Golden Gate Bridge, Highway and Transportation District

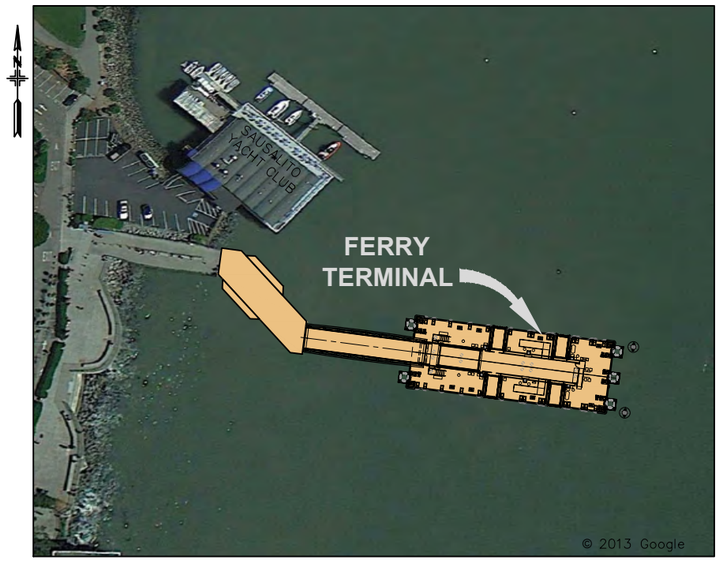
SAUSALITO FERRY TERMINAL VESSEL BOARDING REHABILITATION PROJECT

BCDC DESIGN REVIEW BOARD INFORMATION PACKAGE

OCTOBER 6, 2014

REGIONAL VICINITY PLAN

NO SCALE



SAUSALITO FERRY TERMINAL

NO SCALE

VIEW OF EXISTING TERMINAL

NO SCALE

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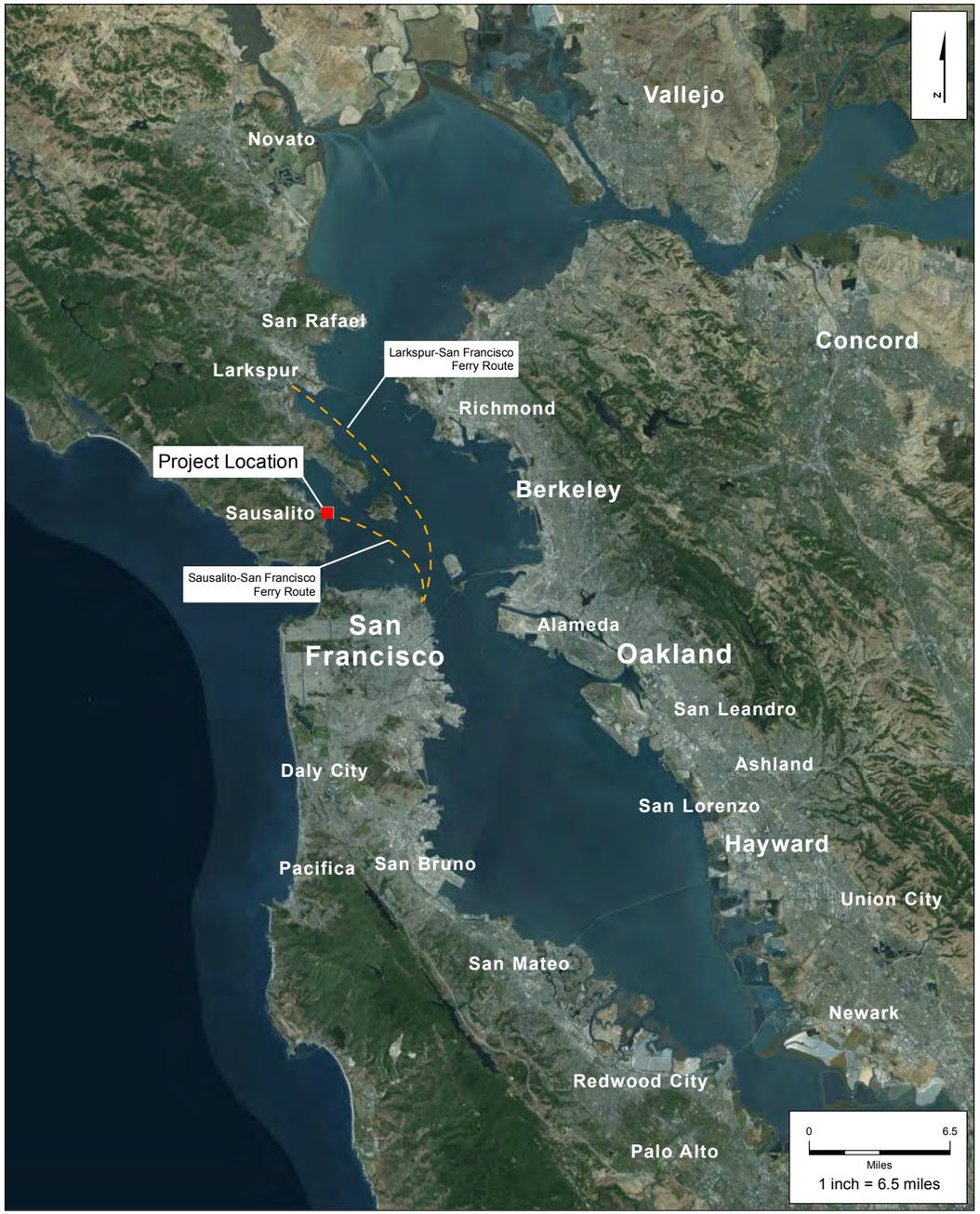


SOURCE: Microsoft Virtual Earth, 2010

Golden Gate Sausalito Ferry Terminal Vessel Boarding Rehabilitation Project

Exhibit 1

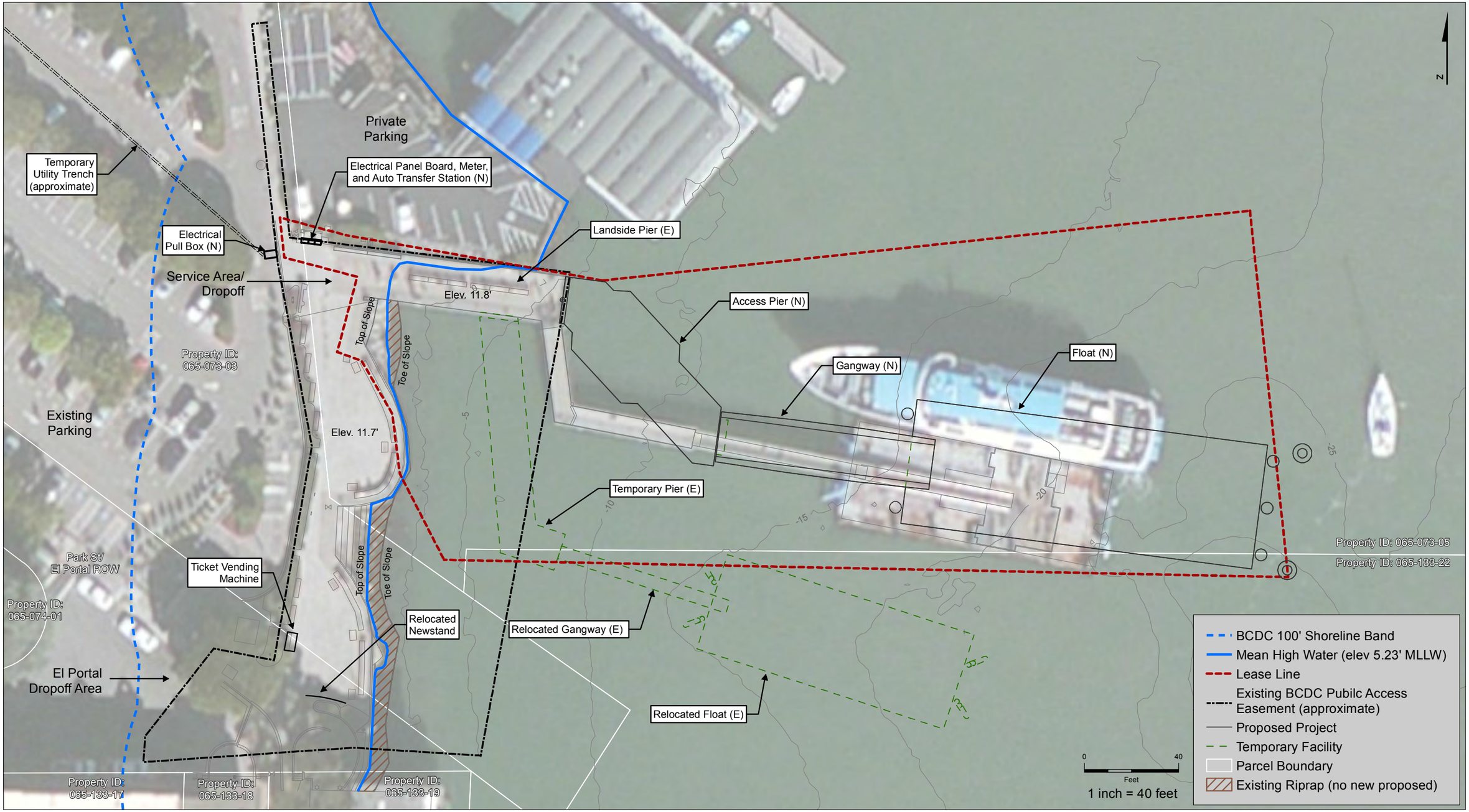
Regional Vicinity Map

SOURCE: Microsoft Virtual Earth, 2010;
County of Marin, 2014

Golden Gate Sausalito Ferry Terminal Vessel Boarding Rehabilitation Project

Exhibit 2

Local Vicinity Map



SOURCE:Microsoft Virtual Earth, 2010; County of Marin, 2014; Moffatt and Nichol; 2014

Golden Gate Sausalito Ferry Terminal Vessel Boarding Rehabilitation Project

Exhibit 3

Site Plan

Notes: All parcels adjacent to the project site are owned by the City (a co-applicant) No proposed changes to contours.
Elevations are in Feet MLLW

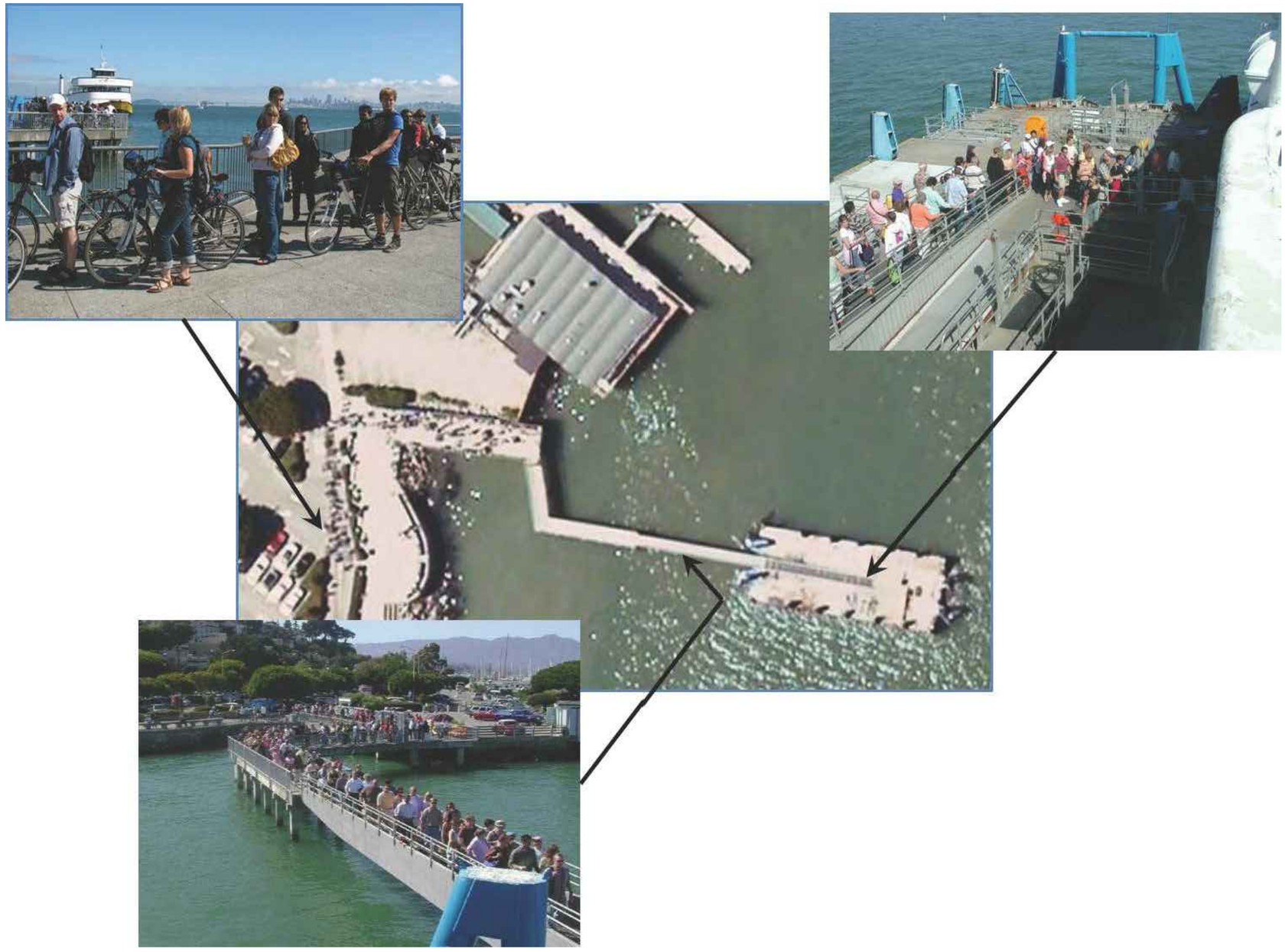
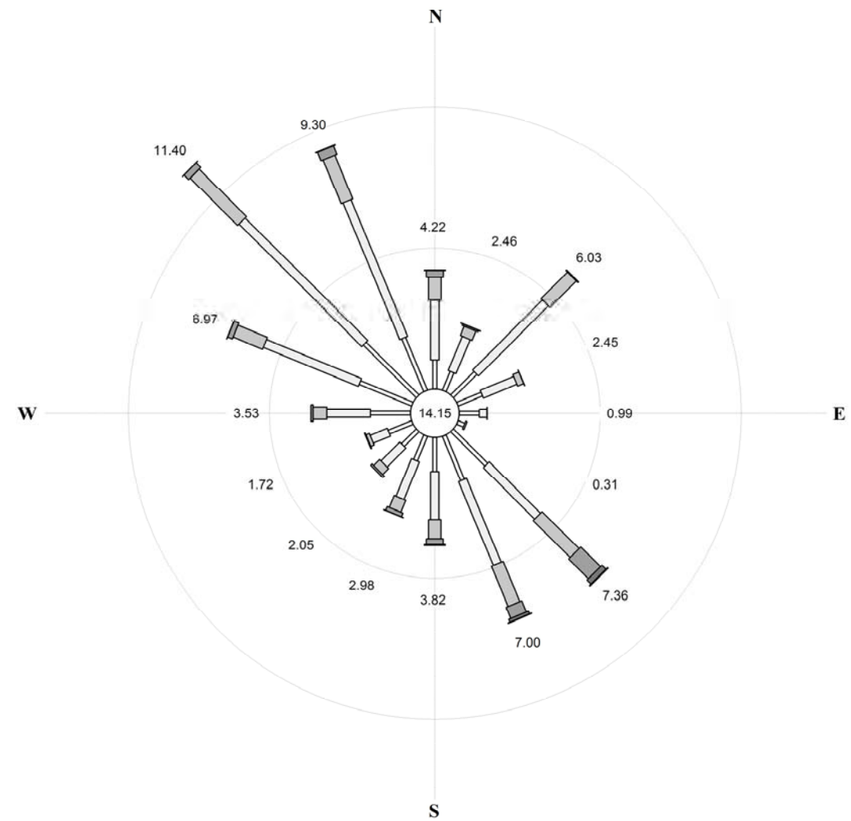


Exhibit 4
Views of Terminal Use During Boarding

Joint Frequency Distribution (Dec, Jan, Feb)

Period of observations 1996-2012



Wind Speed (Knots)

Calms included at center.
Rings drawn at 5% intervals
Direction FROM is shown
13.26% of observations were missing.

PERCENT OCCURRENCE: Wind Speed (Knots)
LOWER BOUND OF CATEGORY

DIR	1	4	9	14	20	26
N	1.03	2.11	0.81	0.23	0.02	0.00
NNE	0.73	1.31	0.35	0.05	0.01	0.00
NE	1.18	3.50	1.32	0.04	0.00	0.00
ENE	0.93	1.29	0.23	0.01	0.00	0.00
E	0.71	0.26	0.01	0.00	0.00	0.00
ESE	0.25	0.06	0.00	0.00	0.00	0.00
SE	1.72	2.57	1.85	0.99	0.20	0.03
SSE	1.69	3.21	1.54	0.43	0.11	0.02

TOTAL OBS = 35117 MISSING OBS = 4658

PERCENT OCCURRENCE: Wind Speed (Knots)
LOWER BOUND OF CATEGORY

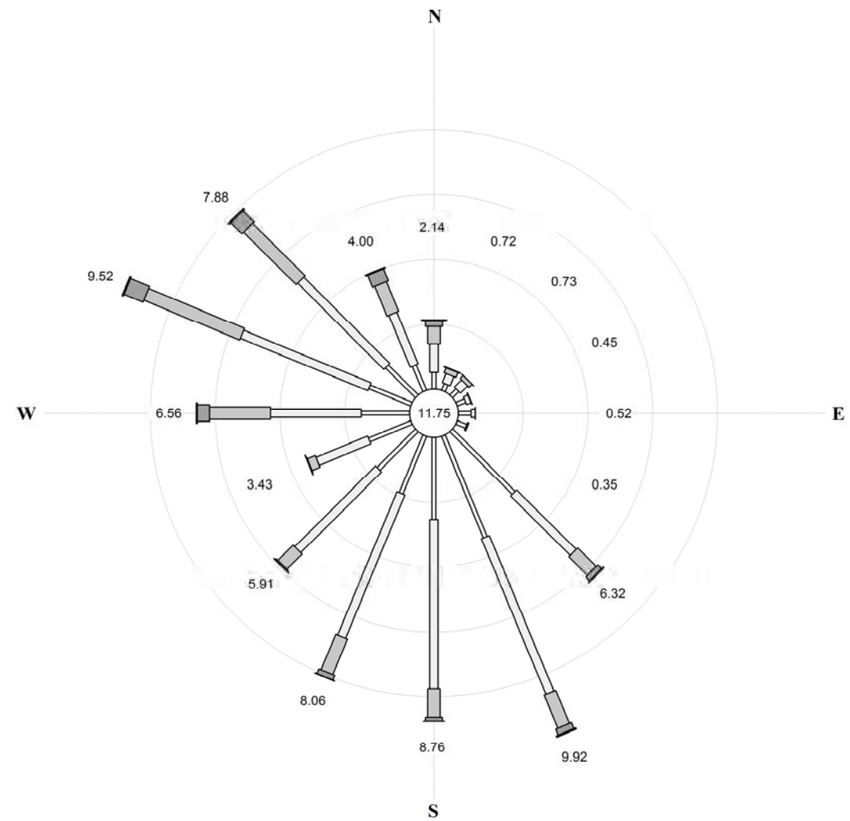
DIR	1	4	9	14	20	26
S	1.20	1.70	0.68	0.21	0.03	0.00
SSW	0.95	1.43	0.46	0.14	0.01	0.00
SW	0.74	0.94	0.29	0.07	0.00	0.00
WSW	0.91	0.66	0.13	0.03	0.00	0.00
W	1.41	1.55	0.49	0.08	0.00	0.00
WNW	2.02	3.64	1.13	0.18	0.01	0.00
NW	2.65	6.15	2.37	0.23	0.01	0.00
NNW	2.04	5.25	1.67	0.33	0.02	0.00

CALM OBS = 4968 PERCENT CALM = 14.15

WINTER WIND ROSE

Joint Frequency Distribution (Mar, Apr, May)

Period of observations 1996-2012



Wind Speed (Knots)

Calms included at center.
Rings drawn at 2% intervals
Direction FROM is shown
12.98% of observations were missing.

PERCENT OCCURRENCE: Wind Speed (Knots)
LOWER BOUND OF CATEGORY

DIR	1	4	9	14	20	26
N	0.52	0.88	0.53	0.18	0.02	0.01
NNE	0.23	0.31	0.17	0.02	0.00	0.00
NE	0.27	0.32	0.13	0.01	0.00	0.00
ENE	0.28	0.15	0.02	0.00	0.00	0.00
E	0.39	0.12	0.01	0.00	0.00	0.00
ESE	0.31	0.04	0.00	0.00	0.00	0.00
SE	2.72	2.60	0.81	0.16	0.03	0.00
SSE	3.38	5.20	1.11	0.19	0.04	0.00

TOTAL OBS = 37536 MISSING OBS = 4873

PERCENT OCCURRENCE: Wind Speed (Knots)
LOWER BOUND OF CATEGORY

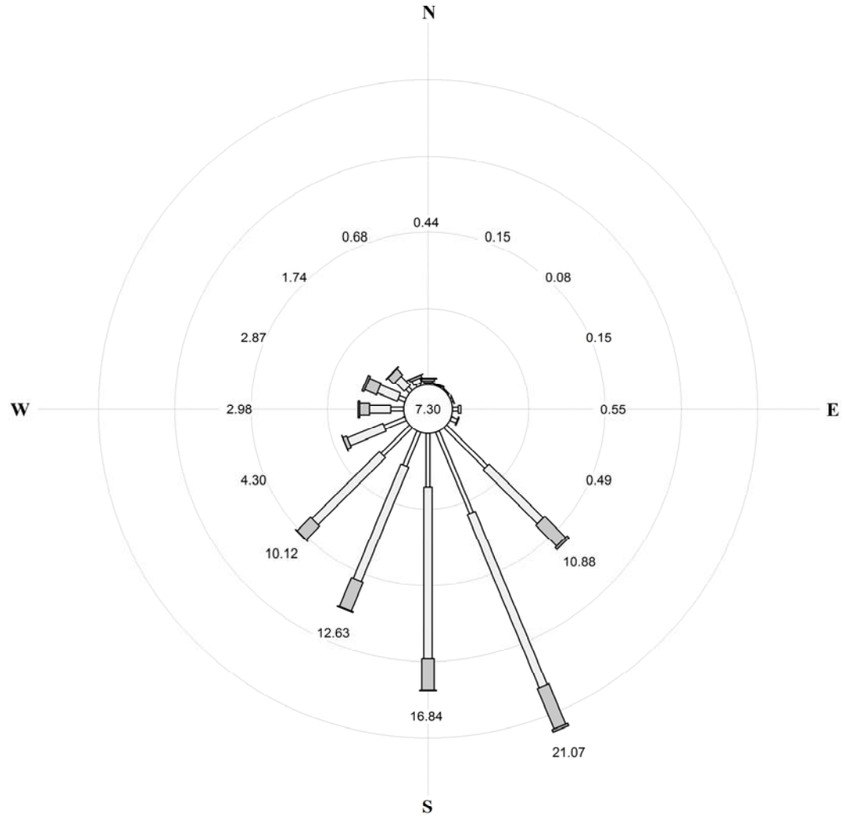
DIR	1	4	9	14	20	26
S	2.52	5.23	0.89	0.11	0.01	0.00
SSW	1.92	4.78	1.19	0.16	0.01	0.00
SW	1.67	3.52	0.67	0.05	0.01	0.00
WSW	1.41	1.72	0.27	0.02	0.01	0.00
W	1.49	2.79	1.88	0.38	0.03	0.00
WNW	1.41	4.24	3.20	0.63	0.04	0.00
NW	1.31	3.75	2.29	0.48	0.04	0.00
NNW	0.86	1.73	0.98	0.40	0.03	0.00

CALM OBS = 4409 PERCENT CALM = 11.75

SPRING WIND ROSE

Joint Frequency Distribution (Jun, Jul, Aug)

Period of observations 1996-2012



Wind Speed (Knots)

Calms included at center.
Rings drawn at 5% intervals.
Direction FROM is shown.
6.74% of observations were missing.

PERCENT OCCURRENCE: Wind Speed (Knots)
LOWER BOUND OF CATEGORY

DIR	1	4	9	14	20	26
N	0.14	0.10	0.15	0.05	0.00	0.00
NNE	0.07	0.04	0.04	0.00	0.00	0.00
NE	0.06	0.01	0.00	0.00	0.00	0.00
ENE	0.12	0.03	0.00	0.00	0.00	0.00
E	0.37	0.17	0.01	0.00	0.00	0.00
ESE	0.43	0.06	0.00	0.00	0.00	0.00
SE	3.77	5.00	1.93	0.18	0.00	0.00
SSE	5.80	12.25	2.85	0.17	0.00	0.00

TOTAL OBS = 35779 MISSING OBS = 2413

PERCENT OCCURRENCE: Wind Speed (Knots)
LOWER BOUND OF CATEGORY

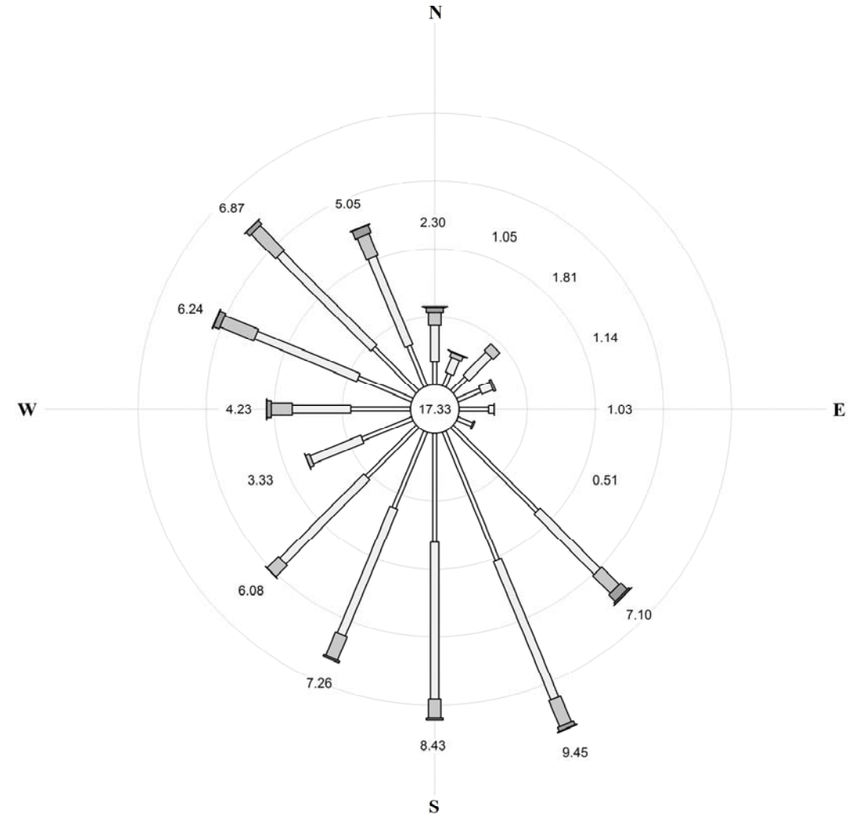
DIR	1	4	9	14	20	26
S	3.52	11.25	2.03	0.04	0.00	0.00
SSW	2.41	8.10	2.05	0.07	0.00	0.00
SW	2.62	6.23	1.24	0.03	0.00	0.00
WSW	1.50	2.52	0.26	0.01	0.00	0.00
W	0.84	1.39	0.64	0.11	0.00	0.00
WNW	0.48	1.41	0.82	0.15	0.00	0.00
NW	0.33	0.85	0.53	0.04	0.00	0.00
NNW	0.20	0.30	0.15	0.01	0.00	0.00

CALM OBS = 2612 PERCENT CALM = 7.30

SUMMER WIND ROSE

Joint Frequency Distribution (Sep, Oct, Nov)

Period of observations 1996-2012



Wind Speed (Knots)

Calms included at center.
Rings drawn at 2% intervals.
Direction FROM is shown.
10.80% of observations were missing.

PERCENT OCCURRENCE: Wind Speed (Knots)
LOWER BOUND OF CATEGORY

DIR	1	4	9	14	20	26
N	0.66	1.07	0.39	0.14	0.02	0.01
NNE	0.41	0.46	0.15	0.02	0.01	0.00
NE	0.59	0.94	0.28	0.00	0.00	0.00
ENE	0.73	0.35	0.06	0.00	0.00	0.00
E	0.86	0.16	0.01	0.00	0.00	0.00
ESE	0.47	0.04	0.00	0.00	0.00	0.00
SE	3.54	2.49	0.73	0.27	0.05	0.01
SSE	4.08	4.40	0.83	0.12	0.02	0.00

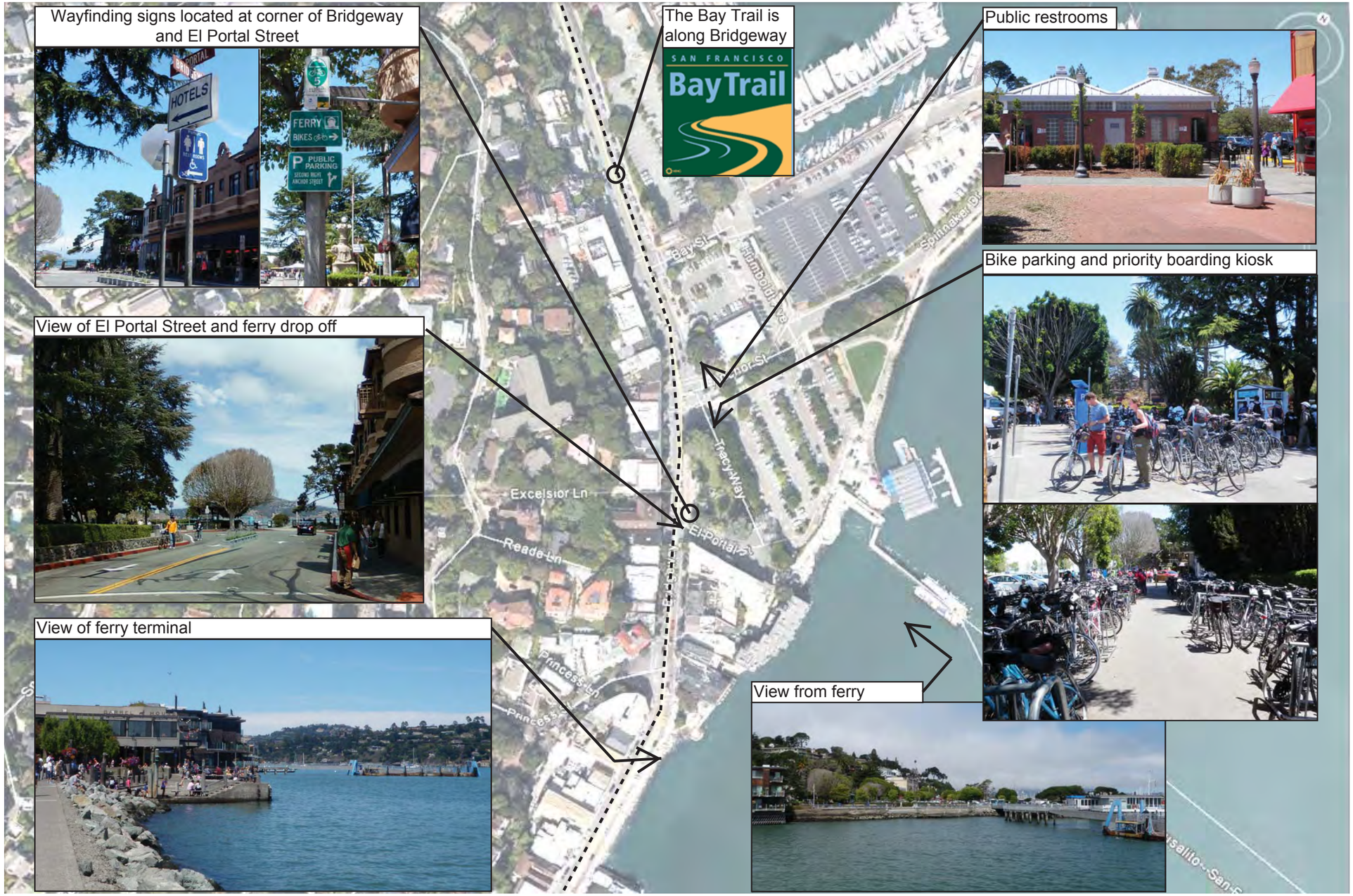
TOTAL OBS = 34944 MISSING OBS = 3774

PERCENT OCCURRENCE: Wind Speed (Knots)
LOWER BOUND OF CATEGORY

DIR	1	4	9	14	20	26
S	3.20	4.60	0.56	0.06	0.00	0.00
SSW	2.44	4.03	0.74	0.05	0.00	0.00
SW	2.11	3.48	0.47	0.01	0.00	0.00
WSW	1.59	1.61	0.12	0.01	0.00	0.00
W	1.75	1.72	0.62	0.13	0.01	0.00
WNW	1.72	3.25	1.07	0.18	0.02	0.00
NW	1.82	3.89	1.01	0.15	0.01	0.00
NNW	1.29	2.81	0.69	0.25	0.02	0.00

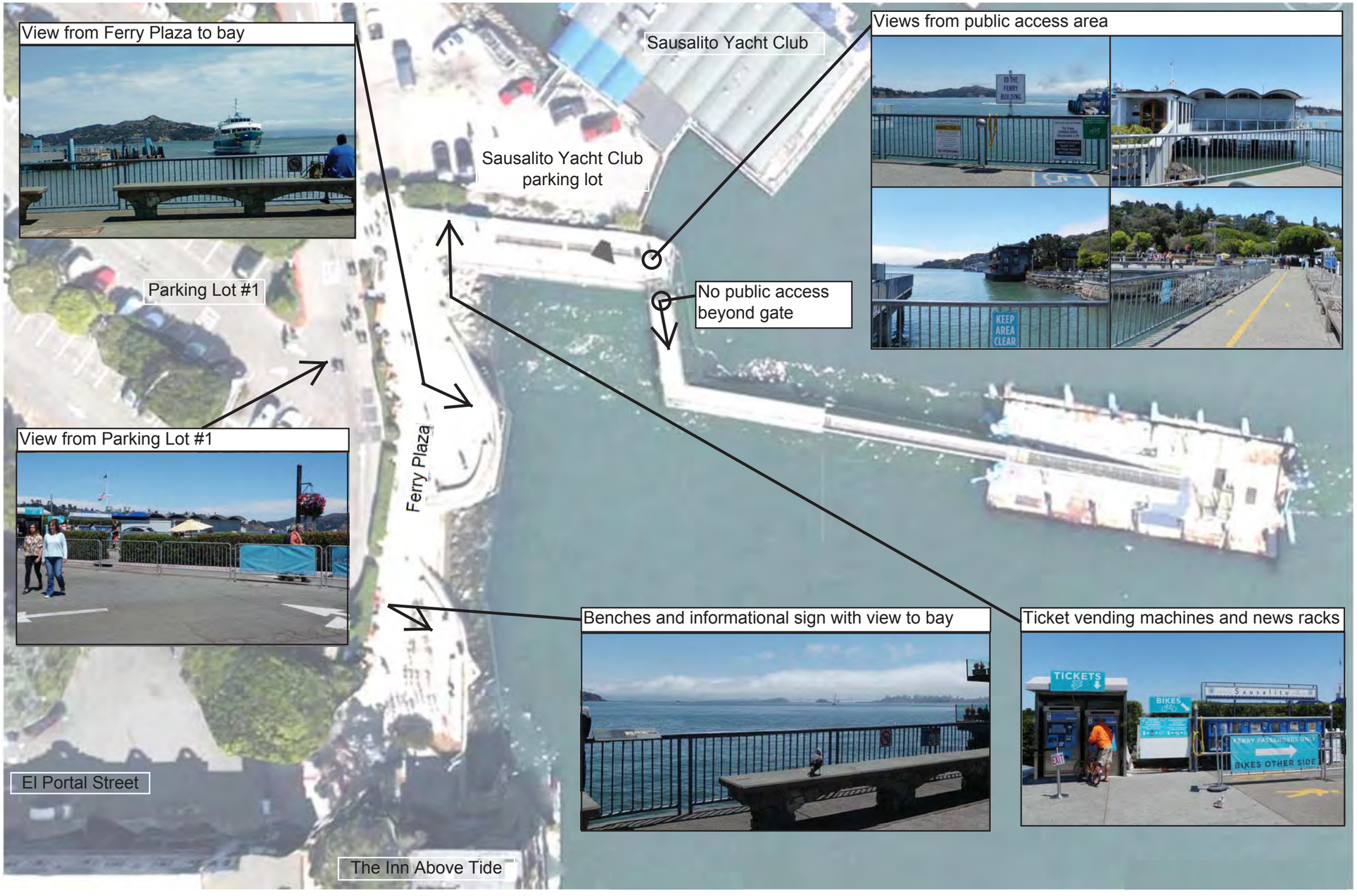
CALM OBS = 6056 PERCENT CALM = 17.33

FALL WIND ROSE



SOURCE: Golden Gate Bridge, Highway, & Transportation District, 2014.

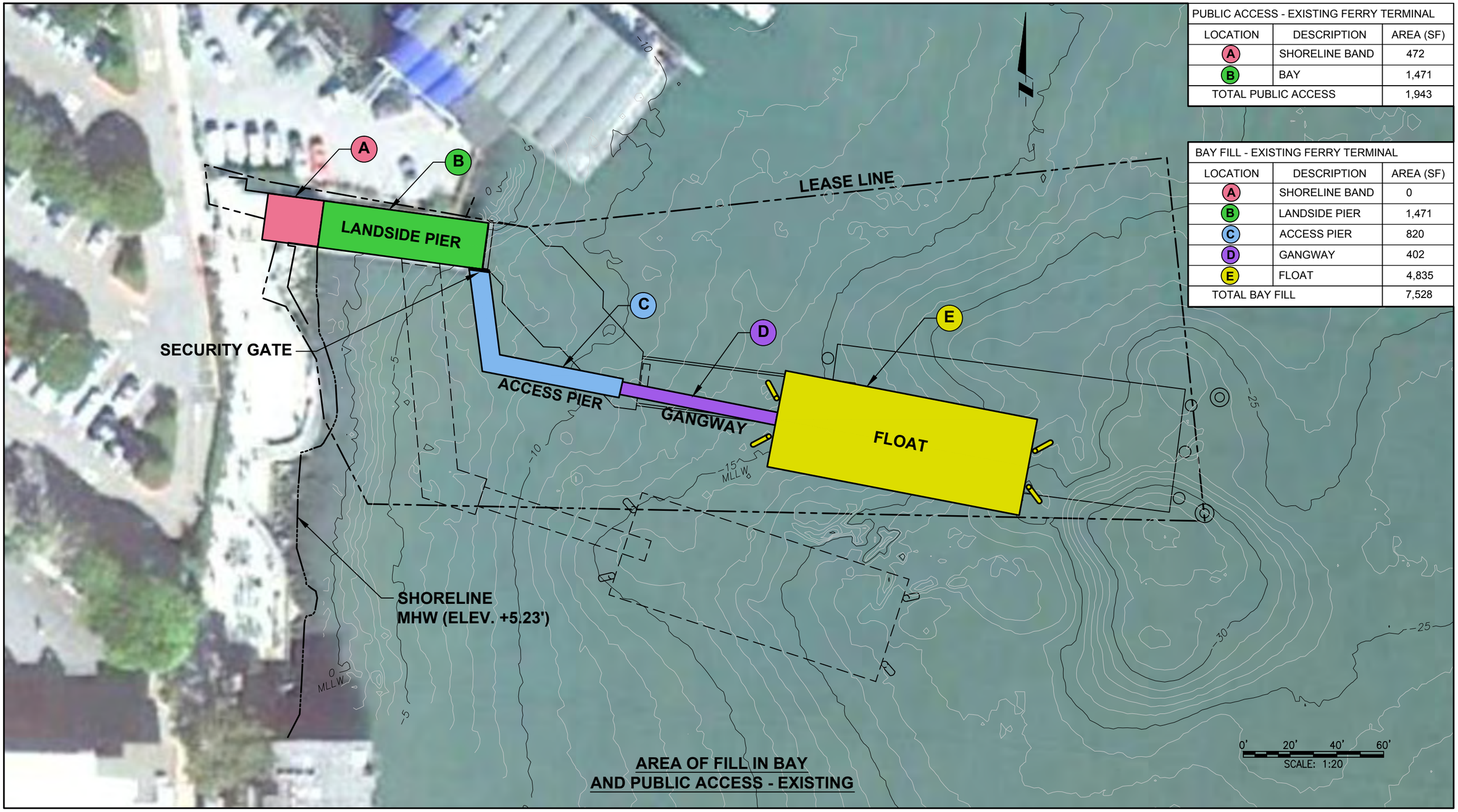
Exhibit 7
Existing Conditions in Vicinity of Project Site



SOURCE: Golden Gate Bridge, Highway, & Transportation District, 2014.

Golden Gate Ferry Sausalito Terminal Vessel Boarding Rehabilitation

Exhibit 8
Existing Conditions at and Adjacent to Project Site



PUBLIC ACCESS - EXISTING FERRY TERMINAL

LOCATION	DESCRIPTION	AREA (SF)
A	SHORELINE BAND	472
B	BAY	1,471
TOTAL PUBLIC ACCESS		1,943

BAY FILL - EXISTING FERRY TERMINAL

LOCATION	DESCRIPTION	AREA (SF)
A	SHORELINE BAND	0
B	LANDSIDE PIER	1,471
C	ACCESS PIER	820
D	GANGWAY	402
E	FLOAT	4,835
TOTAL BAY FILL		7,528

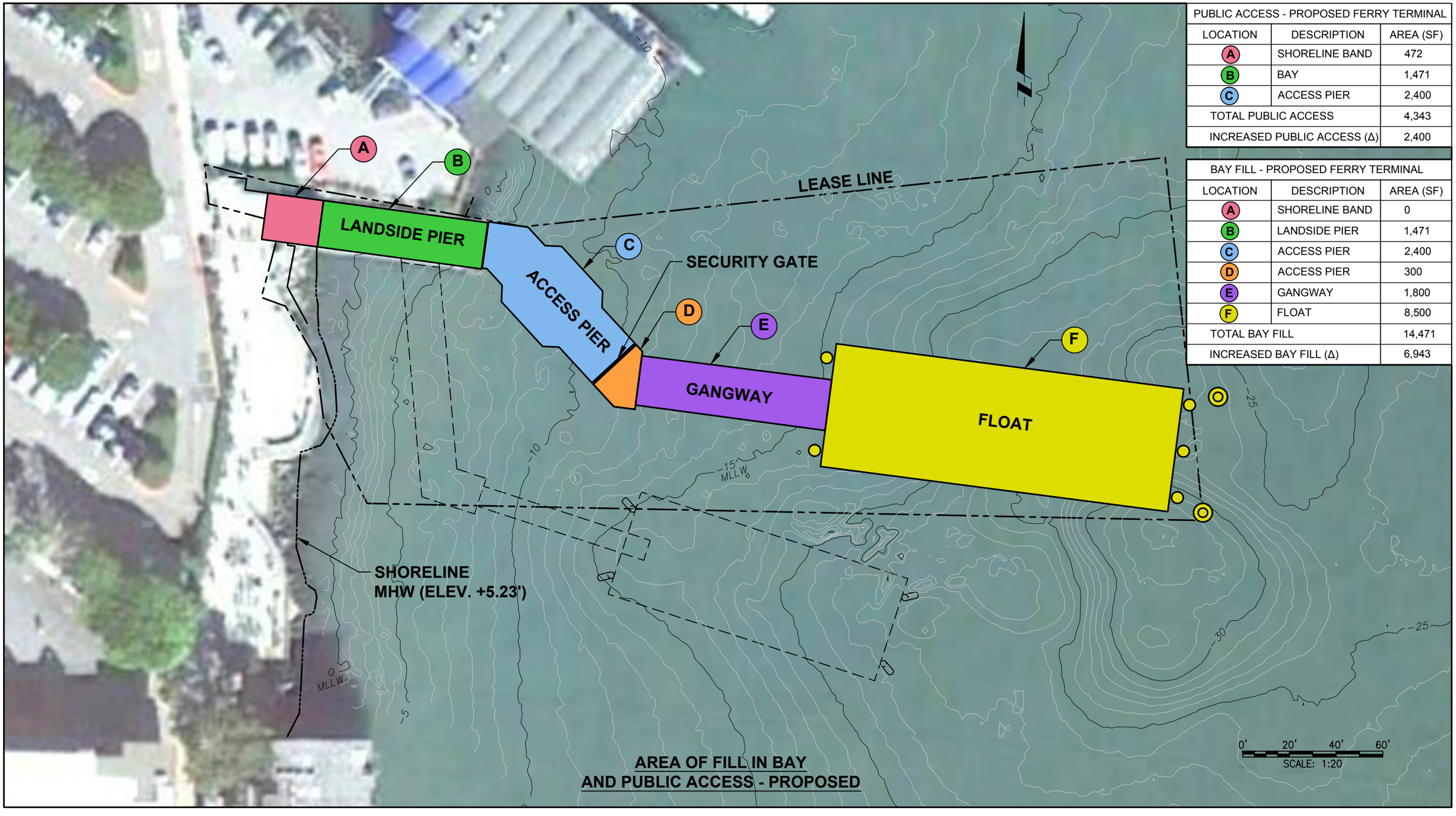
Golden Gate Ferry Sausalito Terminal Vessel Boarding Rehabilitation

Exhibit 9

Area of Fill in Bay and Public Access - Existing

PUBLIC ACCESS - PROPOSED FERRY TERMINAL		
LOCATION	DESCRIPTION	AREA (SF)
A	SHORELINE BAND	472
B	BAY	1,471
C	ACCESS PIER	2,400
TOTAL PUBLIC ACCESS		4,343
INCREASED PUBLIC ACCESS (Δ)		2,400

BAY FILL - PROPOSED FERRY TERMINAL		
LOCATION	DESCRIPTION	AREA (SF)
A	SHORELINE BAND	0
B	LANDSIDE PIER	1,471
C	ACCESS PIER	2,400
D	ACCESS PIER	300
E	GANGWAY	1,800
F	FLOAT	8,500
TOTAL BAY FILL		14,471
INCREASED BAY FILL (Δ)		6,943



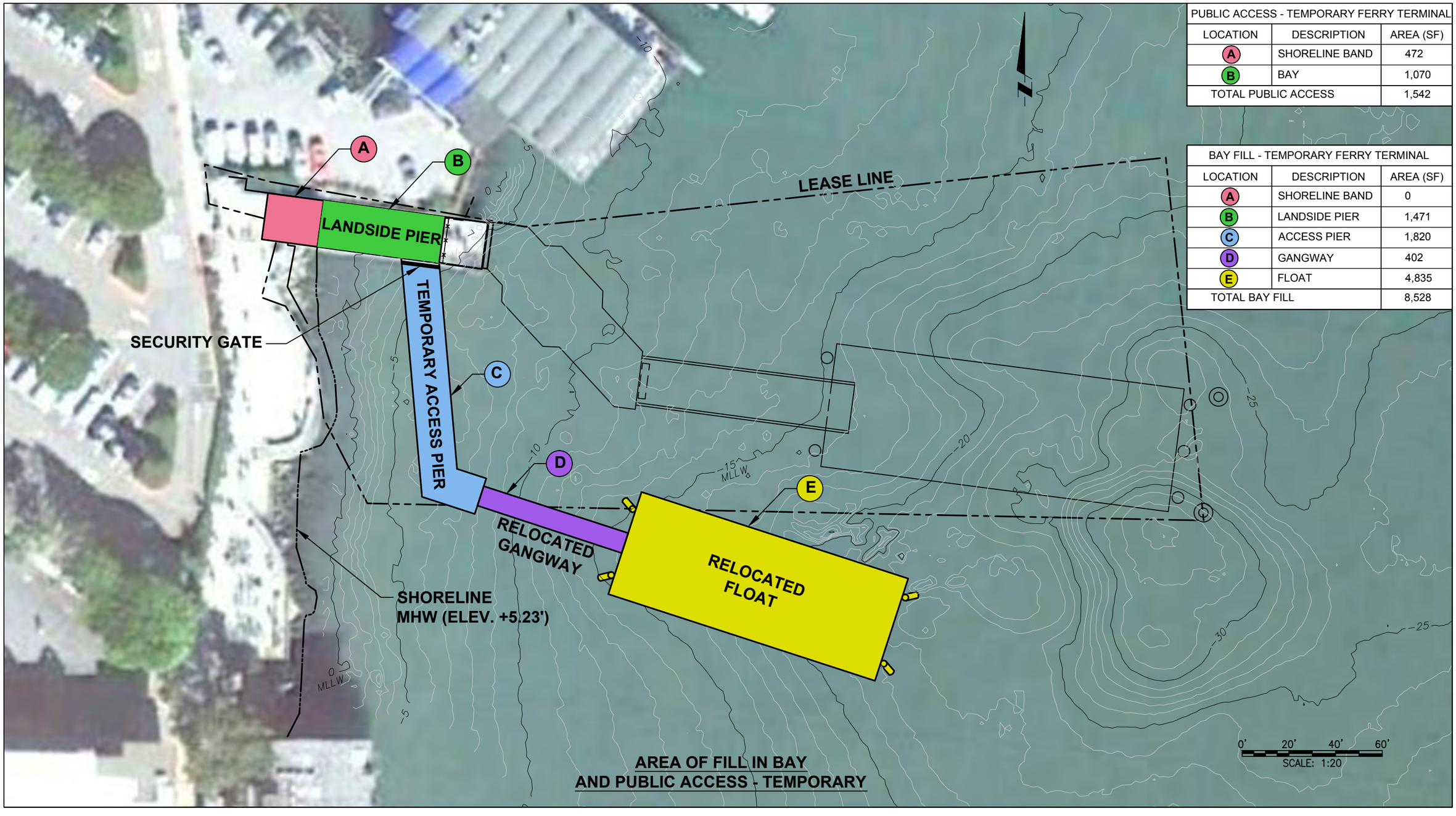
Golden Gate Ferry Sausalito Terminal Vessel Boarding Rehabilitation

Exhibit 10

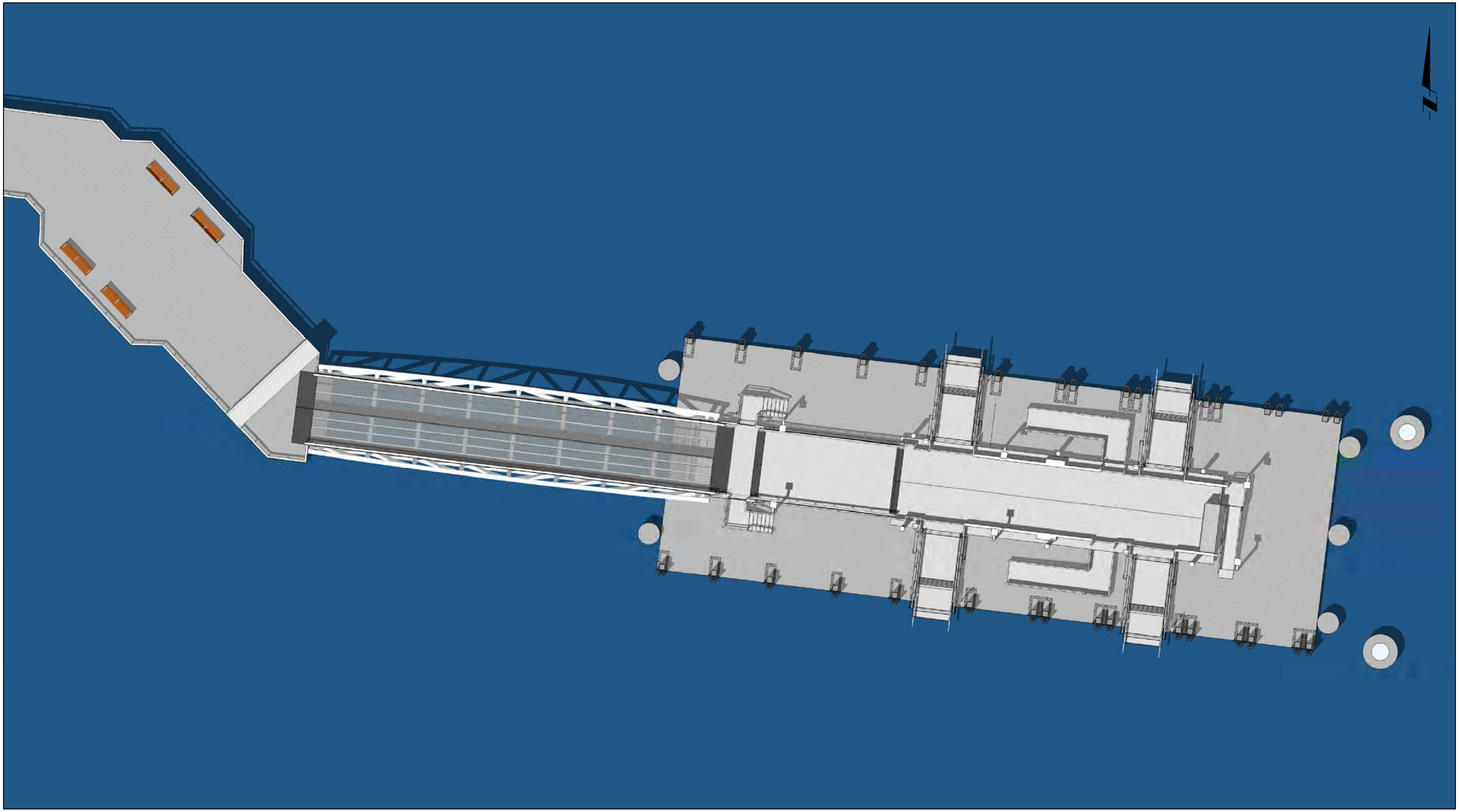
Area of Fill in Bay and Public Access - Proposed

PUBLIC ACCESS - TEMPORARY FERRY TERMINAL		
LOCATION	DESCRIPTION	AREA (SF)
A	SHORELINE BAND	472
B	BAY	1,070
TOTAL PUBLIC ACCESS		1,542

BAY FILL - TEMPORARY FERRY TERMINAL		
LOCATION	DESCRIPTION	AREA (SF)
A	SHORELINE BAND	0
B	LANDSIDE PIER	1,471
C	ACCESS PIER	1,820
D	GANGWAY	402
E	FLOAT	4,835
TOTAL BAY FILL		8,528



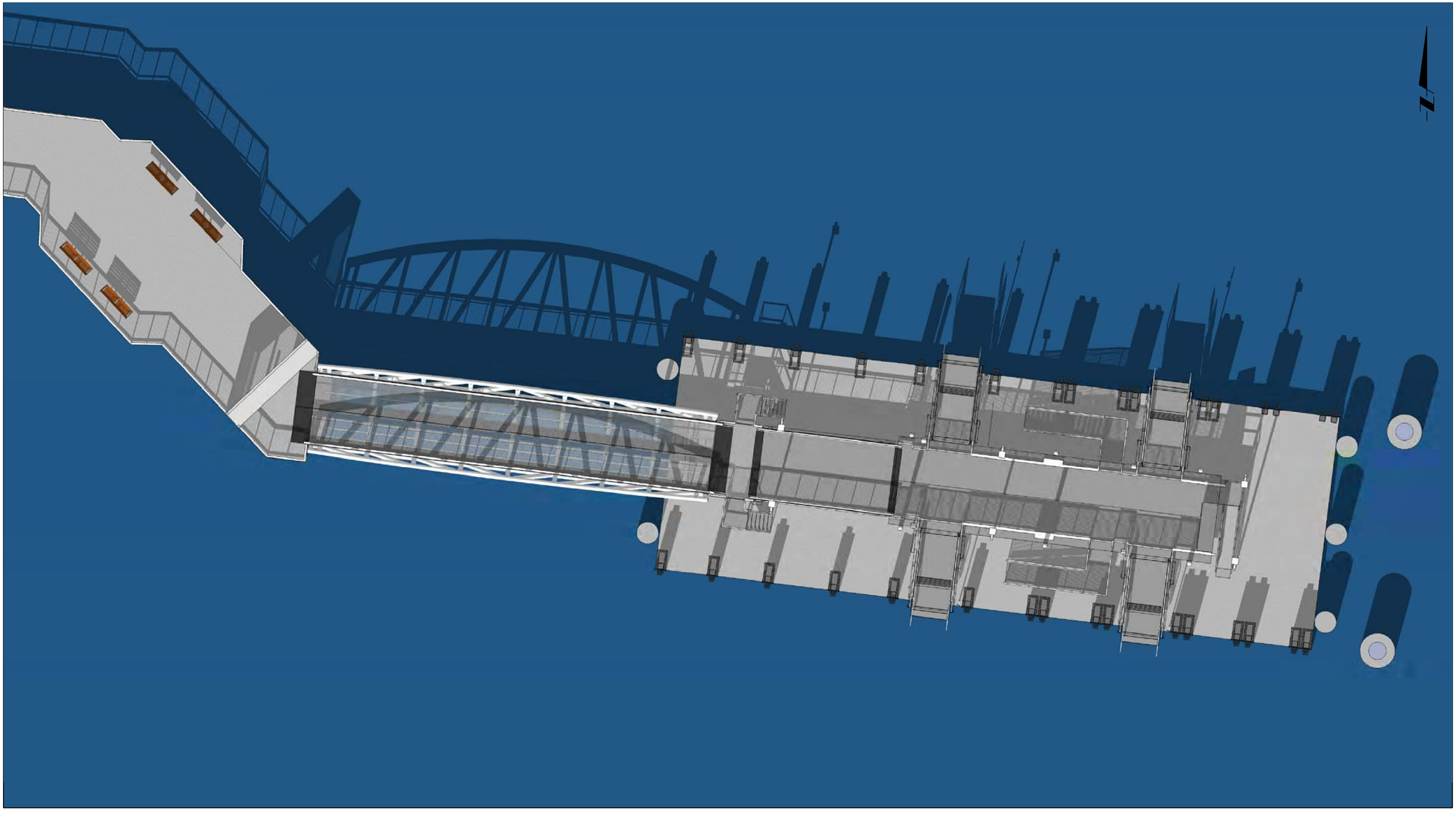
AREA OF FILL IN BAY AND PUBLIC ACCESS - TEMPORARY



Golden Gate Ferry Sausalito Terminal Vessel Boarding Rehabilitation

Exhibit 12

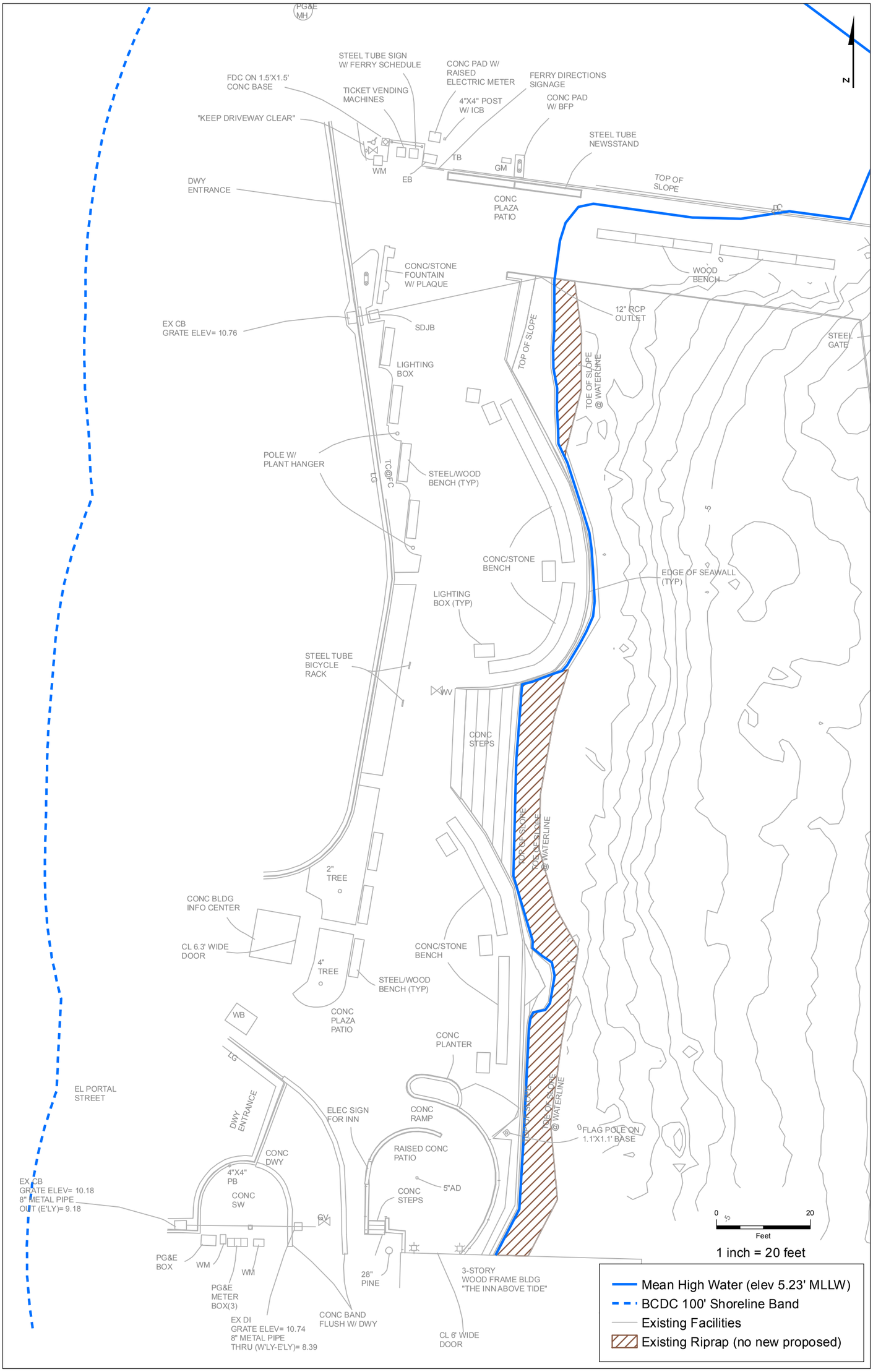
Mid-Day Shadow Study-June 21 MHW



Golden Gate Ferry Sausalito Terminal Vessel Boarding Rehabilitation

Exhibit 13

Mid-Day Shadow Study-December 21 MHW

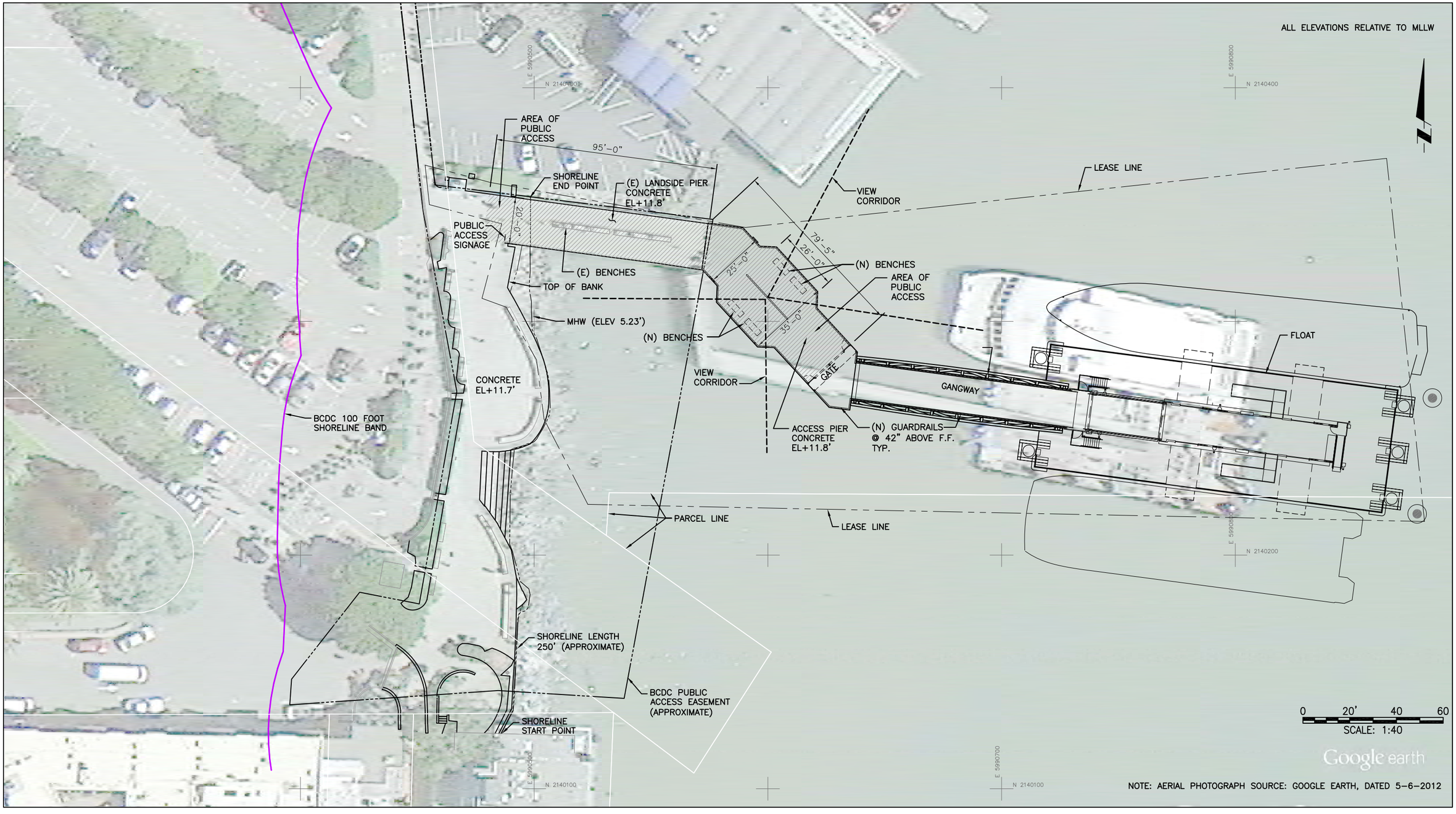


SOURCE: Moffatt & Nichol; 2014

Golden Gate Sausalito Ferry Terminal Vessel Boarding Rehabilitation Project

Exhibit 14

Existing Public Improvements



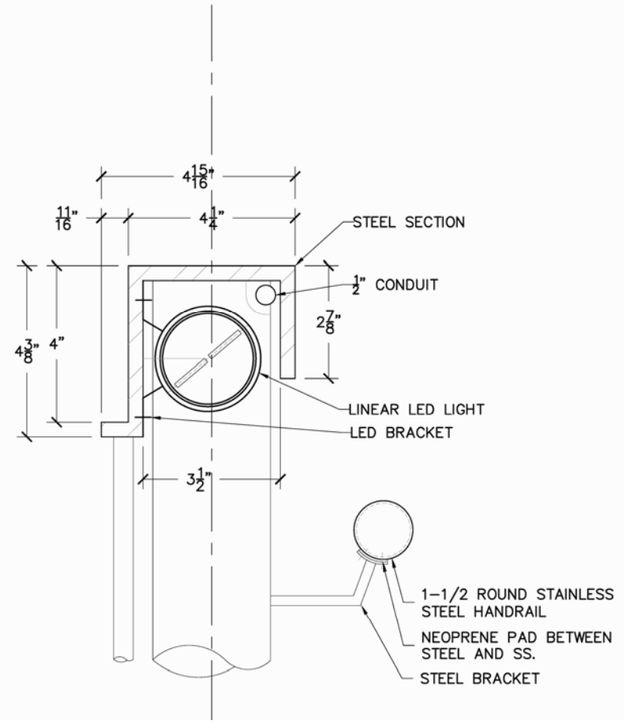
Golden Gate Ferry Sausalito Terminal Vessel Boarding Rehabilitation

Exhibit 15

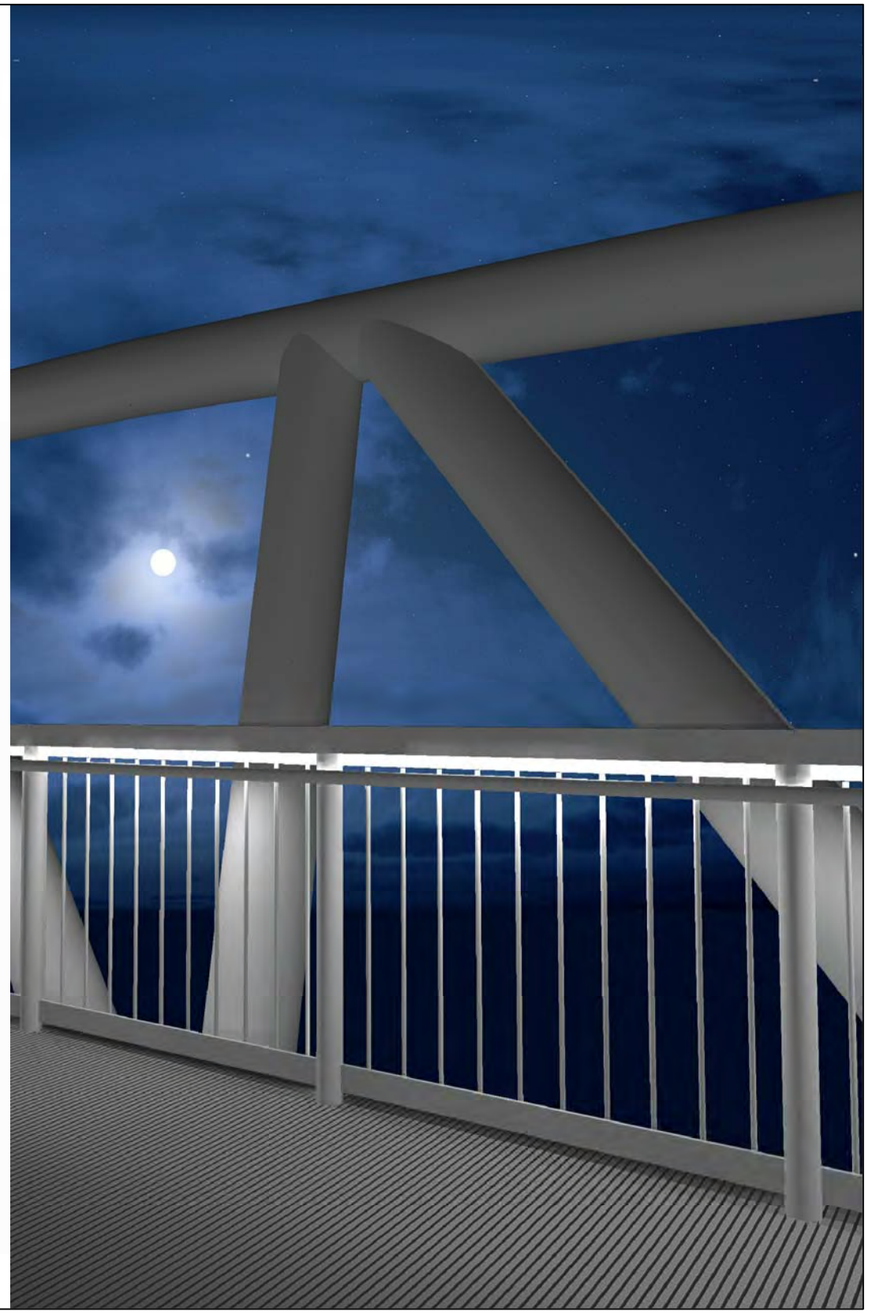
Public Access Detail Plan

Existing

Proposed Marine Grade LED Light



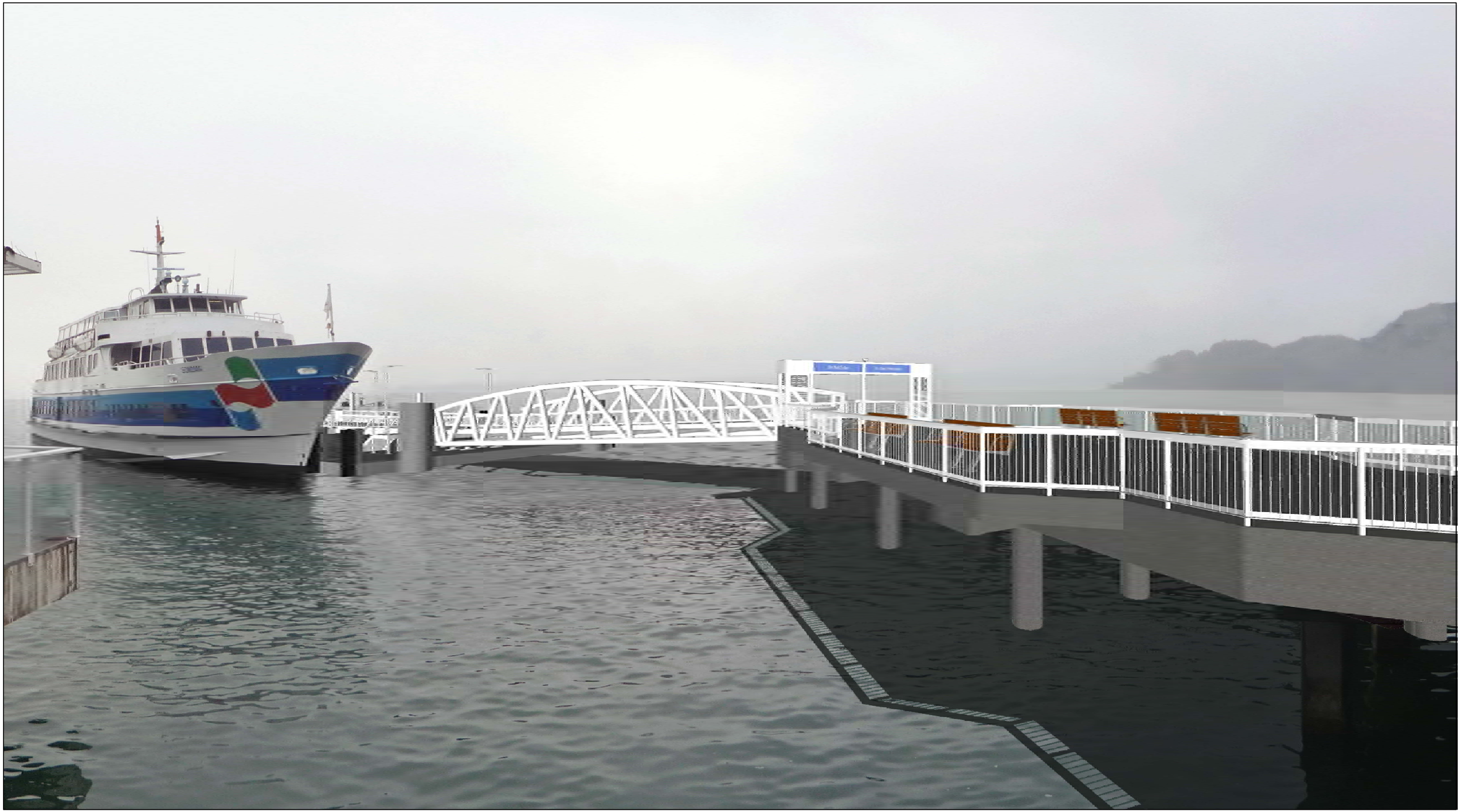
Detail @ Top of Guardrail



Proposed

Exhibit 16

Existing and Proposed Lighting at Guardrails



Golden Gate Ferry Sausalito Terminal Vessel Boarding Rehabilitation

Exhibit 17

View of Proposed Terminal from Sausalito Yacht Club

Golden Gate Ferry Sausalito Terminal Vessel Boarding Rehabilitation

Exhibit 18

View of Proposed Terminal from Plaza

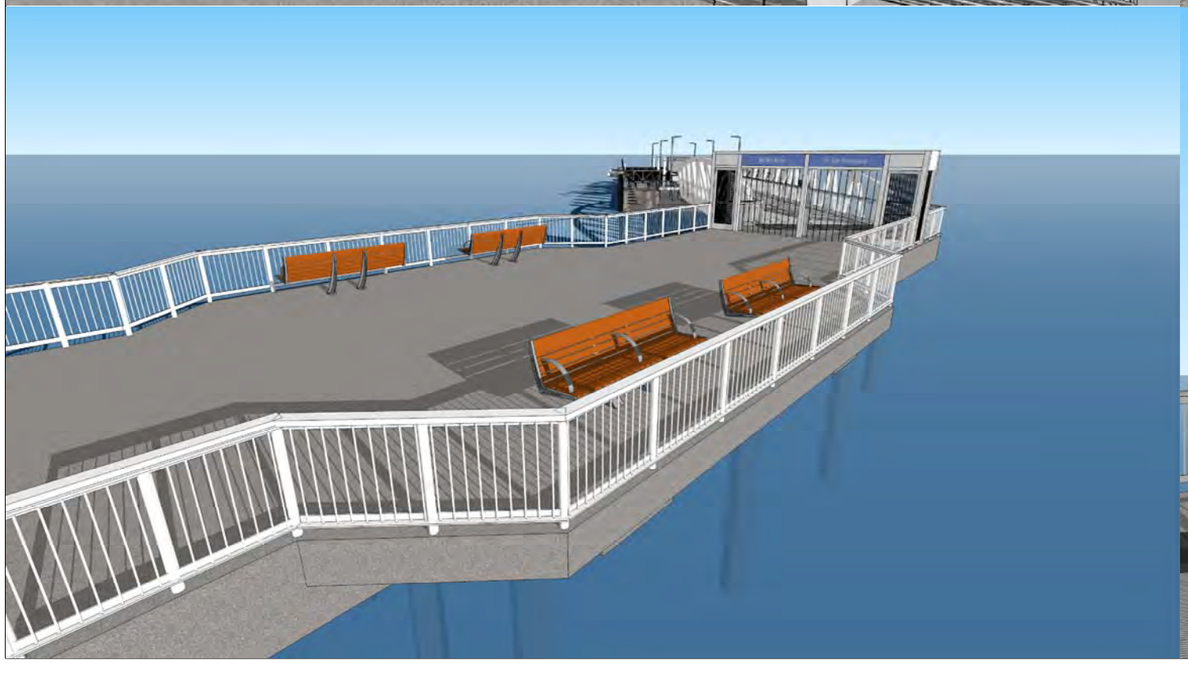
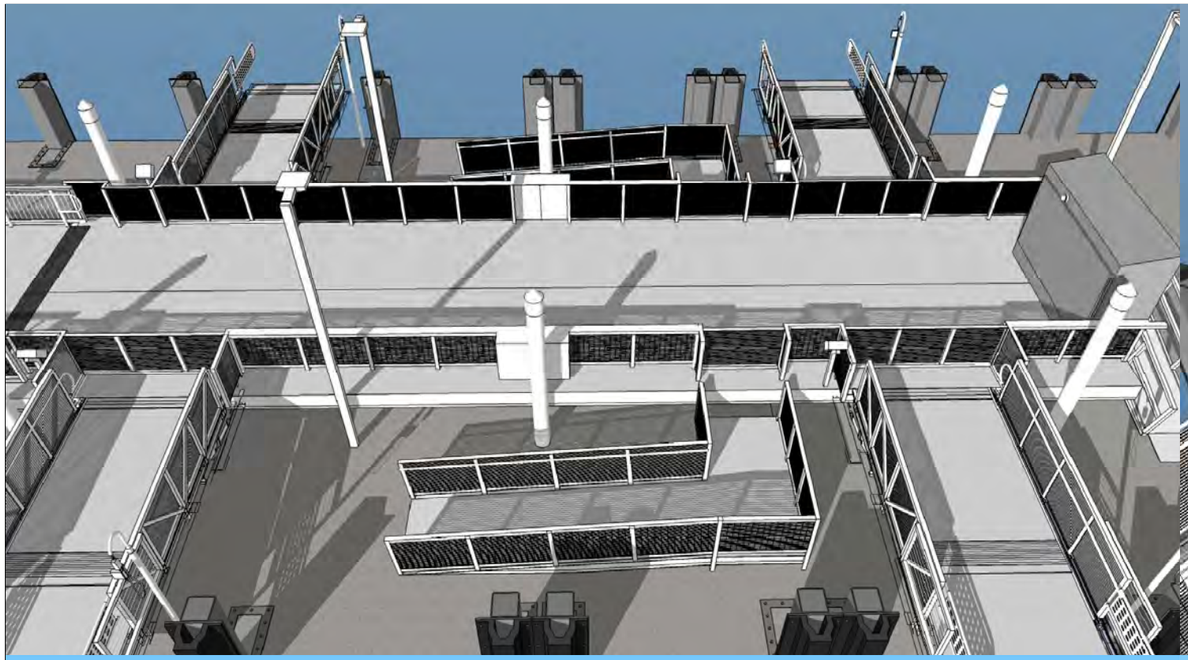
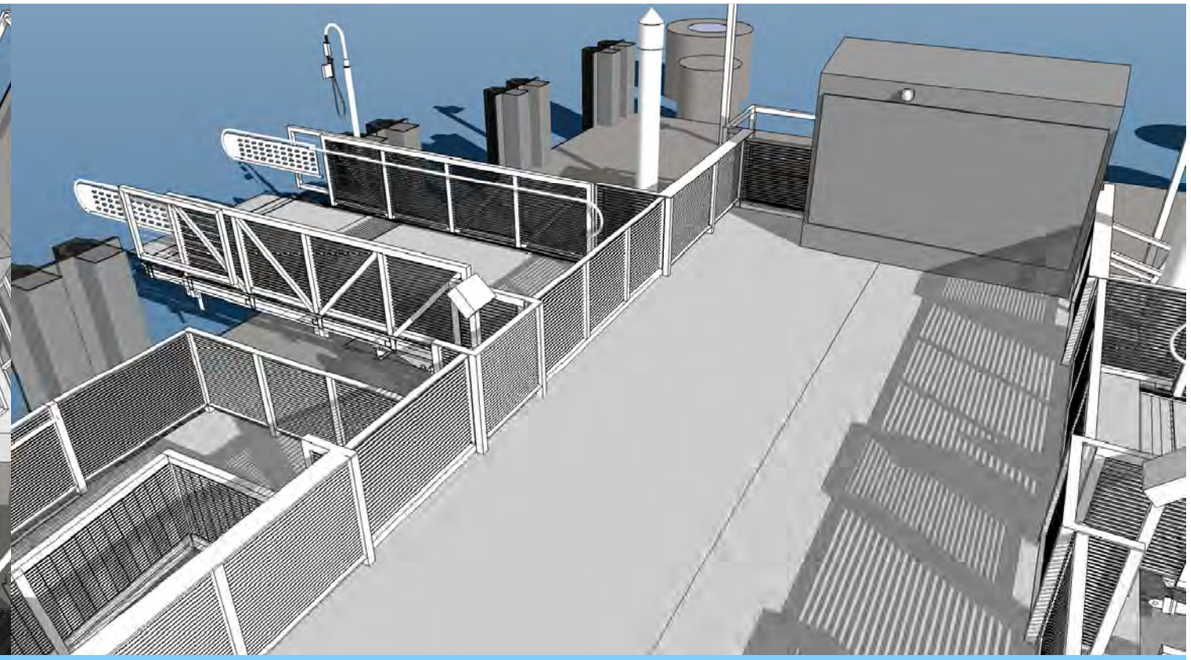
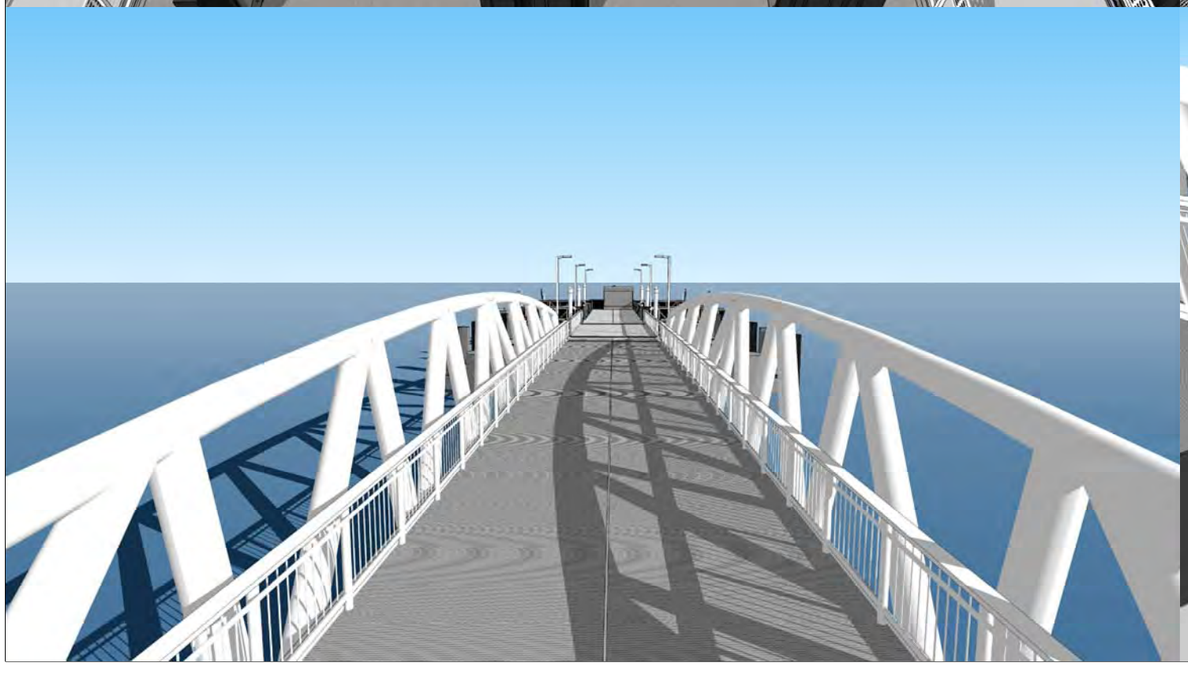


Exhibit 19

Public Access Pier and Gate Rendering







Golden Gate Ferry Sausalito Terminal Vessel Boarding Rehabilitation

Exhibit 20

Gangway and Float Rendering

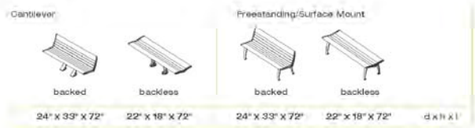
Sense of Place

We believe in the power of design and its ability to elevate public spaces. Landscape Forms provides great design, integrated product collections, and leading edge technology for creating a sense of place in outdoor environments.

Austin™ Specifications

Seat

Austin benches are available in backed or backless, and in a selection of interior and exterior woods, as well as aluminum extruded boards. Unique cantilever style or freestanding/surface mount supports are cast iron.



Arm Options

Optional arms may be added to both ends, as well as the center position. Arms are available for either backed or backless benches. All arms are cast aluminum and attached to the seat boards.

Mounting Options

Austin benches with freestanding/surface mount supports ship with glides which may be removed for surface mounting. All cantilever supports must be surface mounted into concrete.

Austin may be specified with FSC Certified woods; call for pricing and lead times. Powdercoat finish on metal parts contains no heavy metals, is HAPS-free and has extremely low VOCs. Bench materials are 100% recyclable.

Landscape Forms is proud to specify FSC and Green-e certified paper. This paper meets the Forest Stewardship Council's standards for responsible forest management and is made using certified renewable energy.

Finishes

Interior woods are finished with Landscape Forms' exclusive LF-80 wood finish, a clear, catalyzed acrylic lacquer. Special stain may be specified for an upcharge.

Exterior woods are unfinished and will weather to a soft pewter gray, requiring no future maintenance.

Metal is finished with Landscape Forms' proprietary Pangard II® polyester powercoat, a hard yet flexible finish that resists rusting, chipping, peering and fading. Call for standard color chart. A wide array of optional colors may be specified for an upcharge.

To Specify

Select the Austin bench in backed or backless option. Specify surface mount cantilever or freestanding/surface mount support. Specify wood type and/or powdercoat color. Specify number of arms. Benches may be specified in FSC certified woods. Visit landscapeforms.com; click Design Tools, Materials/Colors link for standard offerings, including FSC wood options.

www.landscapeforms.com
Download product photos, brochures, color charts, SketchUp components, technical information, CAD details, CSI specifications, assembly instructions.

Austin is designed by Robert Chipman, ASLA.
Specifications are subject to change without notice.
Austin is manufactured in U.S.A.
Austin design is protected by U.S. Patent Nos. D481,210, D481,211, D482,885, D483,960.
Austin meets BIFMA performance and safety standards.
Location photography: Lady Bird Johnson Wildflower Center, Austin, TX
Landscape Forms supports the LAF at the Second Century level.
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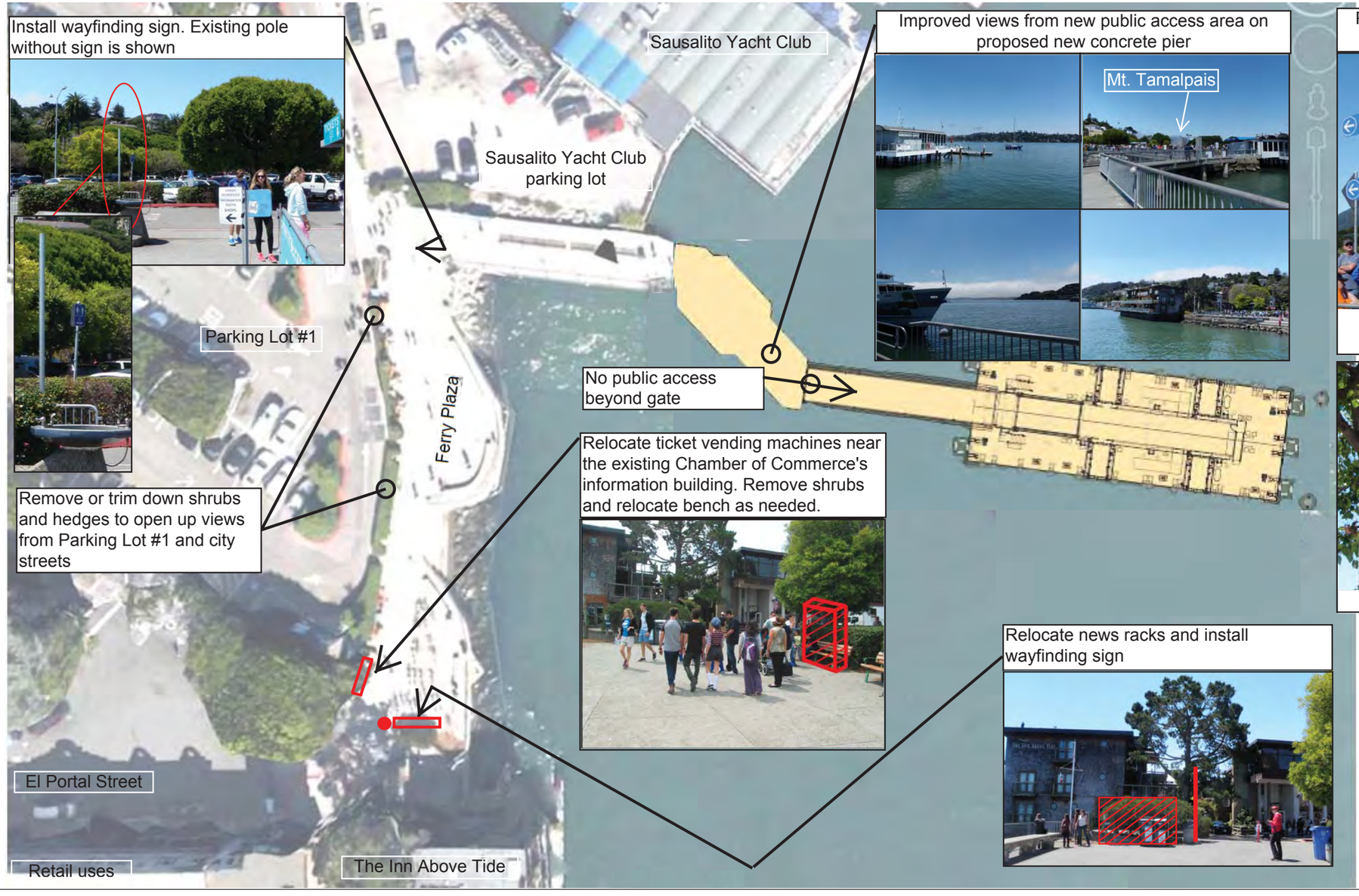
EXISTING BENCHES TO REMAIN ON LANDSIDE PIER

PROPOSED BENCHES FOR NEW ACCESS PIER

Exhibit 21
Existing and Proposed Seating Area at Project Site

Land side issues include:
*Improve views
*Improve connectivity/circulation
*Improve wayfinding signs



Note:
Relocated and new items shown in red are not to scale

SOURCE: Golden Gate Bridge, Highway, & Transportation District, 2014.

Exhibit 22
Suggested Landside Improvements

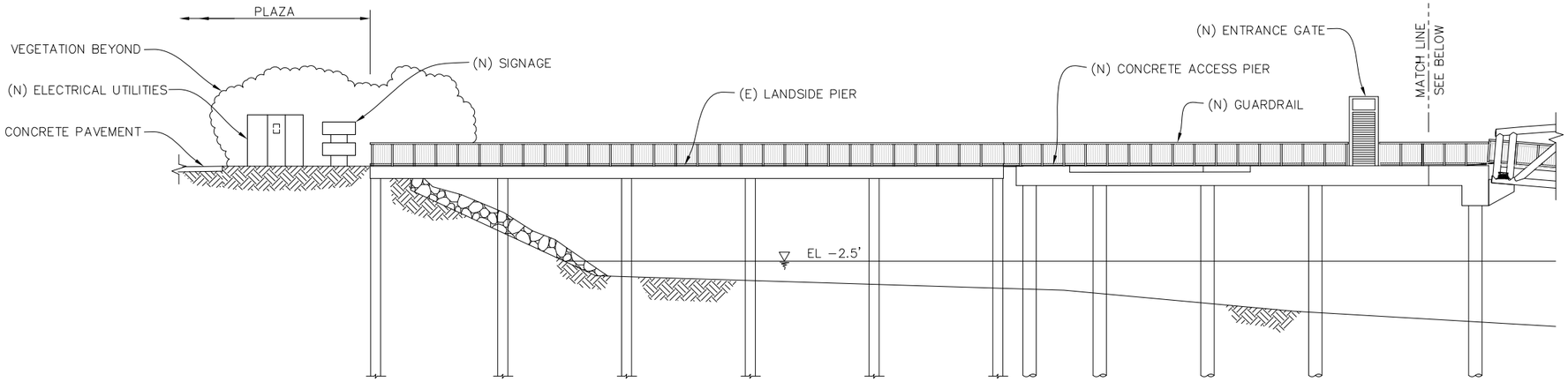
POTENTIAL IMPROVEMENTS

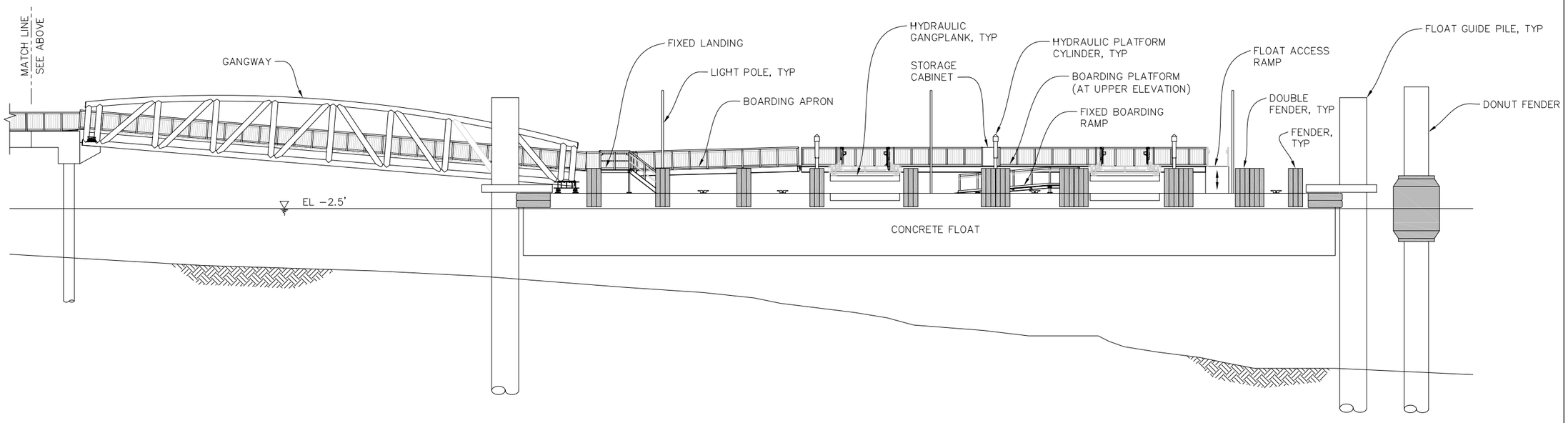
1. **Existing Plaza Improvements**
   - Improved pedestrian circulation patterns and amenities
   - Reorganized ticket kiosk location and circulation pattern
   - Improved signage
2. **Increased Bicycle Staging Area**
   - Expanded staging capacity
   - Improved information/reservation location
   - Improved internal circulation capacity (widths)
3. **Connecting Sidewalk: Plaza to Bus Staging**
   - Sidewalk with adequate capacity (width)
   - Elimination of pedestrian/vehicular conflicts
4. **Improved Bus Staging Area**
   - Provision for adequate pedestrian queuing
   - Provision for safe loading and unloading patterns
   - Improved signage and information
5. **Revisions in Parking Lot 1**
   - Provisions for handicapped pick-up and drop-off (ADA compliant)
   - Provisions for pick-up and drop-off circulation
   - Optimization of parking
   - Improved signage and information
6. **Extended Sidewalk to Parking Lot 3**
   - Provision of sidewalk network
   - Crosswalk improvements
   - Improved signage and information

SOURCE: City of Sausalito, 2013

Golden Gate Ferry Sausalito Terminal Vessel Boarding Rehabilitation

Exhibit 23
Landside Project, Potential Improvements Study



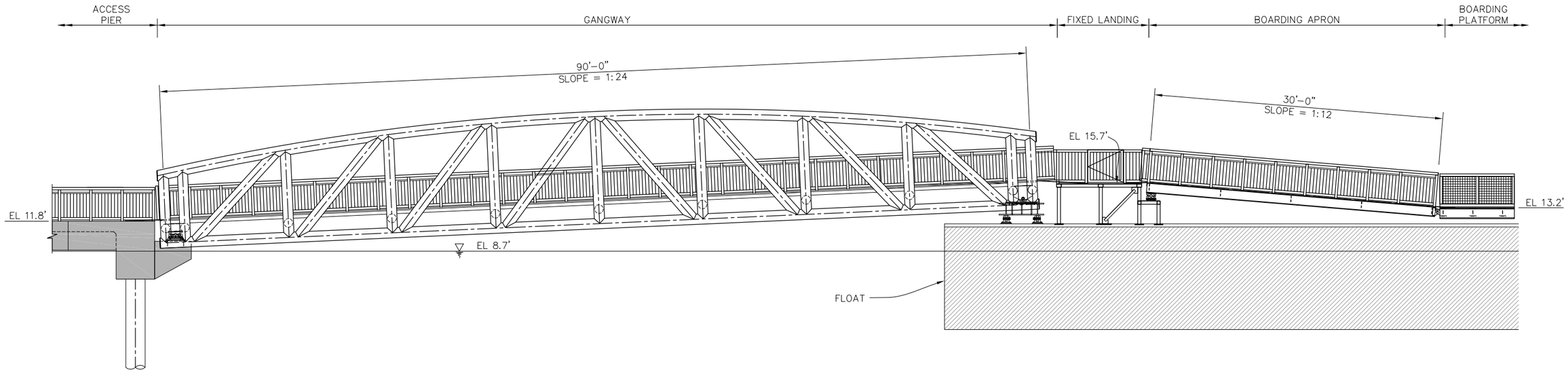


TERMINAL ELEVATION
SCALE: 1" = 20'−0"

NOTE:

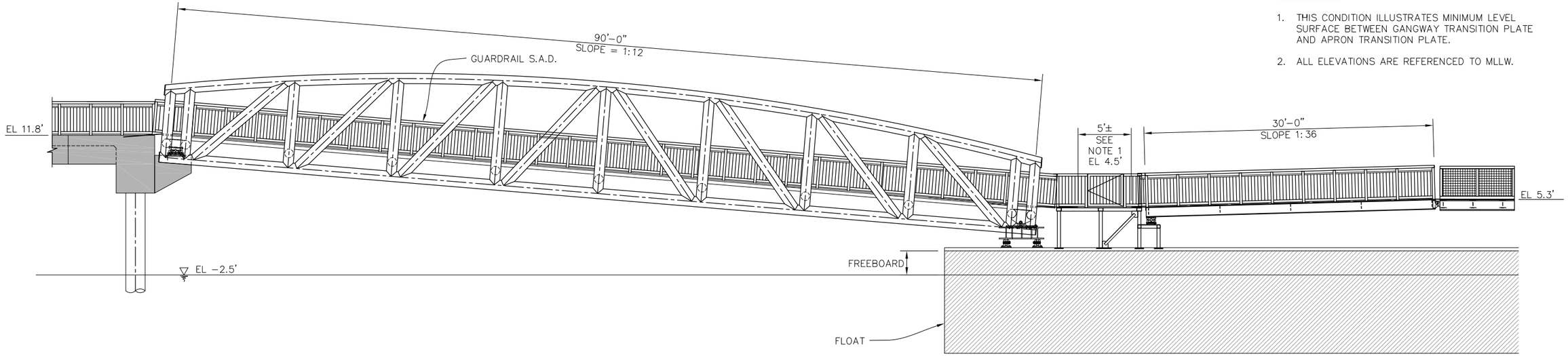
ALL ELEVATIONS ARE REFERENCED TO MLLW.

0' 10' 20' 30'
SCALE: 1:20



HIGH WATER – VESSEL WITH LOW DOOR FREEBOARD

SCALE: 3/32" = 1'-0"



LOW WATER – VESSEL WITH HIGH DOOR FREEBOARD

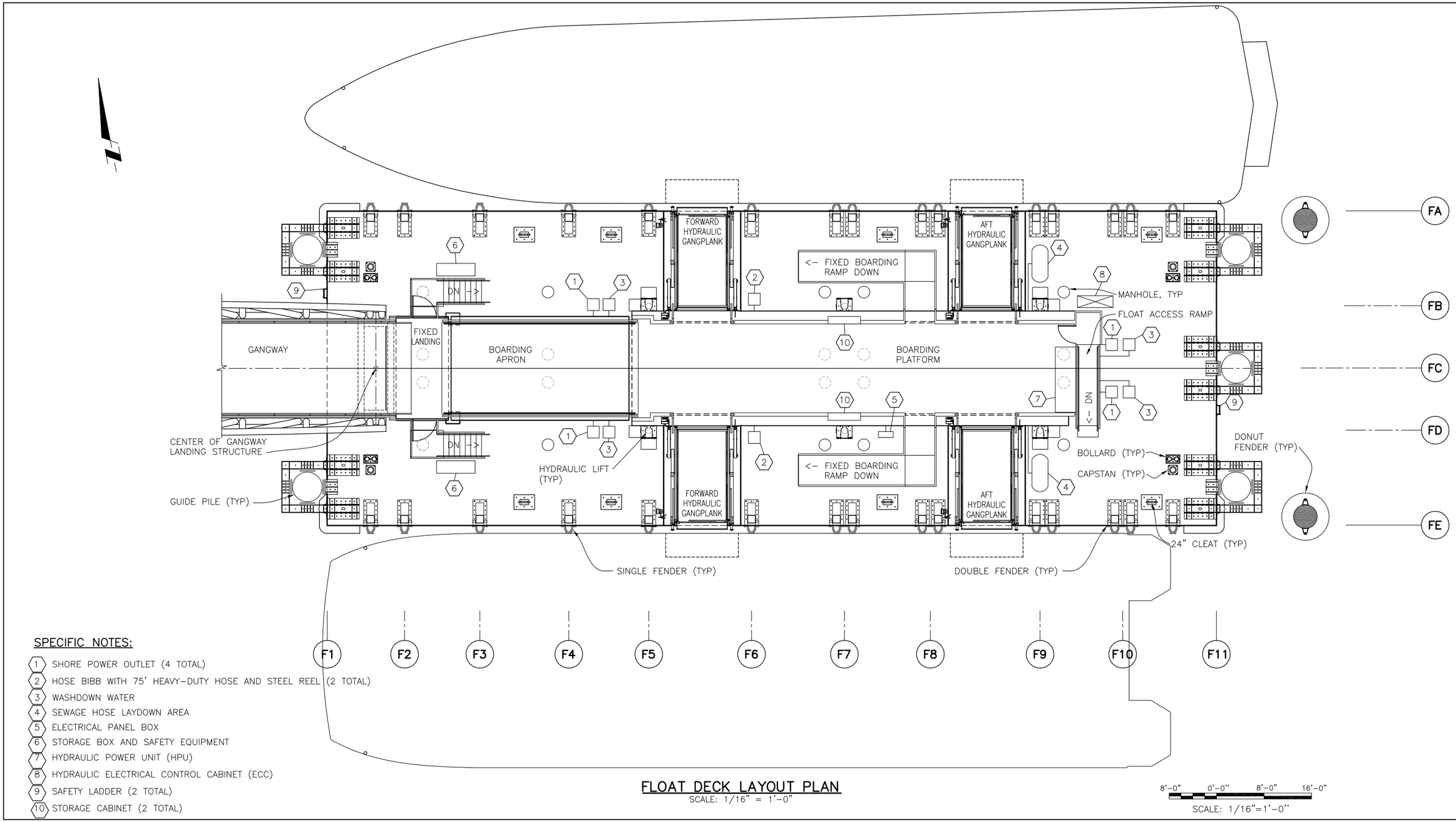
SCALE: 3/32" = 1'-0"

NOTES:

1. THIS CONDITION ILLUSTRATES MINIMUM LEVEL SURFACE BETWEEN GANGWAY TRANSITION PLATE AND APRON TRANSITION PLATE.
2. ALL ELEVATIONS ARE REFERENCED TO MLLW.

8'-0" 0'-0" 4'-0" 8'-0"

SCALE: 3/32"=1'-0"



SPECIFIC NOTES:

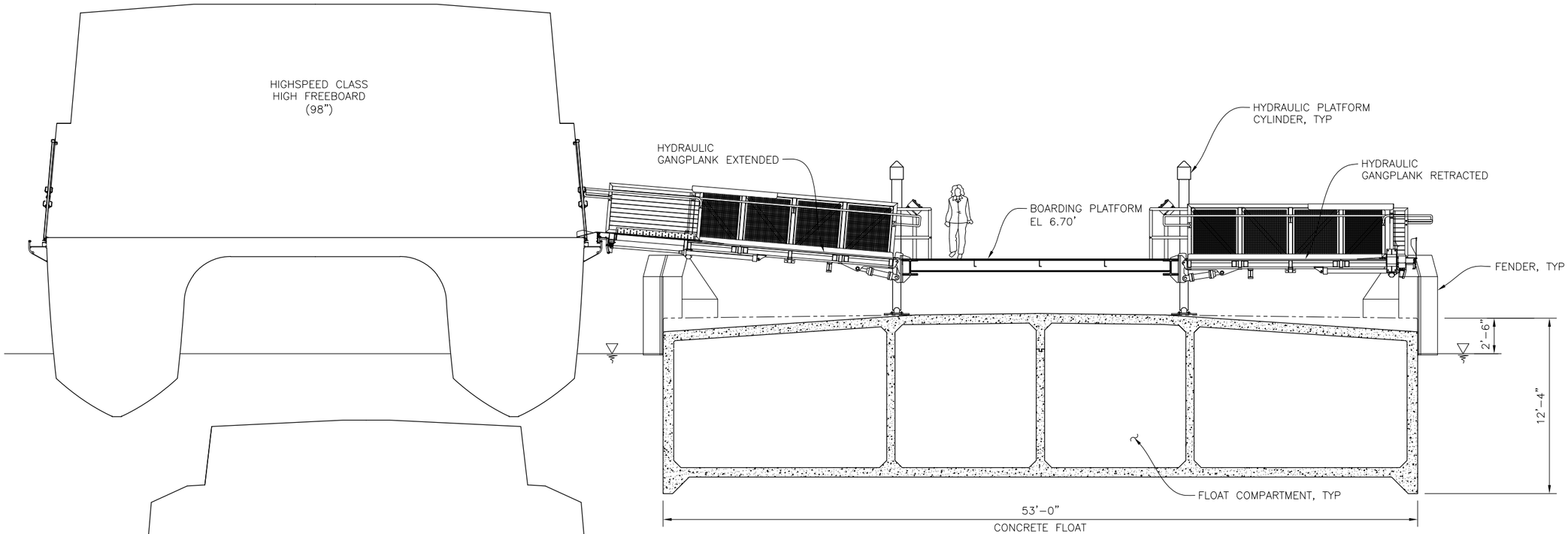
1. SHORE POWER OUTLET (4 TOTAL)
2. HOSE BIBB WITH 75' HEAVY–DUTY HOSE AND STEEL REEL (2 TOTAL)
3. WASHDOWN WATER
4. SEWAGE HOSE LAYDOWN AREA
5. ELECTRICAL PANEL BOX
6. STORAGE BOX AND SAFETY EQUIPMENT
7. HYDRAULIC POWER UNIT (HPU)
8. HYDRAULIC ELECTRICAL CONTROL CABINET (ECC)
9. SAFETY LADDER (2 TOTAL)
10. STORAGE CABINET (2 TOTAL)

FLOAT DECK LAYOUT PLAN

SCALE: 1/16" = 1'–0"

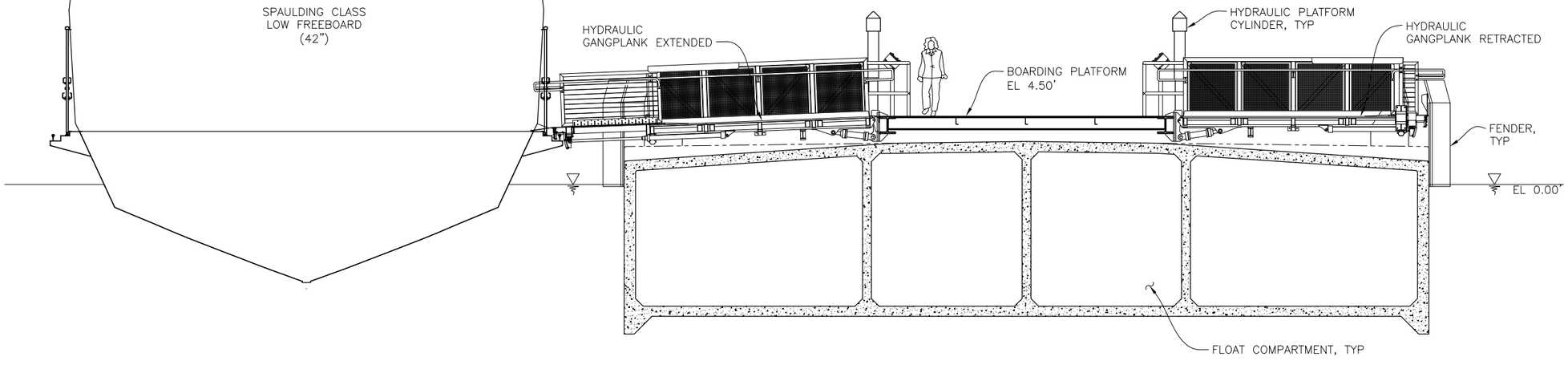
8'–0" 0'–0" 8'–0" 16'–0"

SCALE: 1/16"=1'–0"



BOARDING PLATFORM AT HIGH POSITION

SCALE: 1/8" = 1'-0"



BOARDING PLATFORM AT LOW POSITION

SCALE: 1/8" = 1'-0"

4'-0" 0'-0" 4'-0" 8'-0"

SCALE: 1/8"=1'-0"

Exhibit 27

Float Section Through Boarding Platform and Gangplanks

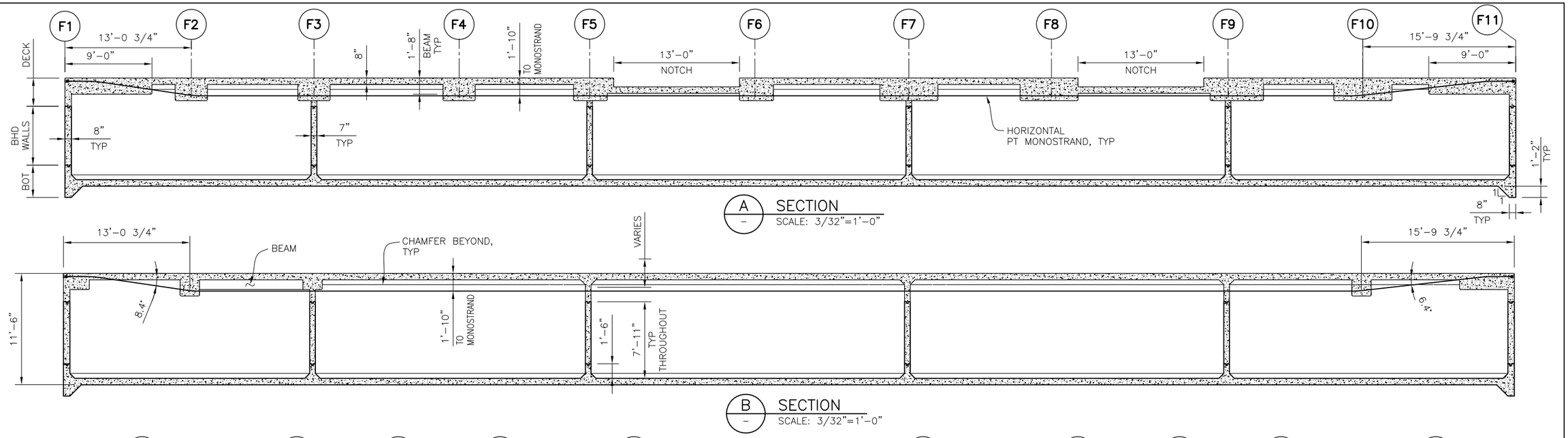
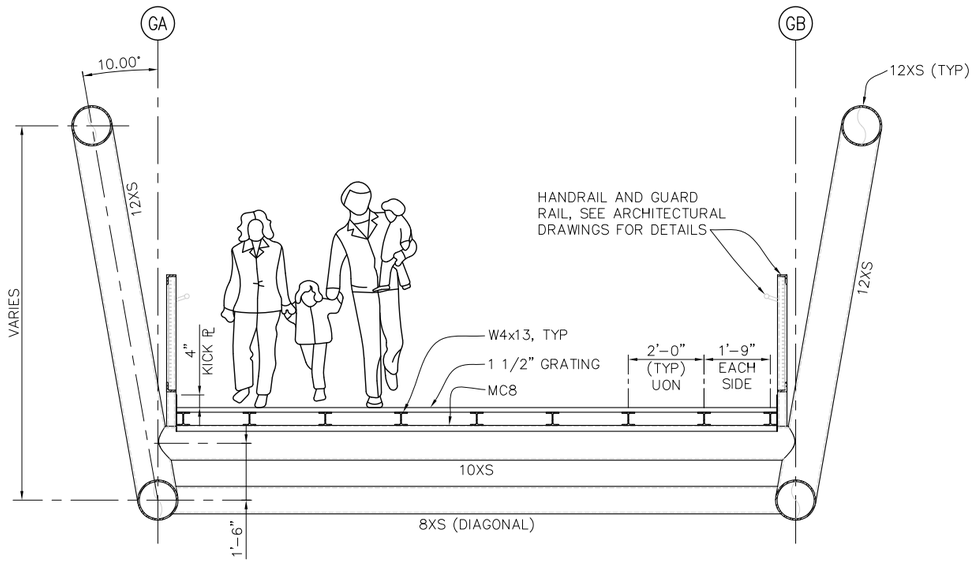
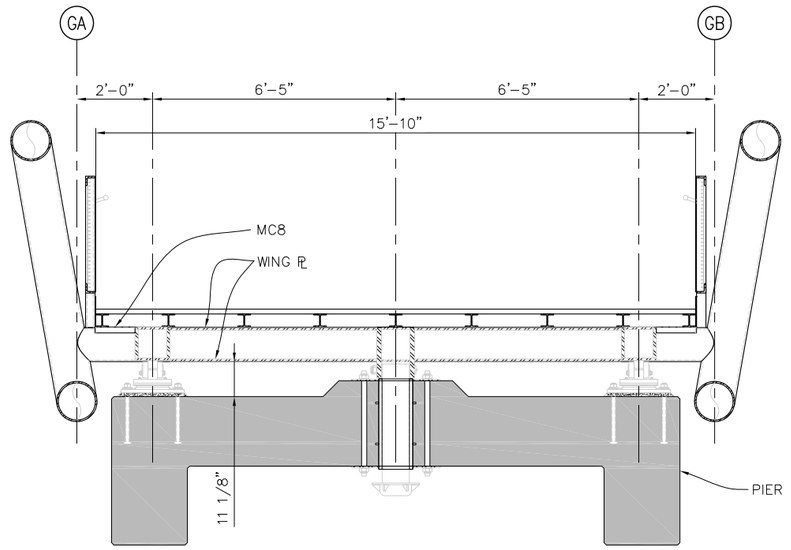


Exhibit 28

Float Longitudinal & Transverse Sections

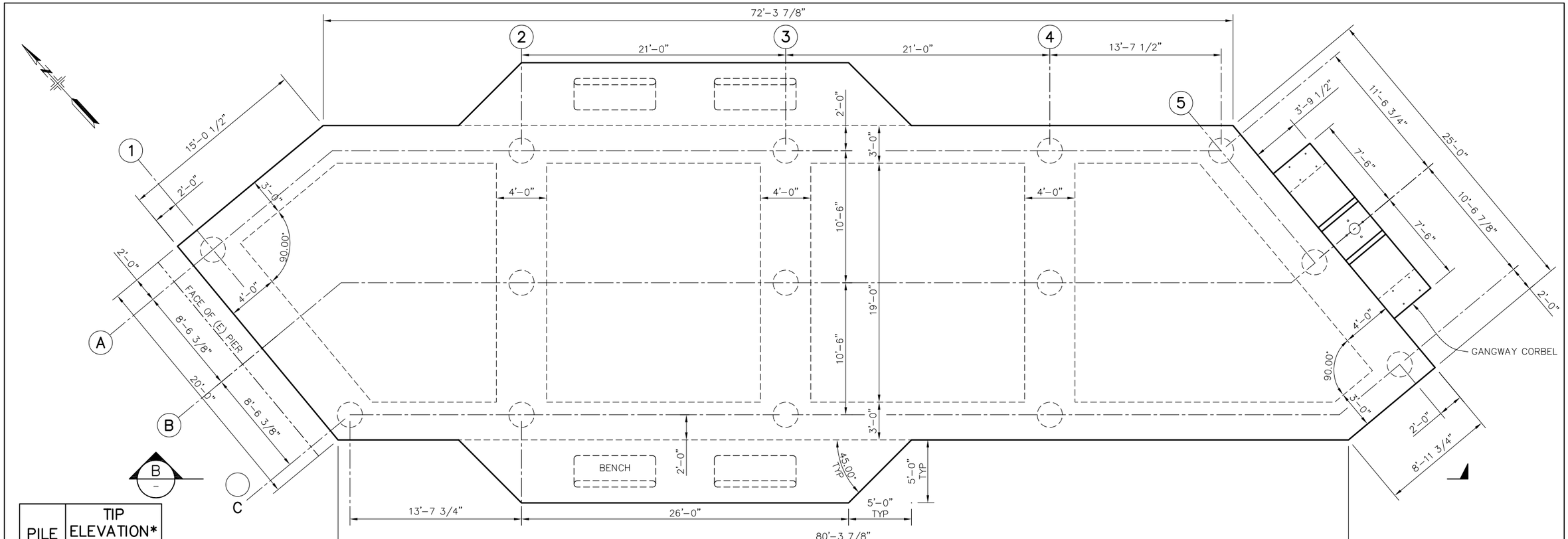


A — GANGWAY TYPICAL SECTION
SCALE: 1/4"=1'-0"



B — GANGWAY SECTION AT CONCRETE PIER
SCALE: 1/4"=1'-0"

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

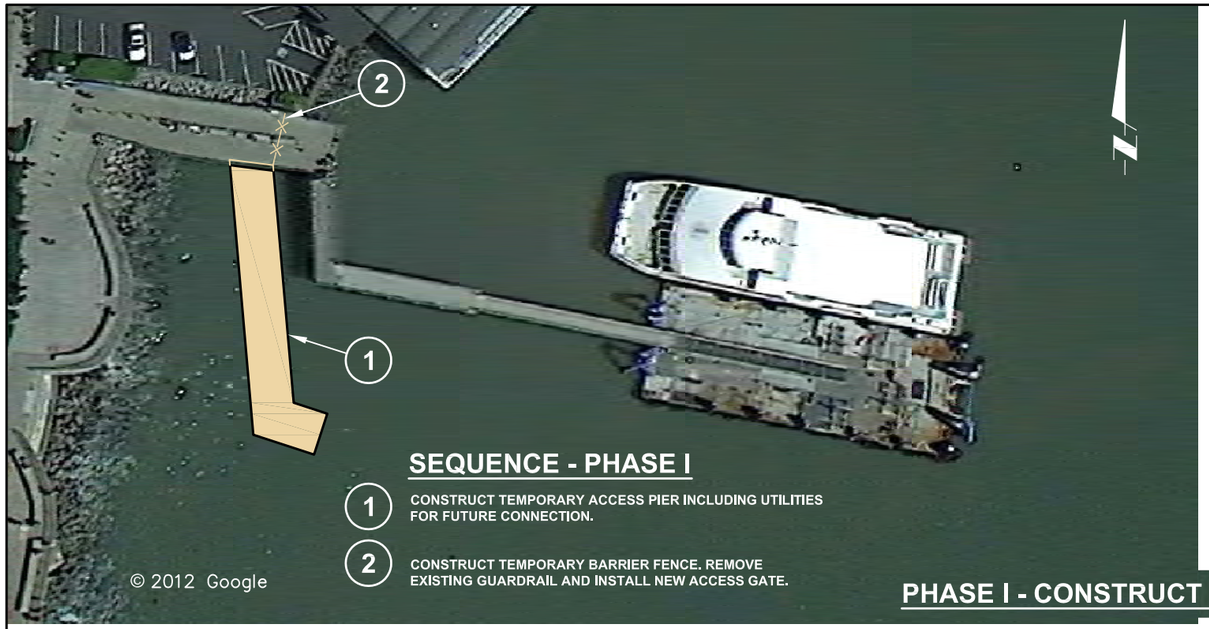


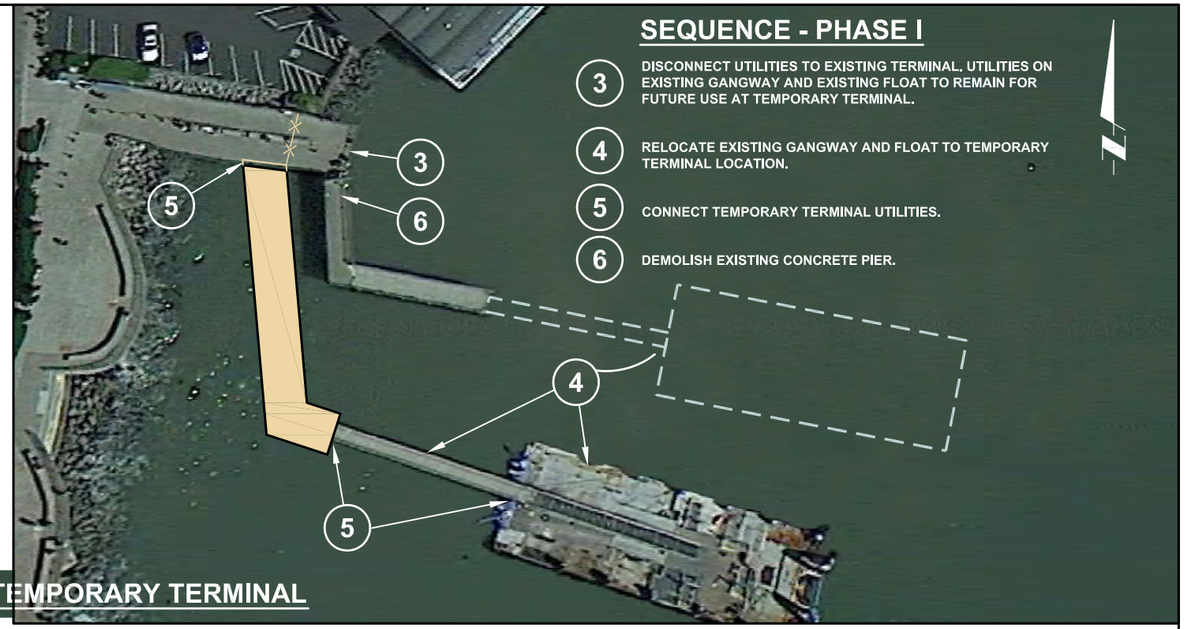
PILE	TIP ELEVATION* (ft)
1A	−65.00
1C	−65.00
2A	−65.00
2B	−65.00
2C	−65.00
3A	−65.00
3B	−65.00
3C	−65.00
4A	−65.00
4B	−65.00
4C	−65.00
5A	−65.00
5B	−65.00
5C	−65.00

*DRIVE PILES TO THE TOP OF BEDROCK. BEDROCK ELEVATION TO BE FIELD VERIFIED.

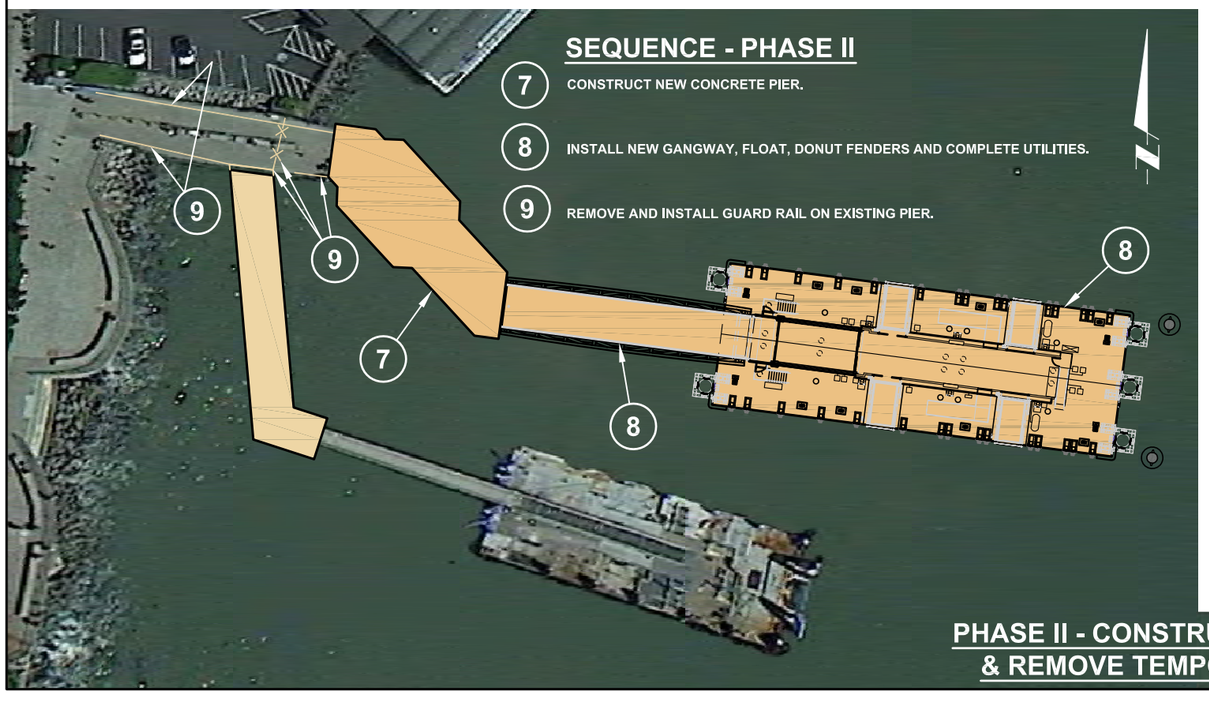
Exhibit 30

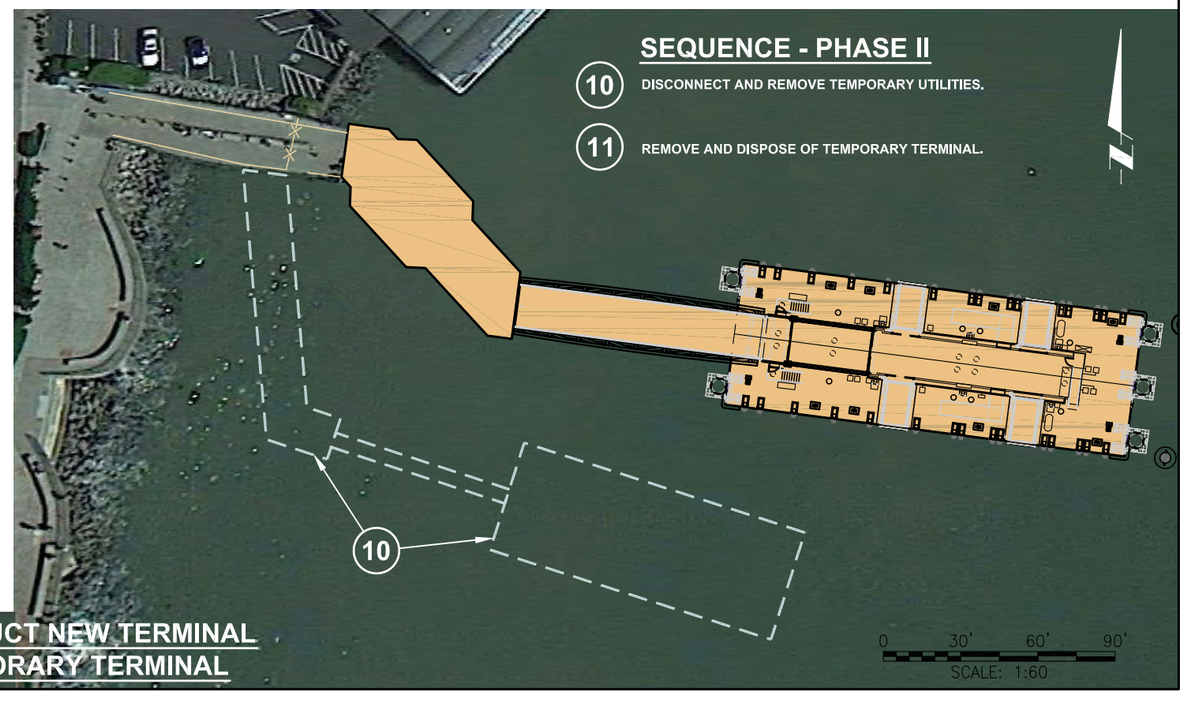
Access Pier Plan & Elevation





PHASE I - CONSTRUCT TEMPORARY TERMINAL



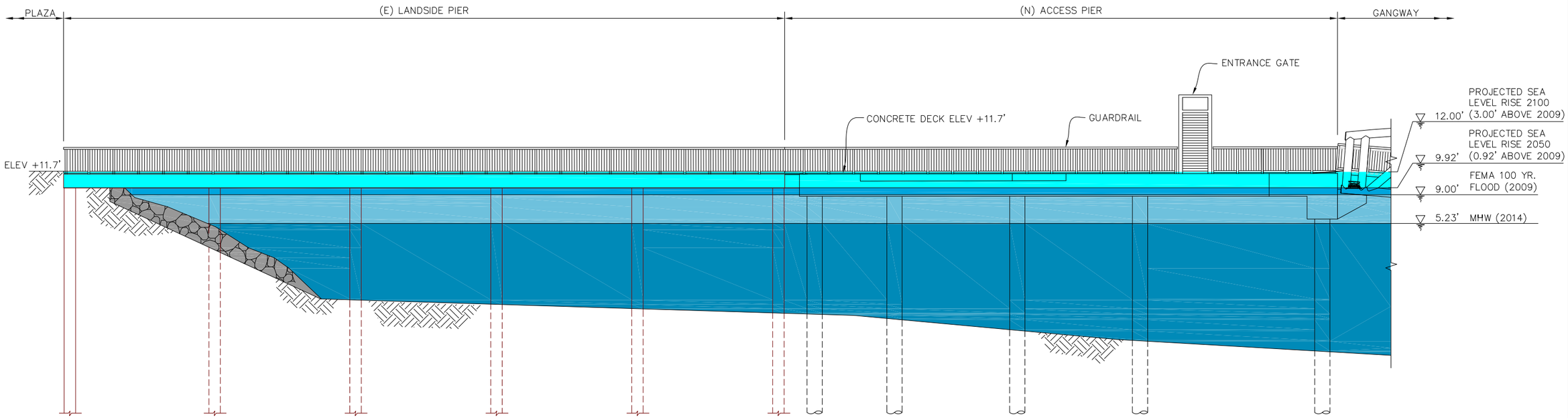


PHASE II - CONSTRUCT NEW TERMINAL & REMOVE TEMPORARY TERMINAL

Golden Gate Ferry Sausalito Terminal Vessel Boarding Rehabilitation

Exhibit 31

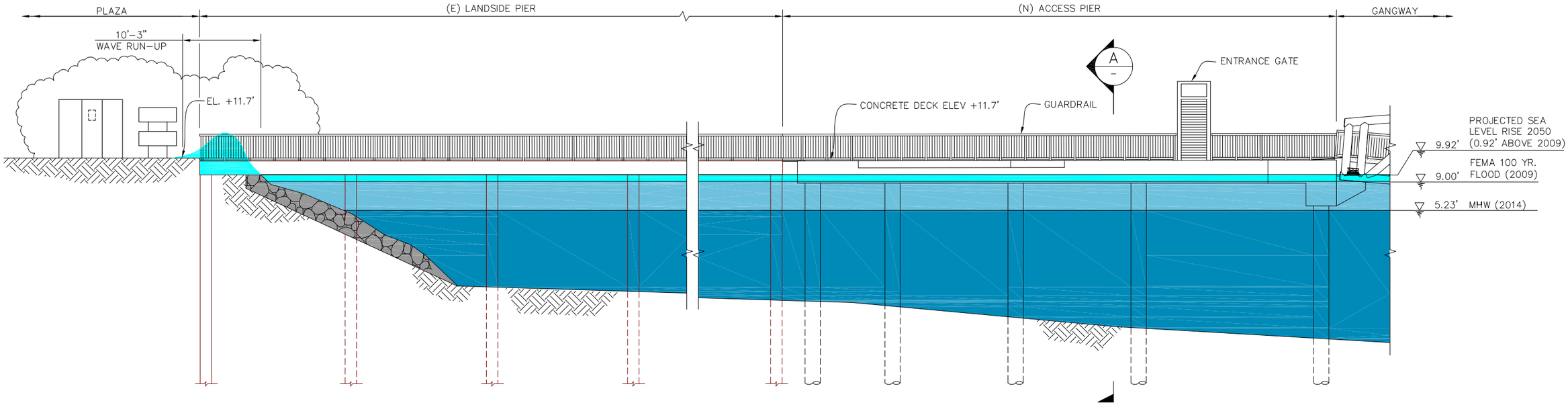
Stage Construction



PIER ELEVATION FOR SEA LEVEL RISE
(MID-CENTURY AND END-OF-CENTURY)
NO SCALE

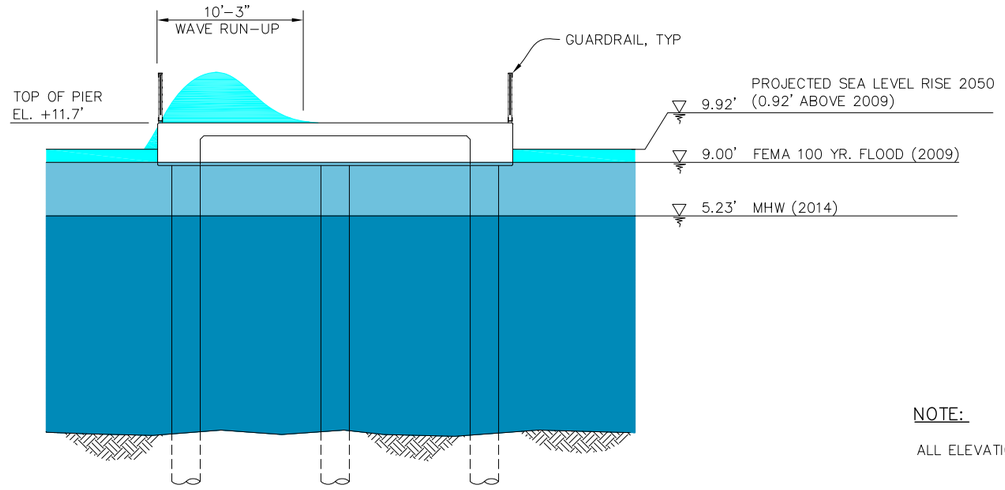
NOTES:

1. DATUM: ALL ELEVATIONS ARE RELATIVE TO MEAN LOWER LOW WATER (MLLW).
2. MEAN HIGH WATER IS TAKEN AS COTERMINOUS WITH MEAN HIGH TIDE.
3. PIER EXTENSION HAS A DESIGN LIFE OF 40 YEARS.



PIER ELEVATION FOR WAVE RUN-UP

NO SCALE



A – SECTION

NO SCALE

NOTE:

ALL ELEVATIONS ARE RELATIVE TO MEAN LOWER LOW WATER (MLLW).