CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877
WEB: WWW.COASTAL.CA.GOV

F12a

A-3-MCO-17-0068 (MBARI STORAGE BUILDING AND PARKING LOT)
AUGUST 14, 2020 HEARING
EXHIBITS

Table of Contents

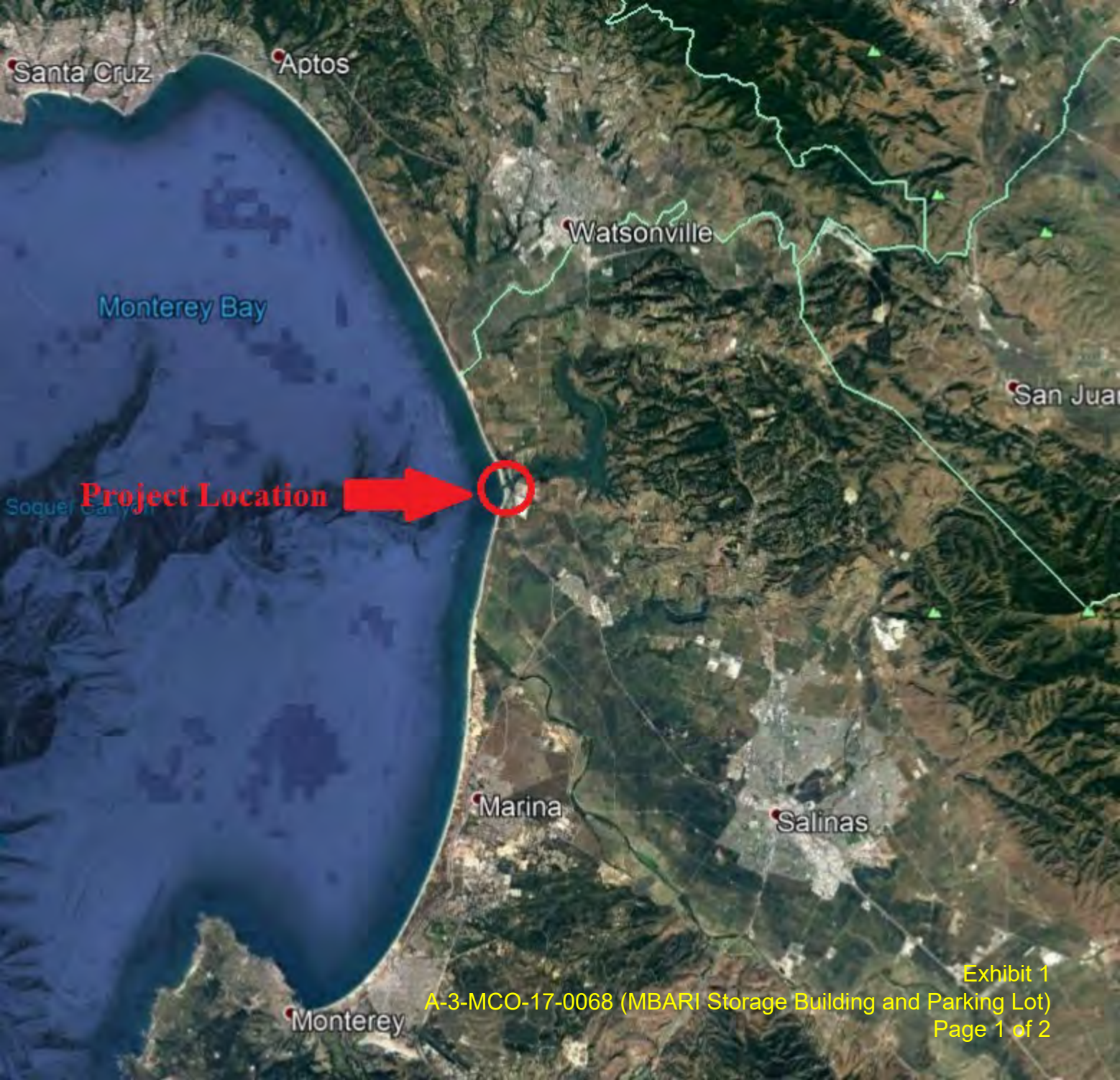


Exhibit 1
A-3-MCO-17-0068 (MBARI Storage Building and Parking Lot)
Page 1 of 2

NORTH COUNTY

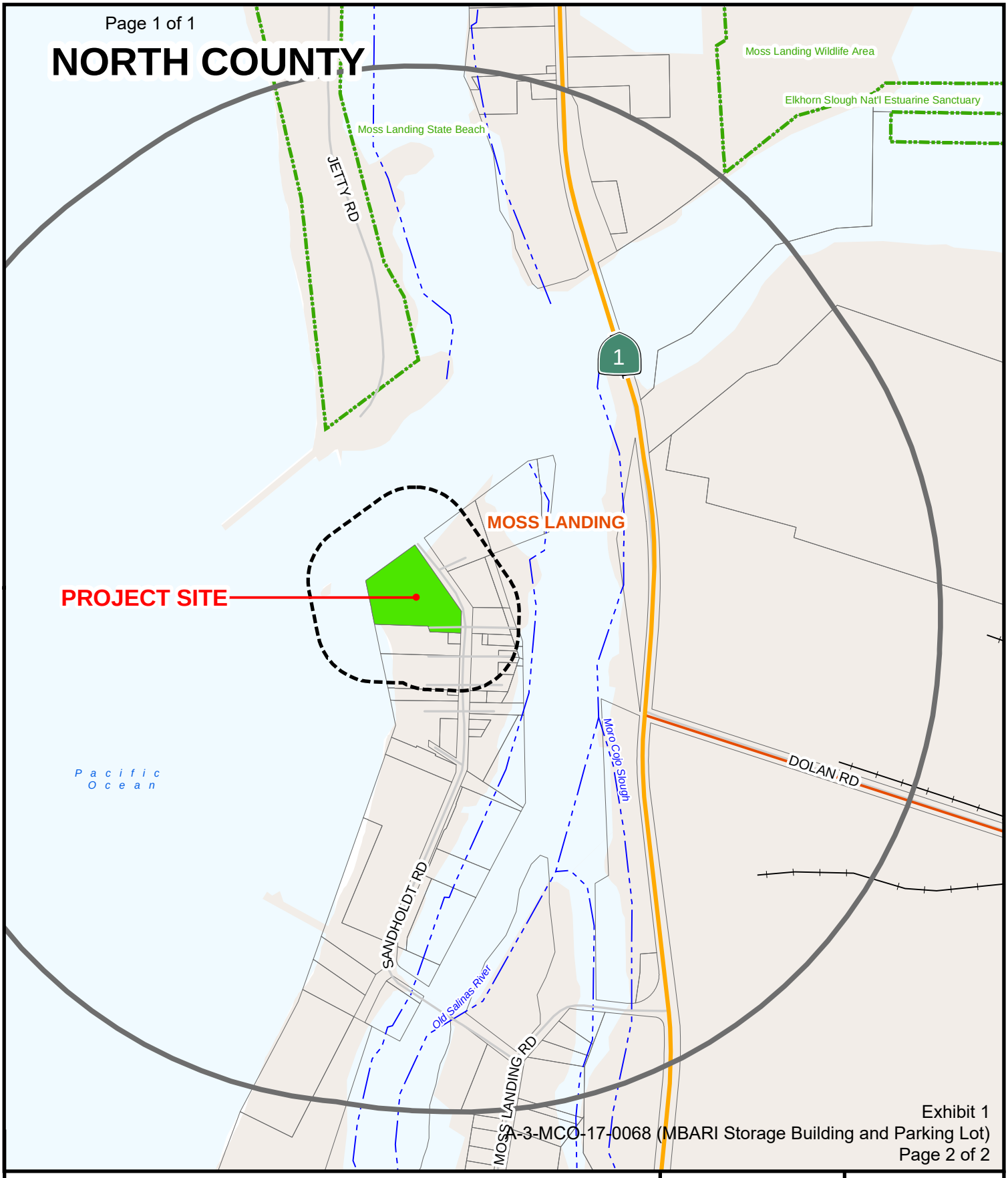


Exhibit 1
A-3-MCO-17-0068 (MBARI Storage Building and Parking Lot)
Page 2 of 2

APPLICANT: MONTEREY BAY AQUARIUM RESEARCH INSTITUTE

APN: 133-252-001-000 **FILE #** PLN120553

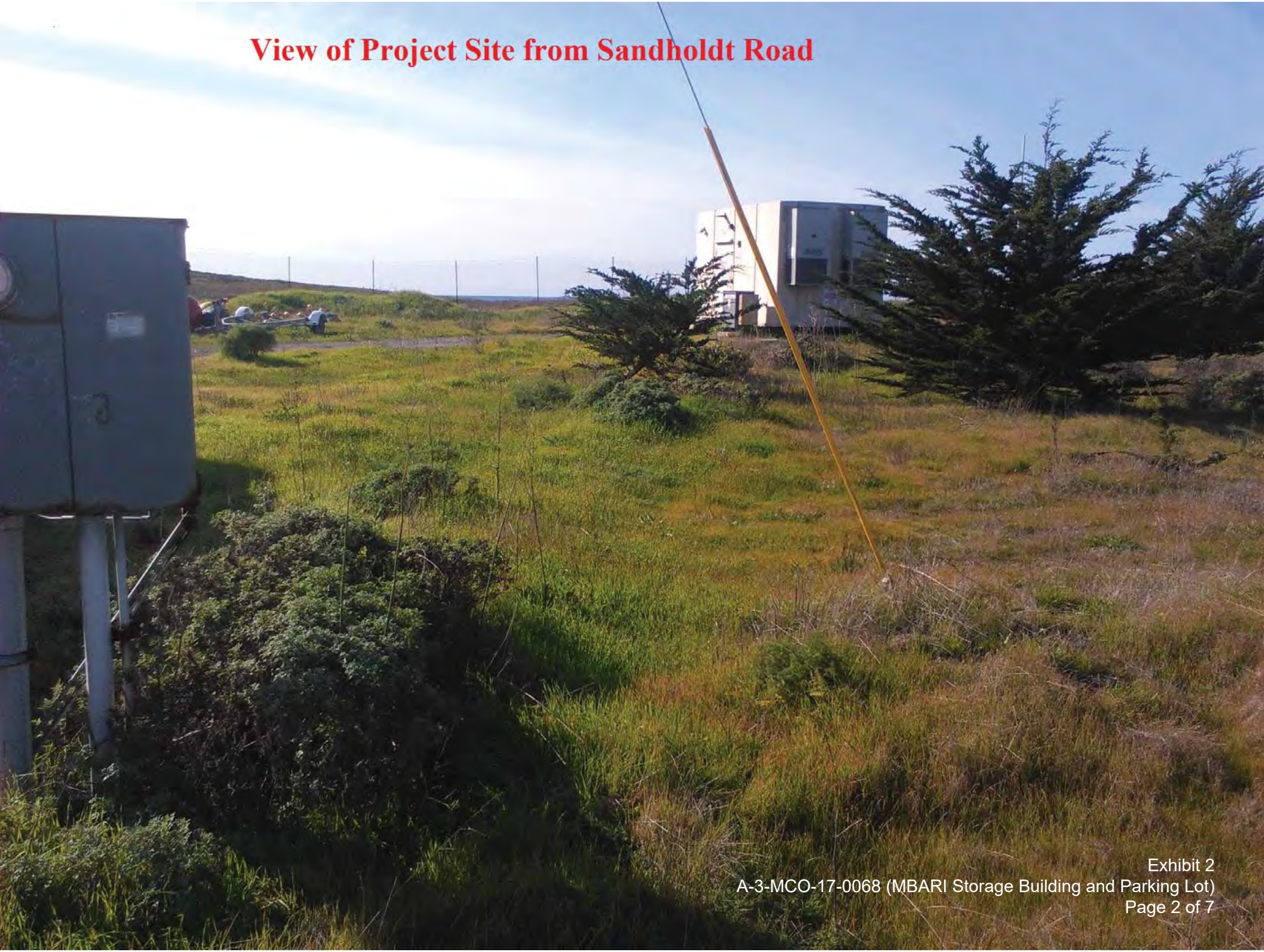
2500' Limit | 300' Limit | City Limits | Water

N

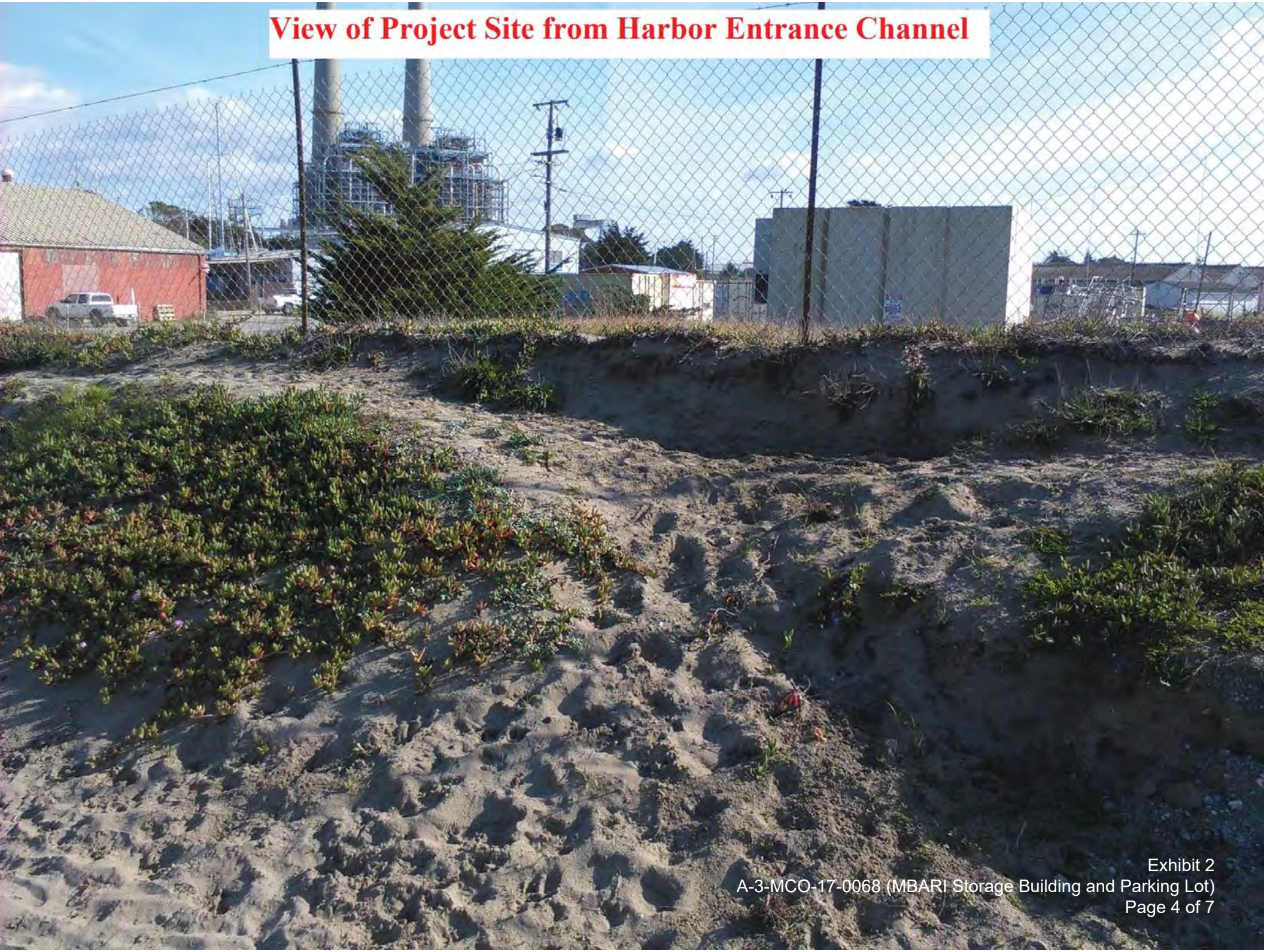
0 500 Feet

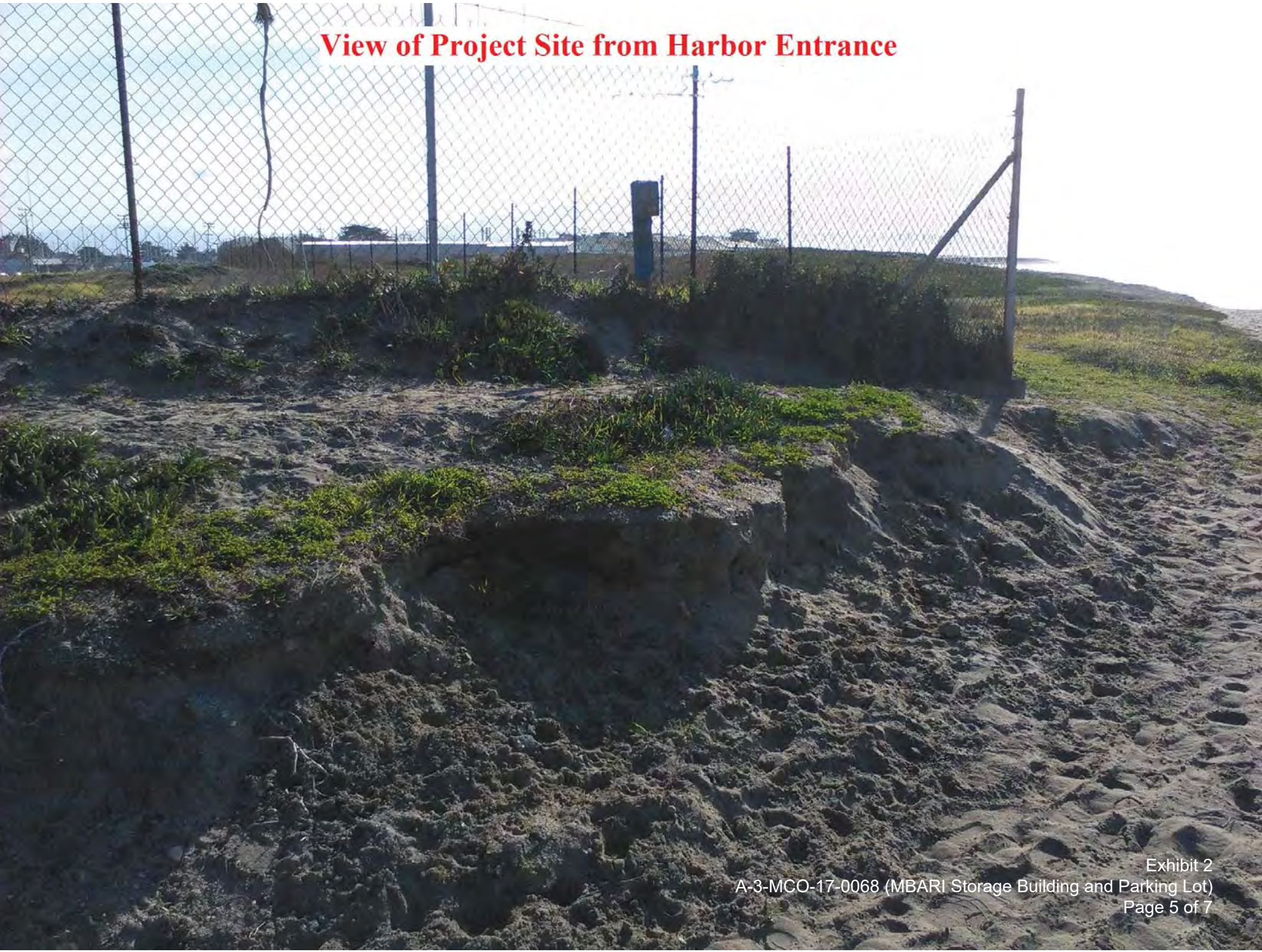
PLANNER: GONZALES

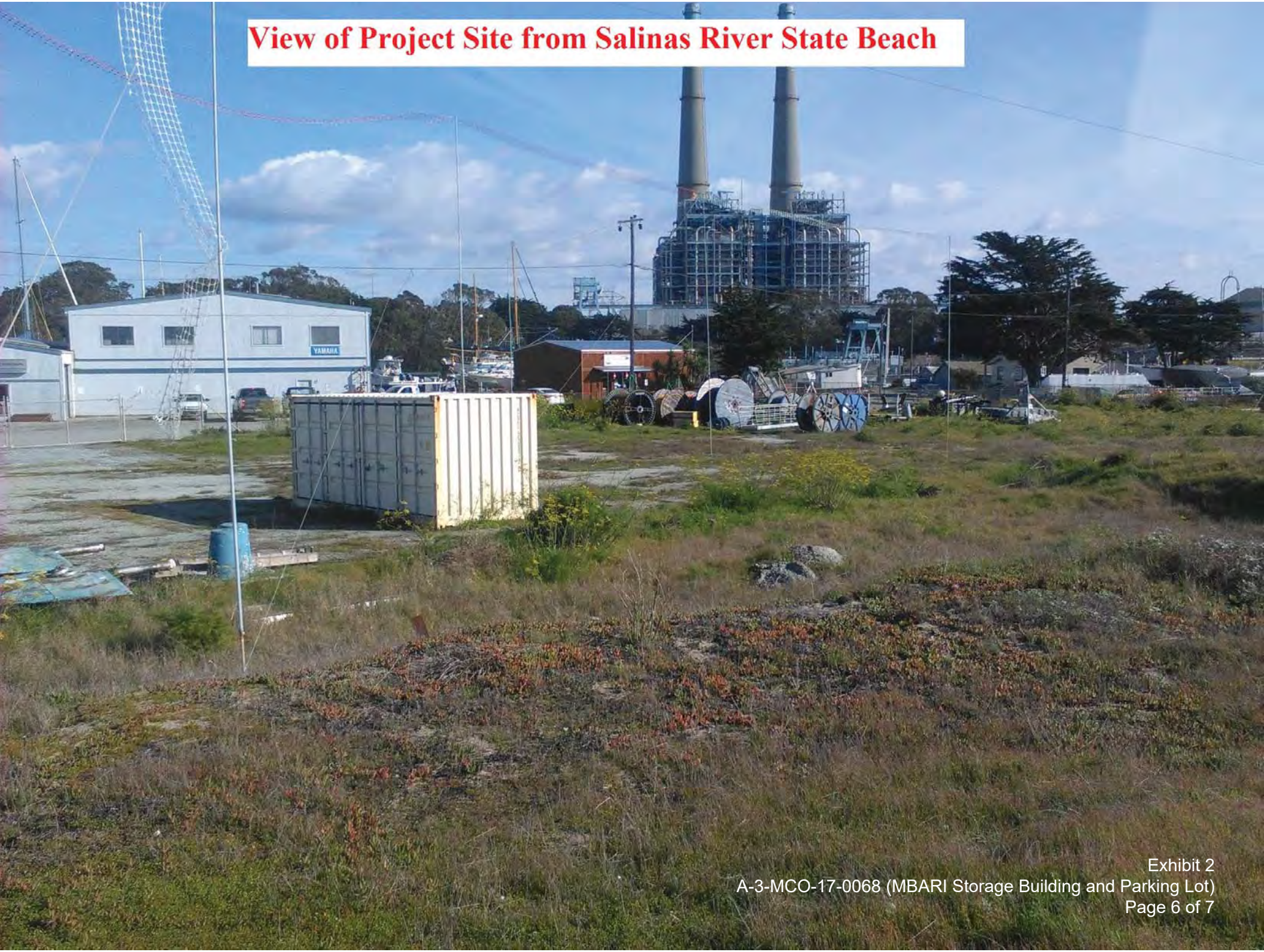

View of Project Site From Sandholdt Road


View of Project Site from Sandholdt Road


View of Project Site from Harbor Entrance Channel


View of Project Site from Harbor Entrance Channel


View of Project Site from Harbor Entrance


View of Project Site from Salinas River State Beach
YAMAHA

View of Project Site from Salinas River State Beach

- Development Footprint
- Public Access Restricted Area
- Dune Habitat Restricted Area

MBARI EXPEDITION STAGING BUILDING

PROJECT INFORMATION

The Monterey Bay Aquarium Research Institute (MBARI) has purchased a new coastal research vessel for upcoming research projects. To house the equipment, spare parts, and research/experiment paraphernalia MBARI proposes to construct a new 5,200 sq.ft. Field Program Staging Building along with site improvements, parking, and fenced storage/staging areas. The facility will be used to store and assemble components to build equipment packages. The equipment packages will include but not limited to gliders, moorings, drifters, and autonomous underwater vehicles. They will be set up prior to mobilizing for major Monterey Bay field programs. The facilities will be occupied intermittently with existing staff between the hours of 6:00am and 6:00pm.

Zoning: LI (CZ)
Occupancy: F-1
Construction Type: V Fully Sprinklered
Proposed Floor Area: 5,200 sq ft
Proposed Covered Entry: ±620 sq ft
Total Building Coverage 5820 sq ft
Total Coverage: 5,820 sq ft ^ 132,422 sq ft=4.4%
Maximum Height Allowed: 35 ft
Maximum Height Proposed: 32'-6" ft ±
Height Above Natural Grade: See Sheet A-6.0
Setbacks: See Sheet A-2
Site Area: APN 133-252-001 3.04 acres (or 132,422 sq ft)
Trees Removed: None
Sanitary Waste: Moss Landing Sanitation District
Fiber Optics: MBARI
Telephone/Fiber Optics: AT&T

Property Owner: MBARI
7700 Sandholdt Road
Moss Landing, CA 95039
Contact: Basilio Martinez, CFO (831) 775-1731
Project Address: 7500 Sandholdt Road
Moss Landing, CA 95039

See Civil drawings for pervious and impervious area.
Floor Area Ratio Max 50% Coverage
Cut: 1,477 cu yds
Fill: 1,675cu yds
Import: 198 cu yds
Water Company: Existing 2" Meter Pajaro Sunny Mesa
Gas and Electric: PG&E

Drawings to be updated to meet 2019 California Building Code

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T-1	TOPOGRAPHIC MAP
C-1	GRADING/DRAINING/UTILITIES
C-2	EARTHWORK/EROSION CONTROL PLAN
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C-4	CIVIL ENGINEERING NOTES
L1.0	IRRIGATION PLAN
L2.0	PLANTING PLAN
L3.0	DETAILS
A-1.0	SITE PLAN
A-1.1	SITE IMPROVEMENT PLAN
A-5.0	REFLECTED CEILING PLAN & FIXTURE SCHEDULE
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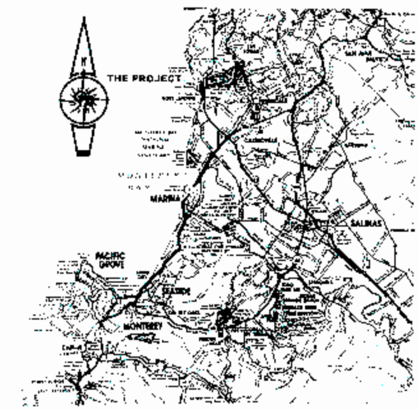
A-7.0	EXTERIOR ELEVATIONS & SIGN ELEVATIONS
A-7.1	EXTERIOR ELEVATIONS
S-1.0	STRUCTURAL FOUNDATION PLAN
S-2.0	STRUCTURAL FRAMING PLAN
E2.0	SITE LIGHTING PLAN
E2.1	BUILDING LIGHTING & ELECTRICAL PLAN
E3.0	PANEL SCHEDULE & DETAILS
E4.0	ELECTRICAL DETAILS

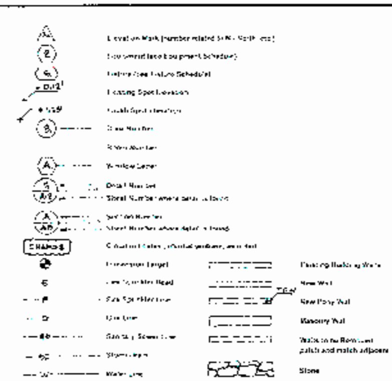
Architectural Drawings updated by Flad Architects

VICINITY MAP



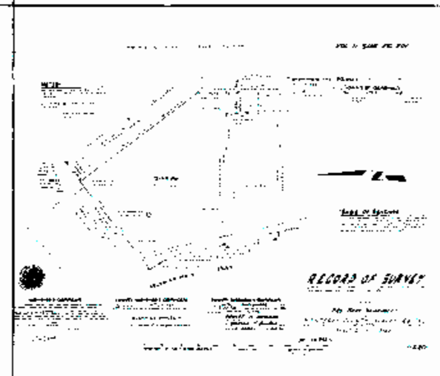
ABBREVIATIONS

LEGEND



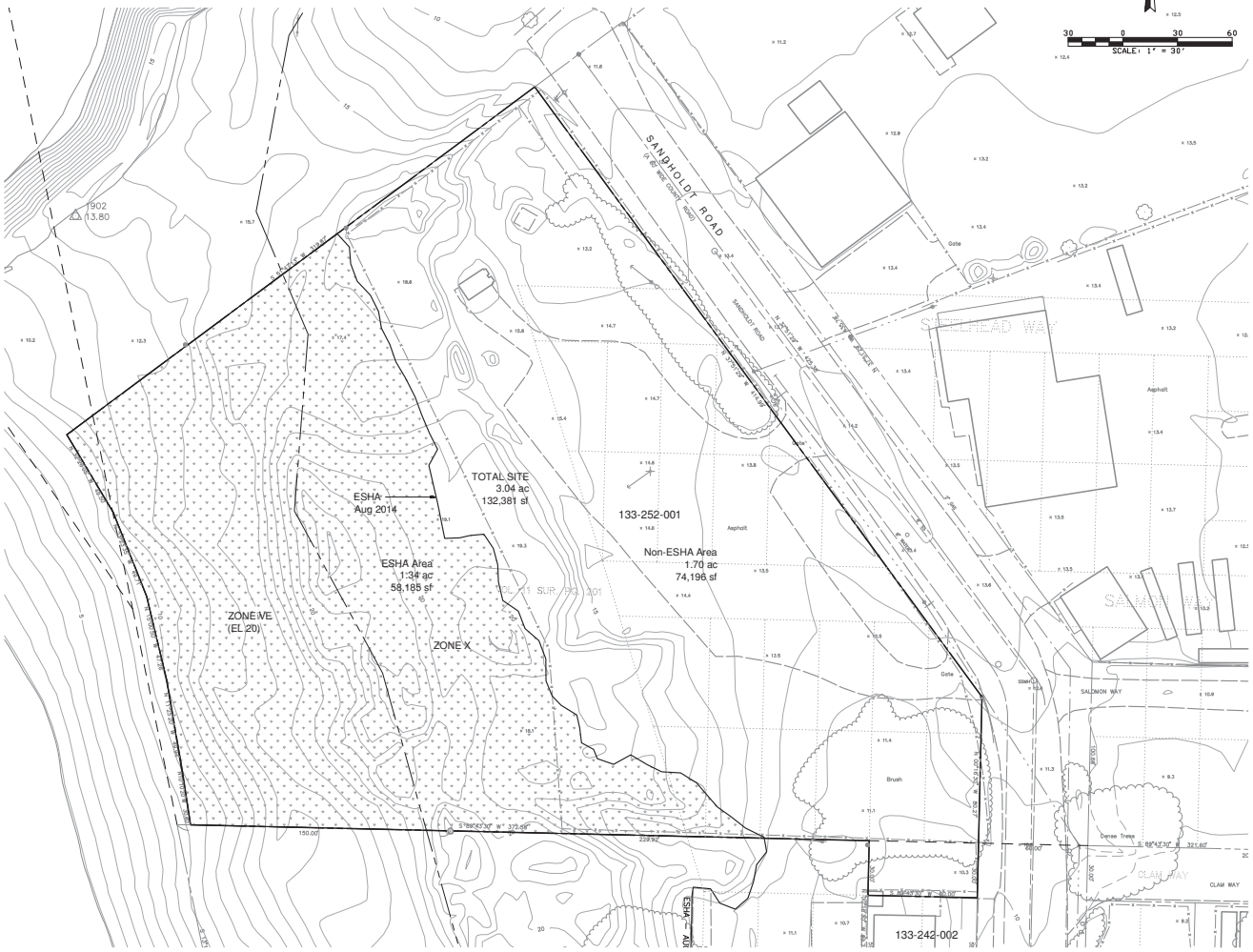
GENERAL NOTES

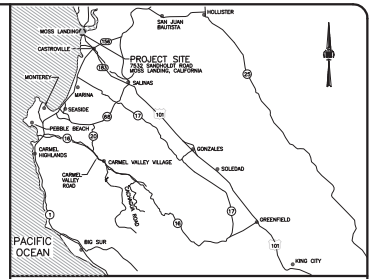
SITE & PROJECT LIMITS



05-27-20

G-1





VICINITY MAP

NOT TO SCALE

LEGEND & ABBREVIATIONS

CATCH BASIN
ELECTROLIER
FIRE HYDRIANT
MANHOLE
MONUMENT
POWER POLE
SLOPE 25%
SPOT ELEVATION
STREET SIGN
WATER VALVE

CONTOUR
EDGE OF PAVEMENT
FEMA FLOOD LINE
FENCE
GAS MAIN
OVERHEAD WIRES
PROPERTY LINE
SANITARY SEWER MAIN
STORM DRAIN MAIN
VEGETATION (EDGE)
WATER MAIN

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
BFPA	BACKFLOW PREVENTION ASSEMBLY
CL	CENTERLINE
(E)	EXISTING
EP	EDGE OF PAVEMENT
FFE	FINISH FLOOR ELEVATION
FG	FINISH GRADE
FH	FIRE HYDRANT
G	GAS
GR	GRATE
INV	INVERT
MAX	MAXIMUM
MIN	MINIMUM
PP	POWER POLE
PVC	POLYVINYL CHLORIDE
PVT	PAVEMENT
R	RISER/RADIUS
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
TC	TOP OF CURB
TW	TOP OF WALL
UON	UNLESS OTHERWISE NOTED
W	WATER
WV	WATER VALVE

NOTES

1) ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). THE LOCAL DATUM SHIFT BETWEEN NAVD88 AND THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS −2.76 FEET. SUBTRACT 2.76 FEET FROM THE NAVD88 ELEVATIONS SHOWN HEREON TO OBTAIN THE APPROXIMATE NGVD29 ELEVATIONS. THIS DATUM SHIFT WAS DETERMINED BY COMPARING THE PUBLISHED NAVD88 AND NGVD29 ELEVATIONS OF SEVERAL NEARBY BENCHMARKS FROM THE NATIONAL GEODETIC SURVEY'S DATABASE, INCLUDING BENCHMARKS IDENTIFIED AS "GU4101", "GU4102", "GU4104" AND "GU3207".

2) THE NAD83 CALIFORNIA COORDINATE SYSTEM, ZONE IV, EPOCH 2002.00 WAS USED FOR THE COMPILATION OF THIS MAPPING. COORDINATES SHOWN HEREON AND IN THE ACCOMPANYING CAD DRAWING ARE GRID COORDINATES PER THE ABOVE MENTIONED COORDINATE SYSTEM.

3) PROPERTY LINES SHOWN PER BESTOR ENGINEERS, INC. RECORD OF SURVEY, RECORDED IN THE COUNTY OF MONTEREY IN VOLUME 30 OF SURVEYS AT PAGE 119.

4) AERIAL TOPOGRAPHY MAPPING PROVIDED BY HJW GEOSPATIAL, INC. OAKLAND, CA. IN MAY 2007.

5) FEMA FLOOD ZONES AND DESIGNATIONS ARE BASED ON THE FEMA FIRM MAP 06053C 0070G, EFFECTIVE APRIL 2, 2009.

6) "ESHA–AUGUST,2014" LINE AS DELINEATED BY RANA CREEK AND MEASURED IN THE FIELD ON AUGUST 6, 2014.

REVISIONS

DESIGNED BY
DRAWN BY
DATE: PRELIMINARY

ENGINEER
RCE:
EXP:

PRELIMINARY
NOT FOR CONSTRUCTION

BESTOR ENGINEERS, INC.
CIVIL ENGINEERING - SURVEYING - LAND PLANNING
9701 BLUE LARKSPUR LANE, MONTEREY, CALIFORNIA 93940

PREPARED FOR: M.B.A.R.I.

TOPOGRAPHIC MAP

APN 133-252-001
SANDHOLDT ROAD, MOSS LANDING
COUNTY OF MONTEREY, CALIFORNIA

SCALE: 1"= 30'
DATE: 7/28/14
SHEET: T-1
WO: 6719.06

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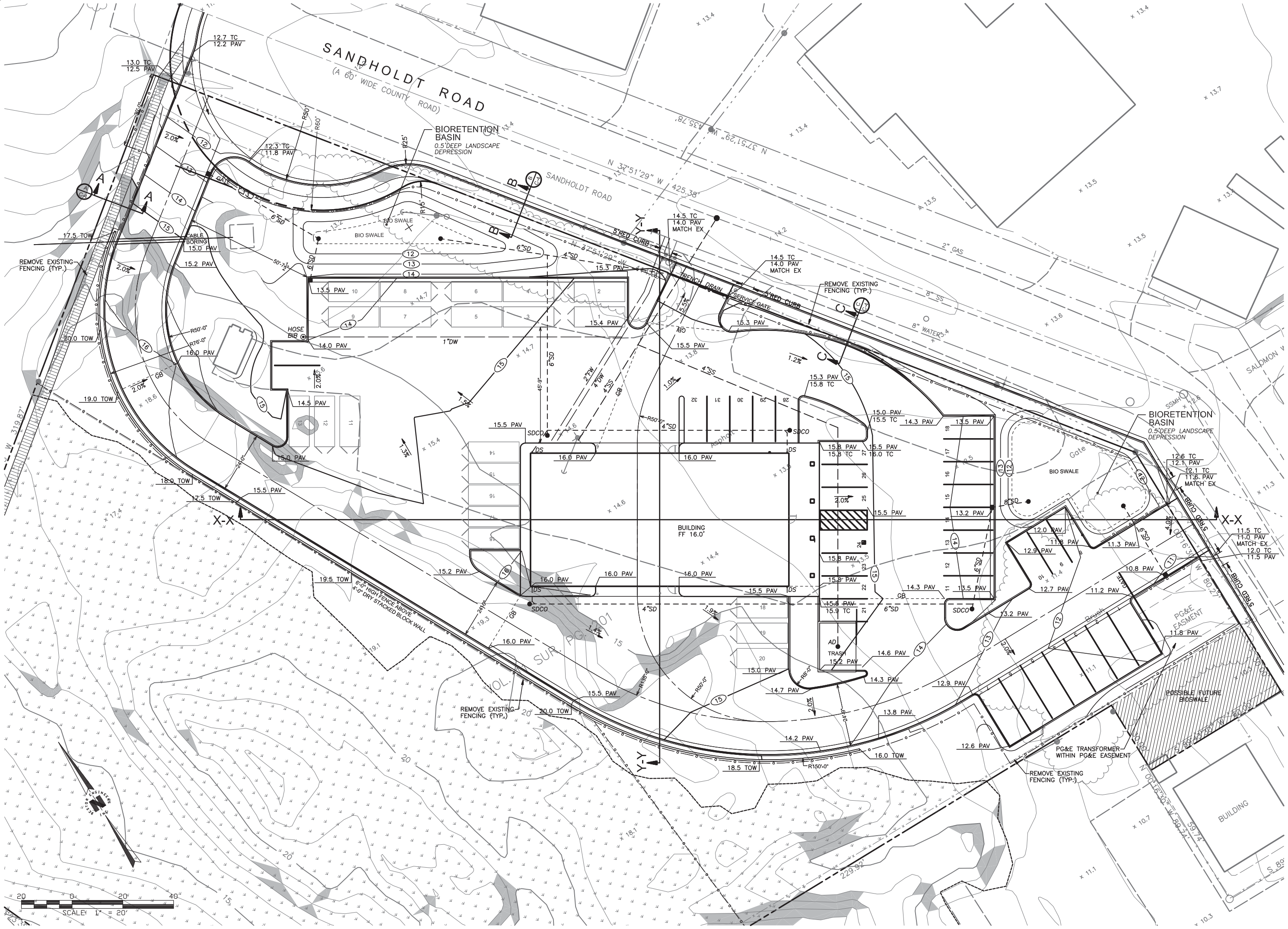
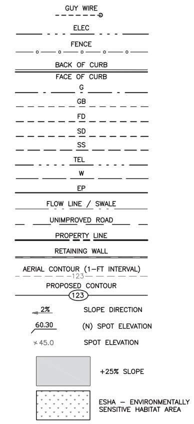


LEGEND

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
BF	BACKFLOW PREVENTOR
BR	BOTTOM OF RAMP
∘ CO	CLEANOUT
CONC	CONCRETE
△	CONTROL POINT
EL	ELEVATION
(E)	EXISTING
EP	EDGE OF PAVEMENT
FD	FOUND
FD	FOUNDATION DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FL	FLOW LINE
FT	FEET
FF	FINISH FLOOR
FH	FIRE HYDRANT
FS	FINISHED SURFACE
GB	GRADE BREAK
INV	INVERT
LP	LIGHT POLE
● MH	MANHOLE
(N)	NEW
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUNDED CURVE
PG&E	PACIFIC GAS & ELECTRIC
POC	POINT OF CONNECTION
P	POINT
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
R	RADIUS
RD	ROOF DRAIN
SS	SANITARY SEWER
TR	TOP OF RAMP
TEL	TELEPHONE
TDC	TOP OF DEPRESSED CURB
TW	TOP OF WALL
UON	UNLESS OTHERWISE NOTED
W	WATER
WM	WATER METER
WV	WATER VALVE



EARTHWORK QUANTITIES

CUT: 1,477 CUBIC YARDS

FILL: 1,675 CUBIC YARDS

NET: 198 CUBIC YARDS (IMPORT)

10% FILL FACTOR

EARTHWORK QUANTITIES ARE TO FINISHED GROUND (i.e. NOT SUBGRADE).

OVER EXCAVATION HAS NOT BEEN INCLUDED IN EARTHWORK CALCULATION. STRIPPINGS HAVE NOT BEEN REMOVED FROM EARTHWORK CALCULATION.

ESHA AREAS

ESHA AREA = 1.34 ACRES

NON-ESHA AREA = 1.70 ACRES

TOTAL AREA = 3.04 ACRES

SHEET NOTES

1. ALL EARTHWORK SHALL BE PERFORMED IN ACCORDANCE TO THE PROJECT GEOTECHNICAL REPORT, PREPARED BY SOIL SURVEYS, INC. AUGUST 30, 2011.
2. ALL GUTTER DOWNSPOUTS SHALL DISCHARGE ONTO PAVED AREAS.
2. BUILDING FINISH FLOOR PER ARCHITECT'S PLANS.
3. SEE PLUMBING PLANS FOR WATER AND SEWER CONNECTION.
4. PLACE 4"-6" CONCRETE EMBEDDED RIVER ROCK AT PARKING SPLASH APRON. FLOWLINE AT TOP OF ROCK TO MATCH FLOWLINE OF CURB.
5. PLACE 4" PERFORATED PIPE BEHIND OR ALONG THE TOP OF FOOTING OF EACH RETAINING WALL, HOLES PLACED DOWN. THE PIPE SHALL BE COVERED WITH A 12" WIDE ENVELOPE OF 3/4" DRAIN ROCK OR CLASS II PERMEABLE MATERIAL WHICH SHALL EXTEND TO WITHIN 12" OF THE GROUND SURFACE BEHIND THE WALLS. DAYLIGHT PIPE.
6. ALL SLOPES ARE SHOWN AT A MAXIMUM OF 2:1 (H:V).
7. SUBGRADE SOIL BELOW ANY NEW PAVEMENT SAHLL BE COMPACTED TO 90 PERCENT RELATIVE COMPACTION, AND AGGREGATE BASE BENEATH NEW PAVEMENT SHALL BE COMPACTED TO 95 PERCENT RELATIVE COMPACTION. SEE SOILS REPORT FOR OVEREXCAVATION DEPTHS.
8. ALL NEW ON-SITE UTILITY TRENCHES SHALL BE BACKFILLED WITH A CLEAN, IMPORTED SAND HAVING A SAND EQUIVALENT OF 30 OR HIGHER EXCEPT THAT THE TOP 8-INCHES OF TRENCH SHALL BE CAPPED WITH NATIVE SOIL. A 2-FOOT PLUG OF COMPACTED, CLAYEY SOIL BACKFILL OR LEAN CONCRETE SHALL BE REQUIRED AROUND THE PIPE OR CONDUIT AT PLACES WHERE UTILITY TRENCHES INTERSECT THE BUILDING PERIMETER. ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95 PERCENT RELATIVE COMPACTION.

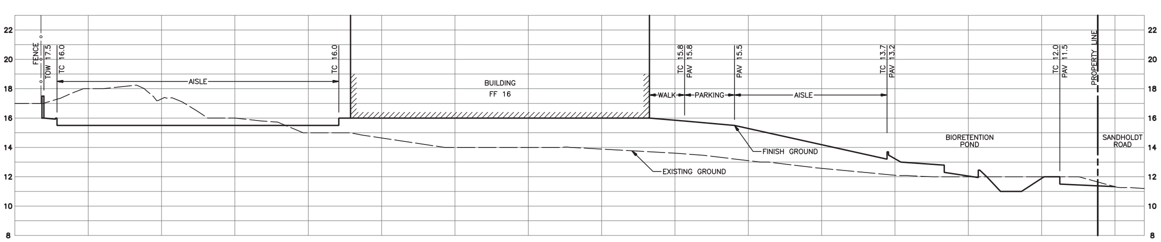
POST-CONSTRUCTION STORMWATER CALC.

WATERSHED NAME	DRAINAGE MANAGEMENT AREA		WATER QUALITY TREATMENT AREA		RUNOFF RETENTION VOLUME		LID CONTROL PRACTICE
	IMP.	PERV.	REQ.	PROV.	REQ.	PROV.	
DMA1	22875	9276	952	1007	1316	1507	BIORETENTION
DMA2	27035	4042	1098	1470	2092	2121	BIORETENTION

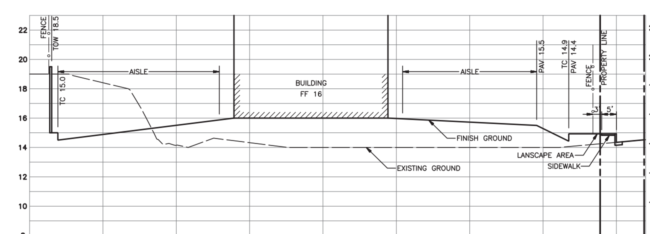
WMZ = 4, 95TH PERCENTILE, 24-HR RAINFALL DEPTH = 1.3 INCHES

DESIGN ASSUMES PONDING DEPTH OF 6 INCHES, SOIL MEDIA DEPTH OF 24 INCHES AND DRAIN ROCK DEPTH OF 12 INCHES.

REMAINING PARCEL AREAS ARE SELF TREATING.



SECTION X-X



SECTION Y-Y

SCALE: HORIZ. 1"=20'
VERT. 1"=4'

REVISIONS

DESIGNED BY

DRAWN BY

DATE:

ENGINEER

RCE:

EXP:

PROGRESS PRINT
NOT FOR CONSTRUCTION

BESTOR ENGINEERS, INC.
CIVIL ENGINEERING – SURVEYING – LAND PLANNING
9701 BLUE LARKSPUR LANE, MONTEREY, CALIFORNIA 93940

PREPARED FOR: MBARI

GRADING/DRAINAGE/UTILITIES

APN 133-252-001
SANDHOLDT RD., MOSS LANDING, CA.

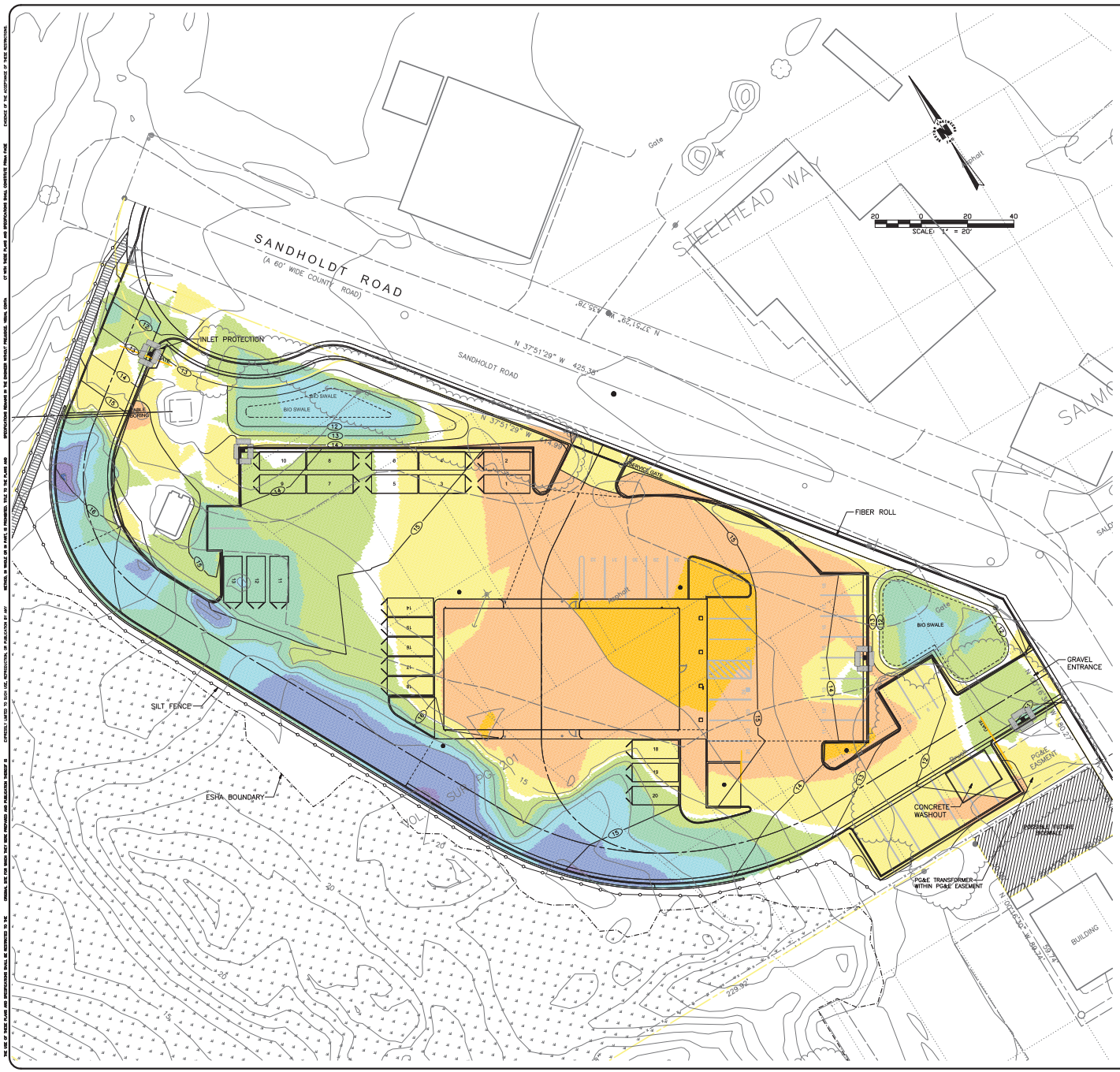
COUNTY OF MONTEREY — CALIFORNIA

SCALE: 1" = 20'

DATE: 1/9/15

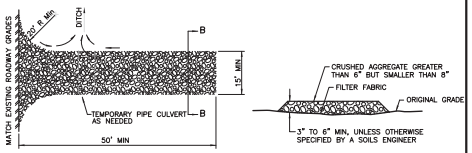
SHEET: C-1

WO: 6719.06



EARTHWORK SCHEDULE

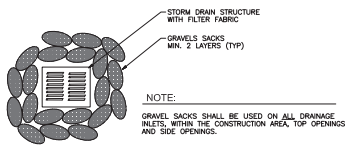
COLOR	RANGE BEG.	RANGE END	PERCENT	AREA
	-7.00	-6.00	0.0	0.00
	-6.00	-5.00	0.0	4.50
	-5.00	-4.00	0.2	156.50
	-4.00	-3.00	5.0	3253.50
	-3.00	-2.00	7.7	4996.50
	-2.00	-1.00	11.0	7111.50
	-1.00	0.00	19.4	12598.00
	0.00	1.00	25.6	16597.50
	1.00	2.00	25.9	16813.00
	2.00	3.00	5.2	3378.00
	3.00	4.00	0.0	0.00
	4.00	5.00	0.0	0.00



PLAN SECTION B-B

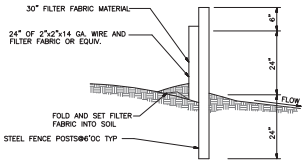
NOTE:
CONSTRUCT SEDIMENT BARRIER AND CHANNELIZE RUNOFF TO SEDIMENT TRAPPING DEVICE.

GRAVEL ENTRANCE 1
NTS

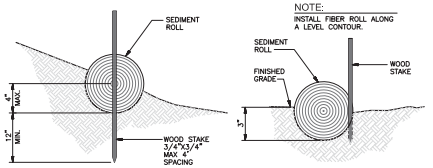


NOTE:
GRAVEL SACKS SHALL BE USED ON ALL DRAINAGE INLETS, WITHIN THE CONSTRUCTION AREA, TOP OPENINGS AND SIDE OPENINGS.

STORM DRAIN PROTECTION 2
NTS



SILT FENCE 3
NTS



ENTRENCHMENT DETAIL IN SLOPE AREA

ENTRENCHMENT DETAIL IN FLAT AREA

FIBER ROLL 4
NTS

REVISIONS
5/15/2020

DESIGNED BY
DRAWN BY
DATE:
ENGINEER
RCE:
EXP:

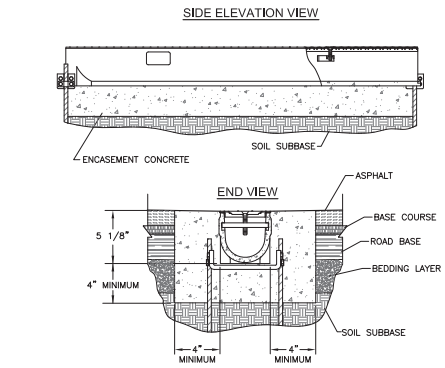
BESTOR ENGINEERS, INC.
CIVIL ENGINEERING - SURVEYING - LAND PLANNING
9701 BLUE LARKSPUR LANE, MONTEREY, CALIFORNIA 93940

PREPARED FOR: MBARI

EARTHWORK/EROSION CONTROL PLAN

APN 133-252-001
SANDHOLDT RD., MOSS LANDING, CA.
COUNTY OF MONTEREY
CALIFORNIA

SCALE: 1" = 20'
DATE: 1/9/15
SHEET: C-2
WO: 6719.06

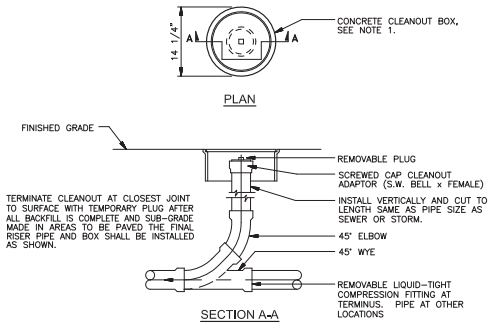


NOTES:

1. CONCRETE STRENGTH, THICKNESS AND REINFORCEMENT BE DETERMINED BY THE STRUCTURAL ENGINEER.
2. REFER TO POLYCAST® INSTALLATION GUIDE FOR COMPLETE DETAILS.

POLYCAST® 600 SERIES TRENCH DRAIN — 1

NTS

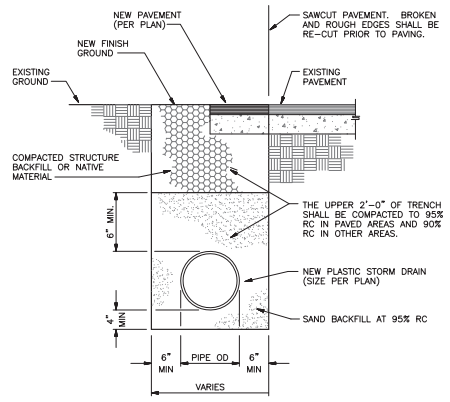


NOTES

1. CLEANOUT BOX SHALL BE CHRISTY G5 TRAFFIC VALVE BOX, OR APPROVED EQUAL, WITH IRON LID MARKED SEWER OR STORM, AS REQ'D.
2. PROVIDE CAST IRON OR STEEL CHECKER PLATE TRAFFIC COVER IN AREAS SUBJECT TO VEHICLE TRAFFIC, PROVIDE CONCRETE COVER IN NON-TRAFFIC AREAS.
3. SLOPE FINISHED GRADE AWAY FROM CLEANOUT BOX.

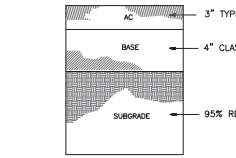
CLEANOUT DETAIL — 2

NTS



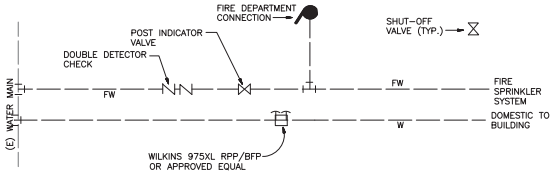
UTILITY TRENCH — 3

NTS



PAVEMENT SECTION — 4

NTS

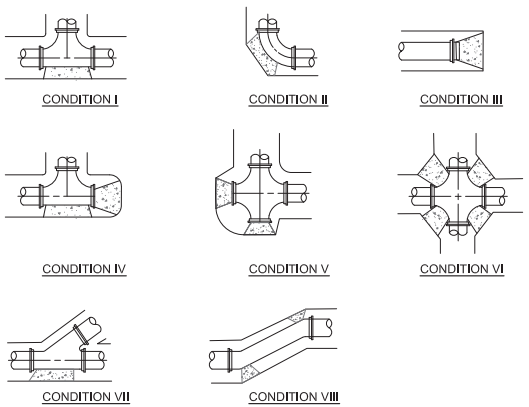


NOTE:

IF THE DOUBLE DETECTOR CHECK IS WITHIN 30 FEET OF THE FIRE DEPARTMENT CONNECTION (FDC) LOCATION, AN OS&Y CAN BE USED INSTEAD OF A POST INDICATOR VALVE (PIV). IF THEY ARE GREATER THAN 30 FEET APART, THEN BOTH THE OS&Y AND PIV ARE REQUIRED. CONTRACTOR TO DETERMINE UPON CONSTRUCTION.

WATER SYSTEM CONNECTION — 5

NTS



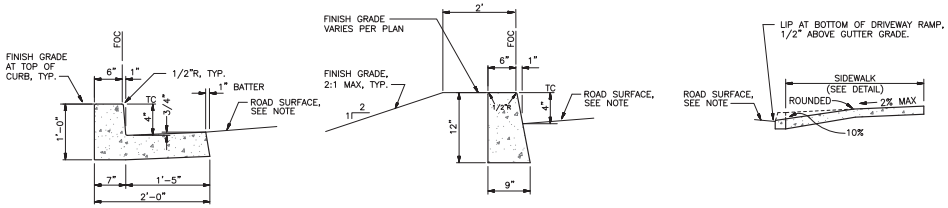
PIPE SIZE	CONDITION							
	I	II	III	IV	V	VI	VII	VIII
<6"	2.0	2.9	2.0	2@2.0	2@2.0	4@1.6	2.0	2@1.6
6"	4.3	4.0	4.3	2@4.3	2@4.3	4@3.3	4.3	2@3.3
8"	7.4	10.6	7.4	2@7.4	2@7.4	4@5.7	7.4	2@5.7
10"	12.1	17.1	12.1	2@12.1	2@12.1	4@9.3	12.1	2@9.3
12"	17.2	24.1	17.2	2@17.2	2@17.2	4@13.2	17.2	2@13.2

NOTES:

1. THRUST BLOCK AREAS BASED ON 225 PSI AND 2,000 PSF SOIL PRESSURE WITH 2 1/2 FEET OF COVER MINIMUM.
2. THRUST BLOCK BEARING FACES SHALL BE PLACED AGAINST UNDISTURBED SOIL, APPROVED COMPACTED BACKFILL, OR CLASS 100-E-100 SLURRY.
3. THRUST BLOCKS SHALL BE CLASS 560-C-3250 CONCRETE, UNLSS SPECIFIED OTHERWISE.
4. TO FACILITATE FUTURE REMOVAL OF THRUST BLOCKS AND LINE EXTENSION USE CARDBOARD SEPARATORS BETWEEN BLOCKS, IF NEEDED.

THRUST BLOCKS — 6

NTS



NOTE:

SLOPE PER PLAN. SLOPE SHALL NOT EXCEED 5% IN ANY DIRECTION WITHIN 4 FEET OF CURB CUT FOR ACCESSIBLE PEDESTRIAN RAMP.

CONCRETE CURBS AND GUTTERS — 7

NTS

REVISIONS
5/15/2020

DESIGNED BY
DRAWN BY
DATE:
ENGINEER
RCE:
EXP:

PROGRESS PRINT
NOT FOR CONSTRUCTION

BESTOR ENGINEERS, INC.
CIVIL ENGINEERING - SURVEYING - LAND PLANNING
8701 BLUE LARKSPUR LANE, MONTEREY, CALIFORNIA 93940

PREPARED FOR: MBARI

CROSS SECTIONS
APN 133-252-001
SANDHOLDT RD., MOSS LANDING, CA.
COUNTY OF MONTEREY
CALIFORNIA

SCALE: NTS
DATE: 1/9/15
SHEET: C-3
WO: 6719.06

CIVIL SPECIFICATIONS

SECTION 1. PLANS AND SPECIFICATIONS

ALL WORK UNDER THIS CONTRACT SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING PLANS AND SPECIFICATIONS INSOFAR AS THEY MAY APPLY:

(1.) BESTOR ENGINEERS INC, PLANS C–01 TO C–04.

(2.) MONTEREY COUNTY STANDARD PLANS AND SPECIFICATIONS.

(3.) STANDARD PLANS AND SPECIFICATIONS OF THE DEPARTMENT OF TRANSPORTATION, STATE OF CALIFORNIA, LATEST EDITION, HEREINAFTER REFERRED TO AS THE STANDARD PLANS AND SPECIFICATIONS.

IN CASE OF CONFLICT BETWEEN THE STANDARD PLANS AND SPECIFICATIONS AND THESE TECHNICAL SPECIFICATIONS, THE TECHNICAL SPECIFICATIONS SHALL TAKE PRECEDENCE OVER AND BE USED IN LIEU OF SUCH CONFLICTING PORTIONS OF THE STANDARD SPECIFICATIONS.

SECTION 16. CLEARING AND GRUBBING

THIS WORK SHALL CONSIST OF ALL CLEARING AND GRUBBING NECESSARY FOR THE PERFORMANCE OF THE WORK COVERED BY THE CONTRACT IN ACCORDANCE WITH THIS SPECIFICATION AND SECTION 16 OF THE STANDARD SPECIFICATIONS.

CLEARING AND GRUBBING SHALL CONSIST OF REMOVING ALL OBJECTIONABLE MATERIAL BETWEEN THE LIMITS OF THE GRADING OPERATION. CONCRETE AND ASPHALT REMOVAL SHALL BE INCLUDED.

SECTION 17. WATERING

FURNISHING AND APPLYING WATER SHALL BE PERFORMED IN GENERAL CONFORMANCE WITH SECTION 17 OF THE STANDARD SPECIFICATIONS.

SECTION 19. EARTHWORK

ALL EARTHWORK SHALL BE PERFORMED IN GENERAL CONFORMANCE WITH SECTION 19 OF THE STANDARD SPECIFICATIONS, EXCEPT AS MODIFIED HEREIN. WORK SHALL COMPLY WITH RECOMMENDATIONS SET FORTH IN GEOTECHNICAL REPORT PREPARED BY SOIL SURVEYS INC., DATED AUGUST 30, 2011, JOB# 5886.

SECTION 26. AGGREGATE BASES

THE WORK SHALL CONSIST OF FURNISHING, SPREADING AND COMPACTING CLASS II AGGREGATE BASES IN CONFORMANCE WITH SECTION 26 OF THE STANDARD SPECIFICATIONS.

SECTION 39. ASPHALT CONCRETE

ASPHALT CONCRETE SHALL BE TYPE "B" AND SHALL CONFORM TO THE PROVISIONS IN SECTION 39, "ASPHALT CONCRETE," OF THE STANDARD SPECIFICATIONS AND THESE SPECIAL PROVISIONS.

THE GRADE OF PAVING ASPHALT SHALL BE AR 4000.

THE AGGREGATE FOR TYPE "B" ASPHALT CONCRETE SHALL CONFORM TO THE GRADING SPECIFIED FOR ONE–HALF INCH (1/2") MAXIMUM AGGREGATE, MEDIUM GRADING.

THE AMOUNT OF ASPHALT BINDER TO BE MIXED WITH THE AGGREGATE SHALL BE BETWEEN 6 PERCENT AND 8 PERCENT BY WEIGHT OF THE DRY AGGREGATE, AS DETERMINED BY THE ENGINEER.

PRIME COAT SHALL BE LIQUID ASPHALT SC–70. ONE APPLICATION OF SC–70 PRIME COAT SHALL BE APPLIED AT THE RATE OF 0.25 GALLON PER SQUARE YARD TO ALL SURFACES OF BASE ROCK WHICH ARE TO BE PAVED WITH ASPHALT CONCRETE.

SECTION 71. SEWERS

SEWERS SHALL BE SDR 35 P.V.C. SEWER PIPE.

SECTION 73. MISCELLANEOUS CONCRETE CONSTRUCTION

CURBS, GUTTERS, SIDEWALKS, SIDEWALK TRANSITIONS, AND ACCESS RAMPS SHALL CONFORM TO THE PROVISIONS IN SECTION 73, "CONCRETE CURBS, GUTTERS AND SIDEWALKS" OF THE STANDARD SPECIFICATIONS.

SECTION 75. WATER PIPE

WATER MAIN SHALL BE CLASS 150 P.V.C. IN ACCORDANCE WITH AWWA STANDARD C900. ALL FITTINGS SHALL BE CLASS 150 DUCTILE IRON PIPE. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. TESTING SHALL INCLUDE ON HOUR OF SUSTAINED PRESSURE AT 200 P.S.I. STERILIZATION SHALL BE IN ACCORDANCE WITH CURRENT AWWA STANDARDS.

GENERAL NOTES:

1. CONTRACTOR SHALL SECURE AND COMPLY WITH STATE AND COUNTY PERMIT REQUIREMENTS.
2. CONTRACTOR SHALL NOTIFY THE COUNTY AND OWNER 48 HOURS PRIOR TO THE INTENTION TO COMMENCE WORK. INSPECTIONS SHALL BE SCHEDULED THROUGH THE COUNTY AND REQUIRE 48 HOURS NOTICE TO ALLOW SCHEDULING OF PERSONNEL.
3. CONTRACTOR SHALL LEAVE AN EMERGENCY TELEPHONE NUMBER WITH THE POLICE AND FIRE DEPARTMENTS AND KEEP THEM INFORMED REGARDING DETOURS. EMERGENCY TELEPHONE NUMBERS FOR PUBLIC WORKS, UTILITIES, AMBULANCE, POLICE AND FIRE DEPARTMENTS SHALL BE POSTED ON THE SITE.
4. ALL WORKMANSHIP AND MATERIALS FURNISHED BY CONTRACTORS SHALL BE OF THE KIND AND QUALITY DESCRIBED IN THE SPECIFICATIONS AND SHALL BE FIRST CLASS THROUGHOUT. NEITHER FINAL PAYMENT NOR FINAL ACCEPTANCE BY COUNTY SHALL RELIEVE CONTRACTOR OF RESPONSIBILITY FOR FAULTY MATERIALS OR WORKMANSHIP.
5. CONTRACTOR SHALL COORDINATE ALL WORK, INCLUDING SUBCONTRACTORS' WORK, SO AS TO ELIMINATE CONFLICTS AND WORK TOWARDS THE GENERAL GOOD AND COMPLETION OF THE ENTIRE PROJECT WITHIN THE SPECIFIED PERIOD. SUBMIT WORK PROGRESS SCHEDULE.
6. EXISTING UNDERGROUND LINES, APPURTENANCES AND FACILITIES WHICH ARE KNOWN TO THE ENGINEER ARE SHOWN FOR INFORMATION ONLY AND IN THEIR APPROXIMATE LOCATION. CONTRACTOR SHALL EXERCISE ALL NECESSARY CAUTION TO AVOID DAMAGE TO ANY EXISTING FACILITIES WHETHER OR NOT SUCH FACILITIES ARE SHOWN ON THE PLANS, AND SHALL BEAR FULL RESPONSIBILITY FOR ANY DAMAGE THERETO. NO WARRANTY IS GIVEN AS TO THE COMPLETENESS AND ACCURACY OF SUCH FACILITIES INFORMATION. DAMAGE TO UTILITIES OR PIPELINES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR SHALL NOTIFY U.S.A. (800) 227–2600 FORTY–EIGHT (48) HOURS PRIOR TO BEGINNING WORK TO HAVE LOCATION OF EXISTING UNDERGROUND UTILITIES MARKED.
7. CONTRACTOR SHALL EXERCISE ALL NECESSARY CAUTION TO AVOID DAMAGE TO ANY EXISTING TREES, UTILITIES AND SURFACE IMPROVEMENTS WHICH ARE REMAIN IN PLACE, AND SHALL BEAR FULL RESPONSIBILITY FOR ANY DAMAGE THERETO.
8. THE CONTRACTOR SHALL REMOVE ALL OBSTRUCTIONS, BOTH ABOVE GROUND AND UNDERGROUND, EXCEPT AS NOTED IN ITEM 6 ABOVE, AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.

GENERAL NOTES:

9. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ANY CURRENTLY APPLICABLE SAFETY LAW OF ANY JURISDICTIONAL BODY. FOR INFORMATION REGARDING THIS PROVISION, THE CONTRACTOR IS DIRECTED TO CONTACT THE STATE OF CALIFORNIA, DIVISION OF OCCUPATIONAL SAFETY AND HEALTH, SALINAS, CA. TELEPHONE (831) 443–3050. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BARRICADES, SAFETY DEVICES, AND CONTROL OF TRAFFIC WITHIN THE CONSTRUCTION AREA. FOR ALL TRENCH EXCAVATION FIVE (5) FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE DIVISION OF OCCUPATIONAL SAFETY AND HEALTH, 1164 MONROE STREET, SUITE 1, SALINAS, CA 93906–3564, TELEPHONE: (831) 443–3050, PRIOR TO BEGINNING ANY EXCAVATION. A COPY OF THIS PERMIT SHALL BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION. ALL SUCH MONUMENTS OR MARKERS OUTSIDE AREA OF CONSTRUCTION WHICH ARE DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. BEFORE DESTROYING ANY MONUMENTS, CONTRACTOR SHALL REQUEST OWNER'S ENGINEER TO ACCURATELY LOCATE AND TIE THEM. IF APPLICABLE, CONTRACTOR SHALL REPLACE SUCH MONUMENTS PRIOR TO COMPLETION TO THE SATISFACTION OF THE COUNTY.
11. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE INCLUDING SAFETY OF CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL, OWNER, COUNTY ENGINEERS AND THE COUNTY HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL, OWNER, COUNTY ENGINEERS OR THE COUNTY.
12. THE CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL. ALL WARNING AND TRAFFIC CONTROL SIGNS, SIGN SIZES AND LOCATIONS FOR THE SIGNS SHALL BE IN ACCORDANCE WITH CALTRANS REQUIREMENTS AND COUNTY STANDARDS.
13. CONTRACTOR SHALL KEEP STREETS CLEAR OF DIRT AND DEBRIS ATTRIBUTABLE TO THE PROJECT'S CONSTRUCTION ACTIVITIES.
14. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB, AND SHALL NOTIFY DESIGN ENGINEER OF ANY VARIATION FROM THE DIMENSIONS AND CONDITIONS SHOWN. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING SHOP DRAWINGS BEFORE PROCEEDING WITH FABRICATION.
15. IN THE EVENT OF ANY CONFLICT OF INFORMATION SHOWN IN THE PLANS AND SPECIFICATIONS, OR ANY CONFLICT BETWEEN THE PLANS AND THE INTENT FOR A CONSISTENT AND FUNCTIONAL FACILITY, THE CONTRACTOR SHALL SO NOTIFY THE DESIGN ENGINEER IN WRITING, UPON WHICH TIME THE DESIGN ENGINEER SHALL RESOLVE THE CONFLICT BY THE ISSUANCE OF A WRITTEN CHANGE ORDER BY REVISING PLANS, SPECIFICATIONS, OR BOTH. THE CONTRACTOR SHALL BEAR FULL COSTS AND RESPONSIBILITY FOR WORK AFFECTED BY SUCH UNRESOLVED CONFLICTS AND PERFORMED BY CONTRACTOR PRIOR TO THE RESOLUTION BY THE DESIGN ENGINEER.
16. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT FINISHED AREAS OF THIS PROJECT ARE PROTECTED FROM ANY DAMAGE WHICH MAY RESULT FROM ADJACENT AREAS STILL UNDER CONSTRUCTION.
17. NO REVISIONS TO THE ACCEPTED IMPROVEMENT PLANS SHALL BE MADE BY THE DESIGN ENGINEER WITHOUT THE PRIOR REVIEW AND APPROVAL BY THE COUNTY.
18. NO MODIFICATIONS SHALL BE MADE TO ANY COUNT FACILITIES WITHOUT PRIOR WRITTEN APPROVAL BY PUBLIC WORKS. ALL MODIFICATIONS SHALL BE WITNESSED BY THE COUNTY INSPECTOR.
19. CONTRACTOR SHALL POSSESS A VALID CLASS A – GENERAL ENGINEERING CONTRACTOR LICENSE.
20. PRIOR TO 10 WORKING DAYS OF START OF CONSTRUCTION, CONTRACTOR SHALL SUBMIT ALL SUBMITTALS AND ANY SUBSTITUTIONS TO ENGINEER AND COUNTY PUBLIC WORKS DIRECTOR FOR REVIEW AND APPROVAL.
21. CONTRACTOR TO MAINTAIN "RECORD" PLANS ON JOB SITE REFLECTING CONSTRUCTION DEVIATIONS. CONTRACTOR'S RECORD PLANS SHALL INDICATE ALL CHANGES.
22. THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT FROM MONTEREY PUBLIC WORKS DEPARTMENT (831) 646–3920 BEFORE COMMENCING WORK ON ANY OFFSITE ACTIVITIES INCLUDING TRENCHING FOR UTILITIES OR GRADING FOR DRIVEWAYS.
23. THE CONTRACTOR SHALL COORDINATE WITH P.G.&E. AND PACIFIC BELL IN LOCATING EXISTING JOINT POWER POLES AND GUY WIRES.
24. ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND IN DRIVEWAY ACCESS AREAS, AND THEY SHALL NOT BE PLACED UNDER LANDSCAPED, RESTORED AND/OR BOARDWALK AREA.

FIRE DEPARTMENT NOTES:

FIRE002–ROADWAY ENGINEERING

THE GRADE FOR ALL ROADS SHALL NOT EXCEED 15 PERCENT. WHERE ROAD GRADES EXCEED 8 PERCENT, A MINIMUM STRUCTURAL ROADWAY SURFACE OF 0.17 FEET OF ASPHALTIC CONCRETE ON 0.34 FEET OF AGGREGATE BASE SHALL BE REQUIRED. THE LENGTH OF VERTICAL CURVES IN ROADWAYS, EXCLUSIVE OF GUTTERS, DITCHES AND DRAINAGE STRUCTURES DESIGNED TO HOLD OR DIVERT WATER, SHALL NOT BE LESS THAN 100 FEET. NO ROADWAY TURN SHALL HAVE A HORIZONTAL INSIDE RADIUS OF LESS THAN 50 FEET. A ROADWAY TURN RADIUS OF 50 TO 100 FEET IS REQUIRED TO HAVE AN ADDITIONAL 4 FEET OF ROADWAY SURFACE. A ROADWAY TURN RADIUS OF 100 TO 200 FEET IS REQUIRED TO HAVE AN ADDITIONAL 2 FEET OF ROADWAY SURFACE. ROADWAY TURNAROUNDS SHALL BE REQUIRED ON DEAD–END ROADS IN EXCESS OF 150 FEET OF SURFACE LENGTH. THE MINIMUM TURNING RADIUS FOR A TURNAROUND SHALL BE 40 FEET FROM THE CENTER LINE OF THE ROAD. IF A HAMMERHEAD/T IS USED, THE TOP OF THE "T" SHALL BE A MINIMUM OF 60 FEET IN LENGTH. (RURAL SALINAS FIRE PROTECTION DISTRICT)

FIRE008–GATES

ALL GATES PROVIDING ACCESS FROM A ROAD TO A DRIVEWAY SHALL BE LOCATED AT LEAST 30 FEET FROM THE ROADWAY AND SHALL OPEN TO ALLOW A VEHICLE TO STOP WITHOUT OBSTRUCTING TRAFFIC ON THE ROAD. GATE ENTRANCES SHALL BE AT LEAST THE WIDTH OF THE TRAFFIC LANE BUT IN NO CASE LESS THAN 12 FEET WIDE. WHERE A ONE–WAY ROAD WITH A SINGLE TRAFFIC LANE PROVIDES ACCESS TO A GATED ENTRANCE, A 40–FOOT TURNING RADIUS SHALL BE USED. WHERE GATES ARE TO BE LOCKED, THE INSTALLATION OF A KEY BOX OR OTHER ACCEPTABLE MEANS FOR IMMEDIATE ACCESS BY EMERGENCY EQUIPMENT MAY BE REQUIRED. (RURAL SALINAS FIRE PROTECTION DISTRICT)

FIRE011–ADDRESSES FOR BUILDINGS

ALL BUILDINGS SHALL BE ISSUED AN ADDRESS IN ACCORDANCE WITH MONTEREY COUNTY ORDINANCE NO. 1241. EACH OCCUPANCY, EXCEPT ACCESSORY BUILDINGS SHALL HAVE ITS OWN PERMANENTLY POSTED ADDRESS. WHEN MULTIPLE OCCUPANCIES EXIST WITHIN A SINGLE BUILDING, EACH INDIVIDUAL OCCUPANCY SHALL BE SEPARATELY IDENTIFIED BY ITS OWN ADDRESS. LETTERS, NUMBERS AND SYMBOLS FOR ADDRESSES SHALL BE A MINIMUM OF 4–INCH HEIGHT, 1/2–INCH STROKE, CONTRASTING WITH THE BACKGROUND COLOR OF THE SIGN, AND SHALL BE ARABIC. THE SIGN AND NUMBERS SHALL BE REFLECTIVE AND MADE OF A NON–COMBUSTIBLE MATERIAL. ADDRESS SIGNS SHALL BE PLACED AT EACH DRIVEWAY ENTRANCE AND AT EACH DRIVEWAY SPLIT. ADDRESS SIGNS SHALL BE VISIBLE FROM BOTH DIRECTIONS OF TRAVEL ALONG THE ROAD. IN ALL CASES, THE ADDRESS SHALL BE POSTED AT THE BEGINNING OF CONSTRUCTION AND SHALL BE MAINTAINED THEREAFTER. ADDRESS SIGNS ALONG ONE–WAY ROADS SHALL BE VISIBLE FROM BOTH DIRECTIONS OF TRAVEL. WHERE MULTIPLE ADDRESSES ARE REQUIRED AT A SINGLE DRIVEWAY, THEY SHALL BE MOUNTED ON A SINGLE SIGN. WHERE A ROADWAY PROVIDES ACCESS SOLELY TO A SINGLE COMMERCIAL OCCUPANCY, THE ADDRESS SIGN SHALL BE PLACED AT THE NEAREST ROAD INTERSECTION PROVIDING ACCESS TO THAT SITE. PERMANENT ADDRESS NUMBERS SHALL BE POSTED PRIOR TO REQUESTING FINAL CLEARANCE. (RURAL SALINAS FIRE PROTECTION DISTRICT)

FIRE030–NON–STANDARD CONDITIONS ROAD ACCESS

ACCESS ROADS SHALL BE REQUIRED FOR EVERY BUILDING WHEN ANY PORTION OF THE EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FEET FROM FIRE DEPARTMENT ACCESS. MAIN ENTRANCE ROADS ENTERING THE FACILITY SHALL BE CONSTRUCTED TO PROVIDE A MINIMUM WIDTH OF 20 FEET WITH AN UNOBSTRUCTED VERTICAL CLEARANCE OF NO LESS THAN 15 FEET. THE ROAD BEHIND THE MAIN BUILDINGS MAY HAVE A MINIMUM WIDTH OF 12 FEET, BUT ONE–WAY WITH DIRECTIONAL SIGNAGE, AND HAVE TURNOUTS. THE ROADWAY SURFACE SHALL PROVIDE UNOBSTRUCTED ACCESS TO CONVENTIONAL DRIVE VEHICLES INCLUDING SEDANS AND FIRE APPARATUS AND SHALL BE AN ALL–WEATHER SURFACE DESIGNED TO SUPPORT THE IMPOSED LOAD OF FIRE APPARATUS (22 TONS). EACH ROAD SHALL HAVE AN APPROVED NAME. (RURAL SALINAS FIRE PROTECTION DISTRICT)

FIRE030–NON–STANDARD CONDITIONS–HYDRANTS AND FIRE FLOW

HYDRANTS FOR FORE PROTECTION SHALL BE PROVIDED AT LOCATIONS APPROVED BY THE SALINAS RURAL FIRE DISTRICT AND SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

A. FIRE FLOW – PURSUANT TO UNIFORM FIRE CODE APPENDIX III–A, THE MINIMUM FIRE FLOW

REQUIREMENT FOR 13,549 SQUARE FOOT COMMERCIAL FACILITIES BUILT WITH TYPE V–N CONSTRUCTION IS 3,250 GALLONS PER MINUTE WITH A RESIDUAL PRESSURE OF 20 PSI UNDER NORMAL OPERATING CONDITIONS FOR A DURATION OF 3 HOURS. THE MINIMUM FIRE FLOW REQUIREMENT FOR TYPE V–1–HOUR CONSTRUCTION IS 2,250 GALLONS PER MINUTE WITH A RESIDUAL PRESSURE OF 20 PSI UNDER NORMAL OPERATING CONDITIONS FOR A DURATION OF 2 HOURS. FIRE FLOW FOR FACILITIES PROTECTED WITH AUTOMATIC FIRE SPRINKLER SYSTEMS MAY BE REDUCED TO 1,500 GALLONS PER MINUTE WITH A RESIDUAL PRESSURE OF 20 PSI UNDER NORMAL OPERATING CONDITIONS FOR A DURATION OF 3 HOURS FOR TYPE V–N CONSTRUCTION, AND A DURATION OF 2 HOURS FOR TYPE V–1–HOUR CONSTRUCTION.

B. TIMING OF INSTALLATION – APPROVED FIRE PROTECTION WATER SUPPLY SYSTEMS MUST BE INSTALLED AND MADE SERVICEABLE PRIOR TO THE TIME OF CONSTRUCTION.

C. HYDRANT/FIRE VALVE (ADDITION) – NEW HYDRANT(S) SHALL BE INSTALLED.

D. HYDRANT/FIRE VALVE (LOCATION) – THE HYDRANT OR FIRE VALVE SHALL BE 18 INCHES ABOVE GRADE, 8 FEET FROM FLAMMABLE VEGETATION, NO CLOSER THAN 4 FEET NOR FURTHER THAN 12 FEET FROM A ROADWAY, AND IN A LOCATION WHERE FIRE APPARATUS USING IT WILL NOT BLOCK THE ROADWAY.

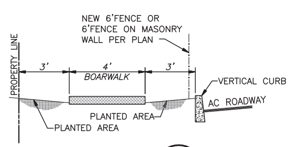
E. FIRE HYDRANTS – HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH SPACING SET FORTH IN UNIFORM FIRE CODE APPENDIX III–B AND IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

F. HYDRANT SIZE – THE HYDRANT SHALL HAVE A MINIMUM OF TWO (2) 2–1/2 INCH OUTLETS NST AND ONE (1) 4–1/2 INCH OUTLET NST. THE RISER SHALL BE A MINIMUM OF SIX (6) INCHES AND SHALL BE WET BARREL TYPE WITH A COEFFICIENT OF 0.9.

G. SIGNING OF WATER SOURCES – HYDRANT OR FIRE VALVE IDENTIFICATION MAY BE ALLOWED AS SPECIFIED IN THE STATE FIRE MARSHAL'S GUIDELINES FOR FIRE HYDRANT MARKINGS ALONG STATE HIGHWAYS AND FREEWAYS, MAY 1988. (RURAL SALINAS FIRE PROTECTION DISTRICT)

FIRE030–NON–STANDARD CONDITIONS – EMERGENCY ACCESS KEY BOX –

EMERGENCY ACCESS KEY BOX SHALL BE INSTALLED AND MAINTAINED. THE TYPE AND LOCATION SHALL BE APPROVED BY THE FIRE DEPARTMENT. THE FIRE DEPARTMENT SHALL BE NOTIFIED WHEN LOCKS ARE CHANGED SO THAT THE EMERGENCY ACCESS KEY BOX CAN BE MAINTAINED WITH CURRENT KEYS. (RURAL SALINAS FIRE PROTECTION DISTRICT)



SECTION A-A (A)

EROSION AND SEDIMENT CONTROL

I. VEGETATIVE PRACTICES

THE EXISTING SITE CONTAINS NATIVE ANDIRON, NATIVE GRASSES AND NATIVE SOIL.

IF AREAS ARE DISTURBED THAT ARE IN THE PROCESS OF BEING LANSCAPED OR CONSTRUCTED DURING THE RAINY SEASON, THE DOWN SLOPE LIMITS OF THE AREA SHALL BE BOUNDED WITH FIBER ROLLS TO SCREEN THE STORM RUNOFF SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM. ALL STORM DRAIN INLETS THAT ARE IN OPERATION DURING CONSTRUCTION SHALL BE PROTECTED WITH GRAVEL SACKS PER THE DETAILS INCLUDED HEREIN. IF THE INLETS ARE NOT UTILIZED DURING THE RAINY SEASON, THEY SHALL BE SEALED TO PREVENT WATER FROM ENTERING. AFTER EACH STORM, ALL STORM PROOFING PROVISIONS SHALL BE INSPECTED AND REPAIRED IF NECESSARY. IF SILT ACCUMULATION HAS OCCURRED, THE SILT SHALL BE REMOVED AND REDEPOSITED ON THE SITE.

ACTUAL GRADING SHALL BEGIN WITHIN 30 DAYS OF VEGETATION REMOVAL OR THE AREA SHALL BE PLANTED TO CONTROL EROSION.

ALL DISTURBED AREAS SHALL BE HYDROSEEDED ACCORDING TO LANDSCAPE ARCHITECT'S SPECIFICATIONS.

II. CONTROL PRACTICES

THE SITE IS A TRIBUTE TO THE ONSITE STORM DRAIN SYSTEM INCLUDING DRAINAGE INLETS. THE ONSITE INLETS SHALL BE PROTECTED THROUGH THE USE OF GRAVEL SACKS TO SCREEN THE STORM RUNOFF SEDIMENTS IF APPLICABLE.

III. CONTROL PRACTICES TO PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS

DURING CONSTRUCTION, A MINIMUM LENGTH OF 50 FEET OF DRAINROCK (3" TO 5" SIZE,) A MINIMUM OF 4–INCHES THICK, SHALL BE INSTALLED FROM THE BACK OF DRIVEWAY INTO THE SITE FOR THE WIDTH OF A TRAVELED WAY (15–FEET MINIMUM). ALL TRAFFIC SHALL ENTER AND EXIT THE SITE VIA SAID ACCESS POINT(S) OVER THE DRAINROCK. IF THE SURROUNDING STREETS ARE SUBJECTED TO DIRT TRACKING FROM THE CONSTRUCTION SITE, DIRT FROM GRADING OPERATIONS SHALL BE SWEPT FROM THE STREET PRIOR TO RAINFALL AND DAILY WHEN ACCUMULATION OCCURS.

IV. CONTROL PRACTICES TO REDUCE WIND EROSION

A. WATER ALL ACTIVE CONSTRUCTION AREAS AT LEAST TWICE DAILY.

B. COVER ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS OR REQUIRE ALL TRUCKS TO MAINTAIN AT LEAST TWO FEET OF FREEBOARD.

C. PAVE, APPLY WATER THREE TIMES DAILY, OR APPLY (NON–TOXIC) SOIL STABILIZERS ON ALL UNPAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES.

D. SWEEP DAILY (WITH WATER SWEEPERS) ALL PAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES.

E. SWEEP STREETS DAILY (WITH WATER SWEEPERS) IF VISIBLE SOIL MATERIAL IS CARRIED ONTO ADJACENT PUBLIC STREETS.

V. WINTER OPERATIONS

NO LAND CLEARING OR GRADING SHALL OCCUR ON THE PROJECT SITE BETWEEN OCTOBER 15 AND APRIL 15 UNLESS AUTHORIZED BY THE LOCAL ATHORITY.

WHEN WINTER OPERATIONS TAKE PLACE, THE FOLLOWING MEASURES MUST BE TAKEN TO PREVENT ACCELERATED EROSION.

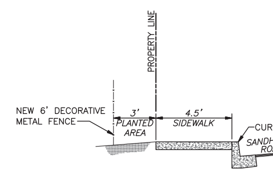
VEGETATION REMOVAL BETWEEN OCTOBER 15 AND APRIL 15 SHALL NOT PRECEDE SUBSEQUENT GRADING OR CONSTRUCTION ACTIVITIES BY MORE THAN TEN (10) DAYS. DURING THIS PERIOD, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE.

BETWEEN OCTOBER 15 AND APRIL 15, DISTURBED SURFACES NOT INVOLVED IN THE IMMEDIATE OPERATIONS MUST BE PROTECTED BY MULCHING AND/OR OTHER EFFECTIVE MEANS OF SOIL PROTECTION.

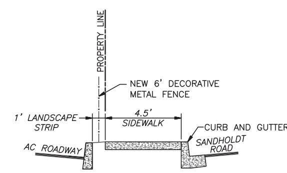
ANY SOILS OR OTHER MATERIALS WHICH ARE DISTURBED SHALL BE ADEQUATELY WATERED DURING AND AFTER CONSTRUCTION OPERATIONS TO PREVENT DUST. EROSION CONTROL MEASURES SHALL BE IN PLACE AT THE END OF EACH DAY'S WORK.

STORMWATER AND DRAINAGE

THE PLANS IDENTIFY ALL STORMWATER AND DRAINAGE INFRASTRUCTURE AND RELATED WATER QUALITY MEASURES (E.G., PERVIOUS PAVEMENTS, ETC.), WITH PREFERENCE GIVEN TO NATURAL BEST MANAGEMENT PRACTICES (BMPS) (E.G., BIOSWALES, VEGETATED FILTER STRIPS, ETC.). SUCH INFRASTRUCTURE AND WATER QUALITY MEASURES SHALL INSURE THAT ALL PROJECT AREA STORMWATER AND DRAINAGE IS FILTERED AND TREATED TO REMOVE EXPECTED POLLUTANTS PRIOR TO DISCHARGE, AND THEN DIRECTED INLAND TO EXISTING STORMWATER INLETS/OUTFALLS AS MUCH AS POSSIBLE. INFRASTRUCTURE AND WATER QUALITY MEASURES SHALL RETAIN RUNOFF FROM THE PROJECT ONSITE TO THE MAXIMUM EXTENT FEASIBLE (E.G., THROUGH THE USE OF PERVIOUS AREAS, PERCOLATION PITS, STORM DRAIN SYSTEMS, ETC.). INFRASTRUCTURE AND WATER QUALITY MEASURES ARE DESIGNED TO ACCOMMODATE RUNOFF FROM THE SITE PRODUCED FROM EACH AND EVERY STORM EVENT UP TO AND INCLUDING THE 85TH PERCENTILE 24–HOUR RUNOFF EVENT. IN EXTREME STORM SITUATIONS (I.E., GREATER THAN THE 85TH PERCENTILE 24–HOUR RUNOFF EVENT STORM) WHERE SUCH RUNOFF CANNOT BE ADEQUATELY ACCOMMODATED ONSITE THROUGH THE PROJECT'S STORMWATER AND DRAINAGE INFRASTRUCTURE, ANY EXCESS RUNOFF SHALL BE CONVEYED INLAND OFFSITE IN A NON–EROSIVE MANNER. ALL DRAINAGE SYSTEM ELEMENTS SHALL BE PERMANENTLY OPERATED AND MAINTAINED, AND THE PLANS SHALL IDENTIFY ALL MAINTENANCE PARAMETERS FOR ALL STORMWATER AND DRAINAGE INFRASTRUCTURE AND RELATED WATER QUALITY MEASURES, INCLUDING BASED ON MANUFACTURERS' RECOMMENDATIONS, WHICH SHALL BE PROVIDED. AT A MINIMUM, ALL TRAPS/SEPARATORS AND/OR FILTERS SHALL BE INSPECTED TO DETERMINE IF THEY NEED TO BE CLEANED OUT OR REPAIRED PRIOR TO OCTOBER 15TH EACH YEAR, PRIOR TO APRIL 15TH EACH YEAR, AND DURING EACH MONTH THAT IT RAINS BETWEEN NOVEMBER 1ST AND APRIL 1ST. CLEAN–OUT AND REPAIRS (IF NECESSARY) SHALL BE DONE AS PART OF THESE INSPECTIONS. ALL TRAPS/SEPARATORS AND/OR FILTERS MUST BE CLEANED PRIOR TO THE ONSET OF THE STORM SEASON (I.E.,NO LATER THAN OCTOBER 15TH OF EACH YEAR). DEBRIS AND OTHER POLLUTANTS REMOVED DURING CLEAN–OUT SHALL BE CONTAINED AND DISPOSED OF IN A PROPER MANNER. ALL INSPECTION, MAINTENANCE, AND CLEAN–OUT ACTIVITIES SHALL BE DOCUMENTED IN AN ANNUAL REPORT SUBMITTED TO THE EXECUTIVE DIRECTOR NO LATER THAN JUNE 30TH OF EACH YEAR. IT IS THE PERMITTEE'S RESPONSIBILITY TO MAINTAIN THE DRAINAGE SYSTEM IN A STRUCTURALLY SOUND MANNER AND ITS APPROVED STATE.



SECTION B-B (B)



SECTION C-C (C)

REVISIONS
⚠ 5/15/2020

DESIGNED BY
DRAWN BY
DATE:
ENGINEER
RCE:
EXP:

BESTOR ENGINEERS, INC.
CIVIL ENGINEERING – SURVEYING – LAND PLANNING
9701 BLUE LARKSPUR LANE, MONTEREY, CALIFORNIA 93940

NOTES
APN 133–242–001 AND 133–242–008
SANDHOLDT RD., MOSS LANDING, CA.
PREPARED FOR: MBARI
COUNTY OF MONTEREY
CALIFORNIA

SCALE: N/A
DATE: 1/9/15
SHEET: C–4
WO: 6719.06

L:\6719\671906\Dwgs\Plansht\C–4.DWG – sibajaf – APR 26, 2020 – 11:22:52

"I MATTHEW P. YURUS CERTIFY THAT THIS LANDSCAPING AND IRRIGATION PLAN COMPLIES WITH ALL MONTEREY COUNTY LANDSCAPING REQUIREMENTS INCLUDING USE OF NATIVE DROUGHT TOLERANT, NON-INVASIVE SPECIES, LIMITED TURF AND LOW FLOW, WATER CONSERVING IRRIGATION FIXTURES."

LANDSCAPE IRRIGATION SCHEDULE

1. IRRIGATION SYSTEM IS TEMPORARY AND IS DESIGN FOR THE FIRST DRY SEASON OR UNTIL NATIVE DUNE PLANTS ARE ESTABLISHED.
2. IF PROJECT IS PLANTED BETWEEN APRIL 15TH AND NOVEMBER 1ST, IRRIGATION SCHEDULE TO BE TWICE (2) PER WEEK FOR 30 MINUTES FOR THE FIRST SIX (6) WEEKS OR UNTIL OWNERS REPRESENTATIVE DEEMS IRRIGATION SCHEDULE TAPERING TO BEGIN. IF PLANTED AFTER NOVEMBER 1ST IRRIGATION SCHEDULE TO BE BASED ON SEASONAL RAINFALL.
3. SCHEDULE TO BE REDUCED AS APPROPRIATE FOR PLANT ESTABLISHMENT.
4. AFTER ESTABLISHMENT ET CONTROLLER TO BE SET FOR SANDING SOIL WITH NATIVE DROUGHT TOLERATE PLANT MATERIAL.

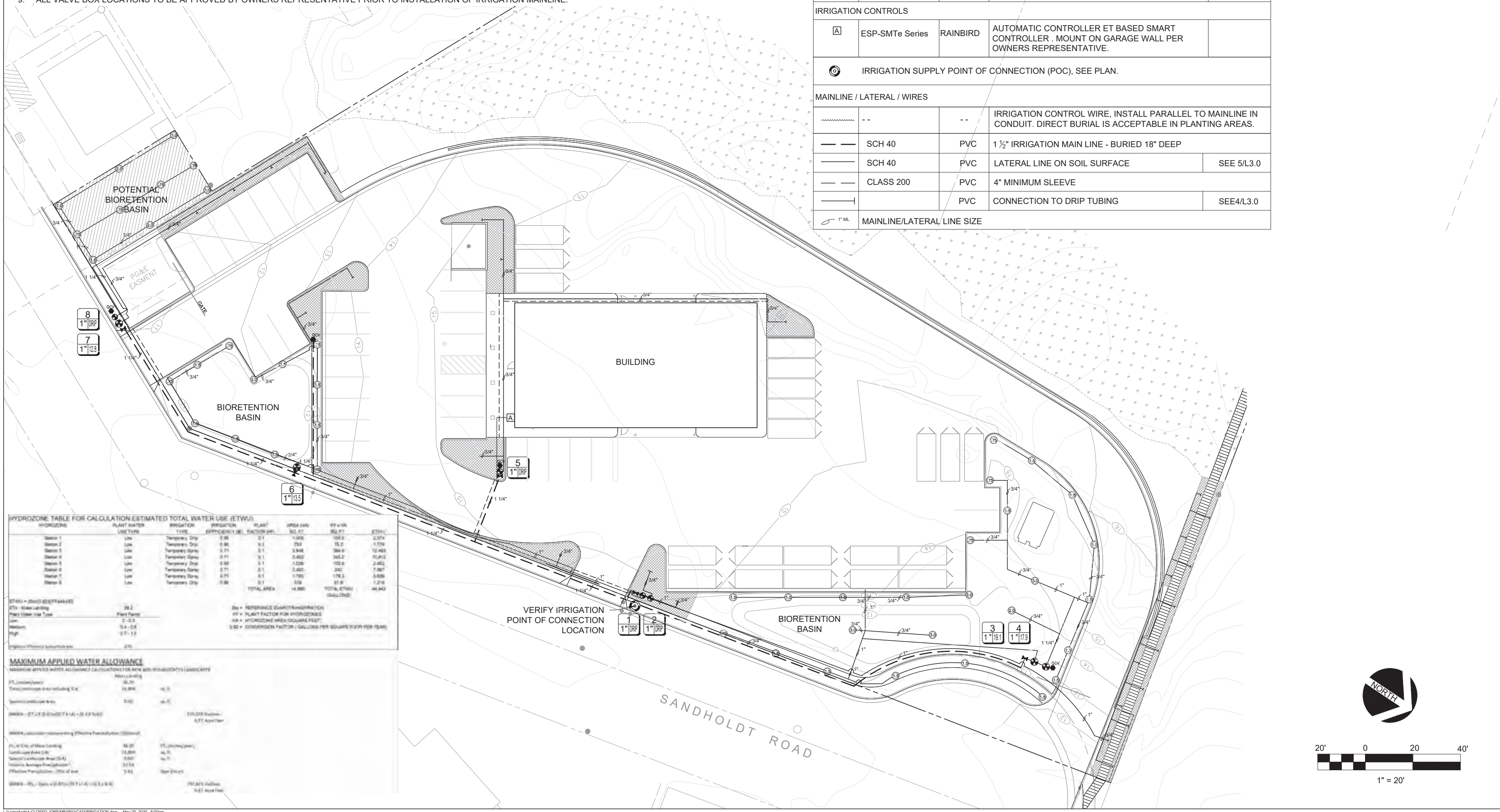
LANDSCAPE IRRIGATION NOTES

1. THE IRRIGATION DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, AND OTHER EQUIPMENT SHOWN WITHIN PAVED AREAS OR OUT OF PROPERTY BOUNDARIES ARE FOR DESIGN CLARIFICATION ONLY, AND SHALL BE INSTALLED IN PLANTING AREAS WITHIN THE LIMITS INDICATED ON THE PLAN.
2. HAND TRENCH WHEREVER NATIVE ESTABLISHED VEGETATION IS PRESENT. TRENCH ADJACENT TO PAVING WHEREVER POSSIBLE.
3. WHERE IRRIGATION CONTROL WIRES ARE NOT SHOWN THEY ARE TO RUN PARALLEL TO MAINLINE.
4. AT LEAST SEVEN DAYS BEFORE BEGINNING WORK, THE IRRIGATION CONTRACTOR SHALL CONFIRM THE STATIC WATER PRESSURE IS AT LEAST 65 PSI AT THE POINT OF CONNECTION. IF STATIC WATER PRESSURE IS LESS THAN STATED, DO NOT PROCEED WITHOUT FIRST NOTIFYING THE IRRIGATION DESIGNER AND OWNER IN WRITING, AND OBTAINING SUBSEQUENT DIRECTION FOR CORRECTIONAL MEASURES. SHOULD THE IRRIGATION CONTRACTOR CHOOSE TO BEGIN THE INSTALLATION WITHOUT SUCH NOTIFICATION, THE IRRIGATION CONTRACTOR WILL ASSUME THE RESPONSIBILITY FOR ALL COSTS INCURRED TO ENSURE THE SYSTEM IS WORKING PROPERLY. NO CHANGE ORDERS WILL BE AUTHORIZED IN SUCH CIRCUMSTANCES.
5. THE SYSTEM DESIGN PRESSURE AT IRRIGATION HEADS IS TO BE 35 PSI
6. THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL ABOVE-GRADE IRRIGATION EQUIPMENT WITH THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION, OR IRRIGATION CONTRACTOR MAY BE REQUIRED TO MOVE SUCH ITEMS AT HIS OWN COST.
7. THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITY LINES (WATER, SEWER, ELECTRICAL, TELEPHONE, GAS, CABLE, TELEVISION, ETC.) PRIOR TO THE START OF ANY WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH LOCATIONS OF WALLS, STRUCTURES AND UTILITIES.THE IRRIGATION CONTRACTOR SHALL COORDINATE WITH THE OWNER TO DETERMINE PROPOSED LOCATIONS OF THE IRRIGATION CONTROLLER.
8. PULL (2) EXTRA CONTROL WIRES AT EACH CONTROL POINT.
9. ALL VALVE BOX LOCATIONS TO BE APPROVED BY OWNERS REPRESENTATIVE PRIOR TO INSTALLATION OF IRRIGATION MAINLINE.

LANDSCAPE IRRIGATION LEGEND

SYMBOL	MODEL	MANUF.	DESCRIPTION	DETAIL	RAD	GPM	PSI	P.R. □	P.R. △
	3504-PC	RAINBIRD	3500 SERIES ROTORS W/ 0.75 NOZZLE	SEE 7/L3.0	17'	0.67	35	0.45	0.52
	3504-PC	RAINBIRD	3500 SERIES ROTORS W/ 1.0 NOZZLE	SEE 7/L3.0	21'	0.92	35	0.40	0.46
	3504-PC	RAINBIRD	3500 SERIES ROTORS W/ 1.5 NOZZLE	SEE 7/L3.0	23'	1.28	35	0.47	0.54
	3504-PC	RAINBIRD	3500 SERIES ROTORS W/ 2.0 NOZZLE	SEE 7/L3.0	27'	1.69	35	0.45	0.52
	3504-PC	RAINBIRD	3500 SERIES ROTORS W/ 3.0 NOZZLE	SEE 7/L3.0	31'	2.60	35	0.63	0.73
	WP-10	NETAFIM	ON GRADE DRIP ZONE, 1.0 GPH EMITTERS	SEE 4/L3.0					
	100-PGA	RAINBIRD	1" GLOBE VALVE, LOCATE UP TO (2) PER VALVE BOX	SEE 6/L3.0					
	XCZ-100-PRB-COM	RAINBIRD	1" DRIP ZONE CONTROL KIT, LOCATE UP TO (3) PER VB-STDBK-L VALVE BOX	SEE 6/L3.0					
	- -	KBI	ISOLATION VALVE, LINE SIZE						
	33-DLRC	RAINBIRD	3/4" QUICK COUPLER, LOCKING COVER & (2) KEYS	SEE 8/L3.0					
	825 Y	FEBCO	REDUCED PRESSURE ZONE ASSEMBLY	SEE 3/L3.0					
IRRIGATION CONTROLS									
A	ESP-SMTe Series	RAINBIRD	AUTOMATIC CONTROLLER ET BASED SMART CONTROLLER . MOUNT ON GARAGE WALL PER OWNERS REPRESENTATIVE.						
	IRRIGATION SUPPLY POINT OF CONNECTION (POC), SEE PLAN.								
MAINLINE / LATERAL / WIRES									
	- -	- -	IRRIGATION CONTROL WIRE, INSTALL PARALLEL TO MAINLINE IN CONDUIT. DIRECT BURIAL IS ACCEPTABLE IN PLANTING AREAS.						
	SCH 40	PVC	1 ½" IRRIGATION MAIN LINE - BURIED 18" DEEP						
	SCH 40	PVC	LATERAL LINE ON SOIL SURFACE	SEE 5/L3.0					
	CLASS 200	PVC	4" MINIMUM SLEEVE						
		PVC	CONNECTION TO DRIP TUBING	SEE4/L3.0					
1" ML	MAINLINE/LATERAL LINE SIZE								

3 / 1" 6.5 — CONTROLLER STATION NUMBER; GALLONS PER MINUTE; VALVE SIZE



HYDROZONE TABLE FOR CALCULATION ESTIMATED TOTAL WATER USE (ETWU)

HYDROZONE	PLANT WATER USE TYPE	IRRIGATION TYPE	IRRIGATION EFFICIENCY (IE)	PLANT FACTOR (PF)	AREA (HA) SQ. FT.	PF x HA SQ. FT.	ETWU
Station 1	Low	Temporary Drip	[illegible]	0.1	[illegible]	[illegible]	[illegible]
Station 2	Low	Temporary Drip	[illegible]	0.1	[illegible]	[illegible]	[illegible]
Station 3	Low	Temporary Spray	[illegible]	0.1	[illegible]	[illegible]	[illegible]
Station 4	Low	Temporary Spray	[illegible]	0.1	[illegible]	[illegible]	[illegible]
Station 5	Low	Temporary Drip	[illegible]	0.1	[illegible]	[illegible]	[illegible]
Station 6	Low	Temporary Spray	[illegible]	0.1	[illegible]	[illegible]	[illegible]
Station 7	Low	Temporary Spray	[illegible]	0.1	[illegible]	[illegible]	[illegible]
Station 8	Low	Temporary Drip	[illegible]	0.1	[illegible]	[illegible]	[illegible]
				TOTAL AREA	[illegible]	TOTAL ETWU (GALLONS)	[illegible]

MAXIMUM APPLIED WATER ALLOWANCE

[illegible]

L:\LivingArch\4 CLOSED JOBS\MBARI\ACAD\IRRIGATION.dwg May 20, 2020 - 6:00pm

RANA LANDSCAPE ARCHITECTURE
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27875 BERWICK DRIVE, SUITE A, CARMEL CA
phone (831) 659.3820 fax (831) 646.2106

SEAL & SIGNATURE:

MBARI
APN: 133-252-001
SANDHOLT ROAD
MOSS LANDING, CA.

PROJECT TITLE:
MBARI – Bldg J.1

REVISIONS: DATE:

SHEET TITLE:
IRRIGATION PLAN

SCALE: 1"=20'-0" DATE: 2020.05.20
DRAWN BY: YG CHECKED BY: MY
PROJECT NO2252864
L1.0

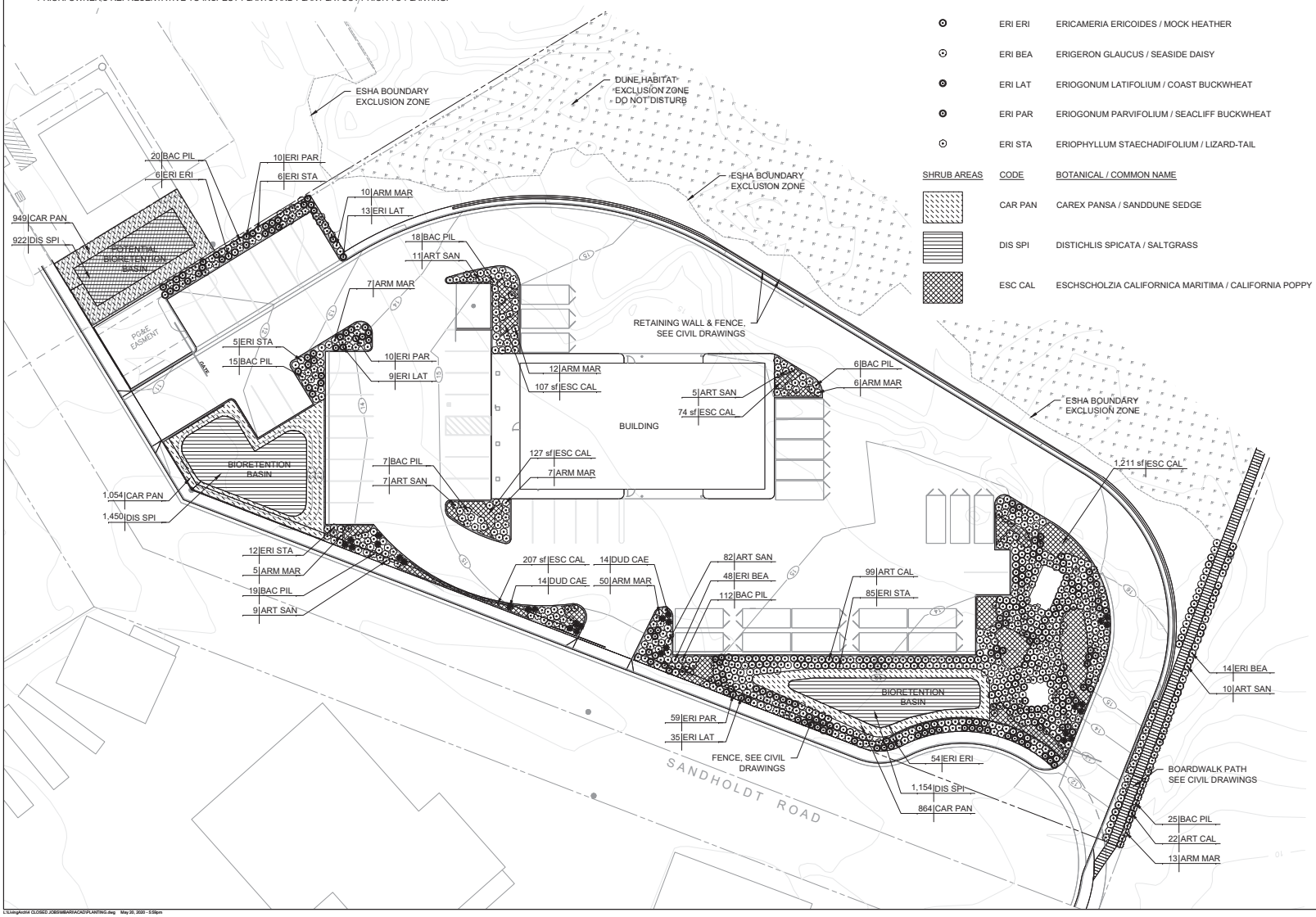
PLANTING NOTES

1. SEE PLANTING DETAILS.
2. SITE PREPARATION FOR PLANTING ACTIVITIES SHOULD MINIMIZE EXISTING SOIL DISTURBANCE.
3. PRIOR TO COMMENCING WORK, CONTRACTOR TO WALK SITE WITH OWNER'S REPRESENTATIVE TO IDENTIFY AND FLAG EXISTING VEGETATION TO REMAIN AND INVASIVE WEED SPECIES TO REMOVE.
4. CONTRACTOR TO REMOVE ALL WEEDS PRIOR TO PLANTING AND IRRIGATION INSTALLATION.
5. WEEDS SHALL BE CONTROLLED ON SITE IN PLANTING AREA SHOWN THROUGHOUT INSTALLATION AND MAINTENANCE PERIOD (60 DAYS).
6. PLANTS IN ONE GALLON CONTAINERS SHOULD RECEIVE A CERTIFIED ORGANIC SLOW RELEASE FERTILIZER PACK (NPK 8-4-4 OR SIMILAR). SUBMIT PRODUCT INFORMATION TO LANDSCAPE ARCHITECT FOR APPROVAL. STUBBIES DO NOT REQUIRE FERTILIZER. BROADCASTING OF FERTILIZER IN RESTORATION AREAS SHALL NOT BE PERMITTED.
7. PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR TO VERIFY QUANTITIES PRIOR TO ORDER.
8. ALL PLANT SUBSTITUTIONS SHALL BE APPROVED BY LANDSCAPE ARCHITECT.
9. CONTRACTOR TO NOTIFY OWNER'S REPRESENTATIVE OF PLANTING SCHEDULE AT LEAST 72 HOURS PRIOR. OWNER'S REPRESENTATIVE TO INSPECT PLANTS AND PLANT LAYOUT PRIOR TO PLANTING.

PLANT SCHEDULE

SHRUBS	CODE	BOTANICAL / COMMON NAME	CONT	WUCOLS	SPACING	QTY
⊙	ARM MAR	ARMERIA MARITIMA / COMMON THRIFT	4" POT	MEDIUM	36" o.c.	110
⊙	ART CAL	ARTEMISIA CALIFORNICA / CALIFORNIA SAGEBRUSH	1 GAL	MEDIUM	36" o.c.	121
⊙	ART SAN	ARTEMISIA PYCNOCEPHALA / SANDHILL SAGE	1 GAL	LOW	36" o.c.	124
⊙	BAC PIL	BACCHARIS PILULARIS / DWARF COYOTE BRUSH	1 GAL	LOW	36" o.c.	222
✹	DUD CAE	DUDLEYA CAESPITOSA / SEA LETTUCE	4" POT	LOW	36" o.c.	28
⊙	ERI ERI	ERICAMERIA ERICOIDES / MOCK HEATHER	1 GAL	LOW	36" o.c.	60
⊙	ERI BEA	ERIGERON GLAUCUS / SEASIDE DAISY	1 GAL	LOW	36" o.c.	62
⊙	ERI LAT	ERIOGONUM LATIFOLIUM / COAST BUCKWHEAT	1 GAL	LOW	36" o.c.	57
⊙	ERI PAR	ERIOGONUM PARVIFOLIUM / SEACLIFF BUCKWHEAT	1 GAL	LOW	36" o.c.	79
⊙	ERI STA	ERIOPHYLLUM STAECHADIFOLIUM / LIZARD-TAIL	1 GAL	LOW	36" o.c.	108

SHRUB AREAS	CODE	BOTANICAL / COMMON NAME	CONT	WUCOLS	SPACING	QTY
	CAR PAN	CAREX PANSA / SANDDUNE SEDGE	4" POT	MEDIUM	12" o.c.	2,867
	DIS SPI	DISTICHLIS SPICATA / SALTGRASS	4" POT	LOW	12" o.c.	3,526
	ESC CAL	ESCHSCHOLZIA CALIFORNICA MARITIMA / CALIFORNIA POPPY	SEED	VERY LOW		1,726 SF



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MBARI
APN: 133-252-001
SANDHOLT ROAD
MOSS LANDING, CA.

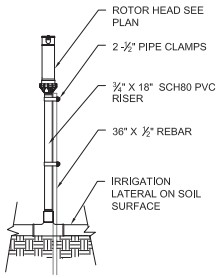
PROJECT TITLE:
MBARI – Bldg J.1

REVISIONS: DATE:

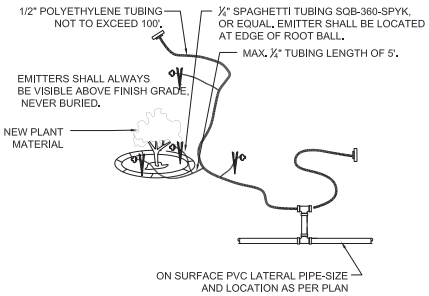
SHEET TITLE:
PLANTING PLAN

SCALE: 1"=20'–0" DATE: 2020.05.20
DRAWN BY: YG CHECKED BY: MY
PROJECT NO2252864

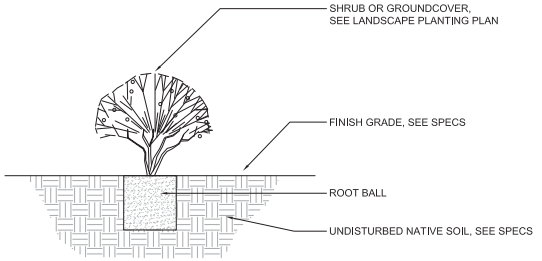
L2.0



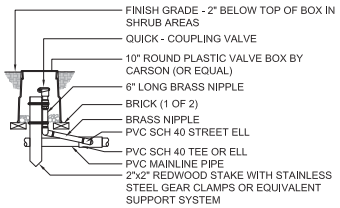
7 ROTOR HEAD
SCALE: 1" = 1'



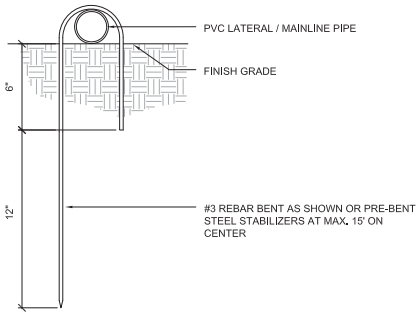
4 DRIP EMITTER LAYOUT
SCALE: 1/2" = 1'



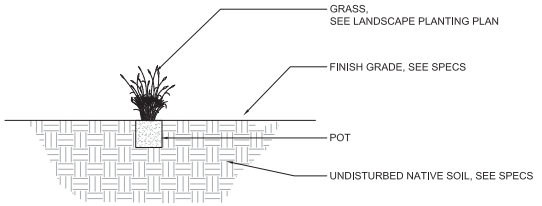
1 SHRUB PLANTING
SCALE: 1/2" = 1'



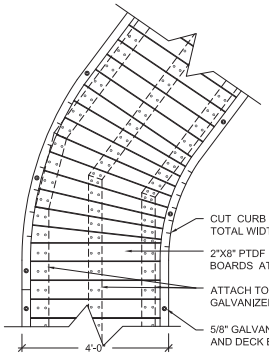
8 QUICK COUPLING VALVE
SCALE: NTS



5 PIPE STABALIZATION
SCALE: 3" = 1'



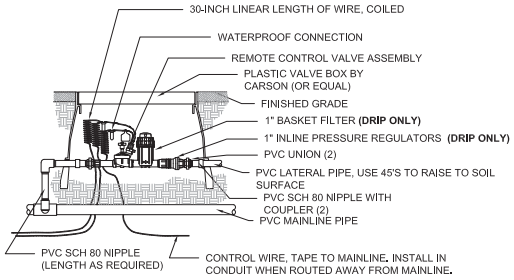
2 GRASS PLANTING
SCALE: 1/2" = 1'



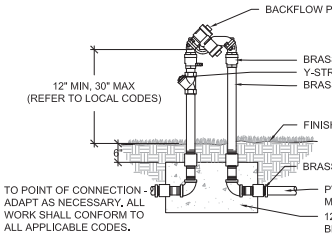
PLAN

NOTES:
1. CURB BOARD LENGTHS SHALL BE NO SHORTER THAN 4'0".
2. AVOID CURB SPLICES ON CURVED PORTIONS OF BOARDWALK.

9 BOARDWALK PLAN
SCALE: 1/2" = 1'



6 REMOTE CONTROL VALVE
SCALE: 1" = 1'



BACKFLOW PREVENTER INSTALLATION: INSTALL BACKFLOW PREVENTION DEVICE IN ACCORD WITH ALL LOCAL CODES AND REGULATIONS. INCLUDE UNIONS AT BOTH INLET AND DISCHARGE SIDES OF DEVICE.

3 BACKFLOW PREVENTOR
SCALE: 1/2" = 1'

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PROJECT TITLE:
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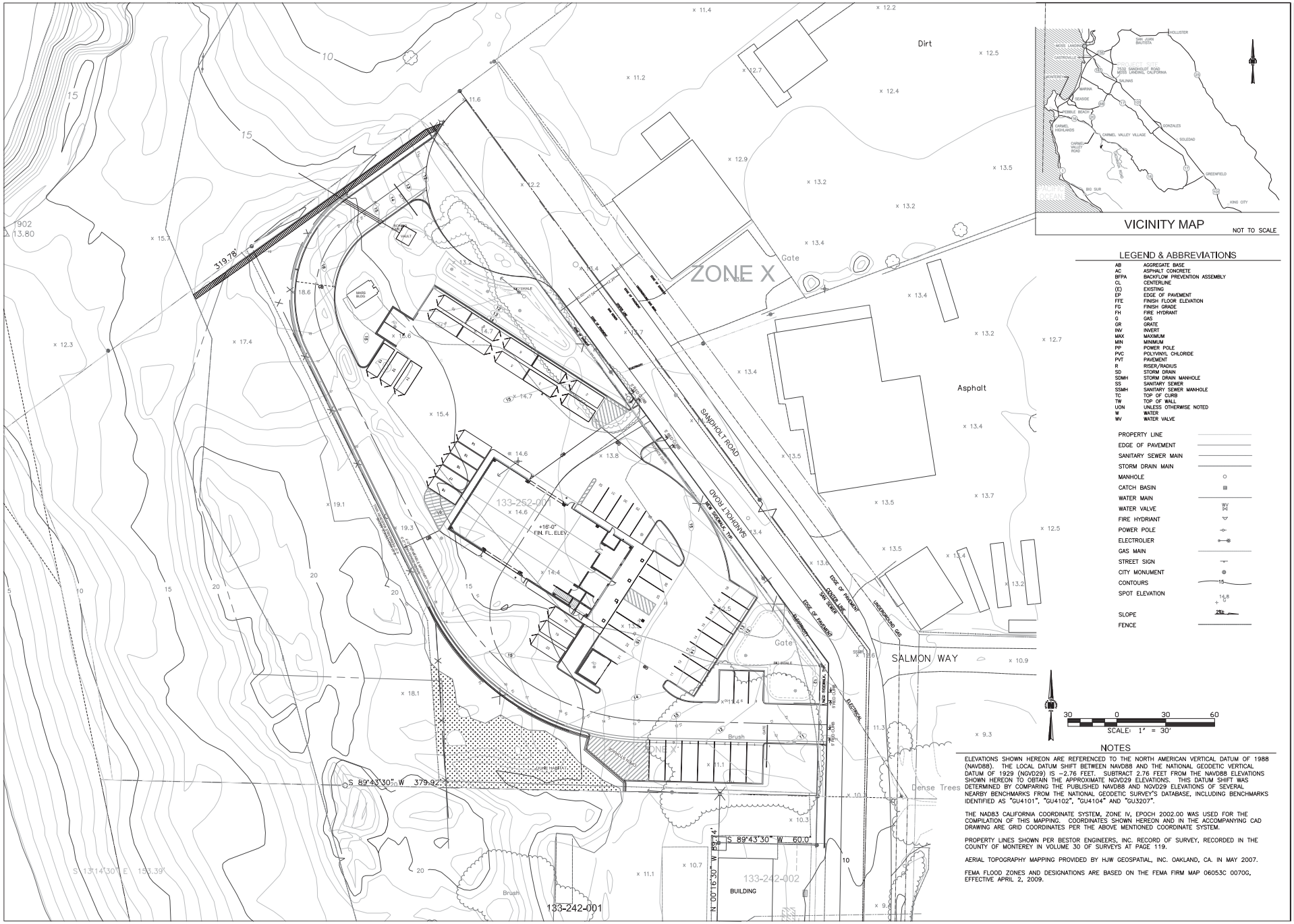
REVISIONS: DATE:

SHEET TITLE:
DETAILS

SCALE: 1"=20'-0" DATE: 2020.05.20
DRAWN BY: YG CHECKED BY: MY
PROJECT NO2252864

L3.0



REVISION	BY
05-27-20	

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831/626-8205
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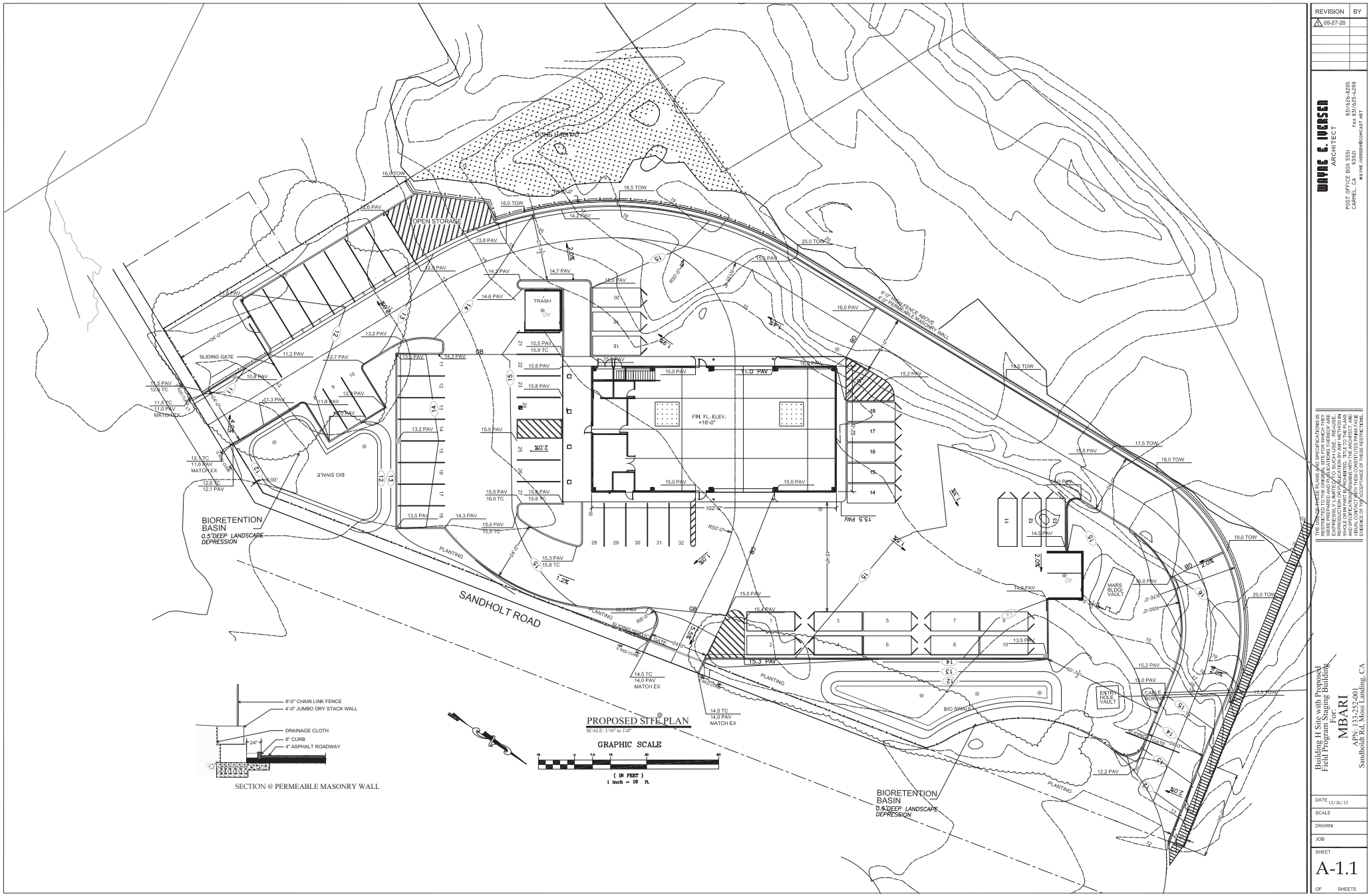
WAYNE.IVERSEN@COMCAST.NET

Building H Site with Proposed
Field Program Staging Building
For:
MBARI
APN: 133-252-001
Sandholdt Rd, Moss Landing, CA

DATE	12/26/13
SCALE	
DRAWN	
JOB	
SHEET	A-1.0
OF	SHEETS



REVISION | BY
05-27-20

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Building H Site with Proposed Field Program Staging Building
For:
MBARI
APN: 133-252-001
Sandholdt Rd, Moss Landing, CA

DATE 12/26/13
SCALE
DRAWN
JOB
SHEET
A-1.1
OF SHEETS

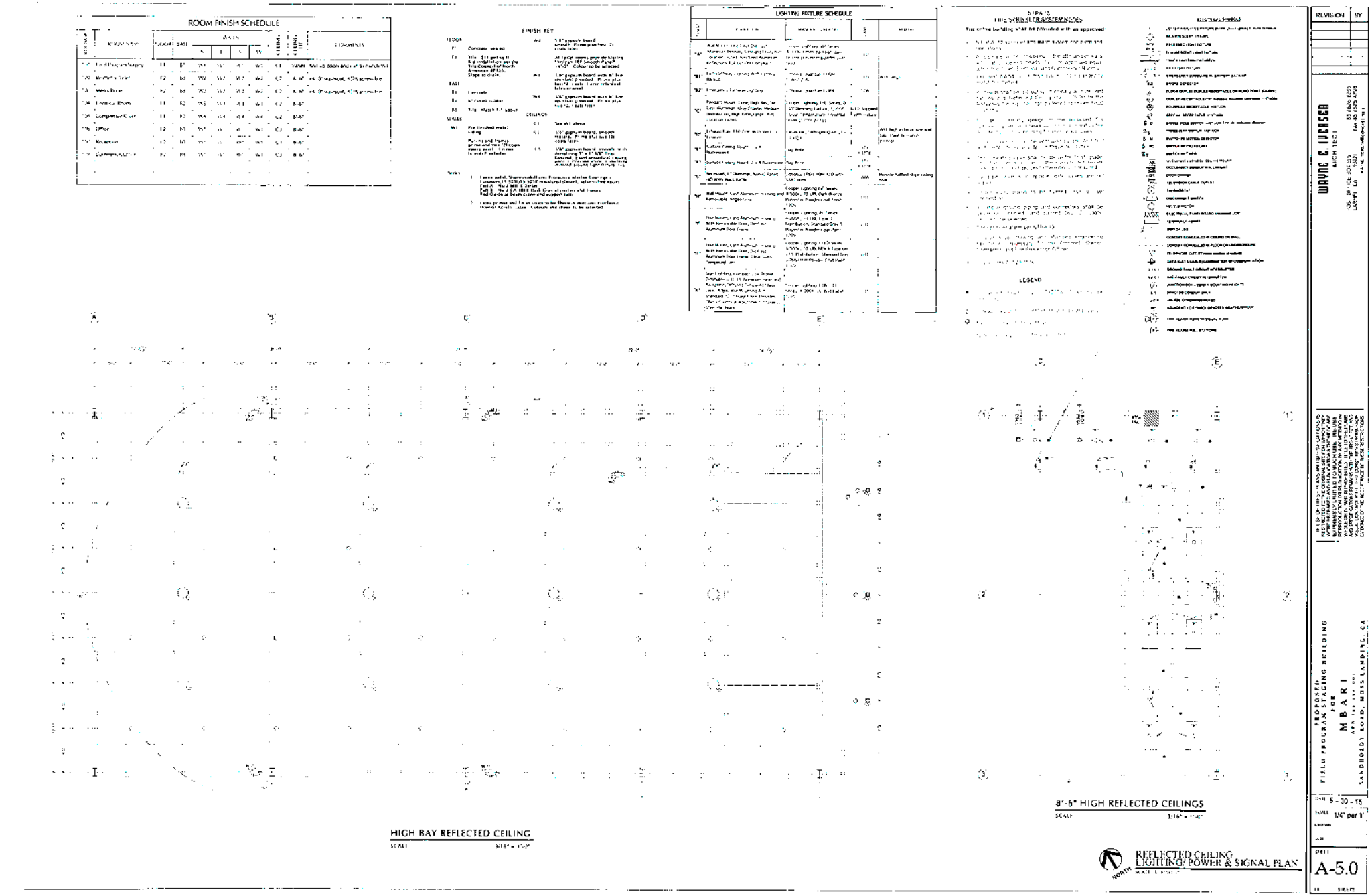
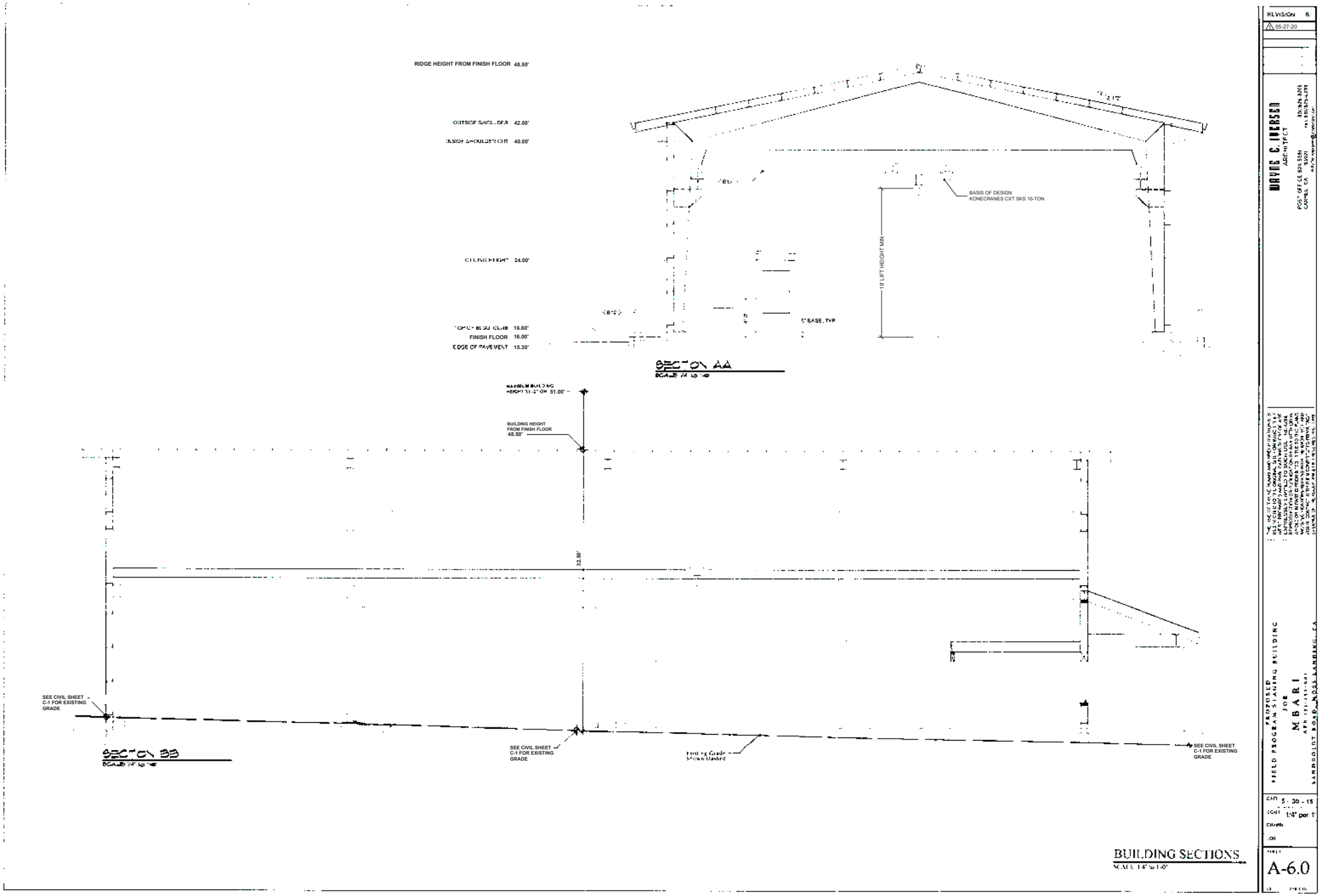
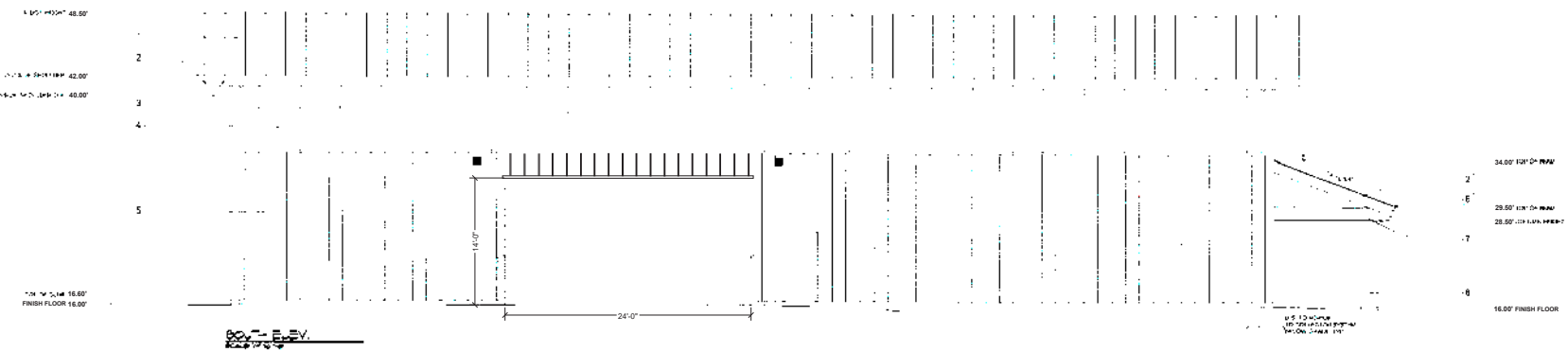
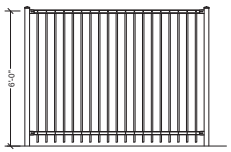


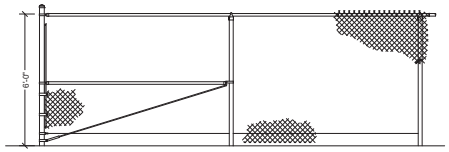
Exhibit 3
A-3-MCO-17-0068 (MBARI Storage Building and Parking Lot)
Page 13 of 24


RIDGE HEIGHT FROM FINISH FLOOR 48.50'
OUTSIDE SHOULDER 42.00'
INSIDE SHOULDER CIR 40.00'
CEILING HEIGHT 24.00'
FINISH FLOOR 16.00'
EDGE OF PAVEMENT 15.30'
BASIS OF DESIGN
KONECRANES CXT SKS 10-TON
19' LIFT HEIGHT MIN
5' BASE, TYP
SECTION AA
BUILDING HEIGHT
FROM FINISH FLOOR
48.50'
32.50'
SEE CIVIL SHEET
C-1 FOR EXISTING
GRADE
SECTION BB
SEE CIVIL SHEET
C-1 FOR EXISTING
GRADE
SEE CIVIL SHEET
C-1 FOR EXISTING
GRADE
BUILDING SECTIONS
DAVID C. IVERSEN
ARCHITECT
PROPOSED
FIELD PROGRAM STAGING BUILDING
FOR
MBARI
DATE 5 - 30 - 15
SCALE 1/4" per 1'
DRAWN
JOB
SHEET
A-6.0
REVISION
05-27-20

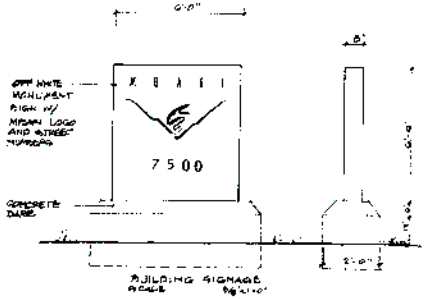


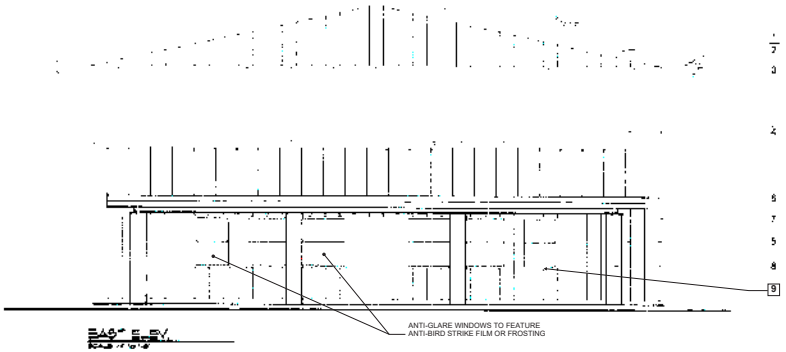


FENCE AT SANDHOLT ROAD
Decorative 6'-0" steel fence with powder coat or equivalent finish suitable for marine environment.



FENCE AT PROPERTY LINE
6'-0" chainlink fence with finish suitable for marine environment (vinyl coated).





EXTERIOR FINISH SCHEDULE

1. Galvanized 24-gauge, metal Nucor VR 16 II roof panels with pencil ribs at 4" centers with Kolmar 500 baked-on Finish. Finish color C.
2. Galvanized 24-gauge metal fascia and boxed soffit with Kolmar 500 baked-on finish. Finish color C.
3. 8"galvanized 22-gauge metal fascia gutter with 3-1/2" square downspouts, all powder-coated to match fascia. Finish color C.
4. Ultirex polycarbonate IPS® Manufacturing Corp, Ultra-R-Panel.
5. Vertical 24-gauge galvanized metal Nucor "Classic Wall" with Kolmar 500 baked-on Finish. Finish color A.
6. 6" galvanized 22 gauge metal fascia gutter with 3-1/2" square downspouts. All powder coated to match fascia. Finish color C.
7. Metal-clad beam. Finish color B.
8. 18" square formed concrete columns and accents. Finish color C.
9. Door and window trim. Finish color B.

PROPOSED FINISH PALETTE

A. Vesta woodgrain finish metal siding or equivalent.

B.

C.

GENERAL BUILDING NOTES

ELEVATIONS

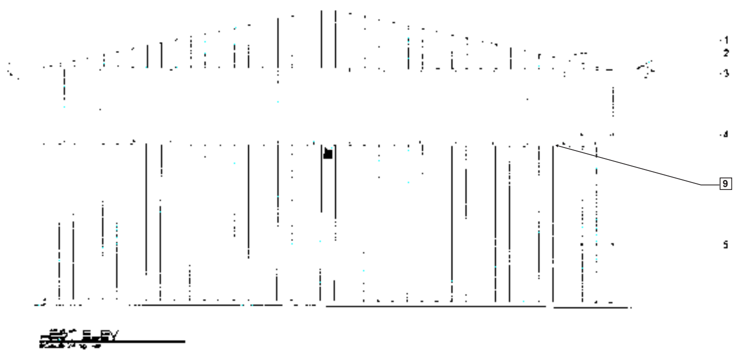
PROPOSED
FIXED PROGRAM STAGING BUILDING
FOR
MBARI
APN 117-141-001
SANDHOLDT ROAD, MOSS LANDING, CA

DAVID E. IVERSEN
ARCHITECT

REVISION | BY
05-27-20

DATE 6 - 30 - 15
SCALE
DRAWN
CHK'D

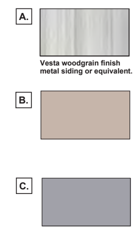
SHEET
A-7.0



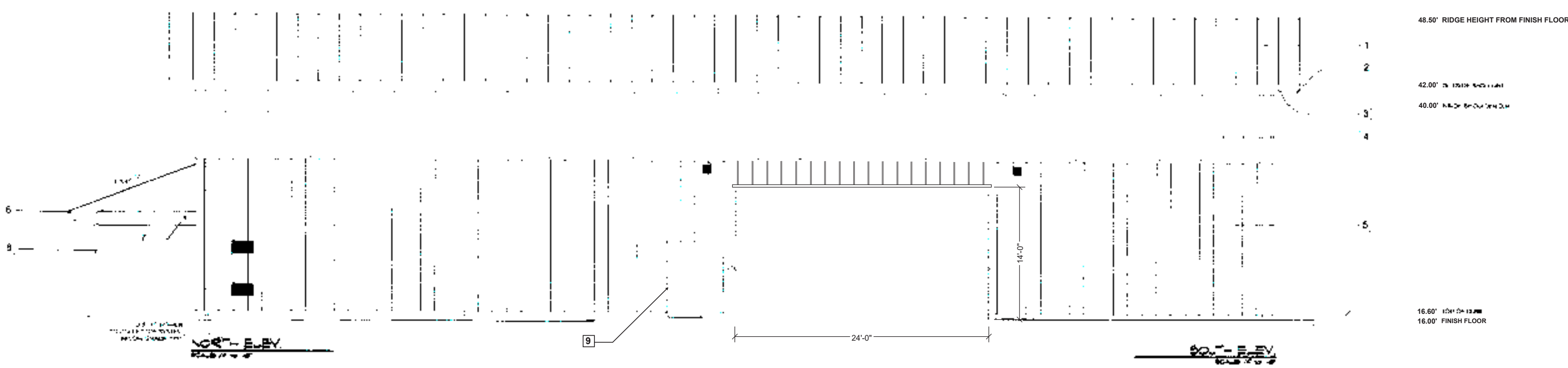
EXTERIOR FINISH SCHEDULE

1. Galvanized 24-gauge, metal Nucor VR 16 II roof panels with pencil ribs at 4" centers with Kelmar 500 baked-on finish. Finish color C.
2. Galvanized 24-gauge metal fascia and boxed soffit with Kelmar 500 baked-on finish. Finish. color C.
3. 8" galvanized 22-gauge metal fascia gutter with 3-1/2" square downspouts. all powder-coated to match fascia. Finish color C.
4. Unitrex polycarbonate PSF Manufacturing Corp, Ultra R-Panel.
5. Vertical 24-gauge galvanized metal Nucor "Classic Wall" with Kelmar 500 baked-on finish. Finish color A.
6. 6" galvanized 22 gauge metal fascia gutter with 3-1/2" square downspouts. All powder coated to match fascia. Finish color C.
7. Metal-clad beam. Finish color B.
8. 18" square formed concrete columns and accents. Finish color C.
9. Door and window trim. Finish color B.

PROPOSED FINISH PALETTE



GENERAL BUILDING NOTES



WAYNE C. IVERSEN
ARCHITECT

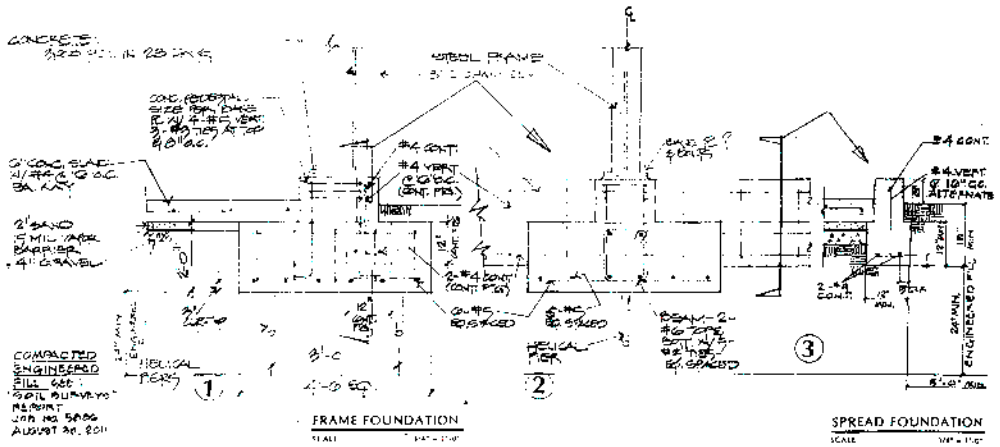
PROPOSED
FIELD PROGRAM STAGING BUILDING
FOR
M B A R I
SANDHOLDT ROAD, MOSS LANDING, CA

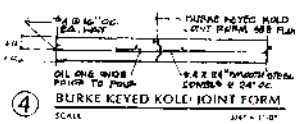
REVISION | BY
05-27-20

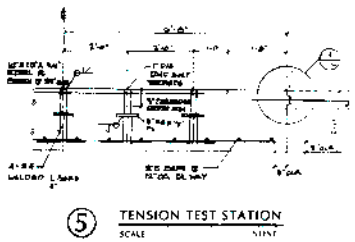
DATE 6-30-15
SCALE 1/4" = 1'

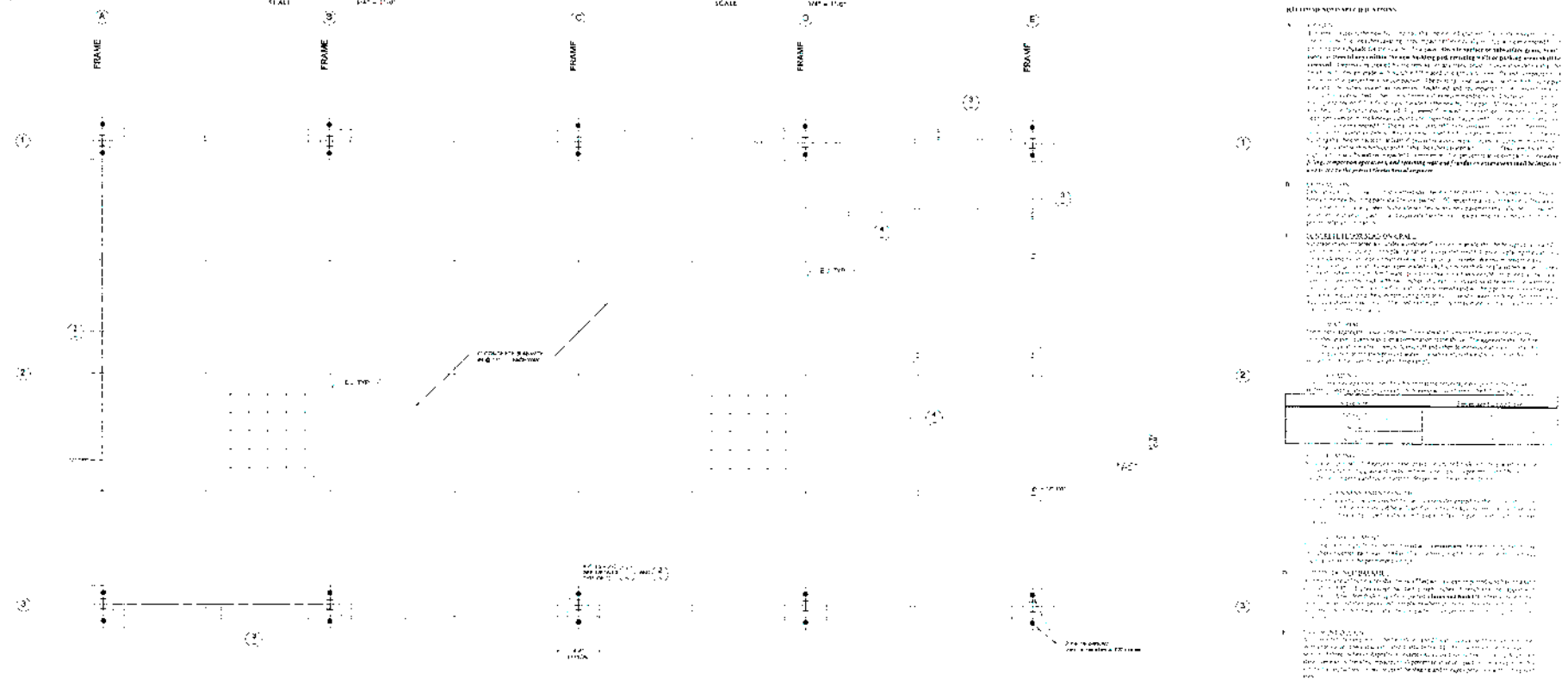
ELEVATIONS

SHEET
A-7.1









FOUNDATION PLAN

PROPOSED
FIELD PROGRAM STAGING BUILDING
FOR
M B A R I

S-1.0

Exhibit 3
A-3-MCO-17-0068 (MBARI Storage Building and Parking Lot)
Page 17 of 24

FRAMING PLAN

WAYNE E. INGERSEN
ARCHITECT

PROPOSED
NEW PREFABRICATED STORAGE BUILDING
FOR
MBARI
SANDHOLDT ROAD, MOSS LANDING, CA

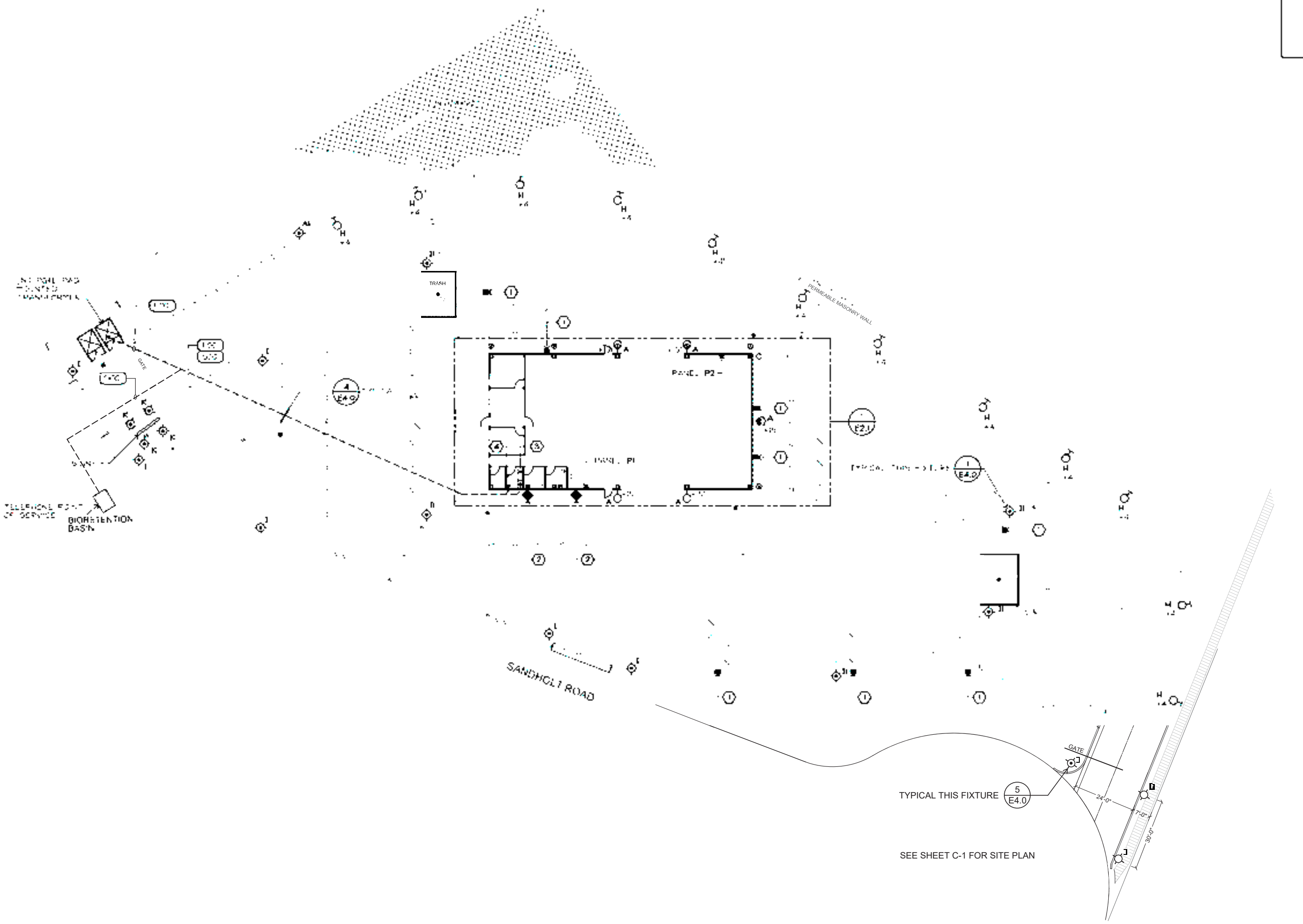
DATE 4-30-16

S-2.0

SHEET NOTES

1. POWER/COMMUNICATIONS PEDESTAL, SEE DETAIL 2/E3.0
2. [illegible]
3. [illegible] 3/E3.0
4. [illegible]

Moss Landing Community Plan Lighting Note
Exterior lighting shall be wildlife-friendly, shall use low sodium or equivalent light sources, and shall be limited to the minimum lighting necessary for pedestrian and vehicular safety purposes. All lighting (exterior and interior) shall be sited and designed so that it limits the amount of light or glare visible from offsite to the maximum extent feasible (including through the use of lowest luminosity possible, directing lighting downward, etc.). The plans shall be submitted with documentation demonstrating compliance with these lighting requirements.



1 **SITE PLAN**
1"=20'-0"

20' 10' 0 20' 40'
1"=20'-0"
NORTH

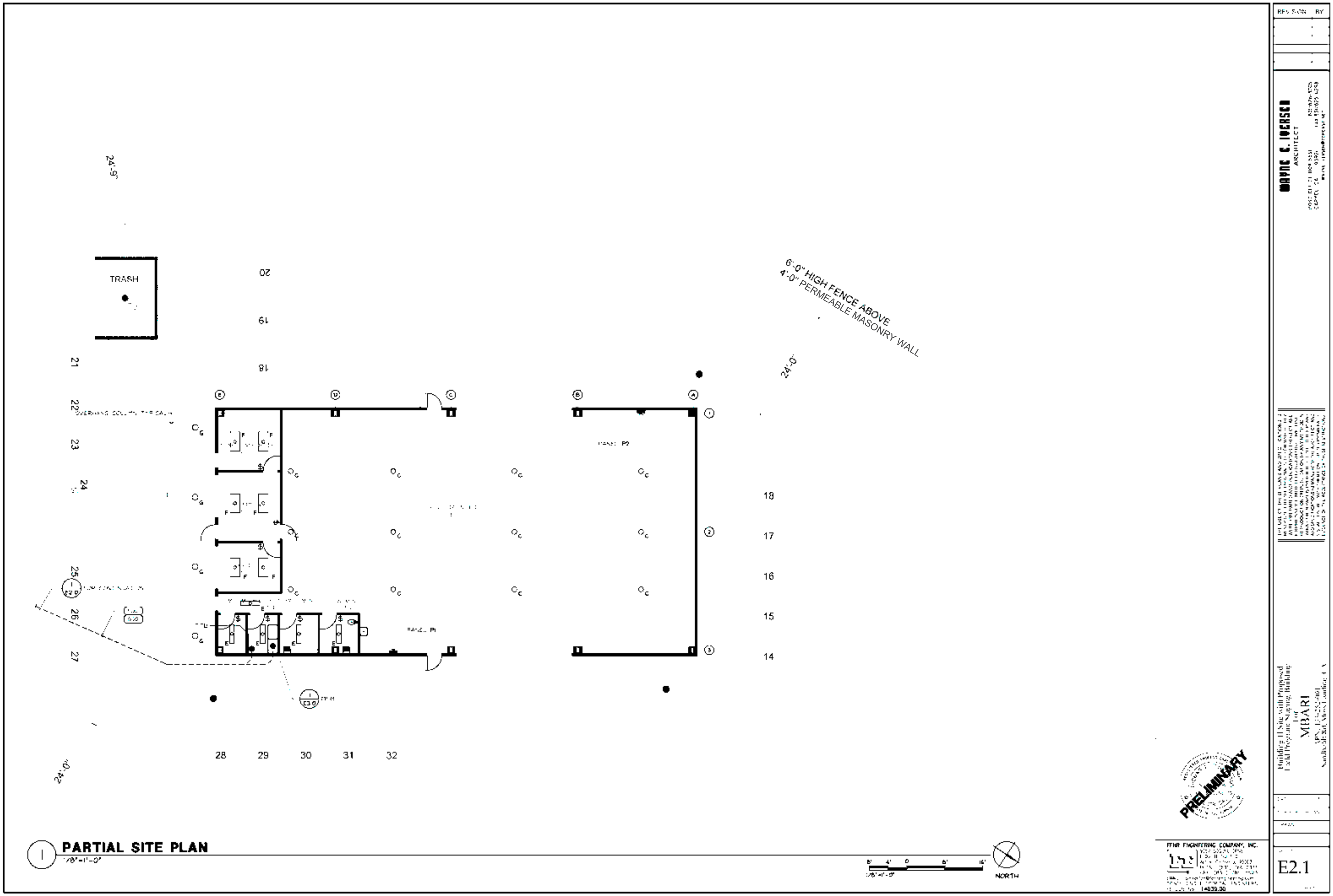
PRELIMINARY

WAYNE C. IVERSEN ARCHITECT

Building II Site with Proposed Field Program Staging Building for MBARI

FEHR ENGINEERING COMPANY, INC.

E2.0



PARTIAL SITE PLAN

1/8"=1'-0"

GENERAL SINGLE LINE NOTES

PANELBOARD SCHEDULE

P1

TYPE
MOUNT
A.I.C.
USE

VOLT-AMPS
A B C TRIP

BUS
MAINS
FEED

VOLT
CONNECTED LOAD
KVA A

VOLT-AMPS
TRIP A B C
USE

PANELBOARD SCHEDULE

P2

TYPE
MOUNT
A.I.C.
USE

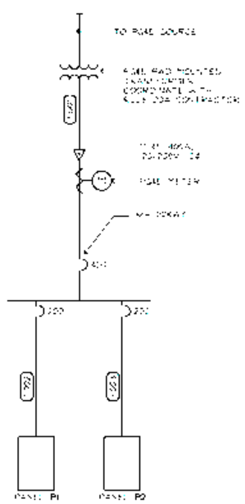
VOLT-AMPS
A B C TRIP

BUS
MAINS
FEED

VOLT
CONNECTED LOAD
KVA A

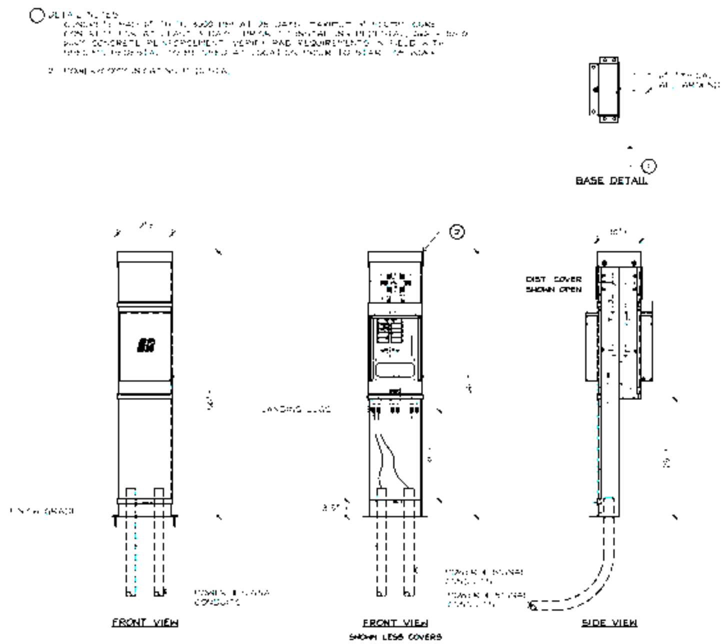
VOLT-AMPS
TRIP A B C
USE

FEEDER SCHEDULE



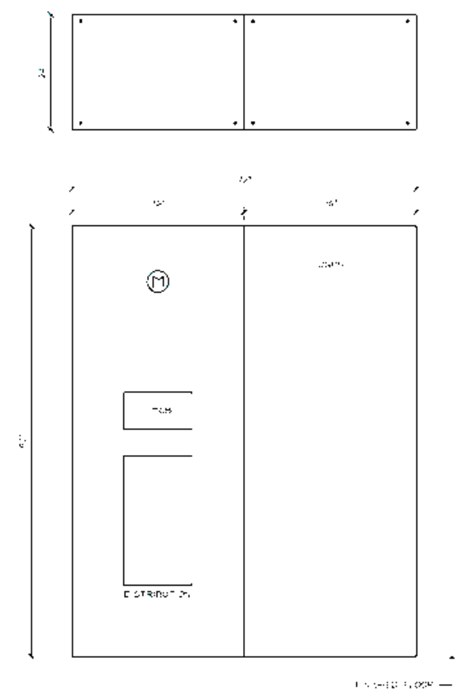
1 SINGLE LINE DIAGRAM

NO SCALE



2 PEDESTAL MOUNTING

NO SCALE



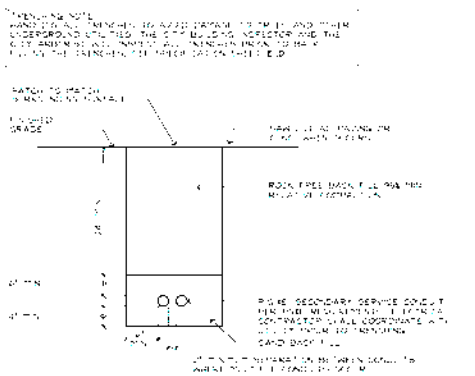
3 SWITCHBOARD ELEVATION

NO SCALE

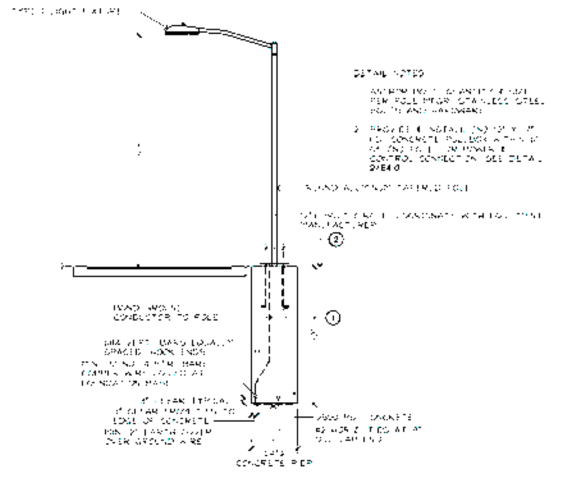
PRELIMINARY

FEHR ENGINEERING COMPANY, INC.

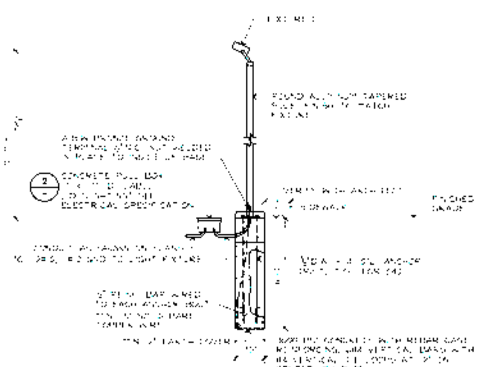
E3.0



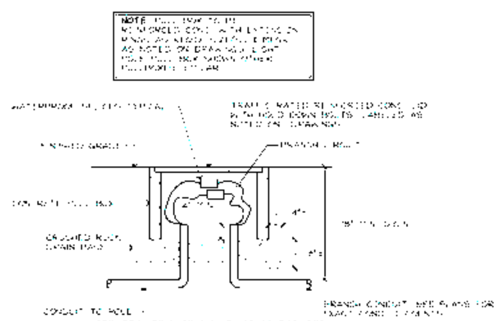
4 **UTILITY SECONDARY TRENCH SECTION**
NO SCALE



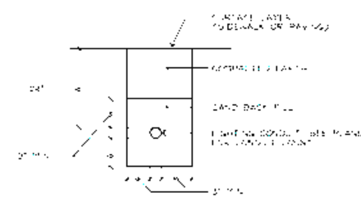
5 **FIXTURE MOUNTING DETAIL (COUNTY)**
NO SCALE



1 **POLE MOUNTED LIGHT FIXTURE (MBARI)**
NO SCALE



2 **PULLBOX DETAIL**
NO SCALE



3 **LIGHTING TRENCH**
NO SCALE

PRELIMINARY

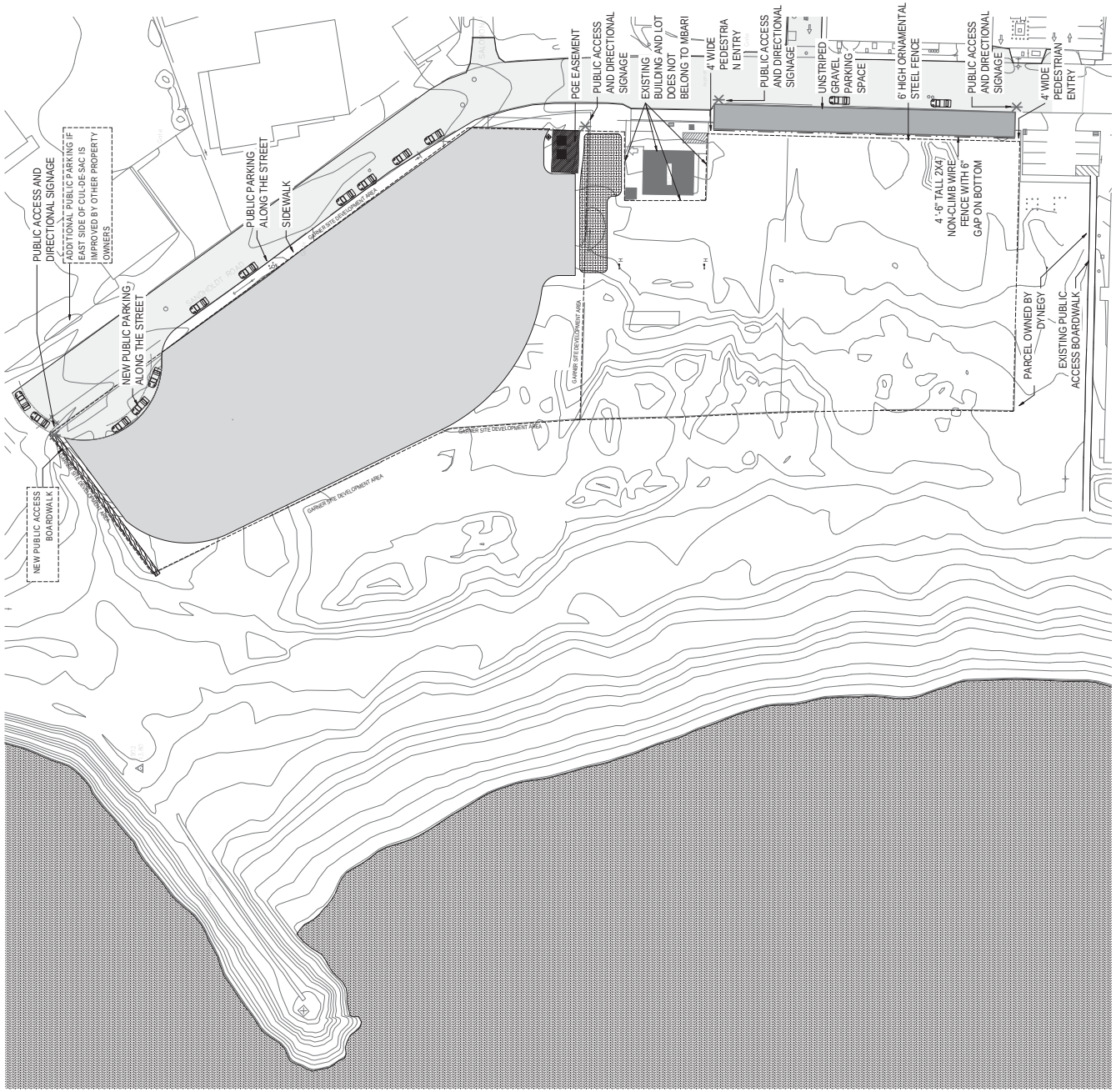
FEHR ENGINEERING COMPANY, INC.

14039.00

WAYNE C. IVERSEN
ARCHITECT

MBARI

E4.0



NOTES:

1. BOARDWALKS AND SIDEWALKS ON THIS PLAN ARE TO BE OPEN 24HOURS PER DAY.
2. NORTHERLY BOARDWALK TO BE SET BACK FROM SECURITY FENCE A MINIMUM OF 3 FEET.
3. BOARDWALKS SHALL BE MAINTAINED BY MBARI.
4. PUBLIC PARKING AREA SHALL BE OPEN TO THE PUBLIC AND MBARI EXCEPT DURING THE HOURS BETWEEN MIDNIGHT AND 5 A.M.

1 PUBLIC ACCESS POTENTIAL OPPORTUNITIES
1/32" = 1'-0"

Flad Architects
Flad Structural Engineers
Affiliated Engineers
ACS

Stamps & Approvals

Project Key Plan

NOT FOR CONSTRUCTION

Rev	Date	Description

Project Title

MBARI

MBARI

APN: 133-252-001
SANDHOLT RD., MOSS LANDING, CA.

MBARI - FIELD PROGRAM STAGING BUILDING

Project Phase

Date	Drawn By
10/29/19	Author
Project Number 19135-00	Checked By Checker

Sheet Title

COUNTY APPROVED SITE PLAN AT THE GARNER SITE WITH MBARI-PREFERRED BUILDING G PARKING ON DAVI SITE AVAILABLE TO PUBLIC DAYTIME USE ON WEEKENDS AND HOLIDAYS - SHOWING OPPORTUNITIES FOR PUBLIC ACCESS

Sheet Number **A-034A** Rev. No.

Overall Description of Operations

Construction of the ESB and site work will take approximately 10 months from the start of the construction. Rough grading, trenching, compaction, setting pull boxes, installing underground piping and conduit and concrete pouring for the building foundations may take approximately 3 months. The building shell on site assembly would take approximately 1 month, building interior including electrical, mechanical, plumbing and finishing 3 months, exterior paving, curbs, electrical fit out of exterior outlet boxes, 2 months, close out and inspections cumulatively 1 month.

6 truck trips are needed to deliver and 6 to pick up the heavy equipment needed for the site preparation, including backhoes and graders.

Construction of the foundations and buildings will require the delivery of materials and concrete trucks. 18 trucks would be required for the aggregate and 28 trucks for concrete delivery (250 cu yds, 9 cu yd trucks) for the building foundations and sidewalks.

The steel building, columns, beams, roof trusses, X-bracing, metal girts, metal siding, roofing, crane beams, trolley, cable would require 15 truck loads, some of them being delivered on large flatbed trailers for the steel work, others on smaller flatbed trucks for the specialty construction associated with the cables, trolleys and winches. The materials will be delivered over the duration of the building assembly, 4 weeks.

Construction materials for the building including plywood sheeting, insulation, waterproofing material, fasteners, windows, doors, frames, roller door, control panels , electrical panels, wiring, service entrance supplies, transformer, breaker panels, dry wall, light fixtures, switches, wiring, boiler, air handling units, conduit, hangers, toilets, plumbing fixtures, carpet, concrete sealant, paint would be delivered from different suppliers and would be delivered in 35 trucks, most of them smaller than full size open trailers which not be expected to impede traffic during transit or during unloading. These deliveries would be made spread out over the period of construction of the building interior 3 months.

Concrete curbs, concrete electrical pull boxes would require 5 truck loads

Large truck deliveries, excluding the concrete trucks, would be scheduled 9am to 3pm outside of peak commuting hours. Concrete truck deliveries would be made continuously during the course of the concrete pour and would be making deliveries to the site during the period 7am-5pm.

There will be between 6-15 construction staff on the site depending on the construction tasks being performed. Construction personnel vehicles will be parked on site whenever construction activities permitted, otherwise they would be parked on the road in front of the ESB but would not obstruct local traffic.

MEMORANDUM

FROM: Lauren Garske-Garcia, PhD, Ecologist

TO: Brian O'Neill, Central Coast Analyst
Susan Craig, Central Coast Manager
Dan Carl, Deputy Director
Michael Ng, Staff Counsel

SUBJECT: MBARI Field Expedition Staging Facility (APN 133-252-001): Ecological Resources

DATE: July 20, 2018

Materials Reviewed:

- Rana Creek Habitat Restoration. Supplement to Updated Biological Assessment (APN 133-252-001) Monterey Bay Aquarium Research Institute, Field Expedition Staging Building. Monterey County CDP Application PLN 120553. California Coastal Commission Appeal No. A-3-MCO-17-0068. Prepared for Mandy Allen; January 3, 2018.
- Rana Creek Habitat Restoration. Updated Biological Assessment for Monterey Bay Aquarium Research Institute, Field Expedition Staging Facility, Building H Site (APN 133-252-001, Moss Landing, CA 95038). Prepared for Monterey Bay Aquarium Research Institute; March 16, 2015.
- Rana Creek Habitat Restoration. Biological Report for Monterey Bay Aquarium Research Institute. Prepared for Monterey Bay Aquarium Research Institute; October 10, 2008 (revised April 15, 2010).
- Rana Creek Habitat Restoration. Updated Botanical Survey Report for Monterey Bay Aquarium Research Institute. Prepared for Monterey Bay Aquarium Research Institute; May 19, 2008.
- Shonman, David. Plant Survey for the Garner Property, Sandholdt Road, Moss Landing, Monterey County AP 133-252-001. Prepared for Coats Consulting; June 17, 1987.
- Griggs, Gary. Monterey Bay Aquarium Research Institute Field Expedition Staging Building, Moss Landing Sand Spit. History and Status of the Dunes at the Proposed Building Site; January 2018.
- California Coastal Commission, Central Coast District Office Enforcement Division. Violation Reference Form V-3-00-001: MBARI Grading; February 2, 2000.
- County of Monterey, Planning and Building Inspection Department. Combined Development Permit Minor and Trivial Amendment: PLN010235; October 9, 2001.

I have reviewed the natural resources occurring on the Monterey Bay Aquarium Research Institute's (MBARI) property (APN 133-252-001) in Moss Landing to determine whether the site supports environmentally sensitive habitat areas (ESHA), in particular, **dune habitat**. Monterey County's approval of a project on the site was appealed to the Commission. On February 7, 2018, the Commission determined that the appeal raised substantial issues, including those related to development within ESHA, and took jurisdiction over the proposed project and its CDP application.

DUNE HABITAT

Dune-backed beaches account for roughly a quarter of California's shoreline but together, **beach-dune complexes constitute only 2-3% of the State's landmass** (Pickart & Barbour 2007), making them one of the State's rarest landscapes. Where they do occur, coastal dunes are **characterized by their sandy substrate, topographical features, and uniquely adapted vegetation communities**. Foredunes, as occur in the narrow band of dunes along the central Monterey Bay and the Moss Landing sand spit, are described as the semi-stabilized features that run parallel to the shoreline, and with attenuation of the most extreme physical forces, generally host a progressively more diverse plant community moving inland. Along the seaward face of foredunes, vegetation may exceed 50% cover (Barbour *et al* 1975) and gradually transition to dune scrub.

LCP ESHA POLICIES

Under the North Monterey County Local Coastal Plan (LCP), ESHA is defined in IP Section 20.06.440 as:

> *Environmentally sensitive habitat means an area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and development.*

LCP Policy 2.3.1 states:

> *The environmentally sensitive habitats of North County are unique, limited, and fragile resources of statewide significance, important to the enrichment of present and future generations of county residents and visitors; accordingly, they shall be protected, maintained, and, where possible, enhanced and restored.*

LCP Policy 2.3.2.1 categorically defines dune habitat as ESHA, without need for independent evaluation of the presence of rare and endangered species (emphases added):

> *With the exception of resource dependent uses, all development, including vegetation removal, excavation, grading, filling, and the construction of roads and structures, shall be prohibited in the following environmentally sensitive habitat areas: riparian corridors, wetlands, dunes, sites of known rare and endangered species of plants and animals, rookeries...*

In other words, under the LCP, if a site is a dune, it is considered ESHA without any other prerequisites.

Further, LCP Policies 2.3.2.2 and 2.3.2.8 speak to land use adjacent to ESHA:

> *Land uses adjacent to locations of environmentally sensitive habitats shall be compatible with the long-term maintenance of the resource. New land uses shall be considered compatible only where they incorporate all*

site planning and design features needed to prevent habitat impacts, upon habitat values and where they do not establish a precedent for continued land development which, on a cumulative basis, could degrade the resource.

Where development is permitted in or adjacent to environmentally sensitive habitat areas (consistent with all other resource protection policies), the County, through the development review process, shall restrict the removal of indigenous vegetation and land disturbance (grading, excavation, paving, etc.) to the minimum amount necessary for structural improvements.

Also, LCP Policy 4.3.6.F.4 addresses industrial use such that:

... New and expanded industrial facilities shall be sited to avoid impacts to agriculture or environmentally sensitive habitats.

GENERAL SETTING

The approximately 3.3-acre subject parcel is the northernmost seaward-facing property along Sandholdt Road in Moss Landing, North Monterey County (**Exhibit 1**). The parcel is bisected by a chain-link fence running roughly parallel to the shoreline, approximately 140-240 ft west of Sandholdt Road. West of the fence, central foredunes give way to beach and the Pacific Ocean. East of the fence, the parcel is relatively degraded and is presently used for what appears to be limited equipment storage and related development. Approximately 170 ft north of the parcel boundary is the southern jetty of the Moss Landing Harbor entrance. Directly south of the subject parcel are two parcels - one larger parcel bounding the shoreline, which is undeveloped and also belongs to MBARI, and the other much smaller parcel bounding Sandholdt Road, which has what appears to be pre-Coastal development and belongs to another land owner. Just south of these two parcels is another large undeveloped parcel owned by MBARI that spans the area between Sandholdt Road and the beach that also appears to include dune habitat. While non-native vegetation appears to be invading all of these areas, it is most concentrated near the proposed development envelope on the subject parcel.

HISTORY OF SUBJECT PARCEL AND SURROUNDING AREAS

The entire length of Sandholdt Road is located on a **sand spit**, a relic of the Old Salinas River that was historically altered to accommodate Moss Landing Harbor. Before being developed, most, if not all, of the **sand spit was central foredune habitat contiguous with the large expanse of central foredunes** (**Exhibit 2**) that continue to persist at Moss Landing and Salinas River State Beaches (now approximately 700 and 1800 ft to the north and south, respectively). In 1947, the US Army Corp of Engineers bisected and dredged the sand spit near the current mouth of Elkhorn Slough and the Monterey Bay Canyon head to create an entry for Moss Landing Harbor (**Exhibit 3**). While this may have impacted littoral sand transport south of the harbor mouth, other dynamic forces such as aeolian (wind) transport and wave energy have continued, and the **dunes themselves have persisted** through the many decades since the harbor was created. In addition, it appears that some of the dredged materials were placed on at least some part of the subject property.

Photos indicate that the site may have been used intermittently over the years for scattered parking/storage of

vehicles and vessels (**Exhibit 4**). In the first photo, showing conditions in 1972[1], the site appears relatively untouched and unoccupied although the effects of scattered boat storage (shown in subsequent photos) appear evident; thus, it appears that some limited storage may have occurred prior to CDP requirements. Aerial photos from 1979, 1986, and 1993 indicate that the subject parcel continued to be used (at least at times) for parking vehicles and vessels, and this use appears to have intensified through the years, although it was never covered by a CDP. It is likely that these activities – particularly the placement of fill material for Harbor construction in the late 1940s and vehicular activity – limited natural dune processes while also facilitating the onset of non-native species invasions.

In early 2000, a **violation case** was opened following reports of unpermitted grading, compaction, and the placement of crushed concrete ("gravel") at the subject parcel[2]. Commission staff contacted the County who confirmed that no CDP had been issued to cover such activities. The County ultimately issued a CDP that allowed for temporary construction parking in the graveled area (related to development at 7502 Sandholdt Road, south of the subject parcel), but did not authorize any other development or use, and **required restoration** within 12 months of permit expiration[3]. However, the **record lacks any indication that the restoration took place** (i.e., restoration plan submission, monitoring reports, official sign-off of restoration completion, etc.). Further, it appears that the gravel was maintained and possibly expanded, and that the site was subsequently used for more intensive storage (i.e., placement of storage containers and other materials), all without CDPs (see 2002 and 2015 photos in **Exhibit 4**). As a result, for our ESHA evaluation **we must consider what the natural resources would be today as if the unpermitted development had never occurred and the requisite restoration had been carried out.**

Only one published report details the natural resources at the subject parcel prior to the violations listed above. In 1987, Shonman conducted a qualitative plant survey at the subject parcel and **described less disturbed portions of the area east of the fence line as characteristic of "mid-dune" vegetation** based on the presence of native dune species. He reported that native yellow sand verbena (*Abronia latifolia*), dune dandelion (*Agroseris apargioides*), beach morning glory (*Calystegia soldanella*), beach evening primrose (*Camissoniopsis cheiranthifolia*[4]), salt grass (*Distichlis spicata*), beach bur (*Ambrosia chamissonis*[5]), silky beach pea (*Lathyrus littoralis*) were abundant, and that invasive non-native species, particularly ice plant (*Carpobrotus* spp.[6]) also occurred. Other species cited by Shonman were native pink sand verbena (*Abronia umbellata*), Pacific dune grass (*Elymus mollis*), mock heather (*Ericameria ericoides*[7]), bush lupine (*Lupinus arboreus*), and the naturalized non-native sea rocket (*Cakile maritima*). Shonman considered the area west of the fence less disturbed and

[1] Meaning prior to Coastal Development Permit (CDP) requirements, which took effect on February 1, 1973 per Proposition 20

[2] CCC Central Coast District Office Enforcement Division V-3-00-001 (February 2, 2000)

[3] Monterey County PLN010235 (September 9, 2001)

[4] Identified as *Camissonia cheiranthifolia*

[5] Identified as silver beachweed, *Franseria chamissonis*

[6] Identified *Carpobrotus edulis* as abundant and *Carpobrotus chilensis* as sparse

[7] Identified as *Haplopappus ericoides*

characteristic of foredune and mid-dune zones, and estimated vegetation cover ranging from 65-85%.

CURRENT STATE OF SUBJECT PARCEL AND SURROUNDING AREAS

Today, much of Sandholdt Road is developed, particularly south of the three northernmost parcels paralleling the shoreline. While some of the area was developed prior to the Coastal Act, the intensity of use has substantially increased in the area over the past four decades. North of the harbor entrance, dune habitat remains largely intact at Moss Landing State Beach. South of Sandholdt Road, substantial restored dune habitat can be found at Salinas River State Beach.

The applicant's biological consultant (Rana Creek Habitat Restoration (RCHR), 2015) identified approximately 0.10 acres in the southwestern corner of the subject parcel east of the fence, and the area west of the fence extending to the beach as dune ESHA. The consultant makes a distinction between the most "intact" or "high quality" native dune vegetation and other dune areas on the parcel degraded by previous activities (i.e., compaction, imported gravel and fill material, staging activities, etc.), determining that only the high quality native dune areas constitute ESHA. This determination appears to be based on the absence of fill material, a dominance of native vegetation, and the consultant's position regarding the likelihood of sensitive species occupying or using the subject parcel (RCHR 2015, 2018). **The consultant's finding that sensitive plant or animal species are unlikely to exist on the subject parcel or in the immediately surrounding area is apparently based on reconnaissance surveys and the lack of published records for sensitive species in the area.** Based on the consultant's report, the County recognized ESHA as occurring entirely outside the development envelope and did not require an ESHA buffer[8].

On January 31, 2018, I visited the subject parcel with Commission Central Coast District staff, MBARI staff, and MBARI's consultants. The goals were to observe current on-the-ground conditions including the vegetation communities and presence of sensitive plant and animal species. We also examined the surrounding landscape.

FIELD OBSERVATIONS: SURROUNDING AREAS

Sandholdt Road is immediately east of the subject parcel; a narrow fringe of ruderal vegetation separates the parcel from the road. Vehicles appear to regularly use the road shoulder for parking and turnabout.

The area directly north of the subject parcel is of distinctly lower elevation than the subject parcel itself (**Exhibit 5**). A steep bank (scarp) occurs within 1-2 ft of the fence line and shell debris (likely an artifact of previous fill) occurs in the sediment layers. The elevated area is vegetated with native species (e.g., yellow sand verbena, beach evening primrose) and non-native species associated with dunes (e.g., iceplant, cut-leaf plantain (*Plantago coronopus*)). Below the scarp, the immediate area is largely unvegetated but within 40-100 ft are native dune plants and non-native weedy species.

At present, the undeveloped areas directly south and west of the subject parcel have the characteristic undulating topography (mounds and depressions) and sandy substrate of dunes (**Exhibit 6**) giving way to the beach. Vegetated areas include species typical of central foredunes such as yellow sand verbena, American dune grass,

[8] Rather than specifying a minimum buffer to protect ESHA, at the suggestion of the consultant (Mitigation Measure 1a, RCHR 2015), the County only required that any excavation activities within 5 ft of ESHA include shoring of cut slopes.

beach bur, and mock heather. Invasive non-native species such as sea rocket, bur clover (*Medicago polymorpha*), and iceplant are also present.

FIELD OBSERVATIONS: SUBJECT PARCEL

With respect to vegetation assemblages, there are four general areas on the subject parcel, recognizable by: 1) a mostly barren gravelled surface spotted with weedy species; 2) a dominance of invasive non-native sweet fennel (*Foeniculum vulgare*) and grasses; 3) a dominance of invasive non-native iceplant and grasses but with a consistent presence of native dune species; and, 4) a dominance of native dune species including beach bur and silky beach pea (**Exhibits 7 and 8**).

Within the fenced area, where vegetation is limited by a dense cover of gravel in the central portion (*Vegetation Area 1*), weedy species such as dock (*Rumex* spp.) and non-native grasses occur. The topography of this graveled area reflects the previous unpermitted grading and compaction, and the gravel itself appears to bleed out from the periphery as it mixes into surrounding substrates.

Invasive non-native sweet fennel and invasive non-native grasses such as ripgut brome (*Bromus diandrus*) dominate the area south of the main gate and to the southeastern corner of the subject parcel (*Vegetation Area 2*), occupying nearly 100% of th**e** available substrate. The topography in this area is relatively flat with some downslope angled towards the southeastern corner. Large items (e.g., cable spools, storage containers) currently stored, and the presumed maneuvering of vehicles to place these, have likely contributed to the observed flattening of the land. Small mounds of thatch from previous vegetation cutting remain and create small-scaled uneven surfaces. Throughout this area, the surface substrates contain organic content and are notably damp in the low area towards the southeast corner.

The area dominated by native dune species (*Vegetation Area 4*) generally aligns with what RCHR (2015) has previously described and mapped as foredunes on either side of the fence. Inside the fence, beach bur, silky beach pea, yellow sand verbena, California salt bush, beach morning glory, beach evening primrose, salt grass, and mock heather all occur. Dune topography is apparent as gently undulating forms. Surface substrate is primarily sandy, though shell debris and gravel appear in peripheral areas.

The remainder of the vegetation within the fenced area includes an assemblage dominated by invasive non-native iceplant and other various non-native species (*Vegetation Area 3*); **however, native dune species are often interspersed among the non-natives.** Beach bur and beach evening primrose were frequently observed surrounded by dense non-native cover (**Exhibit 9**). Native bush lupine and lizard tail (*Eriophyllum staechadifolium*) also provide important vegetative structure in these largely invaded areas. Topographically, evidence of dune features exists as large-scale undulations and along the western side of the graveled area, steep faces suggest scars from previous grading. Like the area dominated by native dune species, the substrate in these areas where native dune species persist among iceplant and other invasive vegetation is primarily sandy.

CENTRAL FOREDUNE HABITAT

Dunes on the subject parcel constitute what CDFW characterizes as central foredune habitat, which generally occurs from mid-Santa Cruz County to Point Conception in Santa Barbara County, and is recognized by the presence of endemic and circumarctic herb species including yellow sand verbena and beach bur. The CDFW

September 2010 Natural Communities list identifies central foredunes as having a rarity ranking of G1 S1.2, a 'critically imperiled' rare habitat type[9]. The second volume of the Manual of California Vegetation ("MCV2", Sawyer et al. 2009) defines central foredune vegetation as a series of species alliances. The ***Abronia latifolia-Ambrosia chamissonis*** **(Sand Verbena-Beach Bur) Herbaceous Alliance,** that has a rarity ranking of G3 S3[10], is typical of central foredune vegetation and best describes what is found on the subject parcel. In addition to this alliance's two eponymous species, other herbaceous dune species included in this alliance and found on the subject site are yarrow (*Achillea millefolium*), saltbushes (*Atriplex* spp.), beach morning glory, beach evening primrose, sea rocket, iceplant, lizard tail, and silky beach pea. Emergent shrub species such as coyotebrush (*Baccharis pilularis*), mock heather, and bush lupine (all observed on the subject parcel) and can also occur at low cover within dune mat. MCV2 describes the herbaceous layer as typically less than 50 cm in height, with the canopy cover ranging from sparse to continuous. Many of these species have been previously documented at the subject parcel (Shonman 1987) and are **currently present, indicating that the characteristic dune species have managed to persist** despite significant disturbance on the subject property and invasion of non-native species. It also suggests that there **has been, and continues to be, a viable native seed bank**.

BASELINE

Given that unpermitted development has occurred on the subject parcel since at least 2000 and given that the restoration required by the County's 2001 permit never took place, the current conditions on the site cannot be used as the baseline for evaluating the proposed development's potential impacts on natural resources. In fact, these circumstances have contributed to the degradation of the subject parcel. Procedurally, we **must consider what would likely be on-site had the unpermitted activities not occurred *and* the required restoration been complete.** To identify what the physical and biological characteristics of the subject parcel would likely have been, we have relied on site reconnaissance, Shonman's vegetation report (1987), aerial imagery, and what is known about the historical land use and its general effects on dune topography, substrates, and vegetation. We interpret what would likely be where the land has been altered and/or heavily disturbed (and not instead restored as required) from observations of the topography, surface substrate, and central foredune vegetation in less disturbed areas, on and surrounding the subject parcel.

ESHA DETERMINATION

Generally, an ESHA determination involves a two-step process. The first step involves verifying whether a particular site supports habitat or species that are either rare or especially valuable because of their special nature or role in an ecosystem. The second step is to ascertain if the respective species or habitat is easily disturbed by human activities or development. In the North County portion of Monterey County specifically, ESHA

[9] Global and State Level 1 communities or species are identified as "critically imperiled - at very high risk of extinction due to extreme rarity (often ≤5 populations), very steep declines, or other factors" (http://www.natureserve.org/conservation-tools/conservation-status-assessment).

[10] Global and State Level 3 communities and species are identified as "vulnerable – at moderate risk of extinction due to a restricted range, relatively few populations (often ≤80), recent and widespread declines, or other factors" (http://www.natureserve.org/conservation-tools/conservation-status-assessment).

determinations are also informed by the LCP's lists of habitat types that are c**ategorically recognized as ESHA, including dunes** (LCP Policy 2.3.2.1).

STEP 1: NATURAL COMMUNITY AND SPECIES RARITY OR SPECIAL VALUE

Given the subject parcel's history, Shonman's report, aerial photographs, our field observations, and interpolating across the area of unpermitted development, including the area now flattened and graveled, **we find that the subject parcel largely constitutes central foredune habitat (G1 S1.2),** which is a critically imperiled rare natural community[11]. Notably, of the three regional foredune habitats in California, central foredunes are considered the rarest. While central foredune habitat itself is rare, the following information about sensitive species *further* supports the rarity finding for this habitat.

FLORA

Although no special status plant species have been documented on the subject parcel itself, federally-threatened and CNPS 1B.2-ranked **Monterey spineflower** (*Chorizanthe pungens* var. *pungens*) and federally-endangered and CNPS 1B.2-ranked **Monterey gilia** (*Gilia tenuiflora* ssp. *arenaria*) have been identified as having a potential to occur and are known from the surrounding area (CNDDB)[12]. Critical habitat for Monterey spineflower is designated approximately 850 ft to the north at Moss Landing State Beach, and 1700 ft to the south at Salinas River State Beach (Unit 2; USFWS 2008). Monterey spineflower thrives in dunes as well as disturbed areas. Gilia is often associated with spineflower as well as several other native dune species that have been documented on the site including beach evening primrose, mock heather, and beach bur. It is important to note that there **have been no protocol-level surveys for these species on the subject parcel** and given their small size, they could be easily missed. Also, the most recent reconnaissance surveys were conducted in June 2014[13], which was on a single day three years into a drought. Under such climate conditions, and particularly where invasive species have dominated cover, **the surface expression of extant spineflower and gilia populations may have been suppressed as seed banks lay dormant awaiting more favorable conditions**. In May 2017, elsewhere in the Monterey Bay region and following a particularly wet winter, we observed extensive populations of Monterey spineflower well beyond where they had been previously mapped - much of this occurred in disturbed areas where non-native vegetation was abundant.[14] Importantly, **a population of Monterey spineflower was also recorded approximately 150 feet south of the subject parcel in June 2017,** from a flat sandy area with iceplant, beach evening primrose, and beach bur (CNDDB; **Exhibit 10**). Given the 2017 observations, the proximity and recent

[11] Natural communities typically meeting Coastal Commission rarity criteria for ESHA include those listed by the CDFW Natural Diversity Database (CNDDB) as having a global or state ranking of 1, 2, or 3.

[12] Plant and animal species typically meeting Coastal Commission rarity criteria for ESHA include those natural communities and species listed by the federal and state endangered species acts (ESA & CESA, respectively), and by the California Native Plant Society (CNPS) as '1B' and '2' plant species.

[13] While prior surveys at the subject parcel (Shonman 1987; RCHR 2008, 2010) have not reported observations of Monterey spineflower and Monterey gilia, they too were only based on reconnaissance rather than protocol-level searches for sensitive species. The Commission generally requires biological surveys to have occurred within 5 years to be considered representative of current conditions; however, older surveys may provide reference and are especially relevant when positive observations of rare or sensitive species are made.

[14] L. Garske-Garcia, *personal observation*

nature of an occurrence, and the similarity in vegetation, it is entirely reasonable to **expect Monterey spineflower to occur nearer or even at the subject parcel**.

Finally, the dune habitat restoration required by the 2001 CDP never took place and instead, the subject parcel has been largely maintained with gravel cover, used for storage, and allowed to become overrun with large swaths of invasive non-native vegetation. This **failure to restore the subject parcel provides important context for our present interpretation** of baseline flora and determination of ESHA. Had the restoration occurred in the manner that is typically the case, invasive non-native vegetation would have been eliminated, dune topography would have been restored, and revegetation with native dune species would have been maintained until well-established. Provided such efforts and achievement of typical success criteria over at least a five-year monitoring period, it is arguable that the current state of the subject parcel would be substantially more conducive to sensitive species such as the Monterey spineflower and Monterey gilia, as well as more representative of native central foredune habitat. As is, the **unpermitted development and lack of required restoration have likely severely curtailed what should be present at the subject parcel today**, and what is necessarily assumed as the baseline for evaluation. Thus, although the subject parcel suffers from muted and altered topography, and an inundation of invasive non-native vegetation, the **current condition is not what we would expect had the required restoration taken place, and it cannot be used alone as the baseline** for understanding the habitat or whether the site constitutes ESHA.

FAUNA

Globose dune beetles are considered to be a vulnerable species by the IUCN and are ranked as G1G2 S1S2, thus warranting protection under the Coastal Act and Northern Monterey County LCP. This nocturnal and largely subterranean species dwells in foredune habitats where vegetation includes beach bur and sand verbena. CNDDB records report them near the subject parcel at Salinas River State Beach in 1991 where they are still **presumed extant**. That beetles were not observed during RCHR's surveys is not surprising given that their general reconnaissance surveys were completed during daylight hours and did not methodically investigate specifically for the beetles.

The **California legless lizard** (*A. pulchra*) is a CDFW Species of Special Concern (SSC)[15], is State-ranked as S3, and is considered sensitive by the US Forest Service. It typically occurs on beach dunes or in chaparral, in sparsely vegetated areas with occurrences of native bush lupines and mock heather, where it burrows in loose sandy substrate and forages on insects, beetles, and spiders within the leaf litter. ***Vegetation Area 4*** **currently provides the necessary conditions** for legless lizard habitat. As with the globose dune beetle, non-detection may be more an artifact of the **lack of rigorous study and focused surveys necessary** to locate this inconspicuous species than its genuine absence (Kuhnz *et al* 2005). CNDDB lists several records of legless lizards within 2 miles of the site and one study estimated that on average, lizards have a home range of approximately 750 sq feet but may exceed 2400 sq ft (Kuhnz 2000). Further, was it not for the ongoing, and particularly more recent, unpermitted alteration of substrate and rampant non-native vegetation that has been allowed to take over much of the subject parcel, additional habitat suitable for legless lizards would likely exist there.

[15] Natural communities and plant and animal species which have in the past met Coastal Commission rarity criteria for ESHA include those natural communities and species listed as California Species of Special Concern.

In addition to being federally-listed as threatened since 1993 and listed by the State as a SSC (State-ranked as S2), **western snowy plovers** are also considered by the US Fish and Wildlife Service to be a Bird of Conservation Concern, and are on the Red Watch List for the North American Bird Conservation Initiative. In 2012, the US Fish and Wildlife Service designated **critical habitat for western snowy plovers from Moss Landing to Monterey** (Unit CA22; USFWS 2012). There are many records of their residence and nesting in the areas surrounding the subject parcel, as near as 350 ft south of the site; however, their **use of the subject parcel is likely marginal**, if any, at this time due to the level of existing disturbance and degradation on-site. Other locations nearby remain important for nesting plovers, including the saltmarshes of the CDFW Moss Landing Wildlife Area (MLWA) approximately 1 mi northeast of the subject parcel and other less-disturbed beaches.

And finally, similar to the discussion concerning flora above, had the required restoration occurred, the subject parcel would be expected to exhibit more recognizable dune topography and native vegetation including special status species, and the fauna should be understood in that way as well.

As described above, the presence of central foredunes and the potential for several sensitive plant and animal species to occur at the subject parcel (thus illustrating the special nature/role of central foredunes in the ecosystem) **satisfies the rarity requirement for Step 1 in the ESHA determination**. Furthermore, as dune habitat, the subject parcel constitutes what is categorically recognized as ESHA under the north Monterey County LCP.

STEP 2: SENSITIVITY TO HUMAN ACTIVITIES AND DEVELOPMENT

As previously stated, dunes are one of the rarest habitats in California (Pickart & Barbour 2007) and support unique assemblages of species, many of which are recognized with special status. It follows that **any direct loss of dune habitat will only mathematically reinforce the remaining fraction's importance**. Where dune habitats remain in California today, they too tend to reflect the impacts of human use and development. The most pressing threats to California's remaining dunes have been cited as **non-native species invasions**, denudation via **trampling and driving,** and climate change via **rising sea levels** and increased storm intensities (Alpert 2016). Further habitat **fragmentation** also threatens to isolate species that depend on dune habitats and limit their abilities to recover via natural dispersal. Other disturbances include **lighting**, which can disrupt activity patterns for nocturnal species such as the globose dune beetle and/or increase their visibility to predators, and **noise**, which may flush nesting birds or other skittish animals such as legless lizards. Individually, each of these disturbances may impact the sensitive resources; cumulatively, such impacts may be further exacerbated. The subject parcel represents a case in point, where the degrading impacts associated with the use and maintenance of the area for storage illustrates what human activities and development can do to dune habitat. Thus, the **sensitivity requirement for Step 2 in the ESHA determination is satisfied**.

ESHA DELINEATION

WEST OF FENCE LINE

West of the fenced area, the applicant's consultant mapped the subject parcel as mostly foredune (sand verbena-beach bur[sage] alliance) with patches of iceplant mats and ruderal vegetation (RCHR 2015). They also noted that there is an attenuating vector of degradation across the foredunes as one moves westward but ultimately, recognize the area west of the fence as ESHA despite the presence of non-native vegetation and other

disturbance. We find that **all of the area between the western side of the fence and the beach is central foredune ESHA** on the basis of: 1) presence of characteristic central foredune vegetation; 2) predominance of sandy substrate; and 3) presence of characteristic topographic dune features.

East of Fence Line

While the area recognized as ESHA by the consultant (RCHR 2015) is relatively less disturbed and more representative of healthy central foredunes, indicators of impaired dunes occur throughout the area. These include the presence of characteristic dune vegetation, sandy substrate, and dune topography. Where unpermitted development exists today - namely the graded, compacted, and graveled area at the core of the proposed development envelope - we find that central foredune ESHA would have existed here as well. The subject parcel's geomorphic history, aerial photographs, Shonman's report (1987), and our field observations all support this and provide guidance for interpolating across the area of unpermitted development. In addition, had the required restoration taken place, we would expect that the areas near and beneath the graveled portion of the subject parcel would demonstrate only **more** dune characteristics (topographic as well as biological), and need to be understood with that baseline as well.

One part of the subject parcel admittedly presents a bit of an interpretive challenge – namely *Vegetation Area 2*, an approximately 0.25-acre area along the eastern edge of the parcel, south of the access gate and west to approximately the location of a power line (as identified in **Exhibit 7** and including a small fraction of the gravelled/weedy area separating the two polygons). As previously described, we observe that this area is currently dominated by invasive non-native sweet fennel and grasses, has damper and more organic substrate compared to the rest of the site, and is relatively flat with some down-sloping to the southeast. Historical imagery (**Exhibit 11**) suggests that vegetation in this area has been distinct and lusher than the rest of the parcel for several decades but the reason for this is not readily apparent in the available record. It is possible that the area was once part of a dune swale – a typical feature of dune systems characterized by lower elevation, wetter substrate, and vegetation assemblages distinct from adjacent drier and more wind-exposed areas – and, which would have been vulnerable to invasion by non-native species once Sandholdt Road was built. Alternatively, the placement of particular fill material may have favored exploitation by non-native species. Or regular topping and composting of vegetation on-site, as appears to be current practice (**Exhibit 12**), could have facilitated the development of organic material, nutrients, and moisture in the substrate. We also observed a water faucet in this area (**Exhibit 13**), which likely augmented natural moisture levels in the substrate and would support the proliferation of non-native species over natives adapted to drier conditions. Regardless of mechanism and timing, it remains that while current conditions in this small area do not appear to indicate dune habitat, historically it once was. And we assume that the restoration, had it been carried out as required, would have resulted in viable dune habitat, whether swale or drier conditions, in the present. Though there is uncertainty concerning the timing and mechanisms of change that led to the conditions we now observe in *Vegetation Area 2*, we err on the side of caution to the benefit of the resources of the State, and find that **the entire area east of the fence line, including the 0.25-acre area discussed, constitutes central foredune ESHA (Exhibit 14).**

Buffers

Although areas designated ESHA are protected from the direct impacts of most development (e.g., only resource-dependent development such as restoration is allowed in ESHA), they remain susceptible to indirect impacts from

activities occurring in adjacent areas. An area between the ESHA and development, commonly referred to as a buffer, is generally required to further protect sensitive resources. Buffers act as screens, preventing or attenuating disturbance from noise, lighting, use of herbicides or pesticides, introduction of invasive and non-native plant and wildlife species, and so forth. Buffers can help preserve conditions that allow for the normal behavior of organisms, serve as habitat corridors, and also provide adaptive capacity for ESHA faced with more broadly changing conditions such as climate change. Critical to buffer function is the fact that a **buffer area is not itself a part of the ESHA**.

While the North Monterey County LCP recognizes dunes as ESHA, it does not provide a policy that explicitly identifies buffer dimensions. In other LCPs, where specified, ESHA buffers are typically set at a minimum of 100 ft, including for dunes.[16] The Commission has similarly **applied a minimum 100-foot buffer to ESHA in past actions, including dune habitats.** At times, it has reduced this to as little as 25 ft where rigorous best management practices are employed, development does not interrupt the continuation of habitat, and additional dune mitigation is required.[17] In the present case, existing development including Sandholdt Road establishes some limits to which a buffer cannot reasonably reach beyond, and given its history, the general area already experiences a level of activity that is not expected to be further reduced. We assume a degree of acclimation by any wildlife using the ESHA, and therefore **recommend a buffer of 50 ft** (**Exhibit 15**).

CONCLUSION

In past actions, the Commission has recognized dunes as ESHA, including categorically in many LCPs (as here in Monterey County). Further, the Commission has recognized the disproportionate nature of impacts imposed on dunes and taken a conservative approach to their protection. While characteristic vegetation has often been a key indicator of dune habitat, the Commission has also found that unvegetated areas exhibiting dune substrate and topography, and areas dominated by invasive non-native species constitute dune ESHA.[18] Similarly, areas with degraded topography and/or substrate – and even those which have been covered in gravel and asphalt in the pre-Coastal era – have been recognized as dune ESHA when the vegetation indicates there are sufficient conditions for dune persistence and/or restoration.[19] In the present case, though dune vegetation, substrate, and topography have all been degraded by human activities such that their expressions are now muted or confused, **multiple lines of evidence indicate that central foredune habitat persists at the subject parcel.** Furthermore, had the restoration required by the 2001 CDP been carried out as expected, we would anticipate that dune habitat conditions and indicators would be significantly more pronounced in the present and that it would be even more evident that the subject parcel constitutes dune habitat. As the LCP categorically considers dunes to be ESHA, without need for independent evaluation of further analyses or the occurrence of special status species, we can readily conclude that the subject parcel constitutes dune ESHA.

[16] For example, see Eureka Certified LCP (1984), Morro Bay Certified LUP (1982), UCSB LRDP (2010), and Malibu LUP (2002).

[17] For example, see Oceano Pavillion (A-3-SLO-04-061) and County of Los Angeles, Department of Beaches and Harbors (CDP 5-17-0537).

[18] For example, see CEMEX Sand Mining (CDO CCC-17-CD-02), Fort Ord Dunes State Park (CDP 3-14-1613), City of Oxnard LCP Amendment 1-05 (Oxnard Shores), and City of Malibu LCP Amendment 1-07 (Malibu Bay Company).

[19] *Ibid*

As described above, central foredune habitat occurs across the entirety of the subject property and thus qualifies as ESHA. Central foredunes are considered critically imperiled (G1 S1.2), and at least two sensitive plant and three sensitive animal species also have the potential to occur at the subject parcel. Because all of these (species and habitat) are rare and can be easily disturbed or degraded by human activities, **I conclude that the approximately 2.7 acres of central foredune habitat at the subject parcel, including 1 acre west of the fence (the remaining 0.6 acres being beach) and 1.7 acres east of the fence, rise to the level of ESHA**. **To further protect the dune ESHA from indirect impacts, I recommend that a minimum buffer of 50 ft be applied about the full perimeter.**

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EXHIBIT 1

Map of vicinity & parcel

EXHIBIT 2

Photos showing before/after spit bisect (1931/1948)

EXHIBIT 3

Map of bathymetry at Moss Landing Harbor entrance and the Monterey Submarine Canyon

EXHIBIT 4

Aerial imagery of the site from 1972, 1979, 1986, 1993, 2002 and 2015

EXHIBIT 5

Photo of area north of the subject parcel

EXHIBIT 6

Photos of areas south and west of subject parcel

EXHIBIT 7

Map of vegetation types and cover

EXHIBIT 8

Photos of four vegetation types/areas

EXHIBIT 9

Photos of native dune species surrounded by non-natives

EXHIBIT 10

Map of Monterey spineflower from CNDDB (2018)

EXHIBIT 11

Aerial imagery highlighting southeastern portion of the site through time (1931 – 2018)

EXHIBIT 12

Photo of sweet fennel topping in *Vegetation Area 2*

EXHIBIT 13

Photo of water faucet in *Vegetation Area 2*

EXHIBIT 14

Map of ESHA delineation

EXHIBIT 15

Map of ESHA delineation and 50 ft ESHA buffer

Exhibit 1: Vicinity of MBARI parcel APN 133-252-001, Moss Landing

Subject Parcel

Existing Fence

Monterey County parcels

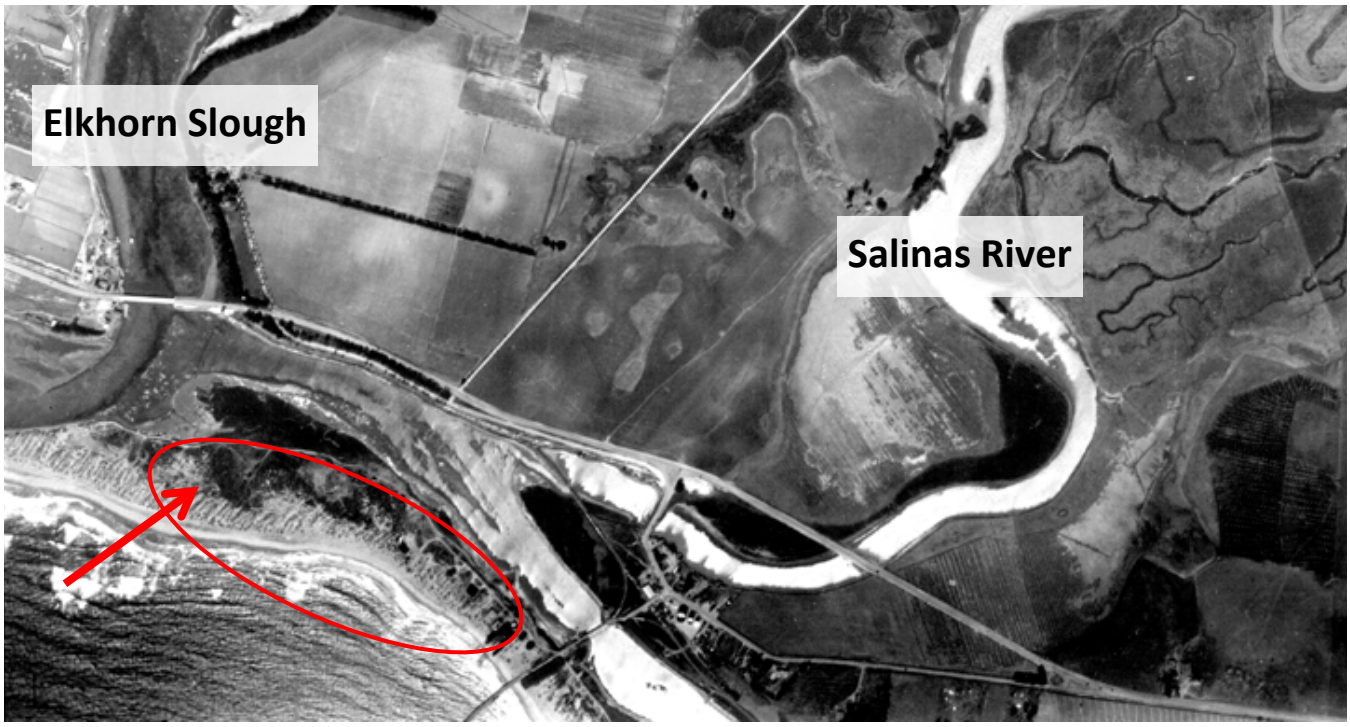
CALIFORNIA COASTAL COMMISSION
Technical Services Division - GIS Unit

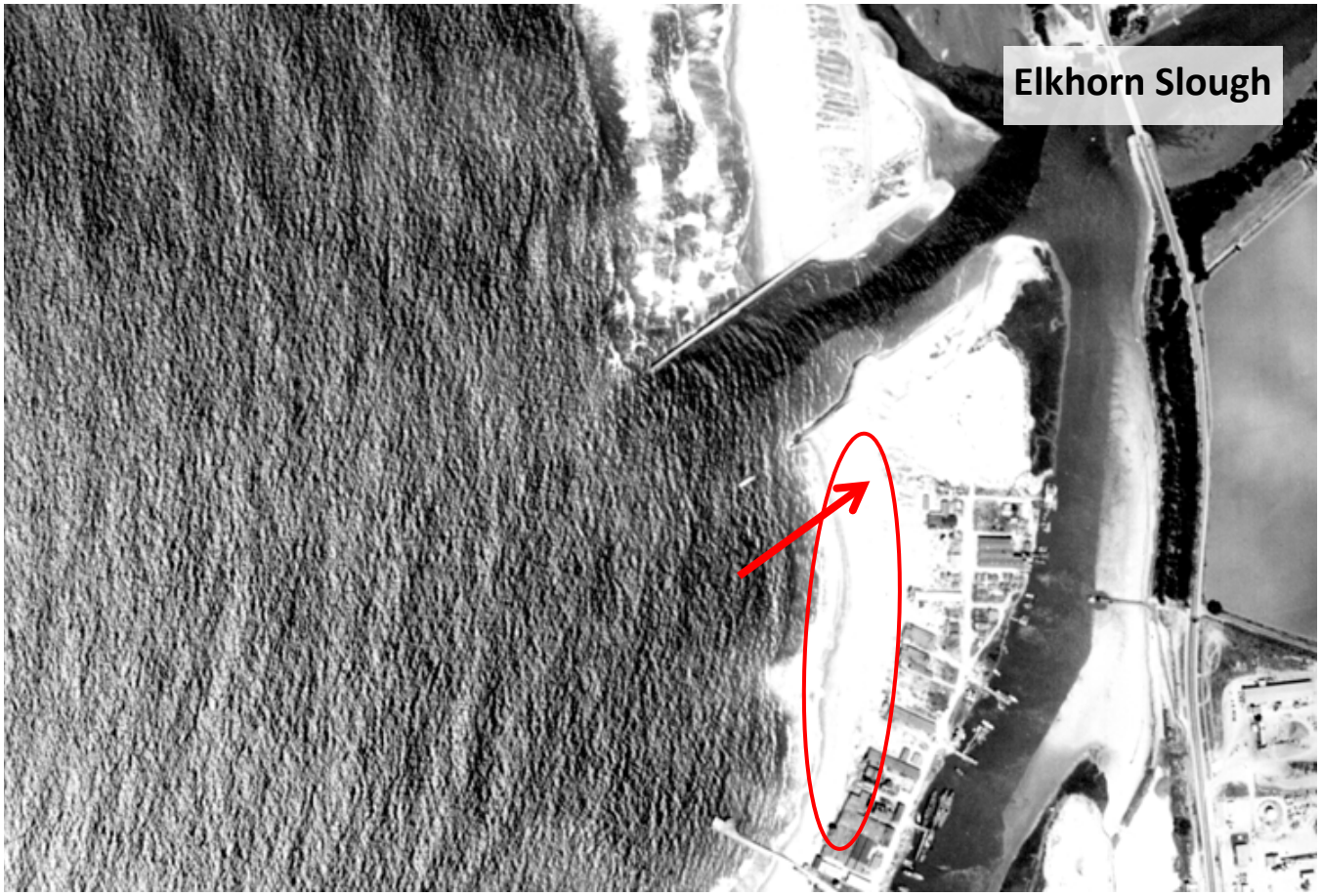
For Illustrative Purposes Only.
All Locations Approximate.
Source: Esri, CCC.

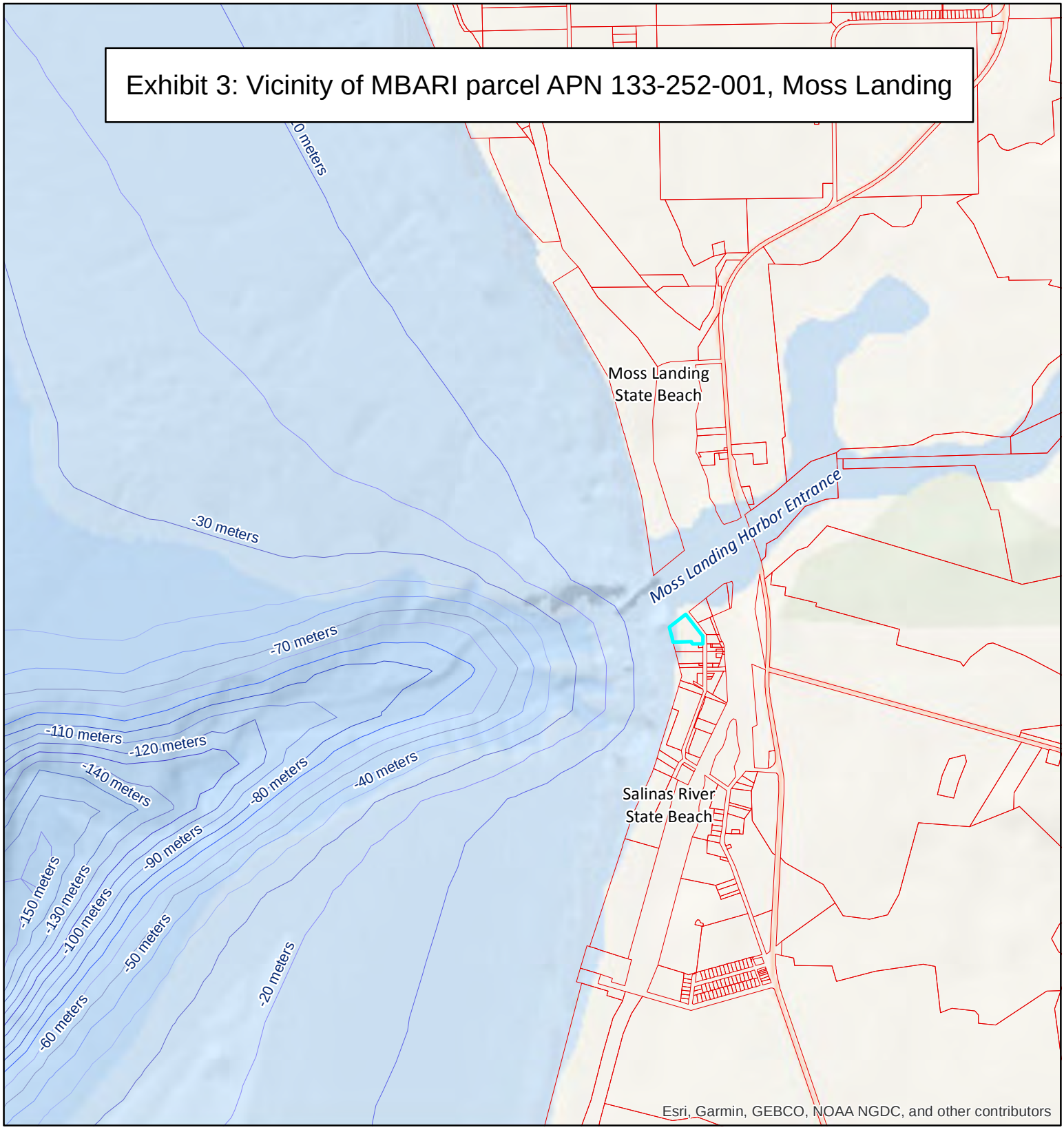
0 125 250 500 Feet
0 37.5 75 150 Meters

N

EXHIBIT 2: Moss Landing sand spit prior to (1931) and following (1948) dredging of harbor entrance. The red oval approximates the dune area associated with the sand spit and roughly seaward of the current location of Sandholdt Road, now largely developed; the subject parcel would be approximately as indicated by the arrows.







Subject Parcel

10-meter Contour Bathymetry

Monterey County parcels

CALIFORNIA COASTAL COMMISSION
Technical Services Division - GIS Unit

For Illustrative Purposes Only.
All Locations Approximate.
Source: Monterey County, Esri, CCC.

0 500 1,000 2,000 Feet
0 125 250 500 Meters

N

EXHIBIT 4: 1972-2015 sequence of aerial photos, including the subject parcel.


1986


1993


2002


2015

EXHIBIT 5: North of the subject parcel's northern fence line

EXHIBIT 6: West and south of subject parcel

Above: From west of the subject parcel's fenced area, looking towards the subject parcel's western fence. Note characteristic native dune vegetation including bushes of mock heather as well as non-native dune vegetation such as iceplant. *Below:* From inside the subject parcel's fenced area, looking southwest along the southern fence. Note undulating dune topography, sandy substrate, and intergrading native and non-native dune vegetation, and non-native grasses (foreground).

Exhibit 7: Vicinity of MBARI parcel APN 133-252-001, Moss Landing

Vegetation Areas

- 1: Gravelled/weedy
- 2: Invasive non-native sweet fennel and grasses
- 3: Invasive non-native iceplant and grasses
- 4: Native dune species (Sand Verbena-Beach Bur Herbaceous Alliance)

- Existing Fence
- Monterey County parcels

CALIFORNIA COASTAL COMMISSION
Technical Services Division - GIS Unit

For Illustrative Purposes Only.
All Locations Approximate.
Source: Monterey County, Esri, CCC.

0 25 50 100 Feet
0 5 10 20 Meters

N

EXHIBIT 8: Vegetation within the fenced area of the subject parcel.

Vegetation Area 1 is characterized by the unpermitted gravel surface and spotted with weedy species. *Above*: Facing south looking at the story poles for the proposed development (center). Note sloping topography in back right of frame. *Below*: Facing east from along the inside of the western fence.

Vegetation Area 2 is dominated by invasive non-native sweet fennel and grasses. *Above*: Facing north-northwest towards the story poles for the proposed development (far left) from the southeastern corner inside the fenced area. Note sloping topography in back left of frame. *Below*: Facing east towards Sandholdt Road from along the southern fence.

Vegetation Area 3 is dominated by invasive non-native iceplant and grasses but includes a noteworthy presence of native dune species. *Above*: Facing north from near the southwestern corner of the fenced area. The fence bisecting the parcel is on the left, story poles for the proposed development are center right. Native dune bushes such as mock heather are apparent. *Below right*: Facing north from the northeastern corner of the fenced area. Though iceplant is thick and dominant, native beach bur is also visibly weaving through the invasive non-native cover (silvery finer-leafed plants). *Below left*: Along the inside of the northern fence, native yellow sand verbena emerging among non-native grasses and weeds.

Vegetation Area 4 represents a relatively "intact" native dune community though also includes invasive non-native iceplant. *Above*: Facing south from the southwest corner inside the fence, native mock heather bushes, silky beach pea, and beach bur intergrade with invasive non-native iceplant. *Below right* Native salt grass and beach evening primrose among dessicated silky beach pea and other dune species. *Below left*: Native beach bur and yellow sand verbena with encroaching invasive non-native iceplant.

EXHIBIT 9: Native dune species persisting among non-natives in *Vegetation Area 3*

Above: Native beach bur emerging through invasive non-native grasses and iceplant. *Right*: Native lizard tail bushes surrounded by invasive non-native pampas and other grasses. *Below*: Native beach evening primrose surrounded by invasive non-native iceplant and yellow sweet clover.

Monterey spineflower (Chorizanthe pungens var. pungens)

California Natural Diversity Database (CNDDB) Government [ds45]

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)

Monterey Spineflower - Final Critical Habitat - USFWS [ds743]

EXHIBIT 10

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A8932
EO Index: 110726
Key Quad: Moss Landing (3612177)
Element Code: PDPGN040M2
Occurrence Number: 63
Occurrence Last Updated: 2018-04-06

Scientific Name: *Chorizanthe pungens var. pungens*
Common Name: Monterey spineflower

Listing Status: **Federal:** Threatened
Rare Plant Rank: 1B.2
State: None
Other Lists: SB_UCBBG-UC Berkeley Botanical Garden

CNDDB Element Ranks: **Global:** G2T2
State: S2

General Habitat:

COASTAL DUNES, CHAPARRAL, CISMONTANE WOODLAND, COASTAL SCRUB, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:

SANDY SOILS IN COASTAL DUNES OR MORE INLAND WITHIN CHAPARRAL OR OTHER HABITATS. 0-170 M.

Last Date Observed: 2017-06-01
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2017-06-01
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

MOSS LANDING, ON SHORELINE BETWEEN ENTRANCE CHANNEL AND MOSS LANDING MARINE LABORATORY.

Detailed Location:

JUST SOUTH OF PROPERTY FENCELINE IN MOSS LANDING, CLOSE TO SHORELINE.

Ecological:

FOUND IN FLAT, SANDY COASTAL DUNE SCRUB HABITAT, CLOSE TO SHORELINE. ASSOCIATED WITH CARPOBROTUS CHILENSIS, C. EDULIS, CAMISSONIA CHEIRANTHIFOLIA, LUPINUS CHAMISSONIS, AMBROSIA CHAMISSONIS, CRYPTANTHA LEIOCARPA, AND CAKILE MARITIMA.

Threats:

General:

APPROXIMATELY 25 PLANTS OBSERVED IN 2017.

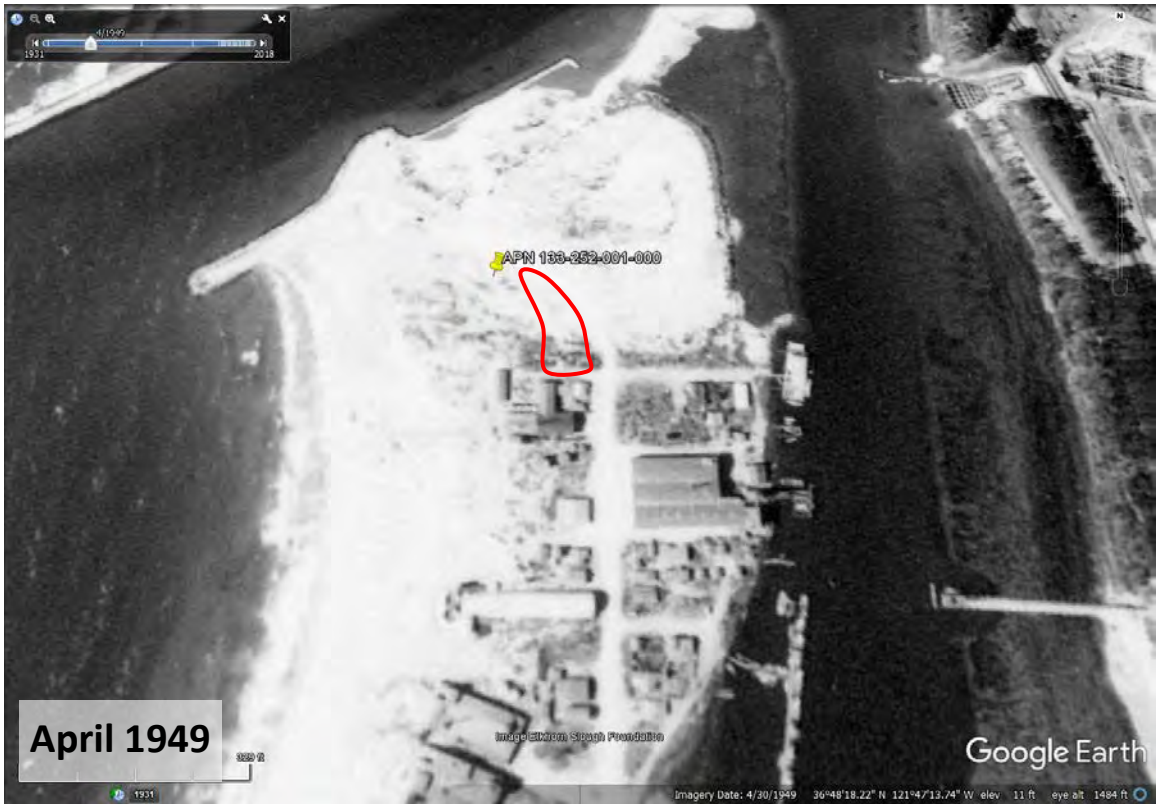
PLSS: T13S, R02E, Sec. 18, NW (M)
Accuracy: 80 meters
Area (acres): 5
UTM: Zone-10 N4073908 E608120
Latitude/Longitude: 36.80484 / -121.78796
Elevation (feet): 10

County Summary:	Quad Summary:
Monterey	Moss Landing (3612177)

Sources:

EDW17F0002 EDWARDS, A. & E. MALKAUSKAS - FIELD SURVEY FORM FOR CHORIZANTHE PUNGENS VAR. PUNGENS 2017-06-01

EXHIBIT 11: Aerial time-series of vegetation at the subject parcel. The yellow pin indicating the parcel location provides a point of reference for images from a constant aerial perspective (altitude/position). The red outline highlights the southeastern area inside the fence, which was once part of a dune and seems to have had distinct vegetation but the timing and mechanism of its conversion to invasive non-native species remains unclear.




APN 133-252-001-000
April 1971
Google Earth


APN 133-252-001-000
December 2004
Google Earth


Click to zoom in on the time slider.
5/2006
1931
2018
APN 133-252-001-000
May 2006
Image © 2018 DigitalGlobe
Google Earth
Imagery Date: 5/24/2006 36°48'18.22" N 121°47'13.74" W elev 14 ft eye alt 1484 ft


5/2007
APN 133-252-001-000
May 2007
Google Earth
Imagery Date: 5/31/2007 36°48'18.22" N 121°47'13.74" W elev 14 ft eye alt 1484 ft


APN 133-252-001-000
May 2009
Image USDA Farm Service Agency
Google Earth


APN 133-252-001-000
May 2011
Google Earth


APN 133-252-001-000
May 2012
Google Earth


APN 133-252-001-000
October 2016
Google Earth


APN 133-252-001-000
June 2017
Google Earth


APN 133-252-001-000
February 2018
Google Earth

EXHIBIT 12: Vegetation maintenance in *Vegetation Area 2*. Note cane-like structures in the foreground and on the right, which are the remainder of cut invasive non-native sweet fennel. Sweet fennel can grow to be over 6 ft tall, is a perennial species, and can regenerate from lower portions of over-wintering stems, roots, and crowns.

EXHIBIT 13: Water faucet in *Vegetation Area 2*

Exhibit 14: ESHA on MBARI parcel APN 133-252-001, Moss Landing

ESHA

Existing Fence

Monterey County parcels

CALIFORNIA COASTAL COMMISSION
Technical Services Division - GIS Unit

For Illustrative Purposes Only.
All Locations Approximate.
Source: Monterey County, Esri, CCC.

0 25 50 100 Feet
0 5 10 20 Meters

Exhibit 15: ESHA with buffer on MBARI parcel APN 133-252-001, Moss Landing

ESHA

50 ft. ESHA Buffer

Existing Fence

Monterey County parcels

CALIFORNIA COASTAL COMMISSION
Technical Services Division - GIS Unit

For Illustrative Purposes Only.
All Locations Approximate.
Source: Monterey County, Esri, CCC.

0 25 50 100 Feet
0 5 10 20 Meters

Monterey County RMA Planning

DRAFT Conditions of Approval/Implementation Plan/Mitigation Monitoring and Reporting Plan

PLN120553

1. PD001 - SPECIFIC USES ONLY

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: This Combined Development Permit (PLN120553) allows: 1) Coastal Development Permit and Design Approval for the construction of a 5,200 square foot field program staging building with 620 square foot covered entry (Building H) and site improvements to include driveway, parking, and storage staging areas, chain link security fencing, site lighting, an entrance sign, and grading (approximately 1,477 cubic yards of cut and 1,675 cubic yards fill); and 2) a Coastal Development Permit to allow development within 100-feet of an environmentally sensitive habitat area. The property is located at 7500 Sandholdt Road, Moss Landing (Assessor's Parcel Number 133-252-001-000), North County Land Use Plan, Moss Landing Community Plan area, Coastal Zone.This permit was approved in accordance with County ordinances and land use regulations subject to the terms and conditions described in the project file. Neither the uses nor the construction allowed by this permit shall commence unless and until all of the conditions of this permit are met to the satisfaction of the Director of RMA - Planning. Any use or construction not in substantial conformance with the terms and conditions of this permit is a violation of County regulations and may result in modification or revocation of this permit and subsequent legal action. No use or construction other than that specified by this permit is allowed unless additional permits are approved by the appropriate authorities. To the extent that the County has delegated any condition compliance or mitigation monitoring to the Monterey County Water Resources Agency, the Water Resources Agency shall provide all information requested by the County and the County shall bear ultimate responsibility to ensure that conditions and mitigation measures are properly fulfilled. (RMA - Planning)

Compliance or Monitoring Action to be Performed: The Owner/Applicant shall adhere to conditions and uses specified in the permit on an ongoing basis unless otherwise stated.

2. PD002 - NOTICE PERMIT APPROVAL

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: The applicant shall record a Permit Approval Notice. This notice shall state:
"A Combined Development Permit (Resolution Number ***) was approved by the Planning Commission for Assessor's Parcel Number 133-252-001-000 on October 25, 2017. The permit was granted subject to 31 conditions of approval which run with the land. A copy of the permit is on file with the Monterey County RMA - Planning Department."
Proof of recordation of this notice shall be furnished to the Director of the RMA - Planning Department prior to issuance of building permits or commencement of the use.
(RMA - Planning Department)

Compliance or Monitoring Action to be Performed: Prior to the issuance of grading and building permits or commencement of use, the Owner/Applicant shall provide proof of recordation of this notice to the RMA - Planning Department.

3. PD003(A) - CULTURAL RESOURCES NEGATIVE ARCHAEOLOGICAL REPORT

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: If, during the course of construction, cultural, archaeological, historical or paleontological resources are uncovered at the site (surface or subsurface resources) work shall be halted immediately within 50 meters (165 feet) of the find until a qualified professional archaeologist can evaluate it. The Monterey County RMA - Planning Department and a qualified archaeologist (i.e., an archaeologist registered with the Register of Professional Archaeologists) shall be immediately contacted by the responsible individual present on-site. When contacted, the project planner and the archaeologist shall immediately visit the site to determine the extent of the resources and to develop proper mitigation measures required for recovery.
(RMA - Planning Department)

Compliance or Monitoring Action to be Performed: The Owner/Applicant shall adhere to this condition on an on-going basis.

Prior to the issuance of grading or building permits and/or prior to the recordation of the final/parcel map, whichever occurs first, the Owner/Applicant shall include requirements of this condition as a note on all grading and building plans. The note shall state "Stop work within 50 meters (165 feet) of uncovered resource and contact the Monterey County RMA - Planning Department and a qualified archaeologist immediately if cultural, archaeological, historical or paleontological resources are uncovered." When contacted, the project planner and the archaeologist shall immediately visit the site to determine the extent of the resources and to develop proper mitigation measures required for the discovery.

4. PD005 - FISH & GAME FEE NEG DEC/EIR

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: Pursuant to the State Public Resources Code Section 753.5, State Fish and Game Code, and California Code of Regulations, the applicant shall pay a fee, to be collected by the County, within five (5) working days of project approval. This fee shall be paid before the Notice of Determination is filed. If the fee is not paid within five (5) working days, the project shall not be operative, vested or final until the filing fees are paid. (RMA - Planning)

Compliance or Monitoring Action to be Performed: Within five (5) working days of project approval, the Owner/Applicant shall submit a check, payable to the County of Monterey, to the Director of RMA - Planning.

If the fee is not paid within five (5) working days, the applicant shall submit a check, payable to the County of Monterey, to the Director of RMA - Planning prior to the recordation of the final/parcel map, the start of use, or the issuance of building permits or grading permits.

5. PD006 - CONDITION OF APPROVAL / MITIGATION MONITORING PLAN

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: The applicant shall enter into an agreement with the County to implement a Condition of Approval/Mitigation Monitoring and/or Reporting Plan (Agreement) in accordance with Section 21081.6 of the California Public Resources Code and Section 15097 of Title 14, Chapter 3 of the California Code of Regulations. Compliance with the fee schedule adopted by the Board of Supervisors for mitigation monitoring shall be required and payment made to the County of Monterey at the time the property owner submits the signed Agreement. The agreement shall be recorded. (RMA - Planning)

Compliance or Monitoring Action to be Performed: Within sixty (60) days after project approval or prior to the issuance of building and grading permits, whichever occurs first, the Owner/Applicant shall:

1) Enter into an agreement with the County to implement a Condition of Approval/Mitigation Monitoring Plan.

2) Fees shall be submitted at the time the property owner submits the signed Agreement.

3) Proof of recordation of the Agreement shall be submitted to RMA-Planning.

6. PD007- GRADING WINTER RESTRICTION

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: No land clearing or grading shall occur on the subject parcel between October 15 and April 15 unless authorized by the Director of RMA - Building Services. (RMA - Planning and RMA - Building Services)

Compliance or Monitoring Action to be Performed: The Owner/Applicant, on an on-going basis, shall obtain authorization from the Director of RMA - Building Services Department to conduct land clearing or grading between October 15 and April 15.

7. PD012(H) - LANDSCAPING PLAN (NO. COUNTY NATIVE)

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: The site shall be landscaped. The use of native species consistent with and found in the project area shall be required in all landscaping plans as a condition of project approval. A list of appropriate native plant species identified in Attachment #2 and #3 in the North County Implementation Plan Development Regulations is available in brochure form (Suggested Native Species Landscaping List - North County Coastal Zone) from RMA - Planning. (RMA - Planning)

Compliance or Monitoring Action to be Performed: Prior to issuance of building permits, the Owner/Applicant/Licensed Landscape Contractor/Licensed Landscape Architect shall submit landscape plans and contractor's estimate to the RMA - Planning for review and approval. Landscaping plans shall include the recommendations from the Forest Management Plan or Biological Survey as applicable. All landscape plans shall be signed and stamped by licensed professional under the following statement, "I certify that this landscaping and irrigation plan complies with all Monterey County landscaping requirements including use of native, drought-tolerant, non-invasive species; limited turf; and low-flow, water conserving irrigation fixtures."

8. PD013 - STREET LIGHTING

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: All street lights in the development shall be approved by the Director of RMA - Planning.
(RMA - Planning Department)

Compliance or Monitoring Action to be Performed: Prior to the issuance of grading or building permits for street lights, the Owner/Applicant shall submit three copies of the lighting plans to the RMA - Planning for review and approval. Approved lighting plans shall be incorporated into final building plans.

Prior to occupancy and on an on-going basis, the Owner/Applicant shall ensure that the lighting is installed and maintained in accordance with the approved plan.

9. PD014(A) - LIGHTING - EXTERIOR LIGHTING PLAN

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: All exterior lighting shall be unobtrusive, down-lit, harmonious with the local area, and constructed or located so that only the intended area is illuminated and off-site glare is fully controlled. The lighting source shall be shielded and recessed into the fixture. The applicant shall submit three (3) copies of an exterior lighting plan which shall indicate the location, type, and wattage of all light fixtures and include catalog sheets for each fixture. The lighting shall comply with the requirements of the California Energy Code set forth in California Code of Regulations Title 24 Part 6. The exterior lighting plan shall be subject to approval by the Director of RMA - Planning, prior to the issuance of building permits.
(RMA - Planning)

Compliance or Monitoring Action to be Performed: Prior to the issuance of building permits, the Owner/Applicant shall submit three copies of the lighting plans to RMA - Planning for review and approval. Approved lighting plans shall be incorporated into final building plans.

Prior to final/occupancy, the Owner/Applicant/Contractor shall submit written and photographic evidence demonstrating that the lighting has been installed according to the approved plan.

On an on-going basis, the Owner/Applicant shall ensure that the lighting is installed and maintained in accordance with the approved plan.

10. PD022(C) - EASEMENT-CONSERVATION AND SCENIC (COASTAL)

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: A conservation and scenic easement shall be conveyed to the County over those portions of the property where Environmentally Sensitive Habitats exists (as identified on the preliminary site plan and biological report) in accordance with the procedures in Monterey County Code § 20.64.280.A. The owner/applicant shall work in consultation with the project biologist and a land surveyor to prepare a metes and bounds description and corresponding map describing and illustrating the easement area. A Subordination Agreement shall be required, where necessary. Language contained in the easement shall be developed in consultation with the project biologist, shall restrict any development detrimental to the habitat value of the foredunes, and include provisions for future maintenance and/or restoration activities necessary for the long-term health of the habitat area. An easement deed shall be submitted to, reviewed and approved by the Director of RMA - Planning and the Executive Director of the California Coastal Commission, and accepted by the Board of Supervisors prior to recording the parcel/final map or prior to issuance of grading and building permits. (RMA - Planning)

Compliance or Monitoring Action to be Performed: Prior to issuance of grading and building permits, the Owner/Applicant/Certified Professional shall submit the conservation and scenic easement deed and corresponding map, showing the exact location of the easement on the property along with the metes and bound description developed in consultation with a certified professional, to RMA - Planning for review and approval.

Prior to issuance of grading and building permits, the Owner/Applicant shall submit a signed and notarized Subordination Agreement, if required, to RMA - Planning for review and approval.

Prior to issuance of grading and building permits, the Owner/Applicant shall record the deed and map showing the approved conservation and scenic easement. Submit a copy of the recorded deed and map to RMA – Planning.

11. PD052 - PRE-CONSTRUCTION MEETING

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: Prior to the commencement of any grading or construction activities, a pre-construction meeting shall be held on the site. The meeting shall include representatives of each of the selected contractors, any consultant who will conduct required monitoring, the Owner/Applicant, the RMA-Planning Department and any other appropriate County Departments. The purpose of the meeting is to review the conditions of approval that are applicable to the grading and construction of the approved development. (RMA - Planning)

Compliance or Monitoring Action to be Performed: Prior to commencement of any grading or construction activities, the Owner/Applicant shall contact RMA-Planning to schedule a pre-construction meeting prior to commencement of any grading or construction activities. The Owner/Applicant shall be responsible for ensuring that all appropriate contractors and technical consultants are in attendance. RMA-Planning staff shall be responsible for identifying and notifying other County Departments that should attend the meeting (if applicable).

12. PDSP001 - TRIBAL CULTURAL RESOURCES (NON-STANDARD)

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: The owner/applicant shall shall ensure that earth disturbance activities associated with the project are observed by a Native America Monitor approved by the Ohlone/Costanoan-Esselen Nation (OCEN) Tribal Council.

Compliance or Monitoring Action to be Performed: Prior to issuance of construction permits for grading or building, the owner/applicant shall submit a contract with a OCEN approved Tribal Monitor to RMA-Planning for review and approval. The contract shall outline logistics for monitoring during earth disturbance activities as well as how cultural resources will be handled if uncovered.

During earth disturbance activities, the OCEN approved monitor shall be onsite observing the work, consistent with the approved contract. Prior to final of construction permits for grading or building, the owner/applicant shall submit a letter from the Tribal Monitor verifying all work was done consistent with the tribal approved contract to RMA-Planning.

13. EHSP01 - HAZ MAT BUSINESS RESPONSE PLAN – MOU (NON-STANDARD)

Responsible Department: Health Department

Condition/Mitigation Monitoring Measure: The applicant shall maintain an up-to-date Business Response Plan that meets the standards found in the California Code of Regulations, Title 19, Division 2, Chapter 4 (Hazardous Material Release Reporting, Inventory, and Response Plans) and the California Health and Safety Code, Division 20, Chapter 6.95 (Hazardous Material Release Response Plans and Inventory).

Compliance or Monitoring Action to be Performed: Prior to issuance of grading/building permits the owner/applicant shall submit the signed Business Response Plan – Memorandum of Understanding (Form available from EHB) that specifies an approved Business Response Plan must be on file with HMMS prior to bringing hazardous materials on site and/or commencement of operations. Once approved, the applicant shall maintain an up-to date Business Response Plan.

14. PW0044 - CONSTRUCTION MANAGEMENT PLAN

Responsible Department: RMA-Public Works

Condition/Mitigation Monitoring Measure: The applicant shall submit a Construction Management Plan (CMP) to the Resource Management Agency (RMA) for review and approval. The CMP shall include measures to minimize traffic impacts during the construction/grading phase of the project and shall provide the following information:
Duration of the construction, hours of operation, an estimate of the number of truck trips that will be generated, truck routes, number of construction workers, parking areas for both equipment and workers, and locations of truck staging areas. Approved measures included in the CMP shall be implemented by the applicant during the construction/grading phase of the project.

Compliance or Monitoring Action to be Performed: 1. Prior to issuance of building or grading permits - Owner/Applicant/Contractor shall prepare a CMP and shall submit the CMP to the RMA for review and approval.
2. On-going through construction phases - Owner/Applicant/Contractor shall implement the approved measures during the construction/grading phase of the project.

15. PWSP001 –FRONTAGE IMPROVEMENTS

Responsible Department: RMA-Public Works

Condition/Mitigation Monitoring Measure: Dedicate a permanent easement to the County of Monterey, for street and right-of-way purposes to accommodate cul-de-sac (CDS) improvements. Right-of-way for CDS shall have a radius of 60 feet and shall be centered on the existing centerline of Sandholdt Road.

Construct portion of CDS, curb, gutter, commercial driveway connections, sidewalk, and paveout, together with required drainage facilities, along the frontage of Sandholdt Road. The design and construction is subject to the approval of the RMA. CDS shall be designed with a radius of 50 feet to face of curb, and shall be centered on the existing centerline of Sandholdt Road.

Compliance or Monitoring Action to be Performed: Prior to issuance of building or grading permits, the Owner/Applicant shall offer to dedicate easement. Owner/Applicant's surveyor shall prepare a legal description and plat of area to be dedicated, subject to the approval of the County Surveyor. Owner/Applicant shall also submit improvement plans for review and approval of the County Engineer, obtain an encroachment permit from the RMA prior to issuance of building permits and complete improvements prior to occupying or commencement of use. Applicant is responsible to obtain all permits and environmental clearances.

16. PWSP002 – DEDICATION (PUE)

Responsible Department: RMA-Public Works

Condition/Mitigation Monitoring Measure: Dedicate a public utility easement to the County of Monterey to accommodate future public utility facilities in the southeast corner of the project site adjacent to Sandholdt Road. The public utility easement shall be approximately 30 feet by 25 feet in size.

Compliance or Monitoring Action to be Performed: Prior to issuance of building or grading permits, the Owner/Applicant shall offer to dedicate easement. Owner/Applicant's surveyor shall prepare a legal description and plat of area to be dedicated, subject to the approval of the County Surveyor.

17. CALIFORNIA CONSTRUCTION GENERAL PERMIT

Responsible Department: Environmental Services

Condition/Mitigation Monitoring Measure: The applicant shall submit a Waste Discharger Identification (WDID) number certifying the project is covered under the California Construction General Permit. (RMA-Environmental Services)

Compliance or Monitoring Action to be Performed: Prior to issuance of any grading or building permits, the applicant shall submit a WDID number certifying the project is covered under the California Construction General Permit.

18. EROSION CONTROL PLAN

Responsible Department: Environmental Services

Condition/Mitigation Monitoring Measure: The applicant shall submit an erosion control plan in conformance with the requirements of Monterey County Code Chapter 16.12. The erosion control plan may be combined with the grading plan provided it is clearly identified. The erosion control plan shall include a construction entrance, concrete washout, stockpile area(s), material storage area(s), portable sanitation facilities and waste collection area(s), as applicable. (RMA-Environmental Services)

Compliance or Monitoring Action to be Performed: Prior to issuance of any grading or building permits, the applicant shall submit an Erosion Control Plan to RMA-Environmental Services for review and approval.

19. FIELD VERIFICATION OF POST-CONSTRUCTION STORMWATER CONTROL MEASURES

Responsible Department: Environmental Services

Condition/Mitigation Monitoring Measure: The applicant shall provide certification from a registered Professional Engineer that the stormwater control facilities have been constructed in accordance with the approved Stormwater Control Plan. (RMA – Environmental Services)

Compliance or Monitoring Action to be Performed: Prior to final inspection, the owner/applicant shall submit a letter to RMA-Environmental Services for review and approval.

20. GEOTECHNICAL CERTIFICATION

Responsible Department: Environmental Services

Condition/Mitigation Monitoring Measure: The applicant shall provide certification from a licensed practitioner that all development has been constructed in accordance with the recommendations in the project Geotechnical Investigation Report and Geological Report. (RMA-Environmental Services)

Compliance or Monitoring Action to be Performed: Prior to final inspection, the owner/applicant shall provide RMA-Environmental Services a letter from a licensed practitioner.

21. GRADING PLAN

Responsible Department: Environmental Services

Condition/Mitigation Monitoring Measure: The applicant shall submit a grading plan incorporating the recommendations in the project Geotechnical Investigation Report prepared by Soil Surveys, Inc and Geological Report prepared by Caprock Geology, Inc. The grading plan shall also address the requirements of Monterey County Code Chapter 16.08, and the geotechnical inspection schedule shall be included on the plan. The applicant shall provide certification from the licensed practitioner that the grading plan incorporates their geotechnical recommendations. (RMA-Environmental Services)

Compliance or Monitoring Action to be Performed: Prior to issuance of any grading or building permits, the applicant shall submit a grading plan to RMA-Environmental Services for review and approval.
Prior to issuance of any grading or building permits, the applicant shall submit certification from a licensed practitioner that they have reviewed the grading plan for compliance with the Geotechnical Report.

22. INSPECTION-DURING ACTIVE CONSTRUCTION

Responsible Department: Environmental Services

Condition/Mitigation Monitoring Measure: The applicant shall schedule an inspection with RMA-Environmental Services to inspect drainage device installation, review the maintenance and effectiveness of BMPs installed, and to verify that pollutants of concern are not discharged from the site. At the time of the inspection, the applicant shall provide certification that all necessary geotechnical inspections have been completed to that point. This inspection requirement shall be noted on the Erosion Control Plan.(RMA – Environmental Services)

Compliance or Monitoring Action to be Performed: During construction, the applicant shall schedule an inspection with RMA-Environmental Services.

23. INSPECTION-FOLLOWING ACTIVE CONSTRUCTION

Responsible Department: Environmental Services

Condition/Mitigation Monitoring Measure: The applicant shall schedule an inspection with RMA-Environmental Services to ensure all disturbed areas have been stabilized and all temporary erosion and sediment control measures that are no longer needed have been removed. This inspection requirement shall be noted on the Erosion Control Plan. (RMA – Environmental Services)

Compliance or Monitoring Action to be Performed: Prior to final inspection, the owner/applicant shall schedule an inspection with RMA-Environmental Services.

24. INSPECTION-PRIOR TO LAND DISTURBANCE

Responsible Department: Environmental Services

Condition/Mitigation Monitoring Measure: The applicant shall schedule an inspection with RMA-Environmental Services to ensure all necessary sediment controls are in place and the project is compliant with Monterey County regulations. This inspection requirement shall be noted on the Erosion Control Plan. (RMA – Environmental Services)

Compliance or Monitoring Action to be Performed: Prior to commencement of any land disturbance, the owner/applicant shall schedule an inspection with RMA-Environmental Services.

25. MAINTENANCE AGREEMENT

Responsible Department: Environmental Services

Condition/Mitigation Monitoring Measure: The applicant shall enter into a Maintenance Agreement (Agreement) that clearly identifies the responsible party for ongoing maintenance of structural Stormwater Control Measures. The Agreement shall contain provisions for an annual report to be prepared by a registered Professional Engineer. The annual report shall be submitted to RMA-Environmental Services, for review and approval, no later than August 15th. All recommended maintenance shall be completed by October 15th of the same year. If maintenance is required, certification shall be provided that all recommended maintenance has been completed before the start of the rainy season. (RMA – Environmental Services)

Compliance or Monitoring Action to be Performed: Prior to issuance of any grading or building permits, the owner/applicant shall submit the signed and notarized Agreement to RMA-Environmental Services for review and approval. The approved Agreement shall be recorded, and a copy of the recorded document shall be provided to RMA-Environmental Services.

A copy of the standard Agreement can be obtained at RMA – Environmental Services.

26. OPERATION AND MAINTENANCE PLAN

Responsible Department: Environmental Services

Condition/Mitigation Monitoring Measure: The applicant shall submit an Operation and Maintenance Plan prepared by a registered Professional Engineer that includes, at a minimum, the following:
a) A site map identifying all structural Stormwater Control Measures requiring O&M practices to function as designed.
b) O&M procedures for each structural Stormwater Control Measure including, but not limited to, LID facilities, retention/detention basins, and proprietorship devices.
c) The O&M Plan shall include short- and long-term maintenance requirements, recommended frequency of maintenance, and estimated cost for maintenance.
(RMA – Environmental Services)

Compliance or Monitoring Action to be Performed: Prior to issuance of any building or grading permits, the owner/applicant shall submit the O&M Plan to RMA-Environmental Services for review and approval.

27. STORMWATER CONTROL PLAN

Responsible Department: Environmental Services

Condition/Mitigation Monitoring Measure: The applicant shall submit a Stormwater Control Plan, prepared by a registered professional engineer, addressing the Post-Construction Stormwater Management Requirements (PCRs) for Development Projects in the Central Coast Region. The plan shall include the location of the drainage facilities and construction details. A report with supporting calculations shall also be provided. The Stormwater Control Plan shall be reviewed by a licensed practitioner to ensure conformance with the Geotechnical Investigation Report and Geological Report. (RMA-Environmental Services)

Compliance or Monitoring Action to be Performed: Prior to issuance of any grading or building permits, the applicant shall submit a Stormwater Control Report and a Stormwater Control Plan to RMA-Environmental Services for review and approval.

Prior to issuance of any grading or building permits, the applicant shall submit certification from a licensed Geotechnical Engineer or Engineering Geologist that they have reviewed and approved the Stormwater Control Plan.

28. CC01 INDEMNIFICATION AGREEMENT

Responsible Department: County Counsel

Condition/Mitigation Monitoring Measure: The property owner agrees as a condition and in consideration of approval of this discretionary development permit that it will, pursuant to agreement and/or statutory provisions as applicable, including but not limited to Government Code Section 66474.9, defend, indemnify and hold harmless the County of Monterey or its agents, officers and employees from any claim, action or proceeding against the County or its agents, officers or employees to attack, set aside, void or annul this approval, which action is brought within the time period provided for under law, including but not limited to, Government Code Section 66499.37, as applicable. The property owner will reimburse the County for any court costs and attorney's fees which the County may be required by a court to pay as a result of such action. The County may, at its sole discretion, participate in the defense of such action; but such participation shall not relieve applicant of his/her/its obligations under this condition. An agreement to this effect shall be recorded upon demand of County Counsel or concurrent with the issuance of building permits, use of property, filing of the final map, recordation of the certificates of compliance whichever occurs first and as applicable. The County shall promptly notify the property owner of any such claim, action or proceeding and the County shall cooperate fully in the defense thereof. If the County fails to promptly notify the property owner of any such claim, action or proceeding or fails to cooperate fully in the defense thereof, the property owner shall not thereafter be responsible to defend, indemnify or hold the County harmless. (County Counsel)

Compliance or Monitoring Action to be Performed: Upon demand of County Counsel or concurrent with the issuance of building permits, use of the property, recording of the final/parcel map, or recordation of Certificates of Compliance, whichever occurs first and as applicable, the Owner/Applicant shall submit a signed and notarized Indemnification Agreement to the County Counsel for review and signature by the County.

Proof of recordation of the Indemnification Agreement, as outlined, shall be submitted to the Office of County Counsel.

29. MM001 - PROTECTION OF DUNE HABITAT

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: In order to protect intact dune habitat adjacent to the construction zone, temporary exclusionary fencing shall be installed. Location of the fencing shall be developed in consultation with a qualified biologist. Construction activities such as trampling, vehicle traffic, runoff; or the staging of equipment, construction materials, or waste shall not disturb existing dune habitat adjacent to the site. Shoring of cut slopes shall be installed where excavation occurs within five feet of adjacent dune in order to prevent movement or sloughing of dune sand. On the first day of construction activities, the construction crew shall be briefed by a qualified biologist to ensure they are aware of exclusion areas, the locations of dunes, monitoring requirements, and protocols if a sensitive species is encountered.

Compliance or Monitoring Action to be Performed: Mitigation Measure Action No. 1a: The owner/applicant shall enter into a contract with a qualified biologist in order to provide the services outlined in Mitigation Measure 1: consultation for exclusionary fencing and training of construction personnel. The signed contract shall be submitted to RMA-Planning to review consistency with the mitigation prior to issuance of construction permits for grading or building.

Mitigation Measure Action No. 1b: Prior to issuance of construction permits for grading or building, the owner/applicant shall submit plans to RMA-Planning delineating where the protection barrier will be installed and if/how shoring of cut slopes within five feet of adjacent dune will be installed. A note shall be placed in the plans encompassing the language contained within Mitigation Measure No. 1.

Mitigation Measure Action No. 1c: Prior to commencement of construction, the owner/applicant shall notify RMA staff when the protection barrier (and shoring if required) has been installed and staff shall verify installation.

Mitigation Measure Action No. 1d: Prior to initiation of construction, a qualified biologist shall advise construction personnel of the potential biological issues associated with development of the site. The owner/applicant or project biologist shall submit documentation to RMA-Planning as evidence that this has occurred in accordance with Mitigation Measure No. 1.

30. MM002 - PRE-CONSTRUCTION SURVEY

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: Due to the proximity of marginal habitat for Western snowy plover (WSP) west of the project site, a pre-construction survey shall be required to determine potential nesting. A qualified biologist shall perform the pre-construction survey for WSP within two weeks of the start of initial construction activities. This survey shall be performed in accordance with the Western Snowy Plover Breeding Window Survey Protocol, Final Draft (Smith, E.E. and Haig, S.M., 2007), provided in Recovery Plan for the Pacific Coast Population of the Western Snowy Plover, vol 2, Attachment J-1 (USFWS, 2007). If active WSP nesting is observed within 50-feet of the construction site, construction activities shall be postponed until monitoring by the biologist confirms the young have fledged.

Compliance or Monitoring Action to be Performed: Mitigation Measure Action No. 2a: The owner/applicant shall enter into a contract with a qualified biologist to perform a preconstruction survey in accordance with Mitigation Measure No. 2. The signed contract shall be submitted to RMA-Planning to review consistency with the mitigation prior to issuance of construction permits for grading or building.

Mitigation Measure Action No. 2b: Within two weeks of the start of initial construction activities, the contracted biologist shall conduct a preconstruction survey for the Western snowy plover in accordance with the Western Snowy Plover Breeding Window Survey Protocol, Final Draft (Smith, E.E. and Haig, S.M., 2007), provided in Recovery Plan for the Pacific Coast Population of the Western Snowy Plover, vol 2, Attachment J-1 (USFWS, 2007). If active WSP nesting is observed within 50-feet of the construction site, construction activities shall be postponed until monitoring by the biologist confirms the young have fledged. The owner/applicant or project biologist shall submit documentation to RMA-Planning as evidence that this has occurred in accordance with Mitigation Measure No. 2

31. MM003 - RAPTOR/MIGRATORY BIRD SURVEY

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: In order to avoid impacts to nesting of birds other than the Western snowy plover, clearing and grubbing of the existing vegetation should occur outside of the nesting season (February – August). If this timing cannot be avoided, a pre-construction survey for raptor/migratory bird nesting shall be performed by a qualified biologist no more than 14 days prior to the onset of grading.

Compliance or Monitoring Action to be Performed: Mitigation Measure Action No. 3a: The owner/applicant shall enter into a contract with a qualified biologist to perform a preconstruction survey in accordance with Mitigation Measure No. 3. The signed contract shall be submitted to RMA-Planning to review consistency with the mitigation prior to issuance of construction permits for grading or building.

Mitigation Measure Action No. 3b: If clearing and grubbing of existing vegetation occurs between February – August, a preconstruction survey for raptor/migratory bird nesting shall be performed by a qualified biologist no more than 14 days prior to the onset of grading. The owner/applicant or project biologist shall submit documentation to RMA-Planning as evidence that this has occurred in accordance with Mitigation Measure No. 3.