN THE STABILIZATION MATERIAL SHALL BE OF SUCH QUALITY THAT IT WILL PROMOTE GERMINATION AND STIMULATE GROWTH OF PLANTS. IT SHALL BE

L HYDROSEEDING SHALL CONFORM TO THE PROVISIONS OF SECTION 20, EROSION CONTROL AND HIGHWAY PLANTING', OF THE STANDARD SPECIFICATIONS OF THE STATE OF

ISSUE D	ISSUES ATE DESCRIPTION
0	6/17/24 PLANNING
AC ENGINEERING, INC.	CIVIL & GEOTECHNICAL CONSULTANTS 454 LAS GALLINAS AVE., SUITE 1047 SAN RAFAEL, CA 94903 P: 415-295-2152 F: 415-472-0603 admin@agnewcivil.com
DECIO	ALO PROFESSION ALON W. AGAR STORE CIVIL COF CALIFORNIA
PROJECT NOTES	60 JRD ST, POINT REYES STATION, CA 94956 APN: 119-226-13
JOB #	276-1
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![](_page_14_Figure_0.jpeg)

L	E	G	Ε	Ν	D

			LEGEND		
ELEVATIONS			EXISTING	PR	OPOSED
NEW ELEVATION	HEIGHT DIFFERENCE	NOTES	(DS)	(DS)	DOWNSPOUTS
34.65	+1.60	SLAB TO RAISED FLOOR CONVERSION	RB	RB	RAIN BARRELS
43.20	+3.00			$\sim$	DIRECTION OF SU
42.59	+3.00				STEPS
					WALKWAY / CON
NOTES				NAME_XXX	SPOT ELEVATION
					– DETAIL NUMBER – SHEET NUMBER
SLOPING GRADES AWAY FROM				<u>_1</u> #10	DELTA w/COMME
STRUCTURE				- ELEV.	NEW ELEVATION
			<u> </u>		

NOTE: 95% COMPACTION OF SUBGRADE BEFORE PLACEMENT OF CONCRETE 3:1 MAX. SLOPE-FII, CONCRETE SLABS (3)

	NOTES:
	<ul> <li>DO NOT USE FLEXIBLE PIPING, TO PREVENT MOSQUITO BREEDING IN WATER THA CONSIDER PIPES THAT MEET FDA FOOD GRADE STANDARDS.</li> </ul>
	THERE SHALL BE NO DIRECT CONNECTION OF ANY RAIN BARREL OR CISTERN A
	PIPE SYSTEM. RAINWATER SYSTEMS SHALL BE COMPLETELY SEPARATE FROM PO
	• ALE MAIN DAMALES AND CISTERNS SHOULD HAVE A SCREEN TO ENSURE MUSQU
	• SCREEN WITH LEAF GUARD OR MAXIMUM $\frac{1}{2}$ to $\frac{1}{4}$ : Minimum corrusion-resistate • Water collected will be used for irrigation only
	ALL OPENINGS TO BE SCREENED WITH A CORROSION-RESISTANT METALLIC FINE
	<ul> <li>LARGE OPENINGS TO BE SECURED AGAINST ACCESS BY CHILDREN</li> </ul>
	<ul> <li>RAIN BARRELS AND GUTTERS TO BE CLEANED ANNUALLY</li> </ul>
	LOCAL MOSQUITO AND VECTOR CONTROL DISTRICT SHALL BE INFORMED OF THE
	AND RIGHTS OF ENTRY IF REQUESTED.
	OR OTHER RAIN WATER SOURCES
	BUG & DEBRIS SCREEN TO BE INSTALLED
#4 BAR 3:1 MAX.	TO VEGETATION, S
THE CONSTRUCTION OF THE CONSTRUCT	BALL VALVE TYP.
4" CONCRETE w/#4 REBAR @ 16"0.C.E.W.	BARRELS. PAVER S AVOID DECKS OR E
o/6" FREE DRAINING GRAVEL	THE SUPPORTING S APPROVED FOR TH
SLABS	
NTS	

		ISSUES
		ISSUE DATE DESCRIPTION
		0 6/17/24 PLANNING
		AC ENGINEERING, INC. CIVIL & GEOTECHNICAL CONSULTANT 454 LAS GALLINAS AVE., SUITE 1047 SAN RAFAEL, CA 94903 P: 415-295-2152 F: 415-472-0603 admin@agnewcivil.com
		C 87262
		<b>J</b> 94956
IN WATER THAT MAY POOL IN FLEXIBLE	E. IF IRRIGATING EDIBLE LANDSCAPES,	
OR CISTERN AND/OR RAINWATER COLLE RATE FROM POTABLE WATER PIPING SY ENSURE MOSQUITOES CANNOT ENTER.	ECTION PIPING TO ANY POTABLE WATER STEMS.	
ROSION-RESISTANT METALLIC HARDWARE	FABRIC	ATIC 3
METALLIC FINE MESH ( <u>1</u> 6: OR SMALLER) TO PREVENT MOSQUITO HARBORAGE		<b>NAGE F</b> M KES ST, -226-1
ORMED OF THE INSTALL. THE LOCAL DISTRICT SHALL BE GIVEN INFORMATION		DRAI NT CLA I: 119-
NSTALLED DW PER PLAN VEGETATION, SOAKER, HOSE, ETC.	<ul> <li>Operation and Maintenance</li> <li>After installing your rain barrel or cistern, follow these tips for long-term safety and functionality.</li> <li>Regularly check the gutters and gutter guards to make sure debris is not entering the rainwater harvesting system.</li> <li>Inspect the screens on the rain barrel or cistern prior to the wet season to make sure debris is not collecting on the surface and that there are not holes allowing mosquitoes to enter the rain barrel. Inspect screens more frequently if there are trees that drop debris on the roof.</li> <li>Clean the inside of the rain barrel once a year (preferably at the end of the dry season when the rain barrel has been fully drained) to prevent buildup of debris. If debris cannot be</li> </ul>	<b>GRADING AN</b> 60 JRD ST, POI
L VALVE TYP.	removed by rinsing, use vinegar or another non- toxic cleaner. Use a large scrub brush on a long stick, and avoid actually entering the rain barrel. Drain washwater to landscaping.	
RELS. PAVER STONES, CONCRETE, ETC. ID DECKS OR BARE DIRT UNLESS SUPPORTING STRUCTURE HAS BEEN ROVED FOR THE LOAD	Clean out debris from cisterns once a year, preferably at the end of the dry season.	270-1
		C - 2.1
	NTS	

![](_page_16_Figure_0.jpeg)

# **Materials & Waste Management**

# **Non-Hazardous Materials**

- Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- Use (but don't overuse) reclaimed water for dust control.

# **Hazardous Materials**

- □ 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 water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- □ 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.
- □ Arrange for appropriate disposal of all hazardous wastes.

# Waste Management

- Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- □ Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

# **Construction Entrances and Perimeter**

- Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

# **Equipment Management & Spill Control**

![](_page_17_Picture_21.jpeg)

# **Maintenance and Parking**

- Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- □ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- □ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste. □ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm
- drains, or surface waters.
- Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

## **Spill Prevention and Control**

- □ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times. □ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- □ Clean up spills or leaks immediately and dispose of cleanup materials properly.
- □ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them. Clean up spills on dirt areas by digging up and
- properly disposing of contaminated soil.
- □ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

# Storm drain polluters may be liable for fines of up to \$10,000 per day!

![](_page_17_Picture_37.jpeg)

# **Construction Best Management Practices (BMPs)**

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

# Earthmoving

**Paving/Asphalt Work** 

- □ Schedule grading and excavation work during dry weather.
- □ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- □ Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.
- □ Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.
- □ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

# **Contaminated Soils**

- □ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
- Unusual soil conditions, discoloration, or odor.
- Abandoned underground tanks.
- Abandoned wells
- Buried barrels, debris, or trash.

- Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- Do not use water to wash down fresh asphalt concrete pavement.

# Sawcutting & Asphalt/Concrete Removal

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

# **Concrete, Grout & Mortar** Application

![](_page_17_Picture_68.jpeg)

- □ Store concrete, grout, and mortar away rain, runoff, and wind.
- □ Wash out concrete equipment/trucks offsite or in a designated washout that will prevent leaching into the garbage.
- When washing exposed aggregate, drains. Block any inlets and vacuum and disposed of properly.

![](_page_17_Picture_73.jpeg)

- tarps all year-round.
- under cover.

from storm drains or waterways, and on pallets under cover to protect them from

area, where the water will flow into a temporary waste pit, and in a manner underlying soil or onto surrounding areas. Let concrete harden and dispose of as

prevent washwater from entering storm gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped

□ Protect stockpiled landscaping materials from wind and rain by storing them under

Stack bagged material on pallets and

Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

![](_page_17_Picture_83.jpeg)

# **Painting & Paint Removal**

![](_page_17_Picture_85.jpeg)

# **Painting Cleanup and Removal**

- □ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- □ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- □ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- □ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a statecertified contractor.

![](_page_17_Picture_92.jpeg)

- Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.
- Divert run-on water from offsite away from all disturbed areas.
- U When dewatering, notify and obtain approval from the local municipality 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 or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

![](_page_17_Picture_97.jpeg)