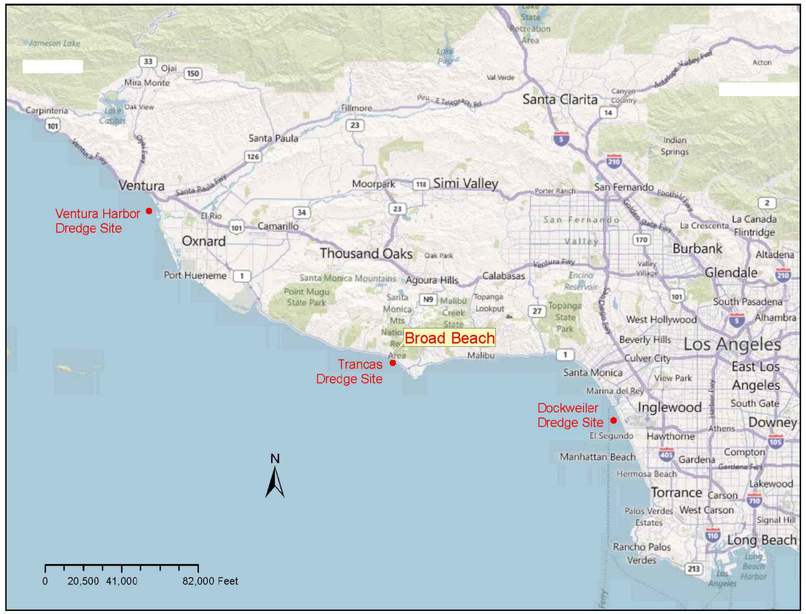
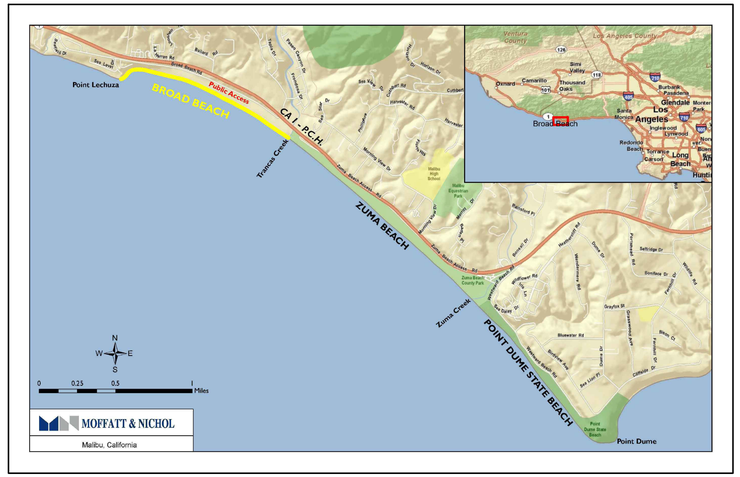
BROAD BEACH RESTORATION PROJECT

PREPARED FOR

BROAD BEACH GEOLOGIC HAZARD ABATEMENT DISTRICT (B.B.G.H.A.D.)



PROJECT VICINITY MAP



BROAD BEACH VICINITY MAP

PROCEDURE OF SURVEY

THE HORIZONTAL DATUM WAS ESTABLISHED THROUGH STATIC GPS OBSERVATIONS. THE VERTICAL DATUM WAS ESTABLISHED UTILIZING LA COUNTY BENCHMARK Y 11394 AND TIDE STATIONS AT SANTA MONICA AND SANTA BARBARA. THE MEAN HIGH WATER ELEVATION LOCALLY (4.67 FEET) WAS DETERMINED UTILIZING THE ABOVE REFERENCED TIDE STATIONS. THE MEAN HIGH WATER LINE WAS SURVEYED AT A FIFTY--FOOT INTERVAL ON OCTOBER 15, 2009. THE TOPOGRAPHIC INFORMATION SHOWN WAS GENERATED THROUGH AERIAL PHOTOGRAMMETRIC METHODS THROUGH PHOTOGRAPHY COLLECTED ON OCTOBER 15, 2009. SURVEY PERFORMED BY KDM MERIDIAN, LAKE FOREST, CA

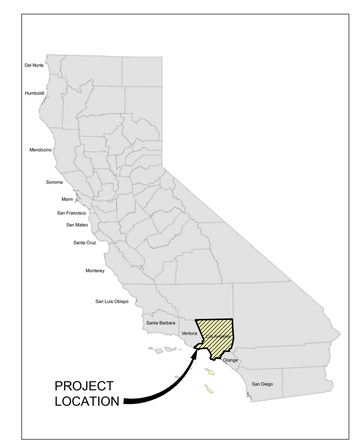
HORIZONTAL DATUM

BEARINGS AND COORDINATES DERIVED FROM THIS MAP OR THE DIGITAL FILE THEREOF ARE IN TERMS OF THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE V (2000.35 EPOCH).
ANY DISTANCES CALCULATED THEREFROM ARE GRID. TO OBTAIN GROUND DISTANCE, DIVIDE GRID DISTANCE BY THE COMBINATION FACTOR OF 1.00000597

VERTICAL DATUM

ALL ELEVATIONS SHOWN HEREON ARE IN TERMS OF MEAN LOWER LOW WATER (MLLW), TIDAL EPOCH 1983–2001.

LOCATION MAP



REGION MAP
NOT TO SCALE

DESIGN TEAM:

RUSSELL BOUDREAU, P.E.
MOFFATT & NICHOL
3780 KILROY AIRPORT WAY, SUITE 600
LONG BEACH, CA 90806
TEL: (562) 426–9551
FAX: (562) 424–7489

LEAD AGENCY:

CALIFORNIA STATE LANDS COMMISSION
DIVISION OF LAND MANAGEMENT
100 HOWE AVENUE, SUITE 100–SOUTH
SACRAMENTO, CA 95825–8202

LEAD AGENCY CONTACTS:

CY R. OGGINS
DIVISION CHIEF
CALIFORNIA STATE LANDS COMMISSION
DIVISION OF ENVIRONMENTAL PLANNING AND MANAGEMENT
100 HOWE AVENUE, SUITE 100–SOUTH
SACRAMENTO, CA 95825–8202
(916) 574–1880 OFFICE
(916) 574–1885 FAX

JASON RAMOS
STAFF ENVIRONMENTAL SCIENTIST
DIVISION OF ENVIRONMENTAL PLANNING AND MANAGEMENT
CALIFORNIA STATE LANDS COMMISSION
100 HOWE AVENUE, SUITE 100–SOUTH
SACRAMENTO, CA 95825–8202
(916) 574–1814 OFFICE
(916) 574–1885 FAX

KENNETH FOSTER
PUBLIC LAND MANAGEMENT SPECIALIST
CALIFORNIA STATE LANDS COMMISSION
DIVISION OF LAND MANAGEMENT
100 HOWE AVENUE, SUITE 100–SOUTH
SACRAMENTO, CA 95825–8202
(916) 574–2555 OFFICE
(916) 574–1925 FAX

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NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. | CHECKED BY Chris Webb
DRAWN BY S. Salazar | IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

TITLE SHEET, VICINITY MAP, LOCATION MAP

SCALE	DATE
NONE	OCT. 2013
JOB NO. 6935-02	
SHEET 1 OF 42	
T-1	

FINAL | 100% | % | % | CONCEPT | STATUS

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_T-1.dwg: Oct 10, 2013 – 3:38pm;

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

GENERAL NOTES:

1. CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2006 EDITION EXCEPT AS MODIFIED ON THE PLANS OR IN SPECIAL PROVISIONS.
2. THESE IMPROVEMENTS CONSIST OF WORK CALLED FOR ON THESE PLANS ONLY.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE STARTING WORK.
4. THE ENGINEER DOES NOT WARRANT THE ACCURACY OF SCALED DIMENSIONS ON ANY PLAN. ALL DIMENSIONS SHALL BE AS DESIGNATED ON THE PLANS.
5. THE CONTRACTOR SHALL PROTECT ALL PUBLIC AND PRIVATE PROPERTY DURING THE PERFORMANCE OF WORK DONE UNDER THE CONTRACT. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO AVOID ANY DAMAGE TO ANY STRUCTURES ADJACENT TO THE PROJECT BOUNDARIES. THE CONTRACTOR SHALL ALSO PROVIDE FOR THE PROTECTION OF THE PUBLIC USING THE BEACH. PHOTOS OF BEFORE AND AFTER PROJECT CONDITIONS SHALL BE TAKEN BY THE CONTRACTOR.
6. EXISTING UTILITIES SHOWN ARE BASED ON AVAILABLE RECORDS OF PARENT UTILITY COMPANIES AND MAY NOT ACCURATELY REPRESENT THEIR ACTUAL LOCATIONS. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATIONS (VERTICAL AND HORIZONTAL) OF ALL UTILITIES IN THE FIELD OR COORDINATE SUCH INDEPENDENT VERIFICATION WITH THE PARENT UTILITY COMPANIES AND PROVIDE THE STATE WITH THE POTHOLE INFORMATION. THE CONTRACTOR SHALL PROTECT IN PLACE OR COORDINATE WITH THE PARENT COMPANY FOR THE RELOCATION OF CONFLICTING UTILITIES ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT 1-800-277-2600 TWO (2) DAYS PRIOR TO ANY EXCAVATION WORK.
7. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION FOR THIS PROJECT. THIS INCLUDES THE SAFETY OF ALL PERSONS AND PROPERTY AND THAT THE REQUIREMENTS SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE STATE OF CALIFORNIA AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FROM LIABILITY ARISING FROM THE NEGLIGENCE OF THE STATE OF CALIFORNIA OR THE ENGINEER.

ENVIRONMENTAL PROTECTION REQUIREMENTS

A. CONTRACTOR SHALL:

1. PROVIDE AND MAINTAIN ENVIRONMENTAL AND PROPERTY PROTECTION AS SPECIFIED.
2. PLAN FOR AND PROVIDE ENVIRONMENTALLY PROTECTIVE MEASURES TO CONTROL POLLUTION THAT DEVELOPS DURING NORMAL CONSTRUCTION PRACTICE AND DURING THE CONSTRUCTION OF PERMANENT OR TEMPORARY ENVIRONMENTAL FEATURES ASSOCIATED WITH THIS PROJECT.
3. COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS PERTAINING TO THE ENVIRONMENT, INCLUDING BUT NOT LIMITED TO WATER, AIR AND NOISE POLLUTION.

B. PRECONSTRUCTION SURVEY

CONTRACTOR SHALL PERFORM A PRECONSTRUCTION INSPECTION AND MAKE A VIDEO RECORD OF THE PROJECT SITE AND AREAS TO BE USED BY THE CONTRACTOR, WITH THE OWNERS OR THE OWNER'S REPRESENTATIVE TO ESTABLISH THE EXISTING CONDITION OF IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO, PAVEMENT, SIDEWALKS, CURBS AND CURBS AND GUTTERS, FENCES AND GATES, TREES AND SHRUBS, SIGNS, AND SIMILAR OBJECTS THAT ARE TO BE PROTECTED IN PLACE.

C. PROTECTION

CONTRACTOR SHALL PRESERVE THE NATURAL RESOURCES AND PROPERTY WITHIN THE PROJECT BOUNDARIES AND OUTSIDE THE LIMITS OF PERMANENT WORK. DAMAGED PROPERTY AND IMPROVEMENTS SHALL BE RESTORED TO AN EQUIVALENT OR IMPROVED CONDITION UPON COMPLETION OF WORK AND PRIOR TO FINAL PAYMENT, AT CONTRACTOR'S SOLE EXPENSE. CONTRACTOR'S OPERATIONS SHALL BE CONFINED TO THE SMALLEST AREAS PRACTICAL, CONSISTENT WITH THE REQUIREMENTS OF THE PROJECT.

CONTROL AND DISPOSAL OF SOLID AND SANITARY WASTES

A. CONTRACTOR SHALL PICK UP SOLID WASTES, AND PLACE IN CONTAINERS WHICH ARE REGULARLY EMPTIED.

B. CONTRACTOR SHALL HAUL RUBBISH AND DEBRIS TO AN APPROVED DISPOSAL SITE LICENSED TO ACCEPT THE TYPE OF MATERIALS BEING DISPOSED.

C. CONTRACTOR SHALL PROVIDE, MAINTAIN, AND REMOVE AT THE COMPLETION OF WORK, CHEMICAL TOILETS OR SIMILARLY EFFECTIVE UNITS IN SUFFICIENT QUANTITY TO PROVIDE FOR THE COMFORT AND HEALTH OF ALL PERSONS EMPLOYED IN THE WORK.

D. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH PERMIT REQUIREMENTS.

ABBREVIATIONS

APPROX.	APPROXIMATE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
CY	CUBIC YARD
ELEV	ELEVATION
FT	FEET
GPS	GLOBAL POSITIONING SYSTEM
HORIZ	HORIZONTAL
INV	INVERT
LA	LOS ANGELES
MAX	MAXIMUM
MHHW	MEAN HIGHER HIGH WATER
MHT	MEAN HIGH TIDE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER
MOD	MODIFIED
MSL	MEAN SEA LEVEL
NAVD88	NORTH AMERICAN VERTICAL DATUM
NO	NUMBER
NOAA/NOS	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION/NATIONAL OCEAN SERVICE
OCT	OCTOBER
OWTS	ONSITE WASTEWATER TREATMENT SYSTEM
RD	ROAD
STA	STATION
TBD	TO BE DETERMINED
TYP	TYPICAL
USA	UNITED STATES OF AMERICA
VERT	VERTICAL

INDEX OF DRAWING

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4	CS-2	CONSTRUCTION ACCESS AND STAGING PLAN
5	CS-3	TRAFFIC CONTROL PLAN
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7	C-2	BEACH FILL PLAN STA 10+00 TO STA 21+50
8	C-3	BEACH FILL PLAN STA 21+50 TO STA 32+00
9	C-4	BEACH FILL PLAN STA 32+00 TO STA 42+50
10	C-5	BEACH FILL PLAN STA 42+50 TO STA 53+00
11	C-6	BEACH FILL PLAN STA 53+00 TO STA 63+50
12	C-7	BEACH FILL PLAN STA 63+50 TO STA 74+00
13	XS-1	TYPICAL BEACH FILL SECTION STA 12+00 TO STA 23+50
14	XS-2	TYPICAL BEACH FILL SECTION STA 28+00 TO STA 43+00
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16	SD-1	STORM DRAIN PLAN & PROFILE STA 30+45.64
17	SD-2	STORM DRAIN PLAN & PROFILE STA 44+21.70
18	SD-3	STORM DRAIN PLAN & PROFILE STA 47+35.62
19	SD-4	STORM DRAIN PLAN & PROFILE STA 60+44.75
20	L-1	BEACH NOURISHMENT & DUNE RESTORATION TYPICAL SECTIONS
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22	L-3	BEACH NOURISHMENT & DUNE RESTORATION TYPICAL SECTIONS
23	L-4	DUNE RESTORATION PLANTING GEOMETRY & DUNE PROTOTYPE
24	L-5	TYPICAL DUNE HUMMOCK GRADING & PLANTING PLAN
25	L-6	TYPICAL DUNE HUMMOCK GRADING & PLANTING PLAN
26	[illegible]	TYPICAL DUNE HUMMOCK GRADING & PLANTING PLAN
27	[illegible]	TYPICAL DUNE HUMMOCK GRADING & PLANTING PLAN
[illegible]	L-9	TYPICAL DUNE HUMMOCK GRADING & PLANTING PLAN
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40	XS-4	TYPICAL RE-NOURISHMENT SECTION STA 12+00 TO STA 23+50
41	XS-5	TYPICAL RE-NOURISHMENT SECTION STA 28+00 TO STA 43+00
42	XS-6	TYPICAL RE-NOURISHMENT SECTION STA 48+00 TO STA 67+00

REVISED 60% DUNE PLANS IN PROGRESS

WATER LEVELS AT BROAD BEACH (TIDAL EPOCH 1983-2001)

WATER LEVEL	ELEVATION TO MLLW VERTICAL DATUM
EXTREME HIGH (OBSERVED JANUARY 27, 1983)	+7.8 FEET
MEAN HIGHER HIGH WATER (MHHW)	+5.5 FEET
MEAN HIGH WATER (MHW)	+4.7 FEET
MEAN SEA LEVEL (MSL), 1983-2001 EPOCH	+2.8 FEET
NATIONAL GEODETIC VERTICAL DATUM – 1929 (NGVD29)	+2.6 FEET
MEAN LOW WATER (MLW)	+0.9 FEET
NORTH AMERICAN VERTICAL DATUM – 1988 (NAVD88)	+0.2 FEET
MEAN LOWER LOW WATER (MLLW)	0.0 FEET
EXTREME LOW (OBSERVED DECEMBER 17, 1933)	-2.7

BASED ON LOS ANGELES OUTER HARBOR TIDE STATION (NOAA/NOS, 2008)

60% SUBMITTAL

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. CHECKED BY Chris Webb
DRAWN BY S. Salazar IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

GENERAL NOTES, ABBREVIATIONS, INDEX OF DRAWINGS

SCALE NONE | DATE OCT. 2013
JOB NO. 6935-02
SHEET 2 OF 42
T-2

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FINAL | 100% | % | % | CONCEPT | STATUS

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_T-2.dwg: Oct 10, 2013 - 3:38pm;

60% SUBMITTAL

250' 0' 250' 500'

SCALE: 1"=250'

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MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. CHECKED BY Chris Webb
DRAWN BY S. Salazar IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

SITE PLAN

SCALE 1"=250' DATE OCT. 2013
JOB NO. 6935-02
SHEET 3 OF 42
CS-1

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

FINAL | 100% | % | % | CONCEPT | STATUS

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_CS-1.dwg; Oct 10, 2013 - 3:36pm;

STAGING AREA #1: ZUMA COUNTY BEACH PARKING LOT #12

1"=40'

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40' 0' 40' 80'
SCALE: 1"=40'

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DRAWN BY S. Salazar IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

CONSTRUCTION ACCESS AND STAGING PLAN

SCALE 1"=40' DATE OCT. 2013
JOB NO. 6935-02
SHEET 4 OF 42
CS-2

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

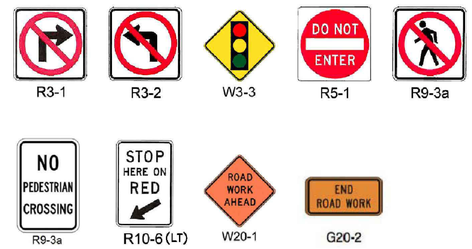
FINAL | 100% | % | % | CONCEPT | STATUS

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_CS-2.dwg; Oct 10, 2013 – 3:38pm;

GENERAL NOTES

1. ALL SIGNS, TRAFFIC CONES, BARRICADES, ETC. SHALL CONFORM TO THE LATEST EDITIONS OF STATE OF CALIFORNIA STANDARD PLANS AND SPECIFICATIONS (2010 EDITION), AND THE CALIFORNIA MUTCD (2012 EDITION).
2. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR PROPER POSITION AND SHALL BE REPAIRED, REPLACED OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
3. CALTRANS RESERVES THE RIGHT TO OBSERVE THESE TRAFFIC CONTROL/DETOUR PLANS IN USE AND TO MAKE ANY CHANGES NECESSITATED BY FIELD CONDITIONS. ALL SUCH CHANGES SHALL SUPERSEDE THESE PLANS AND WILL BE DONE SOLELY AT THE CONTRACTOR'S EXPENSE.
4. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY TRAFFIC CONTROL DEVICES, AND RESTORE ALL PERMANENT SIGNS AND STRIPING IMPACTED BY CONSTRUCTION TO THEIR ORIGINAL CONDITION.
5. ONLY ONE DIRECTION OF TRAFFIC CONTROL MAY BE PLACED AT A TIME.

TEMPORARY CONSTRUCTION SIGNS



LEGEND

- PROPOSED CONSTRUCTION SIGN
- PROPOSED K-RAIL
- EXISTING TRAFFIC DELINEATOR

REGISTERED CIVIL ENGINEER (Date)

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

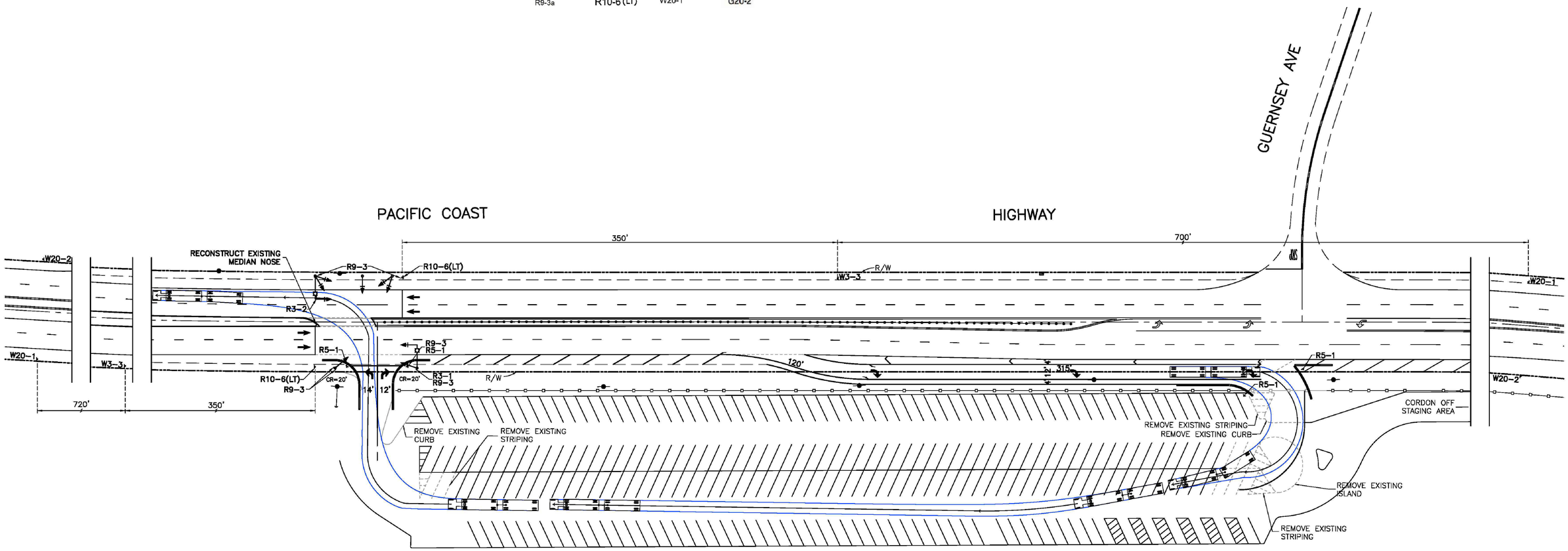
REGISTERED PROFESSIONAL ENGINEER DAVID S. SHENDER No. C45324 Exp. 09/30/14 CIVIL STATE OF CALIFORNIA

LINSCOTT LAW & GREENSPAN engineers

TRANSPORTATION PLANNING – TRAFFIC ENGINEERING – PARKING

- 20931 BURBANK BLVD., SUITE C, WOODLAND HILLS, CA 91367 (818)835-8648
- 600 S. LAKE AVE., SUITE 500, PASADENA, CA 91106 (626)796-2322
- 2 EXECUTIVE CIRCLE, SUITE 250, IRVINE, CA 92614 (949)825-6174
- 4542 RUFFNER ST., SUITE 100, SAN DIEGO, CA 92111 (858)300-8800

RCE NO. DATE



TEMPORARY SIGNING & STRIPING AND TRAFFIC SIGNAL PLAN

60% SUBMITTAL

50' 0' 50' 100'

SCALE: 1"=50'

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MOFFATT & NICHOL

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DRAWN BY S. Salazar IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

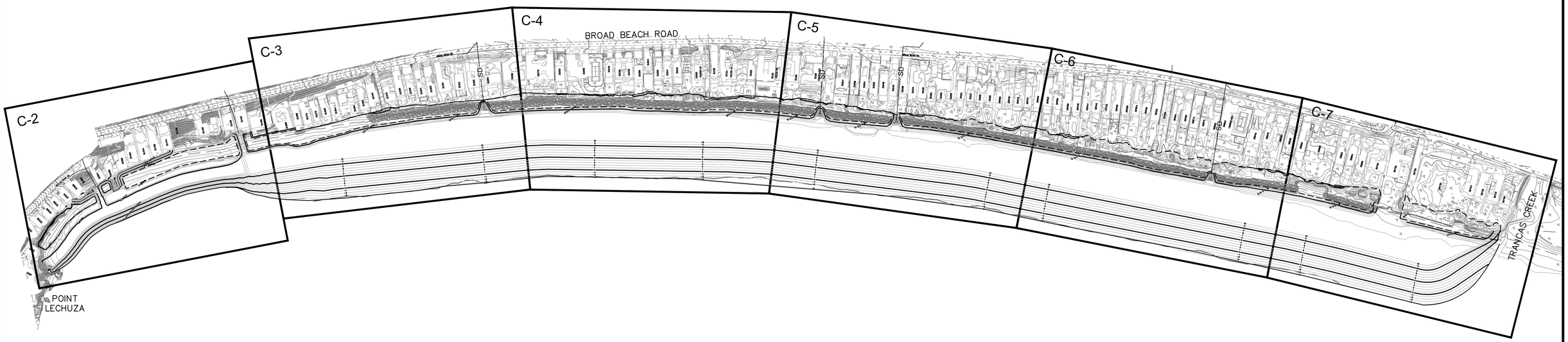
TRAFFIC CONTROL PLAN

SCALE 1"=50' DATE OCT. 2013
JOB NO. 6935-02
SHEET 5 OF 42
CS-3

FINAL | 100% | % | % | CONCEPT | STATUS

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_CS-3.dwg: Oct 10, 2013 - 3:38pm:

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING



SHEET LAYOUT PLAN

1"=200'

60% SUBMITTAL

200' 0' 200' 400'

SCALE: 1"=200'

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BROAD BEACH RESTORATION PROJECT
California State Lands Commission

SHEET LAYOUT PLAN

SCALE 1"=200' DATE OCT. 2013
JOB NO. 6935-02
SHEET 6 OF 42
C-1

FINAL | 100% | % | % | CONCEPT | STATUS

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DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

NOTE:

FOR DUNE RESTORATION PLANS AND DETAILS SEE SHEETS L-1 THRU L-10.

BROAD BEACH ROAD

VICTORIA POINT ROAD

31406 31412 31418 31430 31438 31444 31450 31454 31460 31500 31502 31504 31506 31508 31516 31520 31528 31532 31536

RESTORED DUNES (SEE NOTE 1)

+20 MLLW

+17 MLLW

+14 MLLW

+12 MLLW

10' WIDE SWALE

POST NOURISHMENT TOE

SURF GRASS

SLOPE VARIES

3:1

POINT LECHUZA

MATCH LINE SEE SHEET C-3 STATION 21+50

LEGEND:

- SD — EXISTING STORM DRAIN
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- 18+00 — STATION CONTROL LINE
- DUNE RESTORATION FOOTPRINT
- WAVE UPRUSH +1 YR
- WAVE UPRUSH +5, +15 YR
- WAVE UPRUSH +10, +20 YR

40' 0' 40' 80'

SCALE: 1"=40'

60% SUBMITTAL

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BROAD BEACH RESTORATION PROJECT
California State Lands Commission
BEACH FILL PLAN
STA 10+00 TO STA 21+50

SCALE 1"=40' DATE OCT. 2013
JOB NO. 6935-02
SHEET 7 OF 42
C-2

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

FINAL | 100% | % | % | CONCEPT | STATUS

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_C-2.dwg; Oct 28, 2013 - 11:50am;

NOTE:

FOR DUNE RESTORATION PLANS AND DETAILS SEE SHEETS L-1 THRU L-10.

LEGEND:

- SD — EXISTING STORM DRAIN
- MODIFIED CATCH BASIN
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- EXISTING TEMPORARY REVETMENT
- 18+00 — STATION CONTROL LINE
- DUNE RESTORATION FOOTPRINT
- WAVE UPRUSH +1 YR
- WAVE UPRUSH +5, +15 YR
- WAVE UPRUSH +10, +20 YR

60% SUBMITTAL

40' 0' 40' 80'

SCALE: 1"=40'

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. | CHECKED BY Chris Webb
DRAWN BY S. Salazar | IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission
BEACH FILL PLAN
STA 21+50 TO STA 32+00

SCALE 1"=40' | DATE OCT. 2013
JOB NO. 6935-02
SHEET 8 OF 42
C-3

FINAL | 100% | % | % | CONCEPT | STATUS

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_C-3.dwg: Oct 28, 2013 - 11:50am;

NOTE:

FOR DUNE RESTORATION PLANS AND DETAILS SEE SHEETS L-1 THRU L-10.

LEGEND:

- SD — EXISTING STORM DRAIN
- MODIFIED CATCH BASIN
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- EXISTING TEMPORARY REVETMENT
- 18+00 — STATION CONTROL LINE
- DUNE RESTORATION FOOTPRINT
- WAVE UPRUSH +1 YR
- WAVE UPRUSH +5, +15 YR
- WAVE UPRUSH +10, +20 YR

60% SUBMITTAL

40' 0' 40' 80'

SCALE: 1"=40'

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. | CHECKED BY Chris Webb
DRAWN BY S. Salazar | IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission
BEACH FILL PLAN
STA 32+00 TO STA 42+50

SCALE 1"=40' | DATE OCT. 2013
JOB NO. 6935-02
SHEET 9 OF 42
C-4

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

FINAL | 100% | % | % | CONCEPT | STATUS

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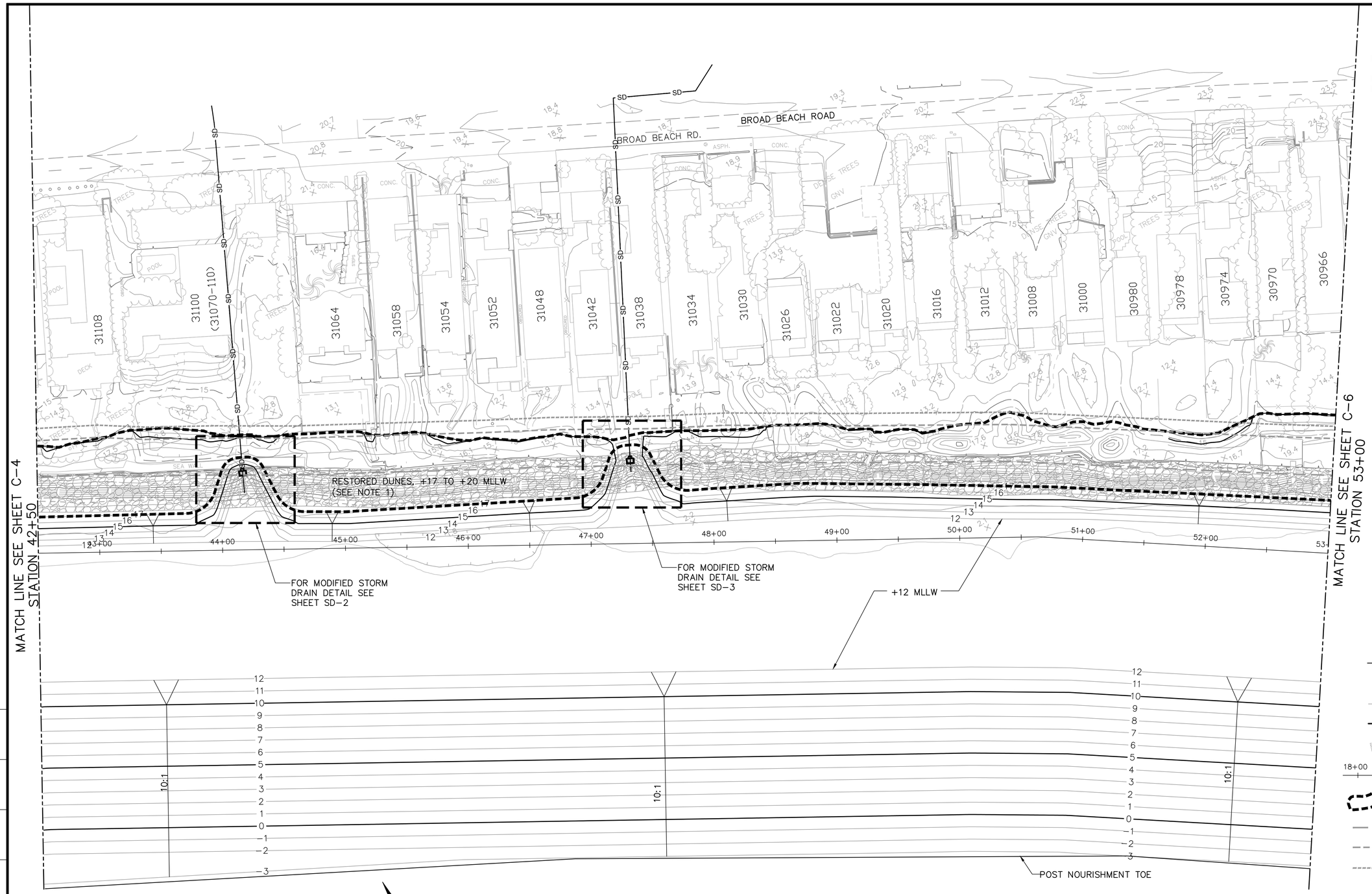
NOTE:

FOR DUNE RESTORATION PLANS AND DETAILS SEE SHEETS L-1 THRU L-10.



LEGEND:

- SD — EXISTING STORM DRAIN
- MODIFIED CATCH BASIN
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- EXISTING TEMPORARY REVETMENT
- 18+00 — STATION CONTROL LINE
- DUNE RESTORATION FOOTPRINT
- WAVE UPRUSH +1 YR
- WAVE UPRUSH +5, +15 YR
- WAVE UPRUSH +10, +20 YR

60% SUBMITTAL

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

40' 0' 40' 80'
SCALE: 1"=40'

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. | CHECKED BY Chris Webb
DRAWN BY S. Salazar | IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission
BEACH FILL PLAN
STA 42+50 TO STA 53+00

SCALE 1"=40' | DATE OCT. 2013
JOB NO. 6935-02
SHEET 10 OF 42
C-5

FINAL | 100% | % | % | CONCEPT | STATUS

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

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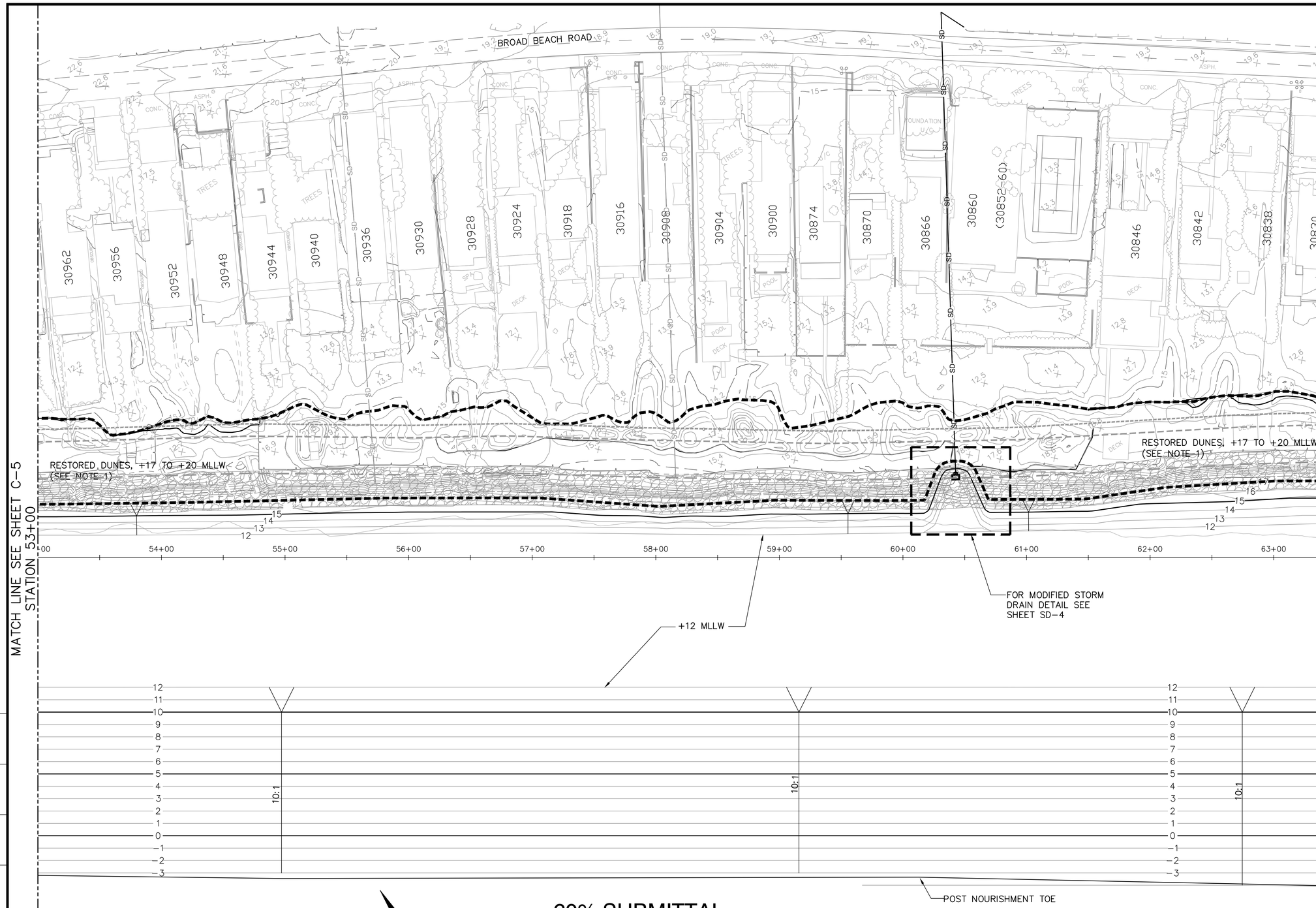


NOTE:

FOR DUNE RESTORATION PLANS AND DETAILS SEE SHEETS L-1 THRU L-10.

LEGEND:

- SD — EXISTING STORM DRAIN
- MODIFIED CATCH BASIN
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- EXISTING TEMPORARY REVETMENT
- 18+00 — STATION CONTROL LINE
- DUNE RESTORATION FOOTPRINT
- WAVE UPRUSH +1 YR
- WAVE UPRUSH +5, +15 YR
- WAVE UPRUSH +10, +20 YR

60% SUBMITTAL

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

40' 0' 40' 80'
SCALE: 1"=40'

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E.
DRAWN BY S. Salazar
CHECKED BY Chris Webb
IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission
BEACH FILL PLAN
STA 53+00 TO STA 63+50

SCALE 1"=40'
DATE OCT. 2013
JOB NO. 6935-02
SHEET 11 OF 42
C-6

FINAL
100%
%
%
CONCEPT
STATUS

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_C-6.dwg: Oct 28, 2013 - 11:51am;

NOTE:

FOR DUNE RESTORATION PLANS AND DETAILS SEE SHEETS L-1 THRU L-10.

BROAD BEACH ROAD

30826 30822 30810 30804 30800 30760 30756 30750 30732 30724 30718 30712 30708

RESTORED DUNES, +17 TO +20 MLLW (SEE NOTE 1)

RESTORED DUNES, +17 TO +20 MLLW (SEE NOTE 1)

MATCH LINE SEE SHEET C-6 STATION 63+50

64+00 65+00 66+00 67+00 68+00 69+00 70+00 71+00 72+00 73+00

TRANCAS CREEK

SLOPE VARIES

+12 MLLW

10:1

10:1

POST NOURISHMENT TOE

LEGEND:

- SD — EXISTING STORM DRAIN
- MODIFIED CATCH BASIN
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- EXISTING TEMPORARY REVETMENT
- 18+00 — STATION CONTROL LINE
- DUNE RESTORATION FOOTPRINT
- WAVE UPRUSH +1 YR
- WAVE UPRUSH +5, +15 YR
- WAVE UPRUSH +10, +20 YR

60% SUBMITTAL

40' 0' 40' 80'

SCALE: 1"=40'

DIGALERT

DIAL TOLL FREE 1-800-227-2600 AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. CHECKED BY Chris Webb

DRAWN BY S. Salazar IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT

California State Lands Commission

BEACH FILL PLAN

STA 63+50 TO STA 74+00

SCALE 1"=40' DATE OCT. 2013

JOB NO. 6935-02

SHEET 12 OF 42

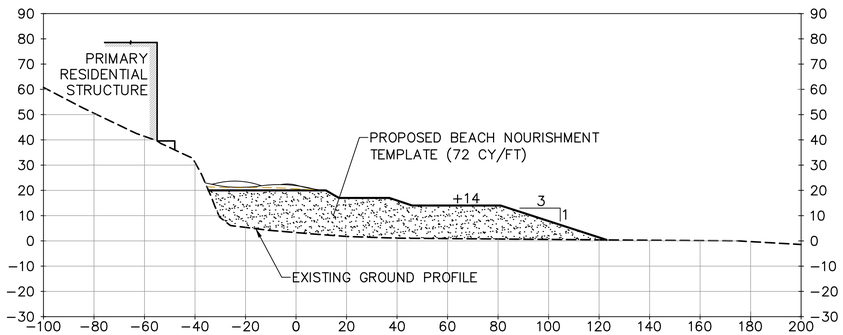
C-7

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

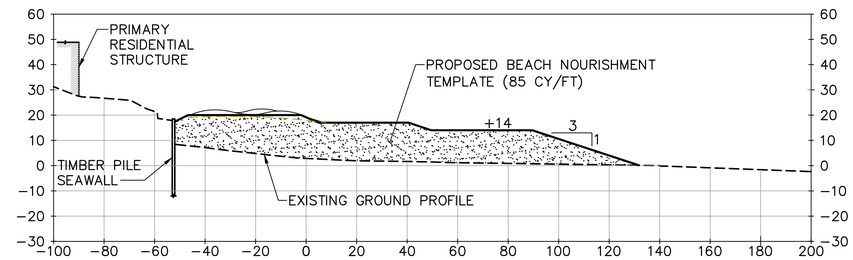
FINAL 100% % % CONCEPT STATUS

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_C-7.dwg; Oct 28, 2013 - 11:51am;

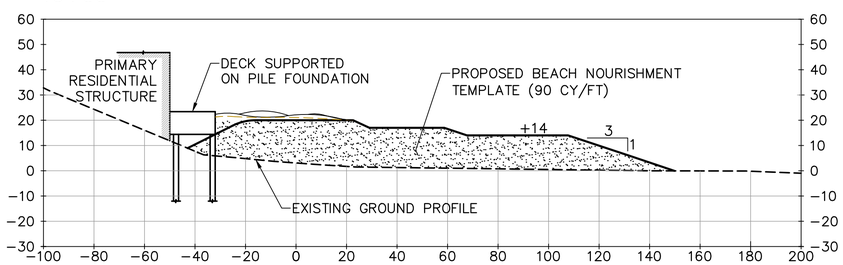
12+00



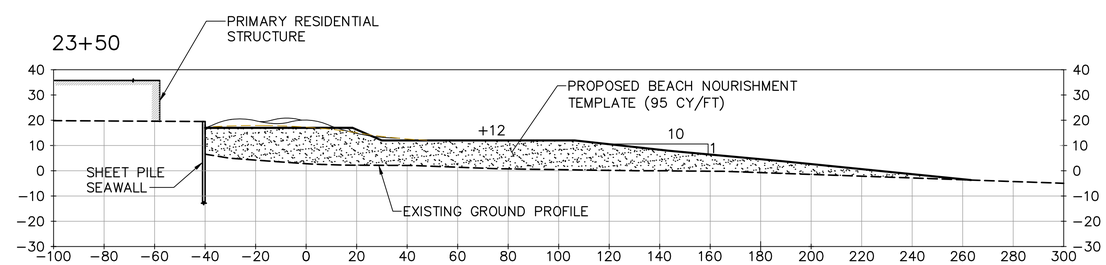
19+00



16+00



23+50



60% SUBMITTAL

DIGALERT
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AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. CHECKED BY Chris Webb
DRAWN BY S. Salazar IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission
TYPICAL BEACH FILL SECTIONS
STA 12+00 TO STA 23+50

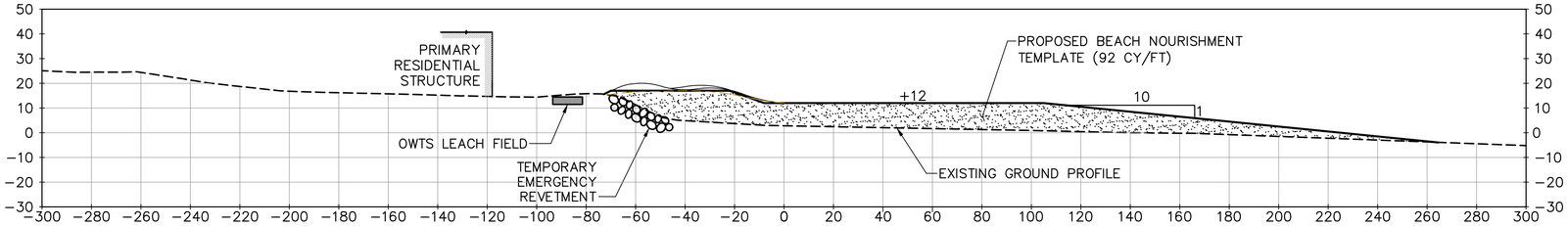
SCALE 1"=30' DATE OCT. 2013
JOB NO. 6935-02
SHEET 13 OF 42
XS-1

FINAL | 100% | % | % | CONCEPT | STATUS

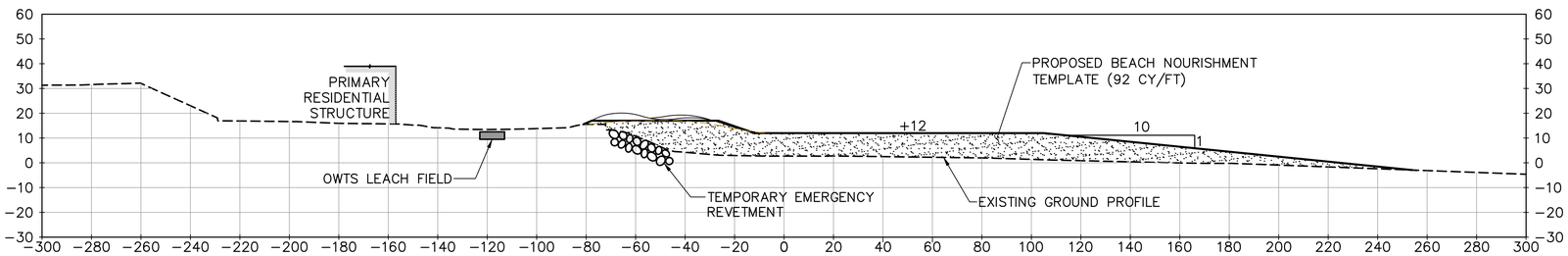
P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_XS-1.dwg; Nov 25, 2013 - 8:30am;

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

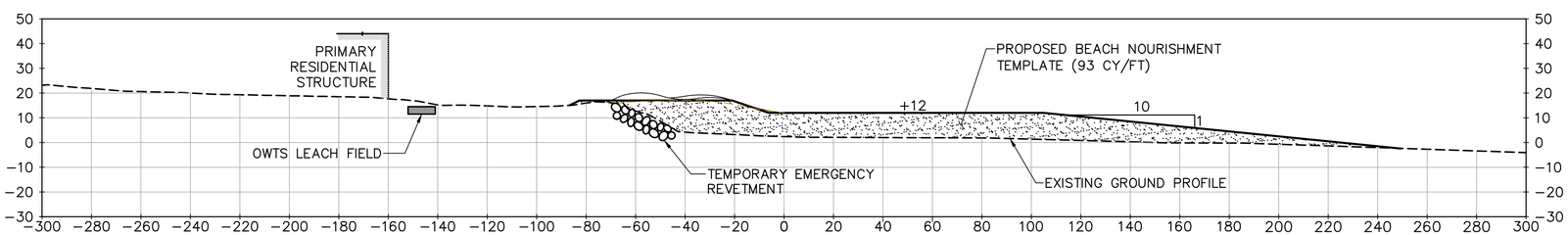
28+00



35+40



43+00



60% SUBMITTAL

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. CHECKED BY Chris Webb
DRAWN BY S. Salazar IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission
TYPICAL BEACH FILL SECTIONS
STA 28+00 TO STA 43+00

SCALE 1"=30' DATE OCT. 2013
JOB NO. 6935-02
SHEET 14 OF 42
XS-2

FINAL | 100% | % | % | CONCEPT | STATUS

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

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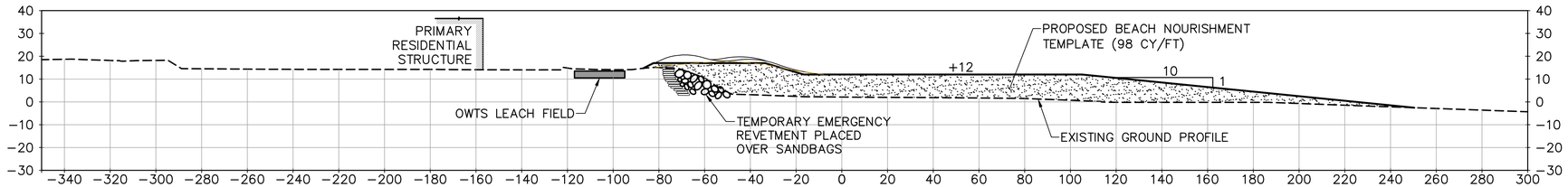
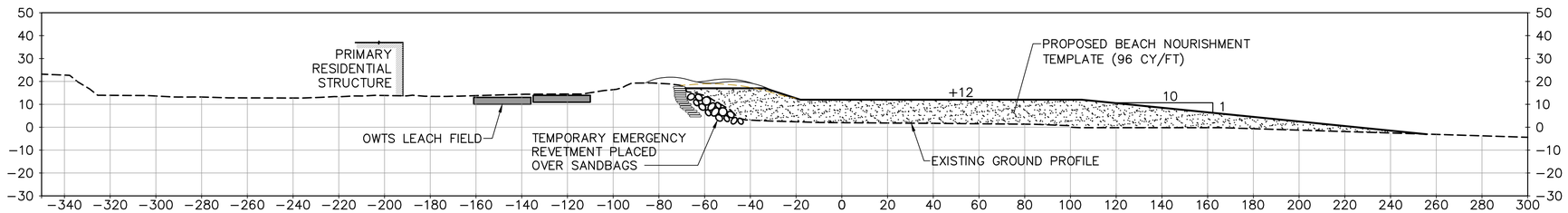
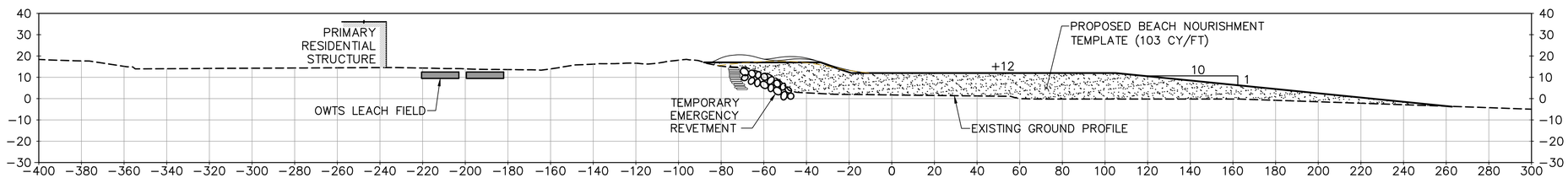
48+00



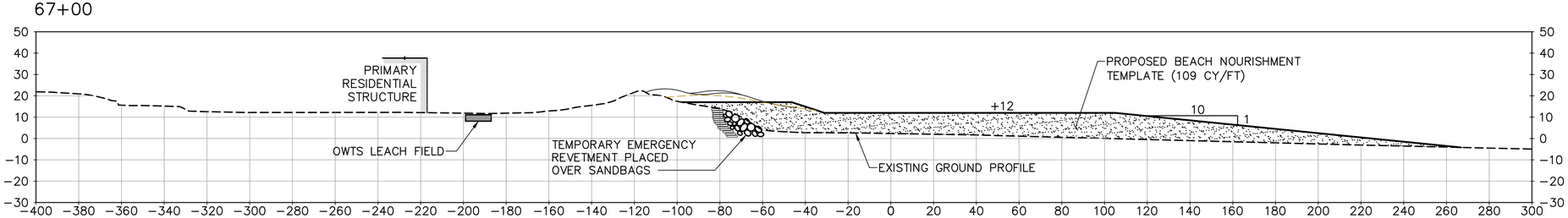
52+50



58+00



67+00



60% SUBMITTAL

FINAL | 100% | % | % | CONCEPT | STATUS

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. | CHECKED BY Chris Webb
DRAWN BY S. Salazar | IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission
TYPICAL BEACH FILL SECTIONS
STA 48+00 TO STA 67+00

SCALE 1"=30' | DATE OCT. 2013
JOB NO. 6935-02
SHEET 15 OF 42
XS-3

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

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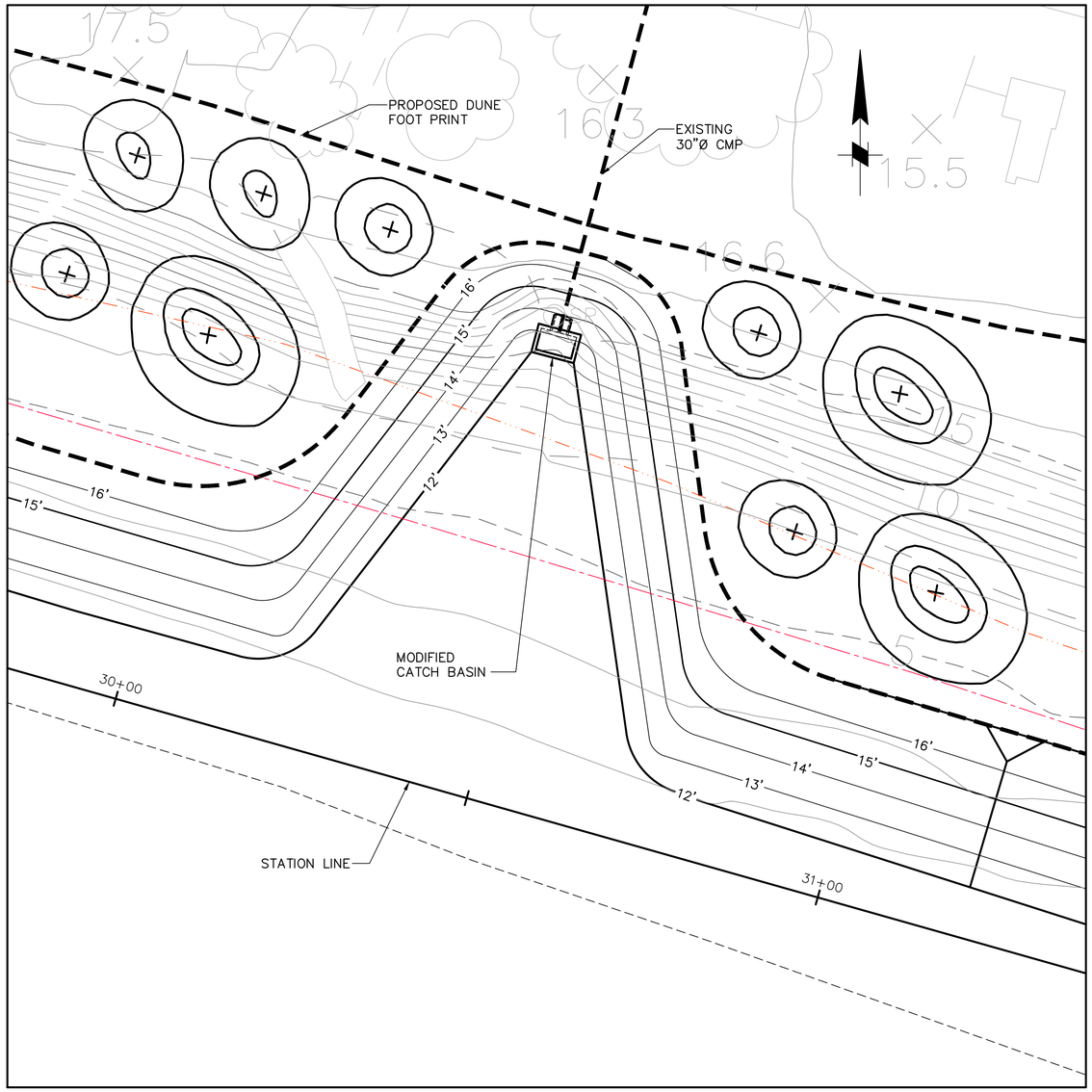
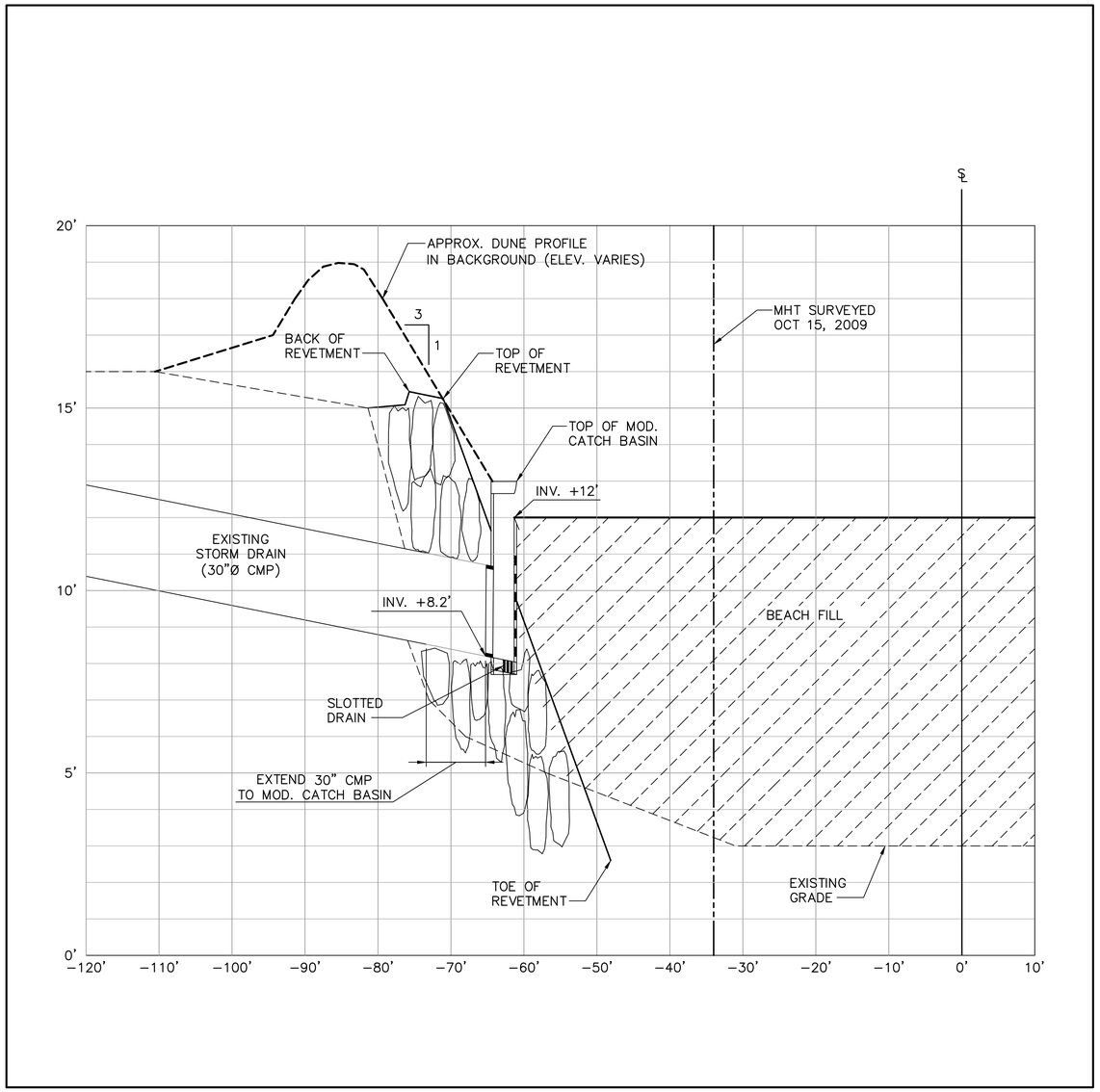


PLAN

SCALE: 1"=10'



PROFILE

SCALE: HORIZ. = 1"=10'
VERT. = 1/2"=1'−0"

NOTE:
ALL ELEVATIONS ARE IN REFERENCE TO THE MLLW DATUM.

60% SUBMITTAL

DIGALERT
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1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

10' 0' 10' 20'
SCALE: 1"=10'

2'−0" 0'−0" 2'−0" 4'−0"
SCALE: 1/2"=1'−0"

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E.
CHECKED BY Chris Webb
DRAWN BY S. Salazar
IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission
STORM DRAIN PLAN & PROFILE
STA 30+45.64

SCALE: AS SHOWN
DATE: OCT. 2013
JOB NO. 6935-02
SHEET 16 OF 42
SD-1

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

FINAL
100%
%
%
CONCEPT
STATUS

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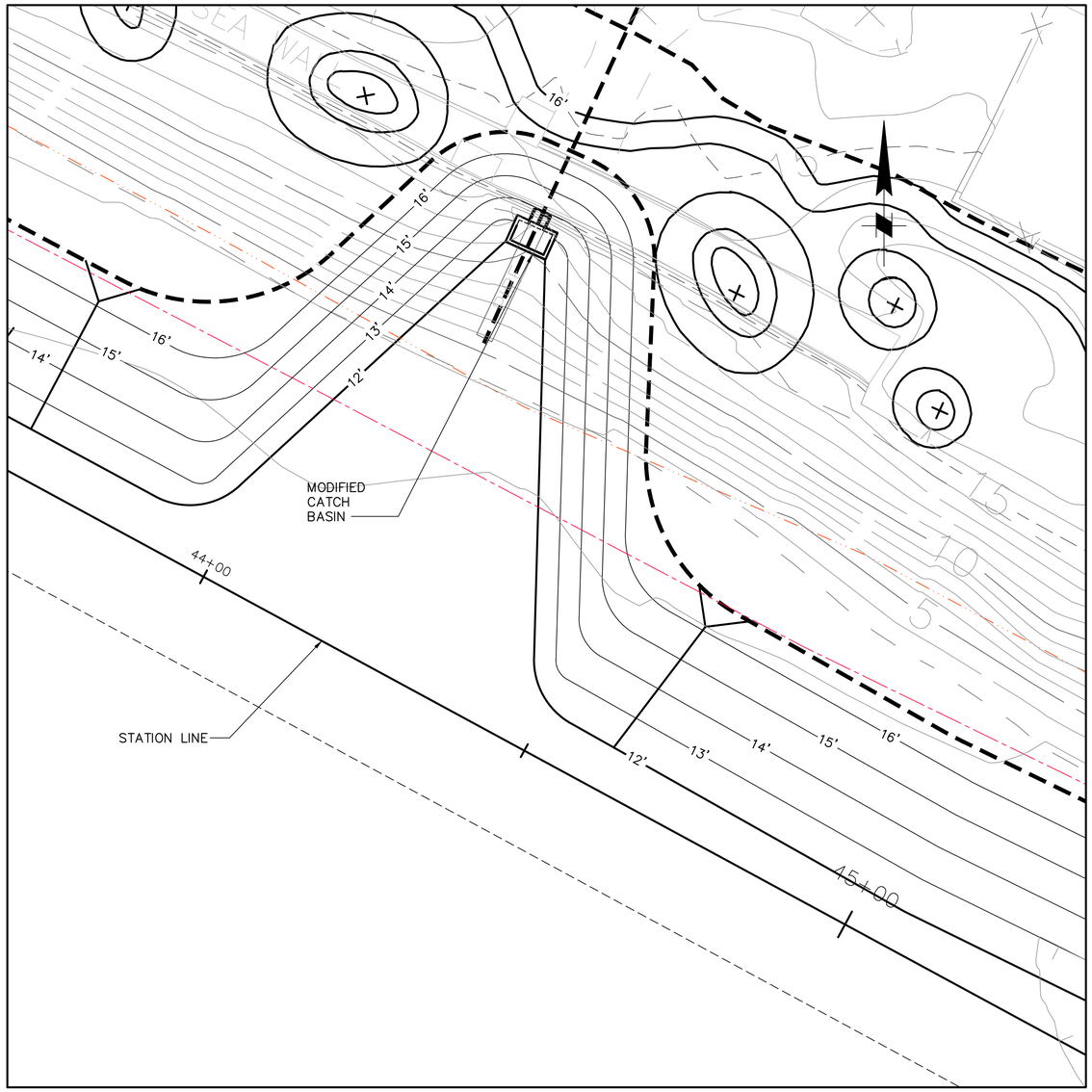
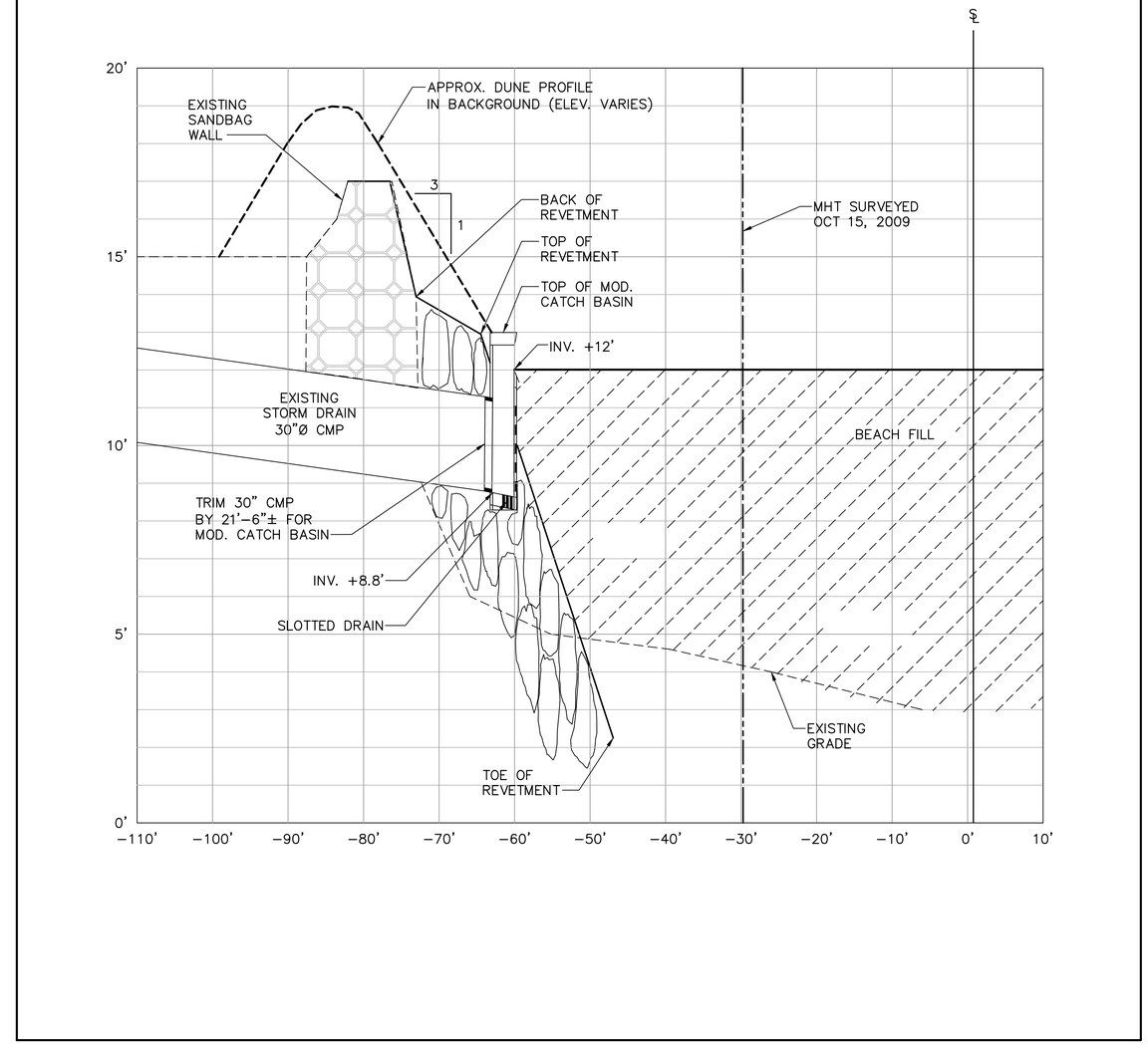


PLAN

SCALE: 1"=10'



PROFILE

SCALE: HORIZ. = 1"=10'
VERT. = 1"=2'

NOTE:
ALL ELEVATIONS ARE IN REFERENCE TO THE MLLW DATUM.

60% SUBMITTAL

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

10' 0' 10' 20'
SCALE: 1"=10'
2'-0" 0'-0" 2'-0" 4'-0"
SCALE: 1/2"=1'-0"

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER
RUSSELL H. BOUDREAU
No. C041810
EXP. 3/31/14
CIVIL
STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E.
DRAWN BY S. Salazar
CHECKED BY Chris Webb
IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission
STORM DRAIN PLAN & PROFILE
STA 44+21.70

SCALE: AS SHOWN
DATE: OCT. 2013
JOB NO. 6935-02
SHEET 17 OF 42
SD-2

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

FINAL
100%
%
%
CONCEPT
STATUS

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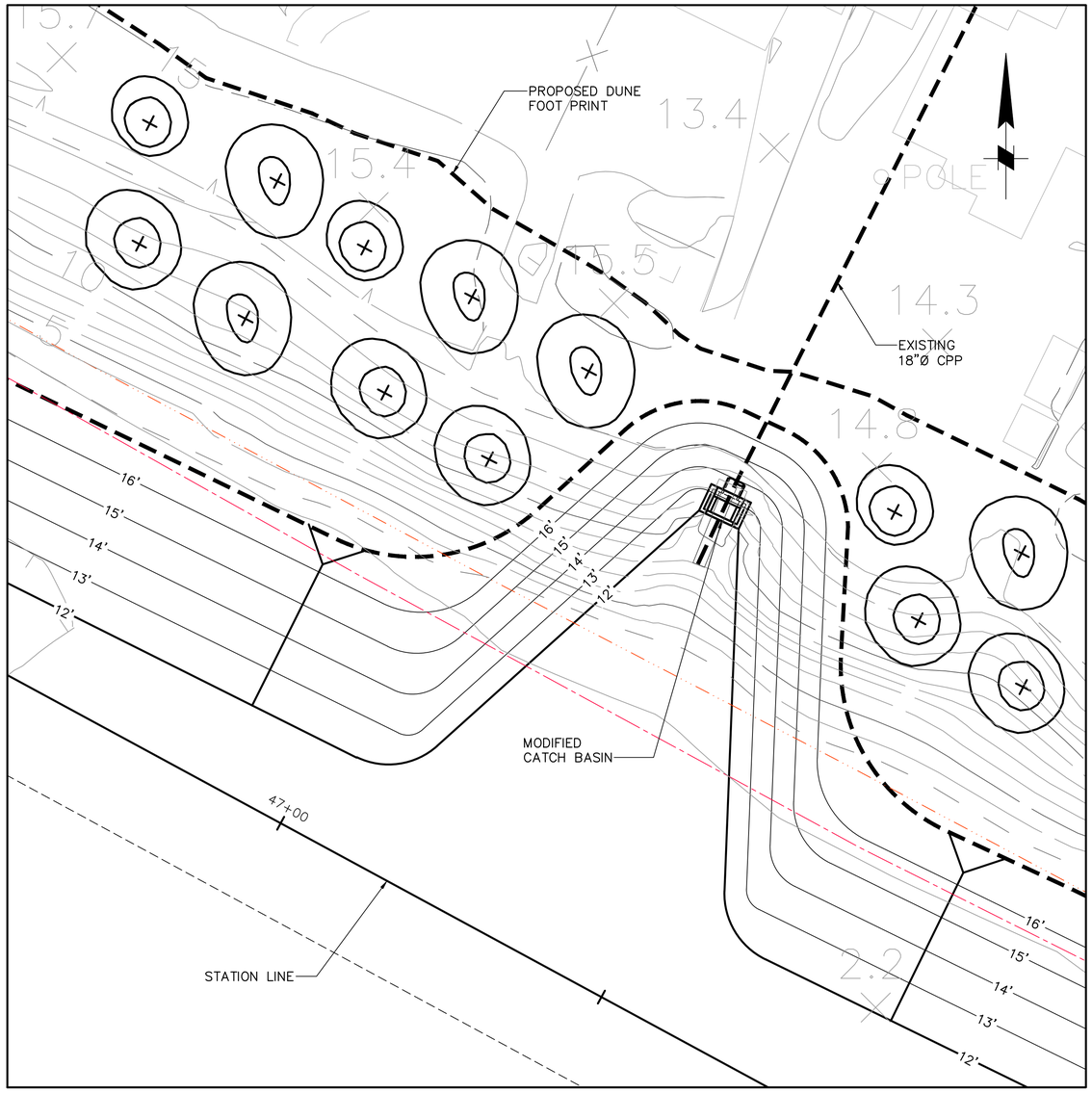
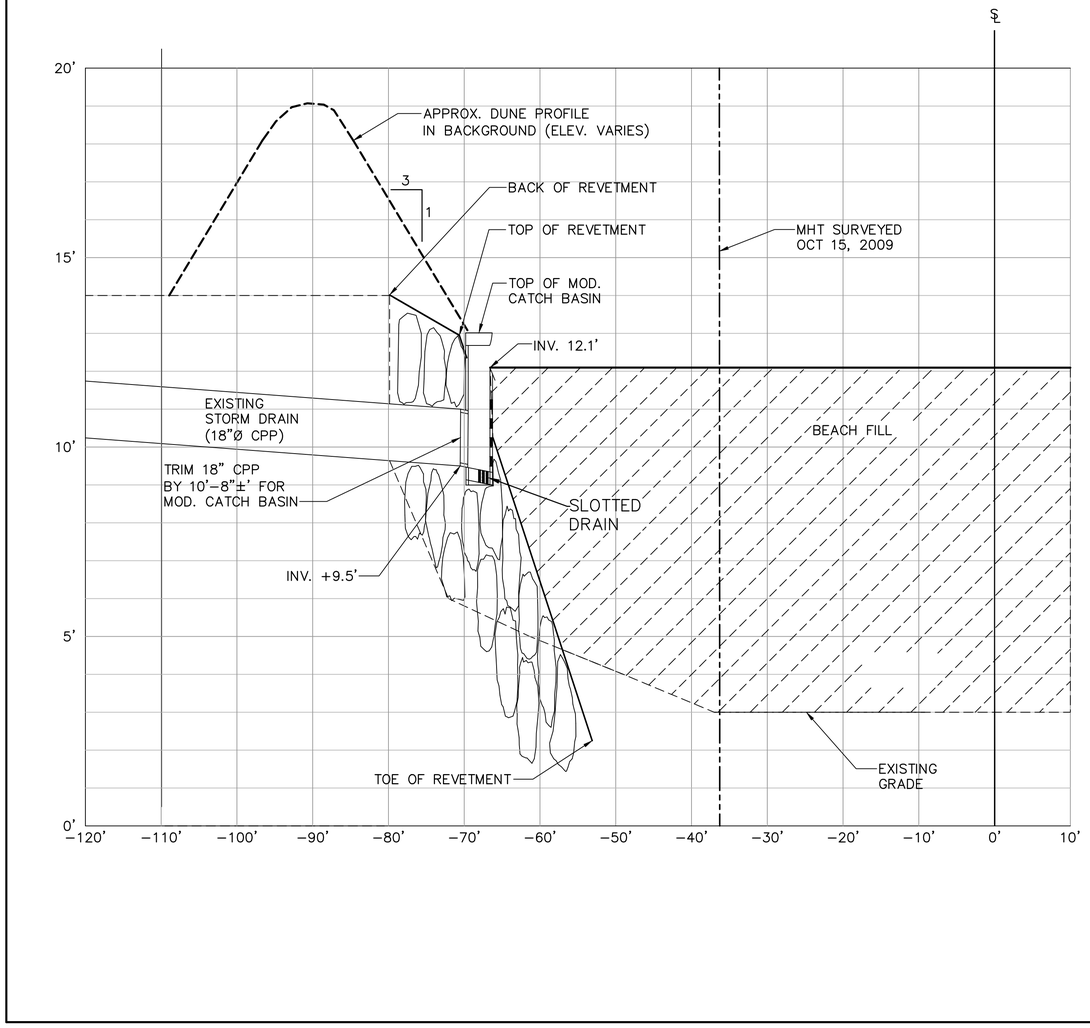


PLAN

SCALE: 1"=10'



PROFILE

SCALE: HORIZ. = 1"=10'
VERT. = 1"=2'

NOTE:
ALL ELEVATIONS ARE IN REFERENCE TO THE MLLW DATUM.

60% SUBMITTAL

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

10' 0' 10' 20'
SCALE: 1"=10'

2'-0" 0'-0" 2'-0" 4'-0"
SCALE: 1/2"=1'-0"

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. | CHECKED BY Chris Webb
DRAWN BY S. Salazar | IN CHARGE Russell Boudreau, P.E.

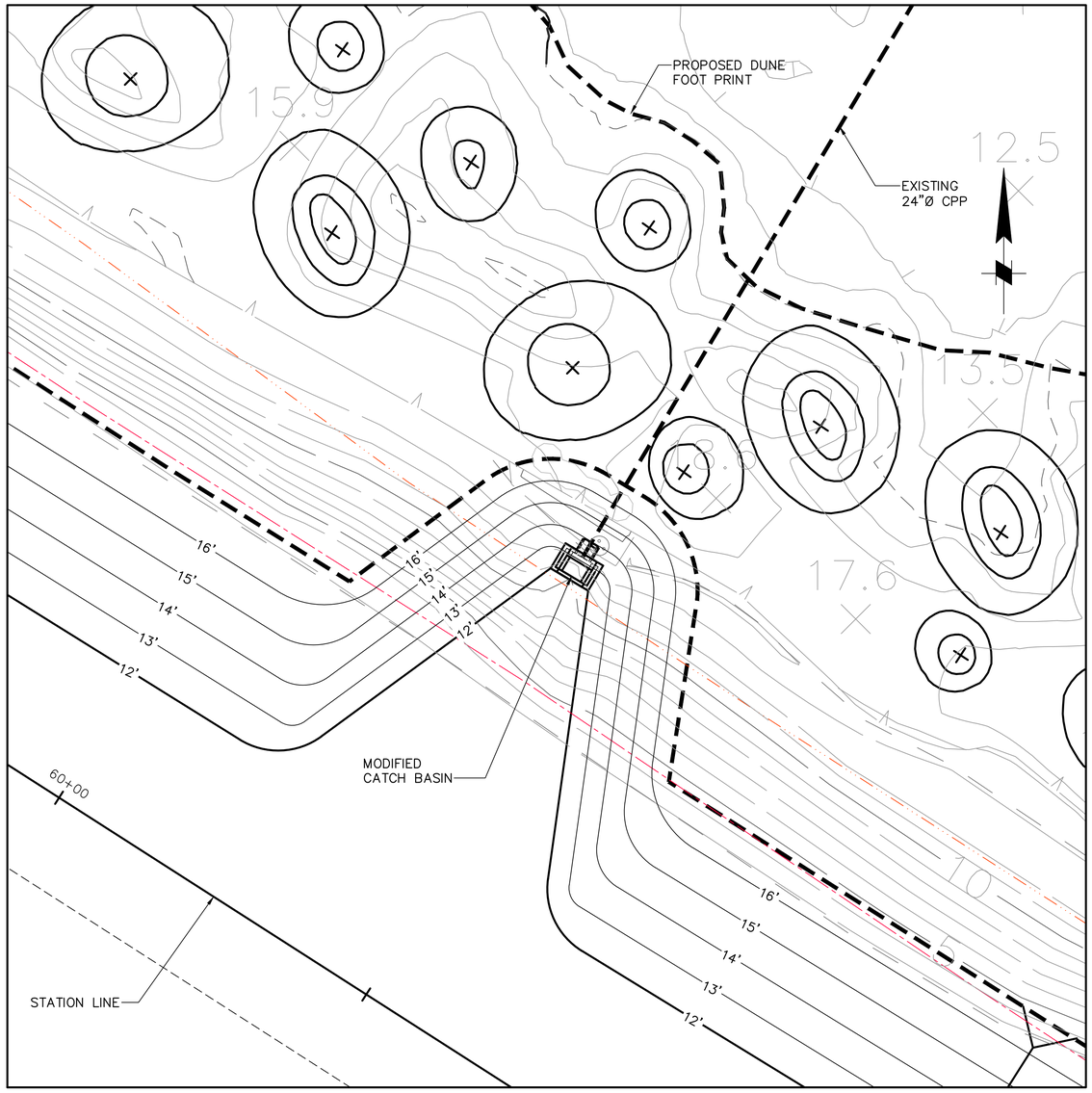
BROAD BEACH RESTORATION PROJECT
California State Lands Commission
STORM DRAIN PLAN & PROFILE
STA 47+35.62

SCALE: AS SHOWN | DATE: OCT. 2013
JOB NO. 6935-02
SHEET 18 OF 42
SD-3

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

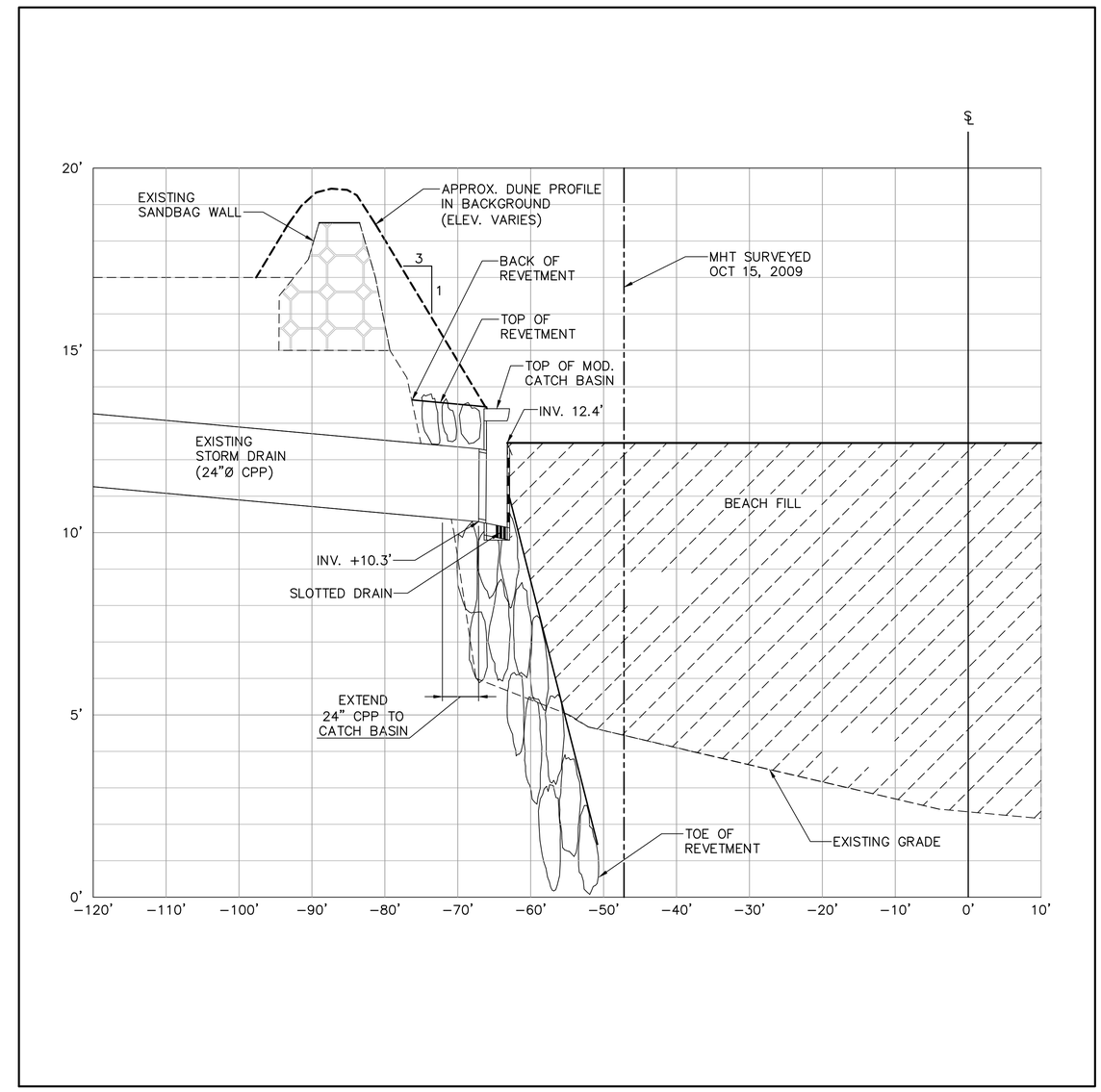
FINAL | 100% | % | % | CONCEPT | STATUS

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_SD-3.dwg: Oct 10, 2013 - 4:22pm;



PLAN

SCALE: 1"=10'



PROFILE

SCALE: HORIZ. = 1"=10'
VERT. = 1"=2'

NOTE:
ALL ELEVATIONS ARE IN REFERENCE TO THE MLLW DATUM.

60% SUBMITTAL

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

10' 0' 10' 20'
SCALE: 1"=10'
2'-0" 0'-0" 2'-0" 4'-0"
SCALE: 1/2"=1'-0"

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E.
CHECKED BY Chris Webb
DRAWN BY S. Salazar
IN CHARGE Russell Boudreau, P.E.

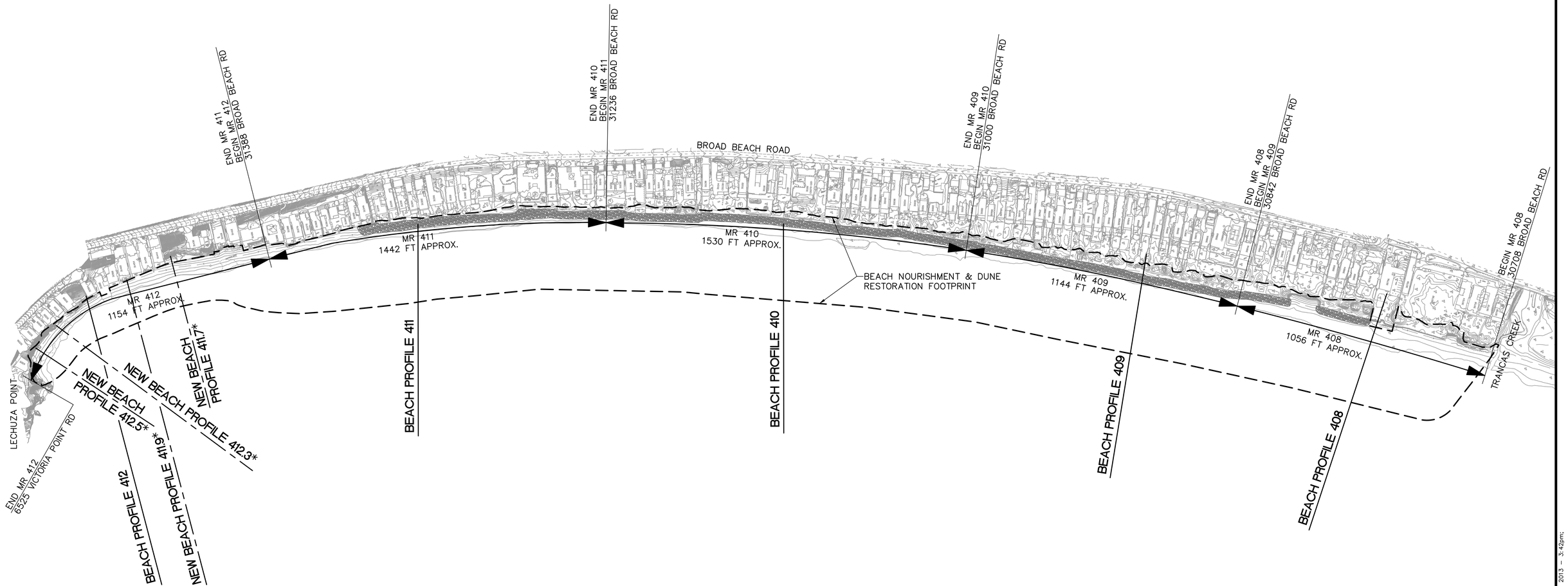
BROAD BEACH RESTORATION PROJECT
California State Lands Commission
STORM DRAIN PLAN & PROFILE
STA 60+44.75

SCALE: AS SHOWN
DATE: OCT. 2013
JOB NO. 6935-02
SHEET 19 OF 42
SD-4

FINAL | 100% | % | % | CONCEPT | STATUS

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\6935D2_SD-4.dwg: Oct 10, 2013 - 4:23pm;



* NEW WEST END PROFILES REQUESTED BY CCC FOR BIOLOGICAL IMPACT STUDY AND FIRST SURVEYED IN SPRING 2013.

60% SUBMITTAL

200' 0' 200' 400'

SCALE: 1"=200'

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. CHECKED BY Chris Webb
DRAWN BY S. Salazar IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

MAINTENANCE REACH AREAS
FOR SAND BACKPASSING

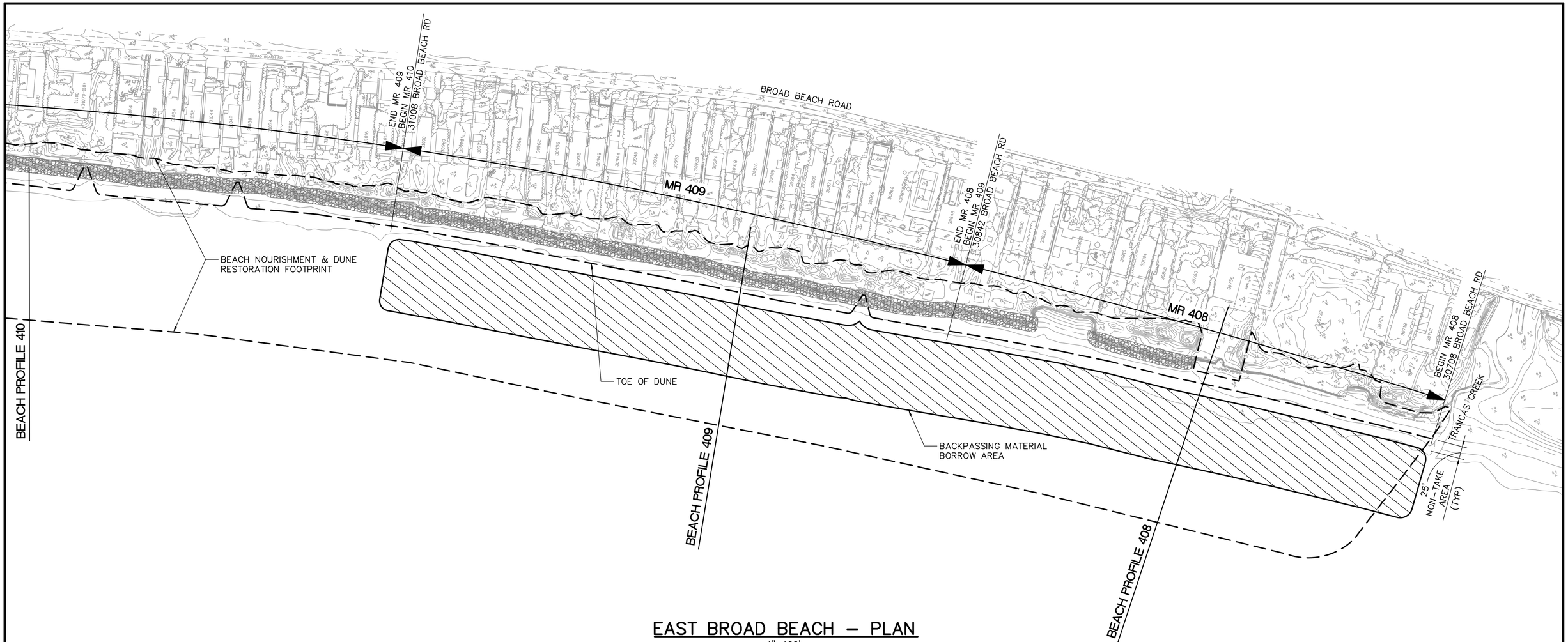
SCALE 1"=200' DATE OCT. 2013
JOB NO. 6935-02
SHEET 30 OF 42
MR-1

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

STATUS: CONCEPT | % | % | 100% | FINAL

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_MR-1.dwg; Oct 10, 2013 - 3:42pm;

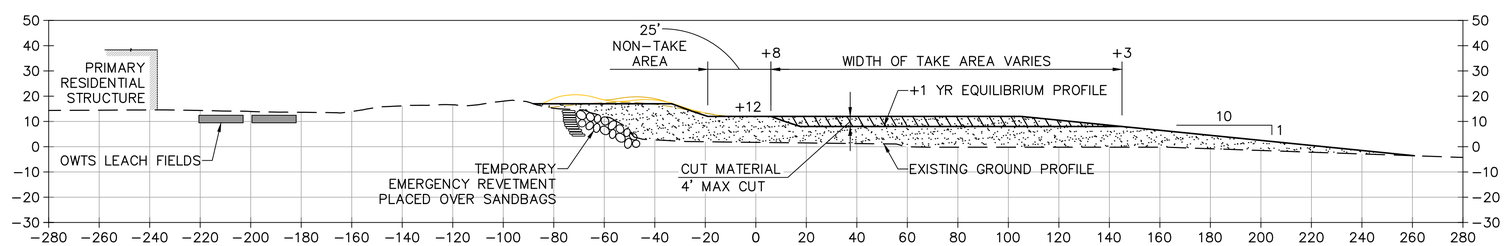


EAST BROAD BEACH – PLAN

1"=100'

NOTE:

FOR 35,000 CY FROM COMBINED TAKE AREAS MR 408/MR 409.



EAST BROAD BEACH – 409 PROFILE

PROPOSED BACKPASSING ACTION AT MR 408 AND MR 409 TO BORROW 35,000 CY

1"=30'

60% SUBMITTAL

SCALE: 1"=100'

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. CHECKED BY Chris Webb
DRAWN BY S. Salazar IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

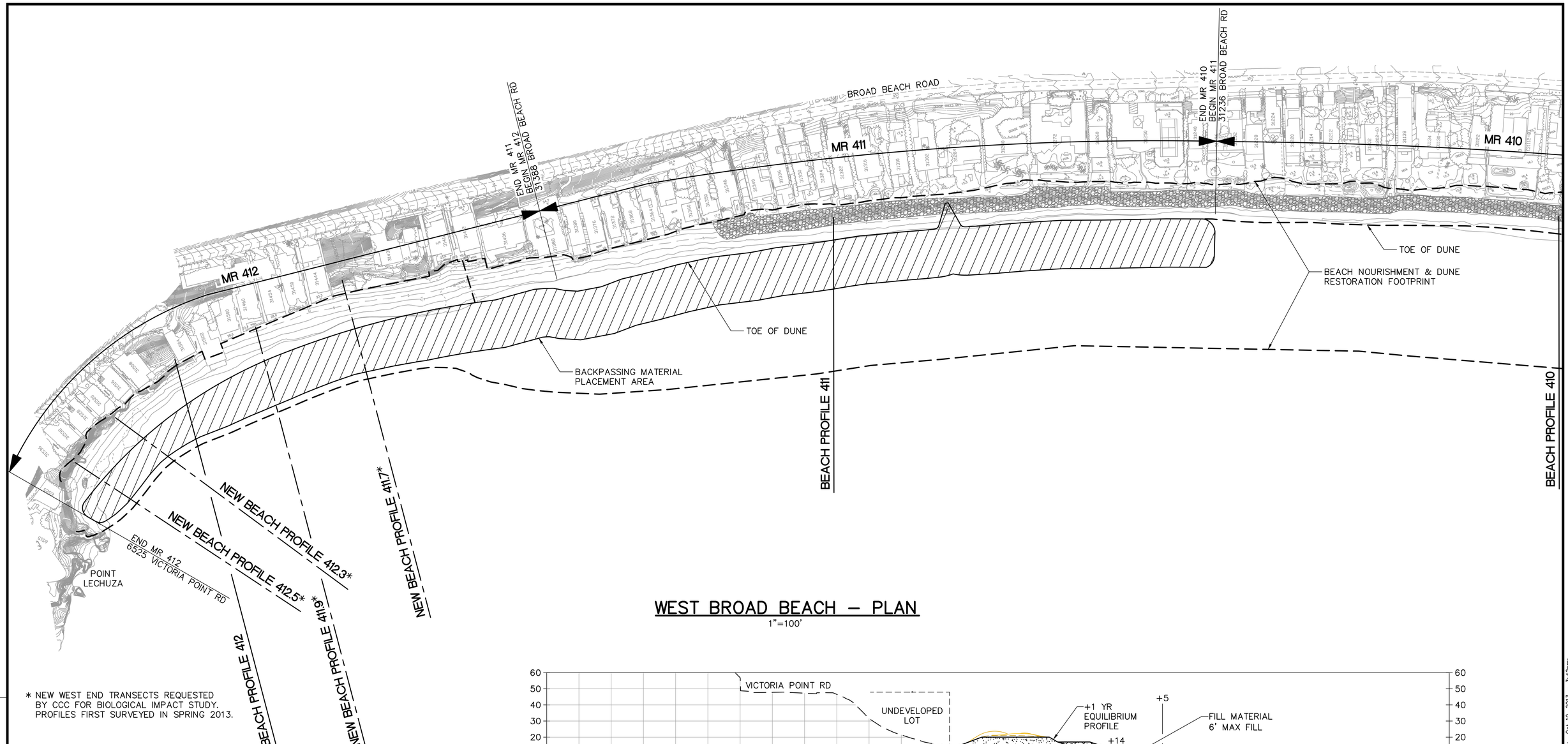
TAKE AREA AT MR 408 AND MR 409 FOR SAND BACKPASSING

SCALE: AS NOTED DATE: OCT. 2013
JOB NO. 6935-02
SHEET 31 OF 42
MR-2

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_MR-2.dwg; Oct 10, 2013 – 3:42pm;

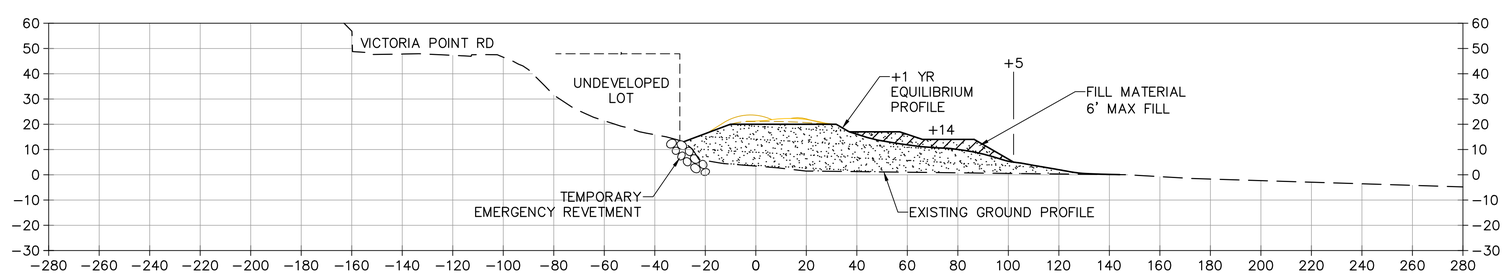
FINAL | 100% | % | % | CONCEPT | STATUS



* NEW WEST END TRANSECTS REQUESTED BY CCC FOR BIOLOGICAL IMPACT STUDY. PROFILES FIRST SURVEYED IN SPRING 2013.

WEST BROAD BEACH – PLAN

1"=100'



WEST BROAD BEACH – 412 PROFILE

PROPOSED BACKPASSING ACTION AT MR 411 AND MR 412 TO PLACE 35,000 CY

1"=30'

BACKPASS SCENARIO NO. 2 NOTES:

1. AVERAGE FILL PROFILE AT MR 412 FOR PLACEMENT OF 35,000 CY AT MR 411 AND MR 412.
2. DEPTH OF FILL RANGES FROM 3 FEET TO 6 FEET.

60% SUBMITTAL

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

100' 0' 100' 200'
SCALE: 1"=100'

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E.
CHECKED BY Chris Webb
DRAWN BY S. Salazar
IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

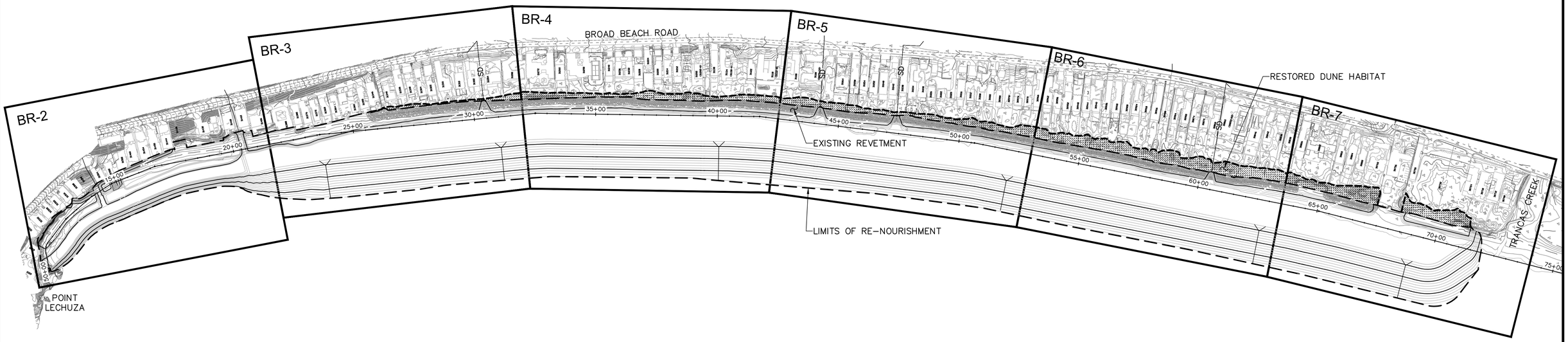
PLACEMENT AREA AT MR 411 AND MR 412 FOR SAND BACKPASING

SCALE: AS NOTED
DATE: OCT. 2013
JOB NO. 6935-02
SHEET 32 OF 42
MR-3

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

FINAL | 100% | % | % | CONCEPT | STATUS

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_MR-3.dwg: Oct 10, 2013 – 3:42pm;



SHEET LAYOUT PLAN

1"=200'

60% SUBMITTAL

200' 0' 200' 400'

SCALE: 1"=200'

DIGALERT

DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER
RUSSELL H. BOUDREAU
No. C041810
EXP. 3/31/14
CIVIL
STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E.
CHECKED BY Chris Webb
DRAWN BY S. Salazar
IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

BEACH RE-NOURISHMENT
SHEET LAYOUT PLAN

SCALE 1"=200'
DATE OCT. 2013
JOB NO. 6935-02
SHEET 33 OF 42
BR-1

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

STATUS: FINAL | 100% | % | % | CONCEPT

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_BR-1.dwg: Oct 10, 2013 - 3:42pm;

BROAD BEACH ROAD

VICTORIA POINT ROAD

31532 31528 31520 31516 31508 31506 31504 31502 31500 31460 31454 31450 31444 31438 31430 31418 31412 31406

LIMITS OF GRADING

+20 MLLW

+17 MLLW

+14 MLLW

+12 MLLW

10' WIDE SWALE

POST NOURISHMENT TOE

SURF GRASS

SLOPE VARIES

3:1

LIMITS OF RE-NOURISHMENT

POINT LECHUZA

MATCH LINE SEE SHEET BR-3 STATION 21+50

LEGEND:

—SD—	EXISTING STORM DRAIN
—5—	EXISTING CONTOUR
—5—	PROPOSED CONTOUR
18+00	STATION CONTROL LINE
— — —	LIMITS OF RE-NOURISHMENT PROJECT

60% SUBMITTAL

40' 0' 40' 80'

SCALE: 1"=40'

DIGALERT

DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E.
DRAWN BY S. Salazar
CHECKED BY Chris Webb
IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

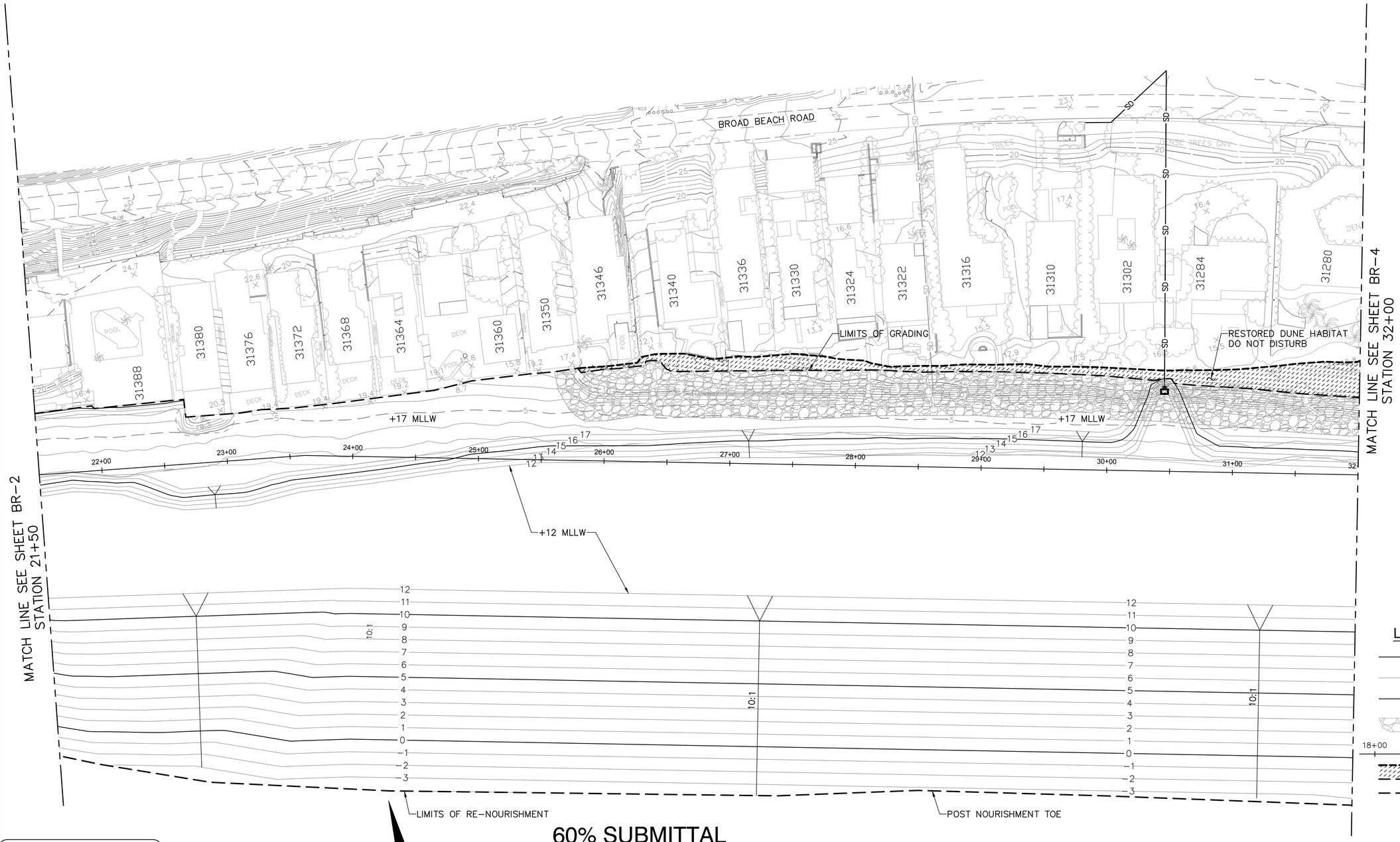
BEACH RE-NOURISHMENT PLAN
STA 10+00 TO STA 21+50

SCALE 1"=40'
DATE OCT. 2013
JOB NO. 6935-02
SHEET 34 OF 42
BR-2

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

FINAL | 100% | % | % | CONCEPT | STATUS

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_BR-2.dwg; Oct 10, 2013 - 3:42pm;



LEGEND:

- SD — EXISTING STORM DRAIN
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- EXISTING TEMPORARY REVETMENT
- 18+00 — STATION CONTROL LINE
- RESTORED DUNE HABITAT
- LIMITS OF RE-NOURISHMENT PROJECT

60% SUBMITTAL

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

40' 0' 40' 80'
SCALE: 1"=40'

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. | CHECKED BY Chris Webb
DRAWN BY S. Salazar | IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

BEACH RE-NOURISHMENT PLAN
STA 21+50 TO STA 32+-00

SCALE 1"=40' | DATE OCT. 2013
JOB NO. 6935-02
SHEET 35 OF 42
BR-3

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

FINAL | 100% | % | % | CONCEPT | STATUS

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_BR-3.dwg; Oct 10, 2013 - 3:42pm;

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING TEMPORARY REVETMENT
- STATION CONTROL LINE
- RESTORED DUNE HABITAT
- LIMITS OF RE-NOURISHMENT PROJECT

60% SUBMITTAL

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

40' 0' 40' 80'
SCALE: 1"=40'

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E.
CHECKED BY Chris Webb
DRAWN BY S. Salazar
IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

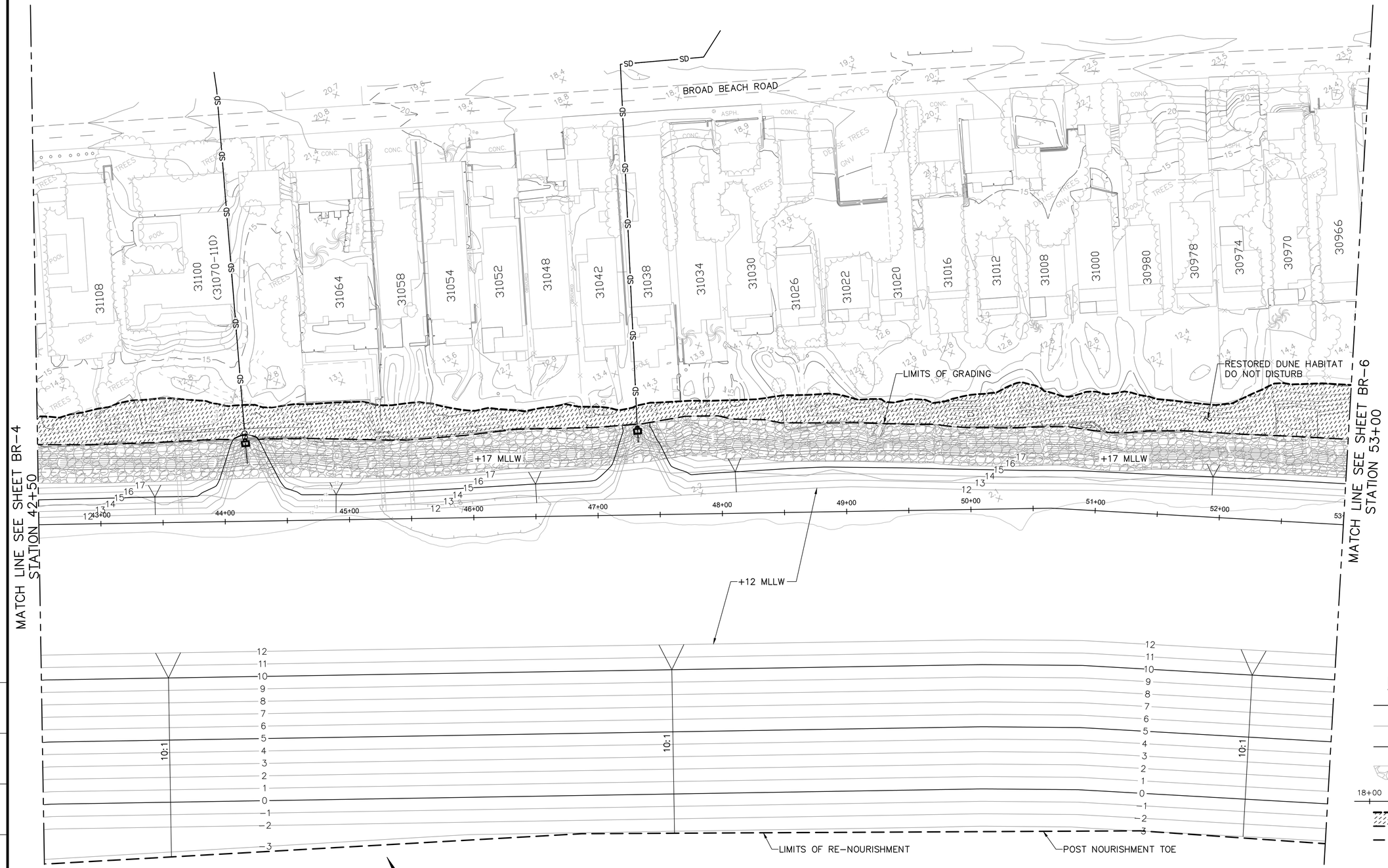
BEACH RE-NOURISHMENT PLAN
STA32+00 TO STA 42+50

SCALE 1"=40'
DATE OCT. 2013
JOB NO. 6935-02
SHEET 36 OF 42
BR-4

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

FINAL
100%
%
%
CONCEPT
STATUS

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_BR-4.dwg; Oct 10, 2013 - 3:43pm;



LEGEND:

- SD — EXISTING STORM DRAIN
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- EXISTING TEMPORARY REVETMENT
- 18+00 — STATION CONTROL LINE
- RESTORED DUNE HABITAT
- LIMITS OF RE-NOURISHMENT PROJECT

60% SUBMITTAL

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

40' 0' 40' 80'
SCALE: 1"=40'

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E.
CHECKED BY Chris Webb
DRAWN BY S. Salazar
IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

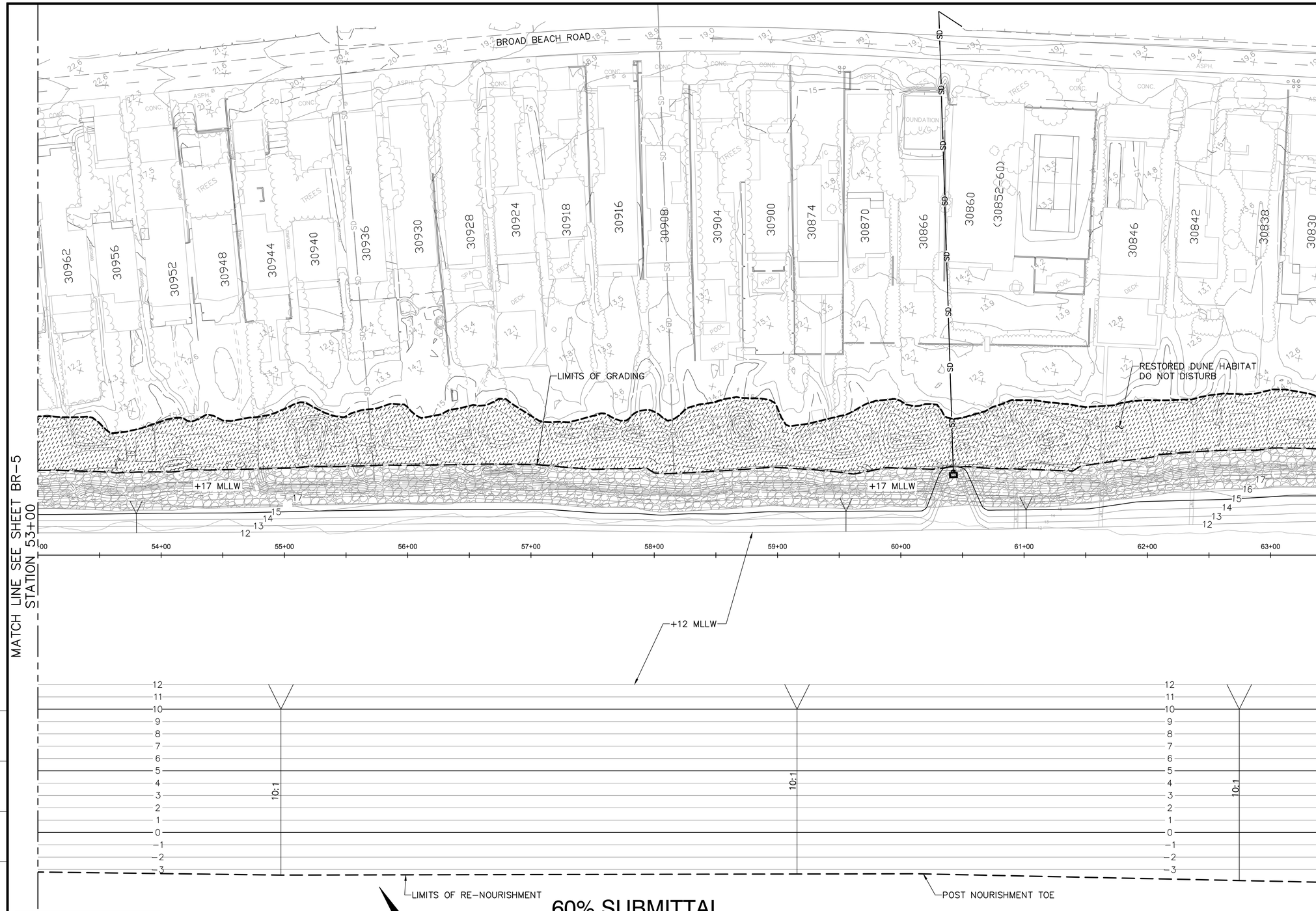
BEACH RE-NOURISHMENT PLAN
STA 42+50 TO STA 53+00

SCALE 1"=40'
DATE OCT. 2013
JOB NO. 6935-02
SHEET 37 OF 42
BR-5

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

FINAL
100%
%
%
CONCEPT
STATUS

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_BR-5.dwg: Oct 10, 2013 - 3:43pm;



LEGEND:

- SD — EXISTING STORM DRAIN
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- EXISTING TEMPORARY REVETMENT
- 18+00 — STATION CONTROL LINE
- RESTORED DUNE HABITAT
- LIMITS OF RE-NOURISHMENT PROJECT

60% SUBMITTAL

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

40' 0' 40' 80'
SCALE: 1"=40'

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E.
DRAWN BY S. Salazar
CHECKED BY Chris Webb
IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

BEACH RE-NOURISHMENT PLAN
STA53+00 TO STA 63+50

SCALE 1"=40'
DATE OCT. 2013
JOB NO. 6935-02
SHEET 38 OF 42
BR-6

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

FINAL
100%
%
%
CONCEPT
STATUS

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_BR-6.dwg; Oct 10, 2013 - 3:43pm;

BROAD BEACH ROAD

30826 30822 30810 30804 30800 30760 30756 30750 30732 30724 30718 30712 30708

RESTORED DUNE HABITAT
DO NOT DISTURB

LIMITS OF GRADING

+17 MLLW

+12 MLLW

MATCH LINE SEE SHEET BR-6
STATION 63+50

64+00 65+00 66+00 67+00 68+00 69+00 70+00 71+00 72+00 73+00 74+

TRANCAS CREEK

SLOPE VARIES

10:1

LIMITS OF RE-NOURISHMENT

POST NOURISHMENT TOE

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING TEMPORARY REVETMENT
- STATION CONTROL LINE
- RESTORED DUNE HABITAT
- LIMITS OF RE-NOURISHMENT PROJECT

60% SUBMITTAL

40' 0' 40' 80'

SCALE: 1"=40'

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. CHECKED BY Chris Webb
DRAWN BY S. Salazar IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

BEACH RE-NOURISHMENT PLAN
STA 63+50 TO STA 74+00

SCALE 1"=40' DATE OCT. 2013
JOB NO. 6935-02
SHEET 39 OF 42
BR-7

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

FINAL 100% % % CONCEPT STATUS

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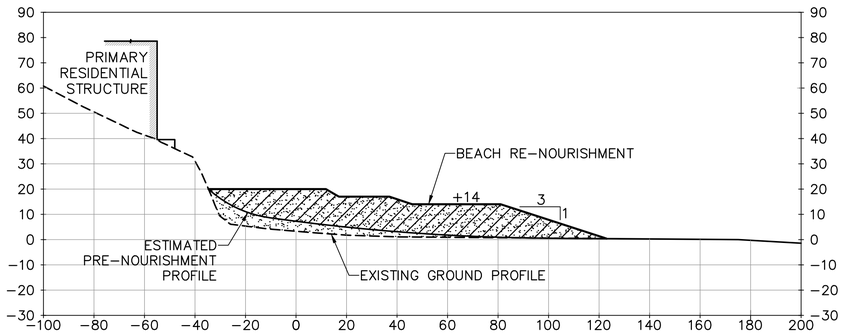
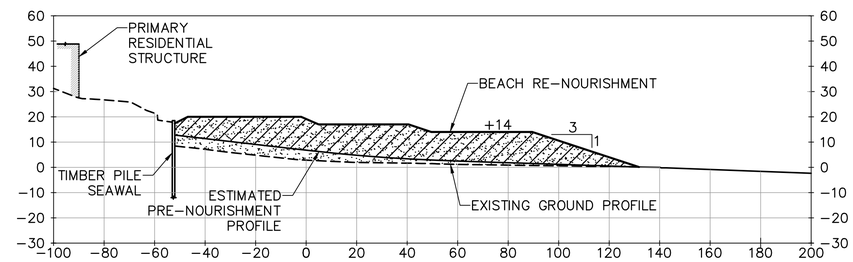
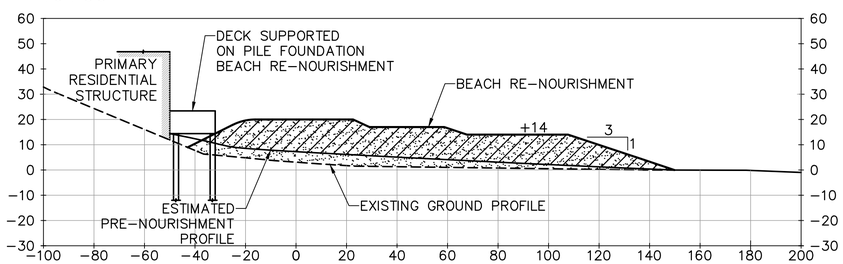
12+00



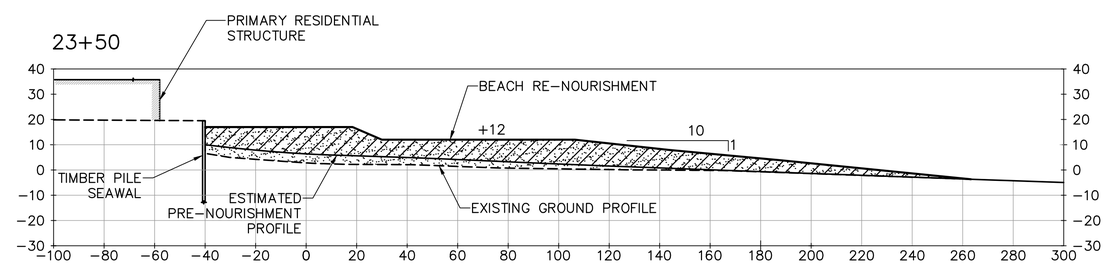
19+00



16+00



23+50



LEGEND:

- MATERIAL REMAINING FROM INITIAL NOURISHMENT
- MAXIMUM RE-NOURISHMENT TEMPLATE
- EXISTING GROUND PROFILE (PRE-PROJECT)
- ESTIMATED PRE-NOURISHMENT PROFILE AT 10 YEARS

60% SUBMITTAL

FINAL | 100% | % | % | CONCEPT | STATUS

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. | CHECKED BY Chris Webb
DRAWN BY S. Salazar | IN CHARGE Russell Boudreau, P.E.

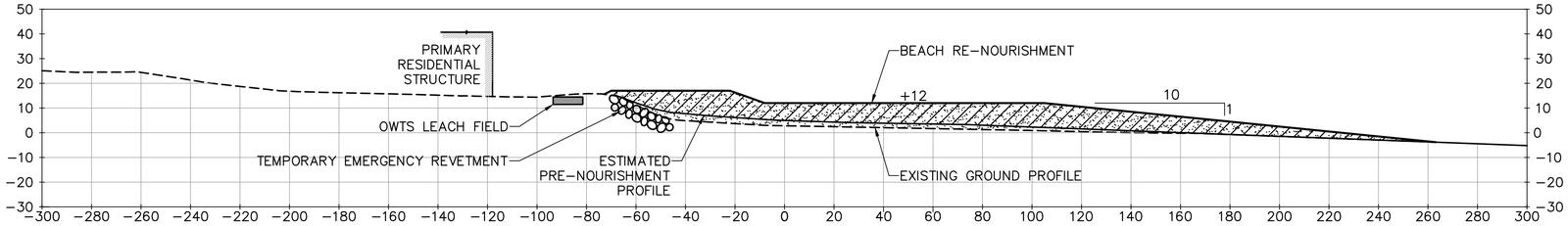
BROAD BEACH RESTORATION PROJECT
California State Lands Commission
TYPICAL RE-NOURISHMENT SECTIONS
STA 12+00 TO STA 23+50

SCALE 1"=30' | DATE OCT. 2013
JOB NO. 6935-02
SHEET 40 OF 42
XS-4

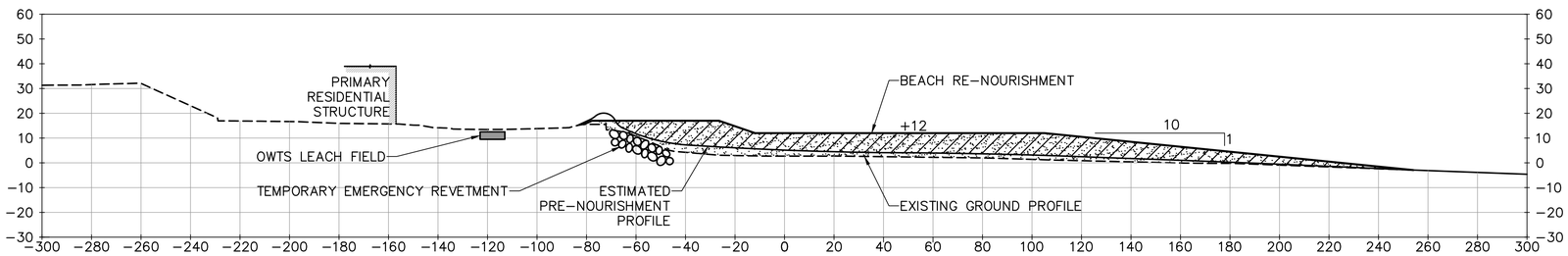
DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_XS-4.dwg; Oct 10, 2013 - 3:43pm;

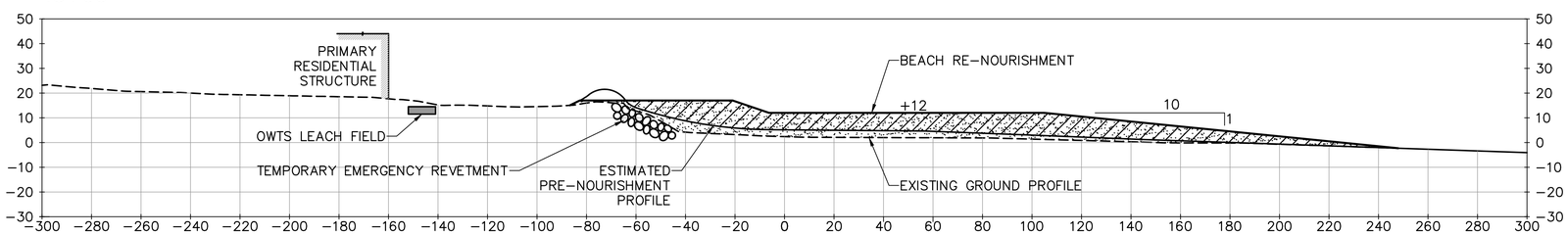
28+00



35+40



43+00



LEGEND:

- MATERIAL REMAINING FROM INITIAL NOURISHMENT
- MAXIMUM RE-NOURISHMENT TEMPLATE
- EXISTING GROUND PROFILE (PRE-PROJECT)
- ESTIMATED PRE-NOURISHMENT PROFILE AT 10 YEARS

60% SUBMITTAL

FINAL | 100% | % | % | CONCEPT | STATUS

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. | CHECKED BY Chris Webb
DRAWN BY S. Salazar | IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

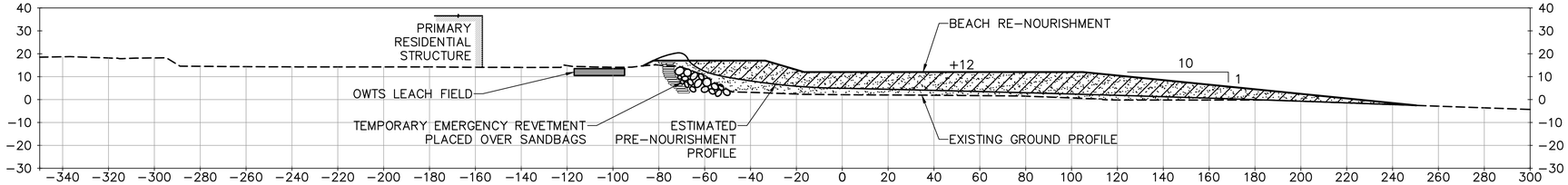
TYPICAL RE-NOURISHMENT SECTIONS
STA 28+00 TO STA 43+00

SCALE 1"=30' | DATE OCT. 2013
JOB NO. 6935-02
SHEET 41 OF 42
XS-5

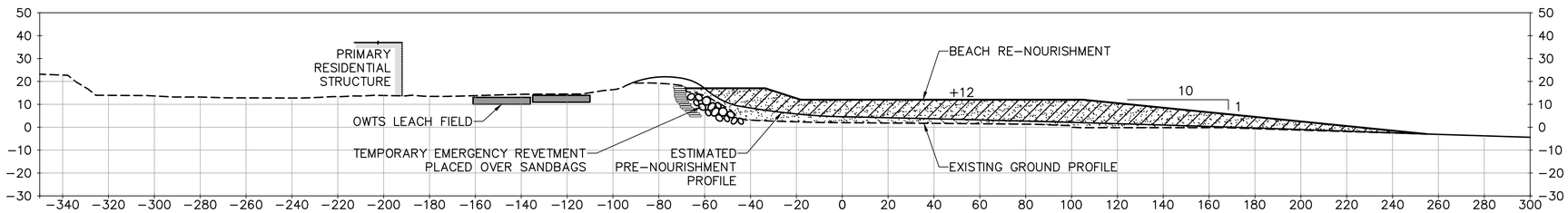
DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_XS-5.dwg; Oct 10, 2013 - 3:43pm;

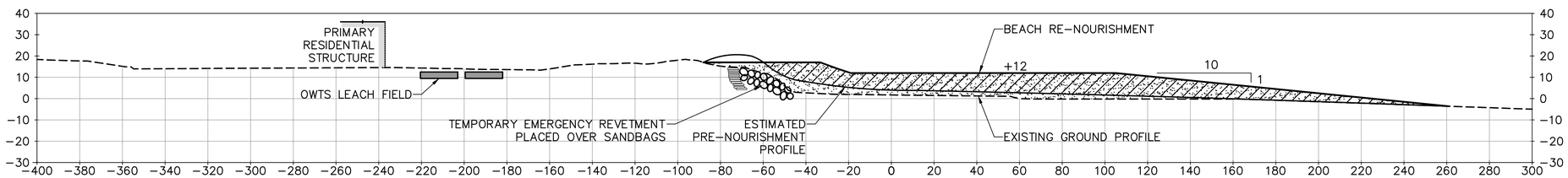
48+00



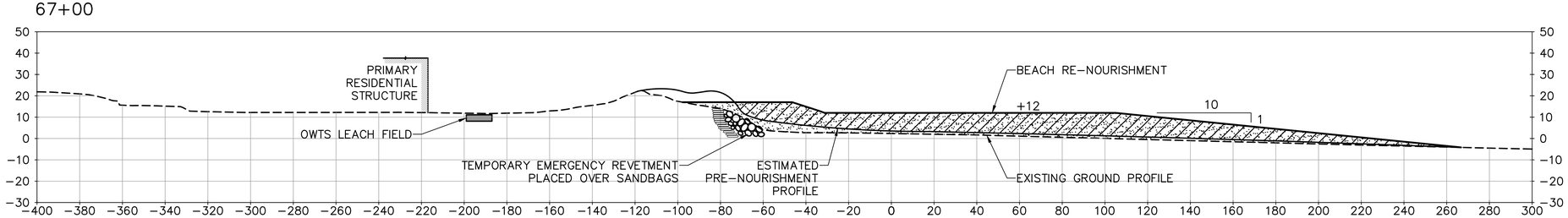
52+50



58+00



67+00



LEGEND:

- MATERIAL REMAINING FROM INITIAL NOURISHMENT
- MAXIMUM RE-NOURISHMENT TEMPLATE
- EXISTING GROUND PROFILE (PRE-PROJECT)
- ESTIMATED PRE-NOURISHMENT PROFILE AT 10 YEARS

60% SUBMITTAL

FINAL | 100% | % | % | CONCEPT | STATUS

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

NO.	REVISION	BY	DATE

REGISTERED PROFESSIONAL ENGINEER RUSSELL H. BOUDREAU No. C041810 EXP. 3/31/14 CIVIL STATE OF CALIFORNIA

MOFFATT & NICHOL

DESIGNED BY Aaron Holloway, P.E. | CHECKED BY Chris Webb
DRAWN BY S. Salazar | IN CHARGE Russell Boudreau, P.E.

BROAD BEACH RESTORATION PROJECT
California State Lands Commission

TYPICAL RE-NOURISHMENT SECTIONS
STA 48+00 TO STA 67+00

SCALE 1"=30' | DATE OCT. 2013
JOB NO. 6935-02
SHEET 42 OF 42
XS-6

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

P:\6935 Broad Beach\7 Design Information\CADD_Active\SHEETS\693502_XS-6.dwg; Oct 10, 2013 - 3:43pm;