

CALIFORNIA COASTAL COMMISSION

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W7b

CC-0005-21 (SANDAG)
June 8, 2022

EXHIBITS-1

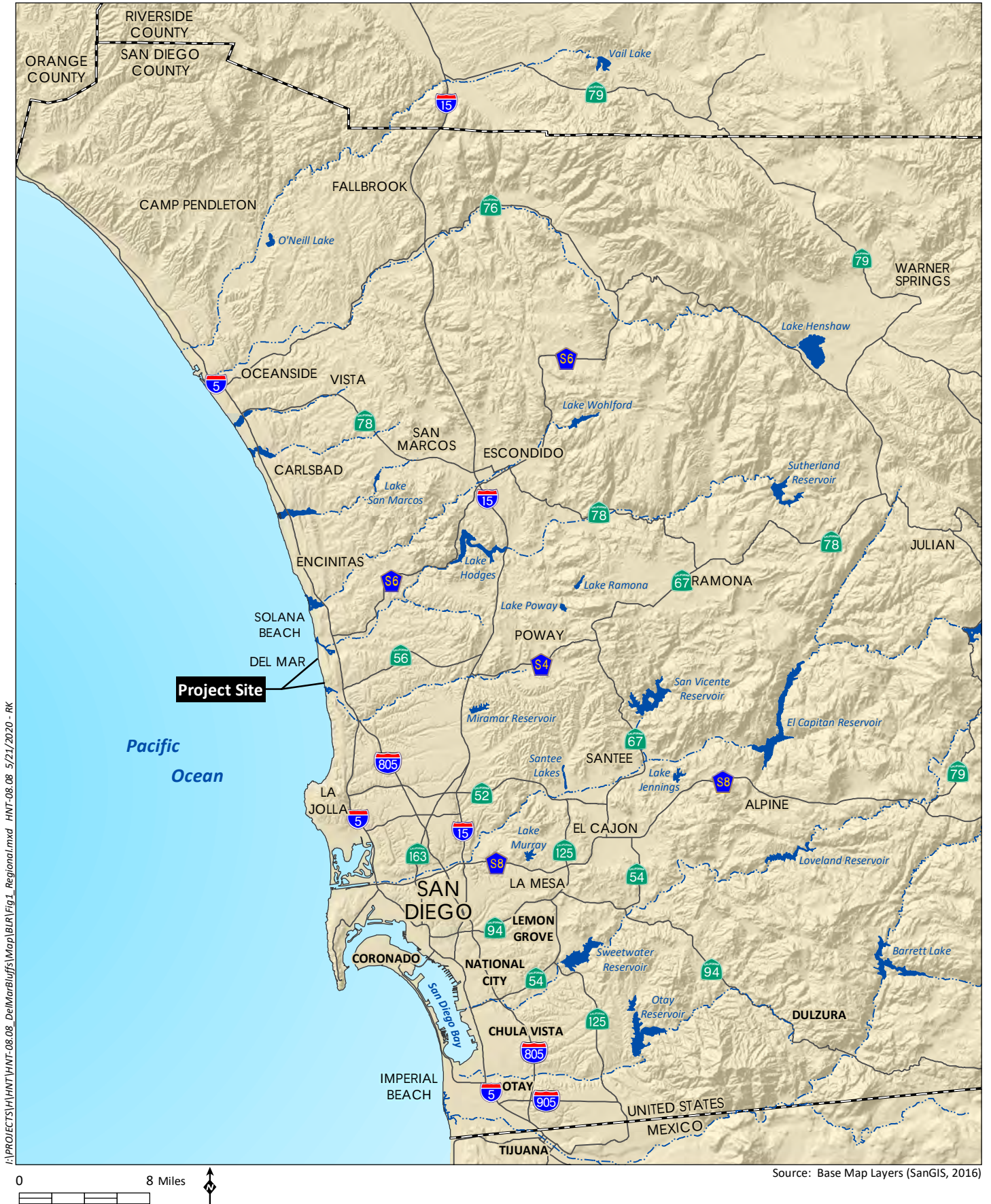
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Stabilization Area Parameters												
Stabilization Area (SA)	Ranking	SA Distance (ft)	Pile Length (ft)	Distance from Pile to Top of Bluff 2020 (ft)	# of Piles	30 Year Design Height Dp (ft)	Total # of Tiebacks (30-year)	Depth of Lagging (ft) (30-year)	Existing or Proposed Seawall	Proposed Fill Behind Seawalls	Total # of Tiebacks Needed (30-years) with Seawall	Depth of Lagging (ft) Needed (30-years) with Seawall
SA21	High	59	60	9	5	30	2	15	Proposed	2:1	1	5
SA20	High	97	60	8	9	38	2	20	Proposed	2:1	0	5
SA23	Medium	52	60	9	4	7	1	5	Existing		0	5
SA24	Medium	812	60	38	85	7	0	0			0	0
SA5	High	165	60	25	18	17	1	5			1	5
SA12	Medium	165	60	18	17	12	1	5	Proposed	5:1	1	0
SA8	Medium	155	60	0	17	16	1	15	Existing**		1	5
SA11	High	100	50	15	10	10	1	5			1	5
SA9	High	156	50	18	17	8	1	0			1	0
* The 2021 Emergency repair includes removal of the existing seawall and construction of 291-foot replacement seawall at SA6N and stabilization of the existing seawall at SA8 by constructing smaller diameter pile cut off wall in front of the seawall. **At SA8, the Proposed Action includes replacement of the existing fill behind the seawall with lightweight fill in order to unload the existing seawall.												

Exhibit 3

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Retrofit Area Parameters														
Stabilization Area (SA)	Ranking	# of Piles	Design Height (ft)	Pile Length (ft)	# of Existing Tiebacks	Approximate # of years to reach Design Height	Distance from Pile Face to Top of Bluff 2020 (ft)	30 Year Design Height (ft)	Total # of Additional Tiebacks (30 years)	Total Depth of Lagging (ft) (30 years)	Existing or Proposed Seawall	Proposed Fill Behind Seawall	Total # of Tiebacks Needed (30 Years) with Seawall	Total Depth of Lagging
DMB2 (SN5) Pile 33 to 38	Medium	6	15	45	1	32	28	13	0	5	Proposed	5:1	0	5
DMB2 (SN5) Pile 24 to 32	High	9	15	45	1	6	13.9	26	2	30	Proposed	2:1	0	5
DMB2 (SN5) Pile 1 to 23	High	23	15	45	1	0	0	32	2	30	Proposed	1.5:1*	0	5
DMB2 (SN7N)	Medium	4	20	45	1	20	7.7	23	2	30	Proposed		0	5
DMB2 (SN7S)	Low	4	10	40	0	28	28.4	14	1	10	Proposed	5:1	1	5
DMB3 (SP1)	Medium	5	18	45	1	12	15	36	1	15	Proposed	2:1	0	5
DMB2 (SN3) Pile 15 to 19	High	5	15	45	1	8	4.7	16	1	10	Existing		0	5
DMB2 (SN3) Pile 1 to 14	High	14	18	45	1	8	0.1	20	1	15	Existing		0	5
DMB2 (SN1N)	High	4	23	60	1	0	8.4	36	1	25	Proposed	2:1	0	5
DMB2 (SN1S) Pile 14 to 29	Medium	16	15	45	1	12	15.2	38	1	20	Proposed	1.5:1*	0	5
DMB2 (SN1S) Pile 6 to 13	High	8	15	45	1	0	7.5	18	1	15	Existing	1.5:1*	0	5
DMB2 (SN1S) Pile 1 to 5	High	5	20	45	1	14	3	18	1	15	Existing	1.5:1*	0	5
DMB2 (SN2)	High	9	23	55	1	0	4.9	26	1	20	Existing	1.5:1*	0	5
DMB4 (Pile 1 to 3)	Medium	3	34	60	1	30	4	29	0	15	Existing		0	5
DMB3 (SP2) Pile 17 to 23	High	7	10	50	0	0	2.5	21	1	15	Existing		1	5
DMB3 (SP2) Pile 6 to 16	Medium	11	10	50	0	20	27.8	25	1	10	Proposed	2:1	1	5
DMB3 (SP2) Pile 1 to 5	Low	5	10	50	0	40	36.2	0	1	0	Proposed	5:1	1	5
DMB2 (SN6) Pile 7 to 10	Medium	4	10	40	0	30	27.5	10	1	5	Proposed	2:1	1	5
DMB2 (SN6) Pile 1 to 6	High	6	10	40	0	2	16.6	20	2	15	Proposed	2:1	1	5
2001 Emergency Repair	High	12	30	60	1	0	0	30	1	20	Proposed	2:1	0	5
DMB3 (SP3) Pile 13	Low	1	26.5	65	1	>50	9.9	20	0	10	Existing		0	5
DMB3 (SP3) Pile 5 to 12	Low	8	26.5	65	1	>50	11.8	18	0	10	Existing	1.5:1	0	5

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												mid slope		
DMB3 (SP3) Pile 1 to 4	Low	4	26.5	65	1	>50	27.7	17	0	5	Proposed	5:1	0	5
DMB3 (SP5)	Medium	13	8	45	0	22	14.8	22	2	20	Proposed	5:1	1	5
DMB3 (SP6) Pile 7 to 14	Medium	8	8	45	0	16	14.3	17	1	10	Proposed	5:1	1	5
DMB3 (SP6) Pile 1 to 6	High	6	8	45	0	0	7	24	2	20	Proposed	5:1	1	5
DMB3 (SP7)	High	14	8	45	0	0	7.3	22	1	15	Proposed	5:1	1	5
DMB3 (SP4) Pile 6 to 10	Low	5	8	45	0	38	26	5	1	0	Proposed	5:1	1	5
DMB3 (SP4) Pile 3 to 5	Low	3	8	45	0	30	23.4	8	1	0	Proposed	5:1	1	5
DMB3 (SP4) Pile 1 to 2	Low	2	8	45	0	24	23.4	10	1	0	Proposed	5:1	1	5
DMB2 (SN8) Pile 12 to 13	Low	2	10	45	0	30	26.2	10	1	0	Proposed	5:1	1	5
DMB2 (SN8) Pile 1 to 11	Medium	11	10	45	0	10	11.3	21	1	15	Proposed	5:1	1	5
*Temporary buttressing of the entire slope at a 1.5 to 1 slope ratio with anchored turf reinforcement mats: This consists of high-performance turf reinforcement mats and engineered earth anchors that work together to lock soil in place and protect against hydraulic stresses. This system provides dynamic erosion control and slope stabilization. The mats are then covered with a layer of topsoil and planted. The species used for planting will be native to the project area.														

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Seawall Parameters				
Seawall	Length (ft)	Width (ft)	Height (ft)	Height of Armored Bluff (Seawall Plus Surface Stabilization) (ft)
1	544	2.5	7	Varies (8-38)
2	293	2.5	7	Varies (17-43)
3	192	2.5	7	Varies (15-17.5)
4	200	2.5	7	Varies (16-25)
5	48	2.5	7	Varies (18)
6	814	2.5	7	Varies (8-9)
MP 245.2 Emergency Repair	291	2.5	Varies (5-13)	Varies (7-58)
Anderson Canyon	161	2.5	Flush with exiting splash pad	42

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SOUTH OF 4th STREET (2021 EMERGENCY REPAIR)

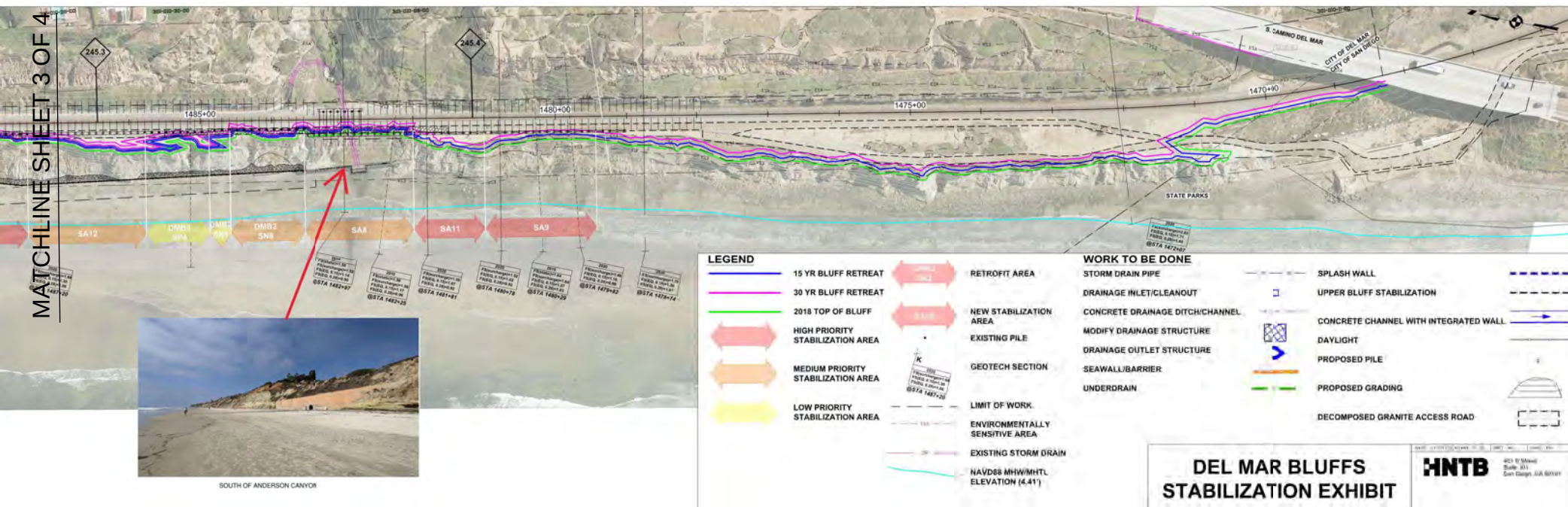
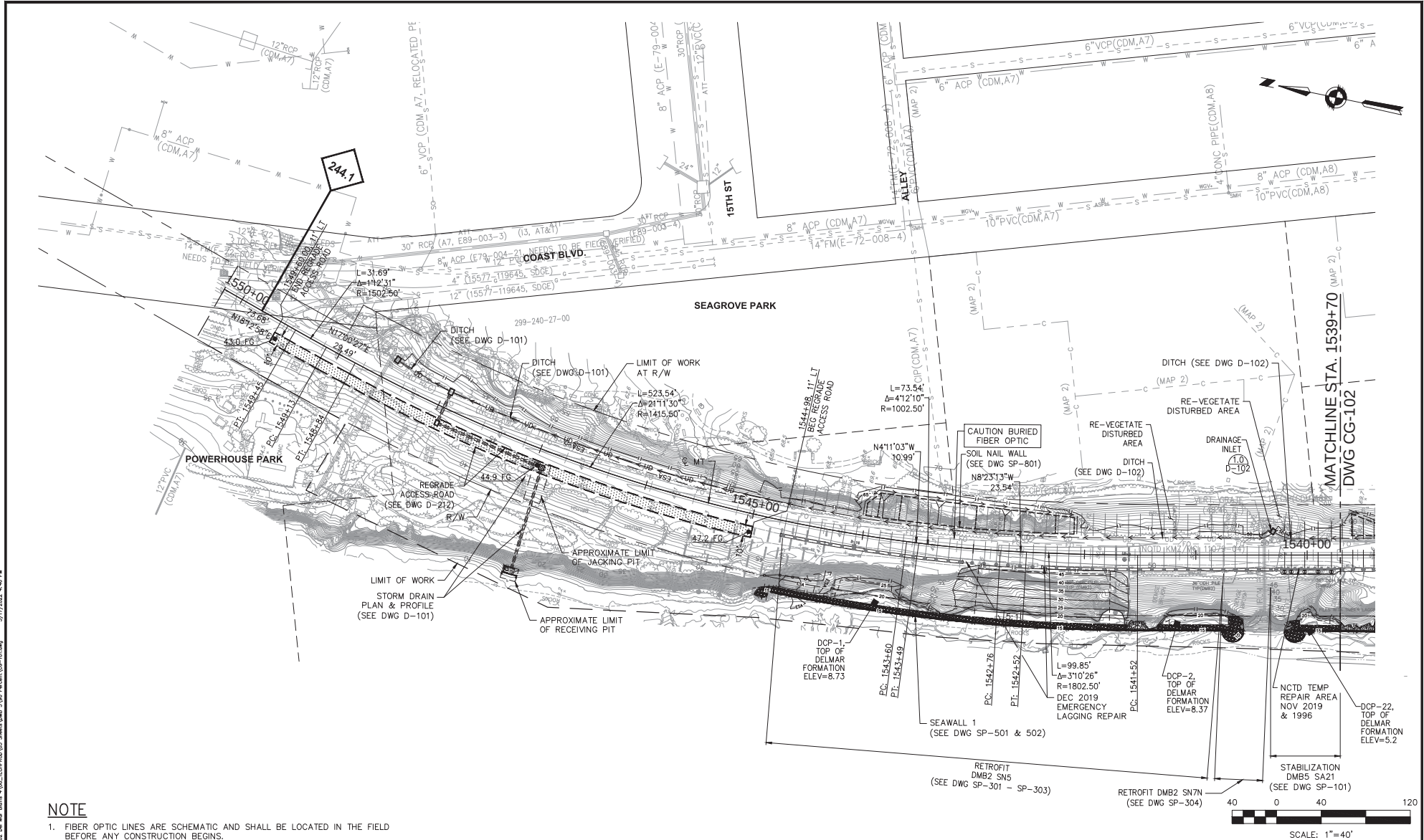


Exhibit 4

FOR REDUCED PLANS ORIGINAL
SCALE IS IN INCHES

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NOTE

1. FIBER OPTIC LINES ARE SCHEMATIC AND SHALL BE LOCATED IN THE FIELD BEFORE ANY CONSTRUCTION BEGINS.

NO.	DATE	REVISIONS	BY	CHK	APRV

HNTB

401 B Street
Suite 301
San Diego, CA 92101

DESIGNED BY G. SHAW	DATE 03/22
DRAWN BY M. COOPER	03/22
CHECKED BY P. MCCOLL	03/22
SANDAG PM A. DEVAUX	03/22



DEL MAR BLUFFS STABILIZATION PROJECT 5
ML STA 1550+00 TO ML STA 1539+70

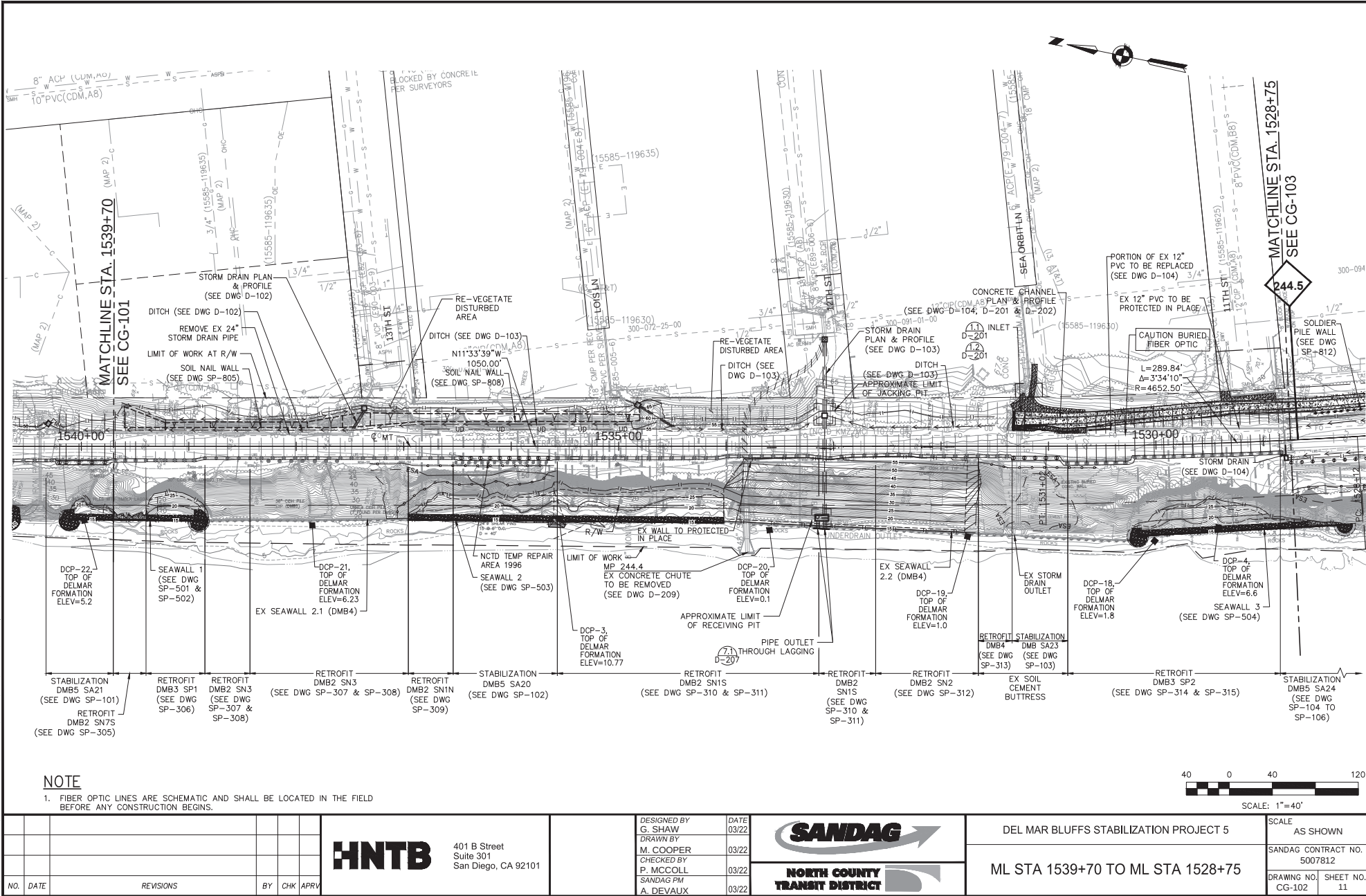
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DRAWING NO. CG-101
SHEET NO. 10

Exhibit 5

90% DESIGN NOT FOR CONSTRUCTION

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90% DESIGN NOT FOR CONSTRUCTION

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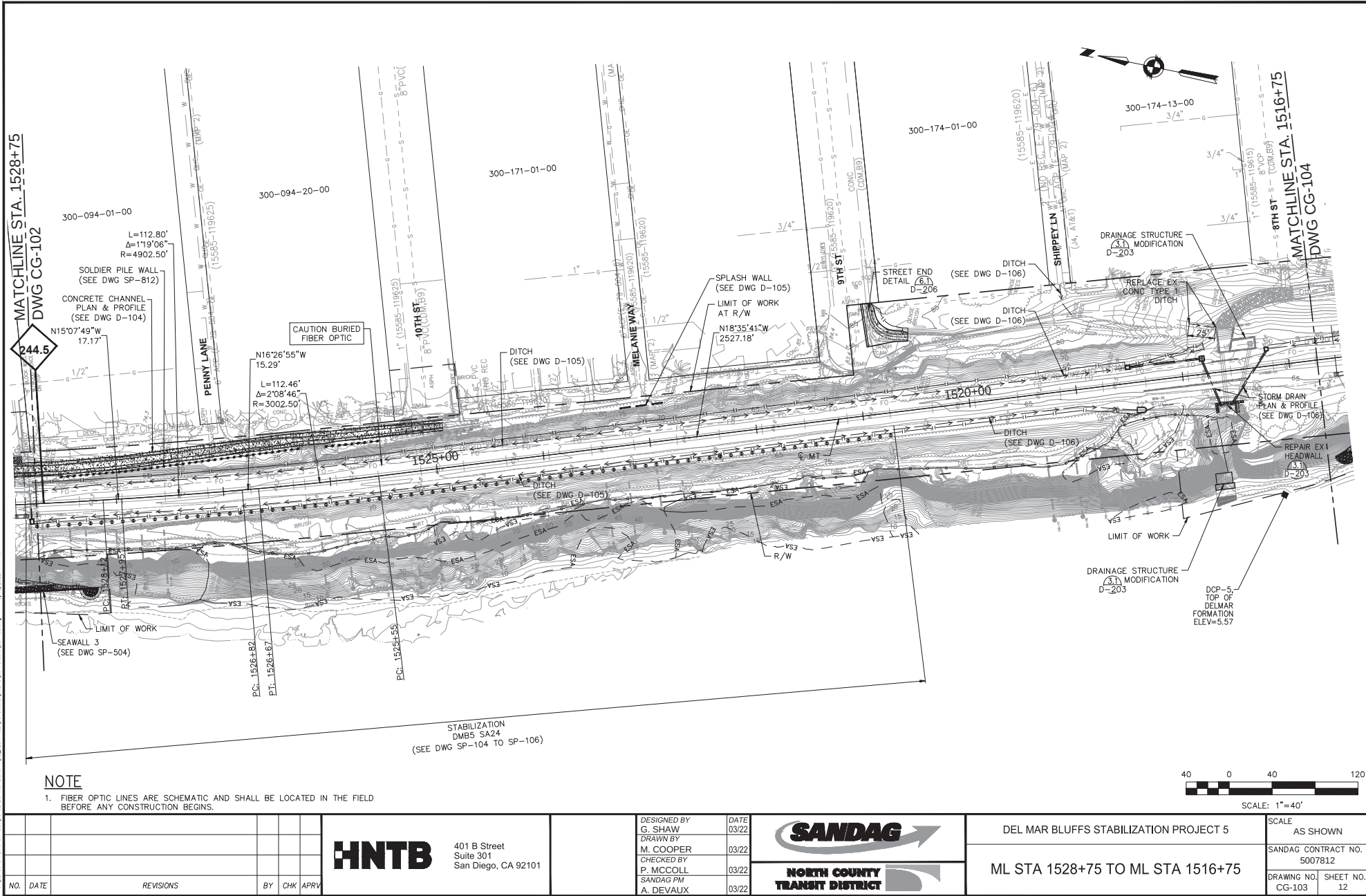
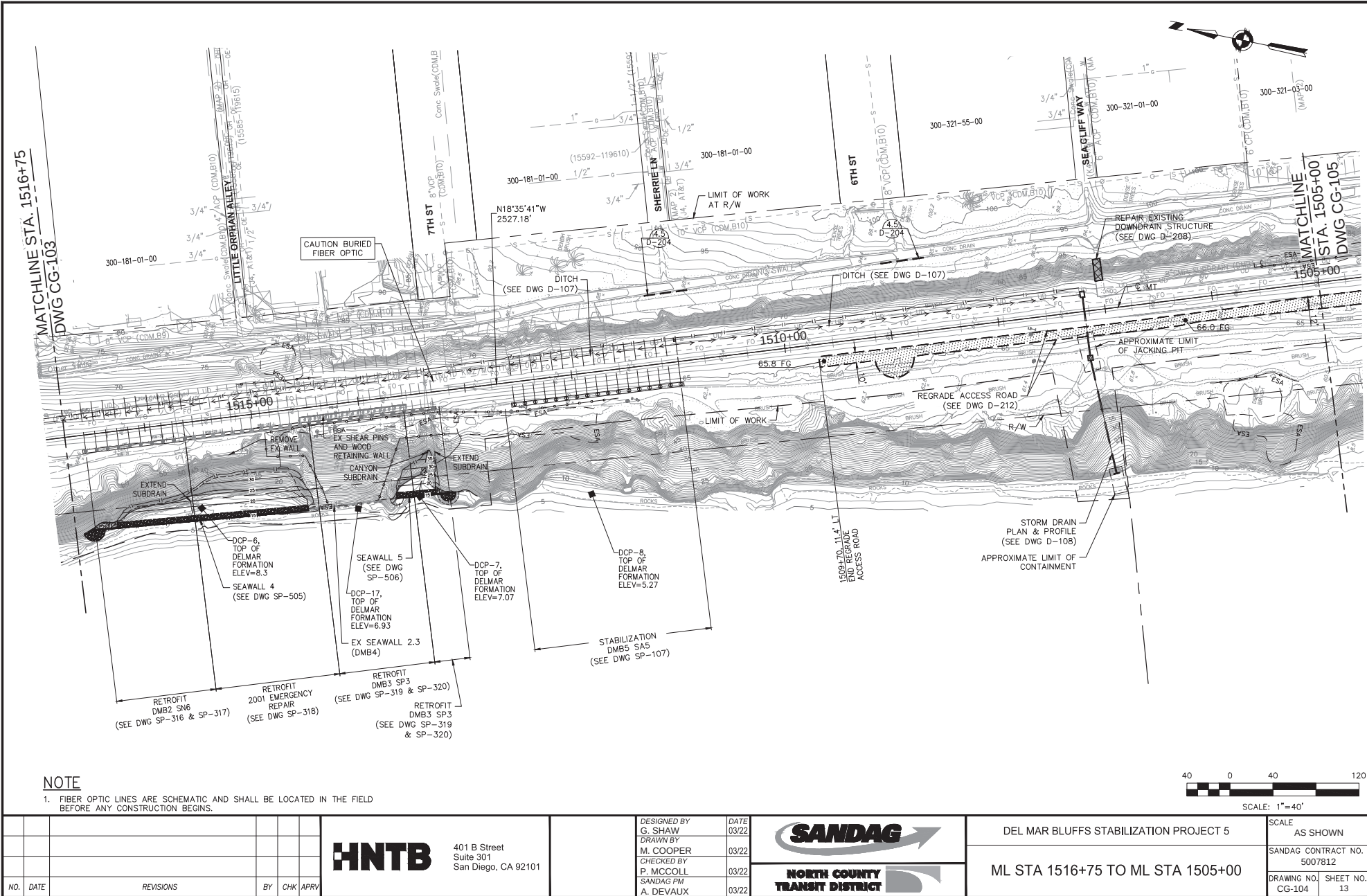


Exhibit 5

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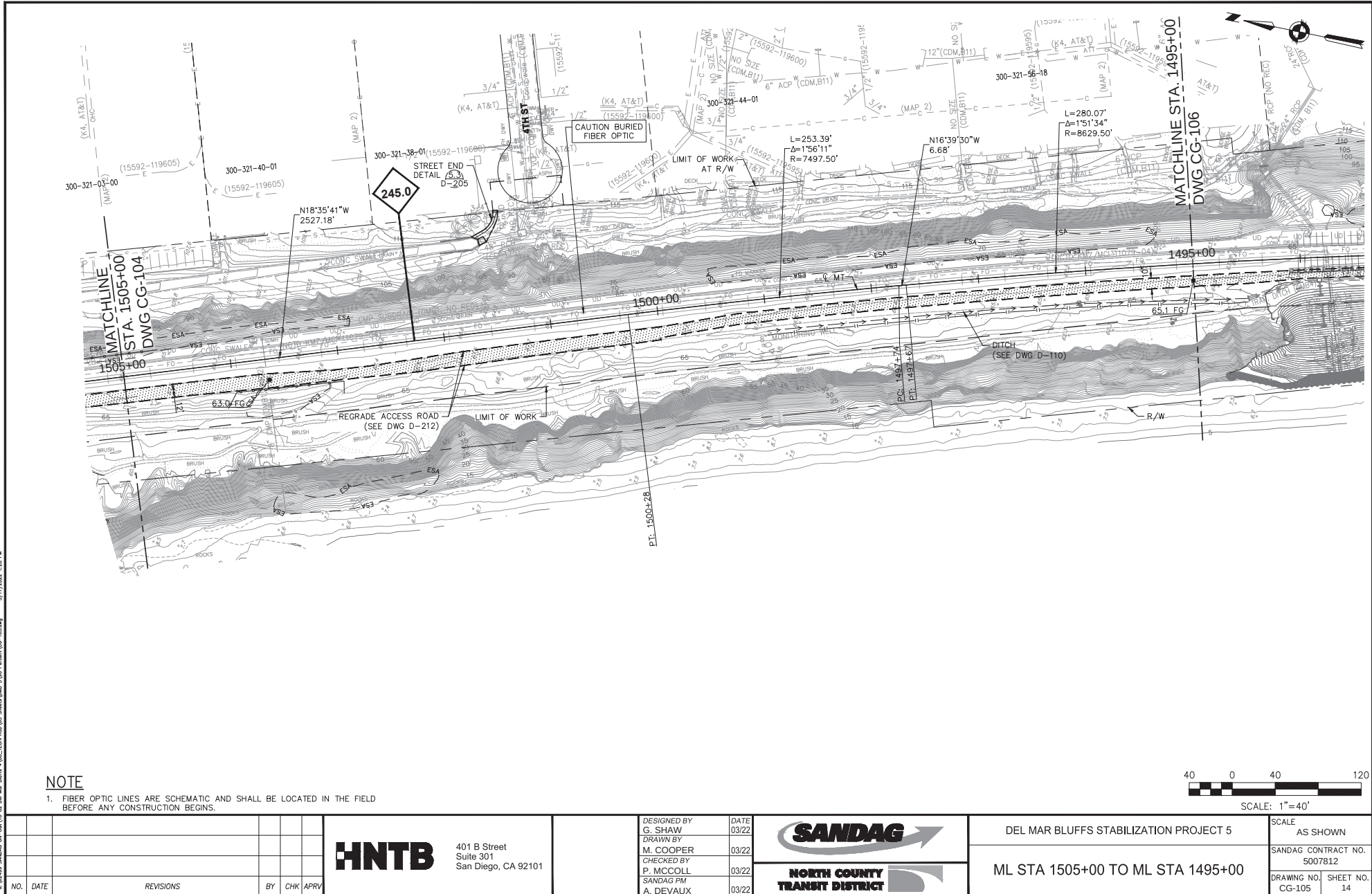
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NOTE

1. FIBER OPTIC LINES ARE SCHEMATIC AND SHALL BE LOCATED IN THE FIELD BEFORE ANY CONSTRUCTION BEGINS.

NO.	DATE	REVISIONS	BY	CHK	APRV

HNTB

401 B Street
Suite 301
San Diego, CA 92101

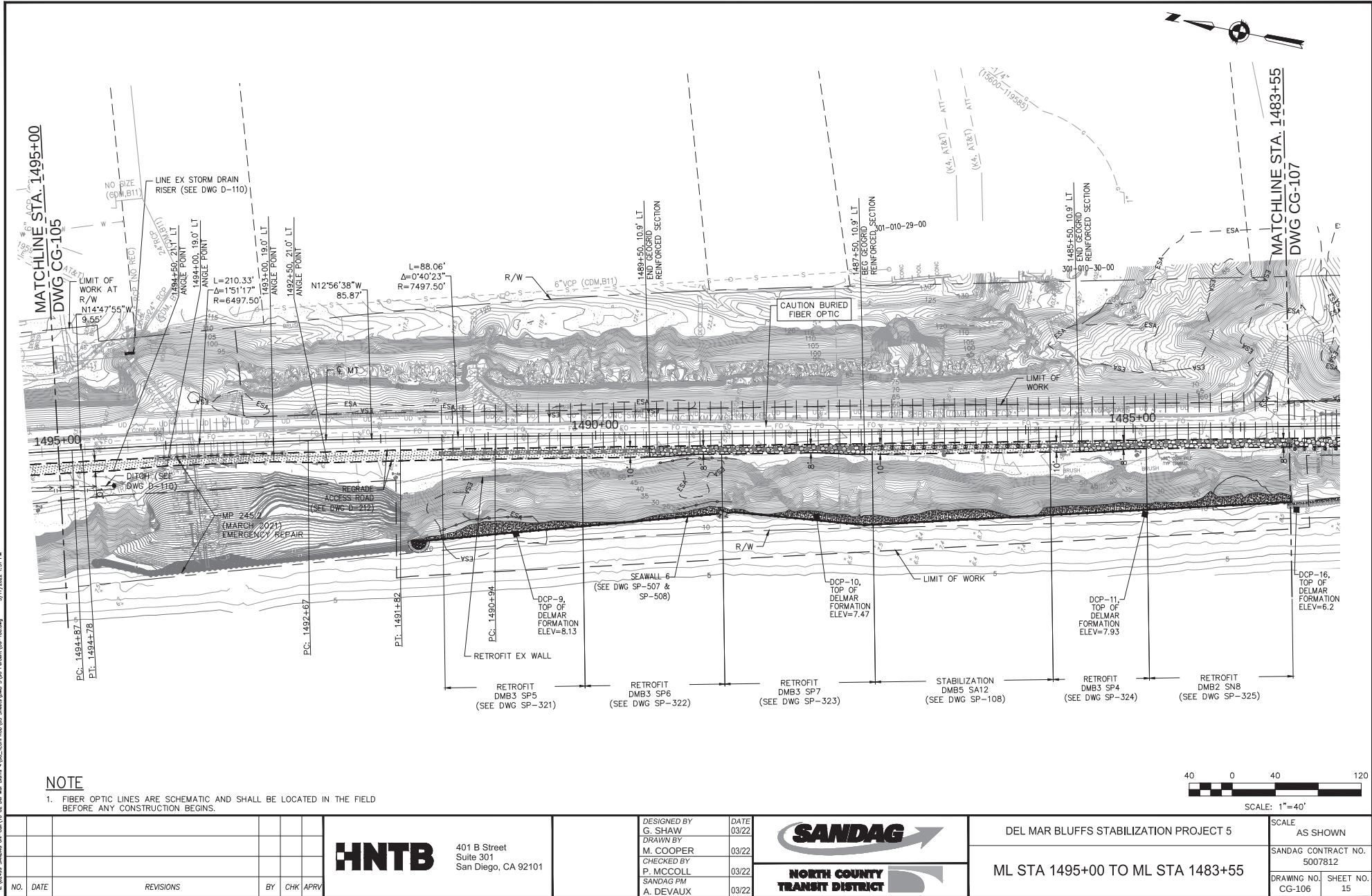
DESIGNED BY G. SHAW	DATE 03/22
DRAWN BY M. COOPER	03/22
CHECKED BY P. MCCOLL	03/22
SANDAG PM A. DEVAUX	03/22



DEL MAR BLUFFS STABILIZATION PROJECT 5	SCALE AS SHOWN
ML STA 1505+00 TO ML STA 1495+00	SANDAG CONTRACT NO. 5007812
	DRAWING NO. SHEET NO. CG-105 14

FOR REDUCED PLANS ORIGINAL
SCALE IS IN INCHES

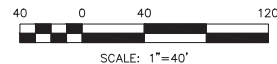
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FOR REDUCED PLANS ORIGINAL
SCALE IS IN INCHES

0 1 2 3

MATCHLINE STA. 1483+55
DWG CG-106



1. FIBER OPTIC LINES ARE SCHEMATIC AND SHALL BE LOCATED IN THE FIELD BEFORE ANY CONSTRUCTION BEGINS.

HNTB

401 B Street
Suite 301
San Diego, CA 92101

DESIGNED BY G. SHAW	DATE 03/22
DRAWN BY M. COOPER	03/22
CHECKED BY P. MCCOLL	03/22
SANDAG PM A. DEVALIX	03/22

	DATE
	03/22
	03/22
	03/22
	03/22



DEL MAR BLUFFS STABILIZATION PROJECT 5

ML STA 1483+55 TO ML STA 1472+0

SCALE AS SHOWN	
SANDAG CONTRACT NO. 5007812	
DRAWING NO. CG-107	SHEET NO. 16

90% DESIGN NOT FOR CONSTRUCTION

FOR REDUCED PLANS ORIGINAL
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