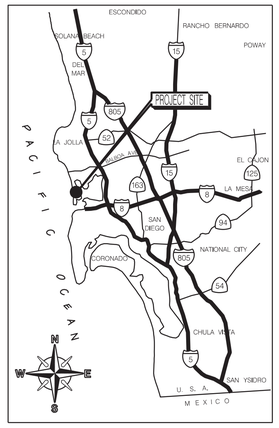
SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

CONTRACTOR'S RESPONSIBILITIES

1. PURSUANT TO SECTION 4216 OF THE GOVERNMENT CODE, AT LEAST 2 WORKING DAYS PRIOR TO EXCAVATION, YOU MUST CONTACT THE REGIONAL NOTIFICATION CENTER (E.G. UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA) AND OBTAIN AN INQUIRY IDENTIFICATION NUMBER.
2. NOTIFY SDG&E AT LEAST 10 WORKING DAYS PRIOR TO EXCAVATING WITHIN 10' OF SDG&E UNDERGROUND HIGH VOLTAGE TRANSMISSION POWER LINES. (I.E., 69 KV & HIGHER)
3. THE LOCATIONS OF EXISTING BUILDINGS AS SHOWN ON THE PLAN ARE APPROXIMATE.
4. STORM DRAIN INLETS SHALL REMAIN FUNCTIONAL AT ALL TIMES DURING CONSTRUCTION.
5. UNLESS OTHERWISE NOTED AS PREVIOUSLY POTHOLED (PH), ELEVATIONS SHOWN ON THE PROFILE FOR EXISTING UTILITIES ARE BASED ON A SEARCH OF THE AVAILABLE RECORD INFORMATION ONLY AND ARE SOLELY FOR THE CONTRACTOR'S CONVENIENCE. THE CITY DOES NOT GUARANTEE THAT IT HAS REVIEWED ALL AVAILABLE DATA. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES EITHER SHOWN ON THE PLANS OR MARKED IN THE FIELD IN ACCORDANCE WITH THE SPECIFICATIONS SECTION 402-UTILITIES.
6. EXISTING UTILITY CROSSINGS AS SHOWN ON THE PLANS ARE APPROXIMATE AND ARE NOT REPRESENTATIVE OF ACTUAL LENGTH AND LOCATION OF CONFLICT AREAS. SEE PLAN VIEW.
7. ALL STORM DRAIN GRATES THAT ARE LOCATED WITHIN A PEDESTRIAN CROSSING SHALL MEET ADA STANDARDS.
8. CONTRACTOR TO COORDINATE THE SUPPORTING OR REMOVAL OF UTILITY POLES WITH THE RESIDENT ENGINEER AND SDG&E PRIOR TO BEGINNING CONSTRUCTION IF ANY POLES ARE IN CONFLICT WITH THE INSTALLATION OF PROPOSED IMPROVEMENTS. THE UTILITY POLES WITHIN THE PROJECT LIMITS ARE EXPECTED TO BE REMOVED AS PART OF THE BLOCK 2SIPROJECT, BUT THE DATE OF THESE REMOVALS IS STILL UNKNOWN.
9. ARCHAEOLOGICAL AND PALEONTOLOGICAL MONITORING REQUIRED ON THIS PROJECT. SEE APPENDIX O OF THE SPECIFICATIONS.
10. CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER PRIOR TO INSTALLING STORM DRAIN IMPROVEMENTS THAT ARE ADJACENT TO THE PROPOSED WATER AND SEWER IMPROVEMENTS TO MAKE SURE THAT THE DEEPER OF THE UTILITIES IS INSTALLED FIRST.
11. PVC SCHEDULE 80 DWV PIPE AND FITTINGS SHALL BE SOLVENT WELDED.
12. IN NARROW STREETS AND ALLEYS CONTRACTOR SHALL UTILIZE SMALLER EQUIPMENT TO AVOID IMPACTS TO EXISTING IMPROVEMENTS AND PRIVATE PROPERTY NOT SPECIFICALLY IDENTIFIED TO BE IMPACTED ON THE PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING/REPLACING EXISTING IMPROVEMENTS THAT ARE DAMAGED.

GEOTECHNICAL NOTES

1. GROUNDWATER IS ANTICIPATED TO BE ENCOUNTERED THROUGHOUT THE LIMITS OF THE PROJECT AT DEPTHS RANGING FROM 3 FEET TO 11FEET BELOW GROUND SURFACE (APPROXIMATE ELEVATIONS -2 FEET TO +7 FEET MSL) BASED ON THE FINDINGS OF THE GEOTECHNICAL REPORT. GROUNDWATER ELEVATIONS MAY FLUCTUATE SIGNIFICANTLY BASED ON SEASONAL AND TIDAL CHANGES.
2. SIGNIFICANT GROUNDWATER INFLOWS CAN BE EXPECTED IN EXCAVATIONS WITHIN GROUNDWATER UNLESS ADEQUATE MEASURES ARE TAKEN TO MITIGATE THE GROUNDWATER INFLOW.
3. TRENCH SHORING IS RECOMMENDED WITHIN THE PORTIONS OF THE PROJECT WHERE THERE IS PAVEMENT. TRENCH SHORING SHALL BE EXTENDED TO A DEPTH OF AT LEAST 10 FEET BELOW THE BOTTOM OF THE PROPOSED TRENCH EXCAVATION DUE TO THE PRESENCE OF GROUNDWATER.
4. SOILS WITHIN THE PROJECT SITE ARE CONSIDERED TO BE AGGRESSIVE TO CONCRETE. TYPE 5 PORTLAND CEMENT CONCRETE SHALL BE USED FOR PROPOSED FACILITIES WITHIN THE PROJECT.
5. FILL MATERIAL FOR TRENCH BACKFILL SHOULD BE FREE OF BIODEGRADABLE MATERIAL, HAZARDOUS SUBSTANCE CONTAMINATION, OTHER DELETERIOUS DEBRIS, AND OR ROCKS OR HARD LUMPS GREATER THAN 6 INCHES. IF THE FILL MATERIAL CONTAINS ROCKS OR HARD LUMPS, AT LEAST 70% (BY WEIGHT) OF ITS PARTICLES SHALL PASS A U.S. STANDARD 3/4-INCH SIEVE. FILL MATERIAL SHOULD CONSIST OF PREDOMINANTLY GRANULAR SOIL (LESS THAN 40 PERCENT PASSING THE U.S. STANDARD #200 SIEVE) WITH EXPANSION INDEX LESS THAN 50.
6. SOIL MATERIAL ENCOUNTERED ONSITE IS CONSIDERED SUITABLE FOR USE AS BACKFILL MATERIALS. MATERIALS TO BE REUSED AS COMPACTED BACKFILL SHALL BE DRIED PRIOR TO USE AS TRENCH BACKFILL MATERIAL WHERE IT IS REMOVED WITHIN GROUNDWATER. IF UNSUITABLE MATERIALS ARE ENCOUNTERED, THEY SHALL BE REMOVED FROM THE PROJECT SITE AND NOT USED AS BACKFILL MATERIAL.
7. IN AREAS WHERE LOOSE OR SOFT SOILS ARE ENCOUNTERED AT THE BOTTOM OF ANY MANHOLE/BOX STRUCTURE EXCAVATIONS, THE LOOSE OR SOFT SOIL MATERIALS SHALL BE REMOVED AND REPLACED WITH 3"-4" CRUSHED ROCK MATERIALS WRAPPED IN GEOTEXTILE FABRIC PER THE GEOTECHNICAL RECOMMENDATIONS. THE OVER EXCAVATION OF ANY LOOSE/SOFT SOIL MATERIAL SHOULD BE EVALUATED AND DETERMINED IN THE FIELD BY THE CITY'S RESIDENT ENGINEER.
8. IMPORTED BACKFILL MATERIALS WILL BE REQUIRED FOR THE "PIPE BEDDING ZONE" AND "PIPE ZONE". CRUSHED ROCK SHALL BE USED FOR PIPE ZONE AND BEDDING BACKFILL MATERIALS WITHIN GROUNDWATER AND SHALL BE WRAPPED IN GEOTEXTILE FILTER FABRIC (MIRAFI140N OR APPROVED EQUAL) TO PREVENT THE MIGRATION OF FINE GRAINED MATERIALS. SEE DETAIL ON SHEET 52.



VICINITY MAP
NOT TO SCALE

TRAFFIC CONTROL NOTES:

THE CONTRACTOR SHALL, PER SECTION 601-2.1.3 OF THE CONTRACT SPECIAL PROVISIONS, PREPARE TRAFFIC CONTROL WORKING DRAWINGS AND SUBMIT THEM TO THE RESIDENT ENGINEER. THE WORKING DRAWINGS WILL BE SENT TO THE ENGINEERING TRAFFIC CONTROL SECTION FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL ALLOW A MINIMUM OF 20 WORKING DAYS FOR REVIEW OF THE WORKING DRAWINGS. UPON APPROVAL OF THE TRAFFIC CONTROL PLAN, THE ENGINEERING TRAFFIC CONTROL SECTION WILL ISSUE A TRAFFIC CONTROL PLAN (TCP) PERMIT. WORK SHALL NOT BEGIN IN THE PUBLIC RIGHT OF WAY WITHOUT THE APPROVED TCP PERMIT.

EXISTING STRUCTURES

EX WATER MAIN & VALVES	
EX WATER METER	
EX FIRE HYDRANT	
EX SEWER MAIN & MANHOLES	
EX DRAINS	
EX PAVEMENT (PROFILE)	
EX GROUND LINE (PROFILE)	
EX STREET LIGHT	
UTILITY POLE	
GAS MAIN	
ELEC COND, TEL COND, CATV, FIBER OPTIC	--E--T--C--FO--
ELEC STRUCTURE	E
CATV STRUCTURE	C
TEL STRUCTURE	T
FIBER OPTIC STRUCTURE	

CONSTRUCTION STORM WATER PROTECTION NOTES

1. TOTAL SITE DISTURBANCE AREA (ACRES) 9.42
   HYDROLOGIC UNIT & WATERSHED PENASQUITOS HU & MISSION BAY WATERSHED
   HYDROLOGIC SUBAREA NAME & NO. SCRIPPS (906.3)
2. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE
   ☐ MINOR WPCP
   THE PROJECT IS SUBJECT TO MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT NO. R9-2013-0001 AS AMENDED BY R9-2015-0001 AND R9-2015-0100
   ☐ WPCP
   THE PROJECT IS SUBJECT TO MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT NO. R9-2013-0001 AS AMENDED BY R9-2015-0001 AND R9-2015-0100
   ☒ SWPPP
   THE PROJECT IS SUBJECT TO MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT NO. R9-2013-0001 AS AMENDED BY R9-2015-0001 AND R9-2015-0100 AND CONSTRUCTION GENERAL PERMIT (CGP) ORDER 2009-0009-DWQ AS AMENDED BY ORDER 2010-0014-DWQ AND 2012-0006-DWQ
   TRADITIONAL: RISK LEVEL 1 ☐ 2 ☒ 3 ☐
   LUP: RISK TYPE 1 ☐ 2 ☐ 3 ☐
3. CONSTRUCTION SITE PRIORITY
   ☐ ASBS ☒ HIGH ☐ MEDIUM ☐ LOW

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

RICK ENGINEERING COMPANY
5620 FRIARS ROAD, SAN DIEGO, CA, 92110
619-291-0707

KEVIN R. GIBSON LICENSE NO. 52295 DATE: 03/13/2023

WORK TO BE DONE

CONSTRUCTION OF SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE CONSISTS OF THE INSTALLATION OF STORM DRAIN THROUGHOUT VARIOUS SECTIONS OF SOUTH MISSION BEACH INCLUDING MISSION BOULEVARD, SAN FERNANDO PLACE, SAN GABRIEL PLACE, CAPISTRANO PLACE, COHASSET COURT, AND BALBOA COURT. CONSTRUCTION ALSO CONSISTS OF STORM DRAIN LATERALS THROUGH THE ALLEY SECTIONS ALONG MISSION BOULEVARD. THE PIPE SIZE INSTALLATION WILL RANGE FROM 48 INCHES, 36 INCHES, 30 INCHES, 24 INCHES, AND 18 INCHES. INSTALLATION OF STORM DRAIN APPURTENANCES, WATER QUALITY BASINS, LOW FLOW DIVERSION STRUCTURES, SLIDE GATE, STREET RESURFACING, CURB RAMPS, LANDSCAPE AND IRRIGATION, AND ALL OTHER INCIDENTAL WORK AND APPURTENANCES IN ACCORDANCE WITH THESE SPECIFICATIONS AND PLANS NUMBERED 41306-01-D THROUGH 41306-128-D WILL ALSO BE IMPLEMENTED FOR THIS PROJECT.

LEGEND

IMPROVEMENTS	STANDARD DRAWINGS	SYMBOL
MAJOR CONTOUR	-	
MINOR CONTOUR	-	
GRADING LIMITS	-	
LIMITS OF WORK	-	
STORM DRAIN	D-61, SDD-110, DETAIL SHT 52	
MODIFIED CLEANOUT TYPE A WITH DIVERSION WEIR	D-09, SDD-114, DETAIL SHT 53	
LOW FLOW DIVERSION WET WELL DETAIL	DETAIL SHT 91	
CLEANOUT TYPE A	D-09, SDD-114, DETAIL SHT 53	
MODIFIED CATCH BASIN TYPE I	D-29, DETAIL SHT 53	
STORM DRAIN CURB INLET TYPE C	SDD-102, SDD-117, SDG-110, D-03B	
MODIFIED CATCH BASIN TYPE F	SDD-119, DETAIL SHT 52	
MODIFIED STORM DRAIN CLEAN OUT W/ SLIDE GATE	DETAIL SHT 55	
SIDEWALK	SDG-109, SDG-155, SDG-156	
CROSS GUTTER	SDG-157, SDG-158	
CURB AND GUTTER - COMBINED TYPE G	SDG-151	
STRUCTURAL SECTION (SCHEDULE J)	SDG-113	
MEAN LOWER LOW WATER (-2.88 NGVD)	-	MLLW
HIGHEST HIGH TIDE (4.91 NGVD)	-	HHT
ORDINARY HIGH WATER (2.01 NGVD)	-	OHW
APPROX. COFFERDAM LIMITS	-	
FEDERAL NAVIGATION LIMITS	-	
SEWER MANHOLE	SDS-107, SDS-108, SDS-120 SDM-113, M-03A	
SURVEY MONUMENT	M-10A, M-10B, M-10C	

FOR ADDITIONAL SYMBOLS SEE RESURFACING, CURB RAMP, LANDSCAPING, AND ELECTRICAL SHEETS.

PERMANENT STORM WATER BMP CATEGORY:

☐ PRIORITY PROJECT DEVELOPMENT
☐ STANDARD DEVELOPMENT PROJECT
☐ PDP EXEMPT
☒ NOT SUBJECT TO PERMANENT STORM WATER REQUIREMENTS

G-1

PLANS FOR THE CONSTRUCTION OF SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

COVER SHEET

SPEC. NO. 2115A ⚠

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 1 OF 128 SHEETS

WBS B-18118 (G)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DCE NAME — DATE 12/18/2023 — RCE# C91224

SUBMITTED BY: KAREN VERA PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	
⚠ ADDENDUM A	RICK		05/21/24	

SEE EACH SHEET CCS27 COORDINATE

SEE EACH SHEET CCS83 COORDINATE

41306-01-D

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GIBSON — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

CONSULTANT

RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
San Diego | Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

AS-BUILT INFORMATION

MATERIALS	MANUFACTURER
PIPE (STORM DRAIN)	-
STORM DRAIN CLEAN OUTS	-
CURB INLETS	-
STORM DRAIN MANHOLES	-
DISSIPATOR	-
CATCH BASINS	-
	-

CONSTRUCTION CHANGE / ADDENDUM

CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.
⚠	5/16/24	1, 36, 37, 38, 57	

WARNING
0 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

The City of SAN DIEGO

⚠ UPDATED SPEC. NO.

ADDENDUM A

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SHEET INDEX

SHEET NO.	DISCIPLINE CODE	TITLE	LIMITS	PIPE SIZE (IN)	PIPE MATERIAL	LENGTH (FT)
1	G-1	COVER SHEET				
2	G-2	SHEET INDEX				
2A	G-3	ENVIRONMENTAL/MITIGATION REQUIREMENTS				
3	G-4	KEY MAP	STORM DRAIN			
4	C-1	SAN FERNANDO PLACE	BONITA COVE TO BAYSIDE WALK	48	RCP	350.30
5	C-2	SAN FERNANDO PLACE	BAYSIDE WALK TO BAYSIDE LANE	48	RCP	331.50
6	C-3	SAN FERNANDO PLACE/ MISSION BOULEVARD	BAYSIDE LANE TO MISSION BLVD / SAN FERNANDO PLACE TO ALLEY	48/24	RCP	245.03/47.47
7	C-4	MISSION BOULEVARD	SAN FERNANDO PLACE TO ALLEY BLK 56	24/18	RCP	225.18/182.13
8	C-5	SAN FERNANDO PLACE	MISSION BOULEVARD	36/24	RCP	47.16/15.14
9	C-6	MISSION BOULEVARD	ALLEY BLK 60 TO ALLEY BLK 51	18	RCP	172.44
10	C-7	MISSION BOULEVARD ALIGNMENT TABLE	ALLEY BLK 60 TO ALLEY BLK 51			
11	C-8	COHASSET COURT	MARINERS BASIN TO BAYSIDE WALK	48	RCP	387.65
12	C-9	BAYSIDE WALK	COHASSET COURT TO SAN GABRIEL PLACE	48	RCP	446.00
13	C-10	SAN GABRIEL PLACE	BAYSIDE WALK TO MISSION BOULEVARD	48/36	RCP	119.02/261.06
14	C-11	MISSION BOULEVARD	ALLEY BLK 45 TO ALLEY BLK 35	36/30	RCP	51.46/368.45
15	C-12	BAYSIDE WALK/ DEVON COURT	SAN GABRIEL PLACE TO DEVON COURT/ BAYSIDE WALK TO BAYSIDE LANE	18	RCP	295.03
16	C-13	MISSION BOULEVARD	ALLEY BLK 44 TO ALLEY BLK 39	24/18	RCP	46.00/120.00
17	C-14	MISSION BOULEVARD ALIGNMENT TABLE	ALLEY BLK 44 TO ALLEY BLK 35			
18	C-15	DEAL COURT/ COHASSET COURT	BAYSIDE WALK TO BAYSIDE LANE/ BAYSIDE WALK TO BAYSIDE LANE	18	RCP	199.03
19	C-16	CAPISTRANO PLACE	MARINERS BASIN TO BAYSIDE WALK	48	RCP	286.16
20	C-17	CAPISTRANO PLACE	BAYSIDE WALK TO MISSION BOULEVARD	48	RCP	390.01
21	C-18	MISSION BOULEVARD	CAPISTRANO PLACE TO ALLEY BLK 23	48/36	RCP	213.74/177.26
22	C-19	MISSION BOULEVARD	ALLEY BLK 19 TO ALLEY BLK 12	36/30/18	RCP	206.26/195.92/16.07
23	C-20	MISSION BOULEVARD	ALLEY BLK 28 TO ALLEY BLK 20	24/18	RCP	61.49/112.22
24	C-21	MISSION BOULEVARD	ALLEY BLK 16 TO ALLEY BLK 12	18	RCP	103.93
25	C-22	MISSION BOULEVARD ALIGNMENT TABLE	ALLEY BLK 19 TO ALLEY BLK 12			
26	C-23	BALBOA COURT	MARINERS BASIN TO BAYSIDE LANE	18	RCP	364.15
27	C-24	SAN LUIS REY PLACE	MARINERS BASIN TO BAYSIDE WALK	18	RCP	344.86
28	C-25	SAN LUIS REY PLACE/BAYSIDE LANE/ASBURY COURT	BAYSIDE WALK TO BAYSIDE LANE/SAN LUIS REY PLACE TO ASBURY COURT/BAYSIDE LANE TO ALLEY	18	RCP	202.71
29	C-26	SAN DIEGO PLACE/ BAYSIDE LANE	MISSION BAY JETTY TO SAN DIEGO PLACE/ MISSION BAY JETTY TO BAYSIDE LANE	18	RCP	77.13
30	C-27	BONITA COVE	BONITA COVE TO BAYSIDE WALK	24	RCP	443.49
31	C-28	LOW FLOW DIVERSION PLAN 1	SYSTEMS 1-A, 2-B, & 2-A	12/6/4	PVC	78.00/121.43/23.31
32	C-29	LOW FLOW DIVERSION PLAN 2	SYSTEMS 4-A, 2-G, & 3-A	12/6/4	PVC	150.00/66.06/11.00
33	C-30	LOW FLOW DIVERSION PLAN 3	SYSTEMS 5-A, 6-A, & 7-A	12/6	PVC	93.05/53.58
34	C-31	LOW FLOW DIVERSION ALIGNMENT TABLE				
35	C-32	LOW FLOW DIVERSION DETAILS				
36	C-33	OUTFALL GRADING 1	SYSTEMS 1 & 9			
37	C-34	OUTFALL GRADING 2	SYSTEMS 2 & 3			
38	C-35	OUTFALL GRADING 3	SYSTEMS 5 & 6			
39	C-36	OUTFALL GRADING DETAIL				
40	C-37	EELGRASS MITIGATION PLAN				
41	C-38	BMP MAP				
42	C-39	GREEN INFRASTRUCTURE 1	BASIN 1	8	PVC	93.87
43	C-40	GREEN INFRASTRUCTURE 2	BASIN 2	8	PVC	160.12
44	C-41	GREEN INFRASTRUCTURE 3	BASIN 3	8	PVC	77.50
45	C-42	GREEN INFRASTRUCTURE 4	BASIN 4	8	PVC	83.00
46	C-43	GREEN INFRASTRUCTURE 5	BASIN 5	8	PVC	90.00
47	C-44	GREEN INFRASTRUCTURE 6	BASIN 6			
48	C-45	GREEN INFRASTRUCTURE 7	BASIN 7			
49	C-46	GREEN INFRASTRUCTURE 8	BASIN 8	8	PVC	36.50
50	C-47	WATER QUALITY BASIN DETAILS 1		TOTAL SD		8,243.63
51	C-48	WATER QUALITY BASIN DETAILS 2				
52	C-49	DETAILS 1				
53	C-50	DETAILS 2				
54	C-51	DETAILS 3				
55	C-52	DETAILS 4				
56	C-53	STORM DRAIN ABANDONMENT AND REMOVAL				
57	C-54	STREET RESURFACING PLAN				
58	C-55	CURB RAMP LOCATION				
59	C-56	SURVEY MONUMENT SHEET				

SHEET NO.	DISCIPLINE CODE	TITLE	LIMITS
60	C-57	ADA IMPROVEMENTS 1	
61	C-58	SURFACE IMPROVEMENTS 1	
62	C-59	SURFACE IMPROVEMENTS 2	
63	C-60	SURFACE IMPROVEMENTS 3	
64	C-61	SURFACE IMPROVEMENTS 4	
65	C-62	SURFACE IMPROVEMENTS 5	
66	C-63	SURFACE IMPROVEMENTS 6	
67	C-64	SURFACE IMPROVEMENTS 7	
68	C-65	SURFACE IMPROVEMENTS 8	
69	C-66	SURFACE IMPROVEMENTS 9	
70	C-67	SURFACE IMPROVEMENTS 10	
71	C-68	SURFACE IMPROVEMENTS 11	
72	C-69	SURFACE IMPROVEMENTS 12	
73	C-70	SURFACE IMPROVEMENTS 13	
74	L-1	PLANTING PLAN	BASIN 1
75	L-2	PLANTING PLAN	BASIN 2
76	L-3	PLANTING PLAN	BASIN 3 & 5
77	L-4	PLANTING PLAN	BASIN 4
78	L-5	PLANTING PLAN	BASIN 6
79	L-6	PLANTING PLAN	BASIN 7
80	L-7	PLANTING PLAN	BASIN 8
81	L-8	PLANTING LEGEND, NOTES, DETAILS & FINISH SCHEDULE	
82	L-9	IRRIGATION PLAN	BASIN 1
83	L-10	IRRIGATION PLAN	BASIN 2
84	L-11	IRRIGATION PLAN	BASIN 3 & 5
85	L-12	IRRIGATION PLAN	BASIN 4
86	L-13	IRRIGATION PLAN	BASIN 6
87	L-14	IRRIGATION PLAN	BASIN 7
88	L-15	IRRIGATION PLAN	BASIN 8
89	L-16	IRRIGATION LEGEND, NOTES & DETAILS	
90	M-1	LOW FLOW DIVERSION DETAILS 1	
91	M-2	LOW FLOW DIVERSION DETAILS 2	
92	M-3	SLIDE GATE DETAILS	
93	E-1	ELECTRICAL SYMBOLS AND ABBREVIATIONS	
94	E-2	ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM	LOW FLOW DIVERSION PUMP SYSTEM 1-A
95	E-3	ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM	LOW FLOW DIVERSION GRAVITY SYSTEM 2-B
96	E-4	ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM	LOW FLOW DIVERSION PUMP SYSTEM 2-A
97	E-5	ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM	LOW FLOW DIVERSION GRAVITY SYSTEM 4-A
98	E-6	ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM	LOW FLOW DIVERSION GRAVITY SYSTEM 2-F
99	E-7	ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM	LOW FLOW DIVERSION PUMP SYSTEM 3-A
100	E-8	ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM	LOW FLOW DIVERSION GRAVITY SYSTEM 5-A
101	E-9	ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM	LOW FLOW DIVERSION GRAVITY SYSTEM 6-A
102	E-10	ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM	LOW FLOW DIVERSION GRAVITY SYSTEM 7-A
103	E-11	ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM	SLIDE GATE SYSTEM 9-A
104	E-12	TYPICAL POWER AND SIGNAL PLAN 1	
105	E-13	TYPICAL POWER AND SIGNAL PLAN 2	
106	E-14	CONDUIT SCHEDULE	
107	E-15	ELECTRICAL DETAILS	
108	E-16	TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 1	
109	E-17	TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 2	
110	E-18	TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 3	
111	E-19	TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 4	
112	E-20	TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 5	
113	E-21	TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 6	
114	E-22	TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 7	
115	E-23	TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 8	
116	E-24	TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 9	
117	E-25	TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 10	
118	E-26	TYPICAL PUMP SYSTEM RTU BACK PANEL LAYOUT 1	
119	E-27	TYPICAL PUMP SYSTEM RTU BACK PANEL LAYOUT 2	
120	E-28	TYPICAL PUMP SYSTEM RTU ELEVATION DIAGRAM	
121	E-29	TYPICAL PUMP SYSTEM RTU BILL OF MATERIALS	
122	E-30	TYPICAL GRAVITY SYSTEM RTU CONTROL DIAGRAM 1	
123	E-31	TYPICAL GRAVITY SYSTEM RTU CONTROL DIAGRAM 2	
124	E-32	TYPICAL GRAVITY SYSTEM RTU CONTROL DIAGRAM 3	
125	E-33	TYPICAL GRAVITY SYSTEM RTU CONTROL DIAGRAM 4	
126	E-34	TYPICAL GRAVITY SYSTEM RTU BACK PANEL LAYOUT	
127	E-35	TYPICAL GRAVITY SYSTEM RTU ELEVATION DIAGRAM	
128	E-36	TYPICAL GRAVITY SYSTEM RTU BILL OF MATERIALS	

ABBREVIATIONS

ABAND	ABANDON
ABAND'D	ABANDONED
AC	ASBESTOS CEMENT PIPE, ASPHALT CONCRETE
AC	ACRES
APPROX	APPROXIMATELY
AVE	AVENUE
BC	BEGIN CURVE
BLVD	BOULEVARD
BMP	BEST MANAGEMENT PRACTICES
BRG.	BEARING
CATV	CABLE TELEVISION
CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
COND	CONDUIT
CONT	CONTINUED
CFS	CUBIC FEET PER SECOND
CT	COURT
DBL	DOUBLE
DCV	DESIGN CAPTURE VOLUME
DMA	DRAINAGE MANAGEMENT AREA
DWT	DETECTABLE WARNING TILE
DWV	DRAINAGE, WASTE, AND VENT
E	EASTING
EC	END CURVE
EL, ELEV	ELEVATION
ELEC	ELECTRIC
EX, EXIST	EXISTING
FO	FIBER OPTIC
FL	FLOW LINE
FPS	FEET PER SECOND
FS	FINISH SURFACE
FT	FEET
GI	GREEN INFRASTRUCTURE
GPM	GALLONS PER MINUTE
HGL	HYDRAULIC GRADIENT LINE
HHT	HIGHEST HIGH TIDE
HORIZ	HORIZONTAL
HP	HIGH PRESSURE, HORSEPOWER
HRS	HOURS
IE	INVERT ELEVATION
IN	INCHES
INF	INFILTRATION
IPS	INTERCEPTOR PUMP STATION
LFD	LOW FLOW DIVERSION
MH	MANHOLE
MHW	MEAN HIGH WATER
MLLW	MEAN LOWER LOW WATER
MOD	MODIFIED
MSL	MEAN SEA LEVEL
N	NORTHING
NPS	NOMINAL PIPE SIZE
O.C.	ON CENTER
OCI	OVERALL CONDITION INDEX
OHW	ORDINARY HIGH WATER
PCC	POINT OF COMPOUND CURVE
PCR	POINT OF CURVE RETURN
PI	POINT OF INTERSECTION
PVMT	PAVEMENT
PR	PARTIAL RETENTION
PROP	PROPOSED
PVC	POLYVINYL CHLORIDE
PX	CROSS LINKED POLYETHYLENE
R/W	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
RTU	REMOTE TERMINAL UNIT
SD	STORM DRAIN
SDGE	SAN DIEGO GAS AND ELECTRIC
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SHT	SHEET
SQ	SQUARE
STA	STATION
SWR	SEWER
TC	TOP OF CURB
TDH	TOTAL DYNAMIC HEAD
TEL, TELE	TELEPHONE
TG	TOP OF GRATE
TP	TOP OF PIPE
TRANS	TRANSFORMER
TYP	TYPICAL
UNK	UNKNOWN
USACOE	UNITED STATES ARMY CORPS OF ENGINEERS
VC	VITRIFIED CLAY PIPE
VERT	VERTICAL
W/	WITH
WTR	WATER
WQ	WATER QUALITY

DISCIPLINE CODE

G	GENERAL
C	CIVIL
L	LANDSCAPING
M	MECHANICAL
E	ELECTRICAL

RICK ENGINEERING COMPANY
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5620 FRIARS ROAD
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SHEET INDEX

G-2

PLANS FOR THE CONSTRUCTION OF SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SHEET INDEX

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 2 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — RCE# C91224
PRINT DCE NAME

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-02-D

ENVIRONMENTAL/MITIGATION REQUIREMENTS

I. PRE-CONSTRUCTION MEETING IS REQUIRED TEN (10) WORKING DAYS PRIOR TO BEGINNING ANY WORK ON THIS PROJECT. THE PERMIT HOLDER/OWNER IS RESPONSIBLE TO ARRANGE AND PERFORM THIS MEETING BY CONTACTING THE CITY RESIDENT ENGINEER (RE) OF THE FIELD ENGINEERING DIVISION AND CITY STAFF FROM MITIGATION MONITORING COORDINATION (MMC). ATTENDEES MUST ALSO INCLUDE THE PERMIT HOLDER'S REPRESENTATIVE(S), JOB SITE SUPERINTENDENT AND THE FOLLOWING CONSULTANTS:

QUALIFIED ARCHAEOLOGIST
QUALIFIED NATIVE AMERICAN MONITOR
QUALIFIED BIOLOGIST

NOTE:
FAILURE OF ALL RESPONSIBLE PERMIT HOLDER'S REPRESENTATIVES AND CONSULTANTS TO ATTEND SHALL REQUIRE AN ADDITIONAL MEETING WITH ALL PARTIES PRESENT.

CONTACT INFORMATION:

a) THE PRIMARY POINT OF CONTACT IS THE RE AT THE FIELD ENGINEERING DIVISION - 858-627-3200
b) FOR CLARIFICATION OF ENVIRONMENTAL REQUIREMENTS, IT IS ALSO REQUIRED TO CALL RE AND MMC AT 858-627-3360

2. MMRP COMPLIANCE: THIS PROJECT, PROJECT TRACKING SYSTEM (PTS) #646245, SHALL CONFORM TO THE MITIGATION REQUIREMENTS CONTAINED IN THE ASSOCIATED ENVIRONMENTAL DOCUMENT AND IMPLEMENTED TO THE SATISFACTION OF THE OSD'S ENVIRONMENTAL DESIGNEE (MMC) AND THE CITY ENGINEER (RE). THE REQUIREMENTS MAY NOT BE REDUCED OR CHANGED BUT MAY BE ANNOTATED (I.E., TO EXPLAIN WHEN AND HOW COMPLIANCE IS BEING MET AND LOCATION OF VERIFYING PROOF, ETC.). ADDITIONAL CLARIFYING INFORMATION MAY ALSO BE ADDED TO OTHER RELEVANT PLAN SHEETS AND/OR SPECIFICATIONS AS APPROPRIATE (I.E., SPECIFIC LOCATIONS, TIMES OF MONITORING, METHODOLOGY; ETC.

NOTE:
PERMIT HOLDER'S REPRESENTATIVES MUST ALERT RE AND MMC IF THERE ARE ANY DISCREPANCIES IN THE PLANS OR NOTES, OR ANY CHANGES DUE TO FIELD CONDITIONS. ALL CONFLICTS MUST BE APPROVED BY RE AND MMC BEFORE THE WORK IS PERFORMED.

3. OTHER AGENCY REQUIREMENTS: EVIDENCE OF COMPLIANCE WITH ALL OTHER AGENCY REQUIREMENTS OR PERMITS SHALL BE SUBMITTED TO THE RE AND MMC FOR REVIEW AND ACCEPTANCE PRIOR TO THE BEGINNING OF WORK OR WITHIN ONE WEEK OF THE PERMIT HOLDER OBTAINING DOCUMENTATION OF THOSE PERMITS OR REQUIREMENTS. EVIDENCE SHALL INCLUDE COPIES OF PERMITS, LETTERS OF RESOLUTION OR OTHER DOCUMENTATION ISSUED BY THE RESPONSIBLE AGENCY.

U.S. ARMY CORPS OF ENGINEERS
ENVIRONMENTAL PROTECTION AGENCY
CALIFORNIA COASTAL COMMISSION

4. MONITORING EXHIBITS

ALL CONSULTANTS ARE REQUIRED TO SUBMIT, TO RE AND MMC, A MONITORING EXHIBIT ON A 11X17 REDUCTION OF THE APPROPRIATE CONSTRUCTION PLAN, SUCH AS SITE PLAN, GRADING, LANDSCAPE, ETC., MARKED TO CLEARLY SHOW THE SPECIFIC AREAS INCLUDING THE LIMIT OF WORK, SCOPE OF THAT DISCIPLINE'S WORK, AND NOTES INDICATING WHEN IN THE CONSTRUCTION SCHEDULE THAT WORK WILL BE PERFORMED. WHEN NECESSARY FOR CLARIFICATION, A DETAILED METHODOLOGY OF HOW THE WORK WILL BE PERFORMED SHALL BE INCLUDED.

5. OTHER SUBMITTALS AND INSPECTIONS:

THE PERMIT HOLDER/OWNER'S REPRESENTATIVE SHALL SUBMIT ALL REQUIRED DOCUMENTATION, VERIFICATION LETTERS, AND REQUESTS FOR ALL ASSOCIATED INSPECTIONS TO THE RE AND MMC FOR APPROVAL PER THE FOLLOWING SCHEDULE:

DOCUMENT SUBMITTAL/INSPECTION CHECKLIST		
ISSUE AREA	DOCUMENT SUBMITTAL	ASSOCIATED INSPECTION/APPROVALS/ NOTES
GENERAL	CONSULTANT QUALIFICATION LETTERS	PRIOR TO PRECONSTRUCTION MEETING
GENERAL	CONSULTANT CONSTRUCTION MONITORING EXHIBITS	PRIOR TO PRECONSTRUCTION MEETING
ARCHAEOLOGICAL RESOURCES	MONITORING REPORT(S)	MONITORING REPORT APPROVAL
BIOLOGICAL RESOURCES	MONITORING EXHIBIT	MONITORING REPORT APPROVAL
BOND RELEASE	REQUEST FOR BOND RELEASE LETTER	FINAL MMRP INSPECTIONS PRIOR TO BOND RELEASE LETTER

C. SPECIFIC MMRP ISSUE AREA CONDITIONS/REQUIREMENTS

BIOLOGICAL RESOURCES

BIO-1: MITIGATION OF 0.31 ACRES OF IMPACTS TO EELGRASS SHALL BE IMPLEMENTED FOR THE PROPOSED PROJECT AND THE PROJECT SHALL IMPLEMENT ALL REQUIREMENTS IDENTIFIED IN THE EELGRASS TRANSPLANT AND MONITORING PLAN IN SUPPORT OF THE SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE PROJECT (MERKEL AND ASSOCIATES. 2019). IMPACTS TO EELGRASS WOULD BE CONDUCTED IN ACCORDANCE WITH THE CALIFORNIA EELGRASS MITIGATION POLIO,' (CEMP') (NMFS 2014). UNDER THIS POLICY ANY EELGRASS IMPACTS WOULD REQUIRE SUCCESSFUL MITIGATION AT A 1.2:1 REPLACEMENT RATIO THROUGH TRANSPLANT OF A MINIMUM RATIO OF 1.38:1. THE INITIAL RESTORATION PLANTING REQUIRED UNDER THE CEMP SHALL BE A MINIMUM PLANTING OF 18,816 SQUARE FEET WITH AN ULTIMATE REQUIREMENT TO SUCCESSFULLY ESTABLISH AN ESTIMATED 16,362 SQUARE FEET.

BIO-2: PRIOR TO BID OPENING/BID AWARD, OWNER\PERMITTEE SHALL PROVIDE EVIDENCES OF THE FOLLOWING PERMITS, THE FOLLOWING PERMITS AND APPROVALS SHALL BE OBTAINED, OR IT SHALL BE DEMONSTRATED TO THE DEVELOPMENT SERVICES DEPARTMENT THAT SUCH APPROVALS ARE NOT REQUIRED:

A) A R&HA SECTION 10 FOR WORK IN TRADITIONALLY NAVIGABLE WATERS OF THE U.S.,
B) A CWA SECTION 404 FOR DISCHARGE OF DREDGED OR FILL MATERIAL WITHIN WATERS OF THE U.S.,
C) A CWA SECTION 401STATE WATER QUALITY CERTIFICATION FOR ANY ACTION THAT MAY RESULT IN DEGRADATION OF WATERS OF THE STATE, AND
D) A CDP ISSUED BY THE CALIFORNIA COASTAL COMMISSION.

CULTURAL RESOURCES (ARCHAEOLOGY)

CUL-1

I. PRIOR TO PERMIT ISSUANCE OR BID OPENING/BID AWARD

A. ENTITLEMENTS PLAN CHECK

1. PRIOR TO PERMIT ISSUANCE OR BID OPENING 'BID AWARD, WHICHEVER IS APPLICABLE, THE ASSISTANT DEPUTY DIRECTOR (ADD) ENVIRONMENTAL DESIGNEE SHALL VERIFY THAT THE REQUIREMENTS FOR ARCHAEOLOGICAL MONITORING AND NATIVE AMERICAN MONITORING HAVE BEEN NOTED ON THE APPLICABLE CONSTRUCTION DOCUMENTS THROUGH THE PLAN CHECK PROCESS.

B. LETTERS OF QUALIFICATION HAVE BEEN SUBMITTED TO ADD

1. PRIOR TO BID AWARD, THE APPLICANT SHALL SUBMIT A LETTER OF VERIFICATION TO MITIGATION MONITORING COORDINATION (MMC) IDENTIFYING THE PRINCIPAL INVESTIGATOR (PI) FOR THE PROJECT AND THE NAMES OF ALL PERSONS INVOLVED IN THE ARCHAEOLOGICAL MONITORING PROGRAM, AS DEFINED IN THE CITY OF SAN DIEGO HISTORICAL RESOURCES GUIDELINES (HRG). IF APPLICABLE, INDIVIDUALS INVOLVED IN THE ARCHAEOLOGICAL MONITORING PROGRAM MUST HAVE COMPLETED THE 40-HOUR HAZWOPER TRAINING WITH CERTIFICATION DOCUMENTATION.
2. MMC WILL PROVIDE A LETTER TO THE APPLICANT CONFIRMING THE QUALIFICATIONS OF THE PI AND ALL PERSONS INVOLVED IN THE ARCHAEOLOGICAL MONITORING OF THE PROJECT MEET THE QUALIFICATIONS ESTABLISHED IN THE HRG.
3. PRIOR TO THE START OF WORK, THE APPLICANT MUST OBTAIN WRITTEN APPROVAL FROM MMC FOR ANY PERSONNEL CHANGES ASSOCIATED WITH THE MONITORING PROGRAM.

II. PRIOR TO START OF CONSTRUCTION

A. VERIFICATION OF RECORDS SEARCH

1. THE PI SHALL PROVIDE VERIFICATION TO MMC THAT A SITE-SPECIFIC RECORDS SEARCH (1/4-MILE RADIUS) HAS BEEN COMPLETED. VERIFICATION INCLUDES BUT IS NOT LIMITED TO A COPY OF A CONFIRMATION LETTER FROM SOUTH COASTAL INFORMATION CENTER, OR, IF THE SEARCH WAS IN-HOUSE, A LETTER OF VERIFICATION FROM THE PI STATING THAT THE SEARCH WAS COMPLETED.
2. THE LETTER SHALL INTRODUCE ANY PERTINENT INFORMATION CONCERNING EXPECTATIONS AND PROBABILITIES OF DISCOVERY DURING TRENCHING AND/OR GRADING ACTIVITIES.
3. THE PI MAY SUBMIT A DETAILED LETTER TO MMC REQUESTING A REDUCTION TO THE 1/4-MILE RADIUS.

B. PI SHALL ATTEND PRECON MEETINGS

1. PRIOR TO BEGINNING ANY WORK THAT REQUIRES MONITORING; THE APPLICANT SHALL ARRANGE A PRECON MEETING THAT SHALL INCLUDE THE PI, NATIVE AMERICAN CONSULTANT/MONITOR (WHERE NATIVE AMERICAN RESOURCES MAY BE IMPACTED), CONSTRUCTION MANAGER (CM) AND/OR GRADING CONTRACTOR, RESIDENT ENGINEER (RE), BUILDING INSPECTOR (BI), IF APPROPRIATE, AND MMC. THE QUALIFIED ARCHAEOLOGIST AND NATIVE AMERICAN MONITOR SHALL ATTEND ANY GRADING/EXCAVATION RELATED PRECON MEETINGS TO MAKE COMMENTS AND/OR SUGGESTIONS CONCERNING THE ARCHAEOLOGICAL MONITORING PROGRAM WITH THE CONSTRUCTION MANAGER AND/OR GRADING CONTRACTOR.
   a. IF THE PI IS UNABLE TO ATTEND THE PRECON MEETING, THE APPLICANT SHALL SCHEDULE A FOCUSED PRECON MEETING WITH MMC, THE PI, RE, CM OR BI, IF APPROPRIATE, PRIOR TO THE START OF ANY WORK THAT REQUIRES MONITORING.
2. ACKNOWLEDGEMENT OF RESPONSIBILITY FOR CURATION (CIP OR OTHER PUBLIC PROJECTS)
   THE APPLICANT SHALL SUBMIT A LETTER TO MMC ACKNOWLEDGING THEIR RESPONSIBILITY FOR THE COST OF CURATION ASSOCIATED WITH ALL PHASES OF THE ARCHAEOLOGICAL MONITORING PROGRAM.
3. IDENTIFY AREAS TO BE MONITORED.
   a. PRIOR TO THE START OF ANY WORK THAT REQUIRES MONITORING, THE PI SHALL SUBMIT AN ARCHAEOLOGICAL MONITORING EXHIBIT (AME) (WITH VERIFICATION THAT THE AME HAS BEEN REVIEWED AND APPROVED BY THE NATIVE AMERICAN CONSULTANT/MONITOR WHEN NATIVE AMERICAN RESOURCES MAY BE IMPACTED) BASED ON THE APPROPRIATE CONSTRUCTION DOCUMENTS (REDUCED TO11X17) TO MMC IDENTIFYING THE AREAS TO BE MONITORED INCLUDING THE DELINEATION OF GRADING/EXCAVATION LIMITS.
   b. THE AME SHALL BE BASED ON THE RESULTS OF A SITE-SPECIFIC RECORDS SEARCH AS WELL AS INFORMATION REGARDING THE AGE OF EXISTING PIPELINES, LATERALS AND ASSOCIATED APPURTENANCES AND/OR ANY KNOWN SOIL CONDITIONS (NATIVE OR FORMATION).
   c. MMC SHALL NOTIFY THE PI THAT THE AME HAS BEEN APPROVED.
4. WHEN MONITORING WILL OCCUR
   a. PRIOR TO THE START OF ANY WORK, THE PI SHALL ALSO SUBMIT A CONSTRUCTION SCHEDULE TO MMC THROUGH THE RE INDICATING WHEN AND WHERE MONITORING WILL OCCUR.
   b. THE PI MAY SUBMIT A DETAILED LETTER TO MMC PRIOR TO THE START OF WORK OR DURING CONSTRUCTION REQUESTING A MODIFICATION TO THE MONITORING PROGRAM. THIS REQUEST SHALL BE BASED ON RELEVANT INFORMATION SUCH AS REVIEW OF FINAL CONSTRUCTION DOCUMENTS WHICH INDICATE CONDITIONS SUCH AS AGE OF EXISTING PIPE TO BE REPLACED,DEPTH OF EXCAVATION AND/OR SITE GRADED TO BEDROCK, ETC., WHICH MAY REDUCE OR INCREASE THE POTENTIAL FOR RESOURCES TO BE PRESENT.
5. APPROVAL OF AME AND CONSTRUCTION SCHEDULE
   AFTER APPROVAL OF THE AME AND MMC, THE PI SHALL SUBMIT TO MMC WRITTEN AUTHORIZATION OF THE AME AND CONSTRUCTION SCHEDULE FROM THE CM.

III. DURING CONSTRUCTION

A. MONITOR SHALL BE PRESENT DURING GRADING/EXCAVATION/TRENCHING

1. THE ARCHAEOLOGICAL MONITOR SHALL BE PRESENT FULL-TIME DURING ALL SOIL DISTURBING AND GRADING/EXCAVATION/TRENCHING ACTIVITIES WHICH COULD RESULT IN IMPACTS TO ARCHAEOLOGICAL RESOURCES AS IDENTIFIED ON THE AME. THE CONSTRUCTION MANAGER IS RESPONSIBLE FOR NOTIFYING THE RE, PI, AND MMC OF CHANGES TO ANY CONSTRUCTION ACTIVITIES SUCH AS IN THE CASE OF A POTENTIAL SAFETY CONCERN WITHIN THE AREA BEING MONITORED. IN CERTAIN CIRCUMSTANCES OSHA SAFETY REQUIREMENTS MAY NECESSITATE MODIFICATION OF THE AME.
2. THE NATIVE AMERICAN CONSULTANT/MONITOR SHALL DETERMINE THE EXTENT OF THEIR PRESENCE DURING SOIL DISTURBING AND GRADING/EXCAVATION/TRENCHING ACTIVITIES BASED ON THE AME AND PROVIDE THAT INFORMATION TO THE PI AND MMC. IF PREHISTORIC RESOURCES ARE ENCOUNTERED DURING THE NATIVE AMERICAN CONSULTANT/MONITOR'S ABSENCE, WORK SHALL STOP, AND THE DISCOVERY NOTIFICATION PROCESS DETAILED IN SECTION III.B-C AND IV.A-D SHALL COMMENCE.
3. THE PI MAY SUBMIT A DETAILED LETTER TO MMC DURING CONSTRUCTION REQUESTING A MODIFICATION TO THE MONITORING PROGRAM WHEN A FIELD CONDITION SUCH AS DISTURBANCE DUE TO EARTH-DATING THE PREVIOUS GRADING/TRENCHING ACTIVITIES, PRESENCE OF FOSSIL FORMATIONS, OR WHEN NATIVE SOILS ARE ENCOUNTERED THAT MAY REDUCE OR INCREASE THE POTENTIAL FOR RESOURCES TO BE PRESENT.
4. THE ARCHAEOLOGICAL AND NATIVE AMERICAN CONSULTANT/MONITOR SHALL DOCUMENT FIELD ACTIVITY VIA THE CONSULTANT SITE VISIT RECORD (CSVR). THE CSVR'S SHALL BE FAXED BY THE CM TO THE RE THE FIRST DAY OF MONITORING, THE LAST DAY OF MONITORING, MONTHLY (NOTIFICATION OF MONITORING COMPLETION), AND IN THE CASE OF ANY DISCOVERIES. THE RE SHALL FORWARD COPIES TO MMC.

B. DISCOVERY NOTIFICATION PROCESS

1. IN THE EVENT OF A DISCOVERY, THE ARCHAEOLOGICAL MONITOR SHALL DIRECT THE CONTRACTOR TO TEMPORARILY DIVERT ALL SOIL DISTURBING ACTIVITIES, INCLUDING BUT NOT LIMITED TO DIGGING, TRENCHING, EXCAVATING OR GRADING ACTIVITIES IN THE AREA OF DISCOVERY AND IN THE AREA REASONABLY SUSPECTED TO OVERLAY ADJACENT RESOURCES AND IMMEDIATELY NOTIFY THE RE OR BI, AS APPROPRIATE.
2. THE MONITOR SHALL IMMEDIATELY NOTIFY THE PI(UNLESS MONITOR IS THE PI) OF THE DISCOVERY.
3. THE PI SHALL IMMEDIATELY NOTIFY MMC BY PHONE OF THE DISCOVERY AND SHALL ALSO SUBMIT WRITTEN DOCUMENTATION TO MMC WITHIN 24 HOURS BY FAX OR EMAIL WITH PHOTOS OF THE RESOURCE IN CONTEXT, IF POSSIBLE.
4. NO SOIL SHALL BE EXPORTED OFF-SITE UNTIL A DETERMINATION CAN BE MADE REGARDING THE SIGNIFICANCE OF THE RESOURCE SPECIFICALLY IF NATIVE AMERICAN RESOURCES ARE ENCOUNTERED.

C. DETERMINATION OF SIGNIFICANCE

1. THE PI AND NATIVE AMERICAN CONSULTANT/MONITOR, WHERE NATIVE AMERICAN RESOURCES ARE DISCOVERED SHALL EVALUATE THE SIGNIFICANCE OF THE RESOURCE. IF HUMAN REMAINS ARE INVOLVED, FOLLOW PROTOCOL IN SECTION IV BELOW.
   a. THE PI SHALL IMMEDIATELY NOTIFY MMC BY PHONE TO DISCUSS SIGNIFICANCE DETERMINATION AND SHALL ALSO SUBMIT A LETTER TO MMC INDICATING WHETHER ADDITIONAL MITIGATION IS REQUIRED.
   b. IF THE RESOURCE IS SIGNIFICANT, THE PI SHALL SUBMIT AN ARCHAEOLOGICAL DATA RECOVERY PROGRAM (ADRP) AND OBTAIN WRITTEN APPROVAL OF THE PROGRAM FROM MMC, CM AND RE. ADRP AND ANY MITIGATION MUST BE APPROVED BY MMC, RE AND/OR CM BEFORE GROUND DISTURBING ACTIVITIES IN THE AREA OF DISCOVERY WILL BE ALLOWED TO RESUME. NOTE: IF A UNIQUE ARCHAEOLOGICAL SITE IS ALSO AN HISTORICAL RESOURCE AS DEFINED IN CEQA SECTION 15064.5, THEN THE LIMITS ON THE AMOUNT(S) THAT A PROJECT APPLICANT MAY BE REQUIRED TO PAY TO COVER MITIGATION COSTS AS INDICATED IN CEQA SECTION 21083.2 SHALL NOT APPLY.
      (1). NOTE: FOR PIPELINE TRENCHING AND OTHER LINEAR PROJECTS IN THE PUBLIC RIGHT-OF-WAY, THE PI SHALL IMPLEMENT THE DISCOVERY PROCESS FOR PIPELINE TRENCHING PROJECTS IDENTIFIED BELOW UNDER "D".
   c. IF THE RESOURCE IS NOT SIGNIFICANT, THE PI SHALL SUBMIT A LETTER TO MMC INDICATING THAT ARTIFACTS WILL BE COLLECTED, CURATED, AND DOCUMENTED IN THE FINAL MONITORING REPORT. THE LETTER SHALL ALSO INDICATE THAT NO FURTHER WORK IS REQUIRED.
      (1). NOTE: FOR PIPELINE TRENCHING AND OTHER LINEAR PROJECTS IN THE PUBLIC RIGHT-OF-WAY, IF THE DEPOSIT IS LIMITED IN SIZE, BOTH IN LENGTH AND DEPTH; THE INFORMATION VALUE IS LIMITED AND IS NOT ASSOCIATED WITH ANY OTHER RESOURCE; AND THERE ARE NO UNIQUE FEATURES/ARTIFACTS ASSOCIATED WITH THE DEPOSIT, THE DISCOVERY SHOULD BE CONSIDERED NOT SIGNIFICANT.
      (2). NOTE, FOR PIPELINE TRENCHING AND OTHER LINEAR PROJECTS IN THE PUBLIC RIGHT-OF-WAY, IF SIGNIFICANCE CANNOT BE DETERMINED, THE FINAL MONITORING REPORT AND SITE RECORD (DPR FORM 523A/B) SHALL IDENTIFY THE DISCOVERY AS POTENTIALLY SIGNIFICANT.

D. DISCOVERY PROCESS FOR SIGNIFICANT RESOURCES - PIPELINE TRENCHING AND OTHER LINEAR PROJECTS IN THE PUBLIC RIGHT-OF-WAY

THE FOLLOWING PROCEDURE CONSTITUTES ADEQUATE MITIGATION OF A SIGNIFICANT DISCOVERY ENCOUNTERED DURING PIPELINE TRENCHING ACTIVITIES OR FOR OTHER LINEAR PROJECT TYPES WITHIN THE PUBLIC RIGHT-OF-WAY INCLUDING BUT NOT LIMITED TO EXCAVATION FOR JACKING PITS, RECEIVING PITS, LATERALS, AND MANHOLES TO REDUCE IMPACTS TO BELOW A LEVEL OF SIGNIFICANCE:

1. PROCEDURES FOR DOCUMENTATION, CURATION AND REPORTING
   a. ONE HUNDRED PERCENT OF THE ARTIFACTS WITHIN THE TRENCH ALIGNMENT AND WIDTH SHALL BE DOCUMENTED IN-SITU, TO INCLUDE PHOTOGRAPHIC RECORDS, PLAN VIEW OF THE TRENCH AND PROFILES OF SIDE WALLS, RECOVERED, PHOTOGRAPHED AFTER CLEANING AND ANALYZED AND CURATED. THE REMAINDER OF THE DEPOSIT WITHIN THE LIMITS OF EXCAVATION (TRENCH WALLS) SHALL BE LEFT INTACT.
   b. THE PI SHALL PREPARE A DRAFT MONITORING REPORT AND SUBMIT TO MMC VIA THE RE AS INDICATED IN SECTION VI-A.
   c. THE PI SHALL BE RESPONSIBLE FOR RECORDING (ON THE APPROPRIATE STATE OF CALIFORNIA DEPARTMENT OF PARK AND RECREATION FORMS-DPR 523 A/B) THE RESOURCE(S) ENCOUNTERED DURING THE ARCHAEOLOGICAL MONITORING PROGRAM IN ACCORDANCE WITH THE CITY'S HISTORICAL RESOURCES GUIDELINES. THE DPR FORMS SHALL BE SUBMITTED TO THE SOUTH COASTAL INFORMATION CENTER FOR EITHER A PRIMARY RECORD OR SDI NUMBER AND INCLUDED IN THE FINAL MONITORING REPORT.
   d. THE FINAL MONITORING REPORT SHALL INCLUDE A RECOMMENDATION FOR MONITORING OF ANY FUTURE WORK IN THE VICINITY OF THE RESOURCE.

IV. DISCOVERY OF HUMAN REMAINS

IF HUMAN REMAINS ARE DISCOVERED, WORK SHALL HALT IN THAT AREA AND NO SOIL SHALL BE EXPORTED OFF-SITE UNTIL A DETERMINATION CAN BE MADE REGARDING THE PROVENANCE OF THE HUMAN REMAINS; AND THE FOLLOWING PROCEDURES AS SET FORTH IN CEQA SECTION 15064.5(E), THE CALIFORNIA PUBLIC RESOURCES CODE (SEC. 5097.98) AND STATE HEALTH AND SAFETY CODE (SEC. 7050.5) SHALL BE UNDERTAKEN:

A. NOTIFICATION

1. ARCHAEOLOGICAL MONITOR SHALL NOTIFY THE RE OR BI AS APPROPRIATE, MMC, AND THE PI, IF THE MONITOR IS NOT QUALIFIED AS A PI. MMC WILL NOTIFY THE APPROPRIATE SENIOR PLANNER IN THE ENVIRONMENTAL ANALYSIS SECTION (EAS) OF THE DEVELOPMENT SERVICES DEPARTMENT TO ASSIST WITH THE DISCOVER NOTIFICATION PROCESS.
2. THE PI SHALL NOTIFY THE MEDICAL EXAMINER AFTER CONSULTATION WITH THE RE, EITHER IN PERSON OR VIA TELEPHONE.

B. ISOLATE DISCOVERY SITE

1. WORK SHALL BE DIRECTED AWAY FROM THE LOCATION OF THE DISCOVERY AND ANY NEARBY AREA REASONABLY SUSPECTED TO OVERLAY ADJACENT HUMAN REMAINS UNTIL A DETERMINATION CAN BE MADE BY THE MEDICAL EXAMINER IN CONSULTATION WITH THE PI CONCERNING THE PROVENIENCE OF THE REMAINS.
2. THE MEDICAL EXAMINER, IN CONSULTATION WITH THE PI, WILL DETERMINE THE NEED FOR A FIELD EXAMINATION TO DETERMINE THE PROVENIENCE.
3. IF A FIELD EXAMINATION IS NOT WARRANTED, THE MEDICAL EXAMINER WILL DETERMINE WITH INPUT FROM THE PI, IF THE REMAINS ARE OR ARE MOST LIKELY TO BE OF NATIVE AMERICAN ORIGIN.

C. IF HUMAN REMAINS ARE DETERMINED TO BE NATIVE AMERICAN

1. THE MEDICAL EXAMINER WILL NOTIFY THE NATIVE AMERICAN HERITAGE COMMISSION (NAHC) WITHIN 24 HOURS. BY LAW, ONLY THE MEDICAL EXAMINER CAN MAKE THIS CALL.
2. NAHC WILL IMMEDIATELY IDENTIFY THE PERSON OR PERSONS DETERMINED TO BE THE MOST LIKELY DESCENDENT (MLD) AND PROVIDE CONTACT INFORMATION.
3. THE MLD WILL CONTACT THE PI WITHIN 24 HOURS OR SOONER AFTER THE MEDICAL EXAMINER HAS COMPLETED COORDINATION, TO BEGIN THE CONSULTATION PROCESS IN ACCORDANCE WITH CEQA SECTION 15064.5(E), THE CALIFORNIA PUBLIC RESOURCES AND HEALTH & SAFETY CODES.
4. THE MLD WILL HAVE 48 HOURS TO MAKE RECOMMENDATIONS TO THE PROPERTY OWNER OR REPRESENTATIVE, FOR THE TREATMENT OR DISPOSITION WITH PROPER DIGNITY, OF THE HUMAN REMAINS AND ASSOCIATED GRAVE GOODS.
5. DISPOSITION OF NATIVE AMERICAN HUMAN REMAINS WILL BE DETERMINED BETWEEN THE MLD AND THE PI, AND, IF:
   a. THE NAHC IS UNABLE TO IDENTIFY THE MLD, OR THE MLD FAILED TO MAKE A RECOMMENDATION WITHIN 48 HOURS AFTER BEING NOTIFIED BY THE COMMISSION, OR;
   b. THE LANDOWNER OR AUTHORIZED REPRESENTATIVES REJECTS THE RECOMMENDATION OF THE MLD AND MEDIATION IN ACCORDANCE WITH PRC 5097.94(K) BY THE NAHC FAILS TO PROVIDE MEASURES ACCEPTABLE TO THE LANDOWNER, THEN
   c. TO PROTECT THESE SITES, THE LANDOWNER SHALL DO ONE OR MORE OF THE FOLLOWING:
      (1) RECORD THE SITE WITH THE NAHC;
      (2) RECORD AN OPEN SPACE OR CONSERVATION EASEMENT;OR
      (3) RECORD A DOCUMENT WITH THE COUNTY.
   d. UPON THE DISCOVERY OF MULTIPLE NATIVE AMERICAN HUMAN REMAINS DURING A GROUND DISTURBING LAND DEVELOPMENT ACTIVITY, THE LANDOWNER MAY AGREE THAT ADDITIONAL CONFERRAL WITH DESCENDANTS IS NECESSARY TO CONSIDER CULTURALLY APPROPRIATE TREATMENT OF MULTIPLE NATIVE AMERICAN HUMAN REMAINS. CULTURALLY APPROPRIATE TREATMENT OF SUCH A DISCOVERY MAY BE ASCERTAINED FROM REVIEW OF THE SITE UTILIZING CULTURAL AND ARCHAEOLOGICAL STANDARDS. WHERE THE PARTIES ARE UNABLE TO AGREE ON THE APPROPRIATE TREATMENT MEASURES THE HUMAN REMAINS AND ITEMS ASSOCIATED AND BURIED WITH NATIVE AMERICAN HUMAN REMAINS SHALL BE REINTERRED WITH APPROPRIATE DIGNITY, PURSUANT TO SECTION V.3., ABOVE.

D. IF HUMAN REMAINS ARE NOT NATIVE AMERICAN

1. THE PI SHALL CONTACT THE MEDICAL EXAMINER AND NOTIFY THEM OF THE HISTORIC ERA CONTEXT OF THE BURIAL.
2. THE MEDICAL EXAMINER WILL DETERMINE THE APPROPRIATE COURSE OF ACTION WITH THE PI AND CITY STAFF (PRC 5097.98)
3. IF THE REMAINS ARE OF HISTORIC ORIGIN, THEY SHALL BE APPROPRIATELY REMOVED AND CONVEYED TO THE SAN DIEGO MUSEUM OF MAN FOR ANALYSIS. THE DECISION FOR INTERNMENT OF THE HUMAN REMAINS SHALL BE MADE IN CONSULTATION WITH MMC, EAS, THE APPLICANT/LANDOWNER, ANY KNOWN DESCENDANT GROUP, AND THE SAN DIEGO MUSEUM OF MAN.

V. NIGHT AND/OR WEEKEND WORK

A. IF NIGHT AND/OR WEEKEND WORK IS INCLUDED IN THE CONTRACT

1. WHEN NIGHT AND/OR WEEKEND WORK IS INCLUDED IN THE CONTRACT PACKAGE, THE EXTENT AND TIMING SHALL BE PRESENTED AND DISCUSSED AT THE PRECON MEETING.
2. THE FOLLOWING PROCEDURES SHALL BE FOLLOWED.
   a. NO DISCOVERIES
      IN THE EVENT THAT NO DISCOVERIES WERE ENCOUNTERED DURING NIGHT AND/OR WEEKEND WORK, THE PI SHALL RECORD THE INFORMATION ON THE CSVR AND SUBMIT TO MMC VIA FAX BY 8AM OF THE NEXT BUSINESS DAY.
   b. DISCOVERIES
      ALL DISCOVERIES SHALL BE PROCESSED AND DOCUMENTED USING THE EXISTING PROCEDURES DETAILED IN SECTIONS III - DURING CONSTRUCTION, AND IV - DISCOVERY OF HUMAN REMAINS. DISCOVERY OF HUMAN REMAINS SHALL ALWAYS BE TREATED AS A SIGNIFICANT DISCOVERY.
   c. POTENTIALLY SIGNIFICANT DISCOVERIES
      IF THE PI DETERMINES THAT A POTENTIALLY SIGNIFICANT DISCOVERY HAS BEEN MADE, THE PROCEDURES DETAILED UNDER SECTION III - DURING CONSTRUCTION AND IV - DISCOVERY OF HUMAN REMAINS SHALL BE FOLLOWED.
   d. THE PI SHALL IMMEDIATELY CONTACT THE RE AND MMC, OR BY 8AM OF THE NEXT BUSINESS DAY TO REPORT AND DISCUSS THE FINDINGS AS INDICATED IN SECTION III-B, UNLESS OTHER SPECIFIC ARRANGEMENTS HAVE BEEN MADE.

B. IF NIGHT AND/OR WEEKEND WORK BECOMES NECESSARY DURING THE COURSE OF CONSTRUCTION

1. THE CONSTRUCTION MANAGER SHALL NOTIFY THE RE, OR BI, AS APPROPRIATE, A MINIMUM OF 24 HOURS BEFORE THE WORK IS TO BEGIN.
2. THE RE, OR BI, AS APPROPRIATE, SHALL NOTIFY MMC IMMEDIATELY.

C. ALL OTHER PROCEDURES DESCRIBED ABOVE SHALL APPLY, AS APPROPRIATE.

VI. POST CONSTRUCTION

A. SUBMITTAL OF DRAFT MONITORING REPORT

1. THE PI SHALL SUBMIT TWO COPIES OF THE DRAFT MONITORING REPORT (EVEN IF NEGATIVE), PREPARED IN ACCORDANCE WITH THE HISTORICAL RESOURCES GUIDELINES (APPENDIX C/D) WHICH DESCRIBES THE RESULTS, ANALYSIS, AND CONCLUSIONS OF ALL PHASES OF THE ARCHAEOLOGICAL MONITORING PROGRAM (WITH APPROPRIATE GRAPHICS) TO MMC VIA THE RE FOR REVIEW AND APPROVAL WITHIN 90 DAYS FOLLOWING THE COMPLETION OF MONITORING. IT SHOULD BE NOTED THAT IF THE PI IS UNABLE TO SUBMIT THE DRAFT MONITORING REPORT WITHIN THE ALLOTTED 90-DAY TIMEFRAME AS A RESULT OF DELAYS WITH ANALYSIS, SPECIAL STUDY RESULTS OR OTHER COMPLEX ISSUES, A SCHEDULE SHALL BE SUBMITTED TO MMC ESTABLISHING AGREED DUE DATES AND THE PROVISION FOR SUBMITTAL OF MONTHLY STATUS REPORTS UNTIL THIS MEASURE CAN BE MET.
   a. FOR SIGNIFICANT ARCHAEOLOGICAL RESOURCES ENCOUNTERED DURING MONITORING, THE ARCHAEOLOGICAL DATA RECOVERY PROGRAM OR PIPELINE TRENCHING DISCOVERY PROCESS SHALL BE INCLUDED IN THE DRAFT MONITORING REPORT.
   b. RECORDING SITES WITH STATE OF CALIFORNIA DEPARTMENT OF PARKS AND RECREATION THE PI SHALL BE RESPONSIBLE FOR RECORDING (ON THE APPROPRIATE STATE OF CALIFORNIA DEPARTMENT OF PARK AND RECREATION FORMS-DPR 523 A/B) ANY SIGNIFICANT OR POTENTIALLY SIGNIFICANT RESOURCES ENCOUNTERED DURING THE ARCHAEOLOGICAL MONITORING PROGRAM IN ACCORDANCE WITH THE CITY'S HISTORICAL RESOURCES GUIDELINES, AND SUBMITTAL OF SUCH FORMS TO THE SOUTH COASTAL INFORMATION CENTER WITH THE FINAL MONITORING REPORT.
2. MMC SHALL RETURN THE DRAFT MONITORING REPORT TO THE PI VIA THE RE FOR REVISION OR, FOR PREPARATION OF THE FINAL REPORT.
3. THE PI SHALL SUBMIT REVISED DRAFT MONITORING REPORT TO MMC VIA THE RE FOR APPROVAL.
4. MMC SHALL PROVIDE WRITTEN VERIFICATION TO THE PI OF THE APPROVED REPORT.
5. MMC SHALL NOTIFY THE RE OR BI, AS APPROPRIATE, OF RECEIPT OF ALL DRAFT MONITORING REPORT SUBMITTALS AND APPROVALS.

B. HANDLING OF ARTIFACTS

1. THE PI SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CULTURAL REMAINS COLLECTED ARE CLEANED AND CATALOGUED.
2. THE PI SHALL BE RESPONSIBLE FOR ENSURING THAT ALL ARTIFACTS ARE ANALYZED TO IDENTIFY FUNCTION AND CHRONOLOGY AS THEY RELATE TO THE HISTORY OF THE AREA; THAT FAUNAL MATERIAL IS IDENTIFIED AS TO SPECIES; AND THAT SPECIALTY STUDIES ARE COMPLETED, AS APPROPRIATE.

C. CURAT

FIELD DATA

TOPOGRAPHY SOURCE:
BASED ON SURVEY PERFORMED BY THE CITY OF SAN DIEGO SURVEYING DIVISION ON 02/16/2011, WORK ORDER NO. 21002158

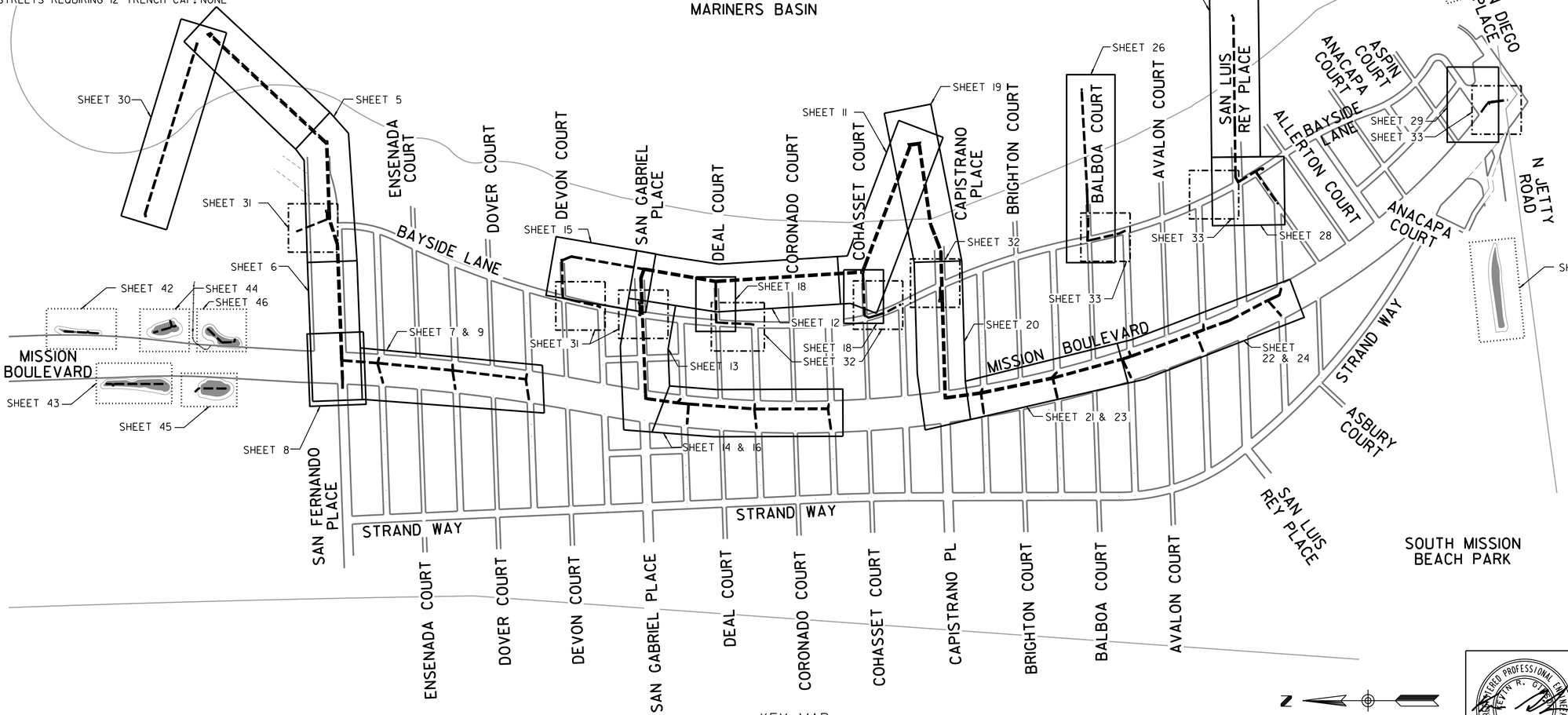
SUPPLEMENTAL SURVEYING PERFORMED BY RICK ENGINEERING COMPANY ON 3/15/2019 AND 7/25/2019, WORK ORDER NO. B-18118

BENCHMARK:
NEBP SAN GABRIEL PL. AND MISSION BLVD. ELEV. 4.491 MSL, BASED ON NGVD 29 FEET AS SHOWN IN THE CITY OF SAN DIEGO BENCH BOOK

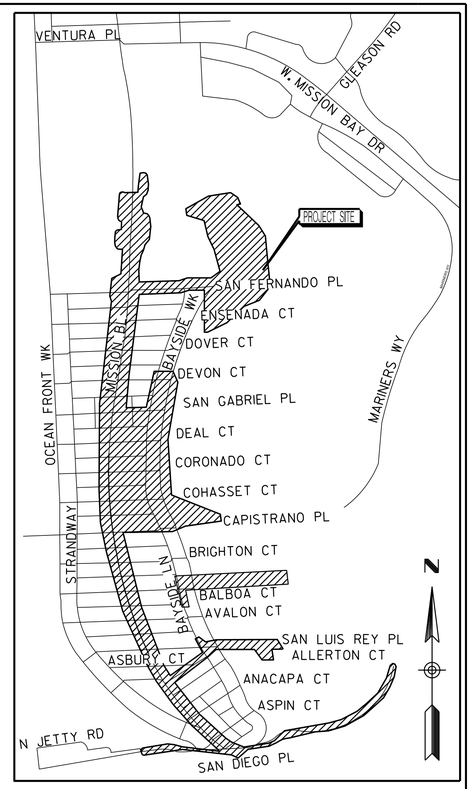
FIELD NOTES:
BAUMGARTNER, 216/218-1692, 12/64-5/65, W.O. 20575
MAPS: 1651, 1809, 5504, 5568, 10684
ROS: 4328, 5533, 5534, 9127, 9862, 10226, 10296, 10853, 11241, 11405, 11420, 11427, 11618, 13382, 14695, 14717, 15078, 15089, 15550, 15563, 15758, 15991, 16891, 17536, 17714, 18188, 19138, 20144
PM: 8154, 10552, 10796, 11646, 15905, 16175, 17863, 19059, 19528, 19741, 20168, 20390, 20441, 20514, 20802, 20803, 20806, 20808, 20809
TP: 1240, 1241, 1242, 1243
CR: 533, 1251, 1258, 1336, 1343, 1597, 1712, 2067, 2189, 2649, 2688, 2695, 3583, 3915, 4088, 4095, 4179, 4302, 4340, 4470, 4845, 4856, 4930, 4954, 5064, 5145, 5222, 5466, 5612, 5675, 5808, 5883, 5982, 5984, 6253, 6410, 6619, 6742, 6825, 6855, 7133, 7216, 7492, 7449, 7604, 7624, 7814, 7841, 7948, 8600, 8646, 8814, 8822, 8824, 8827, 9076, 9339, 10487, 10620, 12178, 12340, 12790, 13829, 14015, 14091, 14339, 15065, 16340, 17189, 17440, 17835, 17858, 18278, 18294, 18677, 18680, 18904, 18924, 19590, 20248, 20426, 21910, 21987, 22492, 22613, 22897, 22950, 23097, 23440, 23528, 23835, 24006, 24304, 24445, 24698, 24940, 25220, 25223, 25345, 25455, 25835, 27108, 27509, 29201, 29207, 29208, 29404, 30050, 30096, 30102, 30233, 30523
CITY DWG: 1406-L, 1407-L, 4945-B, 6219-L, 9851-B, 10963-B, 12968-B, 20339-B

BASIS OF BEARING / COORDINATES:
THE BASIS OF BEARINGS FOR THIS PROJECT WAS DERIVED FROM A PREVIOUS STATIC GPS SURVEY USING GPS 1902 (PT 11) AND GPS 17 (PT 10) AS SHOWN ON R.OF S. 14492 I.E. N 57° 03'12" E, NAD 83 FEET, ZONE 6 (EPOCH 91.35), UTILIZING RTK/GPS FIELD PROCEDURES WITH A CALVRS BASE STATION LOCATED AT KMSA AND CONSTRAINING TO GPS 1902, GPS 17 AND CHECKING GPS 2904 (PT 12).

STREETS REQUIRING 12" TRENCH CAP: NONE



KEY MAP
NO SCALE



LOCATION MAP
NO SCALE

LEGEND
- PROPOSED STORM DRAIN SHEETS
- LOW FLOW DIVERSION DETAILS
- PROPOSED STORM DRAIN
- PROPOSED BASIN SHEETS

0 150 300 450
SCALE 1" = 150'

KEY MAP

G-4

PLANS FOR THE CONSTRUCTION OF SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

KEY MAP

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 3 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — RCE# C91224
PRINT DCE NAME

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GIBBS — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-03-D

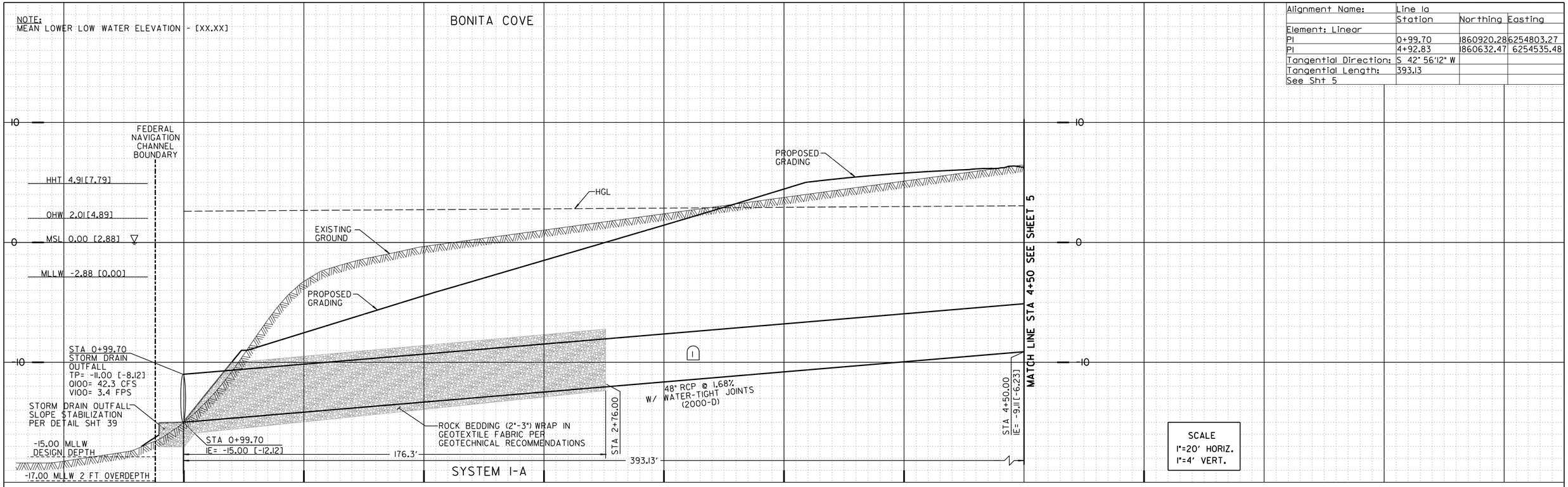
RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

KEY MAP

NOTE:
MEAN LOWER LOW WATER ELEVATION - [XX.XX]

BONITA COVE

Alignment Name:	Line 1a		
	Station	Northing	Easting
Element: Linear			
PI	0+99.70	1860920.28	6254803.27
PI	4+92.83	1860632.47	6254535.48
Tangential Direction:	S 42° 56'12" W		
Tangential Length:	393.13		
See Sht 5			

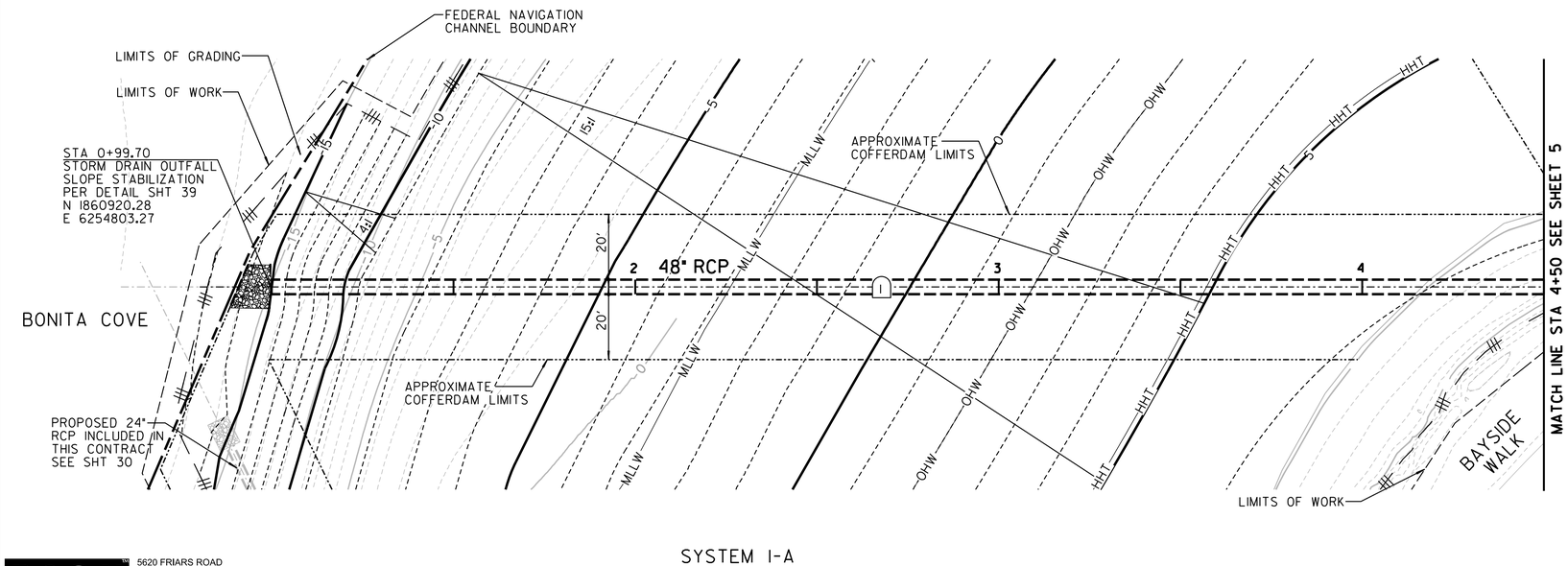


SCALE
1"=20' HORIZ.
1"=4' VERT.

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	S42° 56'12"W		350.30'	48" RCP (2000-D)*

*WATER-TIGHT JOINTS

NOTE:
GRADING LIMITS ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON VARYING FIELD CONDITIONS. CONTRACTOR TO VERIFY LIMITS OF WORK PRIOR TO CONSTRUCTION.



REFERENCES:

WATER: NONE
SEWER: NONE
STORM DRAIN: NONE
TELEPHONE: NONE
GAS: NONE
ELECTRIC: NONE

RETIREMENTS:

NONE

NOTE:
1. FOR OUTFALL GRADING SEE SHT 36
2. FOR LIMITS OF WORK SEE SHT 36
3. FOR COFFERDAM LIMITS SEE SHT 36

0 20 40 80
SCALE 1" = 20'

C-1

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SAN FERNANDO PLACE

BONITA COVE TO BAYSIDE WALK

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 4 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

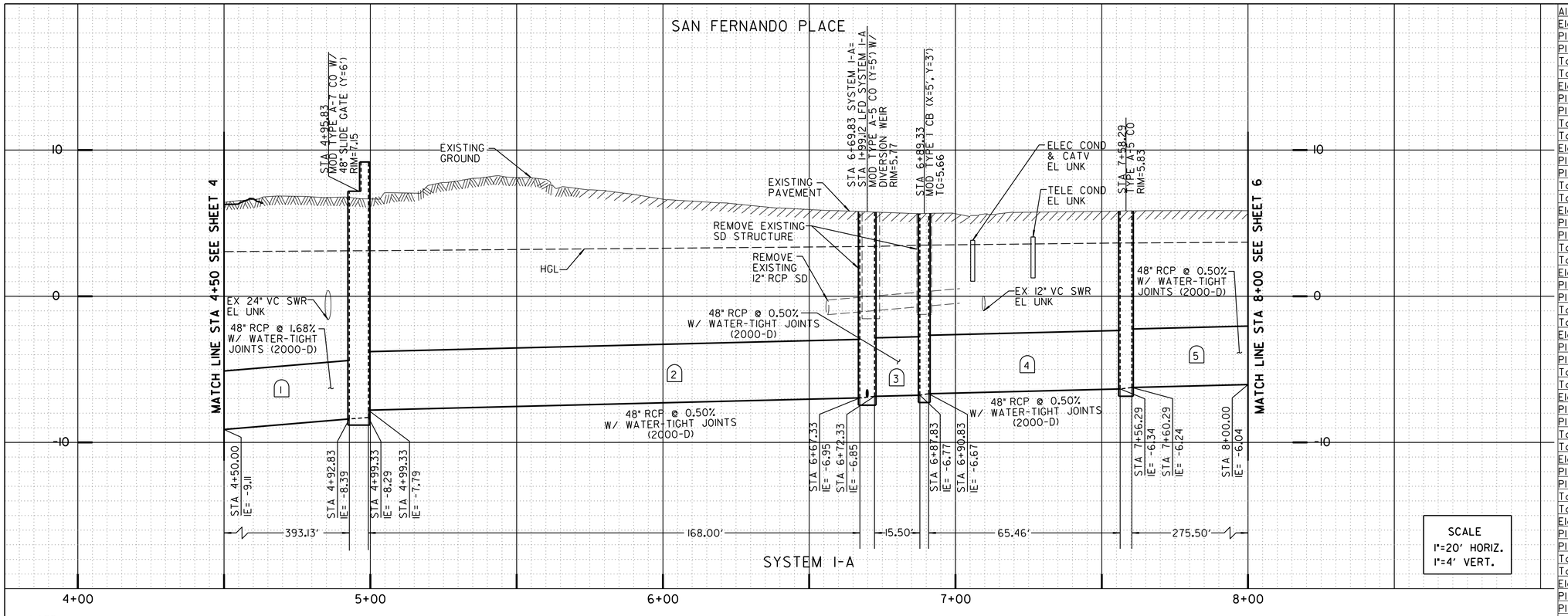
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-04-D

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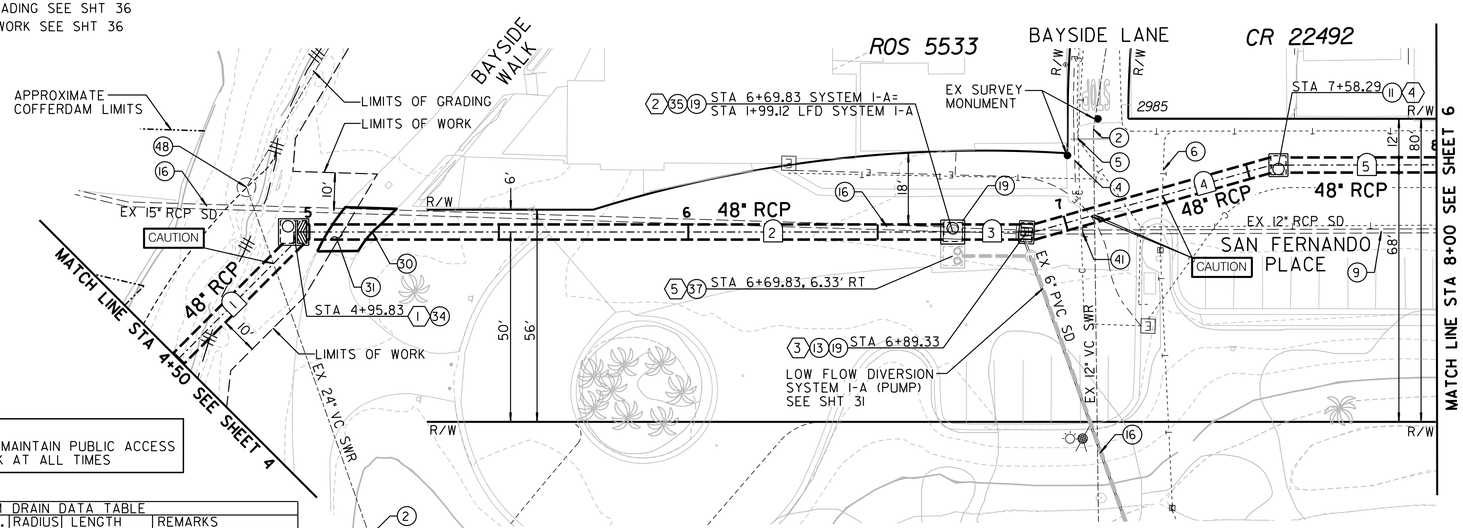
SAN FERNANDO PLACE



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

Alignment Name:	Line 1a		
Element: Linear	Station	Northing	Easting
PI	4+92.83	1860632.47	6254535.48
PI	4+95.83	1860629.47	6254535.59
Tangential Direction:	S 2° 03'48" E		
Tangential Length:	3.00		
Element: Linear			
PI	4+95.83	1860629.47	6254535.59
PI	4+99.33	1860629.34	6254532.09
Tangential Direction:	S 87° 56'12" W		
Tangential Length:	3.50		
Element: Linear			
PI	4+99.33	1860629.34	6254532.09
PI	6+67.33	1860623.29	6254364.20
Tangential Direction:	S 87° 56'12" W		
Tangential Length:	168.00		
Element: Linear			
PI	6+67.33	1860623.29	6254364.20
PI	6+69.83	1860623.20	6254361.70
Tangential Direction:	S 87° 56'12" W		
Tangential Length:	2.50		
Element: Linear			
PI	6+69.83	1860623.20	6254361.70
PI	6+72.33	1860623.11	6254359.20
Tangential Direction:	S 87° 56'12" W		
Tangential Length:	2.50		
Element: Linear			
PI	6+72.33	1860623.11	6254359.20
PI	6+87.83	1860622.56	6254343.71
Tangential Direction:	S 87° 56'12" W		
Tangential Length:	15.50		
Element: Linear			
PI	6+87.83	1860622.56	6254343.71
PI	6+89.33	1860622.57	6254342.21
Tangential Direction:	N 89° 14'40" W		
Tangential Length:	1.50		
Element: Linear			
PI	6+89.33	1860622.57	6254342.21
PI	6+90.83	1860622.59	6254340.71
Tangential Direction:	N 89° 14'40" W		
Tangential Length:	1.50		
Element: Linear			
PI	6+90.83	1860622.59	6254340.71
PI	7+56.28	1860602.54	6254278.40
Tangential Direction:	S 72° 09'44" W		
Tangential Length:	65.46		
Element: Linear			
PI	7+56.28	1860602.54	6254278.40
PI	7+58.28	1860602.47	6254276.40
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	2.00		
Element: Linear			
PI	7+58.28	1860602.47	6254276.40
PI	7+60.28	1860602.39	6254274.41
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	2.00		
Element: Linear			
PI	7+60.28	1860602.39	6254274.41
PI	10+35.78	1860591.95	6253999.10
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	275.50		
See Sht 6			

NOTE:
1. FOR OUTFALL GRADING SEE SHT 36
2. FOR LIMITS OF WORK SEE SHT 36



CONSTRUCTION NOTES
(2) PROTECT EX SEWER MAIN IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(6) PROTECT TEL COND IN PLACE
(9) ABANDON EX STORM DRAIN PER WHITEBOOK SPECIFICATIONS
(11) CONSTRUCT TYPE A-5 CLEANOUT
(13) CONSTRUCT MODIFIED TYPE I CATCH BASIN SEE DETAIL ON SHT 53
(16) REMOVE EX STORM DRAIN
(19) REMOVE EX STORM DRAIN STRUCTURE
(30) REPLACE EXISTING CURB & GUTTER IN KIND
(31) REPLACE EXISTING SIDEWALK IN KIND
(34) CONSTRUCT MODIFIED TYPE A-7 CLEANOUT W/ 48" SLIDE GATE (Y=6') SEE DETAIL ON SHT 55
(35) CONSTRUCT MODIFIED TYPE A-5 CLEANOUT W/ DIVERSION WEIR SEE DETAIL ON SHT 53
(37) CONSTRUCT LOW FLOW DIVERSION WET WELL VAULT SEE DETAIL ON SHT 93
(41) CUT AND PLUG EX STORM DRAIN
(48) PROTECT EX SEWER MANHOLE IN PLACE

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS ALONG BAYSIDE WALK AT ALL TIMES

STORM DRAIN DATA TABLE

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	S42° 56'12"W		42.83'	48" RCP (2000-D)•
2	S87° 56'12"W		168.00'	48" RCP (2000-D)•
3	S87° 56'12"W		15.50'	48" RCP (2000-D)•
4	S72° 09'44"W		65.46'	48" RCP (2000-D)•
5	S87° 49'42"W		39.71'	48" RCP (2000-D)•

•WATER-TIGHT JOINTS

STRUCTURE DATA TABLE

NO.	STA	NORTHING	EASTING	REMARKS
1	4+95.83	1860629.47	6254535.59	MOD TYPE A-7 CO W/ 48" SLIDE GATE (Y=6')
2	6+69.83	1860623.20	6254361.70	MOD TYPE A-5 CO W/ DIVERSION WEIR (Y=5')
3	6+89.33	1860622.57	6254342.21	MOD TYPE I CB (X=5', Y=3')
4	7+58.29	1860602.47	6254276.40	TYPE A-5 CO
5	6+69.83, 6.33' RT	1860629.53	6254361.47	LFD WET WELL VAULT

REFERENCES:
WATER: 23571-0-D, 11293-12-D
SEWER: 5251-0-L, 26396-27-D
STORM DRAIN: 9110-L
TELEPHONE: 54322-010
CATV: 54322-010
GAS: NONE
ELECTRIC: 545322-010

RETIREMENTS:
12" - RCP - STORM DRAIN - 120' - 1984
15" - RCP - STORM DRAIN - 385' - 1984

SYSTEM I-A

0 20 40 80
SCALE 1" = 20'

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rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

REGISTERED PROFESSIONAL ENGINEER
AUSTIN R. GRAY
NO. 52249
STATE OF CALIFORNIA
03/13/2023

C-2

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
SAN FERNANDO PLACE
BAYSIDE WALK TO BAYSIDE LANE

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 5 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DCE NAME — DATE 12/18/2023 — RCE# C91224

SUBMITTED BY: KAREN VERA PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

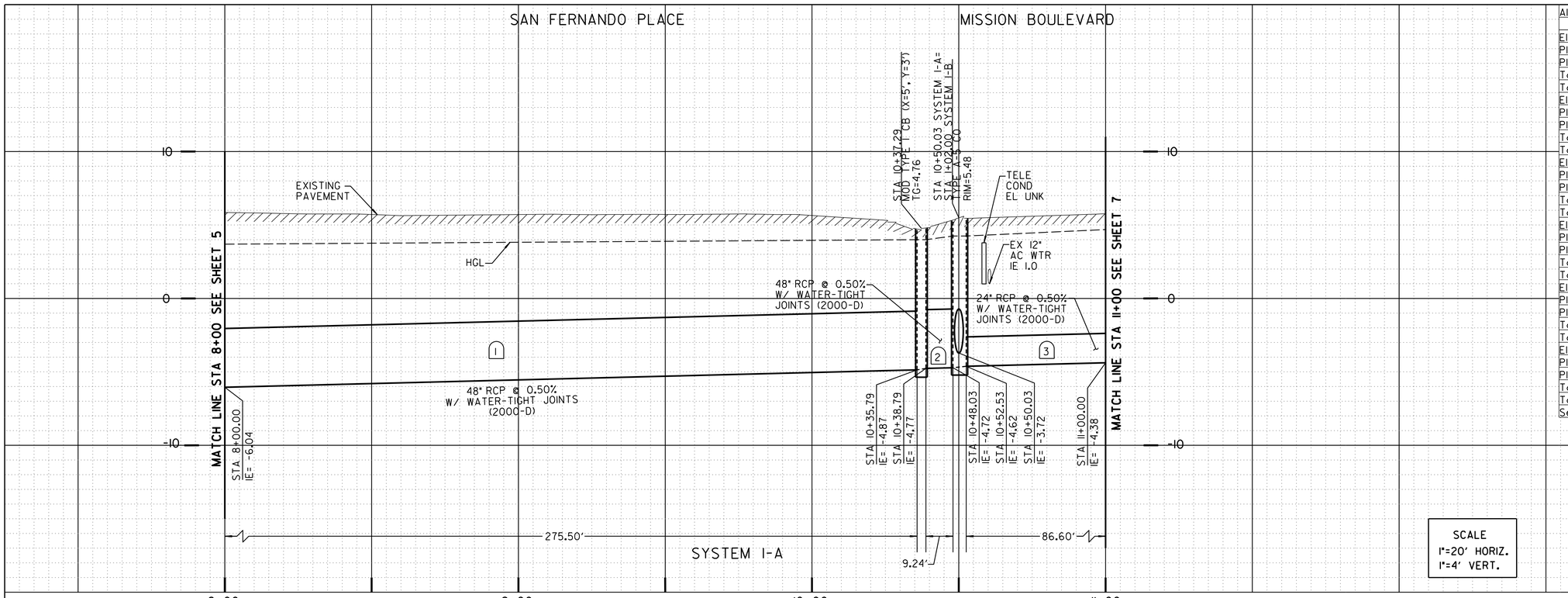
218-1689 CCS27 COORDINATE

1858-6249 CCS83 COORDINATE

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-05-D

SAN FERNANDO PLACE



Alignment Name:	Line 1a		
	Station	Northing	Easting
Element: Linear			
PI	10+35.79	1860591.95	6253999.10
PI	10+37.29	1860591.90	6253997.60
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	1.50		
Element: Linear			
PI	10+37.29	1860591.90	6253997.60
PI	10+38.79	1860591.84	6253996.11
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	1.50		
Element: Linear			
PI	10+38.79	1860591.84	6253996.11
PI	10+48.03	1860591.49	6253986.87
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	9.24		
Element: Linear			
PI	10+48.03	1860591.49	6253986.87
PI	10+50.03	1860591.41	6253984.87
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	2.00		
Element: Linear			
PI	10+50.03	1860591.41	6253984.87
PI	10+52.53	1860588.92	6253984.97
Tangential Direction:	S 2° 10'18" E		
Tangential Length:	2.50		
Element: Linear			
PI	10+52.53	1860588.92	6253984.97
PI	11+39.13	1860502.56	6253978.48
Tangential Direction:	S 4° 17'37" W		
Tangential Length:	86.60		
See Sht 7			

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

REFERENCES:

WATER: 23571-0-D, 11293-12-D
SEWER: 5251-0-L
STORM DRAIN: 9110-L
TELEPHONE: 54322-010
CATV: 54322-010
GAS: NONE
ELECTRIC: 545322-010

RETIREMENTS:

12" - RCP - STORM DRAIN - 255' - 1984

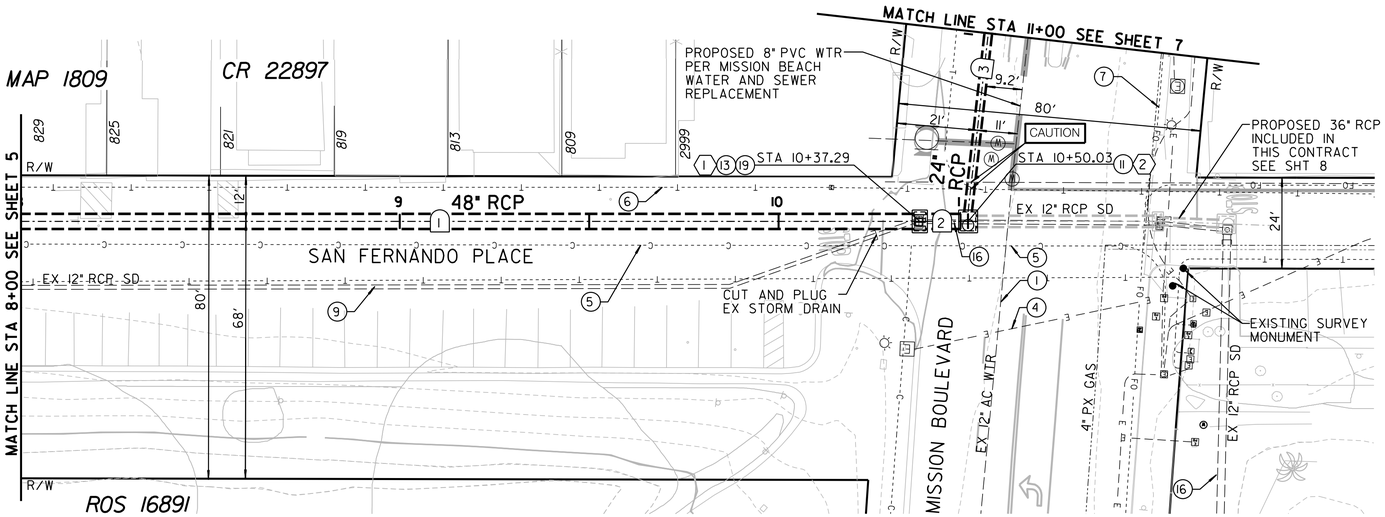
CONSTRUCTION NOTES

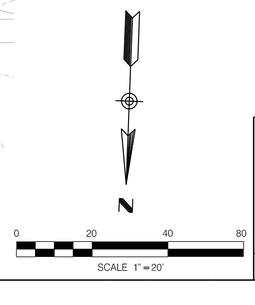
(1) PROTECT EX WATER MAIN IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(6) PROTECT TEL COND IN PLACE
(7) PROTECT FIBER OPTIC COND IN PLACE
(9) ABANDON EX STORM DRAIN PER WHITEBOOK SPECIFICATIONS
(11) CONSTRUCT TYPE A-5 CLEANOUT
(13) CONSTRUCT MODIFIED TYPE I CATCH BASIN SEE DETAIL ON SHT 53
(16) REMOVE EX STORM DRAIN
(19) REMOVE EX STORM DRAIN STRUCTURE

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
(1)	S87° 49'42"W		235.79'	48" RCP (2000-D)*
(2)	S87° 49'42"W		9.24'	48" RCP (2000-D)*
(3)	S04° 17'37"W		47.47'	24" RCP (2000-D)*

*WATER-TIGHT JOINTS

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
(1)	10+37.29	1860591.90	6253997.60	MOD TYPE I CB (X=5', Y=3')
(2)	10+50.03	1860591.41	6253984.87	TYPE A-5 CO





C-3

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
SAN FERNANDO PLACE /MISSION BOULEVARD
BAYSIDE LANE TO MISSION BLVD / SAN FERNANDO PLACE TO ALLEY

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 6 OF 128 SHEETS

WBS B-18118 (G)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

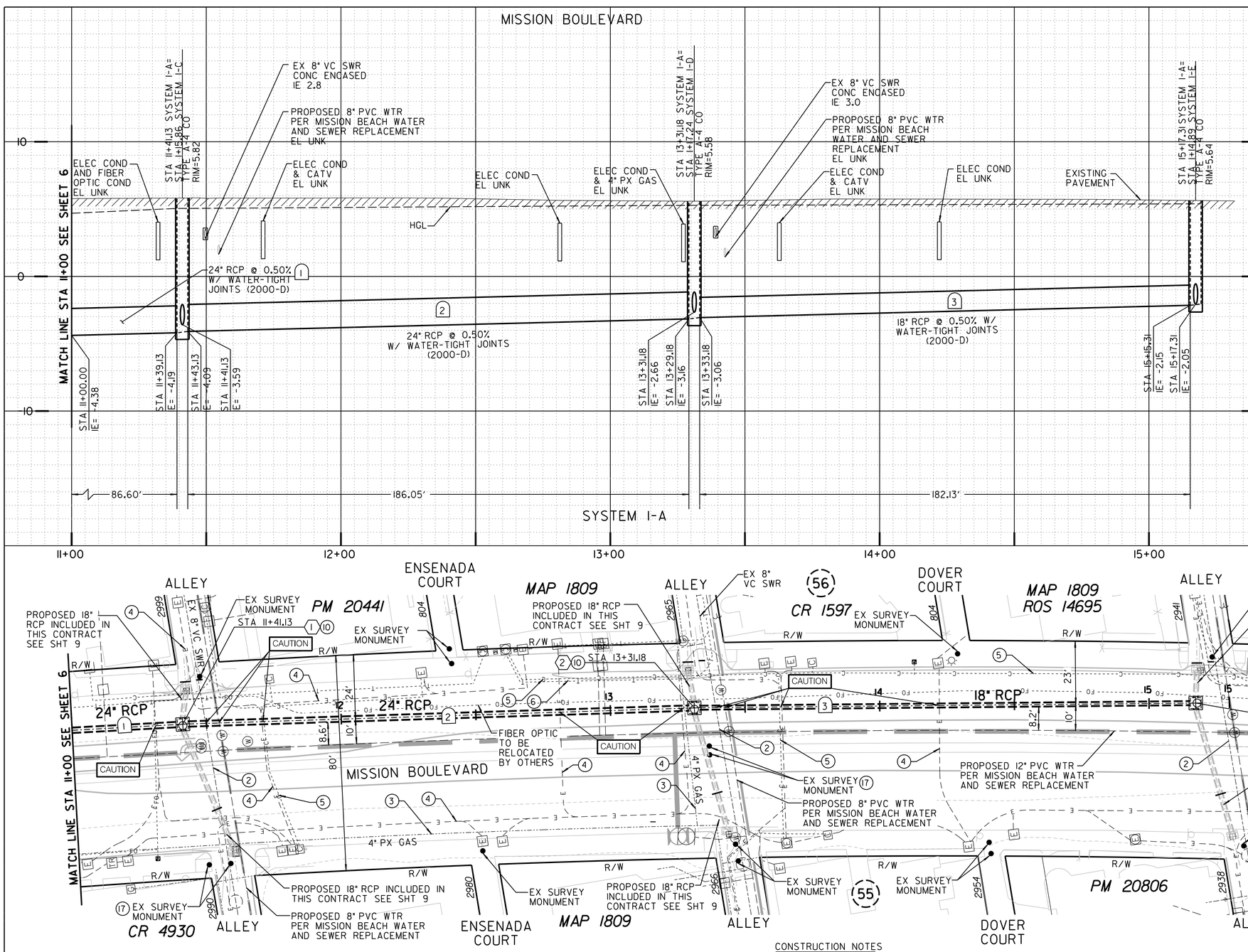
REGISTERED PROFESSIONAL ENGINEER — AUSTIN R. GRAY — NO. 52245 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-06-D

RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

SAN FERNANDO PLACE / MISSION BOULEVARD



Alignment Name:	Line 1a		
	Station	Northing	Easting
Element: Linear			
PI	11+41.13	1860500.56	6253978.33
PI	11+43.13	1860498.57	6253978.18
Tangential Direction:	S 4° 17'37" W		
Tangential Length:	2.00		
Element: Linear			
PI	11+43.13	1860498.57	6253978.18
PI	13+29.18	1860313.40	6253960.06
Tangential Direction:	S 5° 35'27" W		
Tangential Length:	186.05		
Element: Linear			
PI	13+29.18	1860313.40	6253960.06
PI	13+31.18	1860311.41	6253959.86
Tangential Direction:	S 5° 35'27" W		
Tangential Length:	2.00		
Element: Linear			
PI	13+31.18	1860311.41	6253959.86
PI	13+33.18	1860309.42	6253959.67
Tangential Direction:	S 5° 35'27" W		
Tangential Length:	2.00		
Element: Linear			
PI	13+33.18	1860309.42	6253959.67
PI	15+15.31	1860128.60	6253937.89
Tangential Direction:	S 6° 52'04" W		
Tangential Length:	182.13		
Element: Linear			
PI	15+15.31	1860128.60	6253937.89
PI	15+17.31	1860126.61	6253937.65
Tangential Direction:	S 6° 48'55" W		
Tangential Length:	2.00		
Element: Linear			
PI	15+17.31	1860126.61	6253937.65
PI	15+19.31	1860124.63	6253937.41
Tangential Direction:	S 6° 48'55" W		
Tangential Length:	2.00		

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

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	S04° 17'37"W		39.13'	24" RCP (2000-D)•
2	S05° 35'27"W		186.05'	24" RCP (2000-D)•
3	S06° 52'04"W		182.13'	18" RCP (2000-D)•

•WATER-TIGHT JOINTS

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	11+41.13	1860500.56	6253978.33	TYPE A-4 CO
2	13+31.18	1860311.41	6253959.86	TYPE A-4 CO
3	15+17.31	1860126.61	6253937.65	TYPE A-4 CO

REFERENCES:

WATER: 40709-07-D, 2357I-O-D, 9671-O-D
SEWER: 17298-3-D, 17298-5-D
STORM DRAIN: 462-D, 9110-L
TELEPHONE: 545322-010
GAS: 15630-118945, 15630-118940
ELECTRIC: 545322-010

RETIREMENTS:

NONE

C-4

CONSTRUCTION NOTES

(2) PROTECT EX SEWER MAIN IN PLACE
(3) PROTECT GAS IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(6) PROTECT TEL COND IN PLACE
(7) PROTECT FIBER OPTIC COND IN PLACE
(10) CONSTRUCT TYPE A-4 CLEANOUT
(17) CONTACT CITY SURVEY SECTION TO PERPETUATE SURVEY MONUMENT

CAUTION

4" PX GAS! CONTRACTOR TO VERIFY EXACT LOCATION AND MUST NOTIFY SDG&E THREE (3) WEEKS IN ADVANCE PRIOR TO EXCAVATION
SDG&E STANDBY REQUIRED

SYSTEM I-A

0 20 40 80
SCALE 1" = 20'

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
MISSION BOULEVARD
SAN FERNANDO PLACE TO ALLEY BLK 56

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 7 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
ELHAM LOTFI PRINT DCE NAME — C91224 RCE#

SUBMITTED BY: KAREN VERA PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

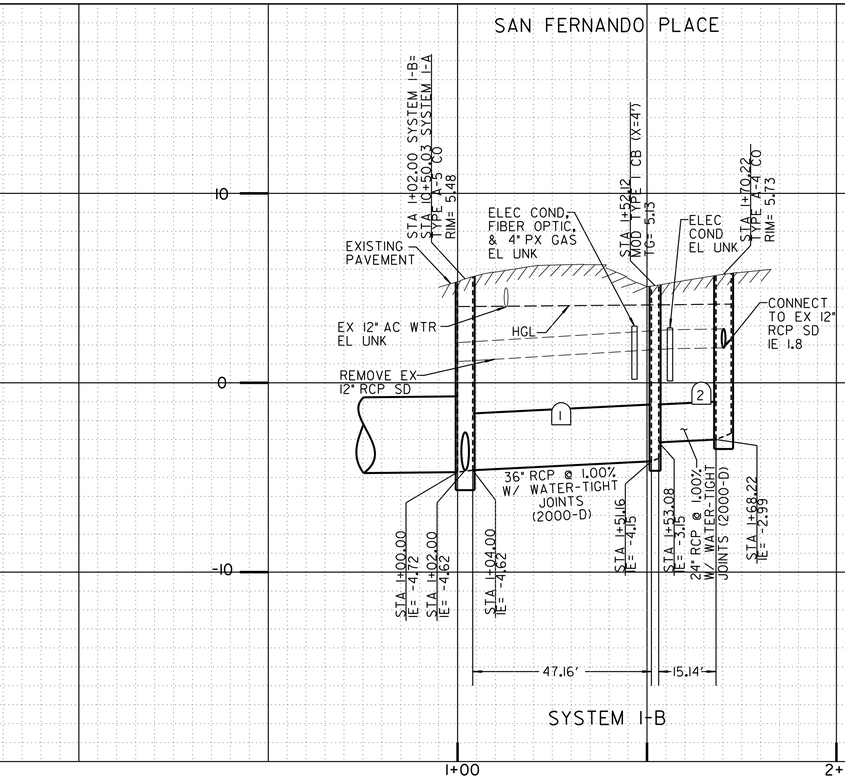
REGISTERED PROFESSIONAL ENGINEER — AUSTIN R. GRAY — NO. 52249 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-07-D

RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

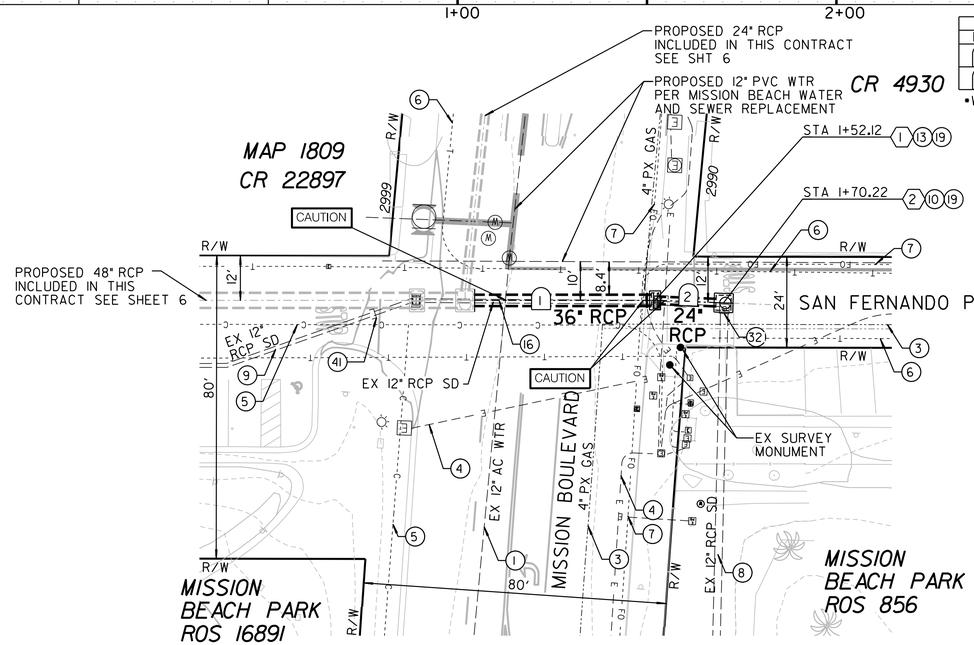
MISSION BOULEVARD



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

Alignment Name:	Line 1b		
	Station	Northing	Easting
Element: Linear			
PI	1+00.00	1860591.49	6253986.87
PI	1+02.00	1860591.41	6253984.87
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+02.00	1860591.41	6253984.87
PI	1+04.00	1860591.34	6253982.87
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+04.00	1860591.34	6253982.87
PI	1+51.16	1860589.55	6253935.74
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	47.16		
Element: Linear			
PI	1+51.16	1860589.55	6253935.74
PI	1+52.12	1860589.51	6253934.79
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+52.12	1860589.51	6253934.79
PI	1+53.08	1860589.48	6253933.83
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+53.08	1860589.48	6253933.83
PI	1+68.22	1860589.48	6253918.69
Tangential Direction:	S 89° 59'56" W		
Tangential Length:	15.14		
Element: Linear			
PI	1+68.22	1860589.48	6253918.69
PI	1+70.22	1860589.48	6253916.69
Tangential Direction:	S 89° 59'56" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+70.22	1860589.48	6253916.69
PI	1+72.22	1860589.48	6253914.69
Tangential Direction:	S 89° 59'56" W		
Tangential Length:	2.00		

SAN FERNANDO PLACE



STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	S87° 49'42"W		47.16'	36" RCP (2000-D)*
2	S89° 59'56"W		15.14'	24" RCP (2000-D)*

*WATER-TIGHT JOINTS

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	1+52.12	1860589.51	6253934.79	MOD TYPE I CB (X=4')
2	1+70.22	1860589.48	6253916.69	TYPE A-4 CO

CONSTRUCTION NOTES

1. PROTECT EX WATER MAIN IN PLACE
3. PROTECT GAS IN PLACE
4. PROTECT ELEC COND IN PLACE
5. PROTECT CATV IN PLACE
6. PROTECT TEL COND IN PLACE
7. PROTECT FIBER OPTIC COND IN PLACE
8. PROTECT EX STORM DRAIN IN PLACE
9. ABANDON EX STORM DRAIN PER WHITEBOOK SPECIFICATIONS
10. CONSTRUCT TYPE A-4 CLEANOUT
13. CONSTRUCT MODIFIED TYPE I CATCH BASIN SEE DETAIL ON SHT 53
16. REMOVE EX STORM DRAIN
19. REMOVE EX STORM DRAIN STRUCTURE
32. CONNECT TO EX STORM DRAIN
41. CUT AND PLUG EX STORM DRAIN

REFERENCES:

WATER: 11293-12-D, 40709-03-D
SEWER: NONE
STORM DRAIN: 9110-L, 20764-4-D
CATV: BLR1955-BLR1956
TELEPHONE: 40709-03-D
GAS: 15637-118945, 15630-118915-15630-118940
ELECTRIC: 545322-010

RETIREMENTS:

12" - RCP - STORM DRAIN - 64' - 1984

CAUTION

4" PX GASI CONTRACTOR TO VERIFY EXACT LOCATION AND MUST NOTIFY SDG&E THREE (3) WEEKS IN ADVANCE PRIOR TO EXCAVATION
SDG&E STANDBY REQUIRED

RICK ENGINEERING COMPANY
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rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

C-5

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SAN FERNANDO PLACE

MISSION BOULEVARD

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 8 OF 128 SHEETS

WBS B-18118 (G)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

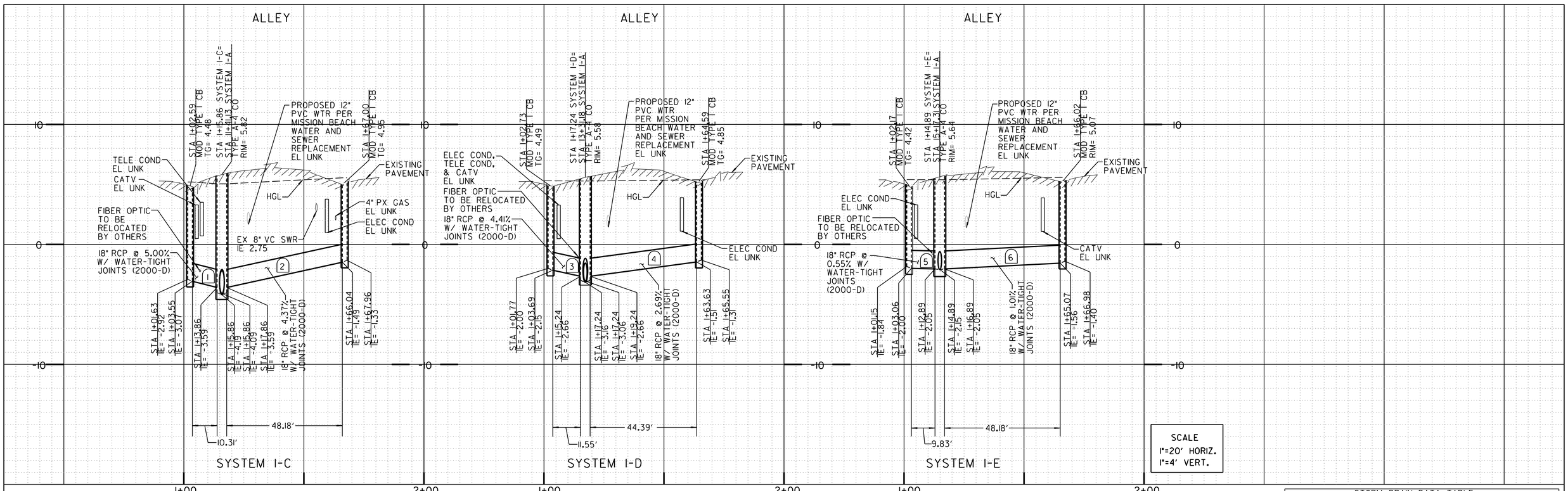
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

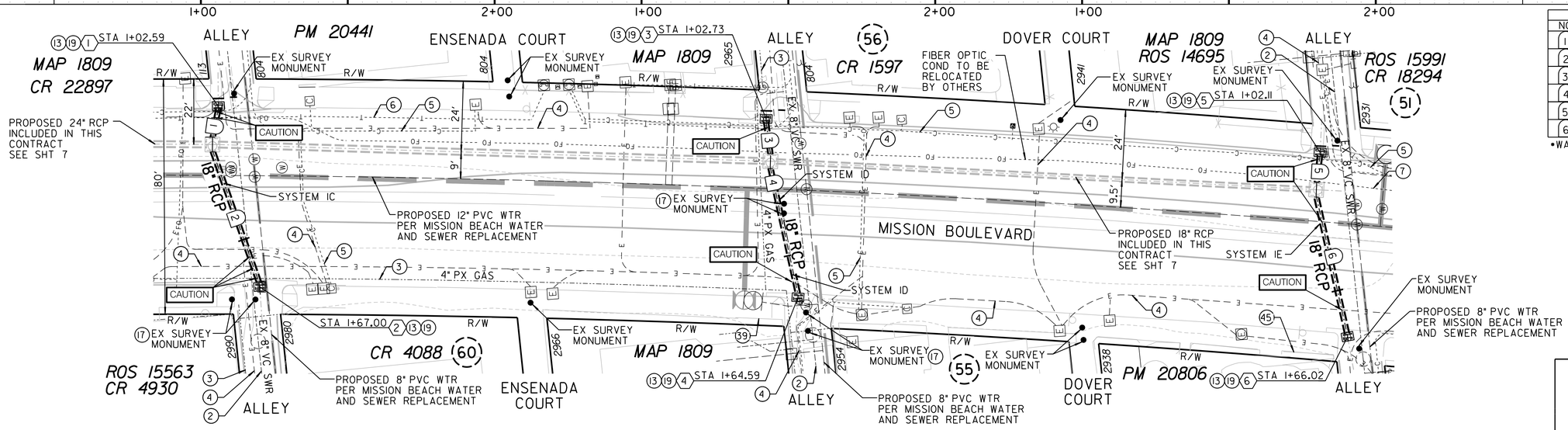
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
41306-08-D

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. CRAIG — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

SAN FERNANDO PLACE





SYSTEMS I-C, I-D, & I-E

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N75° 01'55"W		10.31'	18" RCP (2000-D)*
2	S74° 23'56"W		48.18'	18" RCP (2000-D)*
3	S86° 09'30"W		11.55'	18" RCP (2000-D)*
4	S81° 31'43"W		44.39'	18" RCP (2000-D)*
5	N79° 41'27"W		9.83'	18" RCP (2000-D)*
6	S81° 12'04"W		48.18'	18" RCP (2000-D)*

*WATER-TIGHT JOINTS

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	1+02.59	1860497.69	6253991.25	MOD TYPE I CB
2	1+67.00	1860487.75	6253928.97	MOD TYPE I CB
3	1+02.73	1860311.90	6253974.34	MOD TYPE I CB
4	1+64.59	1860305.20	6253913.02	MOD TYPE I CB
5	1+02.11	1860124.50	6253950.25	MOD TYPE I CB
6	1+66.02	1860119.37	6253887.10	MOD TYPE I CB

CAUTION

4" PX GAS: CONTRACTOR TO VERIFY EXACT LOCATION AND MUST NOTIFY SDG&E THREE (3) WEEKS IN ADVANCE PRIOR TO EXCAVATION SDG&E STANDBY REQUIRED

CONSTRUCTION NOTES

(2) PROTECT EX SEWER MAIN IN PLACE
(3) PROTECT GAS IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(6) PROTECT TEL COND IN PLACE
(7) PROTECT FIBER OPTIC COND IN PLACE
(13) CONSTRUCT MOD TYPE I CATCH BASIN SEE DETAIL ON SHT 53
(17) CONTACT CITY SURVEY SECTION TO PERPETUATE SURVEY MONUMENT
(19) REMOVE EX STORM DRAIN STRUCTURE
(39) PROTECT EX WALL IN PLACE
(45) PROTECT EX PLANT BOXES IN PLACE

REFERENCES:

WATER: 40709-03-D
SEWER: 40709-03-D
STORM DRAIN: 9110-L, 20764-4-D
CATV: BLR1955-BLR1956
TELEPHONE: 40709-03-D
GAS: 15630-118945, 15630-118915-15630-118940
ELECTRIC: 545322-010

RETIREMENTS:

GRATE INLET - 6

NOTE:

1. FOR STORM DRAIN ALIGNMENT TABLE SEE SHT 10

0 20 40 80
SCALE 1" = 20'

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

RICK ENGINEERING COMPANY
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rickengineering.com
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C-6

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

MISSION BOULEVARD

ALLEY BLK 60 TO ALLEY BLK 51

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 9 OF 128 SHEETS

WBS B-18118 (G)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-09-D

MISSION BOULEVARD

Alignment Name:	Line 1c		
	Station	Northing	Easting
Element: Linear			
PI	1+01.63	1860497.63	6253992.2
PI	1+02.59	1860497.69	6253991.25
Tangential Direction:	N 86° 35'16" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+02.59	1860497.69	6253991.25
PI	1+03.55	1860497.75	6253990.29
Tangential Direction:	N 86° 35'16" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+03.55	1860497.75	6253990.29
PI	1+13.86	1860500.41	6253980.33
Tangential Direction:	N 75° 01'55" W		
Tangential Length:	10.31		
Element: Linear			
PI	1+13.86	1860500.41	6253980.33
PI	1+15.86	1860500.56	6253978.33
Tangential Direction:	N 85° 42'23" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+15.86	1860500.56	6253978.33
PI	1+17.86	1860500.71	6253976.34
Tangential Direction:	N 85° 42'23" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+17.86	1860500.71	6253976.34
PI	1+66.04	1860487.75	6253929.93
Tangential Direction:	S 74° 23'56" W		
Tangential Length:	48.18		
Element: Linear			
PI	1+66.04	1860487.75	6253929.93
PI	1+67.00	1860487.75	6253928.97
Tangential Direction:	S 90° 00'00" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+67.00	1860487.75	6253928.97
PI	1+67.96	1860487.75	6253928.01
Tangential Direction:	S 90° 00'00" W		
Tangential Length:	0.96		

Alignment Name:	Line 1d		
	Station	Northing	Easting
Element: Linear			
PI	1+01.77	1860311.80	6253975.29
PI	1+02.73	1860311.90	6253974.34
Tangential Direction:	N 84° 15'39" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+02.73	1860311.90	6253974.34
PI	1+03.69	1860311.99	6253973.38
Tangential Direction:	N 84° 15'39" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+03.69	1860311.99	6253973.38
PI	1+15.24	1860311.22	6253961.85
Tangential Direction:	S 86° 09'30" W		
Tangential Length:	11.55		
Element: Linear			
PI	1+15.24	1860311.22	6253961.85
PI	1+17.24	1860311.41	6253959.86
Tangential Direction:	N 84° 24'33" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+17.24	1860311.41	6253959.86
PI	1+19.24	1860311.61	6253957.87
Tangential Direction:	N 84° 24'33" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+19.24	1860311.61	6253957.87
PI	1+63.63	1860305.07	6253913.97
Tangential Direction:	S 81° 31'43" W		
Tangential Length:	44.39		
Element: Linear			
PI	1+63.63	1860305.07	6253913.97
PI	1+64.59	1860305.20	6253913.02
Tangential Direction:	N 82° 23'08" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+64.59	1860305.20	6253913.02
PI	1+65.55	1860305.32	6253912.07
Tangential Direction:	N 82° 23'08" W		
Tangential Length:	0.96		
Element: Linear			

Alignment Name:	Line 1e		
	Station	Northing	Easting
Element: Linear			
PI	1+01.15	1860124.39	6253951.21
PI	1+02.11	1860124.50	6253950.25
Tangential Direction:	N 83° 11'05" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+02.11	1860124.50	6253950.25
PI	1+03.06	1860124.62	6253949.30
Tangential Direction:	N 83° 11'05" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+03.06	1860124.62	6253949.30
PI	1+12.89	1860126.38	6253939.64
Tangential Direction:	N 79° 41'27" W		
Tangential Length:	9.83		
Element: Linear			
PI	1+12.89	1860126.38	6253939.64
PI	1+14.89	1860126.61	6253937.65
Tangential Direction:	N 83° 11'05" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+14.89	1860126.61	6253937.65
PI	1+16.89	1860126.85	6253935.66
Tangential Direction:	N 83° 11'05" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+16.89	1860126.85	6253935.66
PI	1+65.07	1860119.48	6253888.05
Tangential Direction:	S 81° 12'04" W		
Tangential Length:	48.18		
Element: Linear			
PI	1+65.07	1860119.48	6253888.05
PI	1+66.02	1860119.37	6253887.10
Tangential Direction:	S 83° 38'49" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+66.02	1860119.37	6253887.1
PI	1+66.98	1860119.27	6253886.15
Tangential Direction:	S 83° 38'49" W		
Tangential Length:	0.96		

MISSION BOULEVARD ALIGNMENT TABLE

C– 7

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

MISSION BOULEVARD ALIGNMENT TABLE

ALLEY BLK 60 TO ALLEY BLK 51

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 10 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

APPROVED: _____ FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA — PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI — PROJECT ENGINEER

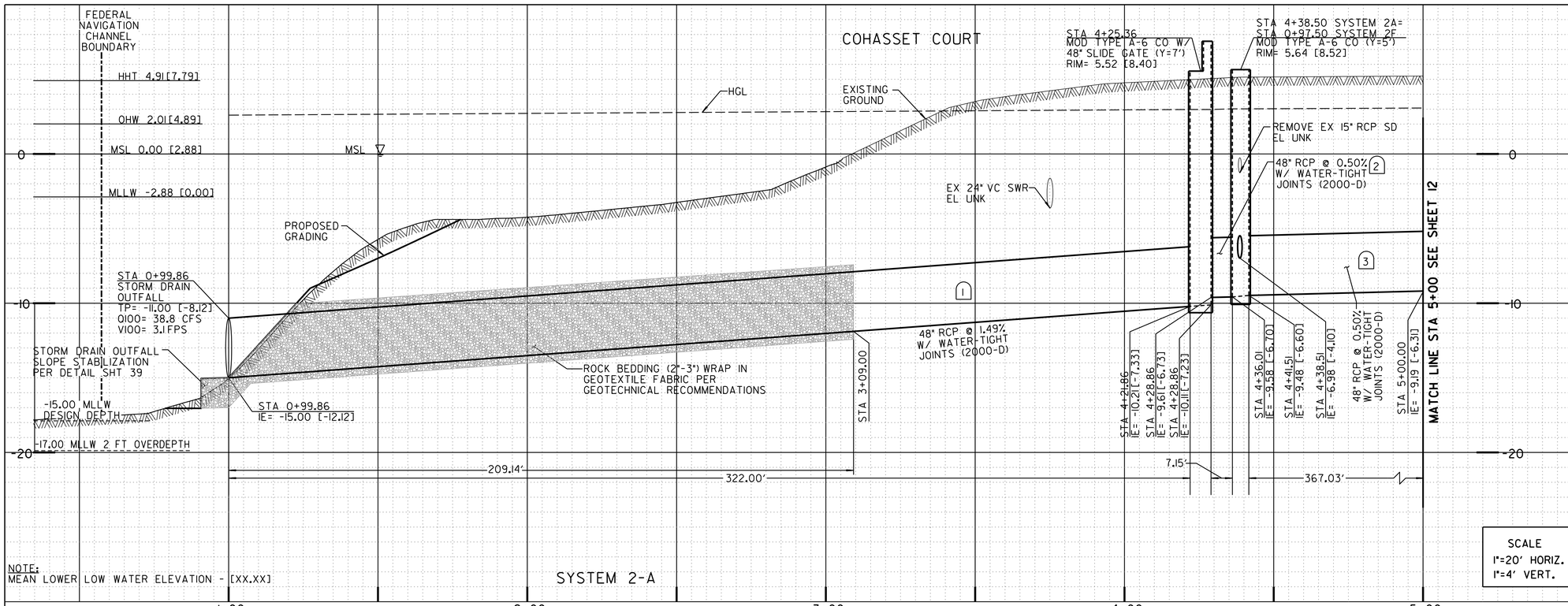
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306–10–D

RICK ENGINEERING COMPANY
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SAN DIEGO, CA 92110
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(FAX) 619-291-4165
rickengineering.com
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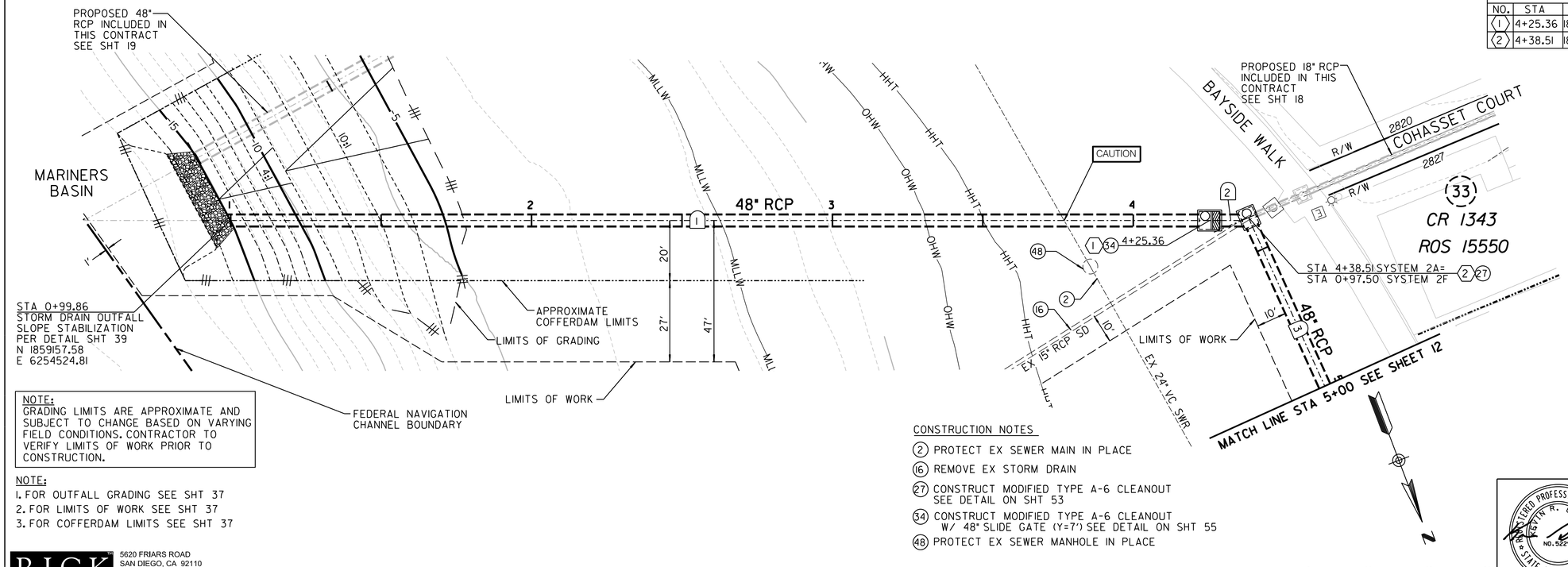
NOTE:
MEAN LOWER LOW WATER ELEVATION - [XX.XX]

SYSTEM 2-A

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

Alignment Name:	LFD 2a - San Gabriel		
	Station	Northing	Easting
Element: Linear			
PI	0+99.86	1859157.58	6254524.81
PI	4+21.86	1859271.69	6254223.71
Tangential Direction:	N 69° 14'44" W		
Tangential Length:	322.00		
Element: Linear			
PI	4+21.86	1859271.69	6254223.71
PI	4+25.36	1859272.93	6254220.44
Tangential Direction:	N 69° 14'44" W		
Tangential Length:	3.50		
Element: Linear			
PI	4+25.36	1859272.93	6254220.44
PI	4+28.86	1859274.17	6254217.16
Tangential Direction:	N 69° 14'44" W		
Tangential Length:	3.50		
Element: Linear			
PI	4+28.86	1859274.17	6254217.16
PI	4+36.01	1859276.70	6254210.48
Tangential Direction:	N 69° 14'44" W		
Tangential Length:	7.15		
Element: Linear			
PI	4+36.01	1859276.70	6254210.48
PI	4+38.51	1859276.60	6254207.98
Tangential Direction:	S 87° 43'02" W		
Tangential Length:	2.50		
Element: Linear			
PI	4+38.51	1859276.60	6254207.98
PI	4+41.51	1859279.60	6254207.86
Tangential Direction:	N 2° 16'58" W		
Tangential Length:	3.00		
Element: Linear			
PI	4+41.51	1859279.60	6254207.86
PI	8+08.54	1859645.89	6254184.57
Tangential Direction:	N 3° 38'18" W		
Tangential Length:	367.03		
See Sht 12			

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	4+25.36	1859272.93	6254220.44	MOD TYPE A-6 CO W/ 48" SLIDE GATE (Y=7')
2	4+38.51	1859276.60	6254207.98	MOD TYPE A-6 CO (Y=5')



NOTE:
GRADING LIMITS ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON VARYING FIELD CONDITIONS. CONTRACTOR TO VERIFY LIMITS OF WORK PRIOR TO CONSTRUCTION.

NOTE:
1. FOR OUTFALL GRADING SEE SHT 37
2. FOR LIMITS OF WORK SEE SHT 37
3. FOR COFFERDAM LIMITS SEE SHT 37

CONSTRUCTION NOTES

(2) PROTECT EX SEWER MAIN IN PLACE
(16) REMOVE EX STORM DRAIN
(27) CONSTRUCT MODIFIED TYPE A-6 CLEANOUT SEE DETAIL ON SHT 53
(34) CONSTRUCT MODIFIED TYPE A-6 CLEANOUT W/ 48" SLIDE GATE (Y=7') SEE DETAIL ON SHT 55
(48) PROTECT EX SEWER MANHOLE IN PLACE

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N69° 14'44"W		322.00'	48" RCP (2000-D)•
2	N69° 14'44"W		7.15'	48" RCP (2000-D)•
3	N03° 38'18"W		58.50'	48" RCP (2000-D)•

•WATER-TIGHT JOINTS

REFERENCES:

WATER: NONE
SEWER: 40709-13-D
STORM DRAIN: 26369-25-D
CATV: NONE
TELEPHONE: NONE
GAS: NONE
ELECTRIC: NONE

RETIREMENTS:

15" - RCP - STORM DRAIN - 170' - 1994

C-8

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
COHASSET COURT
MARINERS BASIN TO BAYSIDE WALK

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 11 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/15/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

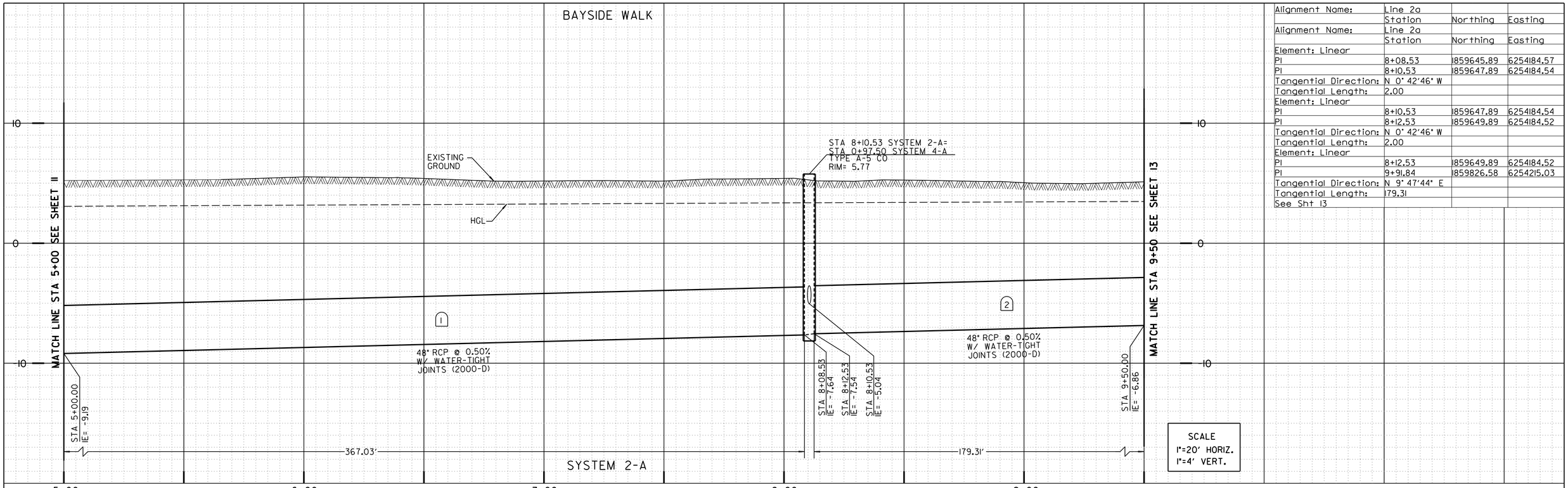
41306-11-D

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COHASSET COURT

BAYSIDE WALK

Alignment Name:	Line 2a		
	Station	Northing	Easting
Alignment Name:	Line 2a		
	Station	Northing	Easting
Element: Linear			
PI	8+08.53	1859645.89	6254184.57
PI	8+10.53	1859647.89	6254184.54
Tangential Direction:	N 0° 42'46" W		
Tangential Length:	2.00		
Element: Linear			
PI	8+10.53	1859647.89	6254184.54
PI	8+12.53	1859649.89	6254184.52
Tangential Direction:	N 0° 42'46" W		
Tangential Length:	2.00		
Element: Linear			
PI	8+12.53	1859649.89	6254184.52
PI	9+91.84	1859826.58	6254215.03
Tangential Direction:	N 9° 47'44" E		
Tangential Length:	179.31		
See Sht 13			



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

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N03° 38'18"W		308.53'	48" RCP (2000-D)•
2	N09° 47'44"E		137.47'	48" RCP (2000-D)•

•WATER-TIGHT JOINTS

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	8+10.53	1859647.89	6254184.54	TYPE A-5 CO

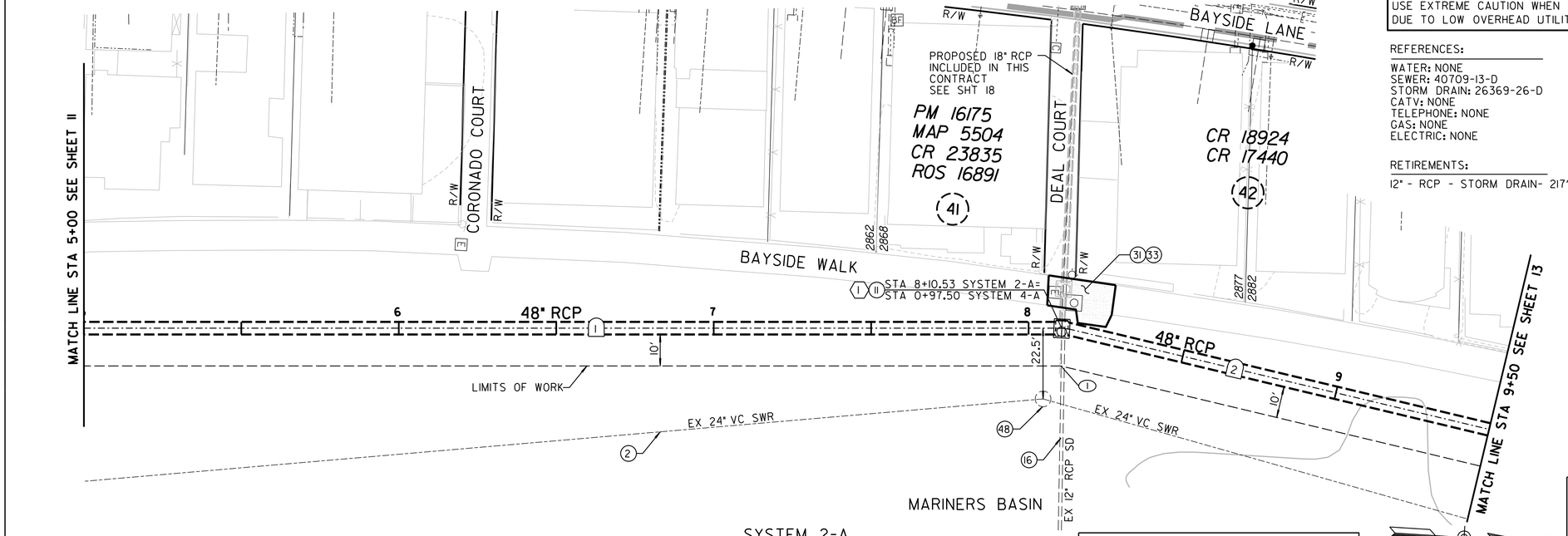
LIMITS OF WORK DATA TABLE		
NO.	NORTHING	EASTING
1	1859648.38	6254196.44

CONSTRUCTION NOTES
(2) PROTECT EX SEWER MAIN IN PLACE
(11) CONSTRUCT TYPE A-5 CLEANOUT
(16) REMOVE EX STORM DRAIN
(31) REPLACE EXISTING SIDEWALK IN KIND
(33) SALVAGE AND REINSTALL EX BENCH

CONTRACTORS NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES

REFERENCES:
WATER: NONE
SEWER: 40709-13-D
STORM DRAIN: 26369-26-D
CATV: NONE
TELEPHONE: NONE
GAS: NONE
ELECTRIC: NONE

RETIREMENTS:
12" - RCP - STORM DRAIN- 217' - 1994



CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS ALONG BAYSIDE WALK AT ALL TIMES

0 20 40 80
SCALE 1" = 20'

C-9

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

BAYSIDE WALK

COHASSET COURT TO SAN GABRIEL PLACE

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 12 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689
CCS27 COORDINATE

1858-6249
CCS83 COORDINATE

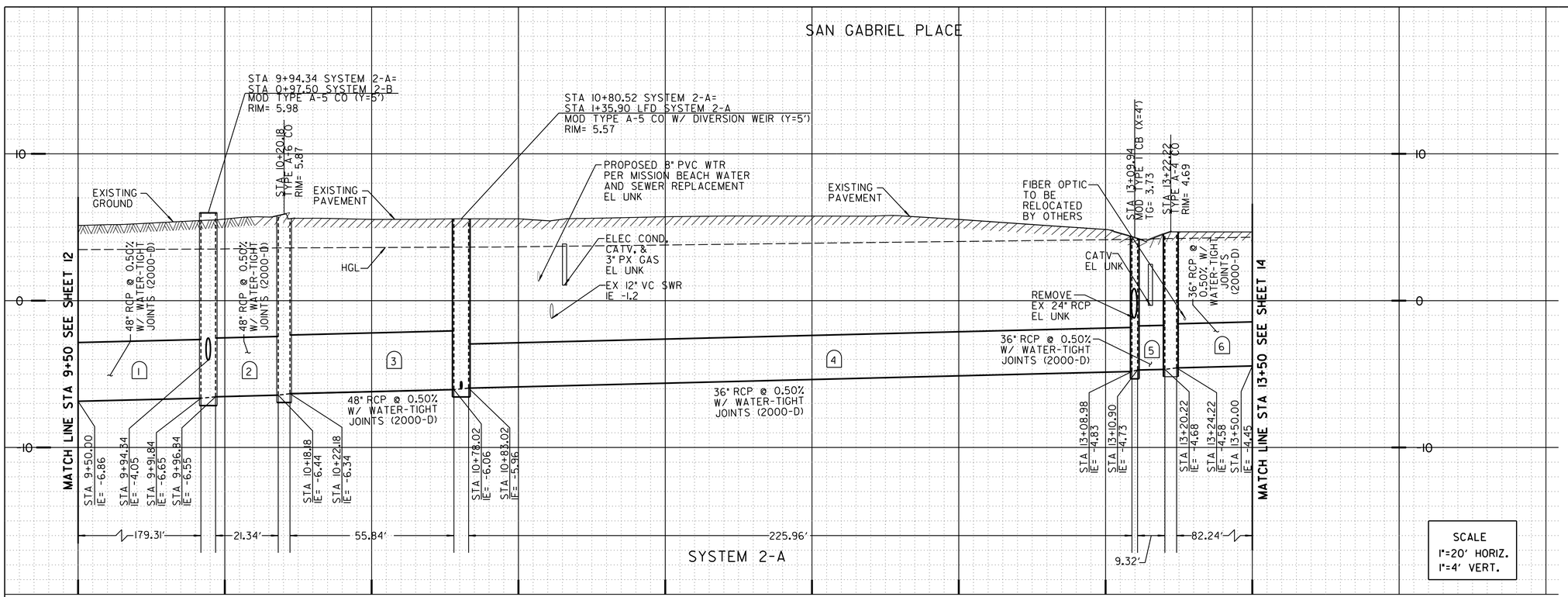
41306-12-D

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52245 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

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(FAX) 619-291-4165
rickengineering.com
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BAYSIDE WALK



LIMITS OF WORK DATA TABLE		
NO.	NORTHING	EASTING
1	1859824.54	6254226.85
2	1859829.68	6254226.47

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS ALONG BAYSIDE WALK AT ALL TIMES

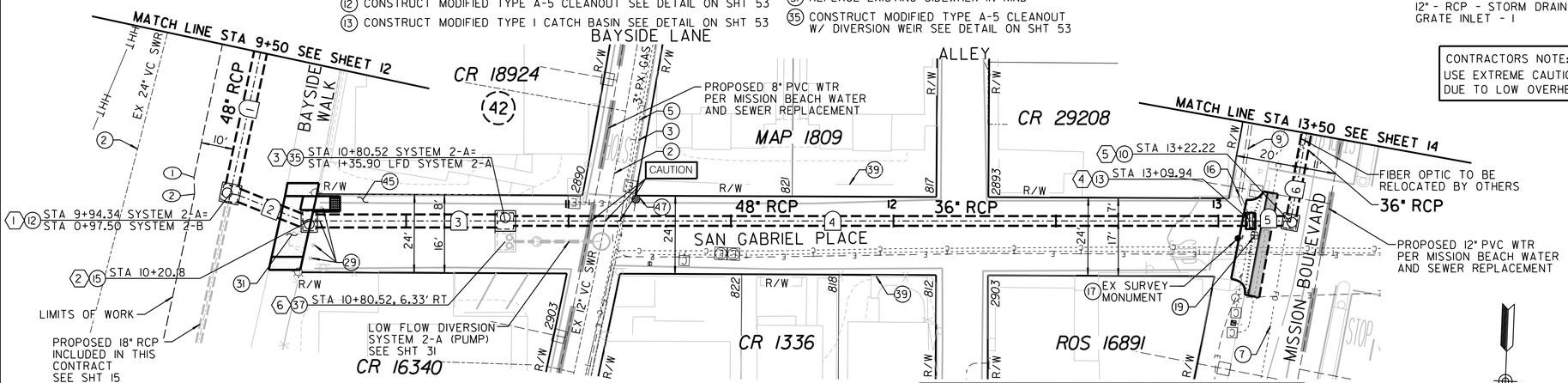
CONSTRUCTION NOTES

(2) PROTECT EX SEWER MAIN IN PLACE
(3) PROTECT GAS IN PLACE
(5) PROTECT CATV IN PLACE
(7) PROTECT FIBER OPTIC COND IN PLACE
(9) ABANDON EX STORM DRAIN PER WHITEBOOK SPECIFICATIONS
(10) CONSTRUCT TYPE A-4 CLEANOUT
(12) CONSTRUCT MODIFIED TYPE A-5 CLEANOUT SEE DETAIL ON SHT 53
(13) CONSTRUCT MODIFIED TYPE I CATCH BASIN SEE DETAIL ON SHT 53
(15) CONSTRUCT TYPE A-6 CLEANOUT
(16) REMOVE EX STORM DRAIN
(17) CONTACT CITY SURVEY SECTION TO PERPETUATE SURVEY MONUMENT
(19) REMOVE EX STORM DRAIN STRUCTURE
(29) SALVAGE AND REINSTALL BOLLARDS
(31) REPLACE EXISTING SIDEWALK IN KIND
(35) CONSTRUCT MODIFIED TYPE A-5 CLEANOUT W/ DIVERSION WEIR SEE DETAIL ON SHT 53
(37) CONSTRUCT LOW FLOW DIVERSION WET WELL VAULT SEE DETAIL ON SHT 91
(39) PROTECT EX WALL IN PLACE
(45) PROTECT EX PLANT BOXES IN PLACE
(47) PROTECT EX UTILITY POLE IN PLACE

REFERENCES:
WATER: 40709-8-D, 13159-13-D, 13159-10-D, 11293-11-D
SEWER: 17298-4-D, 17298-3-D
STORM DRAIN: 462-D, 9110-L
TELEPHONE: NONE
GAS: 15630-118940
ELECTRIC: 15630-118915, 15630-118940

RETIREMENTS:
12" - RCP - STORM DRAIN - 35' - 1962
GRATE INLET - 1

CONTRACTORS NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES



STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	9+94.34	1859829.04	6254215.45	MOD TYPE A-5 CO (Y=5')
2	10+20.18	1859836.51	6254190.87	TYPE A-6 CO
3	10+80.52	1859834.10	6254130.58	MOD TYPE A-5 CO W/ DIVERSION WEIR
4	13+09.93	1859824.92	6253901.35	MOD TYPE I CB (X=4')
5	13+22.22	1859824.79	6253889.09	TYPE A-4 CO
6	10+80.52, 6.33' RT	1859840.42	6254130.33	LFD WET WELL VAULT

SYSTEM 2-A

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N09° 47'44"E		41.84'	48" RCP (2000-D)*
2	N70° 30'52"W		21.34'	48" RCP (2000-D)*
3	S87° 42'30"W		55.84'	48" RCP (2000-D)*
4	S87° 42'30"W		225.96'	36" RCP (2000-D)*
5	S87° 42'30"W		9.32'	36" RCP (2000-D)*
6	S07° 57'31"W		25.78'	36" RCP (2000-D)*

*WATER-TIGHT JOINTS

SCALE 1" = 20'

Alignment Name:	Line 2a		
	Station	Northing	Easting
Element: Linear			
PI	9+91.84	1859826.58	6254215.03
PI	9+94.34	1859829.04	6254215.45
Tangential Direction:	N 9° 47'44" E		
Tangential Length:	2.50		
Element: Linear			
PI	9+94.34	1859829.04	6254215.45
PI	9+96.84	1859829.47	6254212.99
Tangential Direction:	N 80° 12'16" W		
Tangential Length:	2.50		
Element: Linear			
PI	9+96.84	1859829.47	6254212.99
PI	10+18.18	1859836.59	6254192.87
Tangential Direction:	N 70° 30'52" W		
Tangential Length:	21.34		
Element: Linear			
PI	10+18.18	1859836.59	6254192.87
PI	10+20.18	1859836.51	6254190.87
Tangential Direction:	S 87° 42'30" W		
Tangential Length:	2.00		
Element: Linear			
PI	10+20.18	1859836.51	6254190.87
PI	10+22.18	1859836.43	6254188.87
Tangential Direction:	S 87° 42'30" W		
Tangential Length:	2.00		
Element: Linear			
PI	10+22.18	1859836.43	6254188.87
PI	10+78.02	1859834.20	6254133.08
Tangential Direction:	S 87° 42'30" W		
Tangential Length:	55.84		
Element: Linear			
PI	10+78.02	1859834.20	6254133.08
PI	10+80.52	1859834.10	6254130.58
Tangential Direction:	S 87° 42'30" W		
Tangential Length:	2.50		
Element: Linear			
PI	10+80.52	1859834.10	6254130.58
PI	10+83.02	1859834.00	6254128.08
Tangential Direction:	S 87° 42'30" W		
Tangential Length:	2.50		
Element: Linear			
PI	10+83.02	1859834.00	6254128.08
PI	13+08.98	1859824.96	6253902.30
Tangential Direction:	S 87° 42'30" W		
Tangential Length:	225.96		
Element: Linear			
PI	13+08.98	1859824.96	6253902.30
PI	13+09.93	1859824.92	6253901.35
Tangential Direction:	S 87° 42'30" W		
Tangential Length:	0.96		
Element: Linear			
PI	13+09.93	1859824.92	6253901.35
PI	13+10.89	1859824.88	6253900.39
Tangential Direction:	S 87° 42'30" W		
Tangential Length:	0.96		
Element: Linear			
PI	13+10.89	1859824.88	6253900.39
PI	13+20.22	1859824.51	6253891.07
Tangential Direction:	S 87° 42'30" W		
Tangential Length:	9.32		
Element: Linear			
PI	13+20.22	1859824.51	6253891.07
PI	13+22.22	1859824.79	6253889.09
Tangential Direction:	N 82° 02'29" W		
Tangential Length:	2.00		
Element: Linear			
PI	13+22.22	1859824.79	6253889.09
PI	13+24.22	1859822.81	6253888.82
Tangential Direction:	S 7° 57'31" W		
Tangential Length:	2.00		
See Sht 14			

C–10

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SAN GABRIEL PLACE

BAYSIDE WALK TO MISSION BOULEVARD

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 13 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — RCE# C91224
PRINT DCE NAME

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

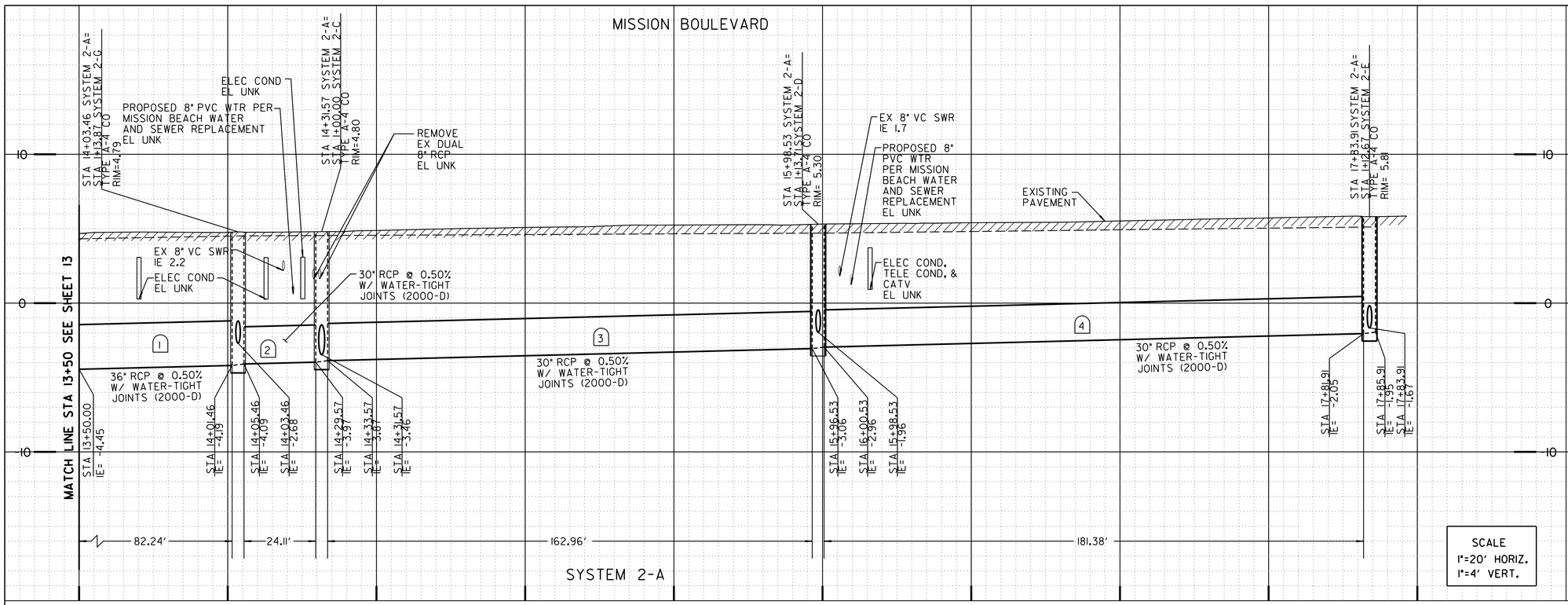
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
41306–13–D

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

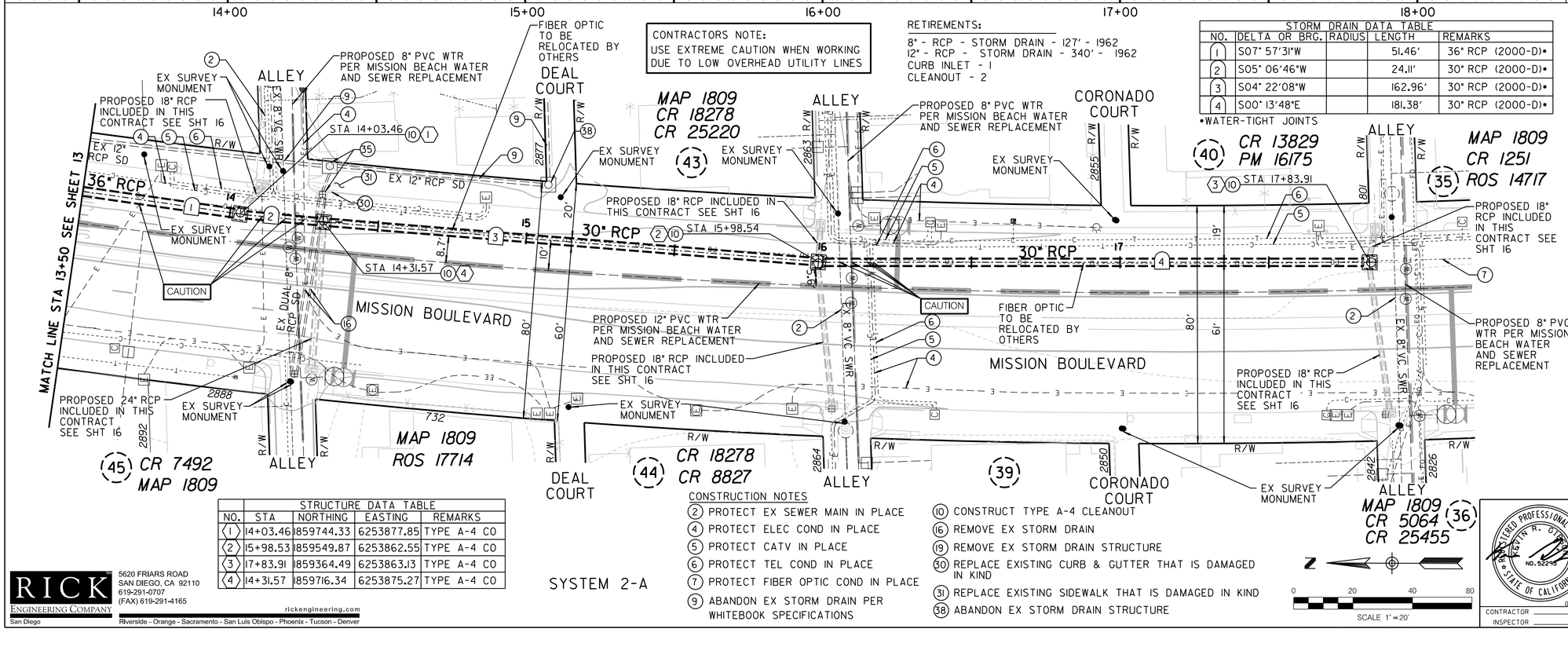
CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

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SAN GABRIEL PLACE



Alignment Name:	Line 2a		
	Station	Northing	Easting
Element: Linear			
PI	13+24.22	1859822.81	6253888.82
PI	14+01.46	1859746.31	6253878.12
Tangential Direction:	S 7° 57'31" W		
Tangential Length:	77.24		
Element: Linear			
PI	14+01.46	1859746.31	6253878.12
PI	14+03.46	1859744.33	6253877.85
Tangential Direction:	S 7° 57'31" W		
Tangential Length:	2.00		
Element: Linear			
PI	14+03.46	1859744.33	6253877.85
PI	14+05.46	1859742.35	6253877.57
Tangential Direction:	S 7° 57'31" W		
Tangential Length:	2.00		
Element: Linear			
PI	14+05.46	1859742.35	6253877.57
PI	14+29.57	1859718.34	6253875.42
Tangential Direction:	S 5° 06'46" W		
Tangential Length:	24.11		
Element: Linear			
PI	14+29.57	1859718.34	6253875.42
PI	14+31.57	1859716.34	6253875.27
Tangential Direction:	S 4° 22'08" W		
Tangential Length:	2.00		
Element: Linear			
PI	14+31.57	1859716.34	6253875.27
PI	14+33.57	1859714.35	6253875.11
Tangential Direction:	S 4° 22'08" W		
Tangential Length:	2.00		
Element: Linear			
PI	14+33.57	1859714.35	6253875.11
PI	15+96.53	1859551.86	6253862.70
Tangential Direction:	S 4° 22'08" W		
Tangential Length:	162.96		
Element: Linear			
PI	15+96.53	1859551.86	6253862.70
PI	15+98.53	1859549.87	6253862.55
Tangential Direction:	S 4° 22'08" W		
Tangential Length:	2.00		
Element: Linear			
PI	15+98.53	1859549.87	6253862.55
PI	16+00.53	1859547.87	6253862.40
Tangential Direction:	S 4° 22'08" W		
Tangential Length:	2.00		
Element: Linear			
PI	16+00.53	1859547.87	6253862.40
PI	17+81.91	1859366.49	6253863.12
Tangential Direction:	S 0° 13'48" E		
Tangential Length:	181.38		
Element: Linear			
PI	17+81.91	1859366.49	6253863.12
PI	17+83.91	1859364.49	6253863.13
Tangential Direction:	S 0° 13'48" E		
Tangential Length:	2.00		
Element: Linear			
PI	17+83.91	1859364.49	6253863.13
PI	17+85.91	1859362.49	6253863.14
Tangential Direction:	S 0° 13'48" E		
Tangential Length:	2.00		



STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	14+03.46	1859744.33	6253877.85	TYPE A-4 CO
2	15+98.53	1859549.87	6253862.55	TYPE A-4 CO
3	17+83.91	1859364.49	6253863.13	TYPE A-4 CO
4	14+31.57	1859716.34	6253875.27	TYPE A-4 CO

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	S07° 57'31"W		51.46'	36" RCP (2000-D)*
2	S05° 06'46"W		24.11'	30" RCP (2000-D)*
3	S04° 22'08"W		162.96'	30" RCP (2000-D)*
4	S00° 13'48"E		181.38'	30" RCP (2000-D)*

*WATER-TIGHT JOINTS

CONSTRUCTION NOTES
(2) PROTECT EX SEWER MAIN IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(6) PROTECT TEL COND IN PLACE
(7) PROTECT FIBER OPTIC COND IN PLACE
(9) ABANDON EX STORM DRAIN PER WHITEBOOK SPECIFICATIONS
(10) CONSTRUCT TYPE A-4 CLEANOUT
(16) REMOVE EX STORM DRAIN
(19) REMOVE EX STORM DRAIN STRUCTURE
(30) REPLACE EXISTING CURB & GUTTER THAT IS DAMAGED IN KIND
(31) REPLACE EXISTING SIDEWALK THAT IS DAMAGED IN KIND
(38) ABANDON EX STORM DRAIN STRUCTURE

SCALE 1" = 20'

REFERENCES:
WATER: 40709-8-D, 13159-13-D, 13159-10-D, 11293-11-D
SEWER: 17298-3-D
STORM DRAIN: 462-D, 9110-L
TELEPHONE: NONE
GAS: 15630-118940
ELECTRIC: 15630-118915, 15630-118940

C-11

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
MISSION BOULEVARD
ALLEY BLK 45 TO ALLEY BLK 35

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 14 OF 128 SHEETS

WBS B-18118 (G)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

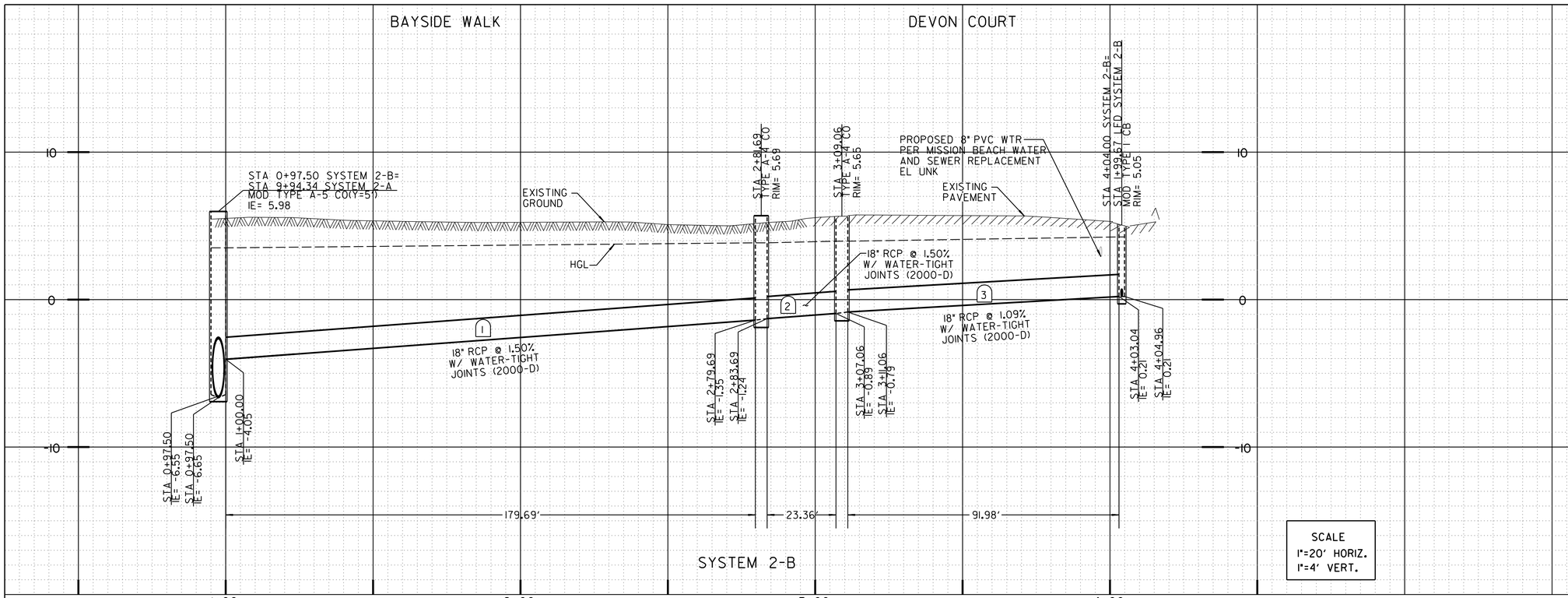
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52249 — STATE OF CALIFORNIA — 03/13/2023

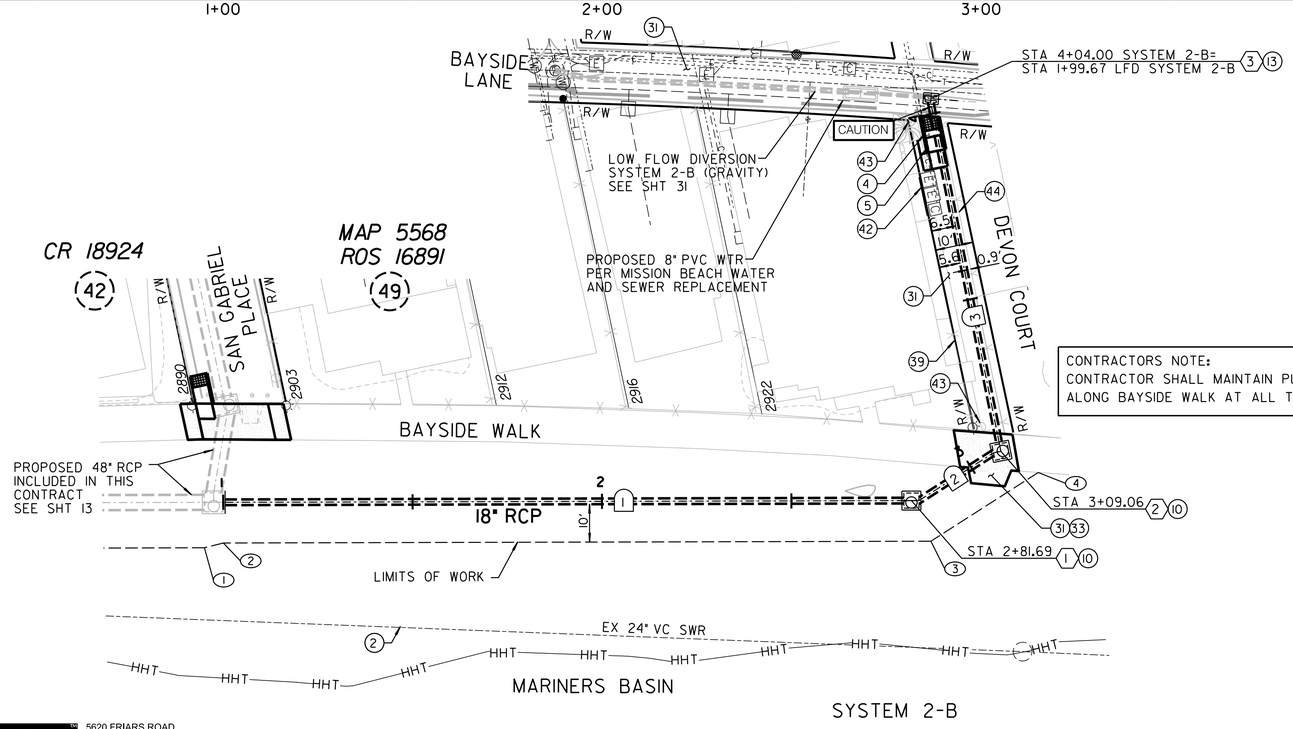
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-14-D

RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

MISSION BOULEVARD





CONSTRUCTION NOTES

(2) PROTECT EX SEWER MAIN IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(10) CONSTRUCT TYPE A-4 CLEANOUT
(13) CONSTRUCT MODIFIED TYPE I CATCH BASIN SEE DETAIL ON SHT 53
(31) REPLACE EXISTING SIDEWALK IN KIND
(33) SALVAGE AND REINSTALL EX BENCH
(39) PROTECT EX WALL IN PLACE
(42) PROTECT EX PEDESTRIAN PROTECTIVE RAILING IN PLACE
(43) SALVAGE AND REINSTALL EX SIGN
(44) PROTECT EX CHAIN LINK FENCE IN PLACE

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS ALONG BAYSIDE WALK AT ALL TIMES

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N09° 47'44"E		179.69'	18" RCP (2000-D)*
2	N22° 42'51"W		23.36'	18" RCP (2000-D)*
3	S88° 33'23"W		91.98'	18" RCP (2000-D)*

*WATER-TIGHT JOINTS

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	2+81.69	1860010.55	6254246.79	TYPE A-4 CO
2	3+09.06	1860036.07	6254238.05	TYPE A-4 CO
3	4+04.00	1860033.94	6254143.17	MOD TYPE I CB

RETIREMENTS:
NONE

REFERENCES:
WATER: NONE
SEWER: 13003-2-D
STORM DRAIN: NONE
CATV: 545322-010
TELEPHONE: 545322-010
GAS: 15630-118940
ELECTRIC: 545322-010

SCALE 1" = 20'

Alignment Name:	Line 2b		
	Station	Northing	Easting
Element: Linear			
PI	0+95.00	1859826.58	6254215.03
PI	0+97.50	1859829.04	6254215.45
Tangential Direction:	N 9° 47'44" E		
Tangential Length:	2.50		
Element: Linear			
PI	0+97.50	1859829.04	6254215.45
PI	1+00.00	1859831.51	6254215.88
Tangential Direction:	N 9° 47'44" E		
Tangential Length:	2.50		
Element: Linear			
PI	1+00.00	1859831.51	6254215.88
PI	2+79.69	1860008.58	6254246.45
Tangential Direction:	N 9° 47'44" E		
Tangential Length:	179.69		
Element: Linear			
PI	2+79.69	1860008.58	6254246.45
PI	2+81.69	1860010.55	6254246.79
Tangential Direction:	N 9° 47'44" E		
Tangential Length:	2.00		
Element: Linear			
PI	2+81.69	1860010.55	6254246.79
PI	2+83.69	1860012.52	6254247.13
Tangential Direction:	N 9° 47'44" E		
Tangential Length:	2.00		
Element: Linear			
PI	2+83.69	1860012.52	6254247.13
PI	3+07.06	1860034.07	6254238.11
Tangential Direction:	N 22° 42'51" W		
Tangential Length:	23.36		
Element: Linear			
PI	3+07.06	1860034.07	6254238.11
PI	3+09.06	1860036.07	6254238.05
Tangential Direction:	N 1° 27'57" W		
Tangential Length:	2.00		
Element: Linear			
PI	3+09.06	1860036.07	6254238.05
PI	3+11.06	1860036.02	6254236.06
Tangential Direction:	S 88° 32'03" W		
Tangential Length:	2.00		
Element: Linear			
PI	3+11.06	1860036.02	6254236.06
PI	4+03.04	1860033.71	6254144.1
Tangential Direction:	S 88° 33'23" W		
Tangential Length:	91.98		
Element: Linear			
PI	4+03.04	1860033.71	6254144.1
PI	4+04.00	1860033.94	6254143.17
Tangential Direction:	N 75° 48'22" W		
Tangential Length:	0.96		
Element: Linear			
PI	4+04.00	1860033.94	6254143.17
PI	4+04.96	1860034.18	6254142.24
Tangential Direction:	N 75° 48'22" W		
Tangential Length:	0.96		

CONTRACTORS NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES

LIMITS OF WORK DATA TABLE		
NO.	NORTHING	EASTING
1	1859824.54	6254226.85
2	1859829.68	6254226.47
3	1860013.78	6254258.254
4	1860044.82	6254245.26

C-12

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

BAYSIDE WALK / DEVON COURT

SAN GABRIEL PLACE TO BAYSIDE WALK TO DEVON COURT BAYSIDE LANE

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 15 OF 128 SHEETS

WBS B-18118 (G)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — RCE# C91224
PRINT DCE NAME

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

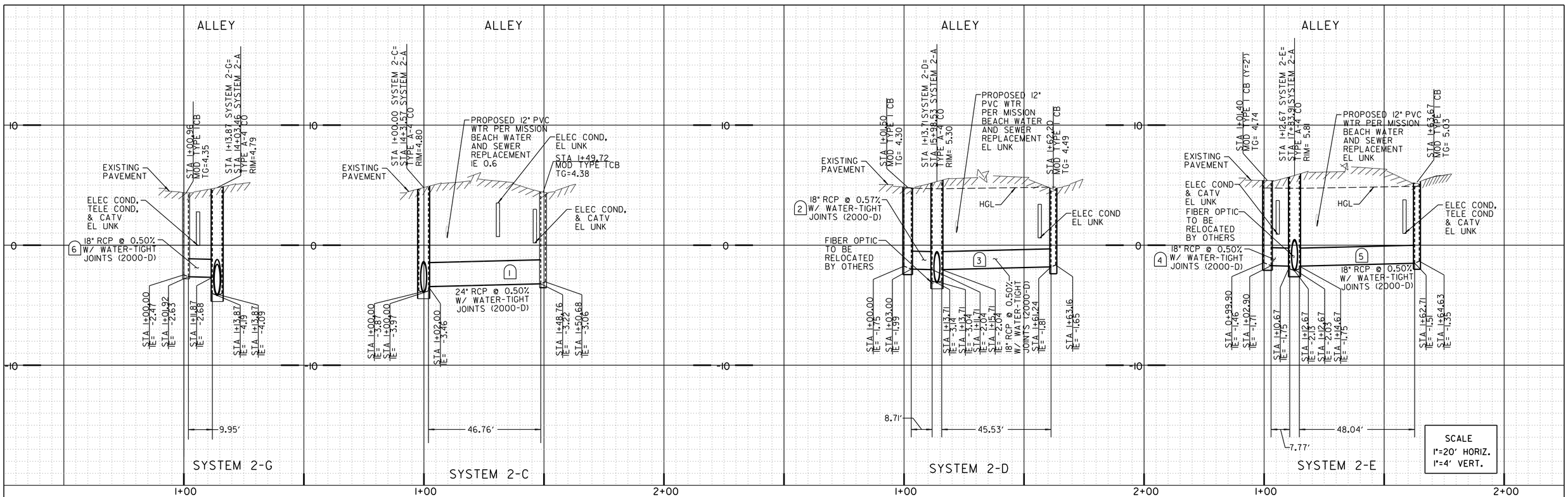
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
41306-15-D

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

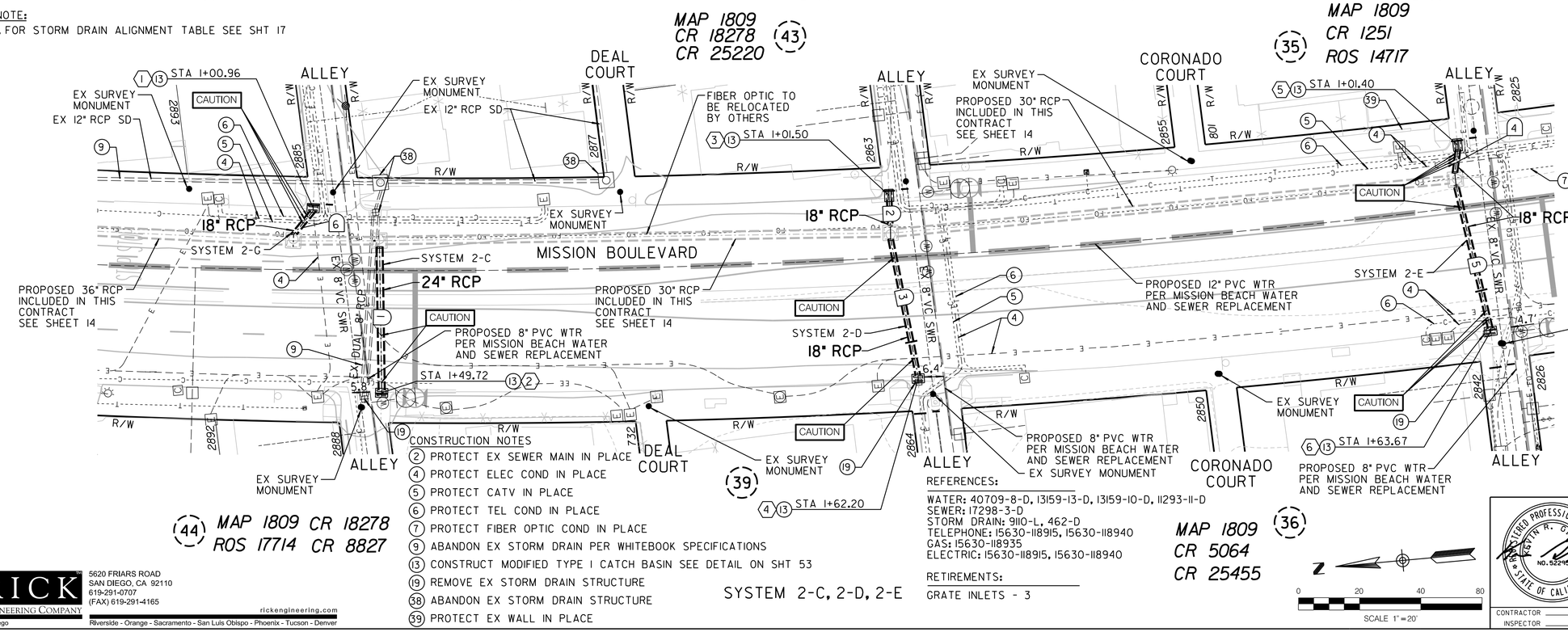
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

RICK ENGINEERING COMPANY
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5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
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BAYSIDE WALK / DEVON COURT



NOTE:
1. FOR STORM DRAIN ALIGNMENT TABLE SEE SHT 17



CONSTRUCTION NOTES
(2) PROTECT EX SEWER MAIN IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(6) PROTECT TEL COND IN PLACE
(7) PROTECT FIBER OPTIC COND IN PLACE
(9) ABANDON EX STORM DRAIN PER WHITEBOOK SPECIFICATIONS
(13) CONSTRUCT MODIFIED TYPE I CATCH BASIN SEE DETAIL ON SHT 53
(19) REMOVE EX STORM DRAIN STRUCTURE
(38) ABANDON EX STORM DRAIN STRUCTURE
(39) PROTECT EX WALL IN PLACE

SYSTEM 2-C, 2-D, 2-E

REFERENCES:
WATER: 40709-8-D, 13159-13-D, 13159-10-D, 11293-11-D
SEWER: 17298-3-D
STORM DRAIN: 9110-L, 462-D
TELEPHONE: 15630-118915, 15630-118940
GAS: 15630-118935
ELECTRIC: 15630-118915, 15630-118940

RETIREMENTS:
GRATE INLETS - 3

SCALE 1" = 20'

STORM DRAIN DATA TABLE

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N85° 37'52"W		46.76'	24" RCP (2000-D)•
2	N87° 11'42"W		8.71'	18" RCP (2000-D)•
3	S83° 54'17"W		45.53'	18" RCP (2000-D)•
4	N77° 11'00"W		7.77'	18" RCP (2000-D)•
5	S81° 45'39"W		48.04'	18" RCP (2000-D)•
6	N45° 11'38"W		9.95'	18" RCP (2000-D)•

•WATER-TIGHT JOINTS

STRUCTURE DATA TABLE

NO.	STA	NORTHING	EASTING	REMARKS
1	1+00.96	1859736.91	6253887.84	MOD TYPE I CB
2	1+49.72	1859720.17	6253825.70	MOD TYPE I CB
3	1+01.50	1859549.22	6253874.74	MOD TYPE I CB
4	1+62.20	1859545.22	6253814.32	MOD TYPE I CB
5	1+01.40	1859362.80	6253874.21	MOD TYPE I CB (Y=2')
6	1+63.67	1859357.56	6253812.63	MOD TYPE I CB

C-13

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
MISSION BOULEVARD
ALLEY BLK 44 TO ALLEY BLK 39

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 16 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
DESIGNED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
41306-16-D

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. CRAIG — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

RICK ENGINEERING COMPANY
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619-291-0707
(FAX) 619-291-4165
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MISSION BOULEVARD

Alignment Name:	Line 2c		
	Station	Northing	Easting
Element: Linear			
PI	0+98.00	1859716.19	6253877.26
PI	1+00.00	1859716.34	6253875.27
Tangential Direction:	N 85° 37'52" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+00.00	1859716.34	6253875.27
PI	1+02.00	1859716.49	6253873.27
Tangential Direction:	N 85° 37'52" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+02.00	1859716.49	6253873.27
PI	1+48.76	1859720.06	6253826.65
Tangential Direction:	N 85° 37'52" W		
Tangential Length:	46.76		
Element: Linear			
PI	1+48.76	1859720.06	6253826.65
PI	1+49.72	1859720.17	6253825.70
Tangential Direction:	N 83° 01'19" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+49.72	1859720.17	6253825.70
PI	1+50.68	1859720.29	6253824.75
Tangential Direction:	N 83° 01'19" W		
Tangential Length:	0.96		

Alignment Name:	Line 2d		
	Station	Northing	Easting
Element: Linear			
PI	1+00.00	1859549.14	6253876.24
PI	1+01.50	1859549.22	6253874.74
Tangential Direction:	N 87° 11'42" W		
Tangential Length:	1.50		
Element: Linear			
PI	1+01.50	1859549.22	6253874.74
PI	1+03.00	1859549.29	6253873.24
Tangential Direction:	N 87° 11'42" W		
Tangential Length:	1.50		
Element: Linear			
PI	1+03.00	1859549.29	6253873.24
PI	1+11.71	1859549.72	6253864.54
Tangential Direction:	N 87° 11'42" W		
Tangential Length:	8.71		
Element: Linear			
PI	1+11.71	1859549.72	6253864.54
PI	1+13.71	1859549.87	6253862.55
Tangential Direction:	N 85° 37'52" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+13.71	1859549.87	6253862.55
PI	1+15.71	1859550.02	6253860.55
Tangential Direction:	N 85° 37'52" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+15.71	1859550.02	6253860.55
PI	1+61.24	1859545.19	6253815.28
Tangential Direction:	S 83° 54'17" W		
Tangential Length:	45.53		
Element: Linear			
PI	1+61.24	1859545.19	6253815.28
PI	1+62.20	1859545.22	6253814.32
Tangential Direction:	N 88° 05'34" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+62.20	1859545.22	6253814.32
PI	1+63.16	1859545.25	6253813.37
Tangential Direction:	N 88° 05'34" W		
Tangential Length:	0.96		

Alignment Name:	Line 2e		
	Station	Northing	Easting
Element: Linear			
PI	0+99.90	1859362.82	6253875.71
PI	1+01.40	1859362.80	6253874.21
Tangential Direction:	S 89° 07'27" W		
Tangential Length:	1.50		
Element: Linear			
PI	1+01.40	1859362.80	6253874.21
PI	1+02.90	1859362.77	6253872.71
Tangential Direction:	S 89° 07'27" W		
Tangential Length:	1.50		
Element: Linear			
PI	1+02.90	1859362.77	6253872.71
PI	1+10.67	1859364.50	6253865.13
Tangential Direction:	N 77° 11'00" W		
Tangential Length:	7.77		
Element: Linear			
PI	1+10.67	1859364.50	6253865.13
PI	1+12.67	1859364.49	6253863.13
Tangential Direction:	S 89° 46'12" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+12.67	1859364.49	6253863.13
PI	1+14.67	1859364.48	6253861.13
Tangential Direction:	S 89° 46'12" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+14.67	1859364.48	6253861.13
PI	1+62.71	1859357.60	6253813.59
Tangential Direction:	S 81° 45'39" W		
Tangential Length:	48.04		
Element: Linear			
PI	1+62.71	1859357.60	6253813.59
PI	1+63.67	1859357.56	6253812.63
Tangential Direction:	S 87° 49'43" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+63.67	1859357.56	6253812.63
PI	1+64.63	1859357.52	6253811.67
Tangential Direction:	S 87° 49'43" W		
Tangential Length:	0.96		

Alignment Name:	Line 2g		
	Station	Northing	Easting
Element: Linear			
PI	1+00.00	1859736.78	6253888.79
PI	1+00.96	1859736.91	6253887.84
Tangential Direction:	N 82° 17'26" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+00.96	1859736.91	6253887.84
PI	1+01.92	1859737.04	6253886.89
Tangential Direction:	N 82° 17'26" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+01.92	1859737.04	6253886.89
PI	1+11.87	1859744.06	6253879.83
Tangential Direction:	N 45° 11'38" W		
Tangential Length:	9.95		
Element: Linear			
PI	1+11.87	1859744.06	6253879.83
PI	1+13.87	1859744.33	6253877.85
Tangential Direction:	N 82° 02'29" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+13.87	1859744.33	6253877.85
PI	1+15.87	1859744.61	6253875.86
Tangential Direction:	N 82° 02'29" W		
Tangential Length:	2.00		

MISSION BOULEVARD ALIGNMENT TABLE

C– 14

SOUTH MISSION BEACH STORM DRAIN
AND GREEN INFRASTRUCTURE
MISSION BOULEVARD ALIGNMENT TABLE

ALLEY BLK 44 TO ALLEY BLK 35

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 17 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: _____ FOR CITY ENGINEER
ELHAM LOTFI PRINT DCE NAME
12/18/2023 DATE
C91224 RCE#

SUBMITTED BY: KAREN VERA PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE

1858-6249 CCS83 COORDINATE

41306–17–D

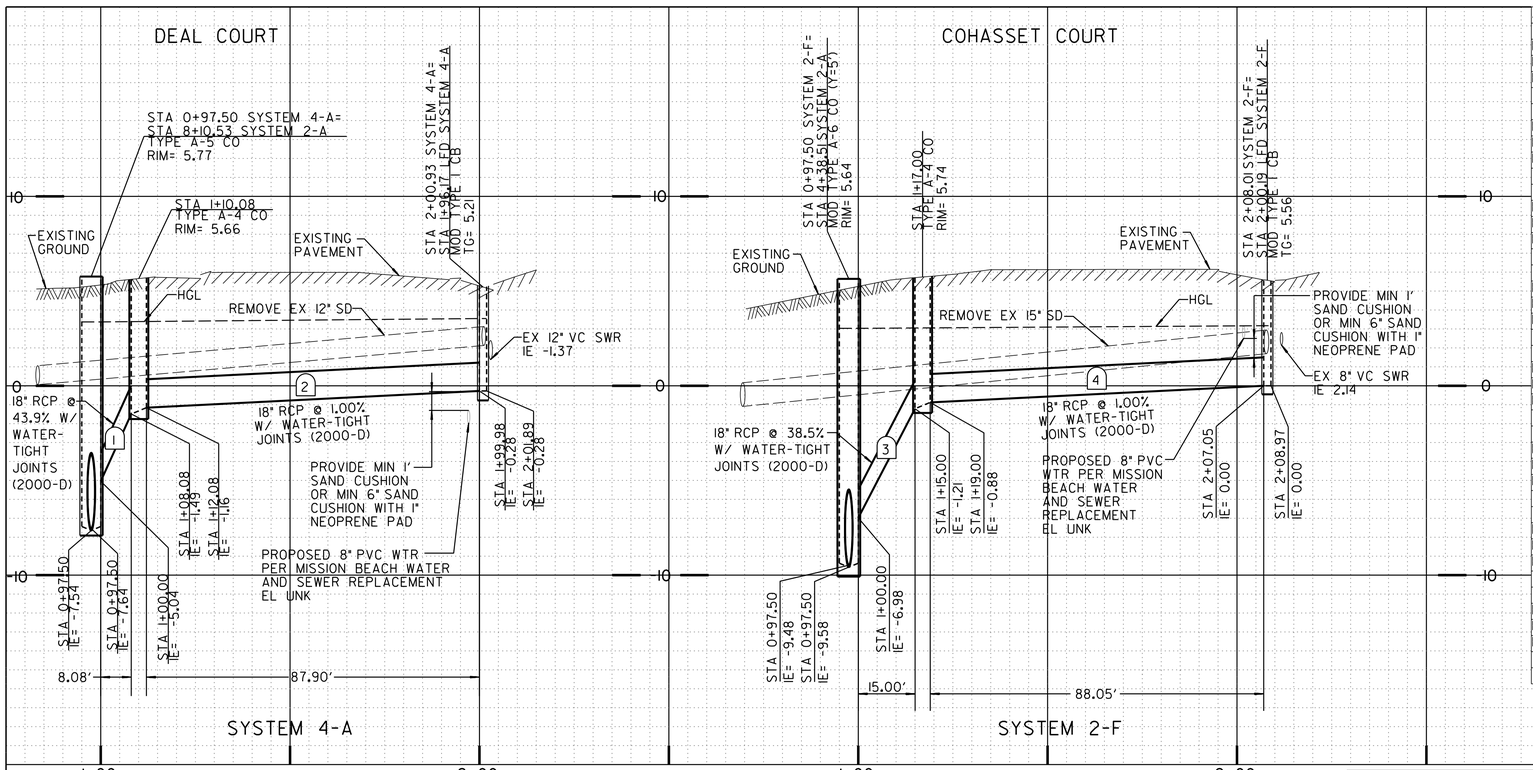
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

0 10 20 30
SCALE 1" = 10'

RICK ENGINEERING COMPANY
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DEAL COURT /COHASSET COURT

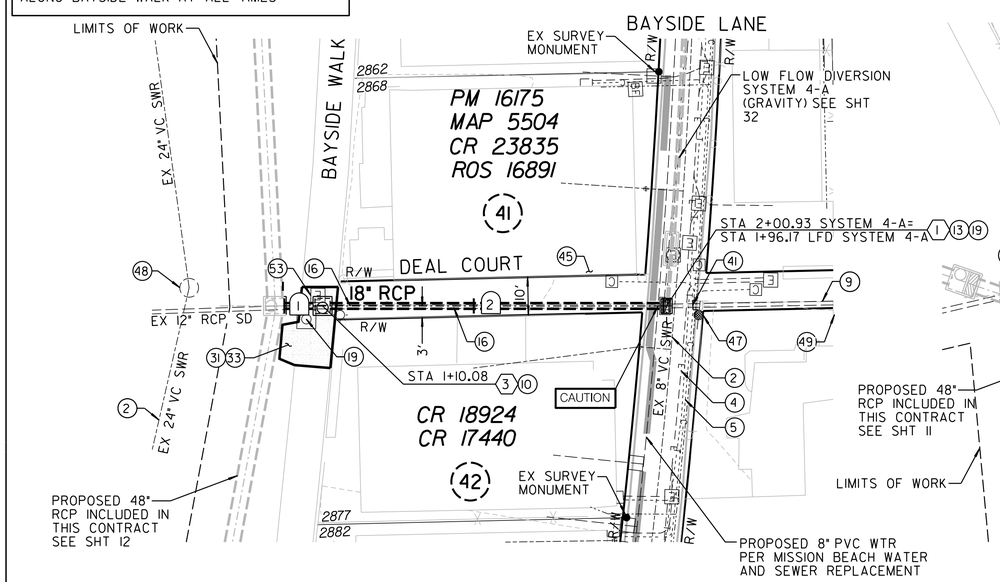


Alignment Name:	Line 4a		
	Station	Northing	Easting
Element: Linear			
PI	0+95.00	1859647.92	6254187.04
PI	0+97.50	1859647.89	6254184.54
Tangential Direction:	S 89° 17'14" W		
Tangential Length:	2.50		
Element: Linear			
PI	0+97.50	1859647.89	6254184.54
PI	1+00.00	1859647.86	6254182.04
Tangential Direction:	S 89° 17'14" W		
Tangential Length:	2.50		
Element: Linear			
PI	1+00.00	1859647.86	6254182.04
PI	1+08.08	1859647.76	6254173.97
Tangential Direction:	S 89° 17'15" W		
Tangential Length:	8.08		
Element: Linear			
PI	1+08.08	1859647.76	6254173.97
PI	1+10.08	1859647.73	6254171.97
Tangential Direction:	S 89° 17'15" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+10.08	1859647.73	6254171.97
PI	1+12.08	1859647.71	6254169.97
Tangential Direction:	S 89° 17'15" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+12.08	1859647.71	6254169.97
PI	1+99.98	1859646.62	6254082.08
Tangential Direction:	S 89° 17'15" W		
Tangential Length:	87.90		
Element: Linear			
PI	1+99.98	1859646.62	6254082.08
PI	2+00.93	1859646.60	6254081.12
Tangential Direction:	S 89° 13'14" W		
Tangential Length:	0.96		
Element: Linear			
PI	2+00.93	1859646.60	6254081.12
PI	2+01.89	1859646.60	6254080.16
Tangential Direction:	S 89° 37'51" W		
Tangential Length:	0.96		

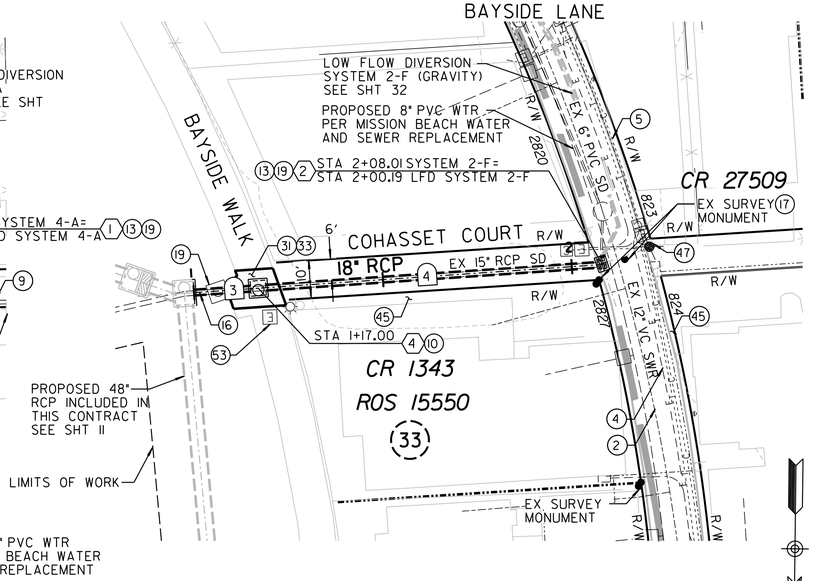
Alignment Name:	Line 2f		
	Station	Northing	Easting
PI	0+95.00	1859276.70	6254210.48
PI	0+97.50	1859276.60	6254207.98
Tangential Direction:	S 87° 43'02" W		
Tangential Length:	2.50		
Element: Linear			
PI	0+97.50	1859276.60	6254207.98
PI	1+00.00	1859276.50	6254205.48
Tangential Direction:	S 87° 43'02" W		
Tangential Length:	2.50		
Element: Linear			
PI	1+00.00	1859276.50	6254205.48
PI	1+15.00	1859275.91	6254190.49
Tangential Direction:	S 87° 43'02" W		
Tangential Length:	15.00		
Element: Linear			
PI	1+15.00	1859275.91	6254190.49
PI	1+17.00	1859275.83	6254188.50
Tangential Direction:	S 87° 43'02" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+17.00	1859275.83	6254188.50
PI	1+19.00	1859275.75	6254186.50
Tangential Direction:	S 87° 43'02" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+19.00	1859275.75	6254186.50
PI	2+07.05	1859272.24	6254098.52
Tangential Direction:	S 87° 43'02" W		
Tangential Length:	88.05		
Element: Linear			
PI	2+07.05	1859272.24	6254098.52
PI	2+08.01	1859271.96	6254097.60
Tangential Direction:	S 73° 14'43" W		
Tangential Length:	0.96		
Element: Linear			
PI	2+08.01	1859271.96	6254097.60
PI	2+08.96	1859271.69	6254096.69
Tangential Direction:	S 73° 14'43" W		
Tangential Length:	0.96		

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

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS ALONG BAYSIDE WALK AT ALL TIMES



CONTRACTORS NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES



CONSTRUCTION NOTES

(2) PROTECT EX SEWER MAIN IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(9) ABANDON EX STORM DRAIN PER WHITEBOOK SPECIFICATIONS
(10) CONSTRUCT TYPE A-4 CLEANOUT
(13) CONSTRUCT MODIFIED TYPE I CATCH BASIN SEE DETAIL ON SHT 53
(16) REMOVE EX STORM DRAIN
(17) CONTACT CITY SURVEY SECTION TO PERPETUATE SURVEY MONUMENT
(19) REMOVE EX STORM DRAIN STRUCTURE
(31) REPLACE EXISTING SIDEWALK IN KIND
(33) SALVAGE AND REINSTALL EX BENCH
(41) CUT AND PLUG EX STORM DRAIN
(45) PROTECT EX PLANT BOXES IN PLACE
(47) PROTECT UTILITY POLE IN PLACE
(48) PROTECT EX SEWER MANHOLE IN PLACE
(49) PROTECT EX FENCE IN PLACE
(53) SALVAGE AND REINSTALL EX PULL BOX

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
(1)	S89° 17'15"W		8.08'	18" RCP (2000-D)•
(2)	S89° 17'15"W		87.90'	18" RCP (2000-D)•
(3)	S87° 43'02"W		15.00'	18" RCP (2000-D)•
(4)	S87° 43'02"W		88.05'	18" RCP (2000-D)•

•WATER-TIGHT JOINTS

REFERENCES:

WATER: 40709-13-D, 40709-21-D, 13159-12-D, 11293-11-D
SEWER: 13013-2-D, 40709-13-D, 17298-3-D
STORM DRAIN: 462-D, 26369-25-D
CATV: 545322-010, BLRI955-BLRI956
TELEPHONE: 545322-010
GAS: 15630-118940
ELECTRIC: 15630-118915, 15630-118935
15630-118940, 545322-010

RETIREMENTS:

12" - RCP - STORM DRAIN - 100' - 1962
15" - RCP - STORM DRAIN - 109' - 1994
GRATE INLET - 2

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
(1)	2+00.93	1859646.60	6254081.12	MOD TYPE I CB
(2)	2+08.01	1859271.96	6254097.60	MOD TYPE I CB
(3)	1+10.08	1859647.73	6254171.97	TYPE A-4 CO
(4)	1+17.00	1859275.83	6254188.50	TYPE A-4 CO

NOTE:
SEE SHT 12 AND 37 FOR LIMITS OF WORK

SCALE 1" = 20'

C–15

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

DEAL COURT / COHASSET COURT

BAYSIDE WALK TO BAYSIDE LANE — BAYSIDE WALK TO BAYSIDE LANE

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 18 OF 128 SHEETS

WBS B-18118 (G)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

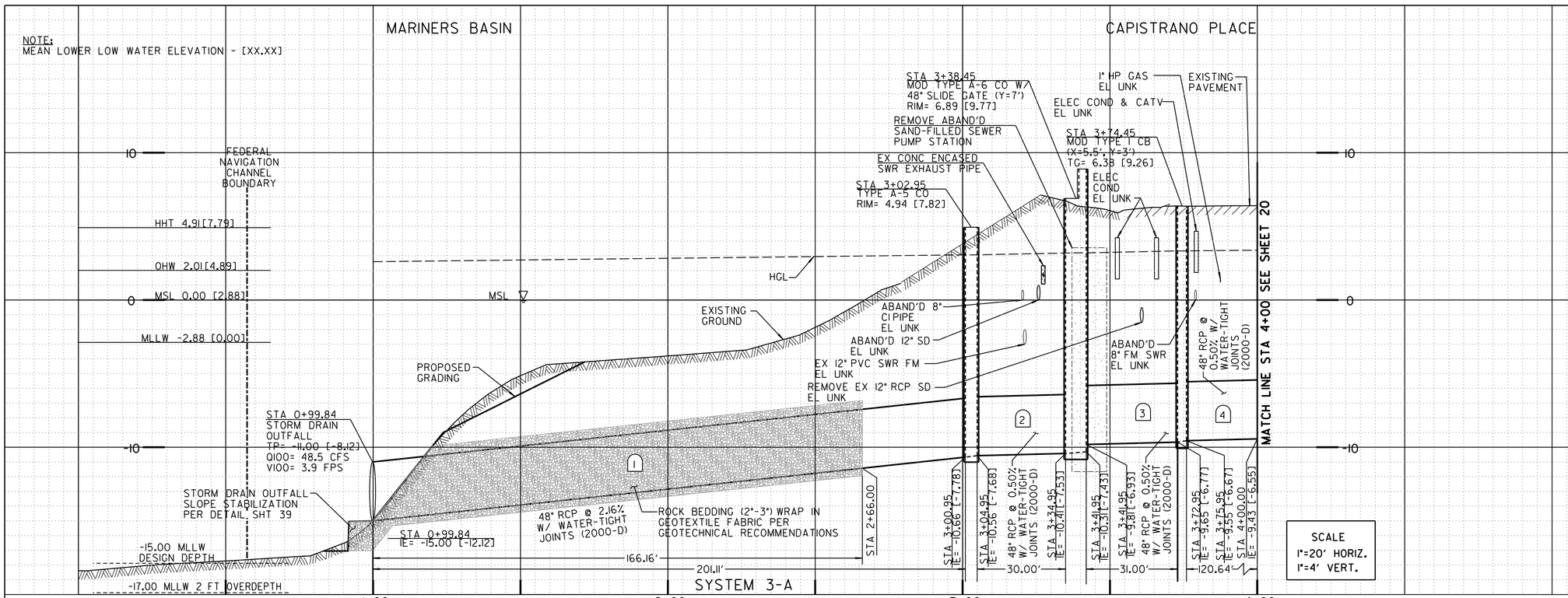
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/15/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306–18–D

RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

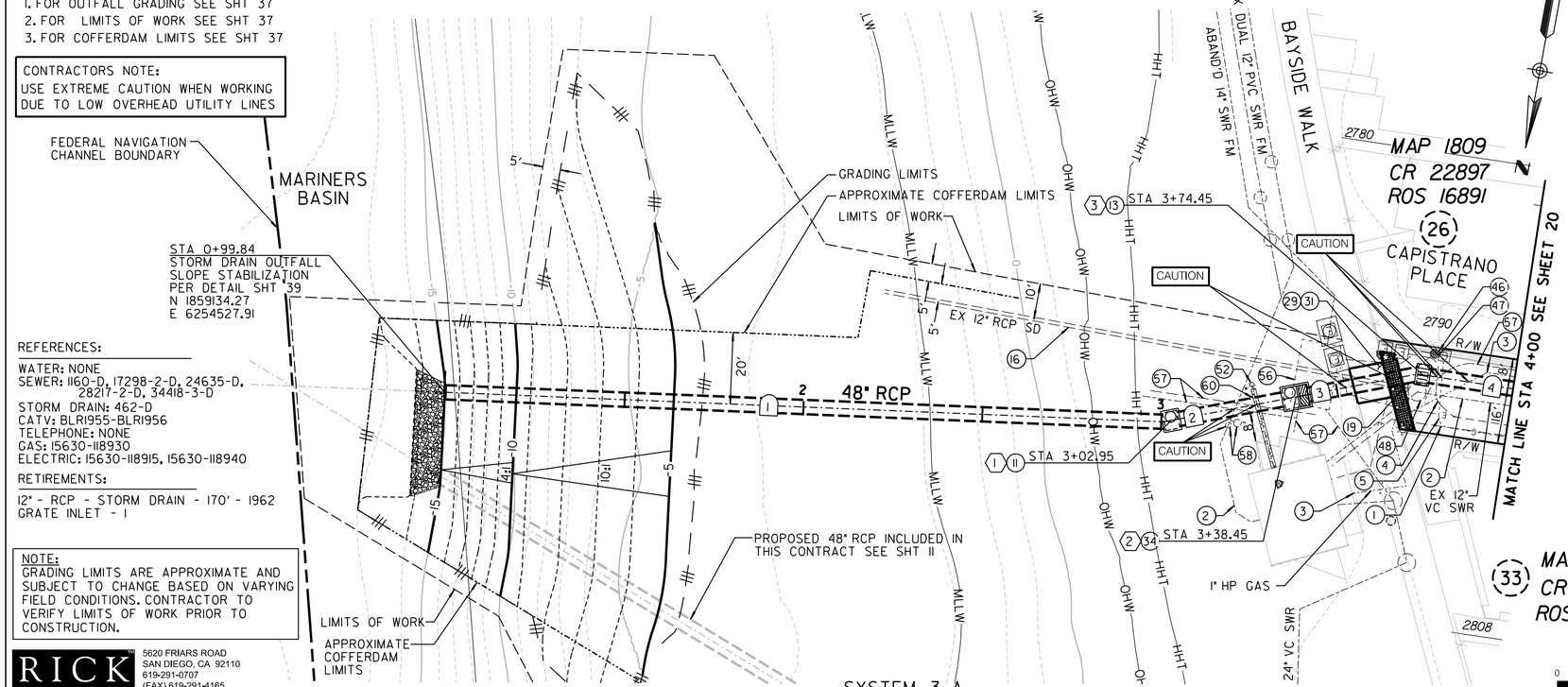
NOTE:
MEAN LOWER LOW WATER ELEVATION - [XX.XX]



Alignment Name:	Line 3a		
	Station	Northing	Easting
Element: Linear			
PI	0+99.84	1859134.27	6254527.91
PI	3+00.95	1859105.85	6254328.82
Tangential Direction:	S 81° 52'33" W		
Tangential Length:	201.11		
Element: Linear			
PI	3+00.95	1859105.85	6254328.82
PI	3+02.95	1859105.13	6254326.96
Tangential Direction:	S 68° 51'51" W		
Tangential Length:	2.00		
Element: Linear			
PI	3+02.95	1859105.13	6254326.96
PI	3+04.95	1859104.41	6254325.09
Tangential Direction:	S 68° 51'51" W		
Tangential Length:	2.00		
Element: Linear			
PI	3+04.95	1859104.41	6254325.09
PI	3+34.95	1859093.59	6254297.11
Tangential Direction:	S 68° 51'51" W		
Tangential Length:	30.00		
Element: Linear			
PI	3+34.95	1859093.59	6254297.11
PI	3+38.45	1859092.33	6254293.85
Tangential Direction:	S 68° 51'51" W		
Tangential Length:	3.50		
Element: Linear			
PI	3+38.45	1859092.33	6254293.85
PI	3+41.95	1859091.07	6254290.58
Tangential Direction:	S 68° 51'51" W		
Tangential Length:	3.50		
Element: Linear			
PI	3+41.95	1859091.07	6254290.58
PI	3+72.95	1859079.89	6254261.67
Tangential Direction:	S 68° 51'51" W		
Tangential Length:	31.00		
Element: Linear			
PI	3+72.95	1859079.89	6254261.67
PI	3+74.45	1859079.83	6254260.17
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	1.50		
Element: Linear			
PI	3+74.45	1859079.83	6254260.17
PI	3+75.95	1859079.78	6254258.67
Tangential Direction:	S 87° 49'42" W		
Tangential Length:	1.50		
Element: Linear			
PI	3+75.95	1859079.78	6254258.67
PI	4+96.59	1859076.20	6254138.08
Tangential Direction:	S 88° 18'06" W		
Tangential Length:	120.64		
See Sht 20			

NOTE:
1. FOR OUTFALL GRADING SEE SHT 37
2. FOR LIMITS OF WORK SEE SHT 37
3. FOR COFFERDAM LIMITS SEE SHT 37

CONTRACTORS NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES



REFERENCES:

WATER: NONE
SEWER: 1160-D, 17298-2-D, 24635-D, 28217-2-D, 34418-3-D
STORM DRAIN: 462-D
CATV: BLR1955-BLR1956
TELEPHONE: NONE
GAS: 15630-118930
ELECTRIC: 15630-118915, 15630-118940

RETIREMENTS:

12" - RCP - STORM DRAIN - 170' - 1962
GRATE INLET - 1

NOTE:
GRADING LIMITS ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON VARYING FIELD CONDITIONS. CONTRACTOR TO VERIFY LIMITS OF WORK PRIOR TO CONSTRUCTION.

CONSTRUCTION NOTES

(1) PROTECT EX WATER IN PLACE
(2) PROTECT EX SEWER MAIN IN PLACE
(3) PROTECT GAS IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(11) CONSTRUCT TYPE A-5 CLEANOUT
(13) CONSTRUCT MODIFIED TYPE I CATCH BASIN (SEE DETAIL ON SHT 53)
(16) REMOVE EX STORM DRAIN
(19) REMOVE EX STORM DRAIN STRUCTURE
(29) SALVAGE AND REINSTALL BOLLARDS
(31) REPLACE EXISTING SIDEWALK IN KIND
(34) CONSTRUCT MODIFIED TYPE A-6 CLEANOUT W/ 48" SLIDE GATE (Y=7') (SEE DETAIL ON SHT 55)
(46) PROTECT EX GUY WIRE IN PLACE
(47) PROTECT UTILITY POLE IN PLACE
(48) PROTECT EX SEWER MANHOLE IN PLACE
(52) PROTECT EX LIGHT / ANTENNA / SEWER EXHAUST IN PLACE
(56) REMOVE CONFLICTING, ABANDONED, SAND-FILLED SEWER PUMP STATION AS NECESSARY (SEE DETAIL ON SHT 54)
(57) REMOVE CONFLICTING ABANDONED CONDUIT AS NECESSARY (SEE PROFILE FOR DETAILS)
(58) PROTECT EX SEWER FM GATE VALVE AND BLOW-OFF IN PLACE (CONTRACTOR TO FIELD VERIFY PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY CONFLICT)
(60) PROTECT EX CONCRETE ENCASED SEWER EXHAUST PIPE

STRUCTURE DATA TABLE

NO.	STA	NORTHING	EASTING	REMARKS
(1)	3+02.95	1859105.13	6254326.96	MOD TYPE A-5 CO
(2)	3+38.45	1859092.33	6254293.85	MOD TYPE A-6 CO W/ 48" SLIDE GATE (Y=7')
(3)	3+74.45	1859079.83	6254260.17	MOD TYPE I CB (X=5.5', Y=3')

STORM DRAIN DATA TABLE

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
(1)	S81° 52'33"W		201.11'	48" RCP (2000-D)•
(2)	S68° 51'51"W		30.00'	48" RCP (2000-D)•
(3)	S68° 51'51"W		31.00'	48" RCP (2000-D)•
(4)	S88° 18'06"W		24.05'	48" RCP (2000-D)•

•WATER-TIGHT JOINTS

C-16

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

CAPISTRANO PLACE

MARINERS BASIN TO BAYSIDE WALK

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 19 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

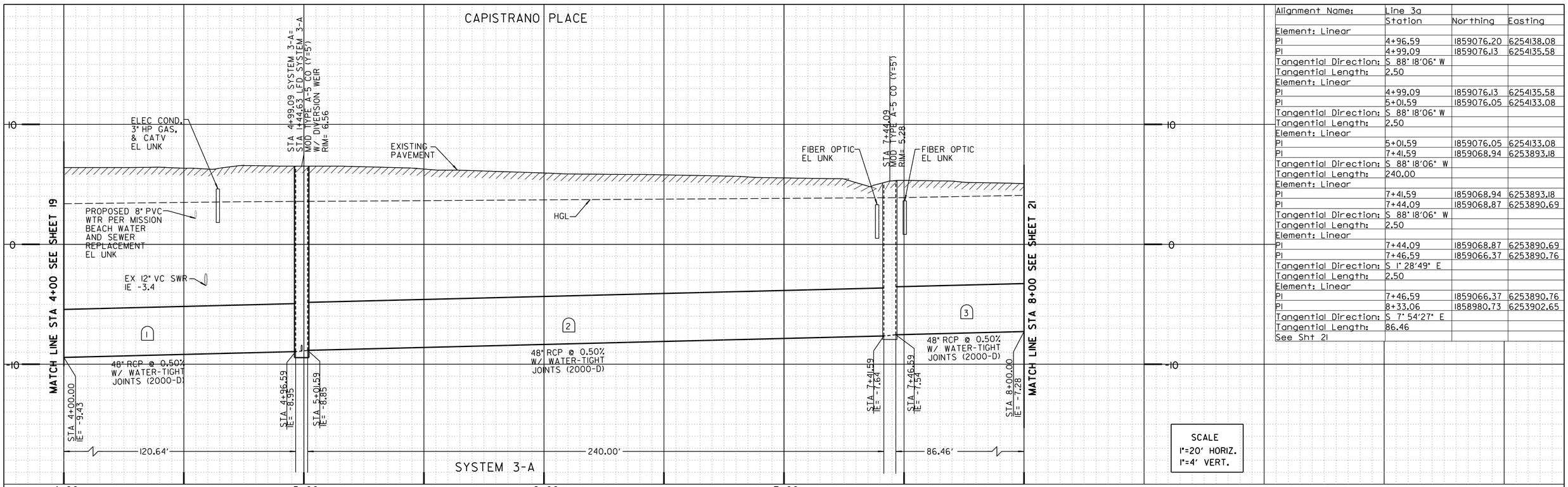
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
41306-19-D

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. CRAIG — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

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(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

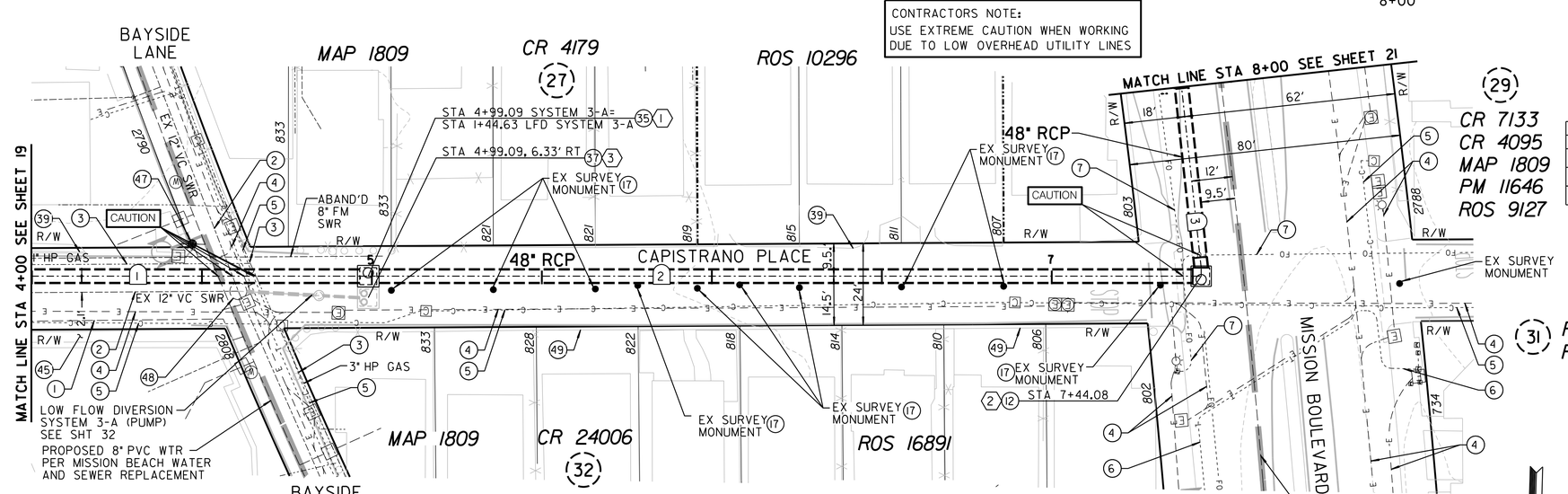
CAPISTRANO PLACE



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

Alignment Name:	Line 3a		
	Station	Northing	Easting
Element: Linear			
PI	4+96.59	1859076.20	6254138.08
PI	4+99.09	1859076.13	6254135.58
Tangential Direction:	S 88° 18'06" W		
Tangential Length:	2.50		
Element: Linear			
PI	4+99.09	1859076.13	6254135.58
PI	5+01.59	1859076.05	6254133.08
Tangential Direction:	S 88° 18'06" W		
Tangential Length:	2.50		
Element: Linear			
PI	5+01.59	1859076.05	6254133.08
PI	7+41.59	1859068.94	6253893.18
Tangential Direction:	S 88° 18'06" W		
Tangential Length:	240.00		
Element: Linear			
PI	7+41.59	1859068.94	6253893.18
PI	7+44.09	1859068.87	6253890.69
Tangential Direction:	S 88° 18'06" W		
Tangential Length:	2.50		
Element: Linear			
PI	7+44.09	1859068.87	6253890.69
PI	7+46.59	1859066.37	6253890.76
Tangential Direction:	S 1° 28'49" E		
Tangential Length:	2.50		
Element: Linear			
PI	7+46.59	1859066.37	6253890.76
PI	8+33.06	1858980.73	6253902.65
Tangential Direction:	S 7° 54'27" E		
Tangential Length:	86.46		
See Sht 21			

CONTRACTORS NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES



STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
(1)	S88° 18'06"W		96.59'	48" RCP (2000-D)*
(2)	S88° 18'06"W		240.00'	48" RCP (2000-D)*
(3)	S07° 54'27"E		53.42'	48" RCP (2000-D)*

*WATER-TIGHT JOINTS

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
(1)	4+99.09	1859076.13	6254135.58	MOD TYPE A-5 CO (Y=5')W/ DIVERSION WEIR
(2)	7+44.09	1859068.87	6253890.69	MOD TYPE A-5 CO (Y=5')
(3)	4+99.09, 6.33' RT	1859082.46	6254135.39	LFD WET WELL VAULT

REFERENCES:

WATER: 40709-13-D,
SEWER: 16739-2-D, 17298-2-D, 13159-10-D
STORM DRAIN: NONE
CATV: BLR1955-BLR1956
TELEPHONE: 545322-020
GAS: 15630-118930
ELECTRIC: 545322-020

RETIREMENTS:

NONE

CONSTRUCTION NOTES

(1) PROTECT EX WATER IN PLACE
(2) PROTECT EX SEWER MAIN IN PLACE
(3) PROTECT GAS IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(6) PROTECT TEL COND IN PLACE
(7) PROTECT FIBER OPTIC IN PLACE
(12) CONSTRUCT MODIFIED TYPE A-5 CLEANOUT SEE DETAIL ON SHT 53
(17) CONTACT CITY SURVEY SECTION TO PERPETUATE SURVEY MONUMENT
(35) CONSTRUCT MODIFIED TYPE A-5 CLEANOUT W/ DIVERSION WEIR SEE DETAIL ON SHT 53
(37) CONSTRUCT LOW FLOW DIVERSION WET WELL VAULT SEE DETAIL ON SHT 91
(39) PROTECT EX WALL IN PLACE
(43) SALVAGE AND REINSTALL EX SIGN
(45) PROTECT EX PLANT BOXES IN PLACE
(47) PROTECT EX UTILITY POLE IN PLACE
(48) PROTECT EX SEWER MANHOLE IN PLACE
(49) PROTECT EX FENCE IN PLACE

C-17

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

CAPISTRANO PLACE

BAYSIDE WALK TO MISSION BOULEVARD

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 20 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

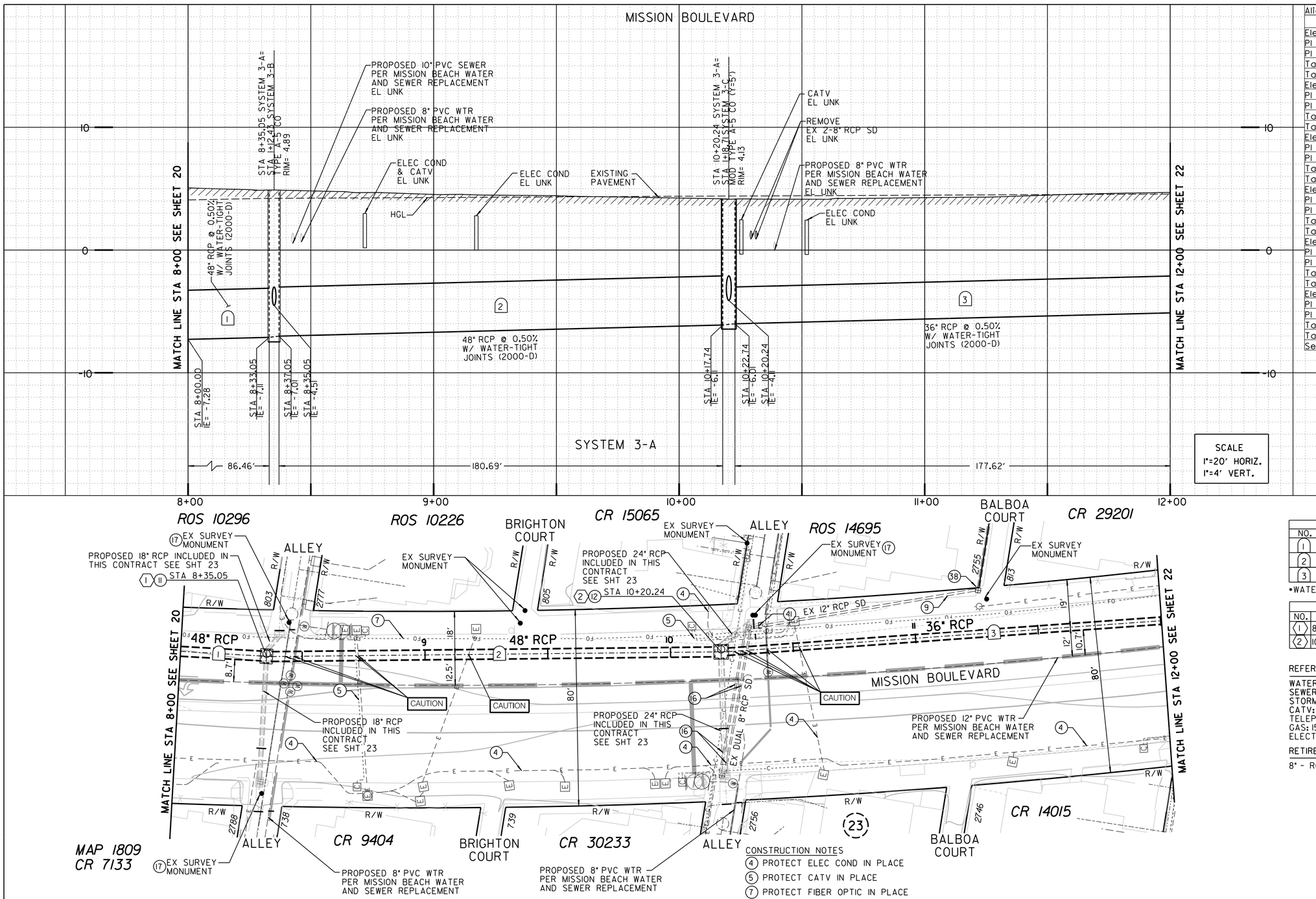
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. CRAIG — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-20-D

RICK ENGINEERING COMPANY
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5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

CAPISTRANO PLACE



Alignment Name:	Line 3a		
	Station	Northing	Easting
Element: Linear			
PI	8+33.05	1858980.73	6253902.65
PI	8+35.05	1858978.75	6253902.93
Tangential Direction:	S 7° 54'27" E		
Tangential Length:	2.00		
Element: Linear			
PI	8+35.05	1858978.75	6253902.93
PI	8+37.05	1858976.76	6253903.20
Tangential Direction:	S 7° 54'27" E		
Tangential Length:	2.00		
Element: Linear			
PI	8+37.05	1858976.76	6253903.20
PI	10+17.74	1858799.87	6253940.10
Tangential Direction:	S 11° 46'50" E		
Tangential Length:	180.69		
Element: Linear			
PI	10+17.74	1858799.87	6253940.10
PI	10+20.24	1858797.44	6253940.60
Tangential Direction:	S 11° 46'50" E		
Tangential Length:	2.50		
Element: Linear			
PI	10+20.24	1858797.44	6253940.60
PI	10+22.74	1858795.00	6253941.11
Tangential Direction:	S 11° 46'50" E		
Tangential Length:	2.50		
Element: Linear			
PI	10+22.74	1858795.00	6253941.11
PI	12+00.36	1858623.64	6253987.88
Tangential Direction:	S 15° 16'02" E		
Tangential Length:	177.62		
See Sht 22			

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

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N7° 54'27"E		33.05'	48" RCP (2000-D)•
2	N11° 46'50"E		180.69'	48" RCP (2000-D)•
3	N15° 16'02E		177.26'	36" RCP (2000-D)•

•WATER-TIGHT JOINTS

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	8+35.05	1858978.75	6253902.93	TYPE A-5 CO
2	10+20.24	1858797.44	6253940.60	MOD TYPE A-5 CO (Y=5')

REFERENCES:

WATER: 40709-12-D
SEWER: NONE
STORM DRAIN: 9110-L
CATV: BLR1955-BLR1956
TELEPHONE: 545322-020
GAS: 15630-118925
ELECTRIC: 545322-020

RETIREMENTS:

8" - RCP - STORM DRAIN - 120' - 1969

CONSTRUCTION NOTES

(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(7) PROTECT FIBER OPTIC IN PLACE
(9) ABANDON EX STORM DRAIN PER WHITEBOOK SPECIFICATIONS
(11) CONSTRUCT TYPE A-5 CLEANOUT
(12) CONSTRUCT MODIFIED TYPE A-5 CLEANOUT SEE DETAIL ON SHT 53
(16) REMOVE EX STORM DRAIN
(17) CONTACT CITY SURVEY SECTION TO PERPETUATE SURVEY MONUMENT
(38) ABANDON EX STORM DRAIN STRUCTURE
(41) CUT AND PLUG EX STORM DRAIN

SCALE 1" = 20'

C-18

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

MISSION BOULEVARD

CAPISTRANO PLACE TO ALLEY BLK 23

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 21 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. CRISP — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

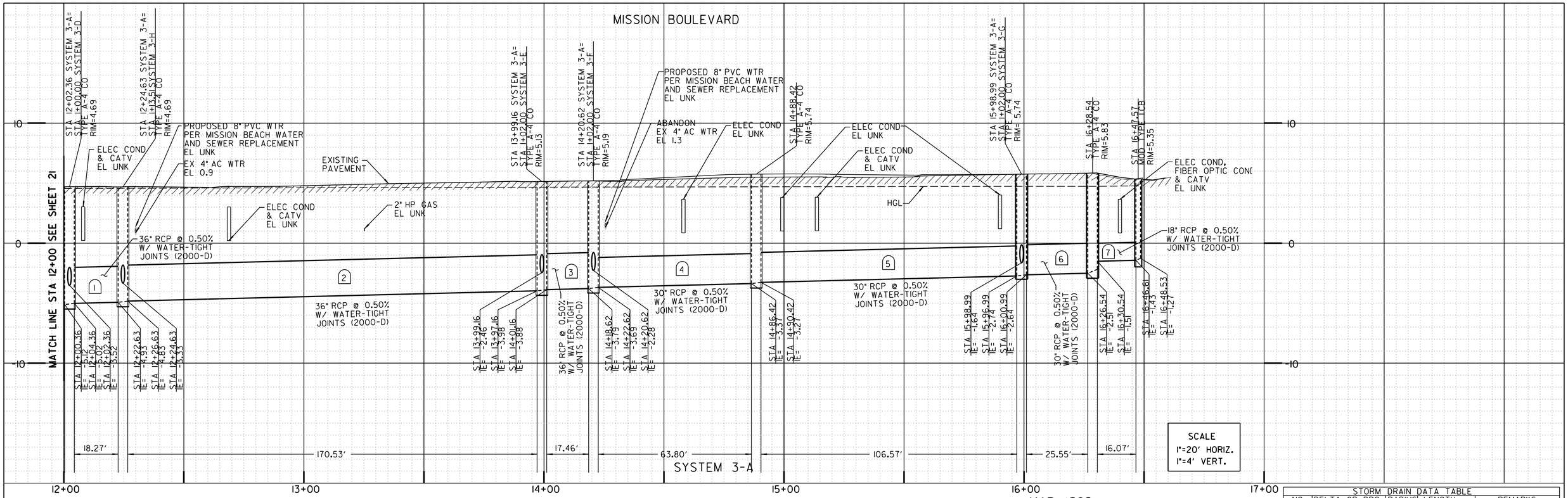
41306-21-D

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SYSTEM 3-A

MISSION BOULEVARD

MISSION BOULEVARD

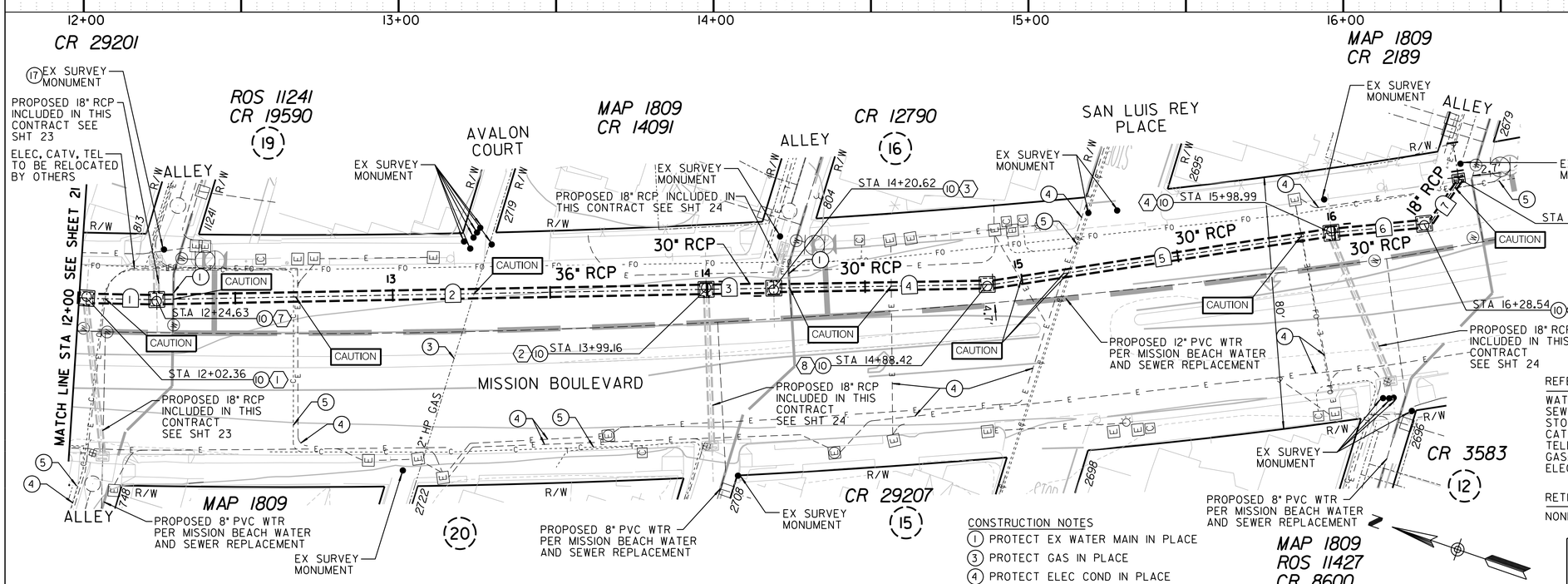


SCALE
1"=20' HORIZ.
1"=4' VERT.

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	S17° 51'33"E		18.27'	36" RCP (2000-D)•
2	S20° 2'28"E		170.53'	36" RCP (2000-D)•
3	S20° 2'29"E		17.46'	36" RCP (2000-D)•
4	S19° 57'18"E		63.80'	30" RCP (2000-D)•
5	S27° 43'3"E		106.57'	30" RCP (2000-D)•
6	S24° 32'33"E		25.55'	30" RCP (2000-D)•
7	S74° 26'37"E		16.07'	18" RCP (2000-D)•

•WATER-TIGHT JOINTS

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	12+02.36	858621.71	6253988.41	TYPE A-4 CO
2	13+99.16	858436.55	6254055.04	TYPE A-4 CO
3	14+20.62	858416.39	6254062.39	TYPE A-4 CO
4	15+98.99	858254.62	6254136.62	TYPE A-4 CO
5	16+28.54	858227.74	6254148.89	TYPE A-4 CO
6	16+47.57	858222.06	6254166.05	MOD TYPE I CB
7	12+24.63	858600.51	6253995.23	TYPE A-4 CO
8	14+88.42	858352.66	6254085.54	TYPE A-4 CO



CONSTRUCTION NOTES

(1) PROTECT EX WATER MAIN IN PLACE
(3) PROTECT GAS IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(10) CONSTRUCT TYPE A-4 CLEANOUT
(13) CONSTRUCT MOD TYPE I CATCH BASIN SEE DETAIL ON SHT 53
(17) CONTACT CITY SURVEY SECTION TO PERPETUATE SURVEY MONUMENT

NOTE:
1. FOR STORM DRAIN ALIGNMENT TABLE SEE SHT 25

SCALE 1"=20'

REFERENCES:
WATER: 40709-27-D
SEWER: NONE
STORM DRAIN: NONE
CATV: BLR1955-BLR1956
TELEPHONE: 545322-020
GAS: 15630-118925
ELECTRIC: 545322-020

RETIREMENTS:
NONE

C-19

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
MISSION BOULEVARD
ALLEY BLK 19 TO ALLEY BLK 12

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 22 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — ELHAM LOTFI, PRINT DCE NAME — 12/18/2023 DATE — C91224 RCE#

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — EVERETT R. CRAIG — NO. 52243 — STATE OF CALIFORNIA — 03/13/2023

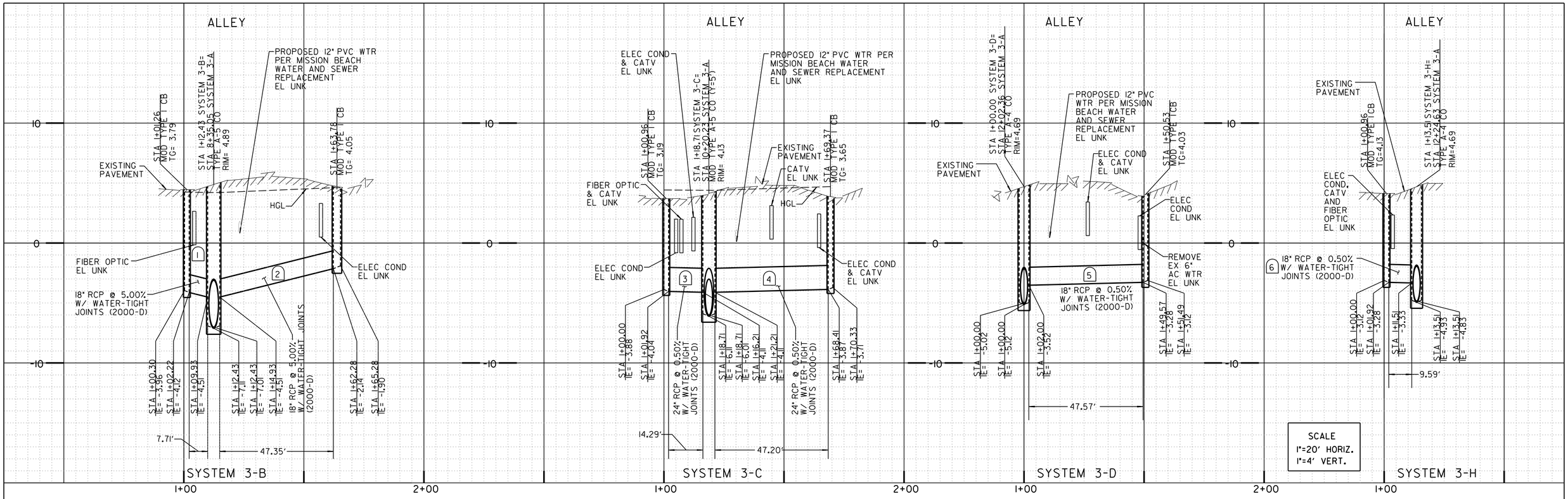
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-22-D

RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

SYSTEM 3-A

MISSION BOULEVARD

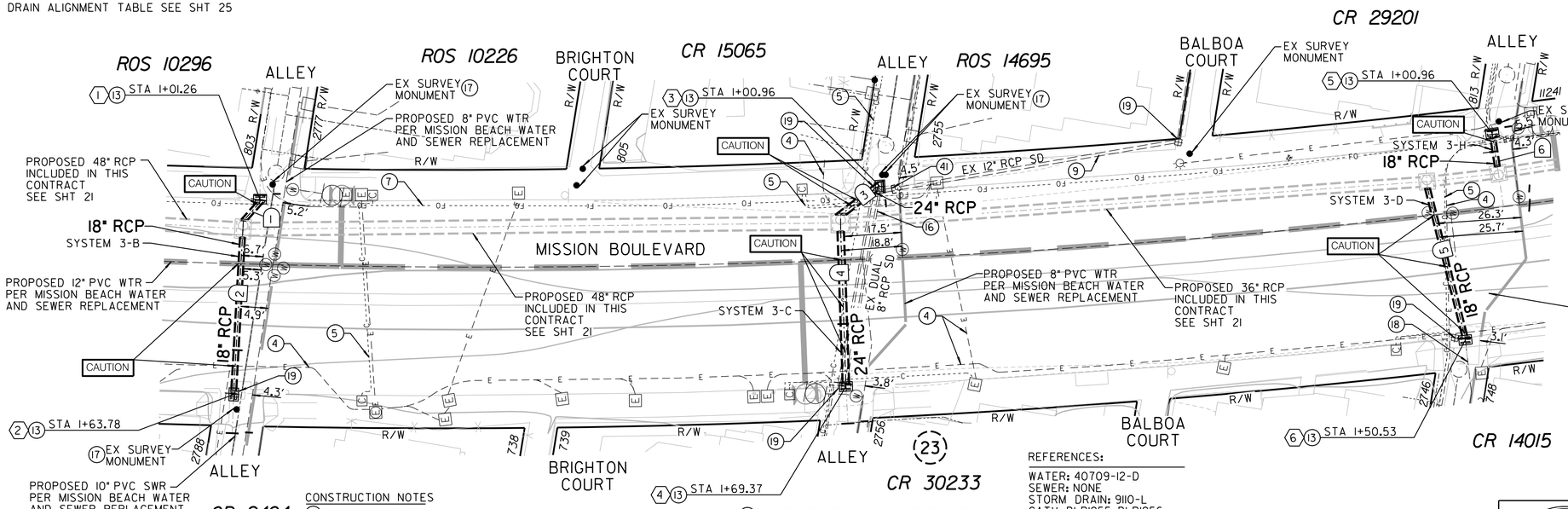


NOTE:
1. FOR STORM DRAIN ALIGNMENT TABLE SEE SHT 25

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N59° 28'04"W		7.71'	18" RCP (2000-D)•
2	S82° 02'58"W		47.35'	18" RCP (2000-D)•
3	N48° 36'32"W		14.29'	24" RCP (2000-D)•
4	S76° 52'33"W		47.20'	24" RCP (2000-D)•
5	S64° 39'04"W		47.57'	18" RCP (2000-D)•
6	S69° 57'32"W		9.59'	18" RCP (2000-D)•

•WATER-TIGHT JOINTS

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	1+01.26	1858975.35	6253912.99	MOD TYPE I CB
2	1+63.78	1858971.62	6253852.07	MOD TYPE I CB
3	1+00.96	1858787.57	6253954.03	MOD TYPE I CB
4	1+69.37	1858785.98	6253891.26	MOD TYPE I CB
5	1+00.96	1858604.79	6254007.03	MOD TYPE I CB
6	1+50.53	1858600.54	6253942.57	MOD TYPE I CB



CONSTRUCTION NOTES
- (4) PROTECT ELEC COND IN PLACE
- (5) PROTECT CATV IN PLACE
- (7) PROTECT FIBER OPTIC IN PLACE
- (9) ABANDON EX STORM DRAIN PER WHITEBOOK SPECIFICATIONS
- (13) CONSTRUCT MODIFIED TYPE I CATCH BASIN SEE DETAIL ON SHT 53
- (16) REMOVE EX STORM DRAIN
- (17) CONTACT CITY SURVEY SECTION TO PERPETUATE SURVEY MONUMENT
- (18) REMOVE EX WATER MAIN
- (19) REMOVE EX STORM DRAIN STRUCTURE
- (41) CUT AND PLUG EX STORM DRAIN

SYSTEM 3-B, 3-C, 3-D

REFERENCES:
WATER: 40709-12-D
SEWER: NONE
STORM DRAIN: 9110-L
CATV: BLR1955-BLR1956
TELEPHONE: NONE
GAS: NONE
ELECTRIC: 15630-118915-15630-118940

RETIREMENTS:
8" - RCP - STORM DRAIN - 120' - 1969
12" - RCP - STORM DRAIN - 93' - 1951
5 - GRATE INLETS

0 20 40 80
SCALE 1"=20'

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REGISTERED PROFESSIONAL ENGINEER KEVIN R. GRAY NO. 52295 STATE OF CALIFORNIA
03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

C-20

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

MISSION BOULEVARD

ALLEY BLK 28 TO ALLEY BLK 20

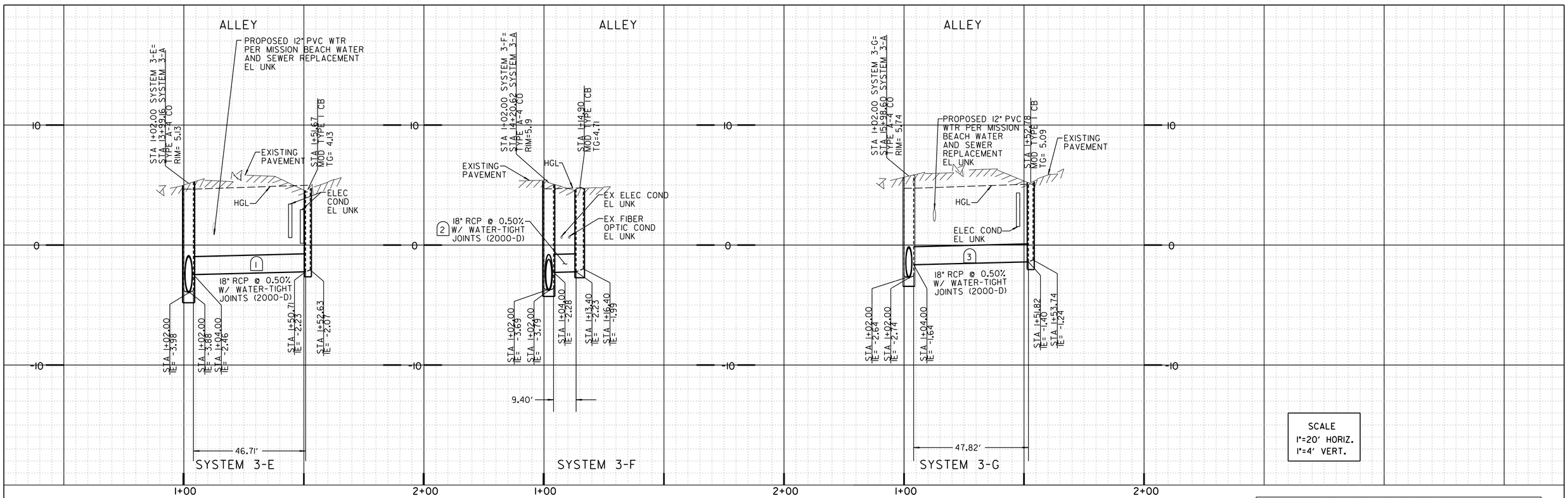
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 23 OF 128 SHEETS

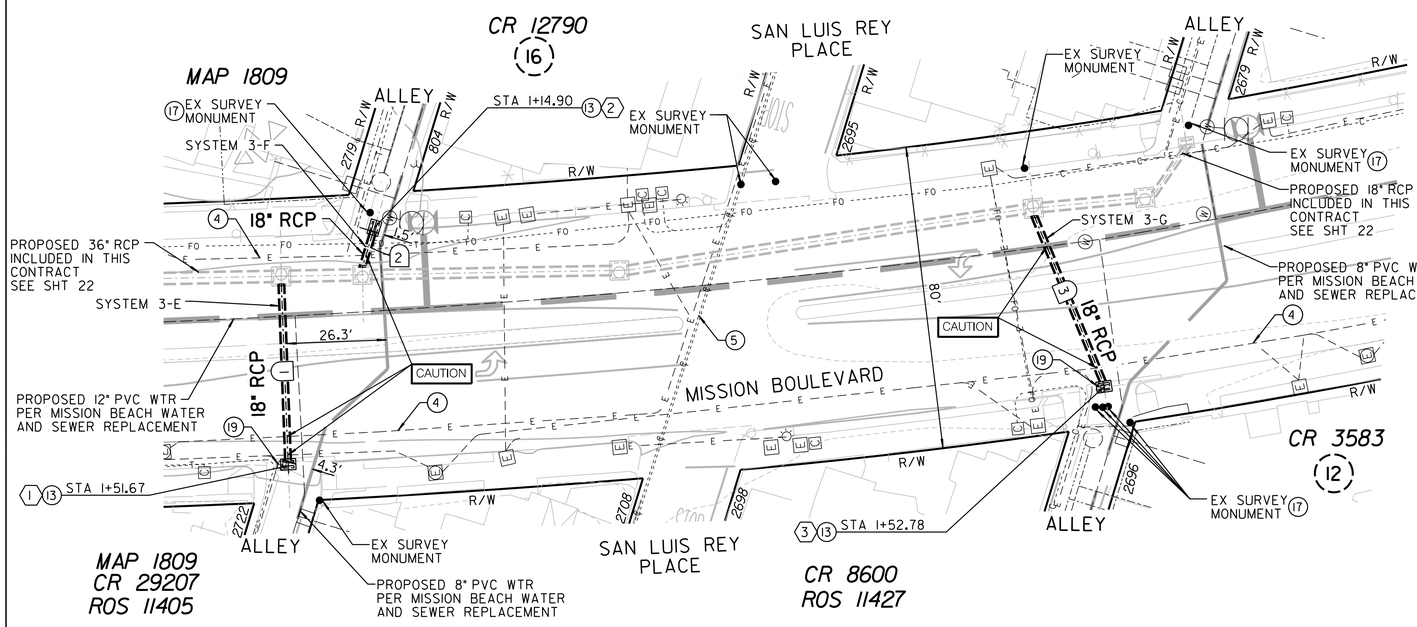
WBS B-18118 (GI) B-18117 (SD)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

41306-23-D

MISSION BOULEVARD





SYSTEM 3-E, 3-F, 3-G

CONSTRUCTION NOTES

4 PROTECT ELEC COND IN PLACE
5 PROTECT CATV IN PLACE
13 CONSTRUCT MODIFIED TYPE I CATCH BASIN SEE DETAIL ON SHT 53
17 CONTACT CITY SURVEY SECTION TO PERPETUATE SURVEY MONUMENT
19 REMOVE EX STORM DRAIN STRUCTURE

STORM DRAIN DATA TABLE

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	S68° 50'46"W		46.71'	18" RCP (2000-D)•
2	S87° 58'24"W		9.40'	18" RCP (2000-D)•
3	S48° 28'25"W		47.82'	18" RCP (2000-D)•

•WATER-TIGHT JOINTS

STRUCTURE DATA TABLE

NO.	STA	NORTHING	EASTING	REMARKS
1	1+51.67	1858418.66	6254008.70	MOD TYPE I CB
2	1+14.90	1858417.46	6254075.17	MOD TYPE I CB
3	1+52.78	1858221.65	6254098.15	MOD TYPE I CB

NOTE:
1. FOR STORM DRAIN ALIGNMENT TABLE SEE SHT 25

REFERENCES:

WATER: 40709-12-D
SEWER: 40709-12-D
STORM DRAIN: NONE
CATV: 545322-020
TELEPHONE: 545322-020
GAS: NONE
ELECTRIC: 15630-118915-15630-118940

RETIREMENTS:

GRATE INLET - 2

0 20 40 80
SCALE 1" = 20'

C-21

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

MISSION BOULEVARD

ALLEY BLK 16 TO ALLEY BLK 12

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 24 OF 128 SHEETS

WBS B-18118 (G)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
41306-24-D

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

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SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
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MISSION BOULEVARD

Alignment Name:	Line 3a			Element: Linear			
	Station	Northing	Easting	PI	14+86.42	1858354.54	6254084.85
Element: Linear				PI	14+88.42	1858352.66	6254085.53
PI	12+00.36	1858623.64	6253987.88	Tangential Direction:	S 19° 57'18" E		
PI	12+02.36	1858621.71	6253988.41	Tangential Length:	2.00		
Tangential Direction:	S 15° 16'02" E			Element: Linear			
Tangential Length:	2.00			PI	14+88.42	1858352.66	6254085.53
Element: Linear				PI	14+90.42	1858350.78	6254086.22
PI	12+02.36	1858621.71	6253988.41	Tangential Direction:	S 19° 57'18" E		
PI	12+04.36	1858619.78	6253988.94	Tangential Length:	2.00		
Tangential Direction:	S 15° 16'02" E			Element: Linear			
Tangential Length:	2.00			PI	14+90.42	1858350.78	6254086.22
Element: Linear				PI	15+96.99	1858256.44	6254135.79
PI	12+04.36	1858619.78	6253988.94	Tangential Direction:	S 27° 43'13" E		
PI	12+22.63	1858602.39	6253994.54	Tangential Length:	106.57		
Tangential Direction:	S 17° 51'33" E			Element: Linear			
Tangential Length:	18.27			PI	15+96.99	1858256.44	6254135.79
Element: Linear				PI	15+98.99	1858254.62	6254136.62
PI	12+22.63	1858602.39	6253994.54	Tangential Direction:	S 24° 32'33" E		
PI	12+24.63	1858600.51	6253995.23	Tangential Length:	2.00		
Tangential Direction:	S 20° 02'28" E			Element: Linear			
Tangential Length:	2.00			PI	15+98.99	1858254.62	6254136.62
Element: Linear				PI	16+00.99	1858252.80	6254137.45
PI	12+24.63	1858600.51	6253995.23	Tangential Direction:	S 24° 32'33" E		
PI	12+26.63	1858598.63	6253995.91	Tangential Length:	2.00		
Tangential Direction:	S 20° 02'28" E			Element: Linear			
Tangential Length:	2.00			PI	16+00.99	1858252.80	6254137.45
Element: Linear				PI	16+26.54	1858229.56	6254148.06
PI	12+26.63	1858598.63	6253995.91	Tangential Direction:	S 24° 32'33" E		
PI	13+97.16	1858438.43	6254054.35	Tangential Length:	25.55		
Tangential Direction:	S 20° 02'28" E			Element: Linear			
Tangential Length:	170.53			PI	16+26.54	1858229.56	6254148.06
Element: Linear				PI	16+28.54	1858227.74	6254148.89
PI	13+97.16	1858438.43	6254054.35	Tangential Direction:	S 24° 32'33" E		
PI	13+99.16	1858436.55	6254055.04	Tangential Length:	2.00		
Tangential Direction:	S 20° 02'29" E			Element: Linear			
Tangential Length:	2.00			PI	16+28.54	1858227.74	6254148.89
Element: Linear				PI	16+30.54	1858225.92	6254149.72
PI	13+99.16	1858436.55	6254055.04	Tangential Direction:	S 24° 32'33" E		
PI	14+01.16	1858434.67	6254055.72	Tangential Length:	2.00		
Tangential Direction:	S 20° 02'29" E			Element: Linear			
Tangential Length:	2.00			PI	16+30.54	1858225.92	6254149.72
Element: Linear				PI	16+46.61	1858221.61	6254165.20
PI	14+01.16	1858434.67	6254055.72	Tangential Direction:	S 74° 26'37" E		
PI	14+18.62	1858418.27	6254061.71	Tangential Length:	16.07		
Tangential Direction:	S 20° 02'29" E			Element: Linear			
Tangential Length:	17.46			PI	16+46.61	1858221.61	6254165.20
Element: Linear				PI	16+47.57	1858222.06	6254166.05
PI	14+18.62	1858418.27	6254061.71	Tangential Direction:	N 62° 09'22" E		
PI	14+20.62	1858416.39	6254062.39	Tangential Length:	0.96		
Tangential Direction:	S 20° 02'29" E			Element: Linear			
Tangential Length:	2.00			PI	16+47.57	1858222.06	6254166.05
Element: Linear				PI	16+48.53	1858222.51	6254166.89
PI	14+20.62	1858416.39	6254062.39	Tangential Direction:	N 62° 09'22" E		
PI	14+22.62	1858414.51	6254063.08	Tangential Length:	0.96		
Tangential Direction:	S 20° 02'29" E						
Tangential Length:	2.00						
Element: Linear							
PI	14+22.62	1858414.51	6254063.08				
PI	14+86.42	1858354.54	6254084.85				
Tangential Direction:	S 19° 57'18" E						
Tangential Length:	63.80						

Alignment Name:	Line 3h		
	Station	Northing	Easting
Element: Linear			
PI	1+00.00	1858605.10	6254007.94
PI	1+00.96	1858604.79	6254007.03
Tangential Direction:	S 71° 19'30" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+00.96	1858604.79	6254007.03
PI	1+01.92	1858604.48	6254006.12
Tangential Direction:	S 71° 19'30" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+01.92	1858604.48	6254006.12
PI	1+11.51	1858601.20	6253997.11
Tangential Direction:	S 69° 57'32" W		
Tangential Length:	9.59		
Element: Linear			
PI	1+11.51	1858601.20	6253997.11
PI	1+13.51	1858600.51	6253995.23
Tangential Direction:	S 69° 57'32" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+13.51	1858600.51	6253995.23
PI	1+15.51	1858599.83	6253993.35
Tangential Direction:	S 69° 57'32" W		
Tangential Length:	2.00		

Alignment Name:	Line 3b		
	Station	Northing	Easting
Element: Linear			
PI	1+00.30	1858975.53	6253913.93
PI	1+01.26	1858975.35	6253912.99
Tangential Direction:	S 79° 17'56" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+01.26	1858975.35	6253912.99
PI	1+02.22	1858975.17	6253912.05
Tangential Direction:	S 79° 17'56" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+02.22	1858975.17	6253912.05
PI	1+09.93	1858979.09	6253905.40
Tangential Direction:	N 59° 28'04" W		
Tangential Length:	7.71		
Element: Linear			
PI	1+09.93	1858979.09	6253905.40
PI	1+12.43	1858978.75	6253902.93
Tangential Direction:	S 82° 05'33" W		
Tangential Length:	2.50		
Element: Linear			
PI	1+12.43	1858978.75	6253902.93
PI	1+14.93	1858978.40	6253900.45
Tangential Direction:	S 82° 05'33" W		
Tangential Length:	2.50		
Element: Linear			
PI	1+14.93	1858978.40	6253900.45
PI	1+62.28	1858971.85	6253853.55
Tangential Direction:	S 82° 02'58" W		
Tangential Length:	47.35		
Element: Linear			
PI	1+62.28	1858971.85	6253853.55
PI	1+63.78	1858971.62	6253852.07
Tangential Direction:	S 81° 03'48" W		
Tangential Length:	1.50		
Element: Linear			
PI	1+63.78	1858971.62	6253852.07
PI	1+65.28	1858971.39	6253850.59
Tangential Direction:	S 81° 03'48" W		
Tangential Length:	1.50		

Alignment Name:	Line 3e		
	Station	Northing	Easting
Element: Linear			
PI	1+00.00	1858437.24	6254056.92
PI	1+02.00	1858436.55	6254055.04
Tangential Direction:	S 69° 57'31" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+02.00	1858436.55	6254055.04
PI	1+04.00	1858435.87	6254053.16
Tangential Direction:	S 69° 57'31" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+04.00	1858435.87	6254053.16
PI	1+50.71	1858419.01	6254009.60
Tangential Direction:	S 68° 50'46" W		
Tangential Length:	46.71		
Element: Linear			
PI	1+50.71	1858419.01	6254009.60
PI	1+51.67	1858418.66	6254008.70
Tangential Direction:	S 68° 50'46" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+51.67	1858418.66	6254008.70
PI	1+52.63	1858418.32	6254007.81
Tangential Direction:	S 68° 50'46" W		
Tangential Length:	0.96		

Alignment Name:	Line 3c		
	Station	Northing	Easting
Element: Linear			
PI	1+00.00	1858786.64	6253954.28
PI	1+00.96	1858787.57	6253954.03
Tangential Direction:	N 15° 14'01" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+00.96	1858787.57	6253954.03
PI	1+01.92	1858788.49	6253953.78
Tangential Direction:	N 15° 14'01" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+01.92	1858788.49	6253953.78
PI	1+16.21	1858797.95	6253943.05
Tangential Direction:	N 48° 36'32" W		
Tangential Length:	14.29		
Element: Linear			
PI	1+16.21	1858797.95	6253943.05
PI	1+18.71	1858797.44	6253940.60
Tangential Direction:	S 78° 13'10" W		
Tangential Length:	2.50		
Element: Linear			
PI	1+18.71	1858797.44	6253940.60
PI	1+21.21	1858796.94	6253938.15
Tangential Direction:	S 78° 26'15" W		
Tangential Length:	2.50		
Element: Linear			
PI	1+21.21	1858796.94	6253938.15
PI	1+68.41	1858786.22	6253892.19
Tangential Direction:	S 76° 52'33" W		
Tangential Length:	47.20		
Element: Linear			
PI	1+68.41	1858786.22	6253892.19
PI	1+69.37	1858785.98	6253891.26
Tangential Direction:	S 75° 47'27" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+69.37	1858785.98	6253891.26
PI	1+70.33	1858785.75	6253890.33
Tangential Direction:	S 75° 47'27" W		
Tangential Length:	0.96		

Alignment Name:	Line 3f		
	Station	Northing	Easting
Element: Linear			
PI	1+00.00	1858415.70	6254060.51
PI	1+02.00	1858416.39	6254062.39
Tangential Direction:	N 69° 57'31" E		
Tangential Length:	2.00		
Element: Linear			
PI	1+02.00	1858416.39	6254062.39
PI	1+04.00	1858417.07	6254064.27
Tangential Direction:	N 69° 57'31" E		
Tangential Length:	2.00		
Element: Linear			
PI	1+04.00	1858417.07	6254064.27
PI	1+13.40	1858417.41	6254073.67
Tangential Direction:	N 87° 58'24" E		
Tangential Length:	9.40		
Element: Linear			
PI	1+13.40	1858417.41	6254073.67
PI	1+14.90	1858417.46	6254075.17
Tangential Direction:	N 87° 58'24" E		
Tangential Length:	1.50		
Element: Linear			
PI	1+14.90	1858417.46	6254075.17
PI	1+16.40	1858417.51	6254076.67
Tangential Direction:	N 87° 58'24" E		
Tangential Length:	1.50		

Alignment Name:	Line 3d		
	Station	Northing	Easting
Element: Linear			
PI	0+98.00	1858622.24	6253990.34
PI	1+00.00	1858621.71	6253988.41
Tangential Direction:	S 74° 43'58" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+00.00	1858621.71	6253988.41
PI	1+02.00	1858621.19	6253986.48
Tangential Direction:	S 74° 43'58" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+02.00	1858621.19	6253986.48
PI	1+49.57	1858600.82	6253943.49
Tangential Direction:	S 64° 39'04" W		
Tangential Length:	47.57		
Element: Linear			
PI	1+49.57	1858600.82	6253943.49
PI	1+50.53	1858600.54	6253942.57
Tangential Direction:	S 72° 48'03" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+50.53	1858600.54	6253942.57
PI	1+51.49	1858600.25	6253941.66
Tangential Direction:	S 72° 48'03" W		
Tangential Length:	0.96		

Alignment Name:	Line 3g		
	Station	Northing	Easting
Element: Linear			
PI	1+00.00	1858255.45	6254138.44
PI	1+02.00	1858254.62	6254136.62
Tangential Direction:	S 65° 28'10" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+02.00	1858254.62	6254136.62
PI	1+04.00	1858253.79	6254134.80
Tangential Direction:	S 65° 28'10" W		
Tangential Length:	2.00		
Element: Linear			
PI	1+04.00	1858253.79	6254134.80
PI	1+51.82	1858222.09	6254099.00
Tangential Direction:	S 48° 28'25" W		
Tangential Length:	47.82		
Element: Linear			
PI	1+51.82	1858222.09	6254099.00
PI	1+52.78	1858221.65	6254098.15
Tangential Direction:	S 62° 40'23" W		
Tangential Length:	0.96		
Element: Linear			
PI	1+52.78	1858221.65	6254098.15
PI	1+53.74	1858221.21	6254097.30
Tangential Direction:	S 62° 40'23" W		
Tangential Length:	0.96		

MISSION BOULEVARD ALIGNMENT TABLE

C-22

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
MISSION BOULEVARD ALIGNMENT TABLE
ALLEY BLK 19 TO ALLEY BLK 12

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 25 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

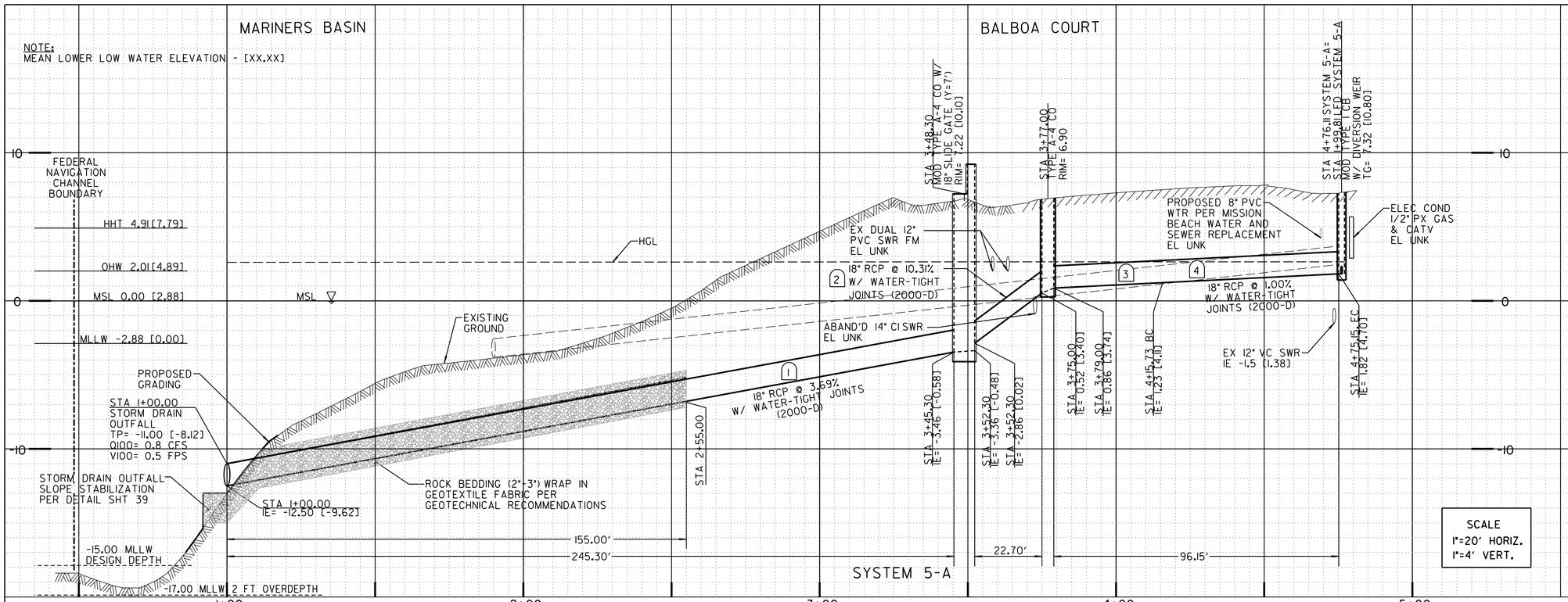
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
41306-25-D

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

0 10 20 30
SCALE 1" = 10'

RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver



Alignment Name:	Line 5a		
	Station	Northing	Easting
Element: Linear			
PI	I+00.00	I858724.29	6254662.62
PI	3+45.30	I858711.19	6254417.67
Tangential Direction:	S 86° 56'24" W		
Tangential Length:	245.30		
Element: Linear			
PI	3+45.30	I858711.19	6254417.67
PI	3+48.80	I858711.07	6254414.17
Tangential Direction:	S 87° 58'17" W		
Tangential Length:	3.50		
Element: Linear			
PI	3+48.80	I858711.07	6254414.17
PI	3+52.30	I858710.95	6254410.68
Tangential Direction:	S 87° 58'17" W		
Tangential Length:	3.50		
Element: Linear			
PI	3+52.30	I858710.95	6254410.68
PI	3+75.00	I858710.06	6254387.99
Tangential Direction:	S 87° 46'29" W		
Tangential Length:	22.70		
Element: Linear			
PI	3+75.00	I858710.06	6254387.99
PI	3+77.00	I858709.99	6254385.99
Tangential Direction:	S 87° 58'17" W		
Tangential Length:	2.00		
Element: Linear			
PI	3+77.00	I858709.99	6254385.99
PI	3+79.00	I858709.92	6254383.99
Tangential Direction:	S 87° 58'17" W		
Tangential Length:	2.00		
Element: Linear			
PI	3+79.00	I858709.92	6254383.99
PC	4+I5.73	I858708.62	6254347.28
Tangential Direction:	S 87° 58'17" W		
Tangential Length:	36.73		
Element: Circular			
PC	4+I5.73	I858708.62	6254347.28
PT	4+75.I5	I858710.04	6254287.92
Radius:	500.75		
Delta:	6° 47'54"	Right	
Length:	59.42		
Element: Linear			
PT	4+75.I5	I858710.04	6254287.92
PI	4+76.II	I858709.84	6254286.98
Tangential Direction:	S 77° 56'25" W		
Tangential Length:	0.96		
Element: Linear			
PI	4+76.II	I858709.84	6254286.98
PI	4+77.07	I858709.64	6254286.04
Tangential Direction:	S 77° 56'25" W		
Tangential Length:	0.96		

CONTRACTORS NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
I	3+48.30	I858711.07	6254414.17	MOD TYPE A-4 CO W/ I8" SLIDE GATE (Y=7')
2	3+77.00	I858709.99	6254385.99	TYPE A-4 CO
3	4+76.II	I858709.84	6254286.98	MOD TYPE I CB W/ DIVERSION WEIR

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
I	S 86° 56'24" W		245.30'	I8" RCP (2000-D)•
2	S 87° 46'29" W		22.70'	I8" RCP (2000-D)•
3	S 87° 58'17" W		36.73'	I8" RCP (2000-D)•
4	△ = 06° 47'54"	500.75'	59.42'	I8" RCP (2000-D)•

•WATER-TIGHT JOINTS

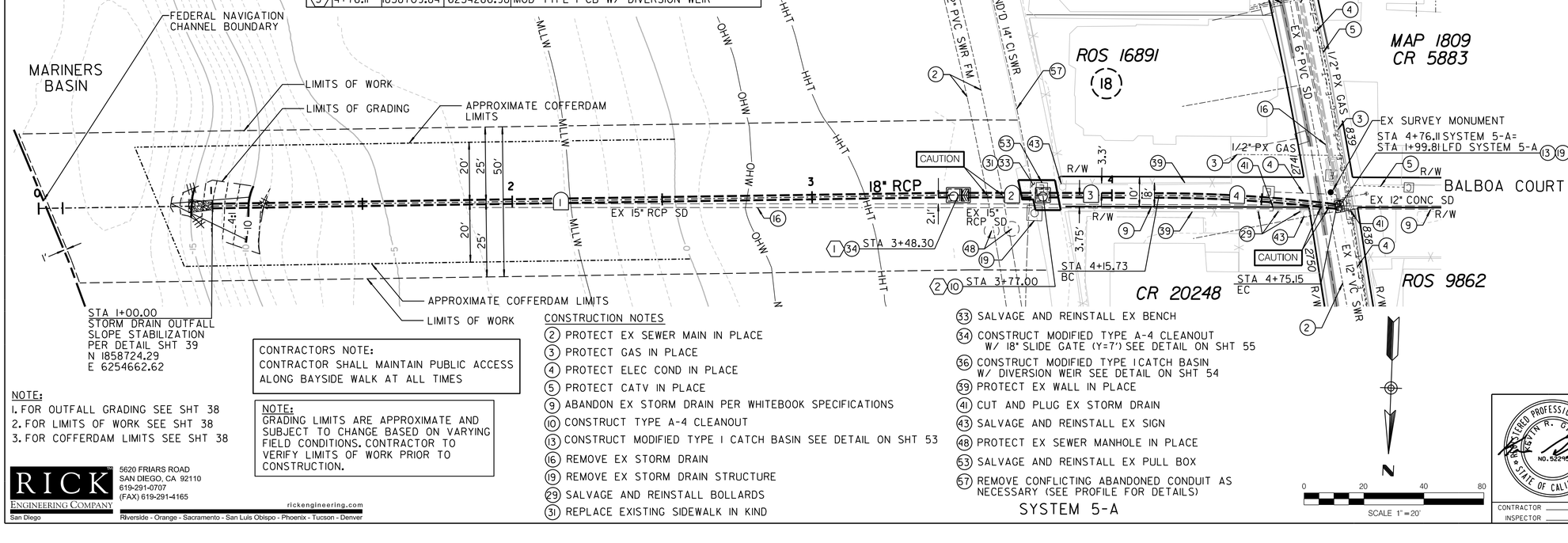
REFERENCES:

WATER: 40709-27-9, I3159-7-D, I3159-I8-D, 9673-0-D
SEWER: II60-D, I6739-5-D, 24635-2-D, 40709-27-D
STORM DRAIN: I3003-2-D, 462-D, 9II0-L, 24635-2-D, 26396-25-D
CATV: BLRI955-BLRI956
TELEPHONE: NONE
GAS: I5630-II8930, I5630-II8925, I5630-II8915-I5630-II8940
ELECTRIC: I5630-II8915-I5630-II8940

RETIREMENTS:

I5" - RCP - STORM DRAIN - 290' - 1989
I2" - CONC - STORM DRAIN - 300' - 195I
6" - PVC STORM DRAIN - 74' - 1994
GRATE INLET - I

C-23



CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS ALONG BAYSIDE WALK AT ALL TIMES

NOTE:
GRADING LIMITS ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON VARYING FIELD CONDITIONS. CONTRACTOR TO VERIFY LIMITS OF WORK PRIOR TO CONSTRUCTION.

NOTE:
I. FOR OUTFALL GRADING SEE SHT 38
2. FOR LIMITS OF WORK SEE SHT 38
3. FOR COFFERDAM LIMITS SEE SHT 38

CONSTRUCTION NOTES

(2) PROTECT EX SEWER MAIN IN PLACE
(3) PROTECT GAS IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(9) ABANDON EX STORM DRAIN PER WHITEBOOK SPECIFICATIONS
(10) CONSTRUCT TYPE A-4 CLEANOUT
(13) CONSTRUCT MODIFIED TYPE I CATCH BASIN SEE DETAIL ON SHT 53
(16) REMOVE EX STORM DRAIN
(19) REMOVE EX STORM DRAIN STRUCTURE
(29) SALVAGE AND REINSTALL BOLLARDS
(31) REPLACE EXISTING SIDEWALK IN KIND
(33) SALVAGE AND REINSTALL EX BENCH
(34) CONSTRUCT MODIFIED TYPE A-4 CLEANOUT W/ I8" SLIDE GATE (Y=7') SEE DETAIL ON SHT 55
(36) CONSTRUCT MODIFIED TYPE I CATCH BASIN W/ DIVERSION WEIR SEE DETAIL ON SHT 54
(39) PROTECT EX WALL IN PLACE
(41) CUT AND PLUG EX STORM DRAIN
(43) SALVAGE AND REINSTALL EX SIGN
(48) PROTECT EX SEWER MANHOLE IN PLACE
(53) SALVAGE AND REINSTALL EX PULL BOX
(57) REMOVE CONFLICTING ABANDONED CONDUIT AS NECESSARY (SEE PROFILE FOR DETAILS)

SYSTEM 5-A

0 20 40 80
SCALE I" = 20'

N

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SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

BALBOA COURT

MARINERS BASIN TO BAYSIDE LANE

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 26 OF 128 SHEETS

WBS B-I8II8 (GI)
B-I8II7 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C9I224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
APPROVED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-I689 CCS27 COORDINATE
I858-6249 CCS83 COORDINATE

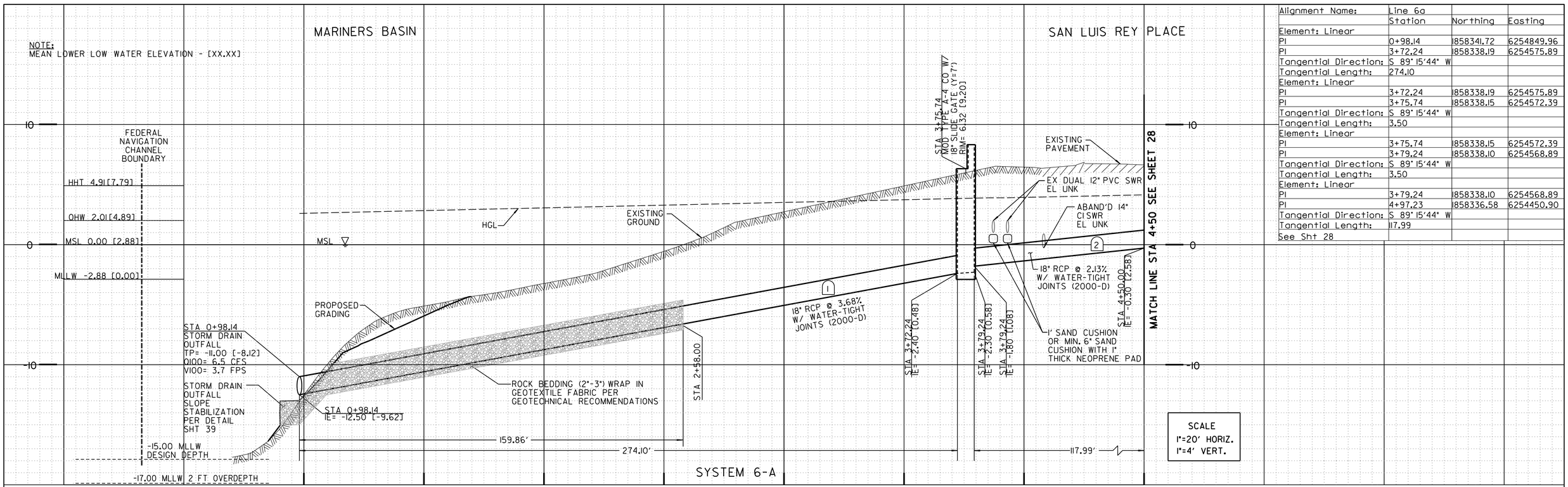
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. CRAIG — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-26-D

BALBOA COURT

NOTE:
MEAN LOWER LOW WATER ELEVATION - [XX.XX]



Alignment Name:	Line 6a		
	Station	Northing	Easting
Element: Linear			
PI	0+98.14	1858341.72	6254849.96
PI	3+72.24	1858338.19	6254575.89
Tangential Direction:	S 89° 15'44" W		
Tangential Length:	274.10		
Element: Linear			
PI	3+72.24	1858338.19	6254575.89
PI	3+75.74	1858338.15	6254572.39
Tangential Direction:	S 89° 15'44" W		
Tangential Length:	3.50		
Element: Linear			
PI	3+75.74	1858338.15	6254572.39
PI	3+79.24	1858338.10	6254568.89
Tangential Direction:	S 89° 15'44" W		
Tangential Length:	3.50		
Element: Linear			
PI	3+79.24	1858338.10	6254568.89
PI	4+97.23	1858336.58	6254450.90
Tangential Direction:	S 89° 15'44" W		
Tangential Length:	117.99		
See Sht 28			

NOTE:
GRADING LIMITS ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON VARYING FIELD CONDITIONS. CONTRACTOR TO VERIFY LIMITS OF WORK PRIOR TO CONSTRUCTION.

NOTE:
1. FOR OUTFALL GRADING LIMITS SEE SHT 38
2. FOR LIMITS OF WORK SEE SHT 38
3. FOR COFFERDAM LIMITS SEE SHT 38

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS ALONG BAYSIDE WALK AT ALL TIMES

REFERENCES:

WATER: NONE
SEWER: 1160-D, 16739-6-D, 24635-3-D, 40709-29-D
STORM DRAIN: NONE
CATV: NONE
TELEPHONE: NONE
GAS: NONE
ELECTRIC: NONE

RETIREMENTS:

NONE

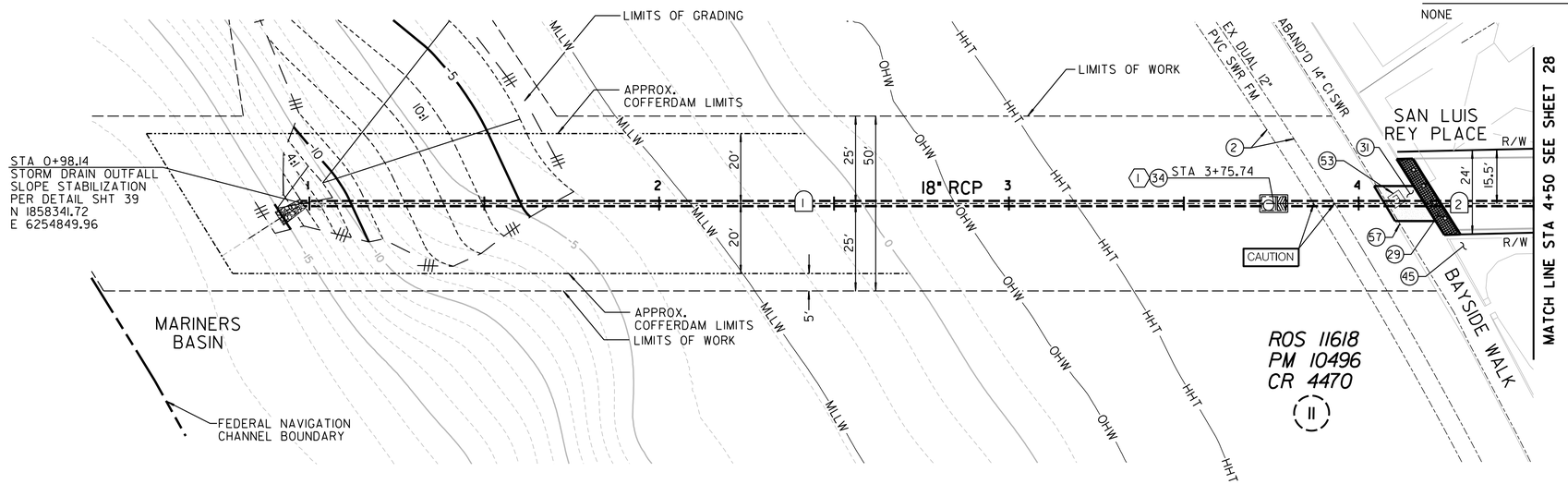
STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	S89° 15'44"W		274.10'	18" RCP (2000-D)•
2	S89° 15'44"W		70.76'	18" RCP (2000-D)•

•WATER-TIGHT JOINTS

STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	3+75.74	1858338.15	6254572.39	MOD TYPE A-4 CO W/ 18" SLIDE GATE (Y=7')

CONSTRUCTION NOTES

(2) PROTECT EX SEWER MAIN IN PLACE
(29) SALVAGE AND REINSTALL BOLLARDS
(31) REPLACE EXISTING SIDEWALK IN KIND
(34) CONSTRUCT MODIFIED TYPE A-4 CLEANOUT W/ 18" SLIDE GATE (Y=7') SEE DETAIL ON SHT 55
(45) PROTECT EX PLANT BOXES IN PLACE
(53) SALVAGE AND REINSTALL EX PULL BOX
(57) REMOVE CONFLICTING ABANDONED CONDUIT AS NECESSARY (SEE PROFILE FOR DETAILS)



SCALE 1" = 20'

C-24

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
SAN LUIS REY PLACE
MARINERS BASIN TO BAYSIDE WALK

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 27 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — RCE# C91224
PRINT DCE NAME

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

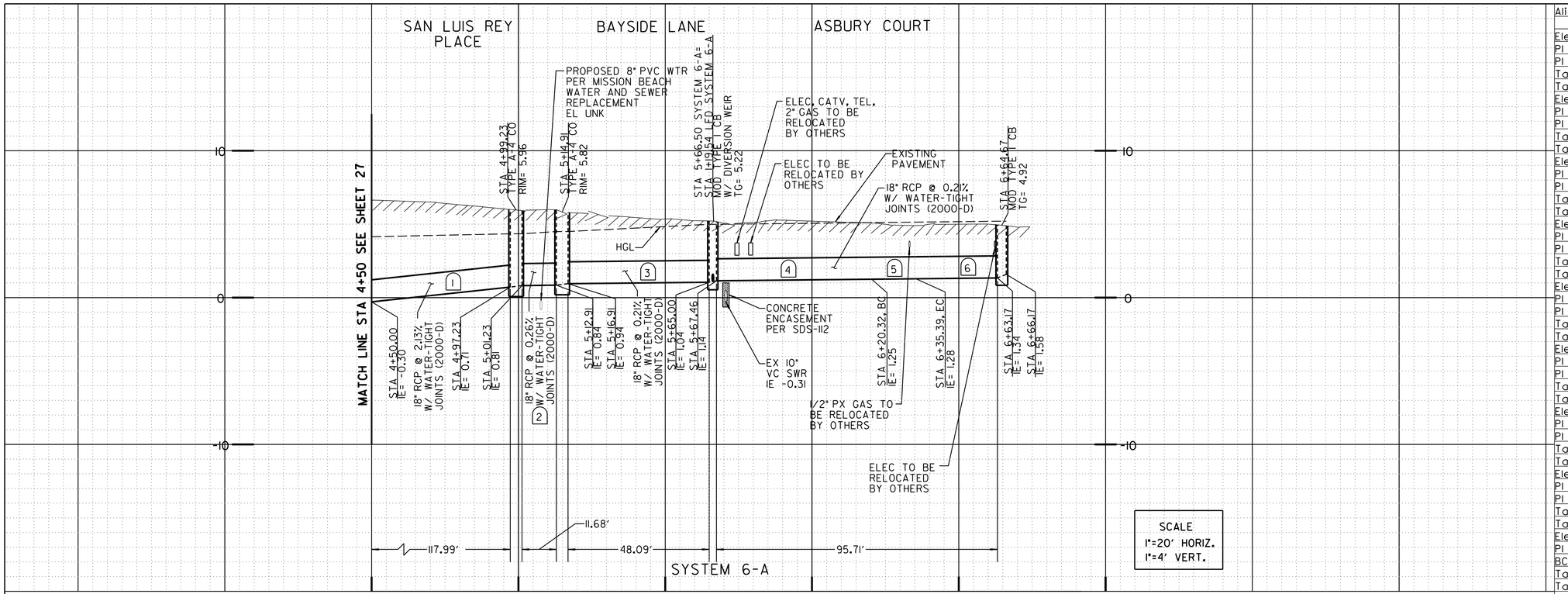
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-27-D

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619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

SAN LUIS REY PLACE



Alignment Name:	Line 6a		
	Station	Northing	Easting
Element: Linear			
PI	4+97.23	1858336.58	6254450.90
PI	4+99.23	1858336.56	6254448.90
Tangential Direction:	S 89° 15'44" W		
Tangential Length:	2.00		
Element: Linear			
PI	4+99.23	1858336.56	6254448.90
PI	5+01.23	1858336.53	6254446.90
Tangential Direction:	S 89° 15'44" W		
Tangential Length:	2.00		
Element: Linear			
PI	5+01.23	1858336.53	6254446.90
PI	5+12.91	1858330.68	6254436.80
Tangential Direction:	S 59° 54'57" W		
Tangential Length:	11.67		
Element: Linear			
PI	5+12.91	1858330.68	6254436.80
PI	5+14.91	1858329.68	6254435.07
Tangential Direction:	S 59° 54'57" W		
Tangential Length:	2.00		
Element: Linear			
PI	5+14.91	1858329.68	6254435.07
PI	5+16.91	1858327.95	6254436.07
Tangential Direction:	S 30° 05'03" E		
Tangential Length:	2.00		
Element: Linear			
PI	5+16.91	1858327.95	6254436.07
PI	5+65.00	1858287.1	6254461.45
Tangential Direction:	S 31° 51'07" E		
Tangential Length:	48.10		
Element: Linear			
PI	5+65.00	1858287.1	6254461.45
PI	5+66.50	1858285.82	6254462.24
Tangential Direction:	S 31° 45'04" E		
Tangential Length:	1.50		
Element: Linear			
PI	5+66.50	1858285.82	6254462.24
PI	5+67.46	1858285.32	6254461.43
Tangential Direction:	S 58° 14'56" W		
Tangential Length:	0.96		
Element: Linear			
PI	5+67.46	1858285.32	6254461.43
BC	6+20.32	1858255.80	6254417.57
Tangential Direction:	S 56° 03'45" W		
Tangential Length:	52.86		
Element: Circular			
BC	6+20.32	1858255.80	6254417.57
EC	6+35.39	1858247.20	6254405.20
Radius:	500.00		
Delta:	1° 43'39"	Left	
Length:	15.07		
Element: Linear			
EC	6+35.39	1858247.20	6254405.20
PI	6+63.17	1858231.01	6254382.63
Tangential Direction:	S 54° 20'07" W		
Tangential Length:	27.78		
Element: Linear			
PI	6+63.17	1858231.01	6254382.63
PI	6+64.67	1858230.13	6254381.41
Tangential Direction:	S 54° 17'08" W		
Tangential Length:	1.50		
Element: Linear			
PI	6+64.67	1858230.13	6254381.41
POE	6+66.17	1858229.25	6254380.19
Tangential Direction:	S 54° 17'08" W		
Tangential Length:	1.50		

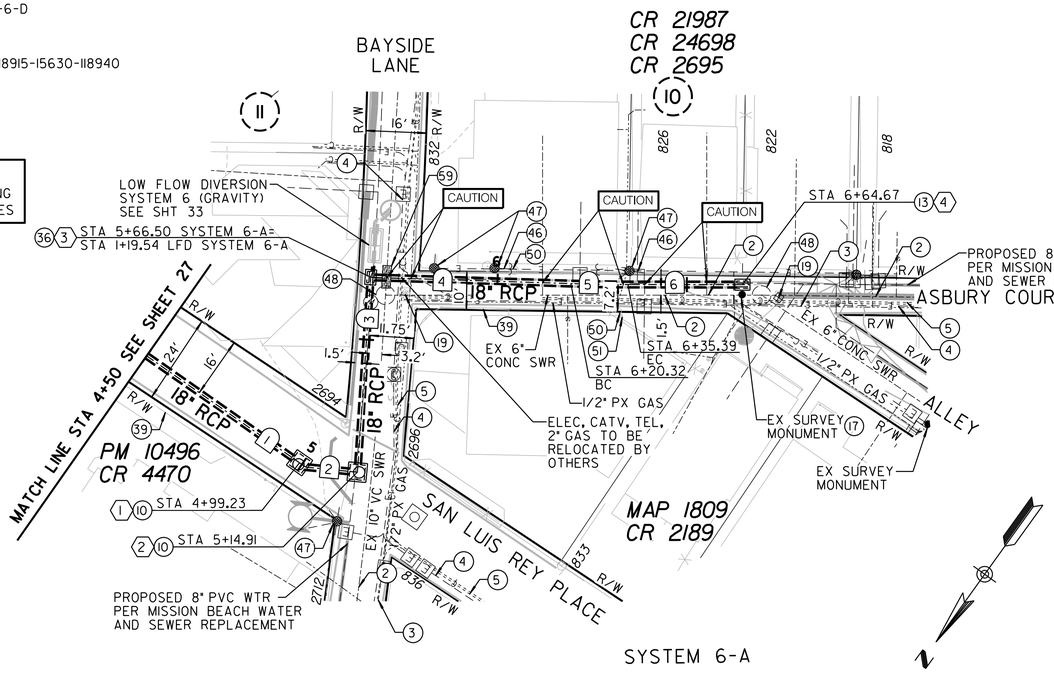
REFERENCES:

WATER: 40709-29-D
SEWER: GROUP 168, 40709-29-D, 16739-6-D
STORM DRAIN: NONE
CATV: NONE
TELEPHONE: NONE
GAS: 15630-118930, 15630-118925,15630-118915-15630-118940
ELECTRIC: 15630-118915-15630-118940

RETIREMENTS:

GRATE INLET - 2

CONTRACTORS NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES



STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	4+99.23	1858336.56	6254448.90	TYPE A-4 CO
2	5+14.91	1858329.68	6254435.07	TYPE A-4 CO
3	5+66.50	1858285.82	6254462.24	MOD TYPE I CB W/ DIVERSION WEIR
4	6+64.67	1858230.13	6254381.41	MOD TYPE I CB

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	S89° 15'44"W		47.23'	18" RCP (2000-D)•
2	S59° 54'57"W		11.67'	18" RCP (2000-D)•
3	S31° 51'07"E		48.10'	18" RCP (2000-D)•
4	S56° 03'45"W		52.86'	18" RCP (2000-D)•
5	△= 01° 43'39"	500.00	15.07'	18" RCP (2000-D)•
6	S54° 20'07"W		27.78'	18" RCP (2000-D)•

•WATER-TIGHT JOINTS

CONSTRUCTION NOTES

(2) PROTECT EX SEWER MAIN IN PLACE
(3) PROTECT GAS IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(10) CONSTRUCT TYPE A-4 CLEANOUT
(13) CONSTRUCT MODIFIED TYPE I CATCH BASIN SEE DETAIL ON SHT 53
(17) CONTACT CITY SURVEY SECTION TO PERPETUATE SURVEY MONUMENT
(19) REMOVE EX STORM DRAIN STRUCTURE
(36) CONSTRUCT MODIFIED TYPE ICATCH BASIN W/ DIVERSION WEIR SEE DETAIL ON SHT 54
(39) PROTECT EX WALL IN PLACE
(46) PROTECT EX GUY WIRE IN PLACE
(47) PROTECT EX UTILITY POLE IN PLACE
(48) PROTECT EX SEWER MANHOLE IN PLACE
(50) PROTECT EX SIGN IN PLACE
(51) PROTECT EX BOLLARD IN PLACE
(59) CONCRETE ENCASE EX SWR PER SDS-112

C-25

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SAN LUIS REY PLACE / BAYSIDE LANE / ASBURY COURT

BAYSIDE WALK TO BAYSIDE LANE | SAN LUIS REY PLACE TO ASBURY COURT | BAYSIDE LANE TO ALLEY

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 28 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

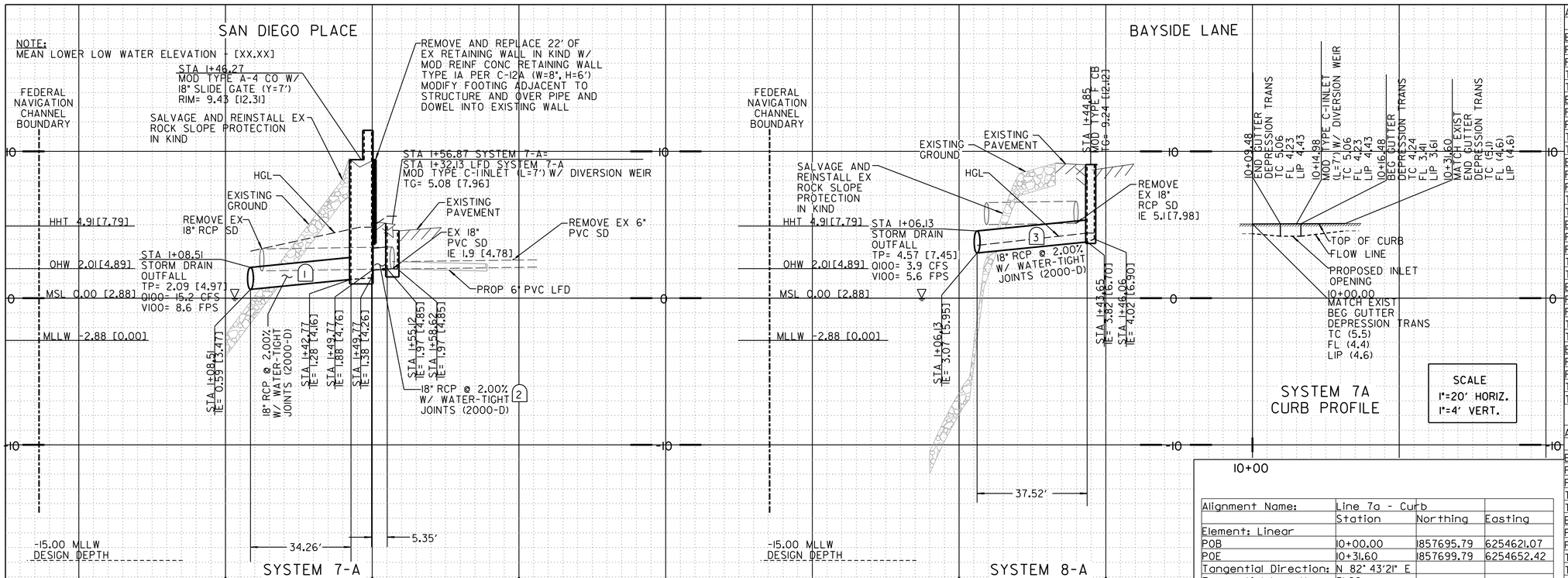
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/31/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-28-D

RICK ENGINEERING COMPANY
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Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

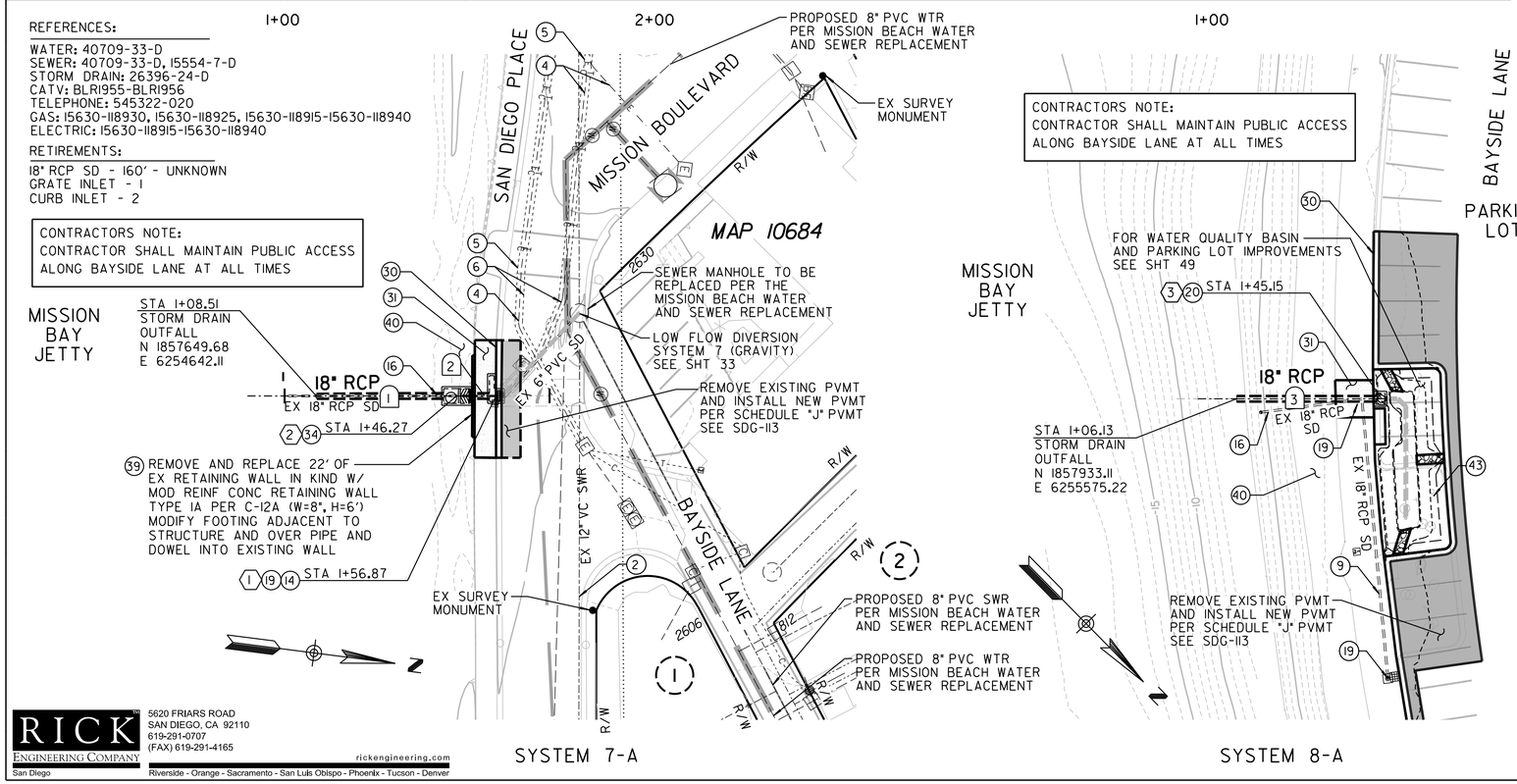
SAN LUIS REY PLACE / BAYSIDE LANE / ASBURY COURT



Alignment Name:	Line 7a - Curb		
	Station	Northing	Easting
Element: Linear			
POB	10+00.00	1857695.79	6254621.07
POE	10+31.60	1857699.79	6254652.42
Tangential Direction:	N 82° 43'21" E		
Tangential Length:	31.60		

Alignment Name:	Line 7a		
	Station	Northing	Easting
Element: Linear			
PI	1+08.51	1857649.68	6254642.11
PI	1+42.77	1857683.66	6254637.74
Tangential Direction:	N 7° 19'57" W		
Tangential Length:	34.26		
Element: Linear			
PI	1+42.77	1857683.66	6254637.74
PI	1+46.27	1857687.13	6254637.29
Tangential Direction:	N 7° 19'57" W		
Tangential Length:	3.50		
Element: Linear			
PI	1+46.27	1857687.13	6254637.29
PI	1+49.77	1857690.61	6254636.84
Tangential Direction:	N 7° 19'57" W		
Tangential Length:	3.50		
Element: Linear			
PI	1+49.77	1857690.61	6254636.84
PI	1+55.12	1857695.90	6254636.17
Tangential Direction:	N 7° 16'39" W		
Tangential Length:	5.35		
Element: Linear			
PI	1+55.12	1857695.90	6254636.17
PI	1+56.87	1857697.64	6254635.94
Tangential Direction:	N 7° 33'27" W		
Tangential Length:	1.75		
Element: Linear			
PI	1+56.87	1857697.64	6254635.94
PI	1+58.62	1857699.37	6254635.71
Tangential Direction:	N 7° 33'27" W		
Tangential Length:	1.75		

Alignment Name:	Line 8a		
	Station	Northing	Easting
Element: Linear			
PI	1+06.13	1857933.11	6255575.22
PI	1+43.65	1857959.42	6255548.47
Tangential Direction:	N 45° 28'10" W		
Tangential Length:	37.52		
Element: Linear			
PI	1+43.65	1857959.42	6255548.47
PI	1+44.85	1857960.27	6255547.61
Tangential Direction:	N 45° 28'10" W		
Tangential Length:	1.21		
Element: Linear			
PI	1+44.85	1857960.27	6255547.61
PI	1+46.06	1857961.11	6255546.75
Tangential Direction:	N 45° 28'10" W		
Tangential Length:	1.21		



STRUCTURE DATA TABLE				
NO.	STA	NORTHING	EASTING	REMARKS
1	1+56.87	1857697.64	6254635.94	MOD TYPE C-1 INLET (L=7') W/ DIVERSION WEIR
2	1+46.27	1857687.13	6254637.29	MOD TYPE A-4 CO W/ 18" SLIDE GATE (Y=7')
3	1+45.15	1857960.47	6255547.40	MOD TYPE F CB

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N07° 19'57"W		34.26'	18" RCP (2000-D)•
2	N07° 16'39"W		5.35'	18" RCP (2000-D)•
3	N45° 28'10"W		37.52'	18" RCP (2000-D)•

•WATER-TIGHT JOINTS

CONSTRUCTION NOTES

(2) PROTECT EX SEWER MAIN IN PLACE
(4) PROTECT ELEC COND IN PLACE
(5) PROTECT CATV IN PLACE
(6) PROTECT TEL COND IN PLACE
(9) ABANDON EX STORM DRAIN PER WHITEBOOK SPECIFICATIONS
(14) CONSTRUCT MODIFIED TYPE C CURB INLET W/ DIVERSION WEIR SEE DETAIL ON SHT 55
(16) REMOVE EX STORM DRAIN
(19) REMOVE EX STORM DRAIN STRUCTURE
(20) CONSTRUCT MODIFIED TYPE F CATCH BASIN SEE DETAIL ON SHT 52
(30) REPLACE EXISTING CURB AND GUTTER IN KIND
(31) REPLACE EXISTING SIDEWALK IN KIND
(34) CONSTRUCT MODIFIED TYPE A-4 CLEANOUT W/ 18" SLIDE GATE (Y=7') SEE DETAIL ON SHT 55
(39) REMOVE EX WALL
(40) SALVAGE AND REINSTALL EX ROCK SLOPE PROTECTION
(43) SALVAGE AND REINSTALL EX SIGN

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS ALONG BAYSIDE LANE AT ALL TIMES

C-26

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SAN DIEGO PLACE / BAYSIDE LANE

MISSION BAY JETTY TO SAN DIEGO PLACE — MISSION BAY JETTY TO BAYSIDE LANE

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 29 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. CRICK — NO. 52245 — STATE OF CALIFORNIA — 03/13/2023

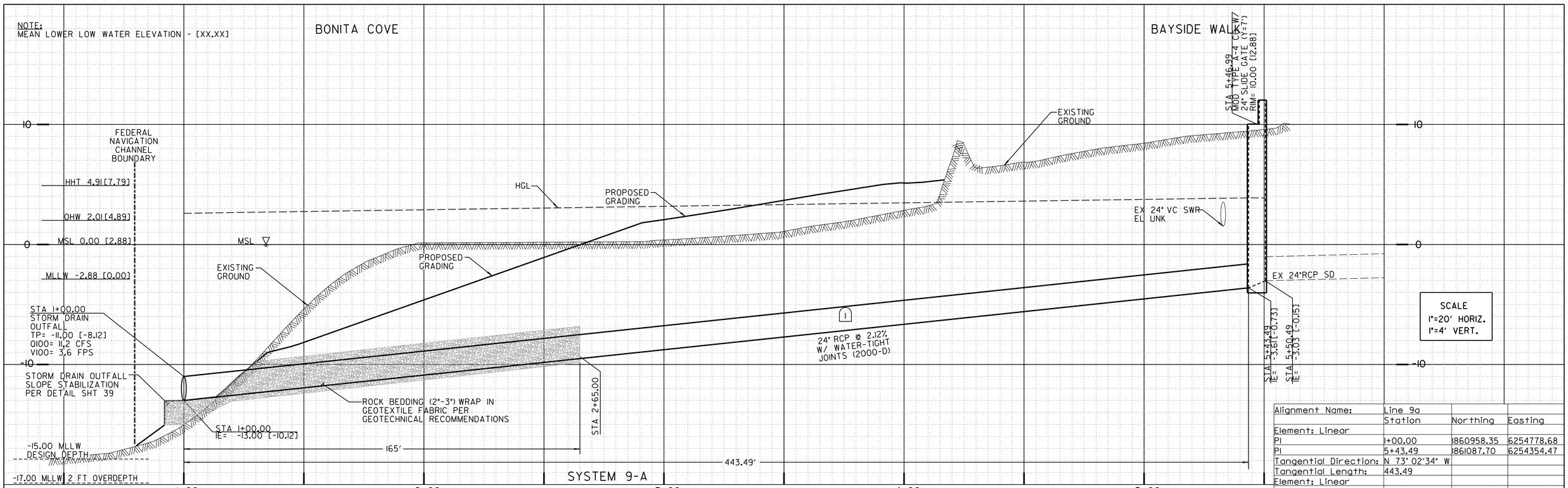
CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-29-D

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San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
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SAN DIEGO PLACE / BAYSIDE LANE

NOTE:
MEAN LOWER LOW WATER ELEVATION - [XX.XX]



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

Alignment Name:	Line 9a		
	Station	Northing	Easting
Element: Linear			
PI	1+00.00	1860958.35	6254778.68
PI	5+43.49	1861087.70	6254354.47
Tangential Direction:	N 73° 02'34" W		
Tangential Length:	443.49		
Element: Linear			
PI	5+43.49	1861087.7	6254354.47
PI	5+46.99	1861086.91	6254351.06
Tangential Direction:	S 76° 57'26" W		
Tangential Length:	3.50		
Element: Linear			
PI	5+46.99	1861086.91	6254351.06
PI	5+50.49	1861086.12	6254347.65
Tangential Direction:	S 76° 57'26" W		
Tangential Length:	3.50		

NOTE:
1. FOR OUTFALL GRADING SEE SHT 36
2. FOR LIMITS OF WORK SEE SHT 36
3. FOR COFFERDAM LIMITS SEE SHT 36

REFERENCES:

WATER: NONE
SEWER: 13003-3-D
STORM DRAIN: 26396-27-D
CATV: NONE
TELEPHONE: NONE
GAS: NONE
ELECTRIC: NONE

RETIREMENTS:

24" - RCP - STORM DRAIN - 309.58 - 1967

CONSTRUCTION NOTES

(2) PROTECT EX SEWER MAIN IN PLACE
(8) PROTECT EX STORM DRAIN IN PLACE
(16) REMOVE EX STORM DRAIN
(32) CONNECT TO EX STORM DRAIN
(34) CONSTRUCT MODIFIED TYPE A-4 CLEANOUT W/ 24" SLIDE GATE (Y=7') SEE DETAIL ON SHT 55

STRUCTURE DATA TABLE

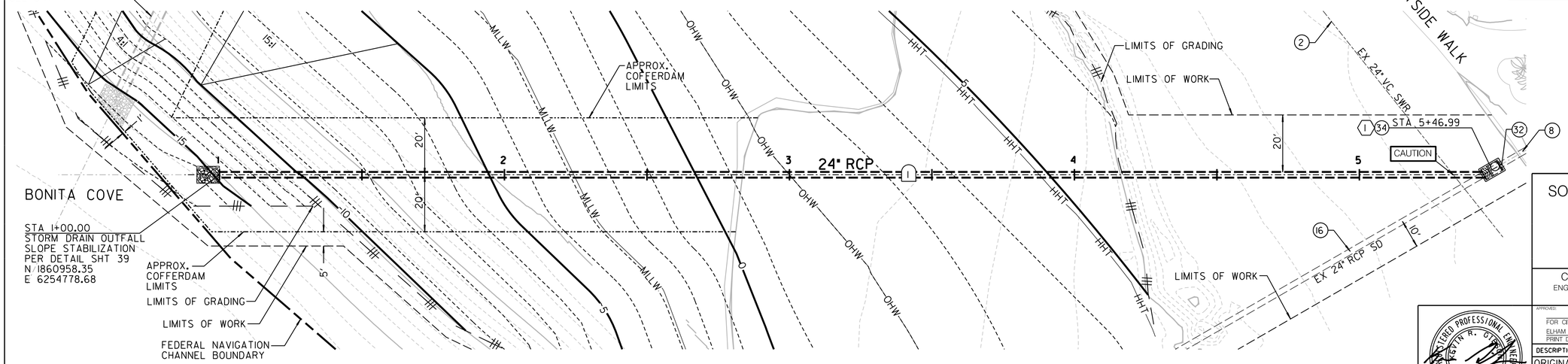
NO.	STA	NORTHING	EASTING	REMARKS
(1)	5+46.99	1861086.91	6254351.06	MOD TYPE A-4 CO W/ 24" SLIDE GATE (Y=7')

STORM DRAIN DATA TABLE

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
(1)	N73° 02'34"W		443.49'	24" RCP (2000-D)•

•WATER-TIGHT JOINTS

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS ALONG BAYSIDE WALK AT ALL TIMES



0 20 40 80
SCALE 1" = 20'

BONITA COVE

C-27

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

BONITA COVE

BONITA COVE TO BAYSIDE WALK

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 30 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — RCE# C91224
PRINT DCE NAME

SUBMITTED BY: KAREN VERA — PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI — PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

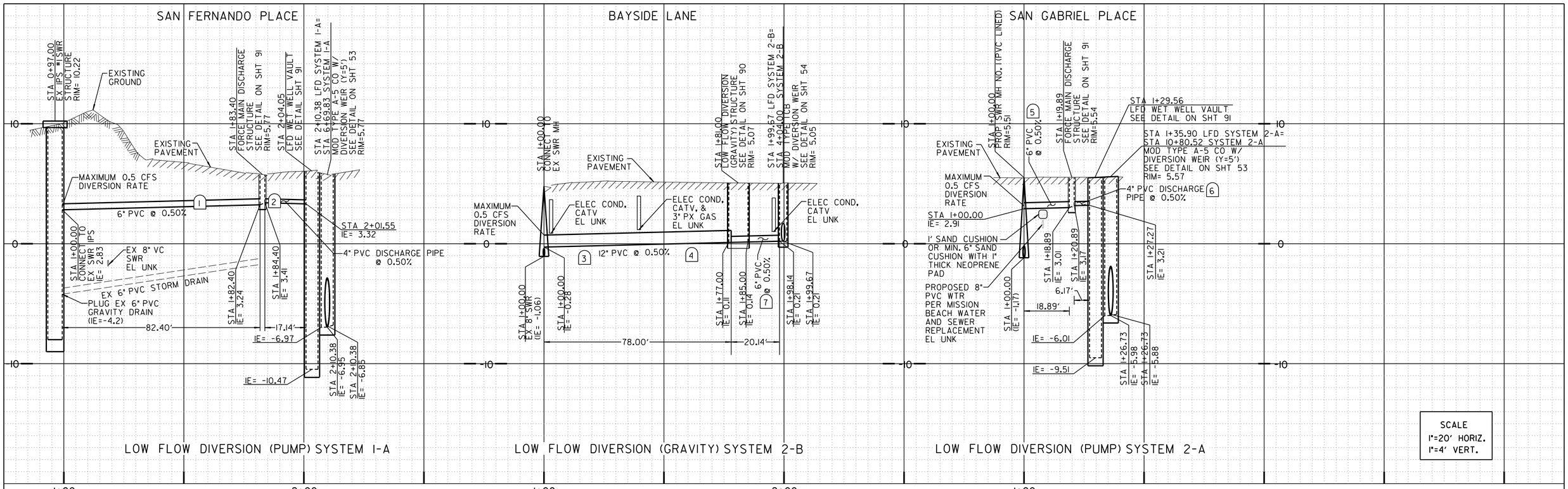
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-30-D

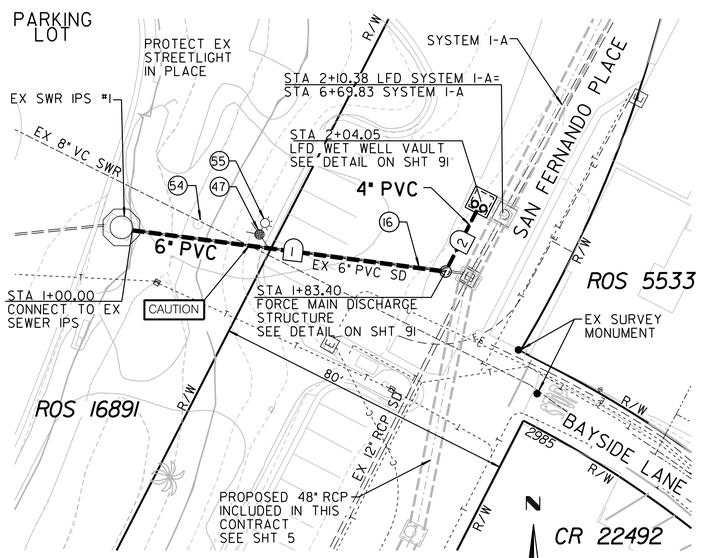
REGISTERED PROFESSIONAL ENGINEER KEVIN R. GRAY NO. 52295 STATE OF CALIFORNIA
03/13/2023

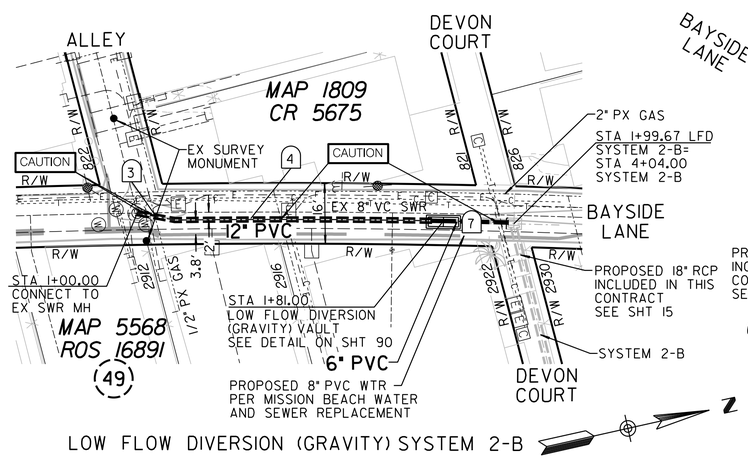
RICK ENGINEERING COMPANY
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619-291-0707
(FAX) 619-291-4165
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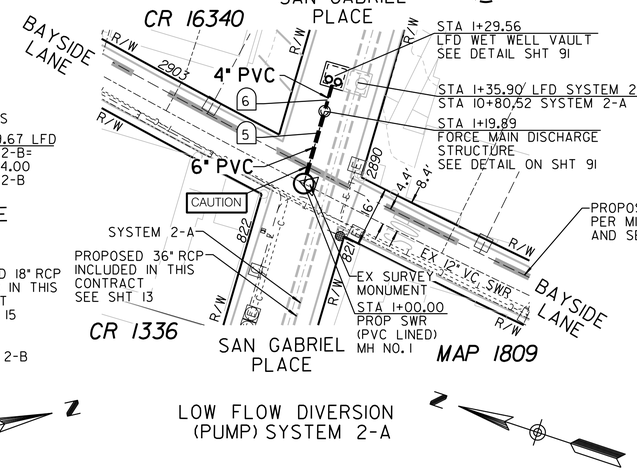
BONITA COVE



CR 18924







CR 22492

CONSTRUCTION NOTES

(16) REMOVE EX STORM DRAIN
(47) PROTECT UTILITY POLE IN PLACE
(54) PROTECT EX TREE IN PLACE
(55) PROTECT EX STREET LIGHT IN PLACE

NOTES:

1. FOR LOW FLOW DIVERSION ALIGNMENT TABLES SEE SHT 34

REFERENCES:

WATER: 23571-0-D, 13159-13-D, 11293-11-D, 11293-12-D
SEWER: 5251-0-L, 17298-4-D
STORM DRAIN: 9110-L, 26396-27-D
CATV: 54322-010
TELEPHONE: 54322-010
GAS: 15630-118940
ELECTRIC: 545322-010, 15630-118915, 15630-118940

RETIREMENTS:

6" - PVC - STORM DRAIN - 90' - 1993

STORM DRAIN DATA TABLE

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	S21° 40'10"E		82.40'	6" PVC (SCH 80 SOLVENT WELDED JOINTS)
2	S87° 56'12"E		17.14'	4" PVC (SCH 80 SOLVENT WELDED JOINTS)
3	N23° 06'07"E		10.15'	12" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
4	△ =01° 46'25"	2192.00'	67.85'	12" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
5	N87° 42'30"E		18.89'	6" PVC (SCH 80 SOLVENT WELDED JOINTS)
6	N87° 42'30"E		6.17'	4" PVC (SCH 80 SOLVENT WELDED JOINTS)
7	△ =00° 31'35"	2192.00'	20.14'	6" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)

SCALE 1" = 20'

C-28

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

LOW FLOW DIVERSION PLAN 1

SYSTEMS 1-A, 2-B, 2-A

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 31 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — RCE# C91224
PRINT DCE NAME

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

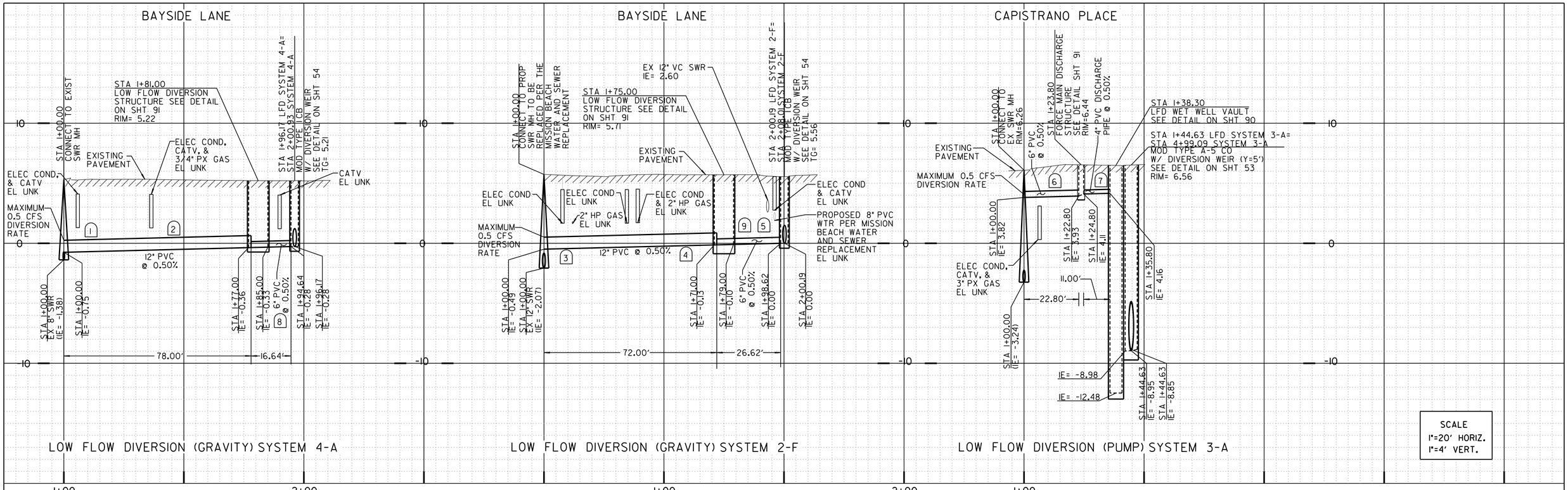
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

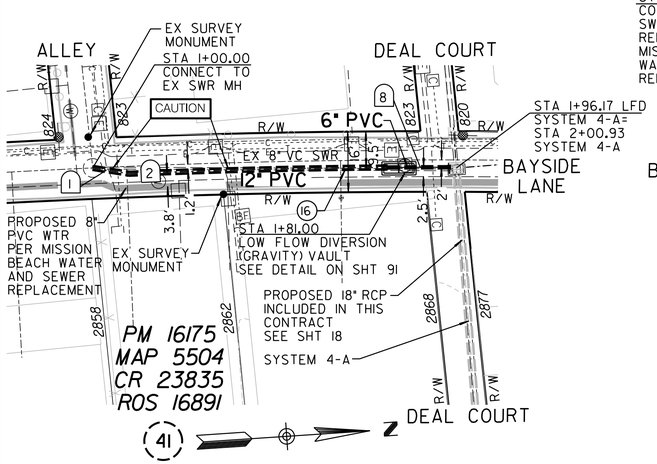
41306-31-D

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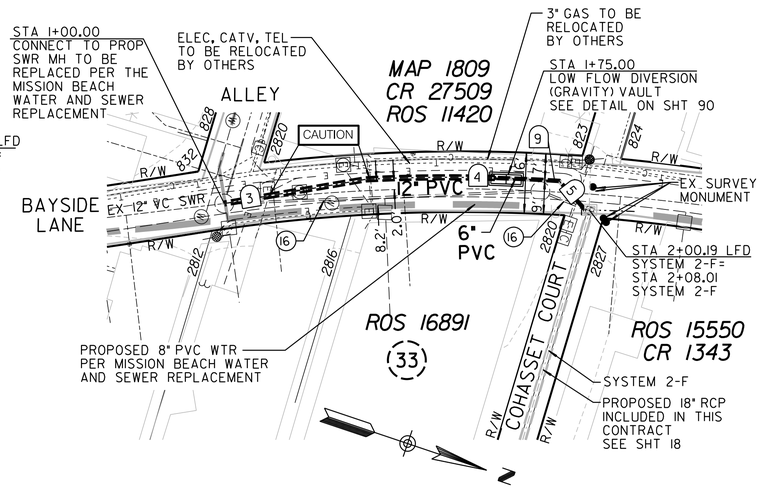
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52245 — STATE OF CALIFORNIA — 03/13/2023

LOW FLOW DIVERSION PLAN 1

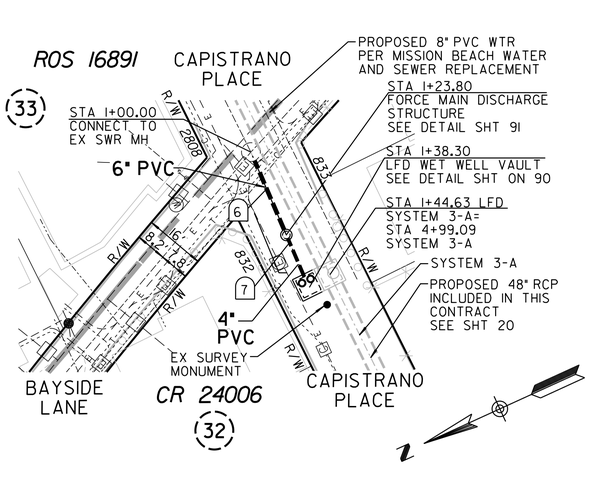




LOW FLOW DIVERSION (GRAVITY) SYSTEM 4-A



LOW FLOW DIVERSION (GRAVITY) SYSTEM 2-F



LOW FLOW DIVERSION (PUMP) SYSTEM 3-A

NOTES:

1. FOR LOW FLOW DIVERSION ALIGNMENT TABLES SEE SHT 34

CONTRACTORS NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES

MAP 1809
PM 20390
(26)

CONSTRUCTION NOTES
(16) REMOVE EX STORM DRAIN

REFERENCES:

WATER: 40709-21-D, 11293-11-D
SEWER: 13003-2-D, 17298-3-D
STORM DRAIN: 462-D, 26396-25-D, 26396-26-D
CATV: 54322-010, BLR1955-BLR1956
TELEPHONE: 54322-010, 54322-020
GAS: 15630-118930, 15630-118940
ELECTRIC: 545322-010, 545322-020

RETIREMENTS:

6" - PVC - STORM DRAIN - 185' - 1993

STORM DRAIN DATA TABLE

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N12° 42'30"E		9.81'	12" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
2	△= 02° 00'13"	1950.00'	68.19'	12" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
3	N28° 20'36"W		37.87'	12" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
4	△= 04° 20'07"	451.00'	34.13'	12" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
5	N29° 25'00"E		9.61'	6" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
6	N88° 37'06"W		22.80'	6" PVC (SCH 80 SOLVENT WELDED JOINTS)
7	N88° 37'06"W		11.00'	4" PVC (SCH 80 SOLVENT WELDED JOINTS)
8	△= 00° 29'20"	1950.00'	16.64'	6" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
9	△= 02° 09'41"	451.00'	17.01'	6" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)

0 20 40 80
SCALE 1" = 20'

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REGISTERED PROFESSIONAL ENGINEER KAITLYN R. GIBSON NO. 32295 STATE OF CALIFORNIA
03/13/2023

C-29

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
LOW FLOW DIVERSION PLAN 2
SYSTEMS 4-A, 2-G, 3-A

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 32 OF 128 SHEETS

WBS B-18118 (G)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DCE NAME — 12/18/2023 DATE — C91224 RCE#

SUBMITTED BY: KAREN VERA PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

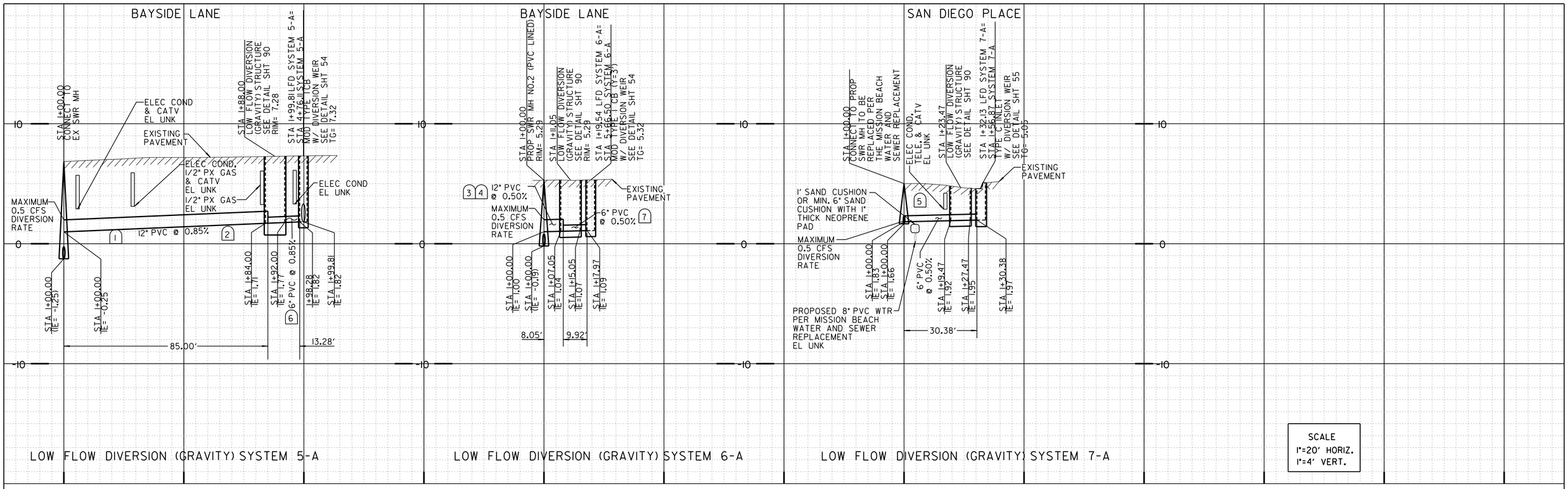
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE

1858-6249 CCS83 COORDINATE

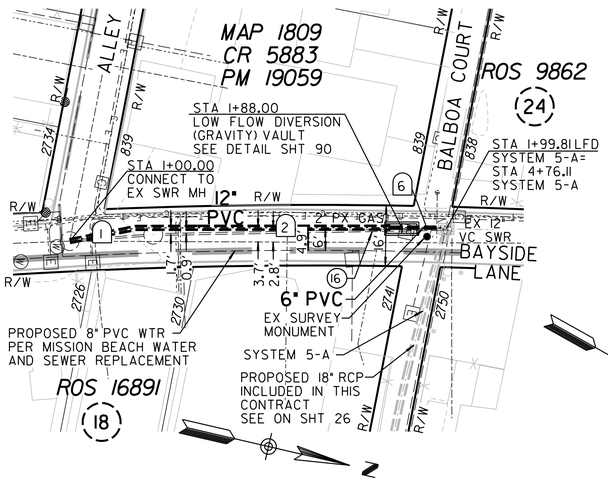
41306-32-D

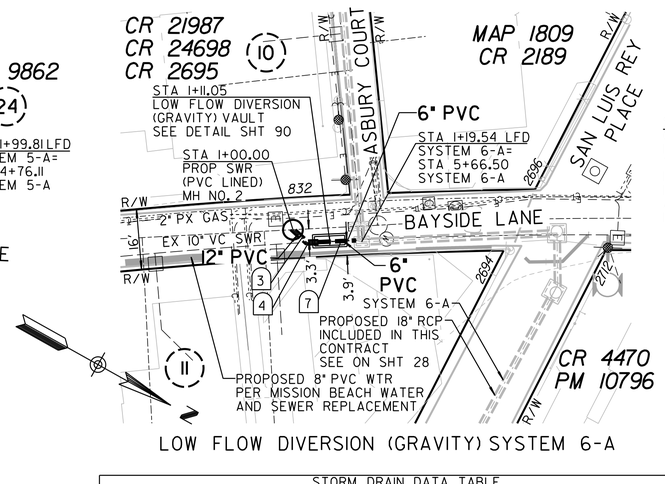
CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

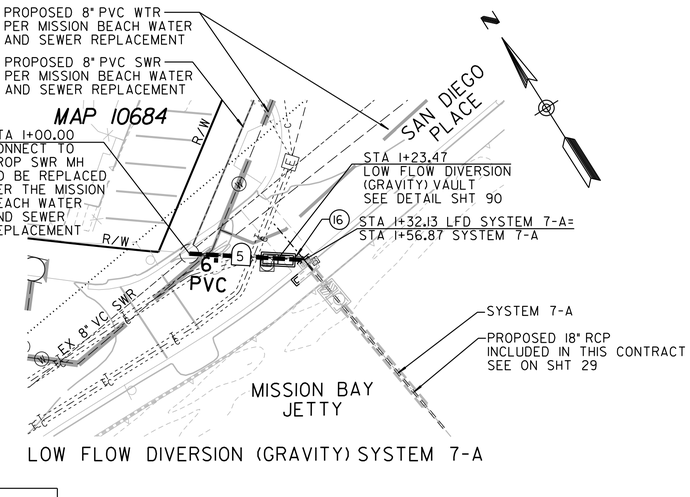


NOTES:

1. FOR LOW FLOW DIVERSION ALIGNMENT TABLES SEE SHT 34







CONTRACTORS NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES

CONSTRUCTION NOTES

(16) REMOVE EX STORM DRAIN

REFERENCES:

WATER: 23571-0-D, 13159-13-D, 11293-11-D, 11293-12-D
SEWER: 40709-33-D, 15554-7-D
STORM DRAIN: 26396-24-D
CATV: 54322-010
TELEPHONE: 54322-010
GAS: 15630-118925, 15630-118930, 15630-118940
ELECTRIC: 15630-118915-15630-118940

RETIREMENTS:

6" - PVC - STORM DRAIN - 120 -1993

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N24° 19'21"W		17.89'	12" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
2	N13° 04'21"W		67.11'	12" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
3	N13° 14'56"E		5.05'	12" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
4	N31° 45'04"W		3.00'	12" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
5	S54° 31'23"E		30.38'	6" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
6	N13° 04'21"W		13.28'	6" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)
7	N15° 34'43"W		9.92'	6" PVC (SCH 80 DWV SOLVENT WELDED JOINTS)

0 20 40 80
SCALE 1" = 20'

C-30

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

LOW FLOW DIVERSION PLAN 3

SYSTEMS 5-A, 6-A, 7-A

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 33 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DOE NAME — 12/18/2023 DATE — C91224 RCE#

SUBMITTED BY: KAREN VERA PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE

1858-6249 CCS83 COORDINATE

41306-33-D

REGISTERED PROFESSIONAL ENGINEER KEVIN R. GIBB NO. 52295 STATE OF CALIFORNIA 03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

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LOW FLOW DIVERSION PLAN 3

Alignment Name:	LFD 1a - San Fernando		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1860706.30	6254310.04
PI	1+82.40	1860629.72	6254340.47
Tangential Direction:	S 21° 40'10" E		
Tangential Length:	82.40		
Element: Linear			
PI	1+82.40	1860629.72	6254340.47
PI	1+83.40	1860628.79	6254340.84
Tangential Direction:	S 21° 40'10" E		
Tangential Length:	1.00		
Element: Linear			
PI	1+83.40	1860628.79	6254340.84
PI	1+84.40	1860628.83	6254341.84
Tangential Direction:	N 87° 56'12" E		
Tangential Length:	1.00		
Element: Linear			
PI	1+84.40	1860628.83	6254341.84
PI	2+01.55	1860629.44	6254358.97
Tangential Direction:	N 87° 56'12" E		
Tangential Length:	17.14		
Element: Linear			
PI	2+01.55	1860629.44	6254358.97
PI	2+04.05	1860629.53	6254361.47
Tangential Direction:	N 87° 56'12" E		
Tangential Length:	2.50		
Element: Linear			
PI	2+04.05	1860629.53	6254361.47
PI	2+06.55	1860627.03	6254361.56
Tangential Direction:	S 2° 03'48" E		
Tangential Length:	2.50		
Element: Linear			
PI	2+06.55	1860627.03	6254361.56
PI	2+07.88	1860625.70	6254361.61
Tangential Direction:	S 2° 03'48" E		
Tangential Length:	1.33		
Element: Linear			
PI	2+07.88	1860625.70	6254361.61
PI	2+10.38	1860623.20	6254361.70
Tangential Direction:	S 2° 03'48" E		
Tangential Length:	2.50		
Element: Linear			
PI	2+10.38	1860623.20	6254361.70
PI	2+12.88	1860620.70	6254361.79
Tangential Direction:	S 2° 03'48" E		
Tangential Length:	2.50		

Alignment Name:	LFD 2a - San Gabriel		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1859839.24	6254100.79
PI	1+18.89	1859840.00	6254119.66
Tangential Direction:	N 87° 42'30" E		
Tangential Length:	18.89		
Element: Linear			
PI	1+18.89	1859840.00	6254119.66
PI	1+19.89	1859840.04	6254120.66
Tangential Direction:	N 87° 42'30" E		
Tangential Length:	1.00		
Element: Linear			
PI	1+19.89	1859840.04	6254120.66
PI	1+20.89	1859840.08	6254121.66
Tangential Direction:	N 87° 42'30" E		
Tangential Length:	1.00		
Element: Linear			
PI	1+20.89	1859840.08	6254121.66
PI	1+27.06	1859840.32	6254127.83
Tangential Direction:	N 87° 42'30" E		
Tangential Length:	6.17		
Element: Linear			
PI	1+27.06	1859840.32	6254127.83
PI	1+29.56	1859840.42	6254130.33
Tangential Direction:	N 87° 42'30" E		
Tangential Length:	2.50		
Element: Linear			
PI	1+29.56	1859840.42	6254130.33
PI	1+32.06	1859837.93	6254130.43
Tangential Direction:	S 2° 17'30" E		
Tangential Length:	2.50		
Element: Linear			
PI	1+32.06	1859837.93	6254130.43
PI	1+33.40	1859836.59	6254130.48
Tangential Direction:	S 2° 17'30" E		
Tangential Length:	1.33		
Element: Linear			
PI	1+33.40	1859836.59	6254130.48
PI	1+35.90	1859834.10	6254130.58
Tangential Direction:	S 2° 17'30" E		
Tangential Length:	2.50		
Element: Linear			
PI	1+35.90	1859834.10	6254130.58
PI	1+38.40	1859831.60	6254130.68
Tangential Direction:	S 2° 17'30" E		
Tangential Length:	2.50		

Alignment Name:	LFD 2b - Devon Ct		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1859937.50	6254118.72
BC	1+10.15	1859946.84	6254122.71
Tangential	N 23° 06'07"		
Tangential Length:	10.15		
Element: Circular			
BC	1+10.15	1859946.84	6254122.71
PCC	1+77.00	1860012.04	6254137.45
Radius:	2192.00		
Delta:	1° 44'50"	Right	
Length:	66.85		
Element: Circular			
PCC	1+77.00	1860012.04	6254137.45
PCC	1+78.00	1860013.01	6254137.68
Radius:	2192.00		
Delta:	0° 01'34"	Right	
Length:	1.00		
Element: Circular			
PCC	1+78.00	1860013.01	6254137.68
PCC	1+85.00	1860019.81	6254139.35
Radius:	2192.00		
Delta:	0° 10'59"	Right	
Length:	7.00		
Element: Circular			
PCC	1+85.00	1860019.81	6254139.35
EC	1+98.14	1860032.56	6254142.52
Radius:	2192.00		
Delta:	0° 20'36"	Right	
Length:	13.14		
Element: Linear			
EC	1+98.14	1860032.56	6254142.52
PI	1+99.67	1860033.94	6254143.17
Tangential	N 25° 11'51" E		
Tangential Length:	1.53		
Element: Linear			
PI	1+99.67	1860033.94	6254143.17
PI	2+01.17	1860035.39	6254143.54
Tangential	N 14° 11'38" E		
Tangential Length:	1.50		

Alignment Name:	LFD 2f - Cohasset Ct		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1859180.13	6254126.78
BC	1+37.87	1859213.46	6254108.80
Tangential	N 28° 20'36"		
Tangential Length:	37.87		
Element: Circular			
BC	1+37.87	1859213.46	6254108.80
PCC	1+71.00	1859244.72	6254097.86
Radius:	451.00		
Delta:	4° 12'30"	Right	
Length:	33.13		
Element: Circular			
PCC	1+71.00	1859244.72	6254097.86
PCC	1+72.00	1859245.67	6254097.56
Radius:	451.00		
Delta:	0° 07'37"	Right	
Length:	1.00		
Element: Circular			
PCC	1+72.00	1859245.67	6254097.56
PCC	1+79.00	1859252.38	6254095.56
Radius:	451.00		
Delta:	0° 53'21"	Right	
Length:	7.00		
Element: Circular			
PCC	1+79.00	1859252.38	6254095.56
EC	1+89.01	1859262.03	6254092.88
Radius:	451.00		
Delta:	1° 16'19"	Right	
Length:	10.01		
Element: Linear			
EC	1+89.01	1859262.03	6254092.88
PI	1+98.62	1859270.39	6254097.60
Tangential	N 29° 25'00"		
Tangential Length:	9.61		
Element: Linear			
PI	1+98.62	1859270.39	6254097.60
PI	2+00.19	1859271.96	6254097.60
Tangential	N 0° 14'52" E		
Tangential Length:	1.57		
Element: Linear			
PI	2+00.19	1859271.96	6254097.60
PI	2+01.69	1859273.40	6254097.17
Tangential	N 16° 45'17" W		
Tangential Length:	1.50		

Alignment Name:	LFD 3a - Capistrano Pl		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1859081.67	6254173.67
PI	1+22.80	1859082.22	6254150.88
Tangential Direction:	N 88° 37'06" W		
Tangential Length:	22.80		
Element: Linear			
PI	1+22.80	1859082.22	6254150.88
PI	1+23.80	1859082.24	6254149.88
Tangential Direction:	N 88° 37'06" W		
Tangential Length:	1.00		
Element: Linear			
PI	1+23.80	1859082.24	6254149.88
PI	1+24.80	1859082.27	6254148.88
Tangential Direction:	N 88° 37'06" W		
Tangential Length:	1.00		
Element: Linear			
PI	1+24.80	1859082.27	6254148.88
PI	1+35.80	1859082.53	6254137.89
Tangential Direction:	N 88° 37'06" W		
Tangential Length:	11.00		
Element: Linear			
PI	1+35.80	1859082.53	6254137.89
PI	1+38.30	1859082.46	6254135.39
Tangential Direction:	S 88° 18'07" W		
Tangential Length:	2.50		
Element: Linear			
PI	1+38.30	1859082.46	6254135.39
PI	1+40.80	1859079.96	6254135.46
Tangential Direction:	S 1° 41'53" E		
Tangential Length:	2.50		
Element: Linear			
PI	1+40.80	1859079.96	6254135.46
PI	1+42.13	1859078.63	6254135.50
Tangential Direction:	S 1° 41'53" E		
Tangential Length:	1.33		
Element: Linear			
PI	1+42.13	1859078.63	6254135.50
PI	1+44.63	1859076.13	6254135.58
Tangential Direction:	S 1° 41'53" E		
Tangential Length:	2.50		
Element: Linear			
PI	1+44.63	1859076.13	6254135.58
PI	1+47.13	1859073.63	6254135.65
Tangential Direction:	S 1° 41'53" E		
Tangential Length:	2.50		

Alignment Name:	LFD 4a - Deal Ct		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1859550.80	6254074.75
BC	1+09.81	1859560.37	6254076.91
Tangential	N 12° 42'30"		
Tangential Length:	9.81		
Element: Circular			
BC	1+09.81	1859560.37	6254076.91
PCC	1+77.00	1859627.50	6254079.72
Radius:	1950.00		
Delta:	1° 58'27"	Right	
Length:	67.19		
Element: Circular			
PCC	1+77.00	1859627.50	6254079.72
PCC	1+78.00	1859628.50	6254079.78
Radius:	1950.00		
Delta:	0° 01'46"	Right	
Length:	1.00		
Element: Circular			
PCC	1+78.00	1859628.50	6254079.78
PCC	1+85.00	1859635.48	6254080.21
Radius:	1950.00		
Delta:	0° 12'20"	Right	
Length:	7.00		
Element: Circular			
PCC	1+85.00	1859635.48	6254080.21
EC	1+94.64	1859645.10	6254080.84
Radius:	1950.00		
Delta:	0° 17'00"	Right	
Length:	9.64		
Element: Linear			
EC	1+94.64	1859645.10	6254080.84
PI	1+96.17	1859646.60	6254081.12
Tangential	N 10° 27'15" E		
Tangential Length:	1.52		
Element: Linear			
PI	1+96.17	1859646.60	6254081.12
PI	1+97.67	1859648.11	6254081.10
Tangential	N 0° 34'28"		
Tangential Length:	1.50		

Alignment Name:	LFD 5a - Balboa Ct		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1858613.71	6254312.56
PI	1+17.89	1858630.01	6254305.19
Tangential	N 24° 19'21" W		
Tangential Length:	17.89		
Element: Linear			
PI	1+17.89	1858630.01	6254305.19
PI	1+84.00	1858694.41	6254290.24
Tangential	N 13° 04'21"		
Tangential Length:	66.11		
Element: Linear			
PI	1+84.00	1858694.41	6254290.24
PI	1+85.00	1858695.38	6254290.01
Tangential	N 13° 04'21"		
Tangential Length:	1.00		
Element: Linear			
PI	1+85.00	1858695.38	6254290.01
PI	1+92.00	1858702.20	6254288.43
Tangential	N 13° 04'21"		
Tangential Length:	7.00		
Element: Linear			
PI	1+92.00	1858702.20	6254288.43
PI	1+98.28	1858708.31	6254287.01
Tangential	N 13° 04'21"		
Tangential Length:	6.28		
Element: Linear			
PI	1+98.28	1858708.31	6254287.01
PI	1+99.81	1858709.84	6254286.98
Tangential	N 1° 02'41" W		
Tangential Length:	1.53		
Element: Linear			
PI	1+99.81	1858709.84	6254286.98
PI	2+01.31	1858711.31	6254286.66
Tangential	N 12° 19'02"		
Tangential Length:	1.50		

Alignment Name:	LFD 6a - Asbury Court		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1858268.40	6254468.29
PI	1+05.05	1858273.31	6254469.44
Tangential	N 13° 14'56" E		
Tangential Length:	5.05		
Element: Linear			
PI	1+05.05	1858273.31	6254469.44
PI	1+07.05	1858275.01	6254468.39
Tangential	N 31° 45'04"		
Tangential Length:	2.00		
Element: Linear			
PI	1+07.05	1858275.01	6254468.39
PI	1+08.05	1858275.86	6254467.86
Tangential	N 31° 45'04"		
Tangential Length:	1.00		
Element: Linear			
PI	1+08.05	1858275.86	6254467.86
PI	1+15.05	1858281.82	6254464.18
Tangential	N 31° 45'04"		
Tangential Length:	7.00		
Element: Linear			
PI	1+15.05	1858281.82	6254464.18
PI	1+17.97	1858284.30	6254462.64
Tangential	N 31° 45'04"		
Tangential Length:	2.92		
Element: Linear			
PI	1+17.97	1858284.30	6254462.64
PI	1+19.54	1858285.82	6254462.24
Tangential	N 14° 45'37"		
Tangential Length:	1.57		
Element: Linear			
PI	1+19.54	1858285.82	6254462.24
PI	1+21.04	1858287.10	6254461.45
Tangential	N 31° 45'04"		
Tangential Length:	1.50		

Alignment Name:	LFD 7a - San Diego Place		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1857717.00	6254610.97
PI	1+19.47	1857705.70	6254626.83
Tangential Direction:	S 54° 31'23" E		
Tangential Length:	19.47		
Element: Linear			
PI	1+19.47	1857705.70	6254626.83
PI	1+27.47	1857701.06	6254633.34
Tangential Direction:	S 54° 31'23" E		
Tangential Length:	8.00		
Element: Linear			
PI	1+27.47	1857701.06	6254633.34
PI	1+30.38	1857699.37	6254635.71
Tangential Direction:	S 54° 34'06" E		
Tangential Length:	2.91		
Element: Linear			
PI	1+30.38	1857699.37	6254635.71
PI	1+32.13	1857697.64	6254635.94
Tangential Direction:	S 7° 26'52" E		
Tangential Length:	1.75		
Element: Linear			
PI	1+32.13	1857697.64	6254635.94
PI	1+33.88	1857695.90	6254636.17
Tangential Direction:	S 7° 33'27" E		
Tangential Length:	1.75		

LOW FLOW DIVERSION ALIGNMENT TABLE

C-31

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

LOW FLOW DIVERSION ALIGNMENT TABLE

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 34 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — RCE# C91224
PRINT DCE NAME

SUBMITTED BY: KAREN VERA — PROJECT MANAGER

APPROVED: SAMER ALSHAMI — PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE

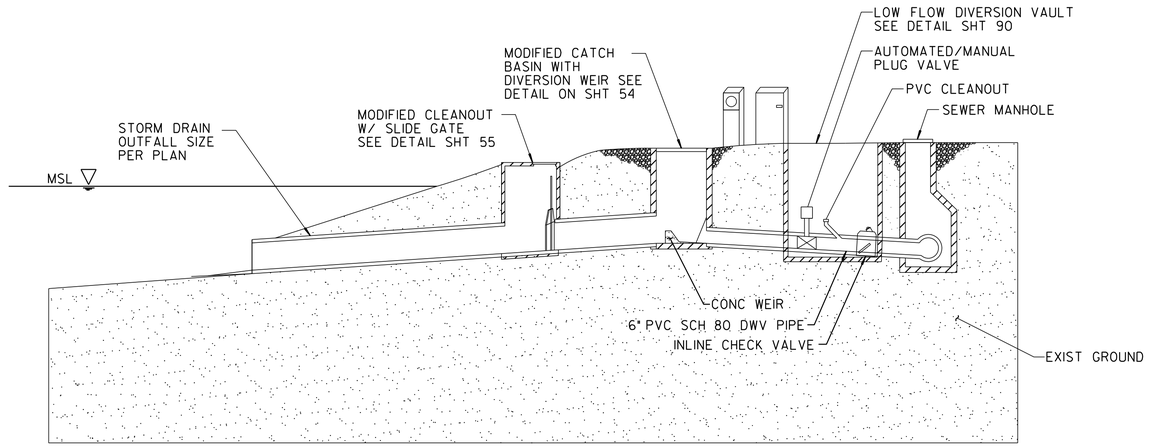
1858-6249 CCS83 COORDINATE

41306-34-D

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GIBBS — NO. 52295 — STATE OF CALIFORNIA — 03/31/2025

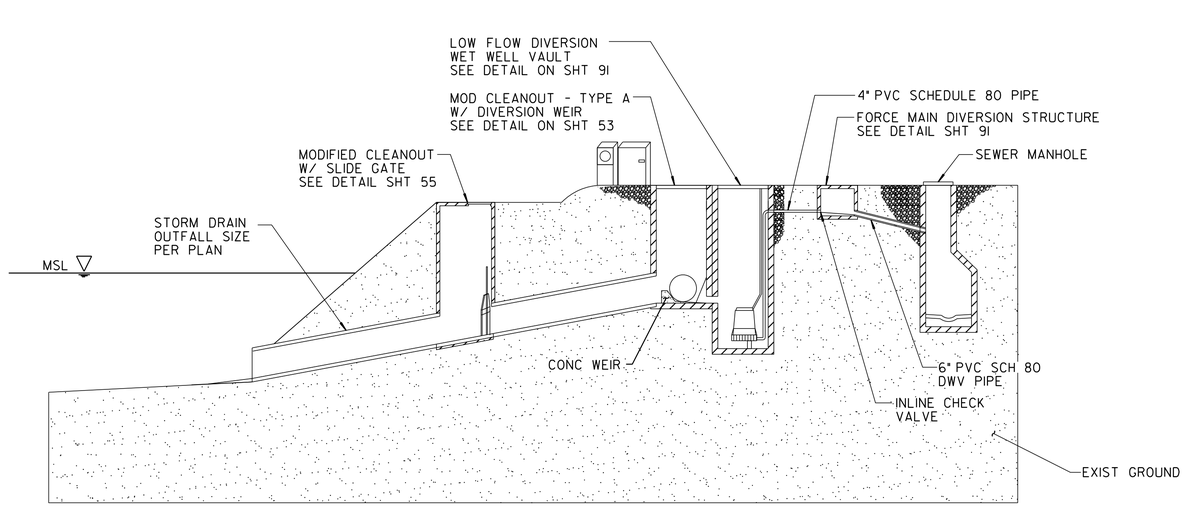
CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver



LOW FLOW DIVERSION (GRAVITY) TYPICAL (CONCEPTUAL) SECTION

NOT TO SCALE



LOW FLOW DIVERSION (PUMP) TYPICAL (CONCEPTUAL) SECTION

NOT TO SCALE

LOW FLOW DIVERSION DETAILS

C-32

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

LOW FLOW DIVERSION DETAILS

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 35 OF 128 SHEETS

WBS B-18118 (GI) / B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
ELHAM LOTFI PRINT DCE NAME — C91224 RCE#

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

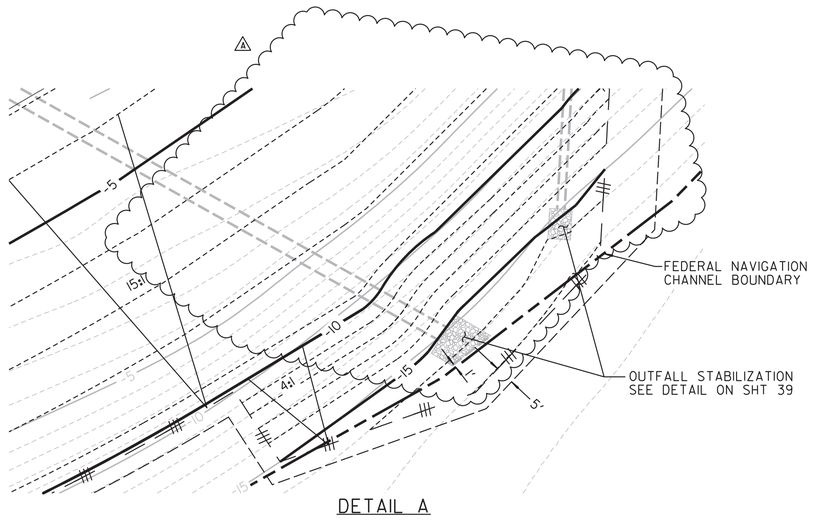
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. COLE — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

SEE EACH SHEET (CCS27 COORDINATE)
SEE EACH SHEET (CCS83 COORDINATE)

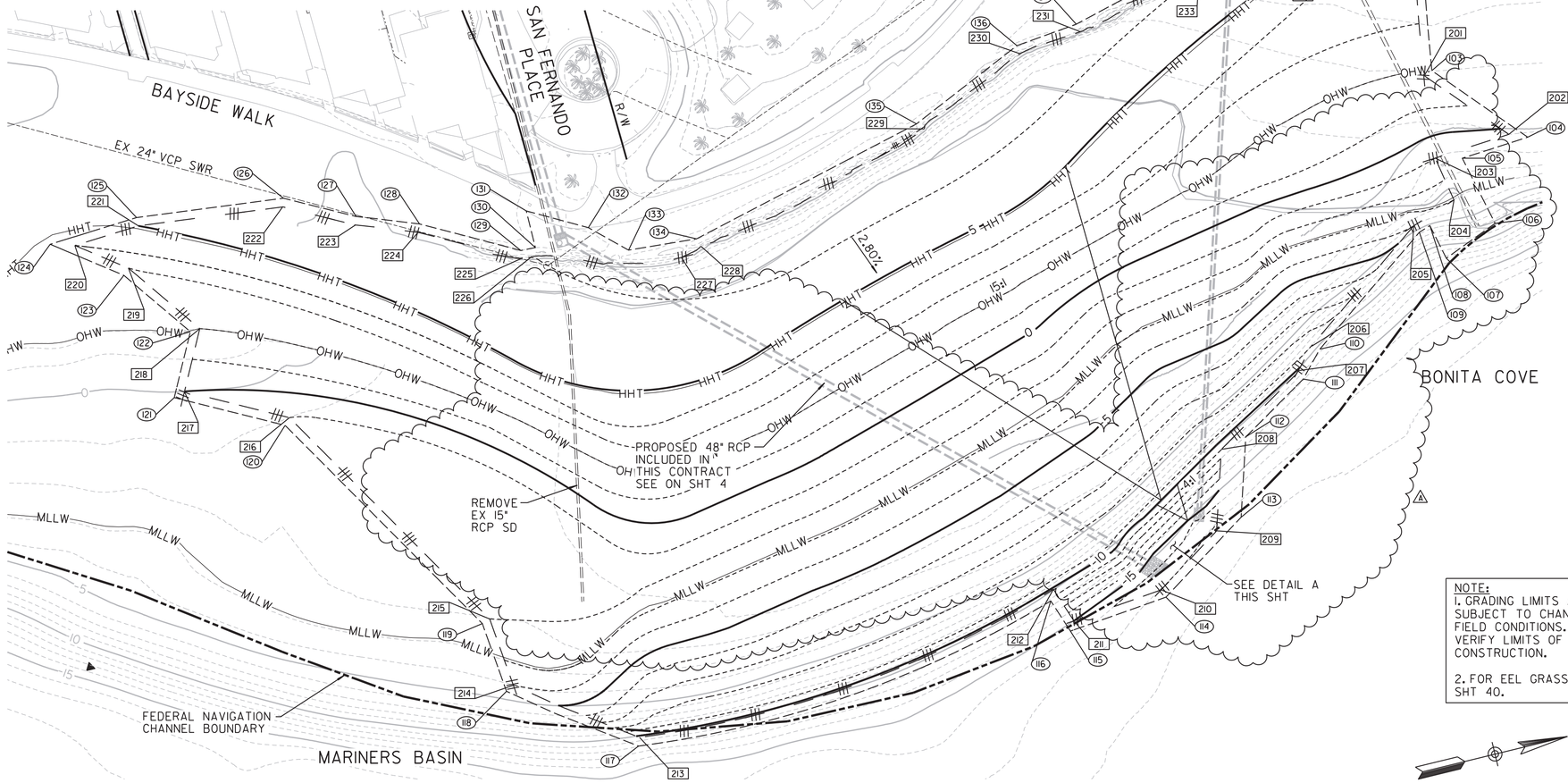
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-35-D

RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver



DETAIL A



SYSTEM 1-A & SYSTEM 9-A

LIMITS OF WORK DATA TABLE		
NO.	NORTHING	EASTING
100	1861093.96	6254337.20
101	1861126.61	6254478.14
102	1861165.26	6254482.61
103	1861153.00	6254560.20
104	1861198.74	6254611.82
105	1861158.26	6254614.76
106	1861167.98	6254656.72
107	1861135.10	6254669.88
108	1861130.23	6254648.84
109	1861123.24	6254651.25
110	1861049.76	6254704.40
111	1861036.04	6254719.25
112	1860994.95	6254744.35
113	1860981.09	6254789.81
114	1860926.70	6254825.21
115	1860867.11	6254831.32
116	1860860.10	6254811.24
117	1860603.66	6254836.97
118	1860534.89	6254787.00
119	1860530.49	6254744.77
120	1860444.92	6254603.40
121	1860385.20	6254571.98
122	1860403.61	6254536.41
123	1860373.36	6254494.77
124	1860335.34	6254466.61
125	1860388.71	6254463.39
126	1860475.73	6254472.83
127	1860514.97	6254493.54
128	1860550.32	6254506.66
129	1860604.76	6254536.02
130	1860613.50	6254536.38
131	1860613.38	6254514.06
132	1860646.69	6254532.33
133	1860666.64	6254550.88
134	1860707.27	6254553.89
135	1860849.65	6254518.70
136	1860918.27	6254487.83
137	1860955.33	6254483.83
138	1861015.97	6254468.19
139	1861031.31	6254467.41
140	1861068.48	6254345.51

GRADING LIMITS DATA TABLE		
NO.	NORTHING	EASTING
200	1861159.48	6254486.96
201	1861147.97	6254562.08
202	1861188.29	6254607.57
203	1861142.68	6254610.88
204	1861147.63	6254637.54
205	1861120.91	6254646.77
206	1861045.47	6254701.59
207	1861034.36	6254713.68
208	1860979.16	6254748.14
209	1860965.10	6254794.25
210	1860924.98	6254820.36
211	1860870.53	6254825.94
212	1860863.21	6254804.99
213	1860604.83	6254832.07
214	1860539.99	6254784.47
215	1860535.34	6254743.14
216	1860448.48	6254599.62
217	1860391.85	6254570.00
218	1860409.47	6254535.97
219	1860376.95	6254491.21
220	1860349.36	6254470.77
221	1860388.59	6254468.41
222	1860474.06	6254477.68
223	1860513.36	6254498.27
224	1860548.25	6254511.22
225	1860604.42	6254540.59
226	1860610.55	6254540.87
227	1860696.00	6254562.44
228	1860708.77	6254558.78
229	1860853.21	6254522.68
230	1860918.87	6254492.93
231	1860956.56	6254488.72
232	1861015.82	6254473.33
233	1861033.00	6254472.28
234	1861082.34	6254476.72

COFFERDAM DATA TABLE		
NO.	NORTHING	EASTING
300	1861148.87	6254596.37
301	1861163.05	6254657.61
302	1861139.57	6254667.02
303	1861124.54	6254602.13
304	1861030.32	6254611.24
305	1860976.66	6254787.19
306	1860917.31	6254813.44
307	1860905.42	6254816.77
308	1860645.12	6254574.57
309	1860607.11	6254769.64
310	1860567.85	6254761.99
311	1860603.72	6254577.88
312	1860603.63	6254560.03
313	1860714.94	6254584.90
314	1860934.30	6254789.00
315	1860994.32	6254592.15

A

NOTE:
1. GRADING LIMITS ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON VARYING FIELD CONDITIONS. CONTRACTOR TO VERIFY LIMITS OF WORK PRIOR TO CONSTRUCTION.

2. FOR EEL GRASS MITIGATION PLAN SEE SHT 40.

0 40 80 120
SCALE 1" = 40'

A REMOVED COFFERDAM LIMITS AND ASSOCIATED DATA TABLE

C-33

OUTFALL GRADING 1

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

OUTFALL GRADING 1

SYSTEMS 1 & 9

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 36 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DCE NAME — 12/18/2023 DATE — C91224 RCE#

SUBMITTED BY: KAREN VERA PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	
ADDENDUM A	RICK		05/21/24	

218-1689 CCS27 COORDINATE

1858-6249 CCS83 COORDINATE

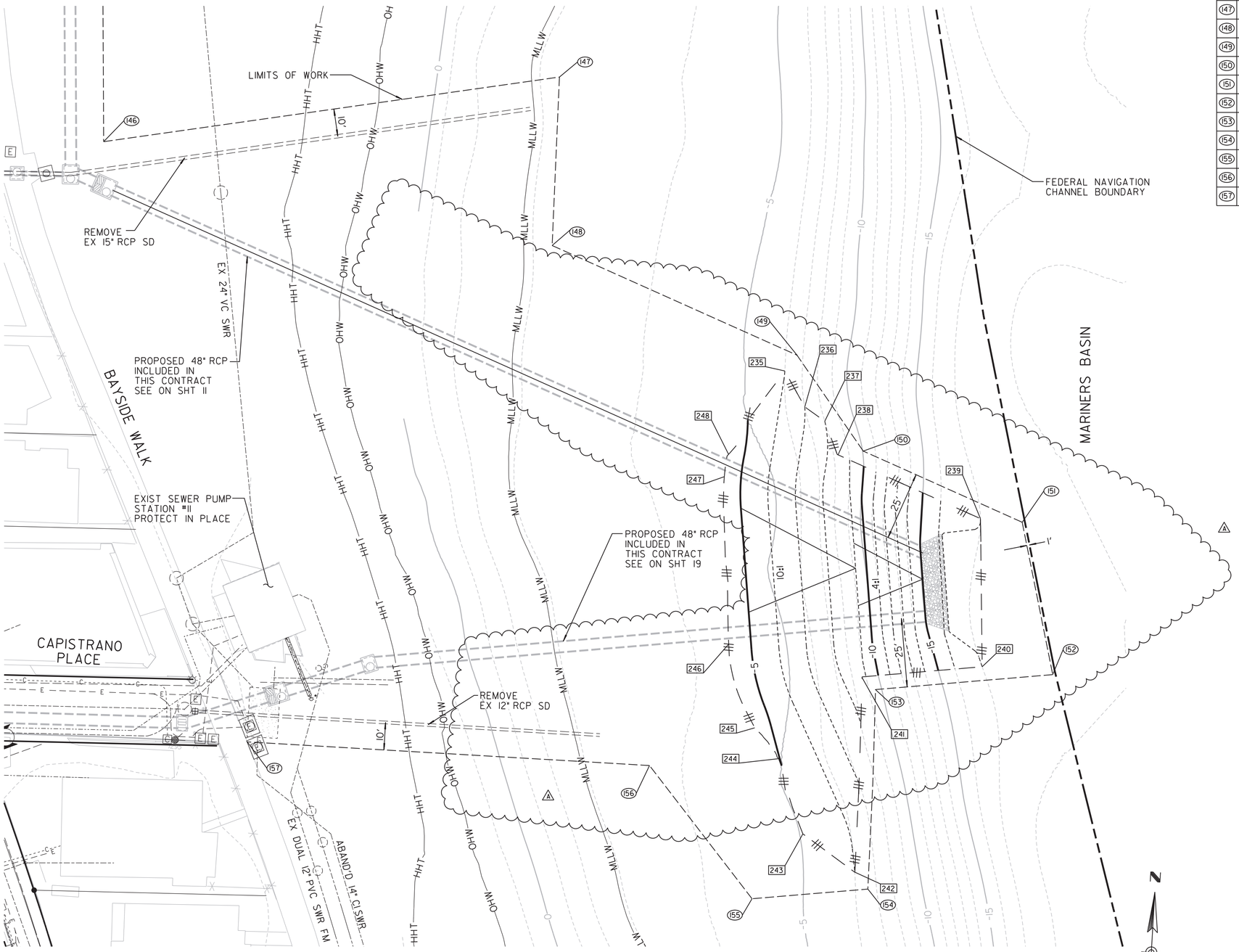
41306-36-D

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. COX — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

ADDENDUM A



SYSTEM 2-A & 3-A

LIMITS OF WORK DATA TABLE		
NO.	NORTHING	EASTING
146	1859289.20	6254219.27
147	1859322.39	6254383.50
148	1859261.04	6254384.44
149	1859226.45	6254475.73
150	1859193.01	6254501.87
151	1859170.56	6254561.11
152	1859115.88	6254575.44
153	1859106.66	6254511.38
154	1859034.04	6254512.85
155	1859028.07	6254470.99
156	1859074.26	6254430.91
157	1859074.26	6254284.25

GRADING LIMITS DATA TABLE		
NO.	NORTHING	EASTING
235	1859220.39	6254471.67
236	1859207.82	6254479.66
237	1859203.04	6254487.24
238	1859191.22	6254492.48
239	1859170.99	6254545.87
240	1859117.22	6254549.65
241	1859110.74	6254506.25
242	1859039.84	6254507.79
243	1859052.70	6254488.09
244	1859079.48	6254477.61
245	1859090.20	6254468.31
246	1859120.05	6254457.09
247	1859180.77	6254451.92
248	1859188.21	6254452.47

COFFERDAM DATA TABLE		
NO.	NORTHING	EASTING
316	1859250.93	6254334.92
317	1859170.99	6254545.87
318	1859117.22	6254549.65
319	1859098.27	6254417.21
320	1859079.26	6254417.21
321	1859079.26	6254374.44

NOTE:
1. GRADING LIMITS ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON VARYING FIELD CONDITIONS. CONTRACTOR TO VERIFY LIMITS OF WORK PRIOR TO CONSTRUCTION.

2. FOR EEL GRASS MITIGATION PLAN SEE SHT 40.

C-34

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

OUTFALL GRADING 2

SYSTEMS 2 & 3

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 37 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
ELHAM LOTFI PRINT DCE NAME — C91224 RCE#

SUBMITTED BY: KAREN VERA PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	
ADDENDUM A	RICK		05/21/24	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
41306-37-D

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

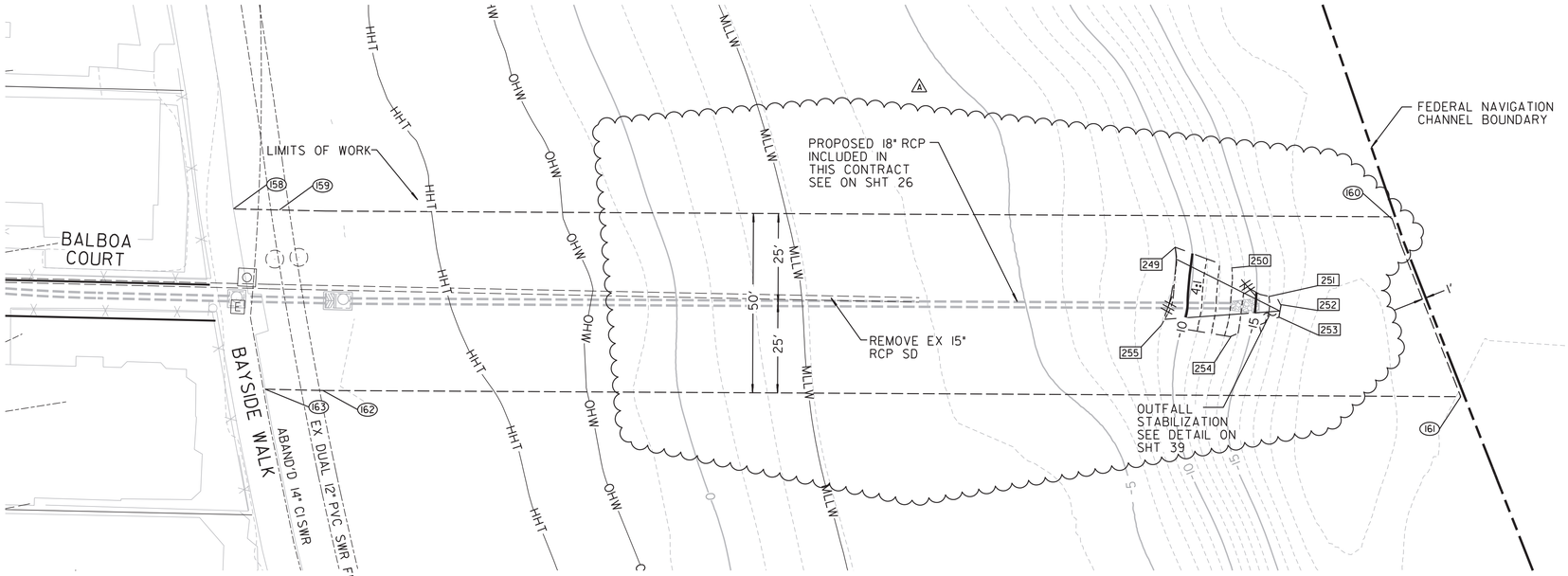
CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

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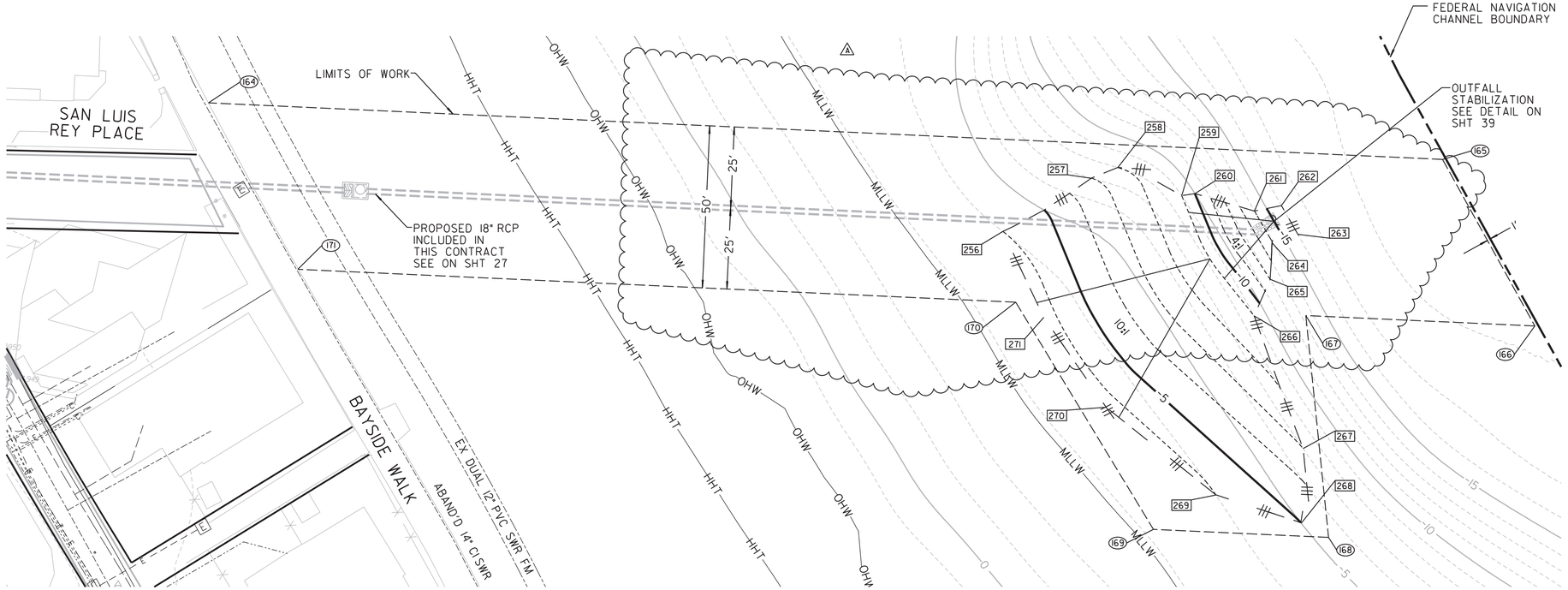
A REMOVED COFFERDAM LIMITS AND ASSOCIATED DATA TABLE

ADDENDUM A

OUTFALL GRADING 2



SYSTEM 5-A



SYSTEM 6-A

LIMITS OF WORK DATA TABLE		
NO.	NORTHING	EASTING
158	1858734.92	6254383.60
159	1858735.38	6254396.42
160	1858751.63	6254705.90
161	1858702.74	6254728.10
162	1858685.88	6254411.45
163	1858685.31	6254395.41
164	1858362.55	6254525.55
165	1858367.46	6254906.59
166	1858317.86	6254938.05
167	1858316.95	6254867.31
168	1858249.06	6254878.32
169	1858248.36	6254824.26
170	1858315.79	6254777.75
171	1858312.94	6254556.07

GRADING LIMITS DATA TABLE		
NO.	NORTHING	EASTING
249	1858739.66	6254646.24
250	1858734.80	6254662.21
251	1858727.50	6254673.20
252	1858725.43	6254676.48
253	1858721.91	6254676.23
254	1858715.82	6254663.27
255	1858717.73	6254643.65
256	1858337.33	6254772.51
257	1858355.29	6254798.73
258	1858359.11	6254806.75
259	1858351.58	6254826.94
260	1858352.47	6254830.98
261	1858348.16	6254849.60
262	1858350.34	6254857.81
263	1858345.60	6254860.92
264	1858339.17	6254855.59
265	1858327.45	6254855.68
266	1858315.90	6254851.41
267	1858275.97	6254868.89
268	1858253.12	6254869.52
269	1858260.13	6254842.85
270	1858285.11	6254807.47
271	1858311.66	6254786.67

COFFERDAM DATA TABLE		
NO.	NORTHING	EASTING
322	1858735.81	6254502.81
323	1858744.77	6254671.22
324	1858705.68	6254689.29
325	1858696.10	6254509.31
326	1858389.49	6254676.14
327	1858361.98	6254869.80
328	1858322.30	6254894.97
329	1858319.88	6254706.63

NOTE:
1. GRADING LIMITS ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON VARYING FIELD CONDITIONS. CONTRACTOR TO VERIFY LIMITS OF WORK PRIOR TO CONSTRUCTION.

2. FOR EEL GRASS MITIGATION PLAN SEE SHT 40.

SCALE 1"=20'

C-35

OUTFALL GRADING 3

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

OUTFALL GRADING 3

SYSTEMS 5 & 6

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 38 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
ELHAM TOTH PRINT DCE NAME — C91224 RCE#

SUBMITTED BY: KAREN VERA PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	
ADDENDUM A	RICK		05/21/24	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
41306-38-D

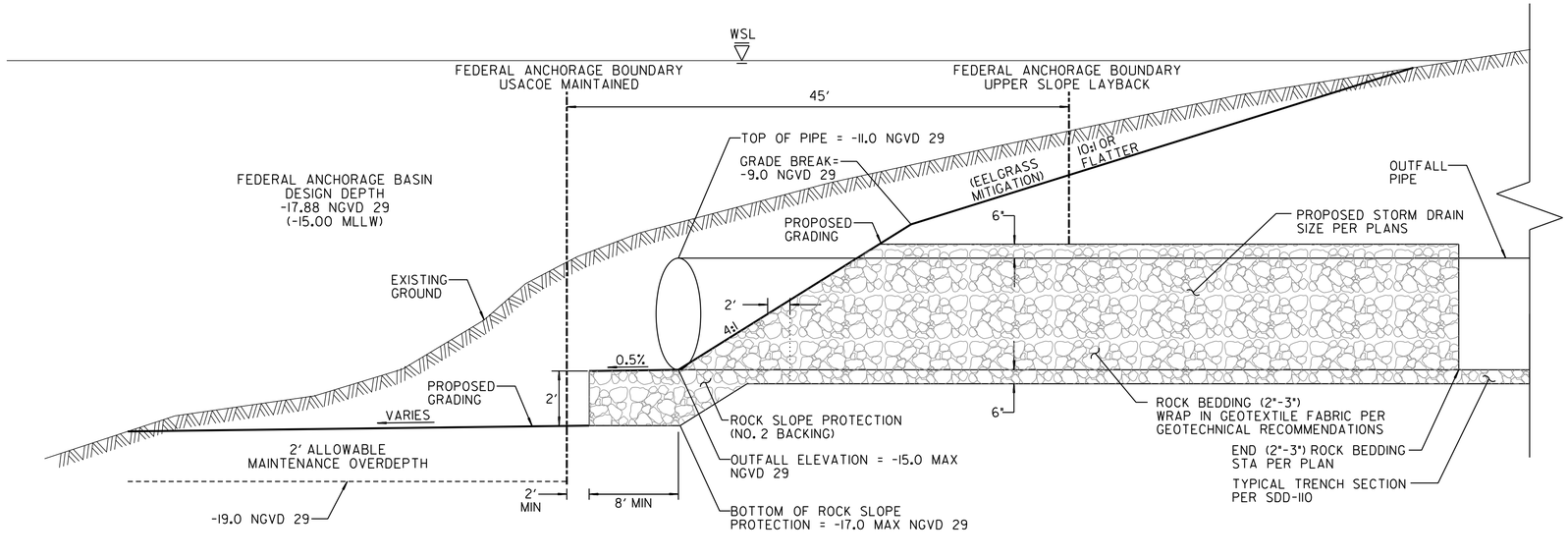
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

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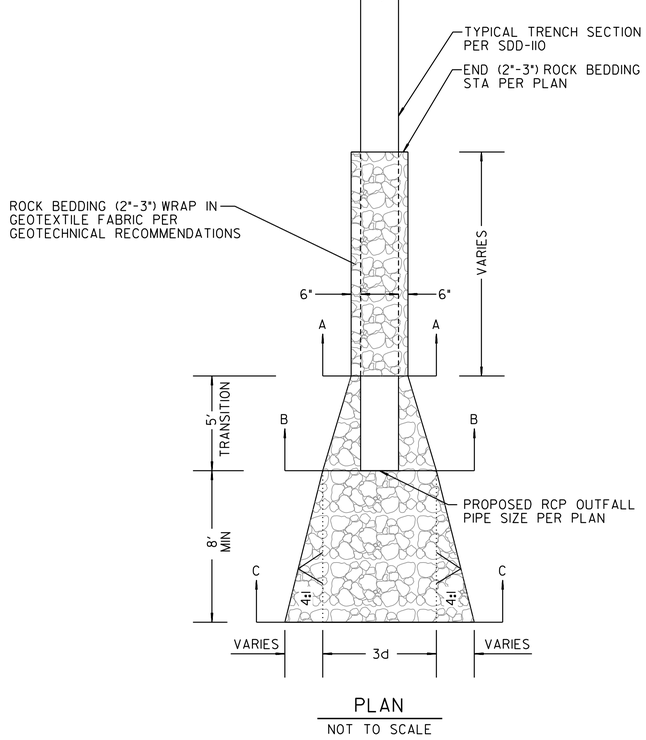
⚠ REMOVED COFFERDAM LIMITS AND ASSOCIATED DATA TABLE

ADDENDUM A



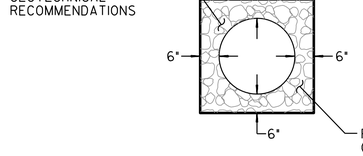
ELEVATION

NOT TO SCALE



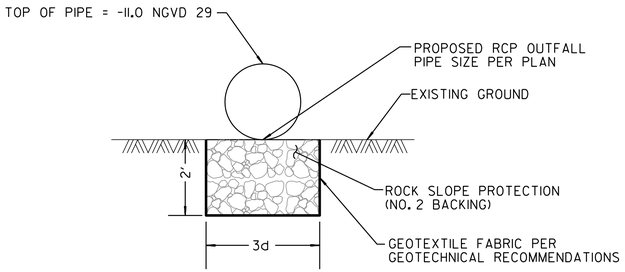
PLAN

NOT TO SCALE



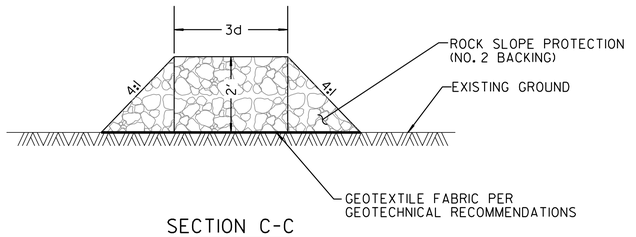
SECTION A-A

NOT TO SCALE



SECTION B-B

NOT TO SCALE



SECTION C-C

NOT TO SCALE

WORK IN TIDAL WATERS

1. THIS WORK IS BEING CONDUCTED IN A FULL TIDAL ENVIRONMENT. CONTRACTOR IS ADVISED TO TAKE APPROPRIATE PRECAUTIONS TO ENSURE THAT SITE CONDITIONS WORK, AND EQUIPMENT STORAGE AND OPERATIONS ARE ACCOMPLISHED IN A MANNER THAT DOES NOT RESULT IN EXPOSURE TO UNINTENDED EQUIPMENT FLOODING OR GROUNDING DUE TO TIDAL CONDITIONS.

2. CONTRACTOR IS ADVISED THAT THE PROJECT VERTICAL DATUM IS FEET NGVD29 (SHEET G-1) AND NOT MEAN LOWER LOW WATER (MLLW) AS DEPICTED ON TIDE TABLES. FOR PLANNING PURPOSES THE DATUM EQUIVALENCY IS PROVIDED BELOW. ALL SURVEY SHALL BE IN ACCORDANCE WITH THE PROJECT HORIZONTAL AND VERTICAL DATA (SHEET G-1).

PROJECT VERTICAL DATUM	REFERENCE VERTICAL DATUM EQUIVALENCE	
NGVD29 (FT)	NAVD88 (FT)	HARMONIC DATA
+4.91	+7.04	HHT (HIGHEST HIGH TIDE)
+2.01	+4.14	MHW (MEAN HIGH WATER)
0.0	+2.13	MSL (MEAN SEA LEVEL)
-2.13	**0.00**	
-2.88	-0.75	MLLW (MEAN LOWER LOW WATER)

STORM DRAIN OUTFALL GRADING DETAIL

NOT TO SCALE

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DETAIL

OUTFALL GRADING D

C-36

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

OUTFALL GRADING DETAIL

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 39 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
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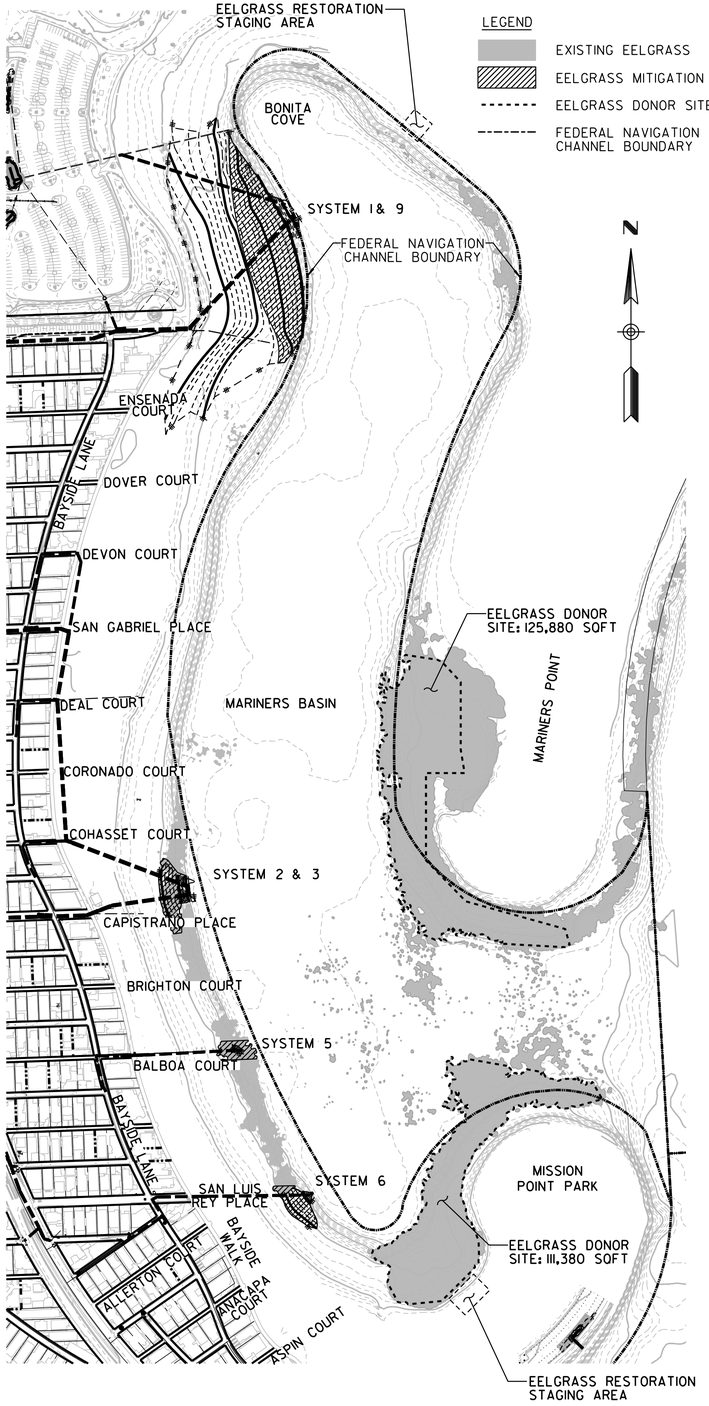
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

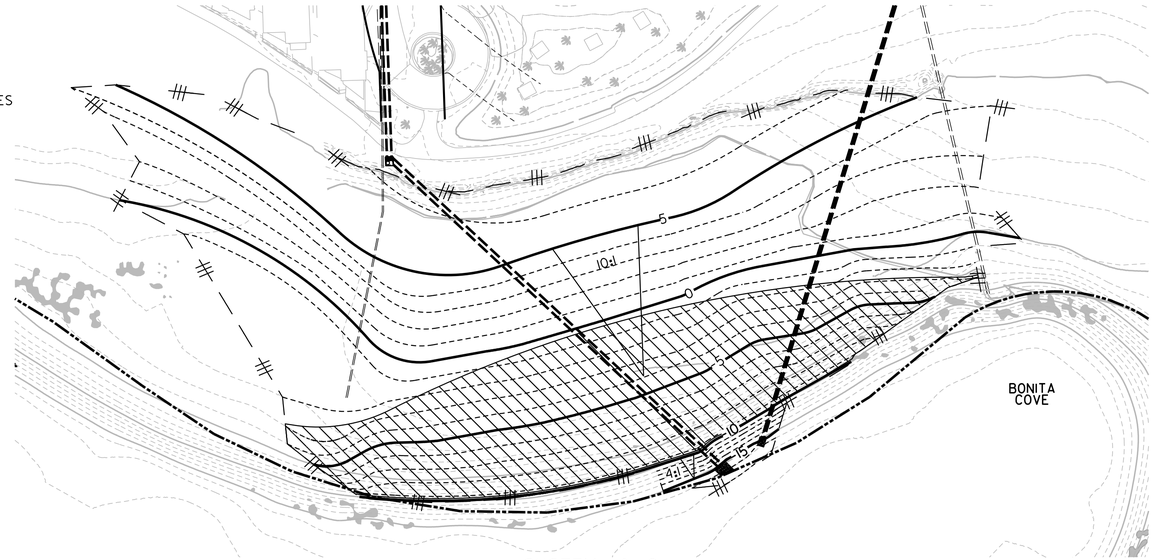
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

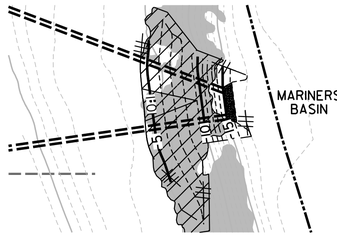
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-39-D

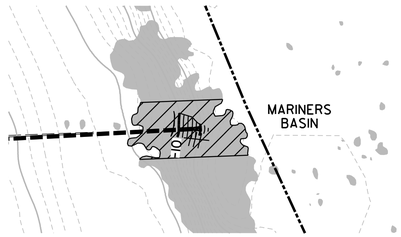




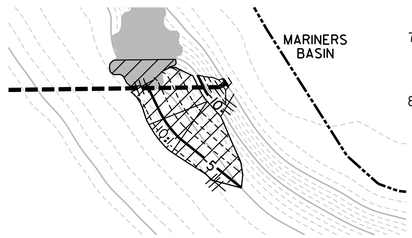
SYSTEM 1& 9
EELGRASS MITIGATION SITE



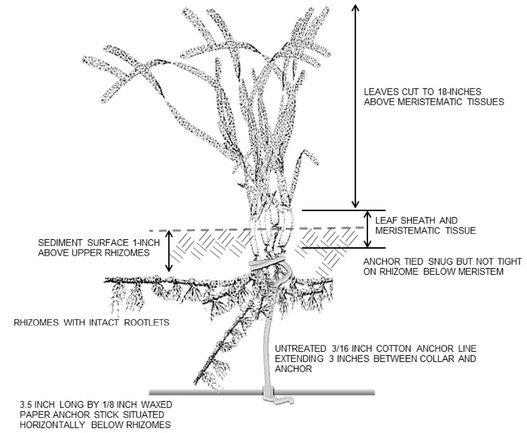
SYSTEM 2 & 3
EELGRASS MITIGATION SITE



SYSTEM 5
EELGRASS MITIGATION SITE



SYSTEM 6
EELGRASS MITIGATION SITE



EELGRASS PLANTING DETAIL

EELGRASS RESTORATION NOTES

1. CONTRACTOR SHALL ADHERE CLOSELY TO THE STANDARDS OUTLINE IN THE EELGRASS PLANTING SPECIFICATIONS, EELGRASS MITIGATION PLAN, AND ISSUED PERMITS AND AUTHORIZATIONS FOR THE WORK. SHOULD CONFLICTS EXIST BETWEEN GUIDANCE FROM THESE SOURCES, THE CONTRACTOR SHALL BRING THIS TO THE ATTENTION OF THE CITY REPRESENTATIVE FOR GUIDANCE ON IMPLEMENTATION.
2. THE CONTRACTOR SHALL OBTAIN A LETTER OF AUTHORIZATION (LOA) TO TRANSPLANT EELGRASS FROM THE CALIFORNIA DEPARTMENT OF FISH & WILDLIFE AND SHALL CONDUCT THE TRANSPLANT WORK UNDER A VALID SCIENTIFIC COLLECTORS PERMIT. BOTH OF WHICH SHALL BE MAINTAINED ON THE PROJECT SITE DURING THE PERIOD OF EELGRASS RESTORATION WORK.
3. STAGING FOR TRANSPLANTS AND CORDONING OFF ANY ON WATER WORK AREAS SHALL BE COORDINATED WITH THE SAN DIEGO LIFEGUARD SERVICES AND THE MISSION BAY PARK MANAGER TO ENSURE WATER SAFETY AND AVOIDANCE OF UNDUE IMPACT TO THE PUBLIC USE OF MISSION BAY PARK. RESTORATION ACTIVITIES WILL BE COORDINATED WITH THE MISSION BAY PARK MANAGER AND LIFEGUARDS TO DECONFILCT RESTORATION WITH SPECIAL EVENTS. THIS MAY RESULT IN PRECLUDING WORK IN SOME AREAS FOR MULTIPLE DAYS.
4. THE MARINER'S POINT EELGRASS DONOR AREA MAY ONLY BE USED DURING THE MONTHS OF MARCH, SEPTEMBER, AND OCTOBER TO AVOID ACTIVITIES CLOSE TO THE LEAST TERN NESTING SITE DURING THE NESTING SEASON. MISS ON POINT DONOR AREAS MAY BE USED DURING ALL PERIODS OF EELGRASS RESTORATION. SPECIFIC DONOR BED USE SHALL BE COORDINATED WITH THE CITY REPRESENTATIVES AND SHALL BE IN ACCORDANCE WITH ISSUED AGENCY AUTHORIZATIONS.
5. EELGRASS SHALL BE CONDUCTED USING BARE-ROOT PLANTING UNITS CONTAINING 6-8 HEALTHY TURIONS PER PLANTING UNIT (SEE EELGRASS PLANTING DETAIL). PLANTS SHALL BE HARVESTED FROM DONOR EELGRASS BEDS, PROCESSED INTO PLANTING UNITS AND PLANTED AS ILLUSTRATED IN THE DETAIL AT 3.28FT (1METER) CENTERS. HARVESTING TO PLANTING FOR ANY INDIVIDUAL UNITS SHALL BE COMPLETED IN 48 HOURS OR LESS AND PLANTS SHALL ALWAYS BE MAINTAINED IN COOL FLOWING SEAWATER OR WITHIN FLOW THROUGH HOLDING TANKS IN THE BAY.
6. EELGRASS RESTORATION SHALL BE COMPLETED IN A CONTINUOUS ACTIVITY SUCH THAT A SINGLE ACCEPTANCE OF WORK COMPLETION CAN BE PROVIDED BY THE CITY AT THE COMPLETION OF PLANTING AND INITIATION OF A 30 DAY PLANT ESTABLISHMENT PERIOD.
7. THE CONTRACTOR SHALL TRACK THE HARVEST, PLANTING UNIT PRODUCTION, AND PLANTING ON A DAILY BASIS AND MAKE INFORMATION AVAILABLE TO THE CITY REPRESENTATIVES ON A DAILY BASIS FOR PROGRESS TRACKING.
8. PLANT MATERIAL SHALL BE HARVESTED, HANDLED, PREPARED INTO PLANTING UNITS, AND PLANTED IN ACCORDANCE WITH EELGRASS PLANTING SPECIFICATIONS AND THE EXAMPLE DIAGRAM ON THIS SHEET. FAILURE TO PROPERLY MANAGE ALL ASPECTS OF THIS WORK MAY LEAD TO PLANT FAILURES DURING THE 30 DAY PLANTING ESTABLISHMENT PERIOD AND THE NEED TO REPLANT UNITS AT CONTRACTOR'S EXPENSE.

EELGRASS PLANTING AREA SUMMARY

SYSTEM	ESTIMATED IMPACT (SF)	PLANTING AREA (SF)	PLANTING UNITS (COUNT)
1& 9	95	53,950	5,014
2 & 3	8,170	9,215	856
5	4,280	4,185	398
6	1,090	6,140	570
TOTAL	13,635	73,490	6,830

NO SCALE

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REGISTERED PROFESSIONAL ENGINEER KEVIN R. CRAIG NO. 52295 STATE OF CALIFORNIA
03/13/2023

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — RCE# C91224
PRINT DCE NAME

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER
SEE EACH SHEET, CCS27 COORDINATE
SEE EACH SHEET, CCS83 COORDINATE
41306-40-D

C-37

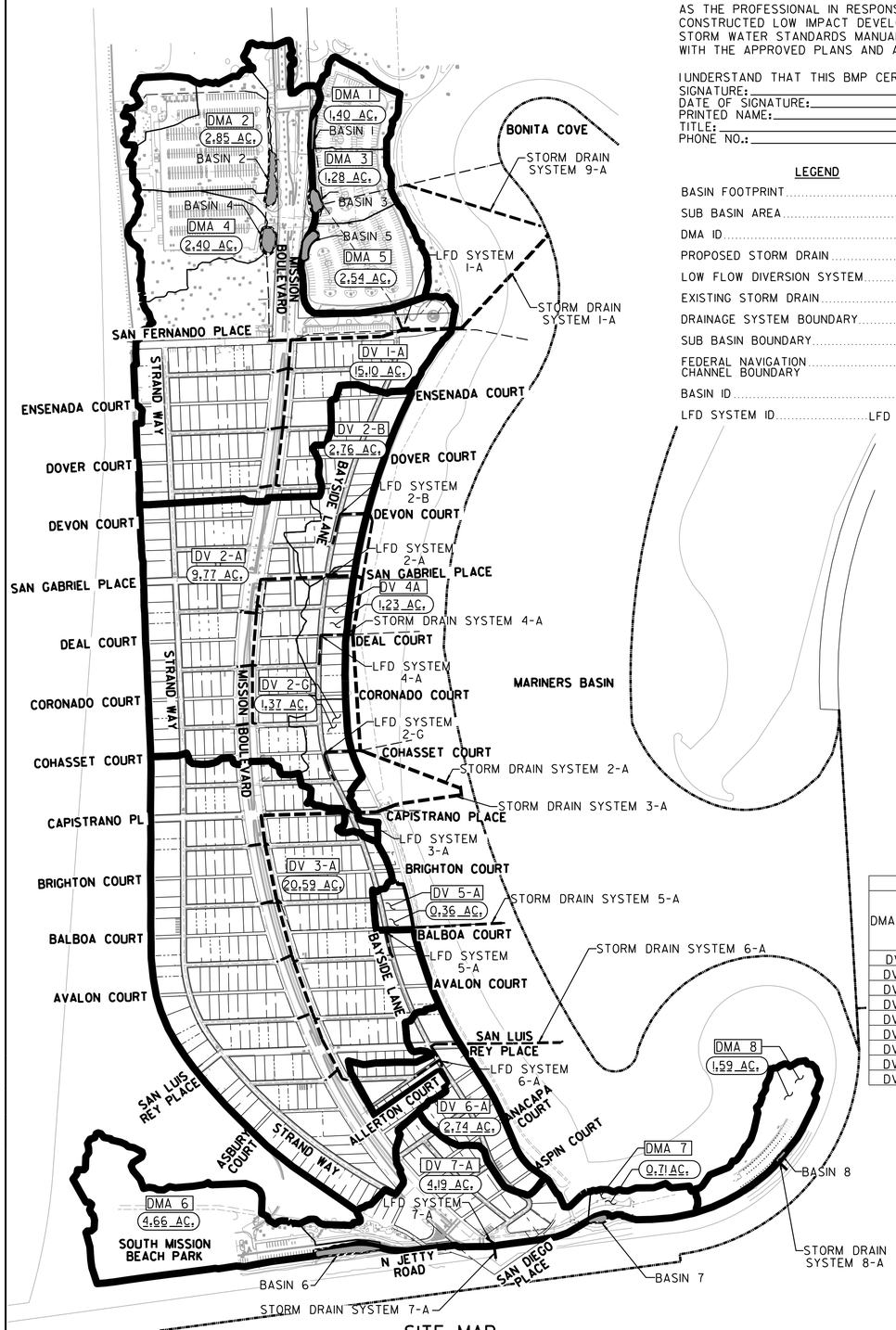
SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

EELGRASS MITIGATION PLAN

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 40 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

EELGRASS MITIGATION PLAN



SITE MAP
NO SCALE

POST-CONSTRUCTION BMP CERTIFICATION:

AS THE PROFESSIONAL IN RESPONSIBLE CHARGE FOR THE DESIGN OF THIS PROJECT, I CERTIFY THAT I HAVE INSPECTED ALL CONSTRUCTED LOW IMPACT DEVELOPMENT (LID) SITE DESIGN, SOURCE CONTROL, AND TREATMENT CONTROL BMPS REQUIRED PER THE STORM WATER STANDARDS MANUAL AND CONTRACT REQUIREMENTS; AND THAT SAID BMPS HAVE BEEN CONSTRUCTED IN COMPLIANCE WITH THE APPROVED PLANS AND ALL APPLICABLE SPECIFICATIONS, PERMITS, ORDINANCES AND SAN DIEGO REGIONAL MS4 PERMIT.

I UNDERSTAND THAT THIS BMP CERTIFICATION STATEMENT DOES NOT CONSTITUTE AN OPERATION AND MAINTENANCE VERIFICATION.

SIGNATURE: _____
DATE OF SIGNATURE: _____
PRINTED NAME: _____
TITLE: _____
PHONE NO.: _____

LEGEND

- BASIN FOOTPRINT
- SUB BASIN AREA ..... (X.XX AC)
- DMA ID ..... [DMA X]
- PROPOSED STORM DRAIN
- LOW FLOW DIVERSION SYSTEM
- EXISTING STORM DRAIN
- DRAINAGE SYSTEM BOUNDARY
- SUB BASIN BOUNDARY
- FEDERAL NAVIGATION CHANNEL BOUNDARY
- BASIN ID ..... BASIN X
- LFD SYSTEM ID ..... LFD SYSTEM X-X

STORM WATER REQUIREMENTS:

1. THIS PROJECT IS SUBJECT TO MUNICIPAL CODE SECTION 4303 AND ORDER NO. R9-2013-0001 AS AMENDED BY R9-2015-0001 AND R9-2015-0100.
2. ALL WORK RELATED TO POLLUTANT CONTROL BMPS SHALL BE IN ACCORDANCE WITH BMP DESIGN AND SIZING REPORT,
   PROJECT NAME/ WBS OR IO: SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE/ B-18118 (SD/GI)
   PROJECT ADDRESS: SOUTH OF WEST MISSION BAY DR AND MISSION BLVD
   PREPARED BY: RICK ENGINEERING COMPANY
   DATE PREPARED: 12/14/2021
3. POLLUTANT CONTROL BMPS ARE REQUIRED FOR THIS PROJECT TO IMPROVE LOCAL WATER QUALITY CONDITIONS, SEE SHT 41 - 49, 50 AND 51

DETAILS

SEE BMP DETAIL PER SHT 50 AND 51

O&M RESPONSIBLE PARTY DESIGNEE: CITY OF SAN DIEGO TRANSPORTATION AND STORMWATER DIVISION							
BMP DESCRIPTION	INSPECTION FREQUENCY	MAINTENANCE FREQUENCY	MAINTENANCE METHOD	QUANTITY	INCLUDED IN O&M MANUAL YES	INCLUDED IN O&M MANUAL NO	SHEET NUMBER(S)
SITE DESIGN ELEMENTS							
LANDSCAPED AREAS	MONTHLY	AS-NEEDED	TRIMMING AND TRASH REMOVAL.	REFER TO LANDSCAPE SHEETS	X		59-77
SOURCE CONTROL ELEMENTS							
STORM DRAIN INLET STENCILING AND SIGNAGE	ANNUALLY	AS-NEEDED	REPLACE/REPAINT STENCILING/SIGNAGE.	2	X		NA
POLLUTANT CONTROL BMP(S)							
BIOFILTRATION BASINS [BASINS 1-5, 8]	MINIMUM TWICE A YEAR AND AFTER EACH "SIGNIFICANT RAIN EVENT" (0.5 INCHES OVER 48 HRS)	AS-NEEDED	REMOVE TRASH & DEBRIS. REPLACE MULCH/COBBLE IN RUTS, RILLS, OR GULLIES. RE-SEED AND/OR PLANT EXPOSED SOIL AREAS. MAINTAIN UNDERDRAINS CLEAR OF SEDIMENT/DEBRIS. REPLACE SOIL MEDIA EVERY 5-10 YEARS.	6	X		42-46, 49-51
BIORETENTION BASINS [BASINS 6-7]	MINIMUM TWICE A YEAR AND AFTER EACH "SIGNIFICANT RAIN EVENT" (0.5 INCHES OVER 48 HRS)	AS-NEEDED	REMOVE TRASH & DEBRIS. REPLACE MULCH IN RUTS, RILLS, OR GULLIES. RE-SEED AND/OR PLANT EXPOSED SOIL AREAS. REPLACE SOIL MEDIA EVERY 5-10 YEARS.	2	X		47, 48, 50, AND 51
OTHER STRUCTURAL COMPONENTS							
LOW-FLOW DIVERSION SYSTEMS [LFD] (ELECTRONIC ACTUATORS, PUMPS, VALVES)	PER MANUFACTURER SPECIFICATIONS	AS-NEEDED	PER MANUFACTURER SPECIFICATIONS	9	X		31-33, 80-88
TIDE GATES (ELECTRONIC ACTUATORS, HANDWHEEL, TIDE GATE)	PER MANUFACTURER SPECIFICATIONS	AS-NEEDED	PER MANUFACTURER SPECIFICATIONS	7	X		47 AND 48

DMA SUMMARY TABLE - FLOW-BASED GREEN INFRASTRUCTURE

DMA NAME	"C" RUNOFF FACTOR	85TH PERCENTILE INTENSITY (IN/HR)	DMA AREA (AC.)	TARGET WQ FLOW RATE	BMP USED	WQ FLOW RATE PROVIDED (CFS)	% WQ FLOW RATE PROVIDED	LFD FLOW TYPE
DV 1A	0.78	0.2	15.10	2.36	LFD 1A	0.47	20%	PUMP
DV 2A	0.88	0.2	9.77	1.72	LFD 2A	0.47	27%	PUMP
DV 2B	0.88	0.2	2.76	0.48	LFD 2B	0.47	97%	GRAVITY
DV 2G	0.88	0.2	1.37	0.24	LFD 2G	0.47	196%	GRAVITY
DV 3A	0.88	0.2	20.59	3.63	LFD 3A	0.47	13%	PUMP
DV 4A	0.88	0.2	1.23	0.22	LFD 4A	0.47	218%	GRAVITY
DV 5A	0.88	0.2	0.36	0.06	LFD 5A	0.47	745%	GRAVITY
DV 6A	0.88	0.2	2.74	0.48	LFD 6A	0.47	98%	GRAVITY
DV 7A	0.88	0.2	4.19	0.73	LFD 7A	0.47	64%	GRAVITY

DMA SUMMARY TABLE - VOLUME-BASED GREEN INFRASTRUCTURE

DMA NAME	"C" RUNOFF	85TH PERCENTILE	DMA AREA	TARGET DCV	BMP USED	PROVIDED DCV	% DCV PROVIDED	BMP TYPE
DMA 1	0.74	0.52	1.40	1956	BASIN 1	545	28%	PR-1
DMA 2	0.85	0.52	2.85	4576	BASIN 2	2634	58%	PR-1
DMA 3	0.80	0.52	1.28	1940	BASIN 3	1375	71%	PR-1
DMA 4	0.67	0.52	2.40	3040	BASIN 4	1991	65%	PR-1
DMA 5	0.76	0.52	2.54	3645	BASIN 5	1618	44%	PR-1
DMA 6	0.61	0.52	4.66	5366	BASIN 6	4642	87%	INF-2
DMA 7	0.65	0.52	0.71	871	BASIN 7	1081	124%	INF-2
DMA 8	0.64	0.52	1.59	1926	BASIN 8	217	11%	PR-1

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK AND THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PERMANENT STORM WATER BMPs AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

RICK ENGINEERING COMPANY
5620 FRIARS ROAD, SAN DIEGO, CA, 92110
619-291-0707

BRENDAN C. HASTIE
LICENSE NO. 65809

DATE: 12/14/2021

RICK ENGINEERING COMPANY
San Diego
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SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

REGISTERED PROFESSIONAL ENGINEER — BRENDAN C. HASTIE — NO. 65809 — STATE OF CALIFORNIA — 03/13/2023

C-38

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

BMP MAP

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 41 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — ELHAM LOTFI, PRINT DCE NAME — 12/18/2023 DATE — C91224 RCE#

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE

1858-6249 CCS83 COORDINATE

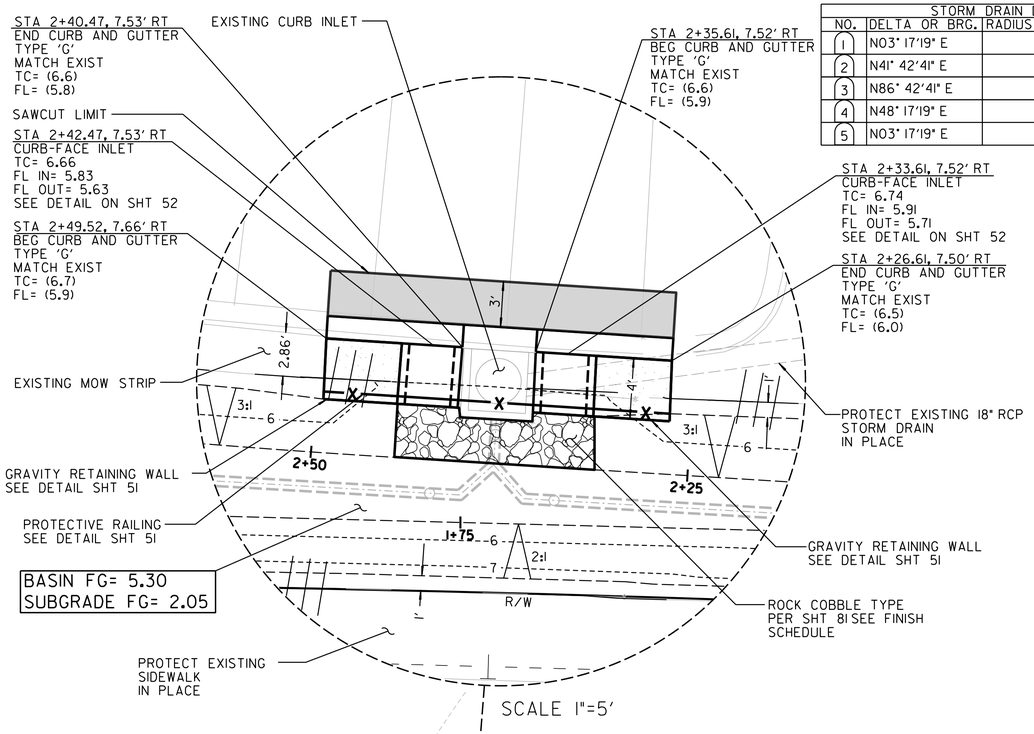
CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-41-D

BMP MAP

NOTE:
BASIN 1 ALIGNMENT IS THE CONTROLLING LINE FOR BASIN AND CURB STATION AND OFFSETS

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS THROUGH SIDEWALKS AT ALL TIMES



STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N03° 17'19" E		59.91'	8" PERFORATED PVC
2	N41° 42'41" E		3.00'	8" PVC
3	N86° 42'41" E		3.00'	8" PVC
4	N48° 17'19" E		3.00'	8" PVC
5	N03° 17'19" E		24.96'	8" PERFORATED PVC

Alignment Name:	Basin 1		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1861306.20	6254064.53
BC	1+15.83	1861293.14	6254055.59
Tangential Direction:	S 34° 24'17" W		
Tangential Length:	15.83		
Element: Circular			
BC	1+15.83	1861293.14	6254055.59
EC	1+18.70	1861290.44	6254054.72
Radius:	5.00		
Delta:	32° 54'00"	Left	
Length:	2.87		
Element: Linear			
EC	1+18.70	1861290.44	6254054.72
BC	2+05.19	1861203.99	6254052.45
Tangential Direction:	S 1° 30'17" W		
Tangential Length:	86.48		
Element: Circular			
BC	2+05.19	1861203.99	6254052.45
EC	2+09.74	1861203.86	6254055.38
Radius:	1.47		
Delta:	177° 56'22"	Left	
Length:	4.56		
Element: Linear			
EC	2+09.74	1861203.86	6254055.38
BC	2+44.53	1861238.57	6254057.54
Tangential Direction:	N 3° 33'55" E		
Tangential Length:	34.78		
Element: Circular			
BC	2+44.53	1861238.57	6254057.54
PCC	3+12.28	1861305.83	6254065.44
Radius:	600.00		
Delta:	6° 28'11"	Right	
Length:	67.75		
Element: Circular			
PCC	3+12.28	1861305.83	6254065.44
POE	3+13.64	1861306.20	6254064.53
Radius:	0.50		
Delta:	155° 31'39"	Left	
Length:	1.36		

Alignment Name:	Underdrain 1a		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1861294.04	6254058.49
PI	1+59.91	1861234.22	6254055.05
Tangential Direction:	N 3° 17'19" E		
Tangential Length:	59.91		
Element: Linear			
PI	1+59.91	1861234.22	6254055.05
PI	1+62.91	1861231.99	6254057.04
Tangential Direction:	N 41° 42'41" E		
Tangential Length:	3.00		
Element: Linear			
PI	1+62.91	1861231.99	6254057.04
PI	1+65.91	1861229.99	6254054.81
Tangential Direction:	N 48° 17'19" E		
Tangential Length:	3.00		
Element: Linear			
PI	1+65.91	1861229.99	6254054.81
POE	1+90.87	1861205.07	6254053.38
Tangential Direction:	N 3° 17'19" E		
Tangential Length:	24.96		

Alignment Name:	Underdrain 1b		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1861231.99	6254057.04
POE	1+03.00	1861231.82	6254060.04
Tangential Direction:	N 86° 42'41" E		
Tangential Length:	3.00		

NOTES:
1. FOR CONSTRUCTION OF WATER QUALITY BASINS SEE BASIN DETAILS ON SHT 50 AND 51.

2. APPROXIMATE GROUND WATER ELEVATION 2.7' PER GEOTECHNICAL INVESTIGATION REPORT, DATED 11/27/19.

3. FOR LANDSCAPE AND IRRIGATION PLANS, SEE SHT 74 AND 82.

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REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GIBBS — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

C-39

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

GREEN INFRASTRUCTURE 1
BASIN 1

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 42 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
ELHAM LOTFI — C91224 RCE#
PRINT DCE NAME

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-42-D

GREEN INFRASTRUCTURE 1

Alignment Name:	Underdrain 2a		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1861186.77	6253925.78
PI	1+15.00	1861171.77	6253925.77
Tangential Direction:	N 0° 03'05" E		
Tangential Length:	15.00		
Element: Linear			
PI	1+15.00	1861171.77	6253925.77
PI	1+19.71	1861168.44	6253922.43
Tangential Direction:	N 45° 03'05" E		
Tangential Length:	4.71		
Element: Linear			
PI	1+19.71	1861168.44	6253922.43
PI	1+24.42	1861165.11	6253925.76
Tangential Direction:	N 44° 56'55" E		
Tangential Length:	4.71		
Element: Linear			
PI	1+24.42	1861165.11	6253925.76
POE	2+54.42	1861035.11	6253925.65
Tangential Direction:	N 0° 03'05" E		
Tangential Length:	130.00		

Alignment Name:	Underdrain 2b		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1861168.44	6253922.43
POE	1+03.00	1861168.45	6253919.44
Tangential Direction:	N 89° 56'55" E		
Tangential Length:	3.00		

NOTES:
1. FOR CONSTRUCTION OF WATER QUALITY BASINS SEE BASIN DETAILS ON SHT 50 AND 51.

2. APPROXIMATE GROUND WATER ELEVATION 2.7' PER GEOTECHNICAL INVESTIGATION REPORT, DATED 11/27/2019.

3. FOR LANDSCAPE AND IRRIGATION PLANS SEE SHT 75 AND 83.

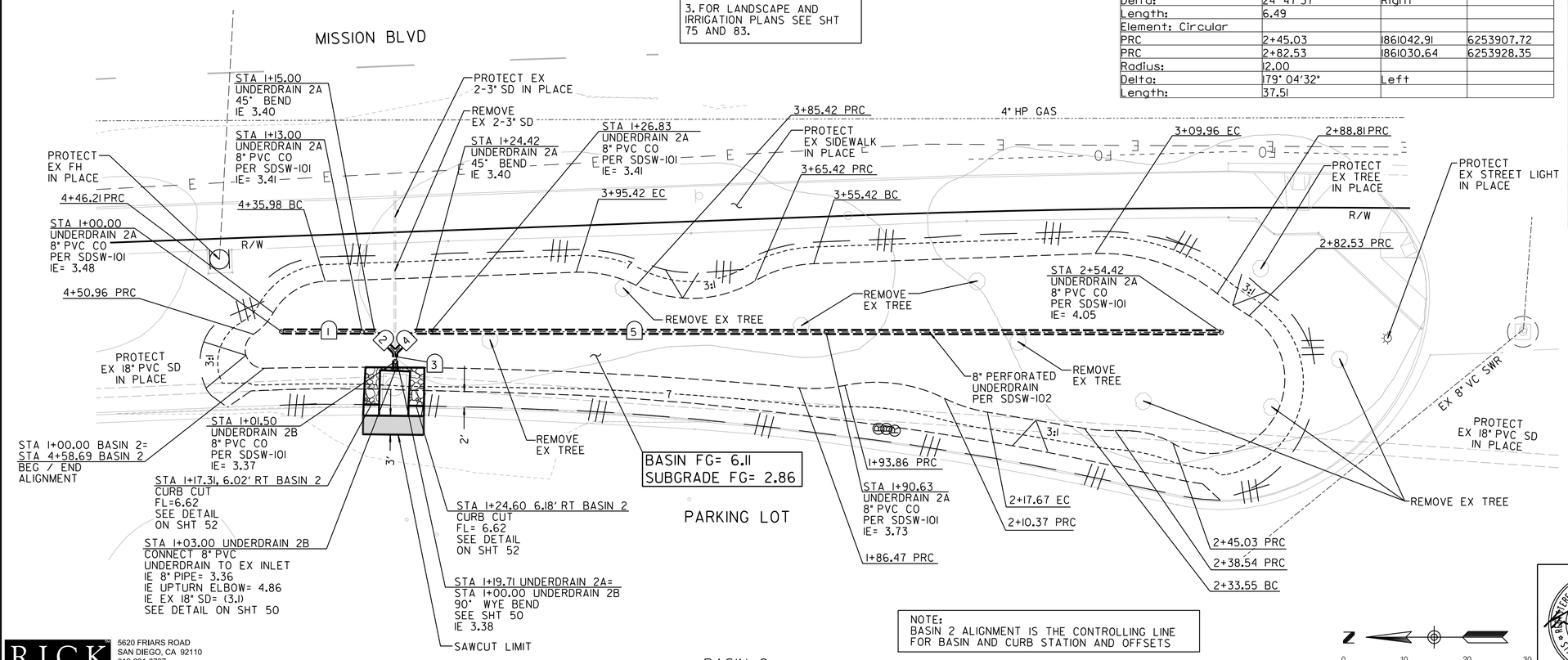
CAUTION

4" HP GAS! CONTRACTOR TO VERIFY EXACT LOCATION AND MUST NOTIFY SDG&E THREE (3) WEEKS IN ADVANCE PRIOR TO EXCAVATION SDG&E STANDBY REQUIRED

Alignment Name:	Basin 2		
	Station	Northing	Easting
Element: Circular			
POB	1+00.00	1861189.58	6253919.84
PRC	1+86.47	1861103.22	6253916.69
Radius:	747.99		
Delta:	6° 37'24"	Right	
Length:	86.47		
Element: Circular			
PRC	1+86.47	1861103.22	6253916.69
PRC	1+93.86	1861095.86	6253917.08
Radius:	25.00		
Delta:	16° 56'50"	Left	
Length:	7.39		
Tangent:	3.72		
Element: Circular			
PRC	1+93.86	1861095.86	6253917.08
PRC	2+10.37	1861079.79	6253915.00
Radius:	25.00		
Delta:	37° 49'53"	Right	
Length:	16.51		
Element: Circular			
PRC	2+10.37	1861079.79	6253915.00
EC	2+17.67	1861072.86	6253912.77
Radius:	25.00		
Delta:	16° 44'20"	Left	
Length:	7.30		
Element: Linear			
EC	2+17.67	1861072.86	6253912.77
BC	2+33.55	1861057.20	6253910.13
Tangential Direction:	S 9° 32'54" W		
Tangential Length:	15.88		
Element: Circular			
BC	2+33.55	1861057.20	6253910.13
PRC	2+38.54	1861052.24	6253909.80
Radius:	25.00		
Delta:	11° 25'12"	Left	
Length:	4.98		
Element: Circular			
PRC	2+38.54	1861049.04	6253909.70
PRC	2+45.03	1861042.91	6253907.72
Radius:	15.00		
Delta:	24° 47'37"	Right	
Length:	6.49		
Element: Circular			
PRC	2+45.03	1861042.91	6253907.72
PRC	2+82.53	1861030.64	6253928.35
Radius:	12.00		
Delta:	179° 04'32"	Left	
Length:	37.51		

Alignment Name:	Basin 2 Cont.		
	Station	Northing	Easting
Element: Circular			
PRC	2+82.53	1861030.61	6253928.33
PRC	2+88.81	1861035.77	6253931.91
Radius:	50.00		
Delta:	7° 11'21"	Right	
Length:	6.27		
Element: Circular			
PRC	2+88.81	1861035.77	6253931.91
EC	3+09.96	1861055.45	6253938.36
Radius:	30.00		
Delta:	40° 24'02"	Left	
Length:	21.15		
Element: Linear			
EC	3+09.96	1861055.45	6253938.36
BC	3+55.42	1861100.88	6253936.72
Tangential Direction:	N 2° 03'31" W		
Tangential Length:	45.46		
Element: Circular			
BC	3+55.42	1861100.88	6253936.72
PRC	3+65.42	1861110.38	6253933.93
Radius:	20.00		
Delta:	28° 38'52"	Left	
Length:	10.00		
Element: Circular			
PRC	3+65.42	1861110.38	6253933.93
PRC	3+85.42	1861129.54	6253933.24
Radius:	20.00		
Delta:	57° 17'45"	Right	
Length:	20.00		
Element: Circular			
PRC	3+85.42	1861129.54	6253933.24
EC	3+95.42	1861139.21	6253935.35
Radius:	20.00		
Delta:	28° 38'52"	Left	
Length:	10.00		
Element: Linear			
EC	3+95.42	1861139.21	6253935.35
BC	4+35.98	1861179.74	6253933.89
Tangential Direction:	N 2° 03'31" W		
Tangential Length:	40.56		
Element: Circular			
BC	4+35.98	1861179.74	6253933.89
PRC	4+46.21	1861188.10	6253928.79
Radius:	10.00		
Delta:	58° 39'17"	Left	
Length:	10.24		
Element: Circular			
PRC	4+46.21	1861188.10	6253928.79
PRC	4+50.96	1861191.30	6253925.34
Radius:	10.00		
Delta:	27° 10'58"	Right	
Length:	4.74		
Element: Circular			
PRC	4+50.96	1861191.30	6253925.34
POE	4+58.69	1861189.58	6253919.84
Radius:	3.00		
Delta:	147° 41'23"	Left	
Length:	7.73		

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS THROUGH SIDEWALKS AT ALL TIMES



NOTE:
BASIN 2 ALIGNMENT IS THE CONTROLLING LINE FOR BASIN AND CURB STATION AND OFFSETS

BASIN 2

SCALE 1"=10'

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N00° 03'05" E		15.00'	8" PERFORATED PVC
2	N45° 03'05" E		4.71'	8" PVC
3	N89° 56'55" E		3.00'	8" PVC
4	N44° 56'55" E		4.71'	8" PVC
5	N00° 03'05" E		130.00'	8" PERFORATED PVC

C-40

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

GREEN INFRASTRUCTURE 2
BASIN 2

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 43 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DOE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

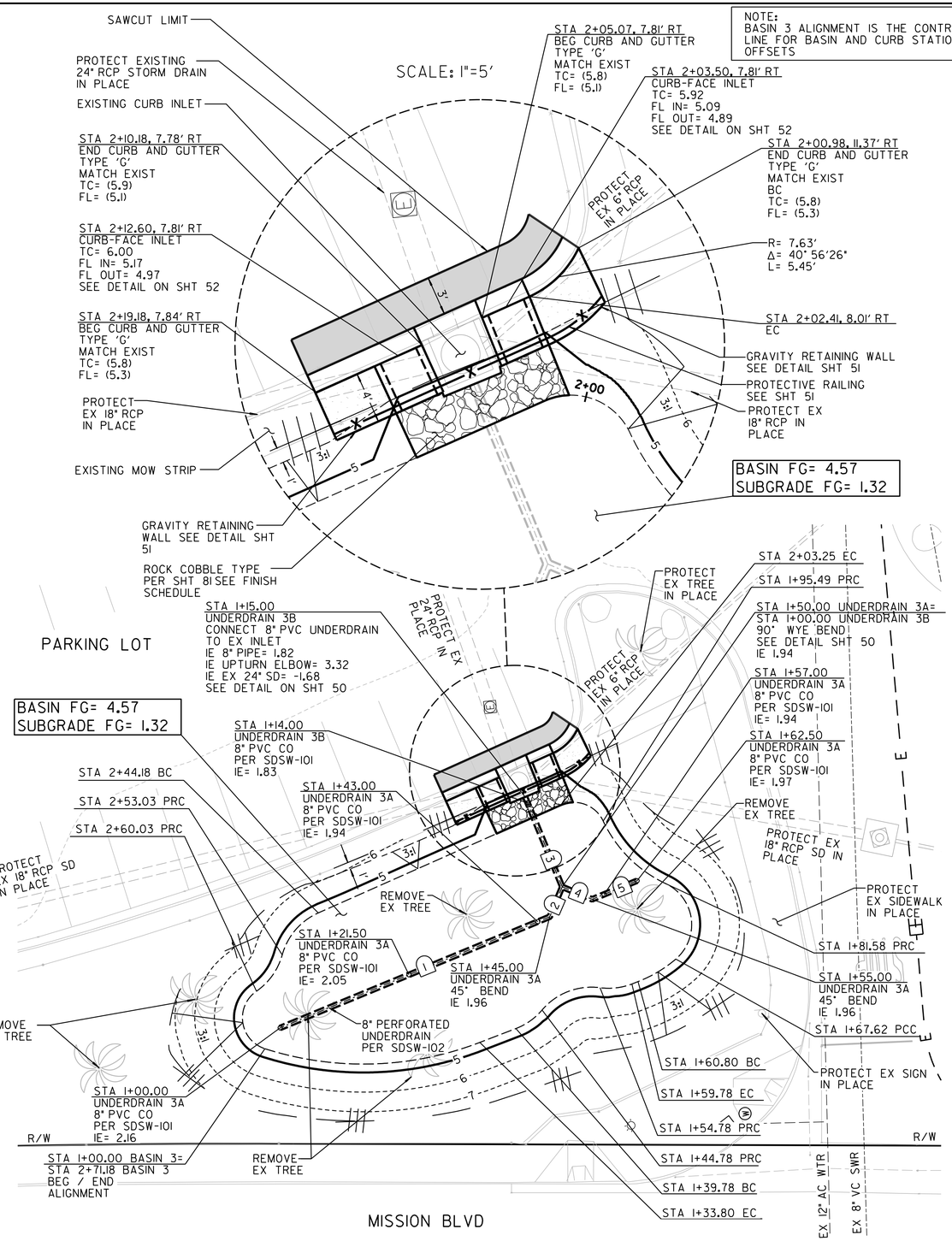
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GILL — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-43-D

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GREEN INFRASTRUCTURE 2



NOTE:
BASIN 3 ALIGNMENT IS THE CONTROLLING LINE FOR BASIN AND CURB STATION AND OFFSETS

Alignment Name:	Basin 3		
	Station	Northing	Easting
Element: Circular			
POB	1+00.00	1861069.00	6254052.46
EC	1+33.80	1861035.94	6254049.93
Radius:	50.00		
Delta:	38° 44'13"	Left	
Length:	33.80		
Element: Linear			
EC	1+33.80	1861035.94	6254049.93
BC	1+39.78	1861030.17	6254051.48
Tangential Direction:	S 14° 59'24" W		
Tangential Length:	5.97		
Element: Circular			
BC	1+39.78	1861030.17	6254051.48
PRC	1+44.78	1861025.85	6254053.90
Radius:	10.00		
Delta:	28° 38'52"	Left	
Length:	5.00		
Element: Circular			
PRC	1+44.78	1861025.85	6254053.90
PRC	1+54.78	1861016.59	6254056.38
Radius:	10.00		
Delta:	57° 17'45"	Right	
Length:	10.00		
Element: Circular			
PRC	1+54.78	1861016.59	6254056.38
EC	1+59.78	1861011.64	6254056.44
Radius:	10.00		
Delta:	28° 38'52"	Left	
Length:	5.00		
Element: Linear			
EC	1+59.78	1861011.64	6254056.44
BC	1+60.80	1861010.66	6254056.70
Tangential Direction:	S 14° 59'24" W		
Tangential Length:	1.02		
Element: Circular			
BC	1+60.80	1861010.66	6254056.70
PCC	1+67.62	1861004.49	6254059.55
Radius:	20.00		
Delta:	19° 33'09"	Left	
Length:	6.83		
Element: Circular			
PCC	1+67.62	1861004.49	6254059.55
PRC	1+81.58	1861004.83	6254071.30
Radius:	7.00		
Delta:	114° 16'20"	Left	
Length:	13.96		
Element: Circular	Station	Northing	Easting
PRC	1+81.58	1861004.83	6254071.30
PRC	1+95.49	1861013.39	6254081.90
Radius:	20.00		
Delta:	39° 49'42"	Right	
Length:	13.90		
Element: Circular			
PRC	1+95.49	1861013.39	6254081.90
EC	2+03.25	1861019.66	6254085.04
Radius:	5.00		
Delta:	88° 55'51"	Left	
Length:	7.76		
Element: Linear			
EC	2+03.25	1861019.66	6254085.04
BC	2+44.18	1861058.60	6254072.44
Tangential Direction:	N 17° 55'01" E		
Tangential Length:	40.93		
Element: Circular			
BC	2+44.18	1861058.60	6254072.44
PRC	2+53.03	1861064.84	6254066.58
Radius:	10.00		
Delta:	50° 41'19"	Left	
Length:	8.85		
Element: Circular			
PRC	2+53.03	1861064.84	6254066.58
PRC	2+60.03	1861069.38	6254061.44
Radius:	10.00		
Delta:	40° 06'25"	Right	
Length:	7.00		
Element: Circular			
PRC	2+60.03	1861069.38	6254061.44
EC	2+71.18	1861069.00	6254052.46
Radius:	5.00		
Delta:	127° 45'15"	Left	
Length:	11.15		

Alignment Name:	Underdrain 3a		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1861066.33	6254055.42
PI	1+45.00	1861023.15	6254068.09
Tangential Direction:	N 16° 21'21" E		
Tangential Length:	45.00		
Element: Linear			
PI	1+45.00	1861023.15	6254068.09
PI	1+50.00	1861020.75	6254072.48
Tangential Direction:	N 61° 21'21" E		
Tangential Length:	5.00		
Element: Linear			
PI	1+50.00	1861020.75	6254072.48
PI	1+55.00	1861016.37	6254070.08
Tangential Direction:	N 28° 38'39" E		
Tangential Length:	5.00		
Element: Linear			
PI	1+55.00	1861016.37	6254070.08
POE	1+62.50	1861009.17	6254072.19
Tangential Direction:	N 16° 21'21" E		
Tangential Length:	7.50		

Alignment Name:	Underdrain 3b		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1861020.75	6254072.48
PI	1+15.00	1861024.98	6254086.87
Tangential Direction:	N 73° 38'39" E		
Tangential Length:	15.00		

STORM DRAIN DATA TABLE

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N16° 21'21"E		45.00'	8" PERFORATED PVC
2	N61° 21'21"E		5.00'	8" PVC
3	N73° 38'39"E		15.00'	8" PVC
4	N28° 38'39"E		5.00'	8" PVC
5	N16° 21'21"E		7.50'	8" PERFORATED PVC

NOTES:
1. FOR CONSTRUCTION OF WATER QUALITY BASINS SEE BASIN DETAILS ON SHT 50 AND 51.

2. APPROXIMATE GROUND WATER ELEVATION 2.7' PER GEOTECHNICAL INVESTIGATION REPORT, DATED 11/27/2019.

3. FOR LANDSCAPE AND IRRIGATION PLANS SEE SHT 76 AND 84.

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS THROUGH SIDEWALKS AT ALL TIMES

BASIN 3

0 10 20 30
SCALE 1" = 10'

GREEN INFRASTRUCTURE 3

C-41

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

GREEN INFRASTRUCTURE 3
BASIN 3

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 44 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

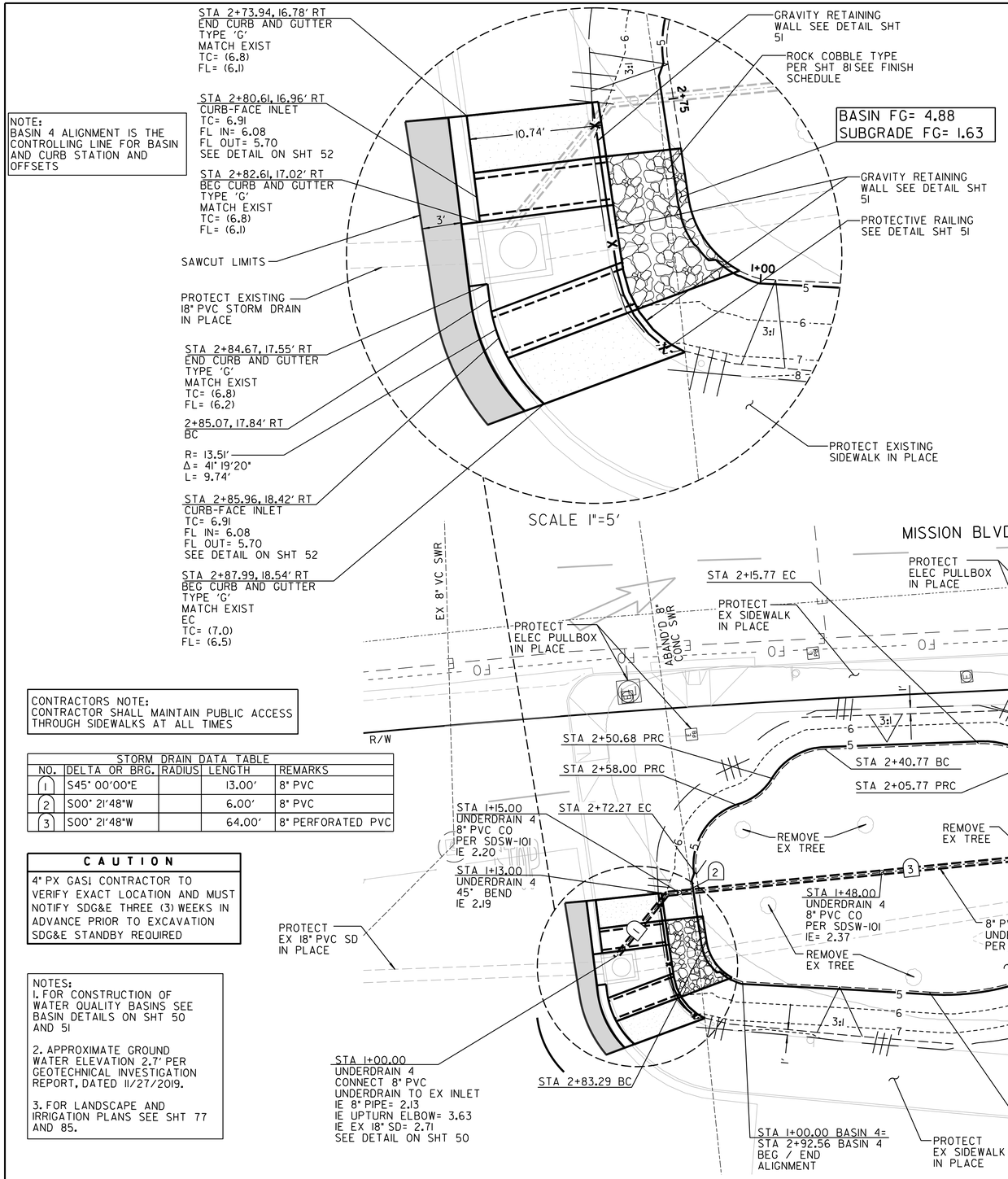
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. CRAIG — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-44-D

RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
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619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver



BASIN 4

NOTE:
BASIN 4 ALIGNMENT IS THE CONTROLLING LINE FOR BASIN AND CURB STATION AND OFFSETS

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS THROUGH SIDEWALKS AT ALL TIMES

STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	S45° 00'00"E		13.00'	8" PVC
2	S00° 21'48"W		6.00'	8" PVC
3	S00° 21'48"W		64.00'	8" PERFORATED PVC

CAUTION

4" PX GAS! CONTRACTOR TO VERIFY EXACT LOCATION AND MUST NOTIFY SDG&E THREE (3) WEEKS IN ADVANCE PRIOR TO EXCAVATION
SDG&E STANDBY REQUIRED

NOTES:
1. FOR CONSTRUCTION OF WATER QUALITY BASINS SEE BASIN DETAILS ON SHT 50 AND 51

2. APPROXIMATE GROUND WATER ELEVATION 2.7' PER GEOTECHNICAL INVESTIGATION REPORT, DATED 11/27/2019.

3. FOR LANDSCAPE AND IRRIGATION PLANS SEE SHT 77 AND 85.

Alignment Name:	Basin 4 Sidewalk		
	Station	Northing	Easting
Element: Linear			
POB	10+00.00	1860874.52	6253877.68
BC	10+02.00	1860874.15	6253879.65
Tangential Direction:	S 79° 26'55" E		
Tangential Length:	2.00		
Element: Circular			
BC	10+02.00	1860874.15	6253879.65
PRC	10+34.90	1860854.68	6253904.61
Radius:	34.39		
Delta:	54° 48'15"	Right	
Length:	32.90		
Element: Circular			
PRC	10+34.90	1860854.68	6253904.61
EC	10+71.95	1860834.66	6253933.67
Radius:	34.48		
Delta:	61° 34'00"	Left	
Length:	37.05		
Element: Linear			
EC	10+71.95	1860834.66	6253933.68
POE	10+72.84	1860834.60	6253934.58
Tangential Direction:	S 86° 33'55" E		
Tangential Length:	0.90		

Alignment Name:	Underdrain 4		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1860962.01	6253905.33
PI	1+13.00	1860952.82	6253914.53
Tangential Direction:	S 45° 00'00" E		
Tangential Length:	13.00		
Element: Linear			
PI	1+13.00	1860952.82	6253914.53
POE	1+83.00	1860882.82	6253914.08
Tangential Direction:	S 0° 21'48" W		
Tangential Length:	70.00		

Alignment Name:	Basin 4		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1860942.14	6253899.05
PI	1+19.39	1860922.99	6253895.99
Tangential Direction:	S 9° 04'33" W		
Tangential Length:	19.39		
Element: Linear			
PI	1+19.39	1860922.99	6253895.99
BC	1+30.35	1860912.18	6253894.18
Tangential Direction:	S 9° 29'56" W		
Tangential Length:	10.96		
Element: Circular			
BC	1+30.35	1860912.18	6253894.18
PCC	1+72.72	1860874.41	6253908.56
Radius:	40.00		
Delta:	60° 41'21"	Left	
Length:	42.37		
Element: Circular			
PCC	1+72.72	1860874.41	6253908.56
PRC	1+95.77	1860881.92	6253925.74
Radius:	10.58		
Delta:	124° 51'19"	Left	
Length:	23.05		
Element: Circular			
PRC	1+95.77	1860881.92	6253925.74
PRC	2+05.77	1860890.95	6253929.59
Radius:	15.00		
Delta:	38° 11'50"	Right	
Length:	10.00		
Element: Circular			
PRC	2+05.77	1860890.95	6253929.59
EC	2+15.77	1860899.98	6253933.43
Radius:	15.00		
Delta:	38° 11'50"	Left	
Length:	10.00		
Element: Linear			
EC	2+15.77	1860899.98	6253933.43
BC	2+40.77	1860924.92	6253935.15
Tangential Direction:	N 3° 57'16" E		
Tangential Length:	25.00		
Element: Circular			
BC	2+40.77	1860924.92	6253935.15
PRC	2+50.68	1860933.58	6253931.22
Radius:	10.00		
Delta:	56° 47'26"	Left	
Length:	9.91		
Element: Circular			
PRC	2+50.68	1860933.58	6253931.22
PRC	2+58.00	1860939.66	6253927.44
Radius:	10.00		
Delta:	41° 57'31"	Right	
Length:	7.32		
Element: Circular			
PRC	2+58.00	1860939.66	6253927.44
EC	2+72.27	1860947.77	6253917.16
Radius:	10.00		
Delta:	81° 44'38"	Left	
Length:	14.27		
Element: Linear			
EC	2+72.27	1860947.77	6253917.16
BC	2+83.29	1860947.26	6253906.15
Tangential Direction:	S 87° 22'43" W		
Tangential Length:	11.02		
Element: Circular			
BC	2+83.29	1860947.26	6253906.15
POE	2+92.56	1860942.14	6253899.05
Radius:	8.00		
Delta:	66° 23'51"	Left	
Length:	9.27		

GREEN INFRASTRUCTURE 4

C-42

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

GREEN INFRASTRUCTURE 4
BASIN 4

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 45 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — RCE# C91224
PRINT DCE NAME

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

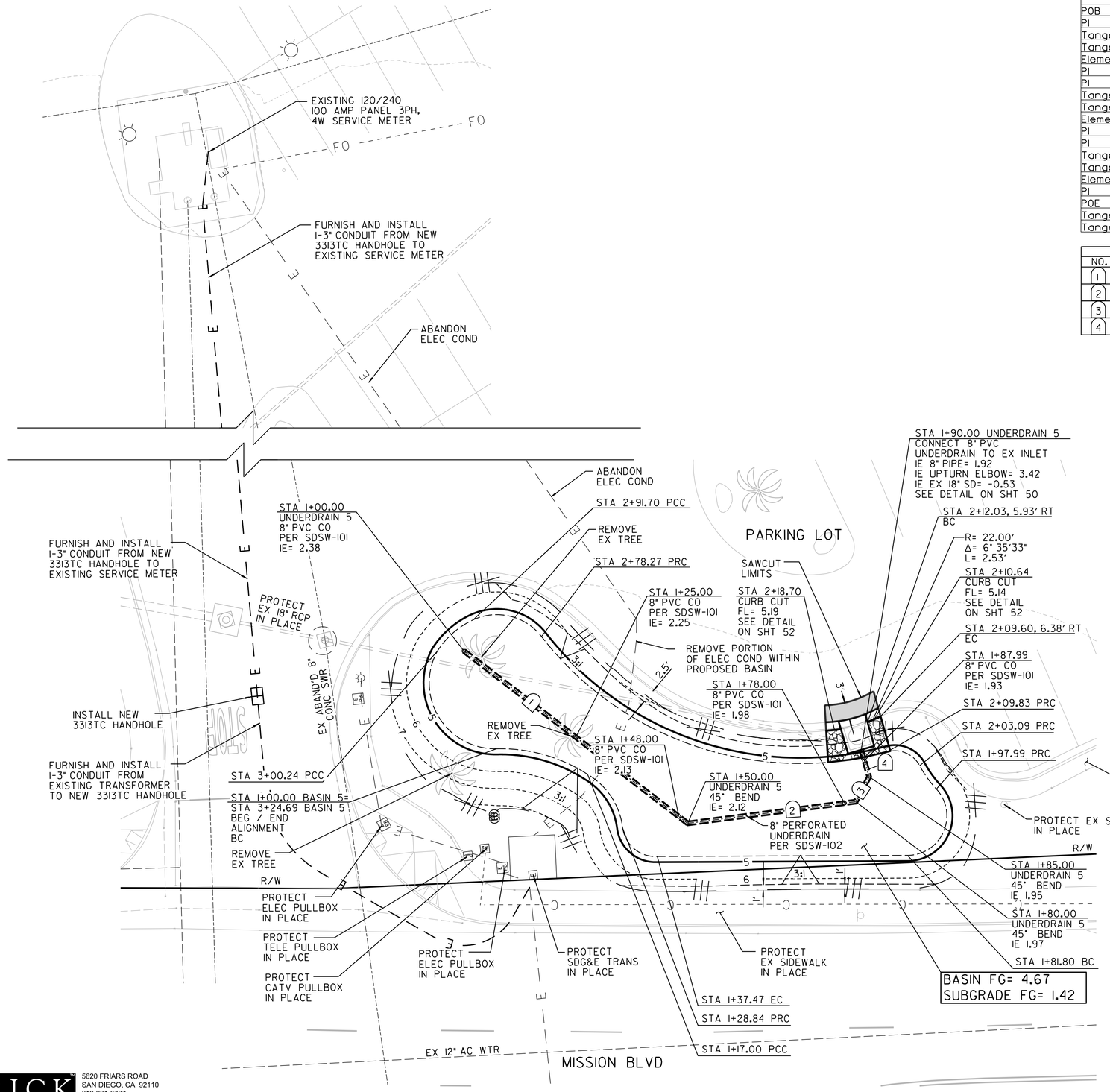
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GIBBS — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-45-D

RICK ENGINEERING COMPANY
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(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver



BASIN 5

Alignment Name:	Underdrain 5		
	Station	Northing	Easting
POB	1+00.00	1860929.92	6254064.94
PI	1+50.00	1860893.75	6254030.42
Tangential Direction:	N 43° 39'52" E		
Tangential Length:	50.00		
Element: Linear			
PI	1+50.00	1860893.75	6254030.42
PI	1+80.00	1860863.76	6254031.12
Tangential Direction:	S 1° 20'08" W		
Tangential Length:	30.00		
Element: Linear			
PI	1+80.00	1860863.76	6254031.12
PI	1+85.00	1860860.92	6254035.23
Tangential Direction:	N 55° 23'47" E		
Tangential Length:	5.00		
Element: Linear			
PI	1+85.00	1860860.92	6254035.23
POE	1+90.00	1860861.82	6254040.15
Tangential Direction:	N 79° 36'13" E		
Tangential Length:	5.00		

STORM DRAIN DATA TABLE

NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N43° 39'52"E		50.00'	8" PERFORATED PVC
2	S01° 20'08"W		30.00'	8" PERFORATED PVC
3	N55° 23'47"E		5.00'	8" PERFORATED PVC
4	N79° 36'13"E		5.00'	8" PVC

Alignment Name:	Basin 5		
	Station	Northing	Easting
Element: Circular			
PC	1+00.00	1860926.02	6254047.13
PCC	1+17.00	1860910.46	6254040.92
Radius:	28.38		
Delta:	34° 19'38"	Right	
Length:	17.00		
Element: Circular			
PCC	1+17.00	1860910.46	6254040.92
PRC	1+28.84	1860905.27	6254030.76
Radius:	12.76		
Delta:	53° 09'10"	Right	
Length:	11.83		
Element: Circular			
PRC	1+28.84	1860905.27	6254030.76
PT	1+37.47	1860899.73	6254025.16
Radius:	5.86		
Delta:	84° 30'35"	Left	
Length:	8.64		
Element: Linear			
PT	1+37.47	1860899.73	6254025.16
PC	1+81.80	1860855.63	6254020.69
Tangential Direction:	S 5° 47'56" W		
Tangential Length:	44.32		
Element: Circular			
PC	1+81.80	1860855.63	6254020.69
PRC	1+97.99	1860849.32	6254031.84
Radius:	7.00		
Delta:	132° 34'06"	Left	
Length:	16.20		
Element: Circular			
PRC	1+97.99	1860849.32	6254031.84
PRC	2+03.09	1860851.82	6254036.27
Radius:	20.00		
Delta:	14° 36'35"	Right	
Length:	5.10		
Element: Circular			
PRC	2+03.09	1860851.82	6254036.27
PRC	2+09.83	1860857.26	6254039.32
Radius:	5.00		
Delta:	77° 10'21"	Left	
Length:	6.73		
Element: Circular			
PRC	2+09.83	1860857.26	6254039.32
PRC	2+78.27	1860916.00	6254066.05
Radius:	58.00		
Delta:	67° 36'36"	Right	
Length:	68.44		
Element: Circular			
PRC	2+78.27	1860916.00	6254066.05
PCC	2+91.70	1860927.71	6254070.27
Radius:	10.00		
Delta:	76° 59'11"	Left	
Length:	13.44		
Element: Circular			
PCC	2+91.70	1860927.71	6254070.27
PCC	3+00.24	1860934.61	6254065.43
Radius:	15.00		
Delta:	32° 37'13"	Left	
Length:	8.54		
Element: Circular			
PCC	3+00.24	1860934.61	6254065.43
PT	3+24.69	1860926.02	6254047.13
Radius:	11.68		
Delta:	119° 55'11"	Left	
Length:	24.45		

NOTE:
BASIN 5 ALIGNMENT IS THE CONTROLLING LINE FOR BASIN AND CURB STATION AND OFFSETS

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS THROUGH SIDEWALKS AT ALL TIMES

NOTES:
1. FOR CONSTRUCTION OF WATER QUALITY BASINS SEE BASIN DETAILS ON SHT 50 AND 51.

2. APPROXIMATE GROUND WATER ELEVATION 2.7' PER GEOTECHNICAL INVESTIGATION REPORT, DATED 11/27/19.

3. FOR LANDSCAPE AND IRRIGATION PLANS SEE SHT 76 AND 84.

RICK ENGINEERING COMPANY
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REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GILL — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

C-43

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

GREEN INFRASTRUCTURE 5
BASIN 5

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 46 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA — PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI — PROJECT ENGINEER

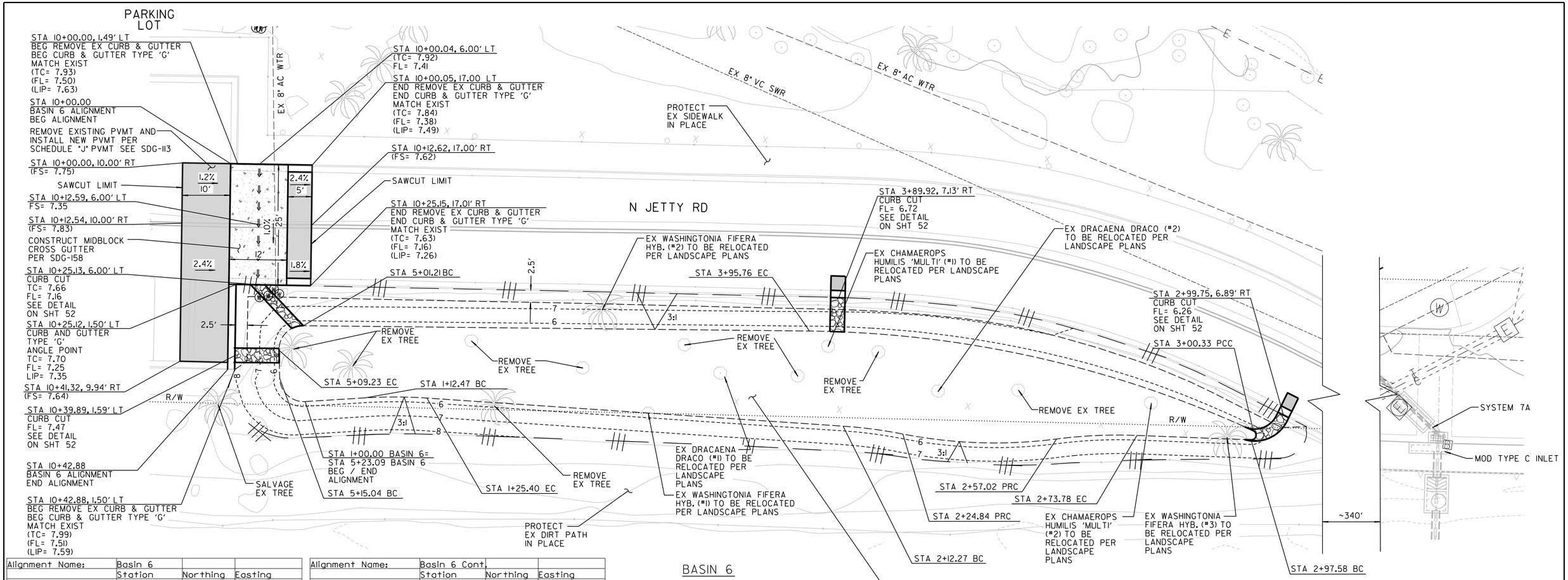
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-46-D

GREEN INFRASTRUCTURE 5



Alignment Name:	Basin 6		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1857657.23	6254073.88
BC	1+12.47	1857659.93	6254086.05
Tangential Direction:	N 77° 30'16" E		
Tangential Length:	12.47		
Element: Circular			
BC	1+12.47	1857659.93	6254086.05
EC	1+25.40	1857661.91	6254098.82
Radius:	100.00		
Delta:	7° 24'35"	Right	
Length:	12.93		
Element: Linear			
EC	1+25.40	1857661.91	6254098.82
BC	2+12.27	1857669.61	6254185.35
Tangential Direction:	N 84° 54'51" E		
Tangential Length:	86.87		
Element: Circular			
BC	2+12.27	1857669.61	6254185.35
PRC	2+24.84	1857669.93	6254197.91
Radius:	100.00		
Delta:	7° 12'03"	Right	
Length:	12.57		
Element: Circular			
PRC	2+24.84	1857669.93	6254197.91
PRC	2+57.02	1857673.89	6254229.70
Radius:	100.00		
Delta:	18° 26'08"	Left	
Length:	32.18		
Element: Circular			
PRC	2+57.02	1857673.89	6254229.70
EC	2+73.78	1857677.24	6254246.11
Radius:	100.00		
Delta:	9° 36'18"	Right	
Length:	16.76		

Alignment Name:	Basin 6 Cont.		
	Station	Northing	Easting
Element: Linear			
EC	2+73.78	1857677.24	6254246.11
BC	2+97.58	1857680.02	6254269.74
Tangential Direction:	N 83° 17'03" E		
Tangential Length:	23.80		
Element: Circular			
BC	2+97.58	1857680.02	6254269.74
PCC	3+00.33	1857681.98	6254269.90
Radius:	1.00		
Delta:	157° 32'34"	Left	
Length:	2.75		
Element: Circular			
PCC	3+00.33	1857681.98	6254269.90
EC	3+95.76	1857688.09	6254175.36
Radius:	227.00		
Delta:	24° 05'18"	Left	
Length:	95.44		
Element: Linear			
EC	3+95.76	1857688.09	6254175.36
BC	5+01.21	1857672.78	6254071.03
Tangential Direction:	S 81° 39'12" W		
Tangential Length:	105.44		
Element: Circular			
BC	5+01.21	1857672.78	6254071.03
EC	5+09.23	1857666.94	6254066.84
Radius:	5.00		
Delta:	91° 57'54"	Left	
Length:	8.03		
Element: Linear			
EC	5+09.23	1857666.94	6254066.84
BC	5+15.04	1857661.22	6254067.88
Tangential Direction:	S 10° 18'43" W		
Tangential Length:	5.81		
Element: Circular			
BC	5+15.04	1857661.22	6254067.88
POE	5+23.09	1857657.23	6254073.88
Radius:	5.00		
Delta:	92° 11'02"	Left	
Length:	8.04		

Alignment Name:	Basin 6 Pavement		
	Station	Northing	Easting
Element: Linear			
POB	10+00.00	1857703.75	6254050.83
PI	10+25.11	1857678.9	6254054.39
Tangential Direction:	S 8° 09'00" E		
Tangential Length:	25.11		
Element: Linear			
PI	10+25.11	1857678.9	6254054.39
POE	10+42.88	1857661.3	6254056.88
Tangential Direction:	S 8° 01'37" E		
Tangential Length:	17.77		

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS THROUGH SIDEWALKS AT ALL TIMES

NOTE:
BASIN 6 ALIGNMENT IS THE CONTROLLING LINE FOR BASIN STATION AND OFFSETS

BASIN 6 PAVEMENT ALIGNMENT IS THE CONTROLLING LINE FOR CURB AND PAVEMENT STATION AND OFFSETS

NOTES:
1. FOR CONSTRUCTION OF WATER QUALITY BASINS SEE BASIN DETAILS ON SHT 50 AND 51

2. APPROXIMATE GROUND WATER ELEVATION 2.6' PER GEOTECHNICAL INVESTIGATION REPORT, DATED 11/27/19.

3. FOR LANDSCAPE AND IRRIGATION PLANS SEE SHT 78 AND 86.

4. ALL TREE/PALM SPECIMENS TO BE RELOCATED SHALL BE TAGGED BY THE LANDSCAPE ARCHITECT PRIOR TO ANY DEMOLITION, CLEARNING AND/OR GRUBBING WORK.

N

0 10 20 30

SCALE 1" = 10'

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GREEN INFRASTRUCTURE 6

C-44

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

GREEN INFRASTRUCTURE 6
BASIN 6

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 47 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

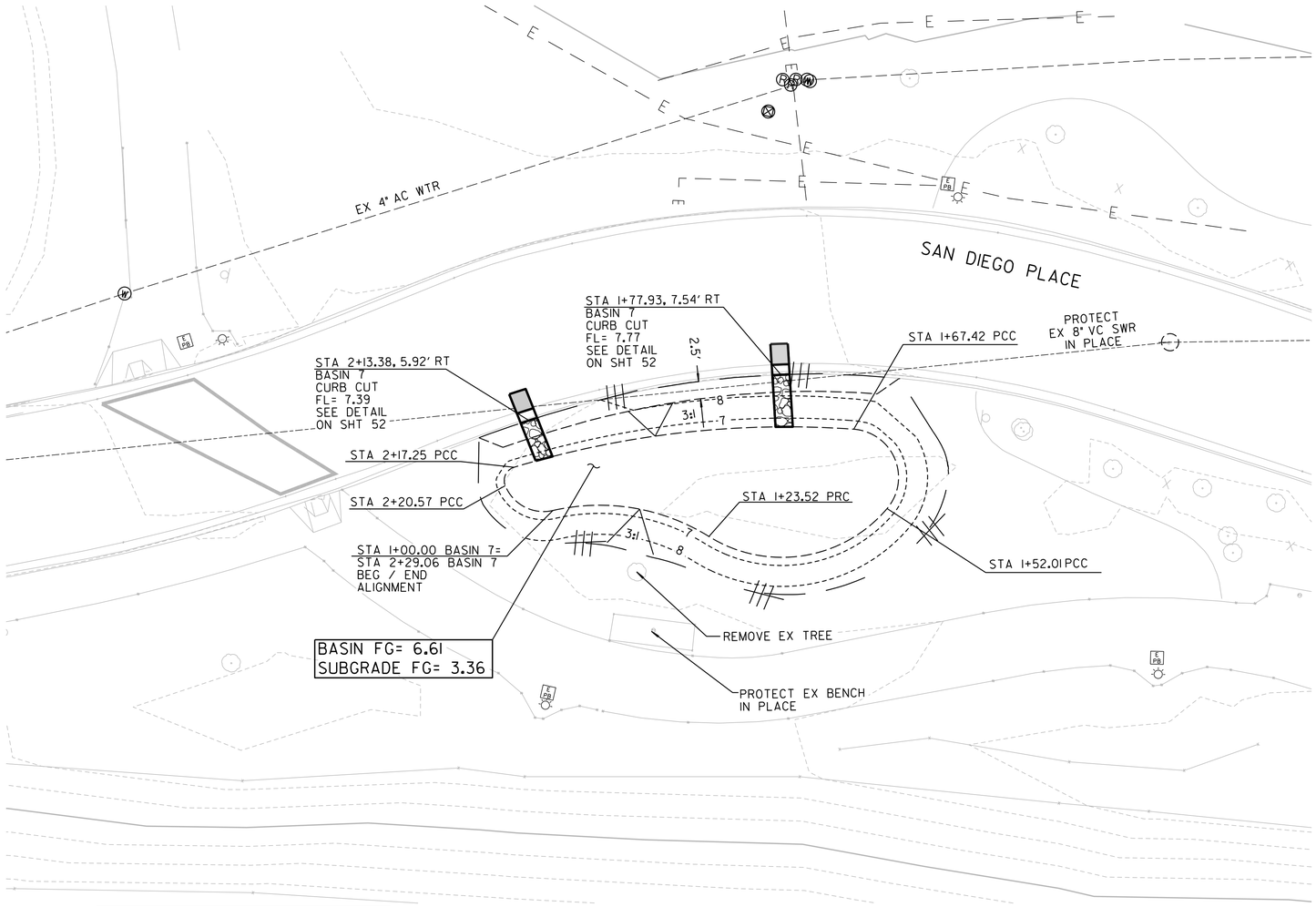
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-47-D



BASIN 7

NOTE:
BASIN 7 ALIGNMENT IS THE CONTROLLING LINE FOR BASIN STATION AND OFFSETS

CONTRACTORS NOTE:
CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS THROUGH SIDEWALKS AT ALL TIMES

Alignment Name:	Basin 7		
	Station	Northing	Easting
Element: Circular			
POB	1+00.00	1857766.77	6254948.49
PRC	1+23.52	1857768.07	6254971.38
Radius:	30.00		
Delta:	44° 55'00"	Right	
Length:	23.52		
Element: Circular			
PRC	1+23.52	1857768.07	6254971.38
PCC	1+52.01	1857777.70	6254995.68
Radius:	20.00		
Delta:	81° 36'45"	Left	
Length:	28.49		
Element: Circular			
PCC	1+52.01	1857777.70	6254995.68
PCC	1+67.42	1857787.86	6254988.43
Radius:	7.00		
Delta:	126° 12'09"	Left	
Length:	15.42		
Element: Circular			
PCC	1+67.42	1857787.86	6254988.43
PCC	2+17.25	1857771.64	6254941.61
Radius:	136.00		
Delta:	20° 59'27"	Left	
Length:	49.82		
Element: Circular			
PCC	2+17.25	1857771.64	6254941.61
PCC	2+20.57	1857768.76	6254940.96
Radius:	2.00		
Delta:	95° 03'12"	Left	
Length:	3.32		
Element: Circular			
PCC	2+20.57	1857768.76	6254940.96
POE	2+29.06	1857766.77	6254948.49
Radius:	6.00		
Delta:	81° 03'27"	Left	
Length:	8.49		

NOTES:
1. FOR CONSTRUCTION OF WATER QUALITY BASINS SEE BASIN DETAILS ON SHT 50 AND 51

2. APPROXIMATE GROUND WATER ELEVATION 2.6' PER GEOTECHNICAL INVESTIGATION REPORT, DATED 11/27/19.

3. FOR LANDSCAPE AND IRRIGATION PLANS SEE SHT 76 AND 87.

0 10 20 30
SCALE 1" = 10'

GREEN INFRASTRUCTURE 7

C-45

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

GREEN INFRASTRUCTURE 7
BASIN 7

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 48 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — KEITH R. GIBSON — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-48-D

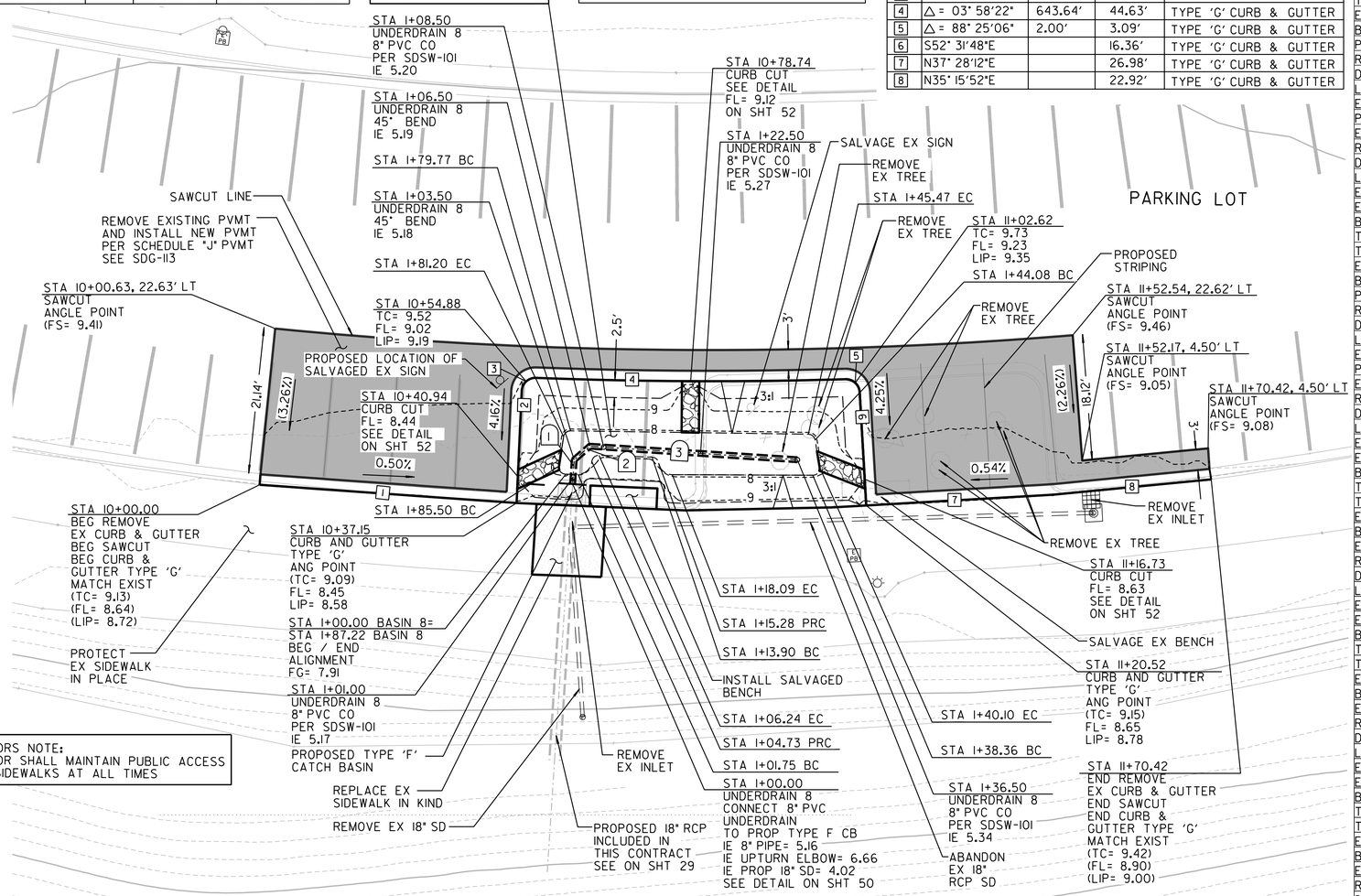
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619-291-0707
(FAX) 619-291-4165
rickengineering.com
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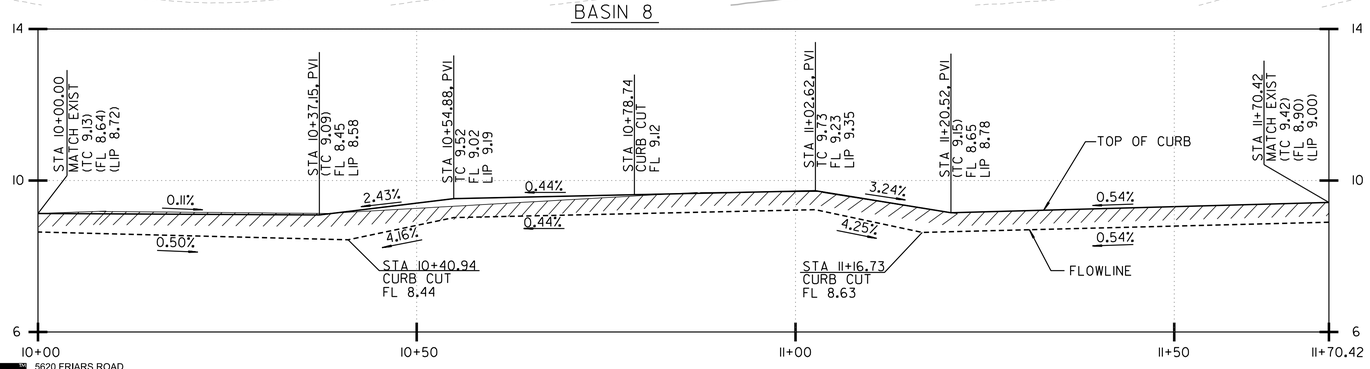
STORM DRAIN DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N45° 28'10" E		3.50'	8" PVC
2	N00° 28'10" E		3.00'	8" PERFORATED PVC
3	N44° 31'50" E		30.00'	8" PERFORATED PVC

NOTE:
BASIN 8 ALIGNMENT IS THE CONTROLLING LINE FOR BASIN STATION AND OFFSETS

BASIN 8 CURB ALIGNMENT IS THE CONTROLLING LINE FOR CURB AND PAVEMENT STATION AND OFFSETS

CURB DATA TABLE				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
1	N44° 49'45"E		37.15'	TYPE 'G' CURB & GUTTER
2	N46° 38'01"W		16.16'	TYPE 'G' CURB & GUTTER
3	△ = 89° 39'30"	2.00'	3.13'	TYPE 'G' CURB & GUTTER
4	△ = 03° 58'22"	643.64'	44.63'	TYPE 'G' CURB & GUTTER
5	△ = 88° 25'06"	2.00'	3.09'	TYPE 'G' CURB & GUTTER
6	S52° 31'48"E		16.36'	TYPE 'G' CURB & GUTTER
7	N37° 28'12"E		26.98'	TYPE 'G' CURB & GUTTER
8	N35° 15'52"E		22.92'	TYPE 'G' CURB & GUTTER





Alignment Name:	Basin 8		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1857961.30	6255545.03
BC	1+01.75	1857962.62	6255546.18
Tangential Direction:	N 41° 02'12" E		
Tangential Length:	1.75		
Element: Circular			
BC	1+01.75	1857962.62	6255546.18
PRC	1+04.73	1857965.33	6255546.10
Radius:	2.00		
Delta:	85° 11'18"	Left	
Length:	2.97		
Element: Circular			
PRC	1+04.73	1857965.33	6255546.10
EC	1+06.24	1857966.70	6255546.09
Radius:	1.00		
Delta:	86° 57'21"	Right	
Length:	1.52		
Element: Linear			
EC	1+06.24	1857966.70	6255546.09
BC	1+13.90	1857972.32	6255551.29
Tangential Direction:	N 42° 48'15" E		
Tangential Length:	7.66		
Element: Circular			
BC	1+13.90	1857972.32	6255551.29
PRC	1+15.28	1857972.49	6255552.55
Radius:	1.00		
Delta:	78° 52'30"	Right	
Length:	1.38		
Element: Circular			
PRC	1+15.28	1857972.49	6255552.55
EC	1+18.09	1857972.88	6255555.11
Radius:	2.00		
Delta:	80° 38'34"	Left	
Length:	2.82		
Element: Linear			
EC	1+18.09	1857972.88	6255555.11
BC	1+38.36	1857988.17	6255568.41
Tangential Direction:	N 41° 02'12" E		
Tangential Length:	20.27		
Element: Circular			
BC	1+38.36	1857988.17	6255568.41
EC	1+40.10	1857989.68	6255568.18
Radius:	1.00		
Delta:	99° 49'21"	Left	
Length:	1.74		
Element: Linear			
EC	1+40.10	1857989.68	6255568.18
BC	1+44.08	1857991.74	6255564.78
Tangential Direction:	N 58° 47'08" E		
Tangential Length:	3.98		
Element: Circular			
BC	1+44.08	1857991.74	6255564.78
EC	1+45.47	1857991.55	6255563.51
Radius:	1.00		
Delta:	79° 37'02"	Left	
Length:	1.39		
Element: Linear			
EC	1+45.47	1857991.55	6255563.51
BC	1+79.77	1857965.90	6255540.74
Tangential Direction:	S 41° 35'50" W		
Tangential Length:	34.30		
Element: Circular			
BC	1+79.77	1857965.90	6255540.74
EC	1+81.20	1857964.59	6255540.72
Radius:	1.00		
Delta:	81° 57'11"	Left	
Length:	1.43		
Element: Linear			
EC	1+81.20	1857964.59	6255540.72
BC	1+85.50	1857961.31	6255543.51
Tangential Direction:	S 40° 21'21" W		
Tangential Length:	4.30		
Element: Circular			
BC	1+85.50	1857961.31	6255543.51
POE	1+87.22	1857961.30	6255545.03
Radius:	1.00		
Delta:	98° 36'27"	Left	
Length:	1.72		

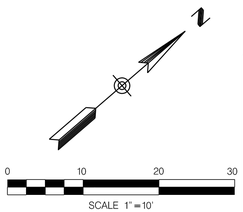
Alignment Name:	Basin 8 Curb		
	Station	Northing	Easting
Element: Linear			
POB	10+00.00	1857926.87	6255517.35
PI	10+37.15	1857953.22	6255543.54
Tangential Direction:	N 44° 49'45" E		
Tangential Length:	37.15		
Element: Linear			
PI	10+37.15	1857953.22	6255543.54
PC	10+53.31	1857964.31	6255531.79
Tangential Direction:	N 46° 38'01" W		
Tangential Length:	16.16		
Element: Circular			
PC	10+53.31	1857964.31	6255531.79
PRC	10+56.44	1857967.13	6255531.70
Radius:	2.00		
Delta:	89° 39'30"	Right	
Length:	3.13		
Element: Circular			
PRC	10+56.44	1857967.13	6255531.70
PRC	11+01.07	1858000.79	6255561.00
Radius:	643.64		
Delta:	3° 58'22"	Left	
Length:	44.63		
Element: Circular			
PRC	11+01.07	1858000.79	6255561.00
PT	11+04.16	1858001.12	6255563.77
Radius:	2.00		
Delta:	88° 25'06"	Right	
Length:	3.09		
Element: Linear			
PT	11+04.16	1858001.12	6255563.77
PI	11+20.52	1857991.16	6255576.75
Tangential Direction:	S 52° 31'48" E		
Tangential Length:	16.36		
Element: Linear			
PI	11+20.52	1857991.16	6255576.75
PI	11+47.50	1858012.58	6255593.17
Tangential Direction:	N 37° 28'12" E		
Tangential Length:	26.98		
Element: Linear			
PI	11+47.50	1858012.58	6255593.17
POE	11+70.42	1858031.29	6255606.40
Tangential Direction:	N 35° 15'52" E		
Tangential Length:	22.92		

Alignment Name:	Underdrain 8		
	Station	Northing	Easting
Element: Linear			
POB	1+00.00	1857961.11	6255546.75
PI	1+03.50	1857963.57	6255544.26
Tangential Direction:	N 45° 28'10" E		
Tangential Length:	3.50		
Element: Linear			
PI	1+03.50	1857963.57	6255544.26
PI	1+06.50	1857966.56	6255544.23
Tangential Direction:	N 0° 28'10" E		
Tangential Length:	3.00		
Element: Linear			
PI	1+06.50	1857966.56	6255544.23
POE	1+36.50	1857987.95	6255565.27
Tangential Direction:	N 44° 31'50" E		
Tangential Length:	30.00		

NOTES:
1. FOR CONSTRUCTION OF WATER QUALITY BASINS SEE BASIN DETAILS ON SHT 50 AND 51

2. APPROXIMATE GROUND WATER ELEVATION 2.6' PER GEOTECHNICAL INVESTIGATION REPORT, DATED 11/27/19.

3. FOR LANDSCAPE AND IRRIGATION PLANS SEE SHT 80 AND 88.



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REGISTERED PROFESSIONAL ENGINEER
KEVIN R. CRAIG
NO. 52295
STATE OF CALIFORNIA
03/13/2023

GREEN INFRASTRUCTURE 8

C-46

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

GREEN INFRASTRUCTURE 8
BASIN 8

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 49 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA — PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI — PROJECT ENGINEER

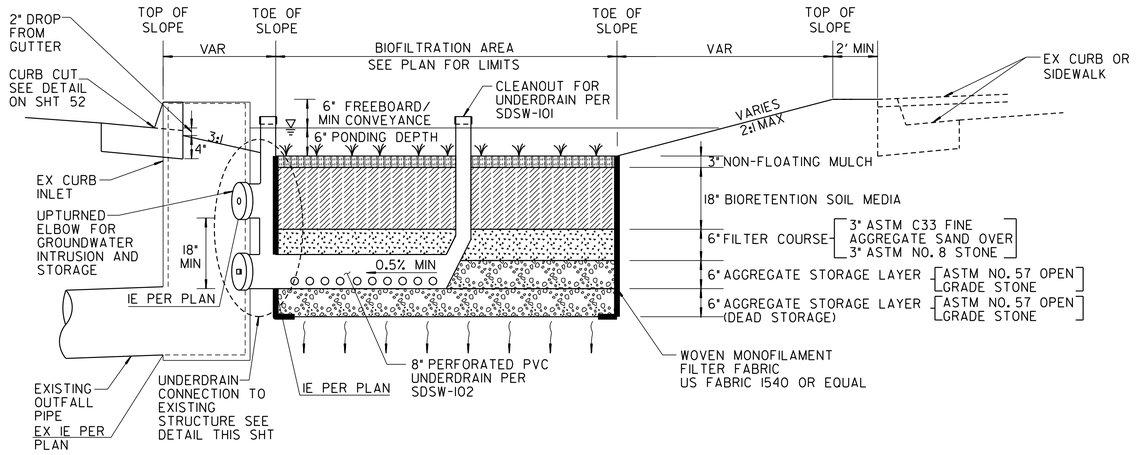
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689
CCS27 COORDINATE

1858-6249
CCS83 COORDINATE

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

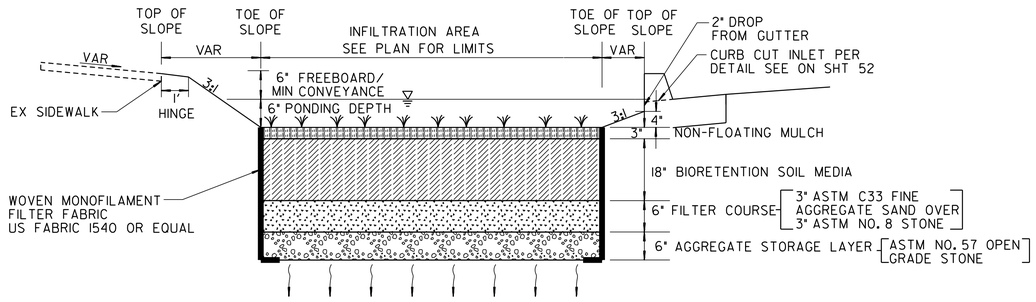
41306-49-D



TYPICAL BIOFILTRATION W/ PARTIAL RETENTION BASIN SECTION

NOT TO SCALE

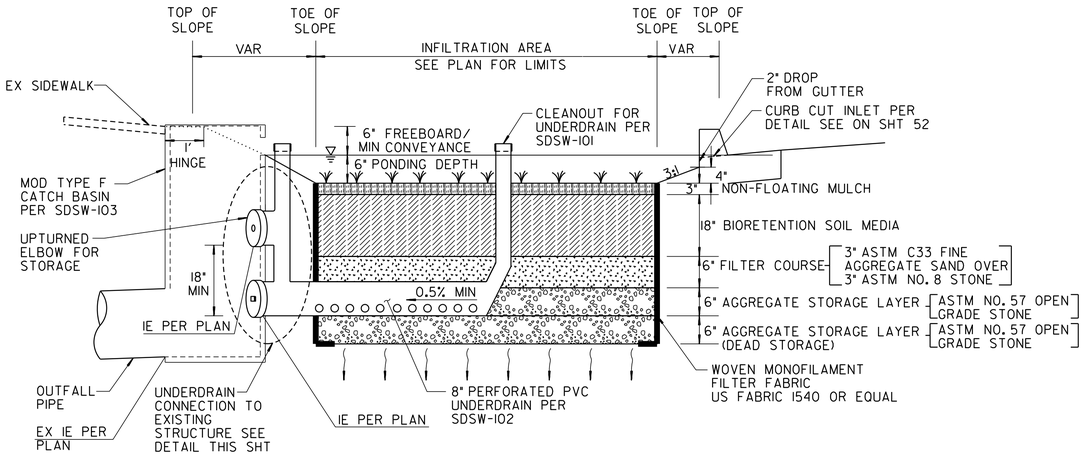
BIOFILTRATION W/ PARTIAL RETENTION BASIN INFORMATION TABLE						
BASIN NO.	FREEBOARD/CONVEYANCE (FT)	PONDING DEPTH (FT)	BIORETENTION SOIL (FT)	SIDE SLOPE	BOTTOM AREA (FT^2)	PONDING AREA (FT^2)
1	0.50	0.50	1.50	2:1-3:1	508	835
2	0.50	0.50	1.50	3:1	3,142	3,692
3	0.50	0.50	1.50	3:1	1,655	1,919
4	0.50	0.50	1.50	3:1	2,455	2,750
5	0.50	0.50	1.50	3:1	1,927	2,270



TYPICAL BIORETENTION BASIN SECTION

NOT TO SCALE

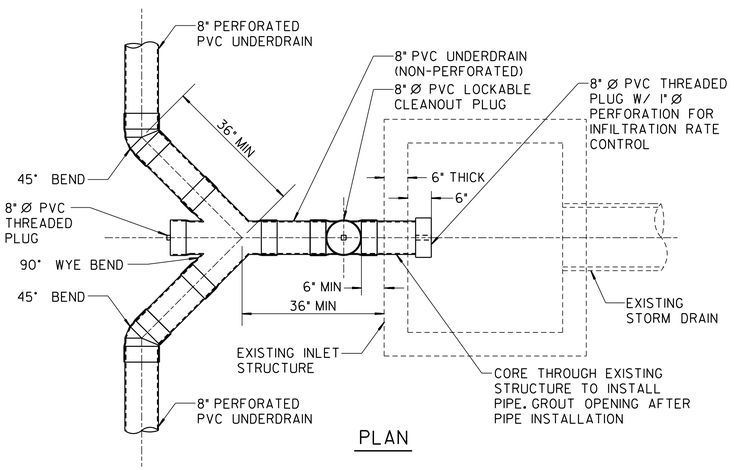
BIORETENTION BASIN INFORMATION TABLE						
BASIN NO.	FREEBOARD/CONVEYANCE (FT)	PONDING DEPTH (FT)	BIORETENTION SOIL (FT)	SIDE SLOPE	BOTTOM AREA (FT^2)	PONDING AREA (FT^2)
6	0.50	0.50	1.50	3:1	3,200	3,841
7	0.50	0.50	1.50	3:1	726	926



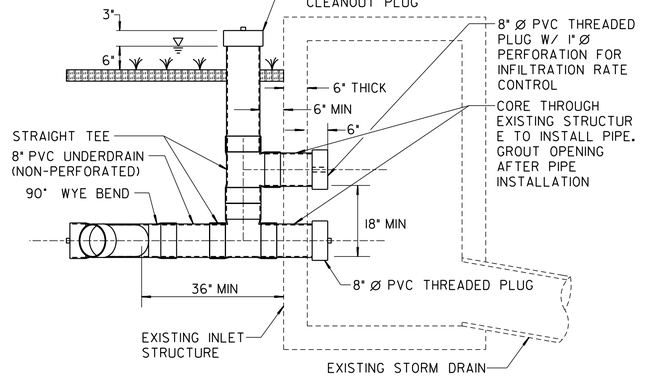
TYPICAL BIOFILTRATION W/ PARTIAL RETENTION BASIN SECTION

NOT TO SCALE

BIOFILTRATION W/ PARTIAL RETENTION BASIN INFORMATION TABLE						
BASIN NO.	FREEBOARD/CONVEYANCE (FT)	PONDING DEPTH (FT)	BIORETENTION SOIL (FT)	SIDE SLOPE	BOTTOM AREA (FT^2)	PONDING AREA (FT^2)
8	0.50	0.50	1.50	3:1	198	334



PLAN



PROFILE

UNDERDRAIN CONNECTION TO EXISTING STRUCTURE W/ UPTURN ELBOW

NOT TO SCALE

WATER QUALITY BASIN DETAILS 1

C-47

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

WATER QUALITY BASIN DETAILS 1

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 50 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

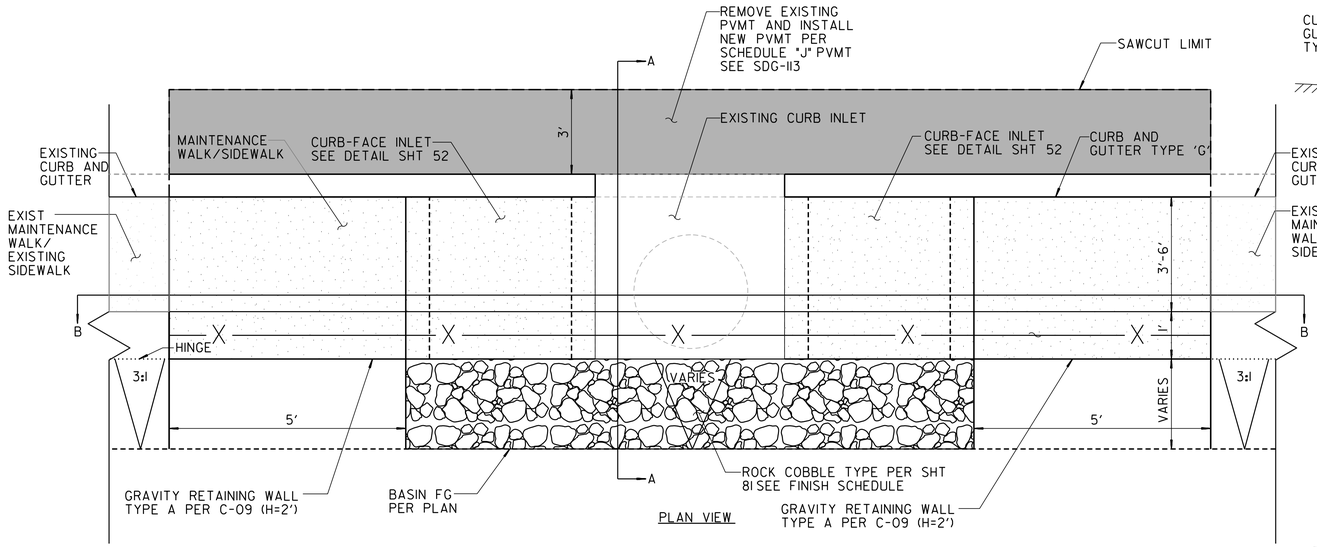
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. CRAIG — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

DESCRIPTION	BY	APPROVED	DATE	FILMED
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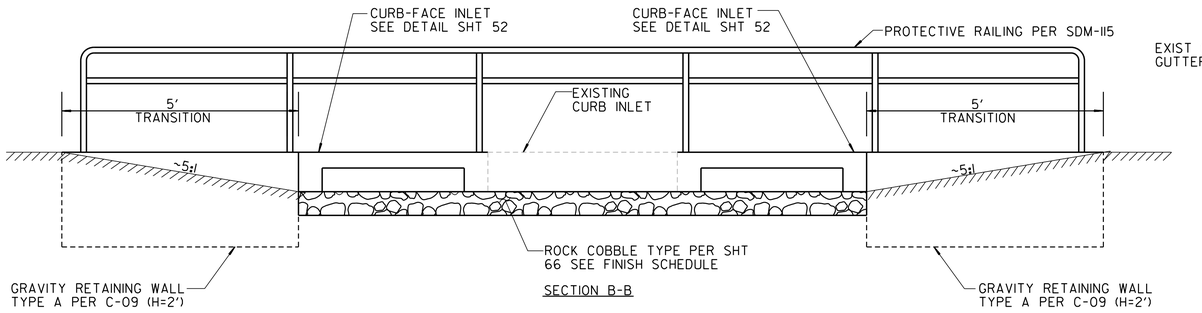
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER
SEE EACH SHEET, CCS27 COORDINATE
SEE EACH SHEET, CCS83 COORDINATE
41306-50-D

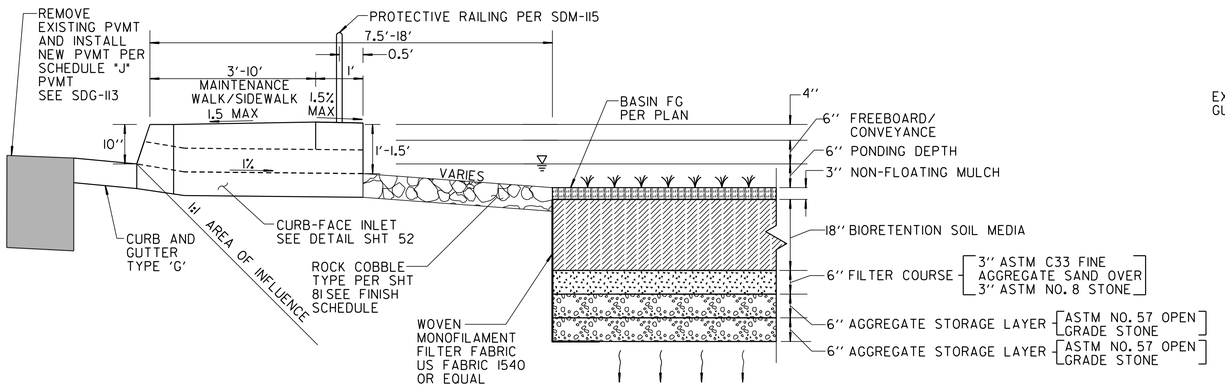
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(FAX) 619-291-4165
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PLAN VIEW



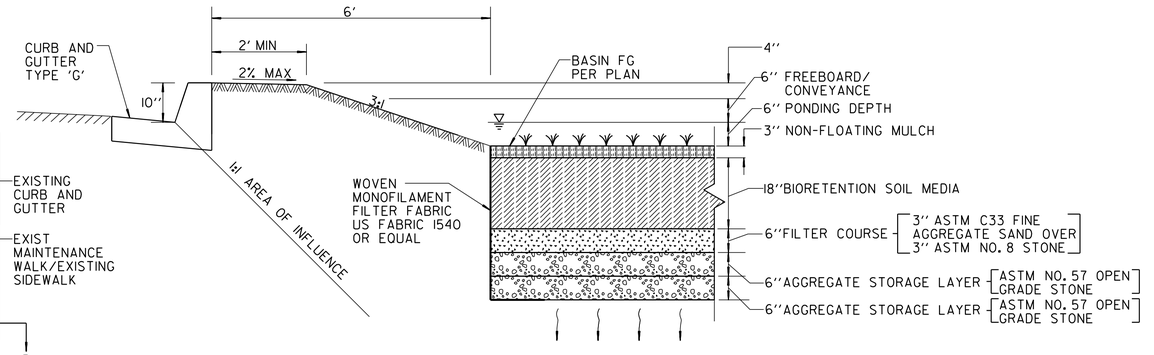
SECTION B-B



SECTION A-A

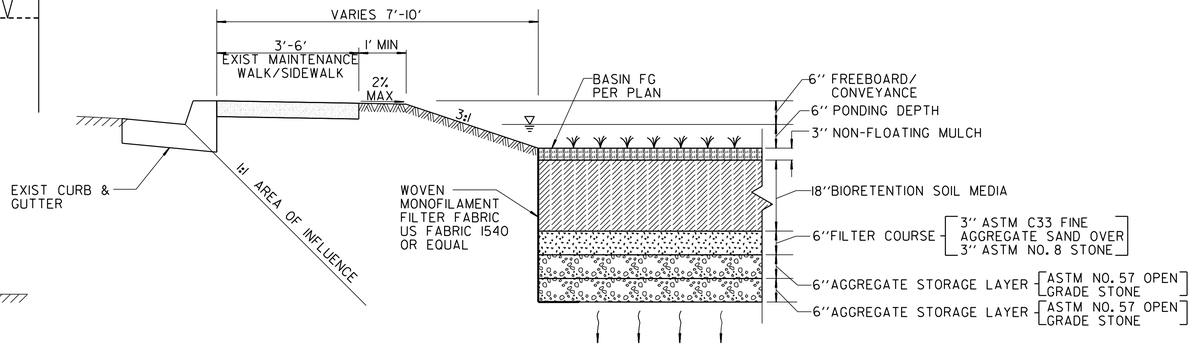
EDGE CONDITION ADJACENT TO SIDEWALK
(BASINS W/ CURB-FACE INLET)

NOT TO SCALE



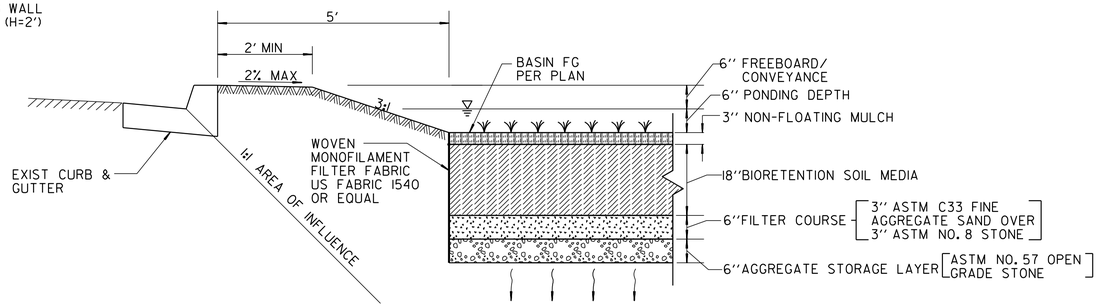
EDGE CONDITION ADJACENT TO CURB
(BASINS W/ CURB CUTS AND OVERFLOW INLETS)

NOT TO SCALE



EDGE CONDITION ADJACENT TO SIDEWALK

NOT TO SCALE



EDGE CONDITION ADJACENT TO CURB
(BASINS W/ CURB CUTS ONLY)

NOT TO SCALE

WATER QUALITY BASIN DETAILS 2

C-48

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
WATER QUALITY BASIN DETAILS 2

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 51 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI PRINT DOE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	F/L/MED
ORIGINAL	RICK		12/18/23	

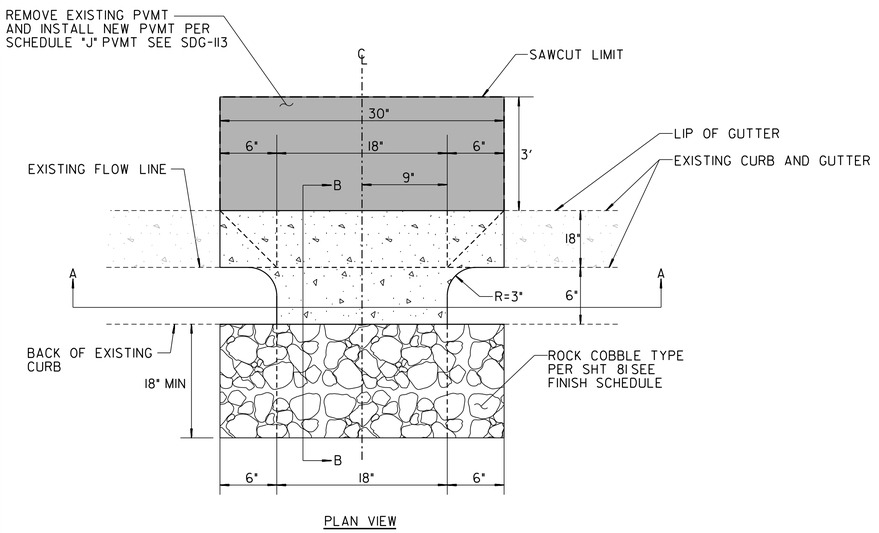
SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER KEVIN R. GRAY NO. 52295 STATE OF CALIFORNIA
03/13/2023

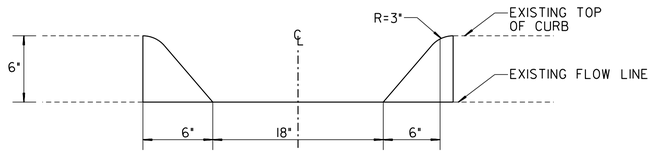
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-51-D

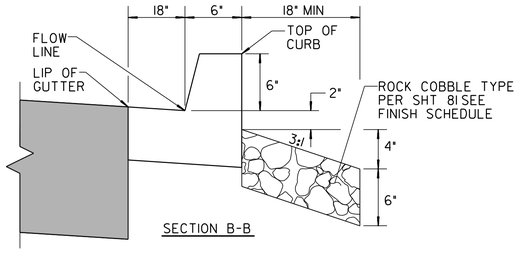
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SAN DIEGO, CA 92110
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(FAX) 619-291-4165
rickengineering.com
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PLAN VIEW



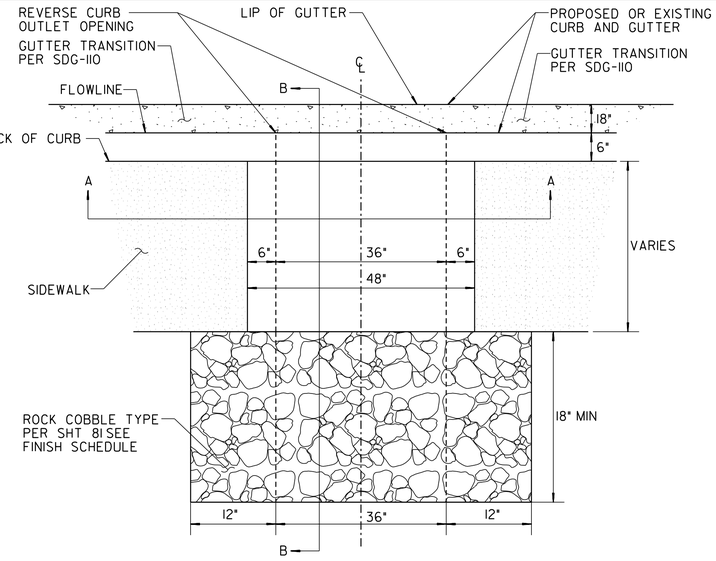
SECTION A-A



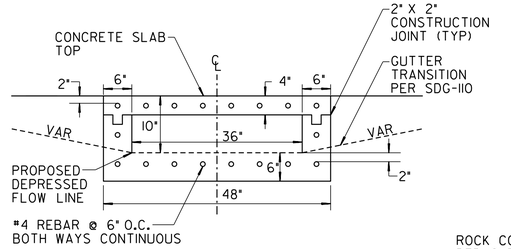
SECTION B-B

CURB CUT INLET DETAIL

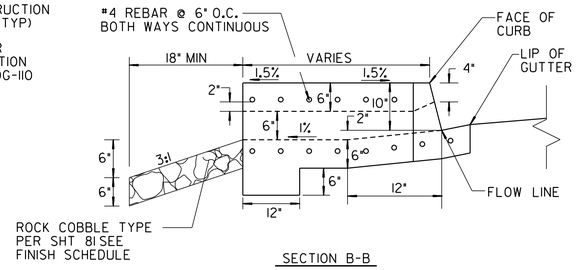
NOT TO SCALE



PLAN VIEW



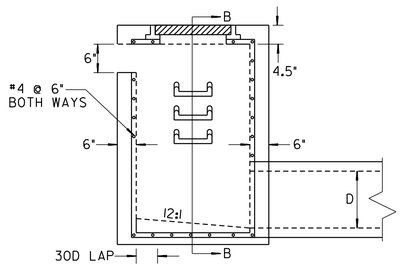
SECTION A-A



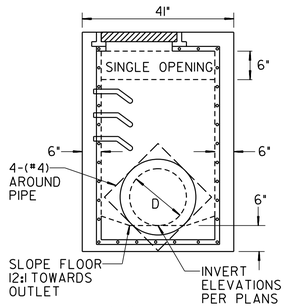
SECTION B-B

CURB-FACE INLET

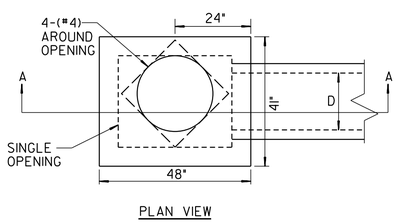
NOT TO SCALE



SECTION A-A



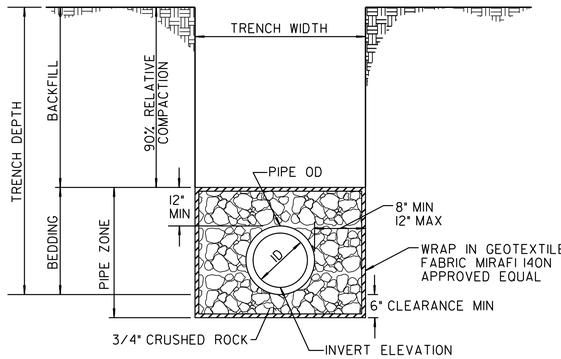
SECTION B-B



PLAN VIEW

MODIFIED TYPE F CATCH BASIN DETAIL

NOT TO SCALE



NOTE

1. PIPE BEDDING DETAIL TYPICAL FOR ALL STORM DRAINS.

PIPE BEDDING AND TRENCH BACKFILL DETAIL

NOT TO SCALE

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C-49

DETAILS 1

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

DETAILS 1

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 52 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

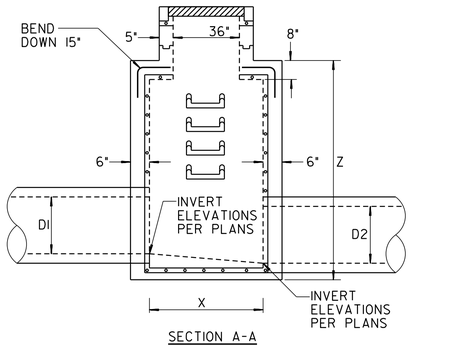
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GILL — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

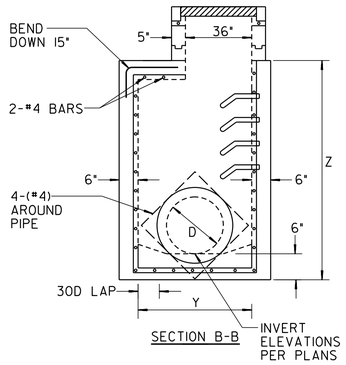
SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

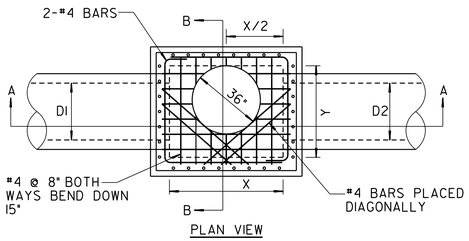
41306-52-D



SECTION A-A



SECTION B-B

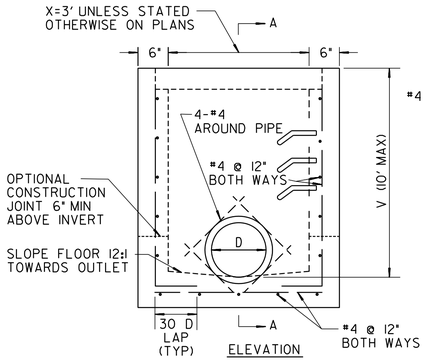


PLAN VIEW

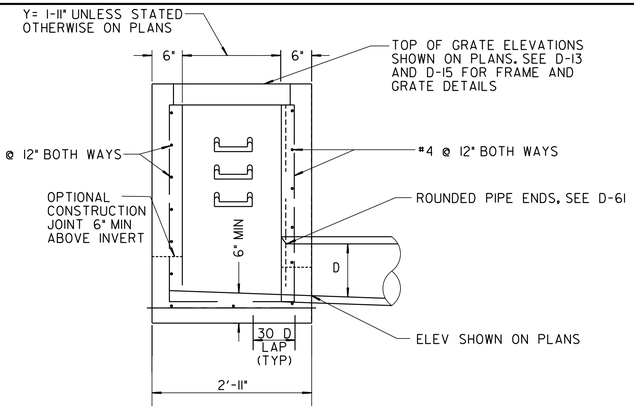
MODIFIED STORM DRAIN CLEANOUT DIMENSIONS			
TYPE	X	Y	Z
MOD A-5	5'	PER PLAN	6' MIN.
MOD A-6	6'	PER PLAN	6' MIN.
MOD A-7	7'	PER PLAN	7' MIN.

MODIFIED STORM DRAIN CLEANOUT - TYPE A

NOT TO SCALE



ELEVATION



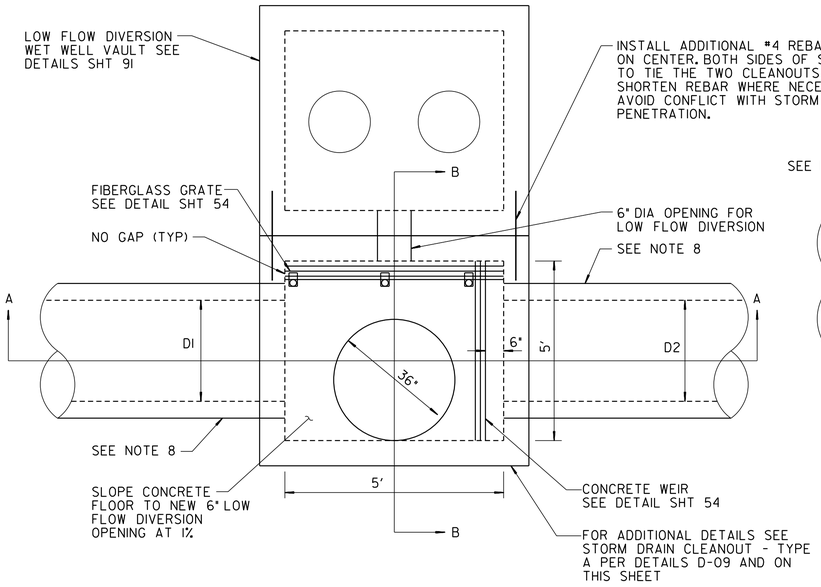
SECTION A-A

MODIFIED CATCH BASIN - TYPE 1

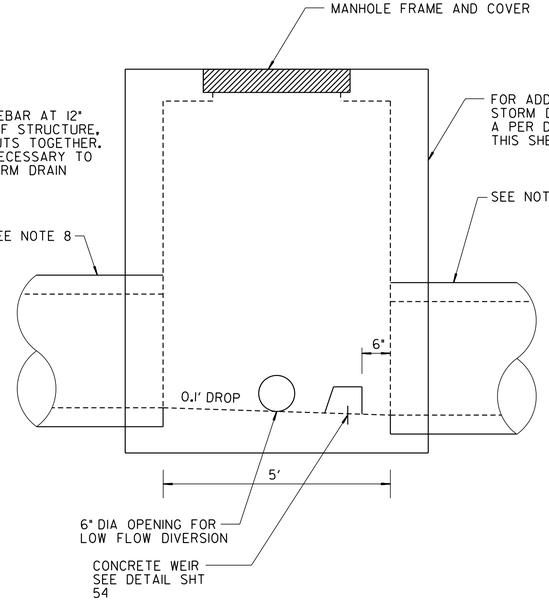
NOT TO SCALE

NOTES

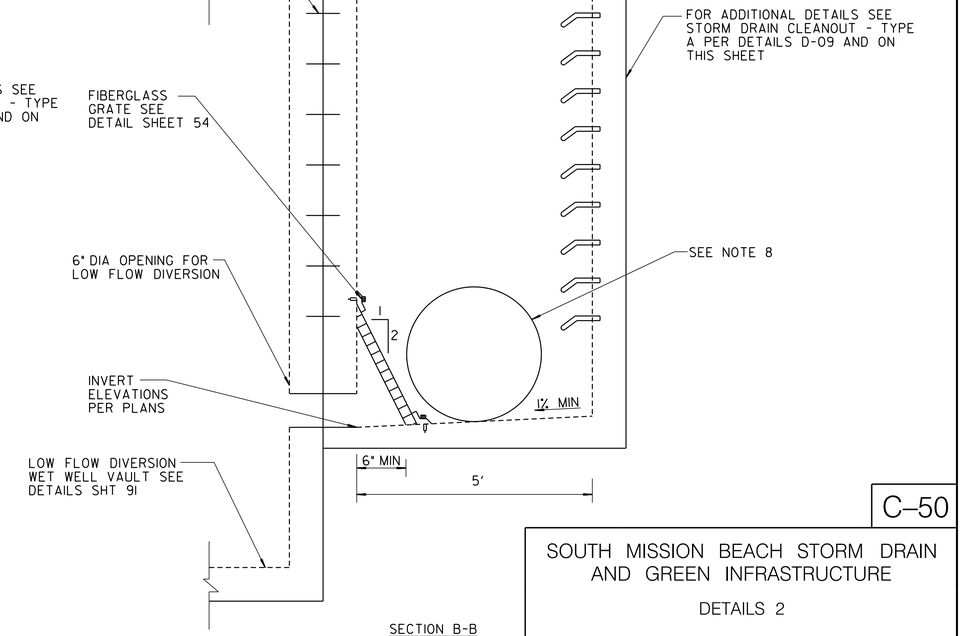
1. SEE SDD-114 FOR ADDITIONAL NOTES AND DETAILS
2. STEPS SHALL BE INSTALLED WHEN V EXCEEDS 4'. SEE SDD-114 FOR DETAILS
3. MAINTAIN 1-1/2" CLEAR SPACING BETWEEN REINFORCING AND CONCRETE SURFACE
4. INCREASE IN ALLOWABLE DEPTH SUBJECT TO APPROVAL BY LOCAL AGENCY.
5. EXPOSED EDGES OF CONCRETE SHALL BE ROUNDED WITH RADIUS OF 1/2"
6. ONLY END BEARING GRATES SHALL BE USED. SEE D-15
7. ALL STORM DRAIN GRATES THAT ARE LOCATED WITHIN A PEDESTRIAN CROSSING SHALL MEET ADA STANDARDS.
8. STORM DRAIN SIZE AND LOCATION VARIES. SEE CORRESPONDING PLAN AND PLAN AND PROFILE SHEETS.



PLAN VIEW



SECTION A-A



SECTION B-B

MODIFIED STORM DRAIN CLEANOUT - TYPE A WITH DIVERSION WEIR

NOT TO SCALE

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DETAILS 2

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

DETAILS 2

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 53 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

REGISTERED PROFESSIONAL ENGINEER KEVIN R. GRAY NO. 52295 STATE OF CALIFORNIA
03/13/2023

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
ELHAM LOTFI PRINT DCE NAME — C91224 RCE#

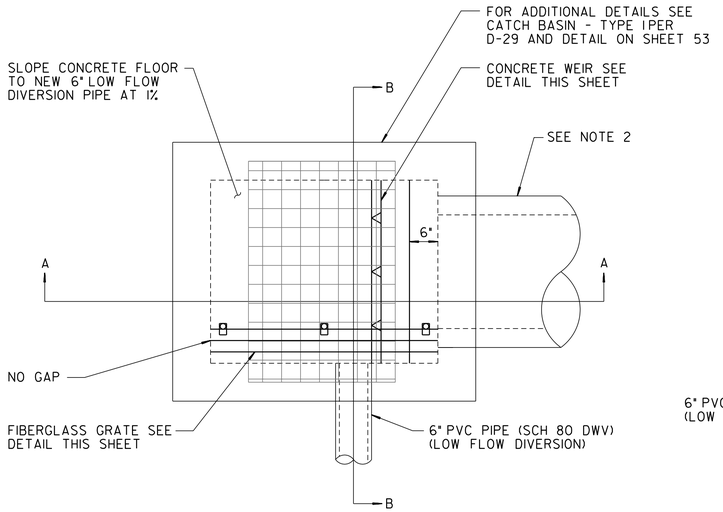
SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

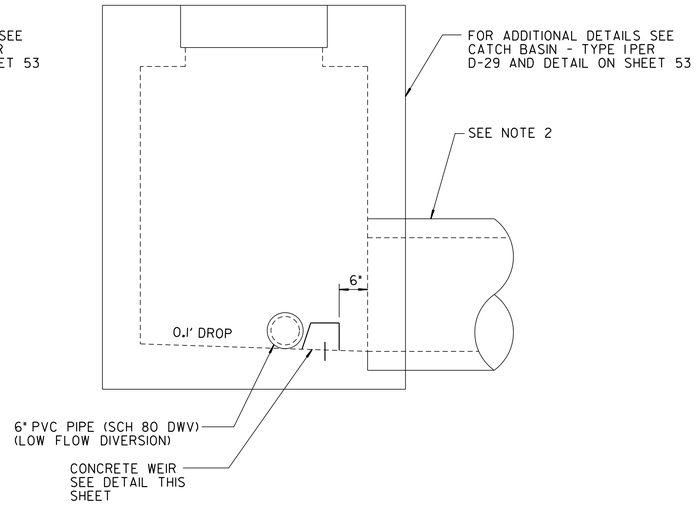
SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

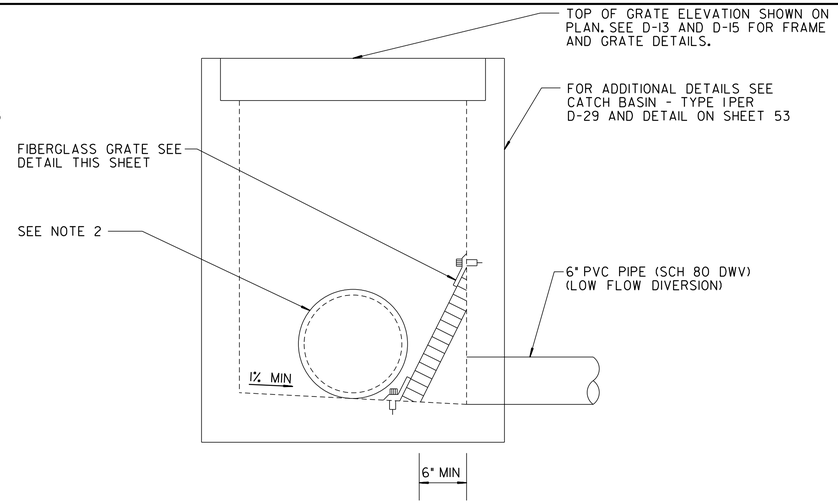
41306-53-D



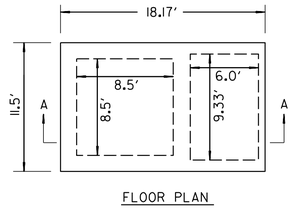
PLAN VIEW



SECTION A-A



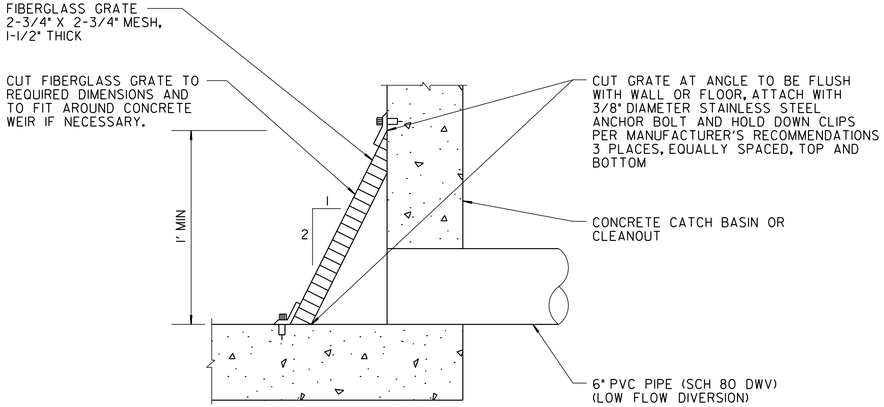
SECTION B-B



FLOOR PLAN

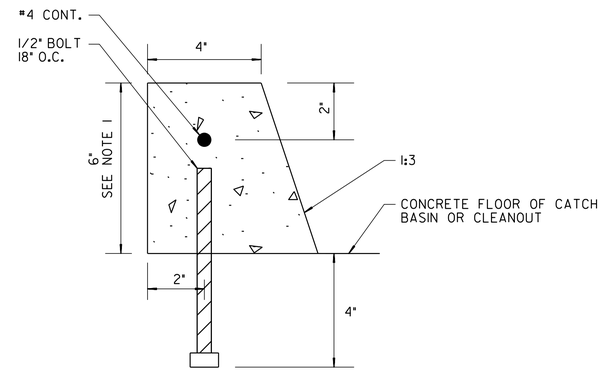
MODIFIED CATCH BASIN - TYPE 1 WITH DIVERSION WEIR

NOT TO SCALE



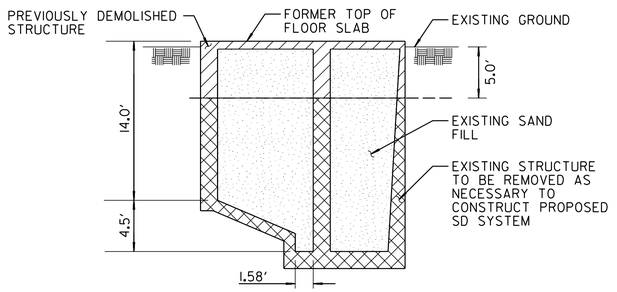
FIBERGLASS GRATE

NOT TO SCALE



CONCRETE WEIR

NOT TO SCALE



SECTION A-A

ABANDONED, SAND-FILLED SEWER PUMP STATION

NOT TO SCALE

NOTES:

1. TOP ELEVATION OF WEIR TO BE 6" ABOVE INVERT OF NEW 6" PVC DIVERSION PIPE
2. STORM DRAIN SIZE AND LOCATION VARIES. SEE CORRESPONDING PLAN AND PROFILE SHEETS.

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DETAILS 3

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

DETAILS 3

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 54 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

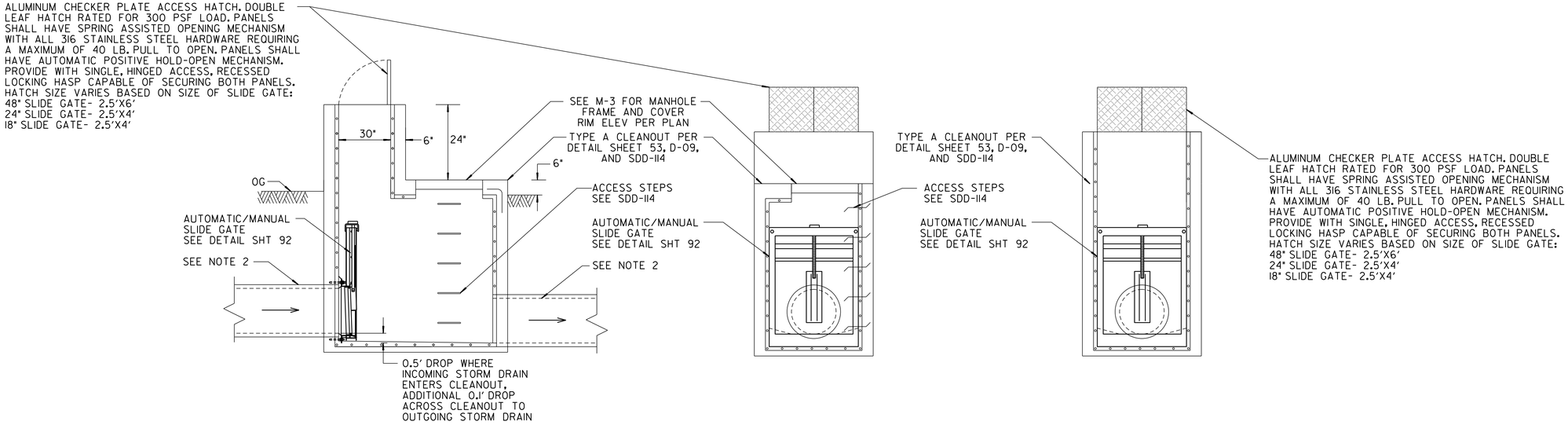
SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GIBBS — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

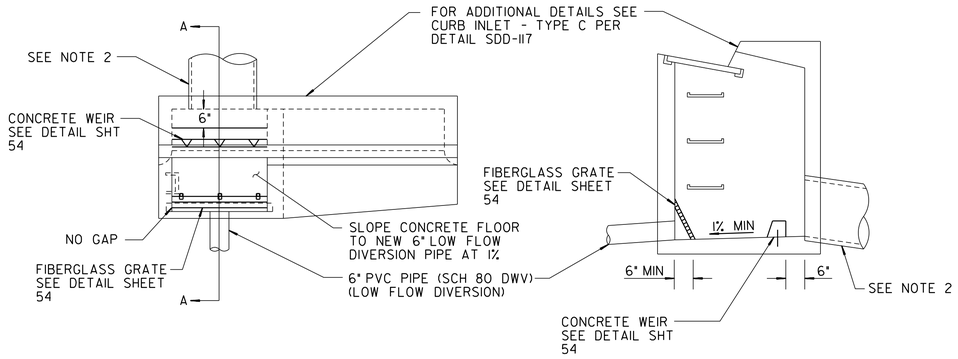
SEE EACH SHEET — CCS27 COORDINATE
SEE EACH SHEET — CCS83 COORDINATE
41306-54-D

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE



MODIFIED STORM DRAIN CLEANOUT - TYPE A WITH SLIDE GATE

NOT TO SCALE



MODIFIED CURB INLET - TYPE C WITH DIVERSION WEIR

NOT TO SCALE

NOTES:

1. TOP ELEVATION OF WEIR TO BE 6" ABOVE INVERT OF NEW 6" PVC DIVERSION PIPE
2. STORM DRAIN SIZE AND LOCATION VARIES. SEE CORRESPONDING PLAN AND PROFILE SHEETS.

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DETAILS 4

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

DETAILS 4

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 55 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

REGISTERED PROFESSIONAL ENGINEER — KEITH A. GRAY — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

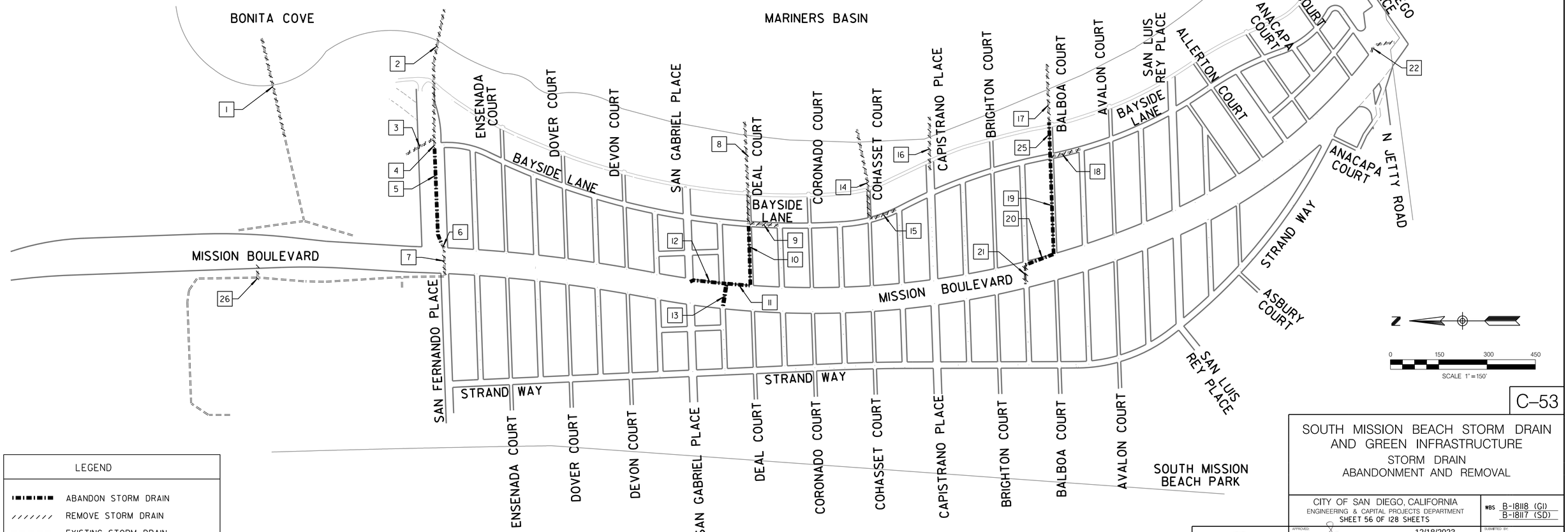
SEE EACH SHEET, CCS27 COORDINATE
SEE EACH SHEET, CCSB3 COORDINATE
41306-55-D

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

STORM DRAIN ABANDONMENT AND REMOVAL

STORM DRAIN RETIREMENT					
NO	LOCATION	SIZE OF PIPE (IN)	MATERIAL	REMOVAL LENGTH (FT)	ABANDONMENT LENGTH (FT)
1	BONITA COVE	24"	RCP	314.1	
2	SAN FERNANDO PLACE (MISSION BAY TO BAYSIDE LANE)	15"	RCP	406.3	
3	SAN FERNANDO PLACE (AT BAYSIDE LANE)	6"	PVC	97.6	
4	SAN FERNANDO PLACE (BAYSIDE LANE TO MISSION BLVD)	12"	RCP	27.1	
5	SAN FERNANDO PLACE (BAYSIDE LANE TO MISSION BLVD)	12"	RCP		297.4
6	SAN FERNANDO PLACE (BAYSIDE LANE TO MISSION BLVD)	12"	RCP	19.6	
7	SAN FERNANDO PLACE (AT MISSION BLVD)	12"	RCP	84.0	
8	DEAL COURT (MISSION BEACH TO BAYSIDE LANE)	12"	RCP	316.7	
9	BAYSIDE LANE (ALLEY TO DEAL COURT)	12"	RCP	92.6	
10	DEAL COURT (BAYSIDE LANE TO MISSION BLVD)	12"	RCP		190.0
11	MISSION BLVD (DEAL CT TO ALLEY)	12"	RCP		68.8
12	MISSION BLVD (ALLEY TO SAN GABRIEL PL)	12"	RCP		119.7
13	MISSION BLVD (AT ALLEY)	DUAL 8"	RCP		118.2
14	COHASSET COURT (MISSION BEACH TO BAYSIDE LANE)	15"	RCP	278.5	

STORM DRAIN RETIREMENT (CONTINUED)					
NO	LOCATION	SIZE OF PIPE (IN)	MATERIAL	REMOVAL LENGTH (FT)	ABANDONMENT LENGTH (FT)
15	BAYSIDE LANE (ALLEY TO COHASSET COURT)	6"	RCP	90.7	
16	CAPISTRANO PLACE (MISSION BEACH TO BAYSIDE LANE)	12"	RCP	169.5	
17	BALBOA COURT (MISSION BEACH TO BAYSIDE LANE)	15"	RCP	181.3	
18	BAYSIDE LANE (ALLEY TO BALBOA COURT)	6"	PVC	93.3	
19	BALBOA COURT (BAYSIDE LANE TO MISSION BLVD)	12"	RCP		300.0
20	MISSION BLVD (BALBOA COURT TO ALLEY)	12"	RCP		92.8
21	MISSION BLVD (AT BRIGHTON COURT)	DUAL 8"	RCP	118.6	
22	SAN DIEGO PLACE	6"	PVC	84.9	
23	SAN DIEGO PLACE	18"	RCP		75.4
24	SAN DIEGO PLACE	18"	RCP	27.4	
25	BALBOA COURT	18"	RCP		108.3
26	MISSION BOULEVARD	DUAL 3"	PVC	59.4	
	TOTAL STORM DRAIN TO BE REMOVED			2,461.6	
	TOTAL STORM DRAIN TO BE ABANDONED				1370.6



LEGEND	
	ABANDON STORM DRAIN
	REMOVE STORM DRAIN
	EXISTING STORM DRAIN
NO	ABANDON STORM DRAIN NO's

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SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
STORM DRAIN
ABANDONMENT AND REMOVAL

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 56 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
ELHAM LOTFI PRINT DCE NAME — C91224 RCE#

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

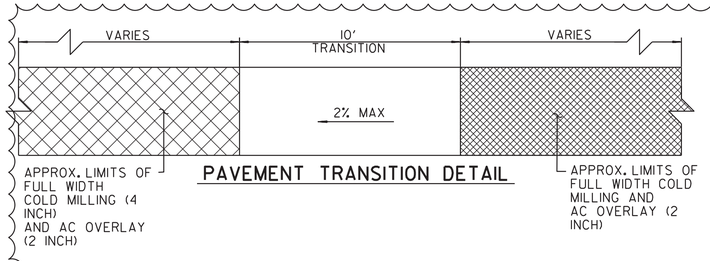
41306-56-D

STREET RESURFACING PLAN

PAVING SCHEDULE NOTES

NO.	SAP ID	COUNCIL DISTRICT	STREET NAME	CROSS STREET 1	CROSS STREET 2	OCI	PAVEMENT LENGTH (FT)	PAVEMENT WIDTH (FT)	STREET CLASSIFICATION	PAVEMENT CLASSIFICATION	ADDITIONAL RESURFACING OUTSIDE OF INFLUENCE AREA
1	SS-024059-PVI	2	SAN FERNANDO PL	BAYSIDE LANE	BAYSIDE WALK	39.10	250	VARIES	RESIDENTIAL	AC IMPROVED	7,273
2	SS-024059-PVI	2	SAN FERNANDO PL	BAYSIDE LANE	BAYSIDE WALK	39.10	150	30	RESIDENTIAL	PCC CONCRETE	1,733
3	SS-009421-PVI	2	DEVON COURT	BAYSIDE LANE	BAYSIDE WALK	-	45	6	COLLECTOR	PCC CONCRETE	0
4	SS-018547-PVI TO SS-018489-PVI	2	MISSION BOULEVARD	SAN FERNANDO PL	ASPIN COURT	60.49 TO 100.00	3,020	29	COLLECTOR	AC IMPROVED	50,974
5	SS-018547-PVI TO SS-018549-PVI	2	MISSION BOULEVARD	SAN FERNANDO PL	ALLEY	65.75 TO 97.20	500	29	COLLECTOR	AC IMPROVED	11,960
6	SS-018549-PVI TO SS-018552-PVI	2	MISSION BOULEVARD	ALLEY	ALLEY	64.21 TO 65.75	580	29	COLLECTOR	AC IMPROVED	15,236
7	SS-018552-PVI TO SS-018554-PVI	2	MISSION BOULEVARD	ALLEY	ALLEY	65.44 TO 65.60	370	29	COLLECTOR	AC IMPROVED	9,565
8	SS-018555-PVI TO SS-018560-PVI	2	MISSION BOULEVARD	ALLEY	STRAND WAY	63.91 TO 100.00	82	29	COLLECTOR	AC IMPROVED	35,380
9	SS-018489-PVI TO SS-018490-PVI	2	MISSION BOULEVARD	STRAND WAY	SAN DIEGO PL	58.46 TO 64.00	VARIES	VARIES	COLLECTOR	AC IMPROVED	12,608
10	SS-024071-PVI	2	MISSION BOULEVARD	BAYSIDE WALK	BAYSIDE LANE	62.00	82	23	COLLECTOR	PCC CONCRETE	787
11-42	VARIES	2	MISSION BOULEVARD	VARIOUS LOCATION	SEE DETAILS ON SHT 62-73	-	VARIES	VARIES	COLLECTOR	CROSS GUTTER	2,460
43	SS-002859-PVI	2	ASBURY COURT	MISSION BLVD	BAYSIDE LANE (SEE DETAIL SHT 61)	58.61	131	10	RESIDENTIAL	PCC CONCRETE	12
44	SS-008829-PVI	2	DEAL COURT	BAYSIDE LANE	BAYSIDE WALK	-	79	10	RESIDENTIAL	PCC CONCRETE	0
45	SS-007491-PVI	2	COHASSET COURT	BAYSIDE LANE	BAYSIDE WALK	-	83	10	RESIDENTIAL	PCC CONCRETE	0
46	SS-006218-PVI	2	CAPISTRANO PL	BAYSIDE LANE	BAYSIDE WALK	42.48	85	24	RESIDENTIAL	PCC CONCRETE	593
47	SS-003422-PVI	2	BALBOA COURT	BAYSIDE LANE	BAYSIDE WALK	-	83	10	RESIDENTIAL	PCC CONCRETE	0
48	SS-024108-PVI	2	SAN LUIS REY PL	BAYSIDE LANE	BAYSIDE WALK	25.00	90	24	RESIDENTIAL	PCC CONCRETE	837

TOTAL AREA OF ADDITIONAL FULL WIDTH COLD MILLING AND AC OVERLAY (2 INCH)	70,497 SF
TOTAL AREA OF ADDITIONAL FULL WIDTH COLD MILLING (4 INCH) AND AC OVERLAY (2 INCH)	72,499 SF
TOTAL AREA OF ADDITIONAL CONCRETE PAVEMENT	3,962 SF
TOTAL AREA OF CROSS GUTTER/ALLEY APRON	4,040 SF



PAVEMENT TRANSITION DETAIL

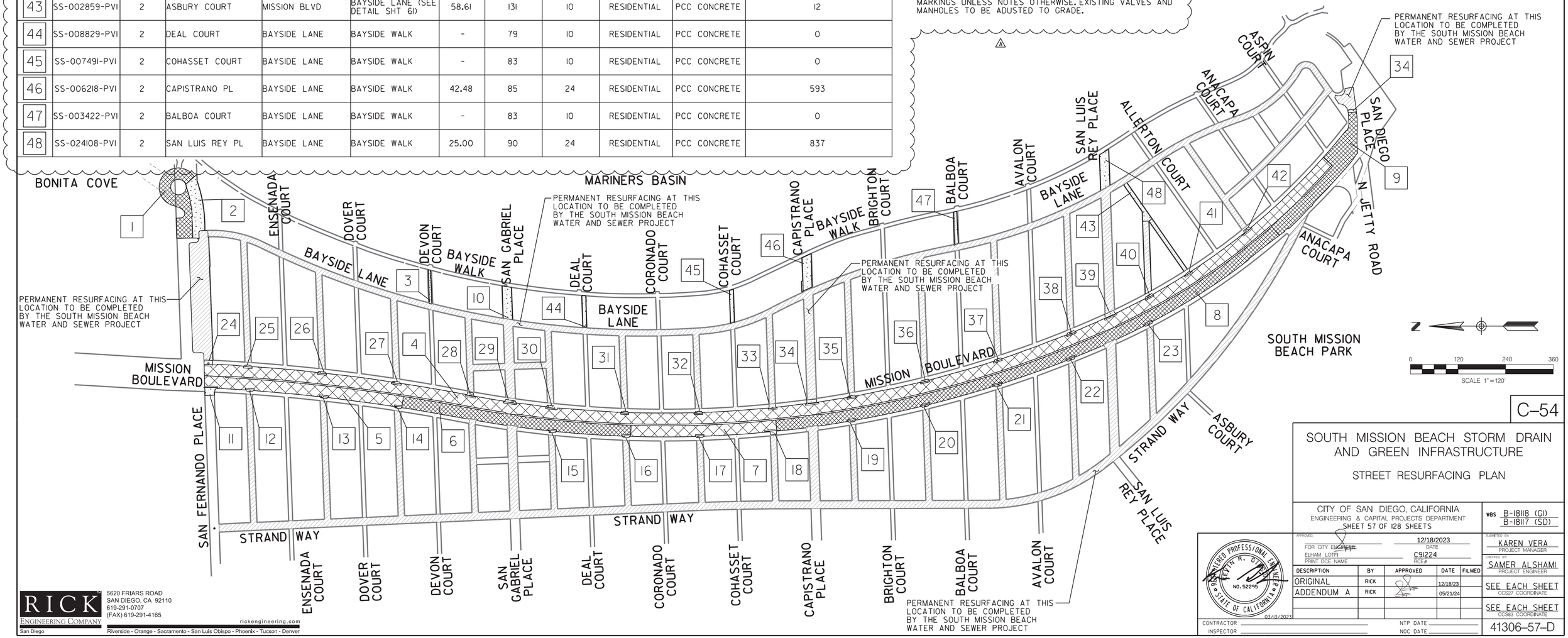
NOTE:

1. PAYMENT FOR PIPELINE INCLUDES PAVEMENT RESTORATION OF THE EXCAVATION AREA, INFLUENCE AREA, BIKE LANE, AND THE AREA THROUGH THE CURB AND GUTTER PER STANDARD DRAWGS SDG-105 AND SDG-107.

2. REPLACE IN KIND ALL EXISTING STRIPING INCLUDING CURB MARKINGS UNLESS NOTES OTHERWISE. EXISTING VALVES AND MANHOLES TO BE ADUSTED TO GRADE.

LEGEND

- APPROX. LIMITS OF FULL WIDTH COLD MILLING AND AC OVERLAY (2 INCH)
- APPROX. LIMITS OF FULL WIDTH COLD MILLING (4 INCH) AND AC OVERLAY (2 INCH)
- APPROX. LIMITS OF CONCRETE PAVEMENT REPLACEMENT
- X — LOCATION PER PAVING SCHEDULE NOTES (THIS SHEET)
- CROSS GUTTER/ ALLEY APRON
- PERMANENT RESURFACING TO BE COMPLETED BY THE SOUTH MISSION BEACH WATER AND SEWER PROJECT



N

0 120 240 360

SCALE 1" = 120'

C-54

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

STREET RESURFACING PLAN

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 57 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DCE NAME — 12/18/2023 DATE — C91224 RCE#

SUBMITTED BY: KAREN VERA PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	
ADDENDUM A	RICK		05/21/24	

SEE EACH SHEET CCS27 COORDINATE

SEE EACH SHEET CCS83 COORDINATE

41306-57-D

CONTRACTOR _____ NTP DATE _____

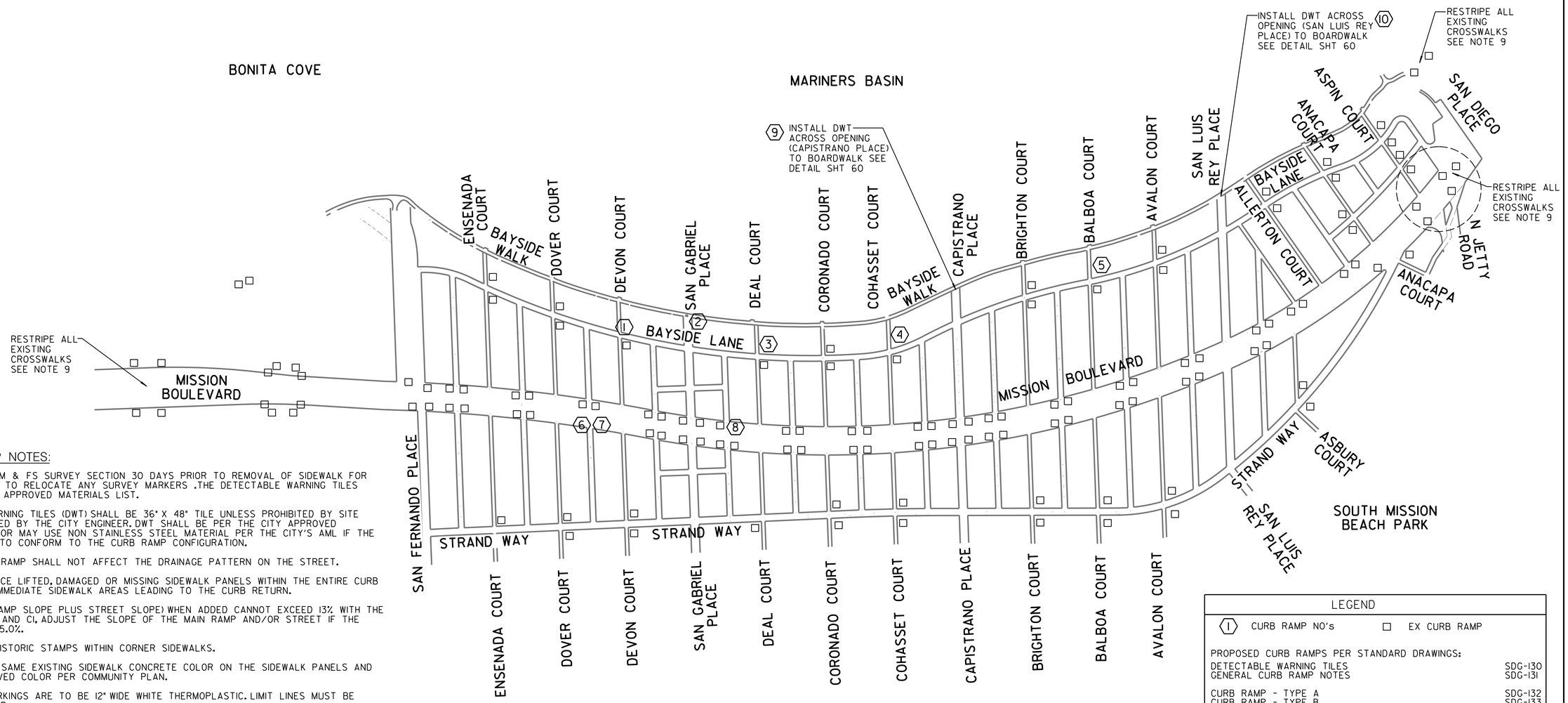
INSPECTOR _____ NOC DATE _____

REGISTERED PROFESSIONAL ENGINEER KEVIN R. GRAY NO. 52295 STATE OF CALIFORNIA — 03/13/2023

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⚠ REVISED PAVEMENT SCHEDULE TABLE, ADDED NOTES, AND REVISED RESURFACING QUANTITIES

ADDENDUM A



GENERAL CURB RAMP NOTES:

1. CONTRACTOR TO NOTIFY CM & FS SURVEY SECTION 30 DAYS PRIOR TO REMOVAL OF SIDEWALK FOR CURB RAMP CONSTRUCTION TO RELOCATE ANY SURVEY MARKERS .THE DETECTABLE WARNING TILES SHALL BE PER THE CITY'S APPROVED MATERIALS LIST.
2. DETECTABLE/ TACTILE WARNING TILES (DWT) SHALL BE 36" X 48" TILE UNLESS PROHIBITED BY SITE CONSTRAINTS AND APPROVED BY THE CITY ENGINEER. DWT SHALL BE PER THE CITY APPROVED MATERIALS LIST. CONTRACTOR MAY USE NON STAINLESS STEEL MATERIAL PER THE CITY'S AML IF THE DWT HAS TO BE TRIMMED TO CONFORM TO THE CURB RAMP CONFIGURATION.
3. THE DESIGN OF THE CURB RAMP SHALL NOT AFFECT THE DRAINAGE PATTERN ON THE STREET.
4. CONTRACTOR SHALL REPLACE LIFTED, DAMAGED OR MISSING SIDEWALK PANELS WITHIN THE ENTIRE CURB RETURN AND ALONG THE IMMEDIATE SIDEWALK AREAS LEADING TO THE CURB RETURN.
5. COUNTER SLOPES (CURB RAMP SLOPE PLUS STREET SLOPE) WHEN ADDED CANNOT EXCEED 13% WITH THE EXCEPTION OF A TYPE C2 AND C1, ADJUST THE SLOPE OF THE MAIN RAMP AND/OR STREET IF THE COUNTER SLOPE EXCEEDS 5.0%.
6. PROTECT AND KEEP ALL HISTORIC STAMPS WITHIN CORNER SIDEWALKS.
7. CONTRACTOR TO USE THE SAME EXISTING SIDEWALK CONCRETE COLOR ON THE SIDEWALK PANELS AND CURB RAMP, MATCH APPROVED COLOR PER COMMUNITY PLAN.
8. LIMIT LINES AND STOP MARKINGS ARE TO BE 12" WIDE WHITE THERMOPLASTIC. LIMIT LINES MUST BE PLACED BEFORE CURB RAMP.
9. RESTRIPE CROSSWALKS TO MEET CONTINENTAL STANDARD PER CITY STANDARD SDM-116.
10. MATCH CURB RAMP WITH EXISTING SIDEWALK COLOR AND SCORING.
11. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS ALONG GUTTER AT PCR AND AT CURB RAMP LANDING.
12. CONTRACTOR TO ENSURE PONDING SHALL NOT OCCUR AT ALL CURB RAMP AREAS.
13. INSTALL PEDESTRIAN BARRICADES PER CITY STANDARD SDG-141. THE ARROW ON THE SIGN SHALL POINT TO THE NEAREST PEDESTRIAN CROSSING.
14. PATCH AND REPAIR DAMAGES ALONG CROSS GUTTERS, ROAD SURFACES, AND ALLEY APRONS AT ALL CROSSING AREAS. REPLACE AS NECESSARY PER CURRENT STANDARDS. REPLACE ALLEY APRONS PER SDG-120 AND CROSS GUTTERS PER CITY STANDARD SDG-157.
15. ALL SIGNS SHALL HAVE A 7'-0" MINIMUM HEIGHT FROM SIDEWALK SURFACE TO BOTTOM OF SIGN. RAISE AS NEEDED.
16. COLD MILL EX AC AND RECONSTRUCT CURB, GUTTER AND STREET PAVING 5 FEET BEYOND CURB RAMP FLARE UNLESS OTHERWISE NOTED.
17. CONTRACTOR TO ENSURE THAT ALL ITEMS INCLUDING SIGN POLES, MAGAZINE RACKS, BENCHES, TRASH CANS, ETC. ARE PLACED OUTSIDE OF THE PEDESTRIAN ACCESSIBLE ROUTE AREAS.
18. RETAINING CURBS BEHIND CURB RAMPS SHALL BE A MINIMUM OF 2" HIGHER THAN THE FINISH GRADE BEHIND THE SIDEWALK.

CURB RAMP NOTES TABLE

LOCATION (NO)	RAMP TYPE	NEW	REPLACEMENT	HISTORIC STAMPS	DETECTABLE WARNING TILES • STAINLESS STEEL	DETECTABLE WARNING TILES • OTHER	CONSTRAINTS	COMMENTS / MODIFICATIONS
1	D	-	X	-	X	-	X	INSTALL TWO 6" RETAINING CURBS. PROTECT EX TREE, STREET SIGN, CHAIN FENCE AND TRANSFORMERS. SEE DETAIL SHT 60.
2	B	-	X	-	X	-	X	INSTALL CURB RAMP TO PROVIDE BOARDWALK ACCESSIBILITY. SEE DETAIL SHT 60.
3	D	-	X	-	X	-	X	INSTALL 6" WIDE RETAINING CURB ON SOUTH SIDE OF RAMP. PROTECT EX STREET SIGN, UTILITY PEDESTAL, AND PLANT MATERIAL
4	D	-	X	-	X	-	X	PROTECT EX STREET SIGN, WATER METER, PLANT MATERIAL, MASONRY WALL AND TRANSFORMER. MAINTAIN 4' WIDE CLEAR PATH OF TRAVEL
5	D	-	X	-	X	-	X	MATCH EXISTING GRADE ON NORTH SIDE. PROVIDE A FLARE ON SOUTH SIDE OF RAMP. PROTECT EX STREET SIGN AND PULL BOX
6	D	-	X	-	X	-	X	DIRECTIONAL TO SW CORNER.
7	D	-	X	-	X	-	X	DIRECTIONAL TO NW CORNER.
8	D	-	X	-	X	-	X	DIRECTIONAL TO NE CORNER. REMOVE EX INLET AND CLEANOUT. POSITION RAMP TO BE IN LINE WITH THE ACCESSIBLE PATH OF TRAVEL ALONG THE SIDEWALK.
9	-	X	-	-		X	X	SEE DETAIL SHT 60.
10	-	X	-	-		X	X	SEE DETAIL SHT 60.

• THE DETECTABLE WARNING TILES SHALL BE PER THE CITY'S APPROVED MATERIALS LIST

LEGEND

(1) CURB RAMP NO's ☐ EX CURB RAMP

PROPOSED CURB RAMPS PER STANDARD DRAWINGS:

DETECTABLE WARNING TILES	SDG-130
GENERAL CURB RAMP NOTES	SDG-131
CURB RAMP - TYPE A	SDG-132
CURB RAMP - TYPE B	SDG-133
DUAL CURB RAMPS	SDG-134
CURB RAMP - TYPE C1 AND C2	SDG-135
CURB RAMP - ADDITIONAL DETAILS	SDG-136
CURB RAMP - TYPE D	SDG-137
GENERAL CURB RAMPS	SDG-138
PEDESTRIAN ISLAND AND CUT-THROUGH DETAILS	SDG-139
PROTECTIVE RAILING AT CURB RAMPS	SDG-140
EXISTING HISTORICAL STAMP OR IMPRESSION PLACEMENT	SDG-115

NO SCALE

C-55

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

CURB RAMP LOCATION

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 58 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
ELHAM LOTFI — C91224 RCE#
PRINT DCE NAME

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GIBBONS — NO. 52295 — STATE OF CALIFORNIA — 03/31/2023

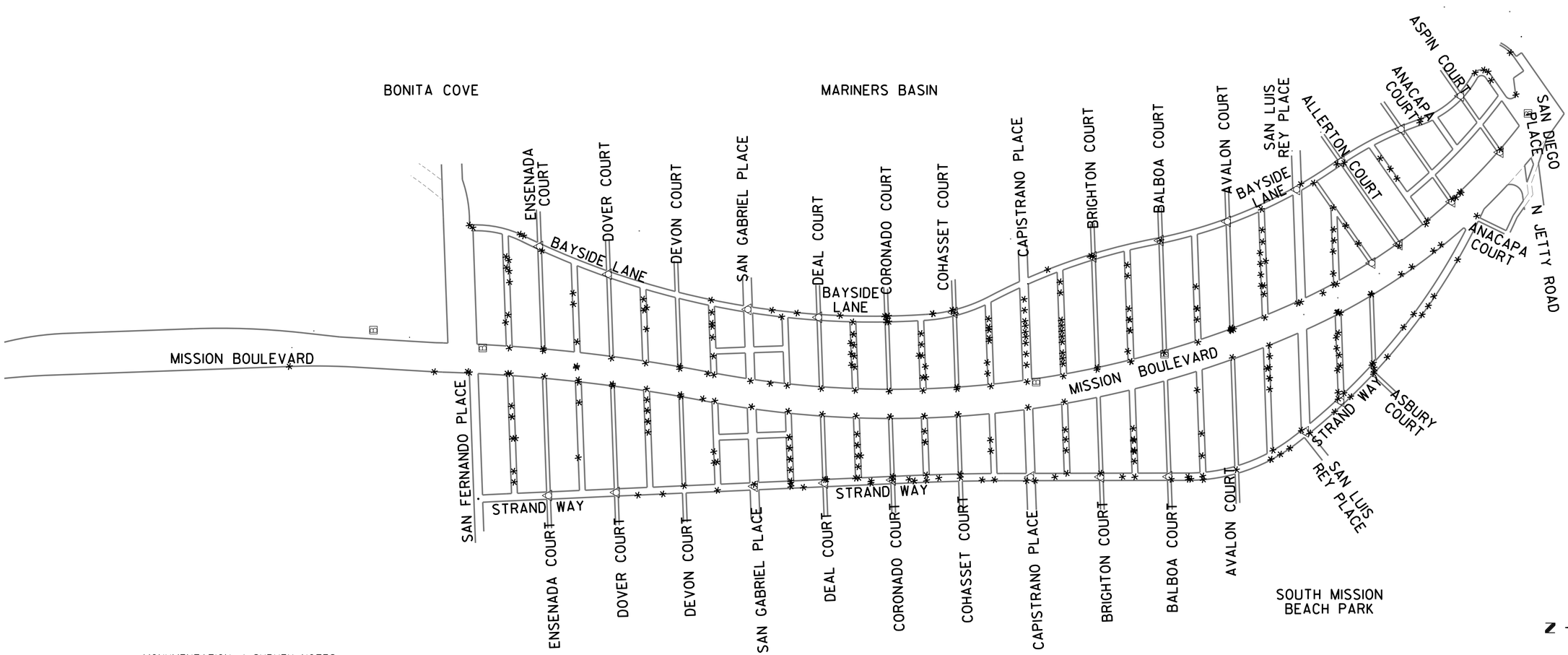
SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-58-D

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CURB RAMP LOCATION



N

0 150 300 450

SCALE 1" = 150'

MONUMENTATION / SURVEY NOTES

THIS MAP WAS CREATED FROM A PARCEL LAYER AND DOES NOT DEPICT THE ACTUAL LOCATION OF THE PROPERTY LINES. NO BOUNDARY ANALYSIS WAS PERFORMED. THE SURVEY MONUMENTS HAVE BEEN LOCATED BY SURVEY GRADE MEASUREMENTS, AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

THE CITY OF SAN DIEGO LAND SURVEYORS SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. WHEN SETTING SURVEY MONUMENTS USED FOR RE-ESTABLISHMENT OF THE DISTURBED CONTROLLING SURVEY MONUMENTS AS REQUIRED BY SECTIONS 6730.2 AND 8771OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR.

IF ANY HORIZONTAL OR VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACING ANY HORIZONTAL CONTROL AND VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION IF THE CITY OF SAN DIEGO SURVEY SECTION IS NOT NOTIFIED PRIOR TO CONSTRUCTION. THE FILING OF A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE SHALL BE FILED WITH COUNTY SURVEYOR. A COPY OF THE FILED DOCUMENT SHALL BE FURNISHED TO THE CITY OF SAN DIEGO SURVEY SECTION.

LEGEND	
*	APPROXIMATE LOCATION OF EXISTING SURVEY MONUMENT
△	APPROXIMATE LOCATION OF EXISTING M-10
B	APPROXIMATE LOCATION OF SURVEY BENCH

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SURVEY MONUMENT SHEET

C-56

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SURVEY MONUMENT SHEET

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 59 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
ELHAM LOTFI PRINT DCE NAME — C91224 RCE#

SUBMITTED BY: KAREN VERA PROJECT MANAGER
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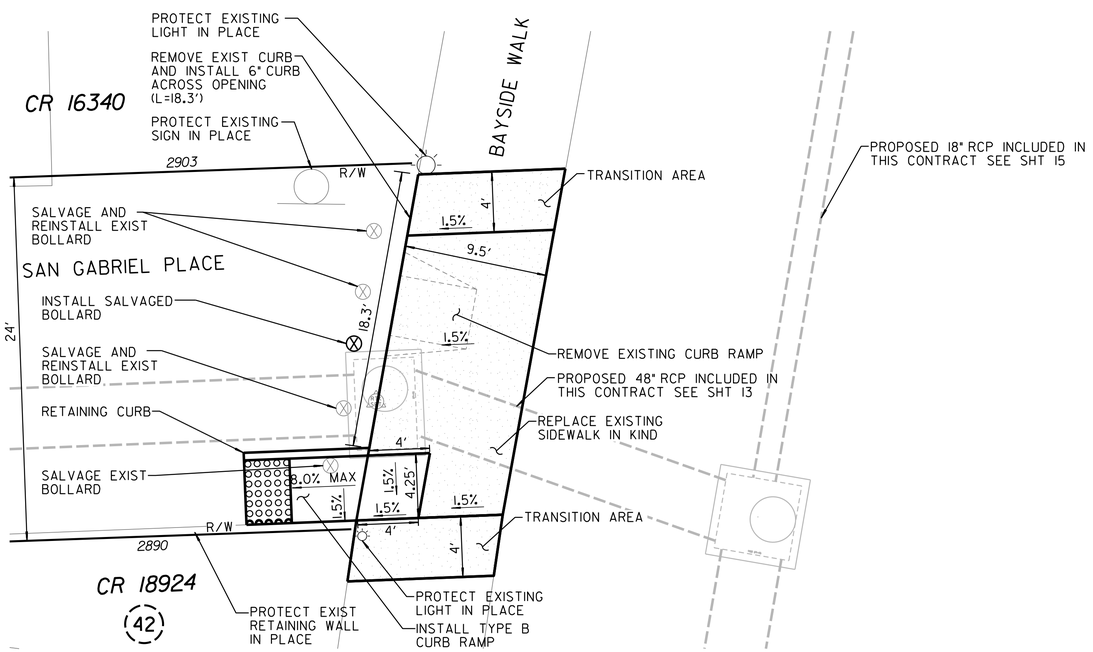
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

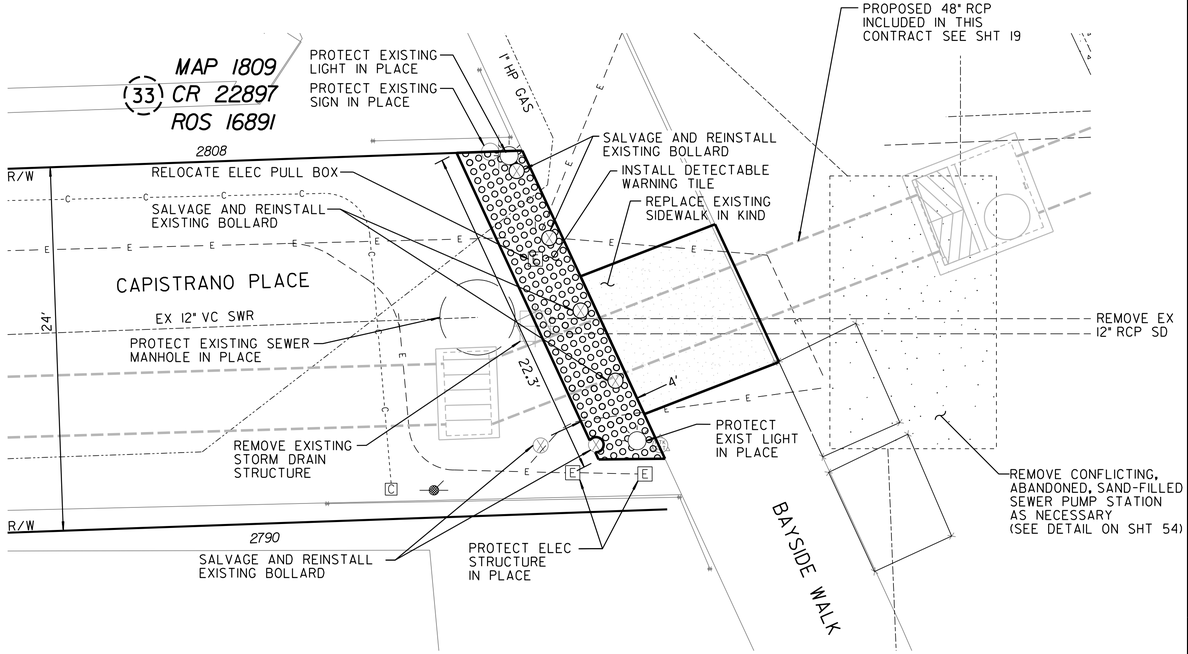
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

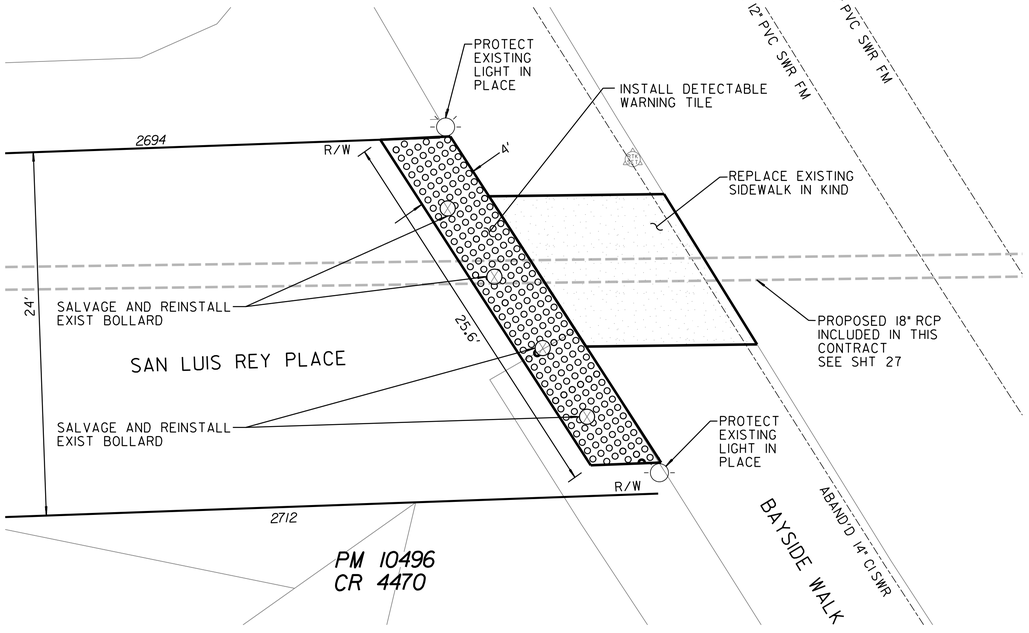
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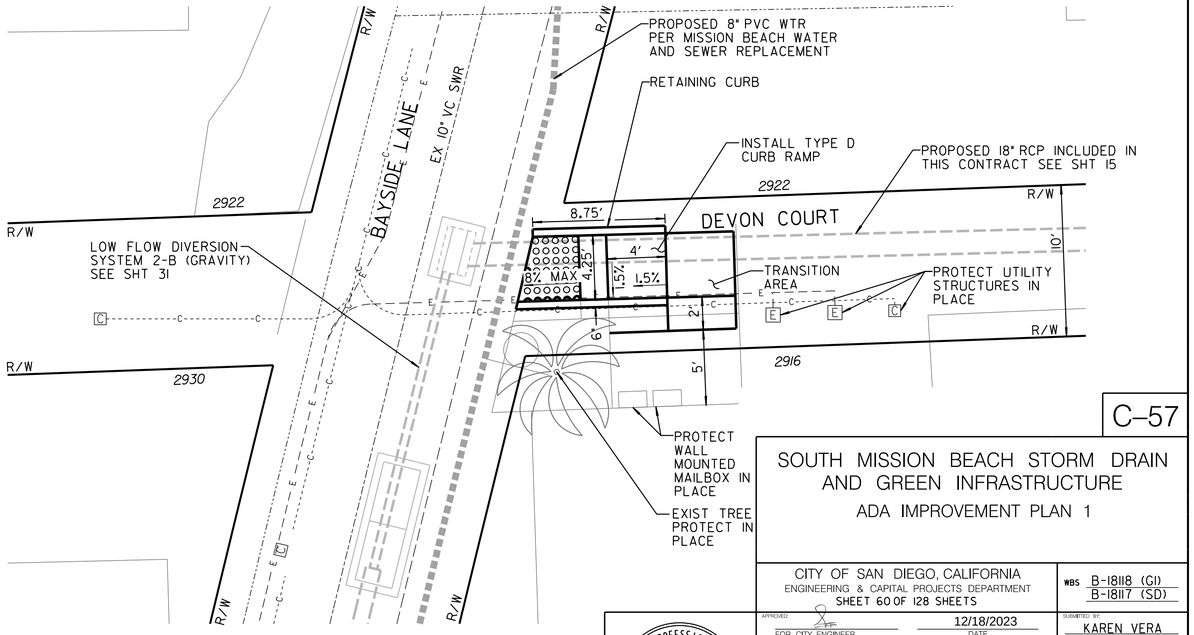
(2) SAN GABRIEL PLACE CURB RAMP DETAIL



(9) CAPISTRANO PLACE DETECTABLE WARNING TILE DETAIL



(10) SAN LUIS REY PLACE DETECTABLE WARNING TILE DETAIL



(1) DEVON COURT CURB RAMP DETAIL

SCALE 1" = 5'

C-57

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

ADA IMPROVEMENT PLAN 1

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 60 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
ELHAM LOTFI PRINT DCE NAME — C91224 RCE#

SUBMITTED BY: KAREN VERA PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

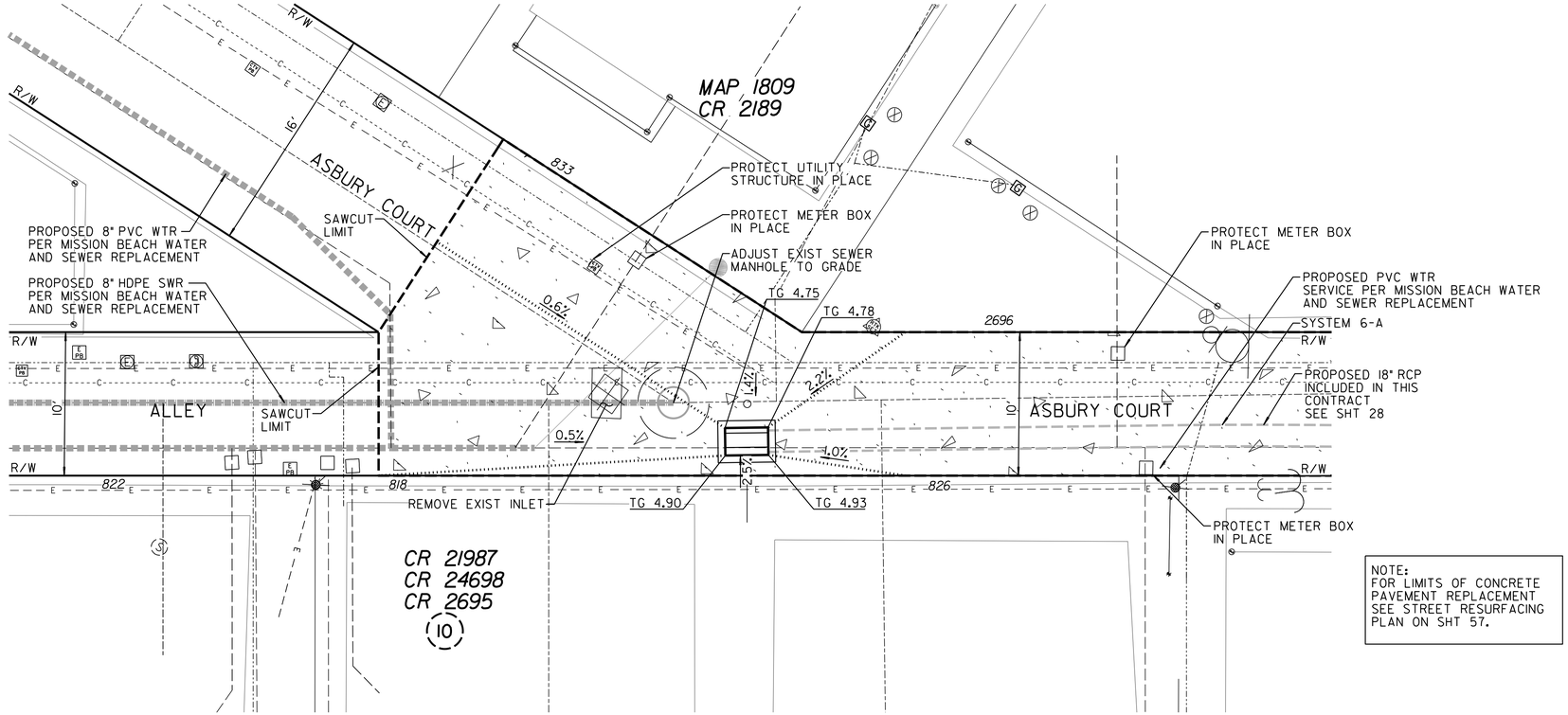
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
41306-60-D

REGISTERED PROFESSIONAL ENGINEER KEVIN R. GRAY NO. 52295 STATE OF CALIFORNIA
03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

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ADA IMPROVEMENT PLAN 1



DETAIL: ASBURY COURT 36

SURFACE IMPROVEMENTS 1

C-58

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SURFACE IMPROVEMENTS 1

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 61 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
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SUBMITTED BY: KAREN VERA PROJECT MANAGER

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DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE

1858-6249 CCS83 COORDINATE

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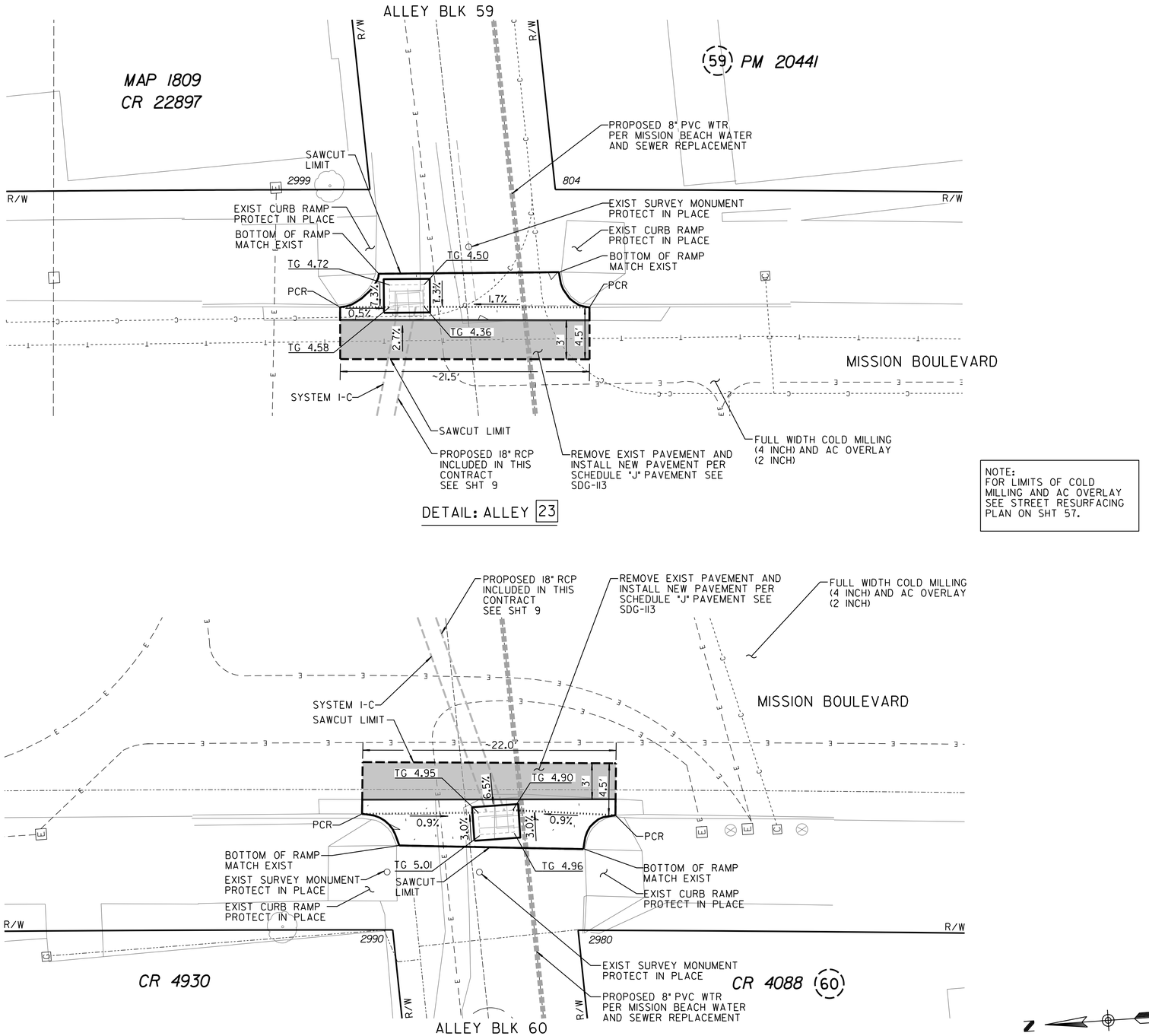
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

N

0 5 10 15
SCALE 1" = 5'

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DETAIL: ALLEY 23

DETAIL: ALLEY 12

NOTE:
FOR LIMITS OF COLD MILLING AND AC OVERLAY SEE STREET RESURFACING PLAN ON SHT 57.

0 5 10 15
SCALE 1" = 5'

SURFACE IMPROVEMENTS 2

C-59

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SURFACE IMPROVEMENTS 2

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 62 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

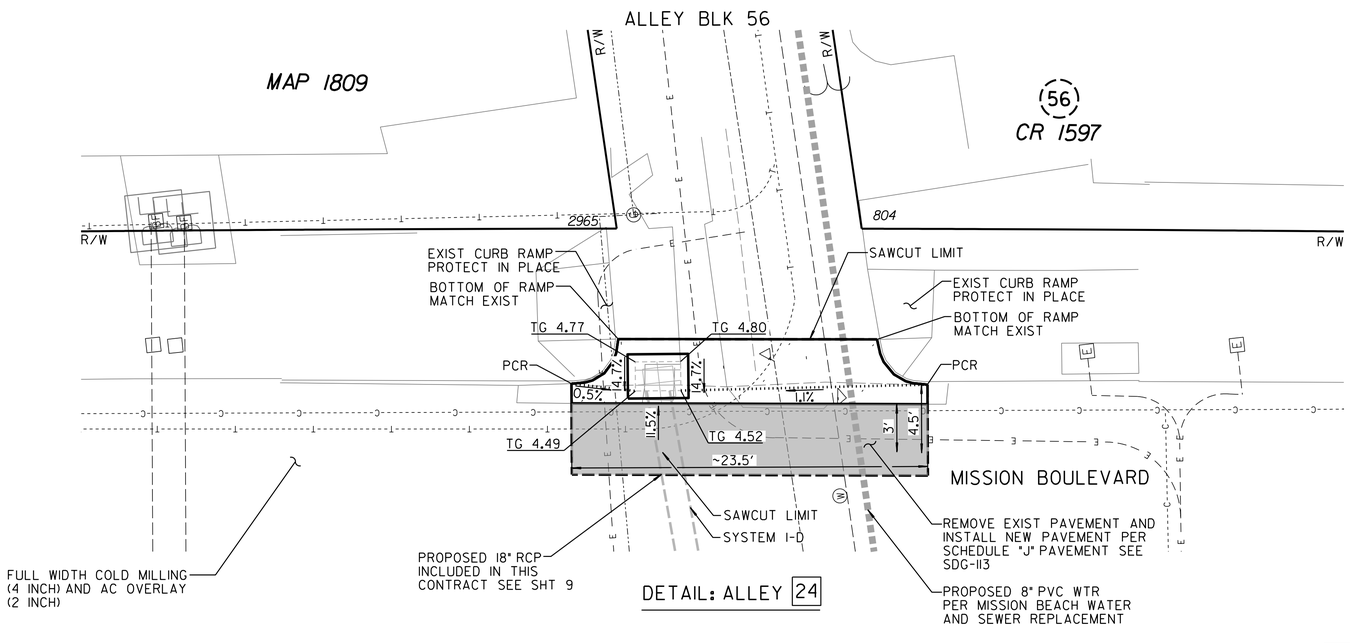
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-62-D

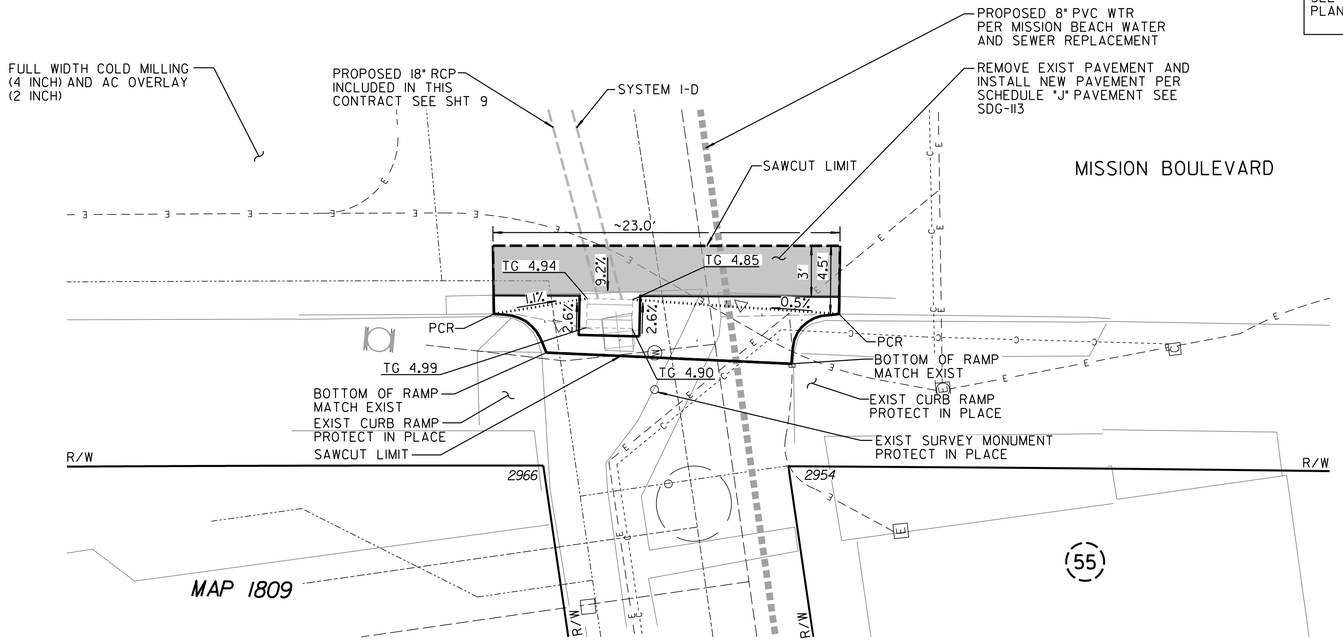
REGISTERED PROFESSIONAL ENGINEER · KEVIN R. GRAY · NO. 52295 · STATE OF CALIFORNIA · 03/13/2023

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DETAIL: ALLEY 24

NOTE:
FOR LIMITS OF COLD MILLING AND AC OVERLAY SEE STREET RESURFACING PLAN ON SHT 57.



DETAIL: ALLEY 13

0 5 10 15
SCALE 1" = 5'

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SURFACE IMPROVEMENTS 3

C-60

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SURFACE IMPROVEMENTS 3

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 63 OF 128 SHEETS

WBS B-18118 (GI)
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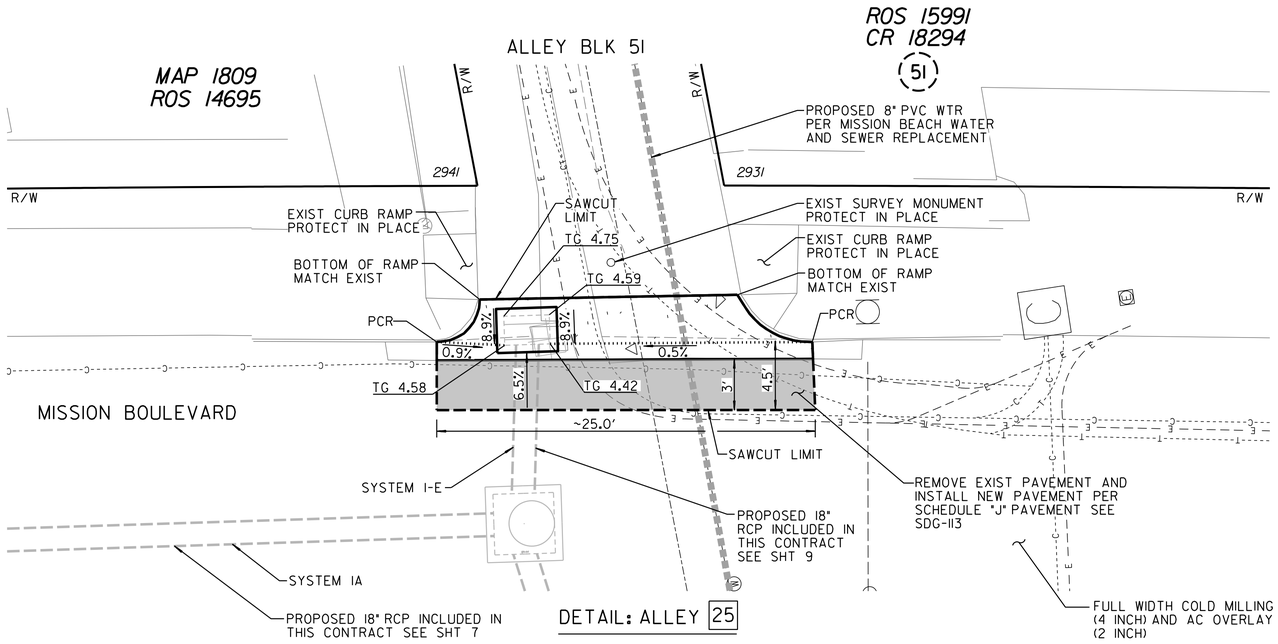
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

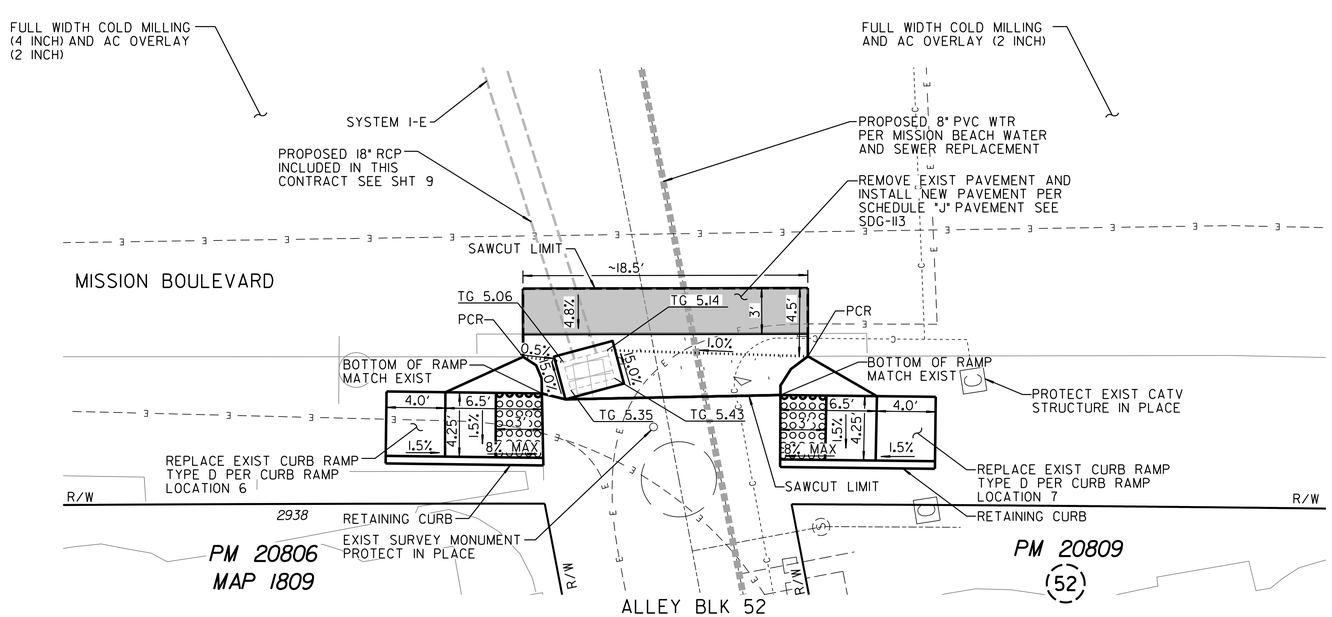
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-63-D



DETAIL: ALLEY 25

NOTE:
FOR LIMITS OF COLD MILLING AND AC OVERLAY SEE STREET RESURFACING PLAN ON SHT 57.



DETAIL: ALLEY 14

0 5 10 15
SCALE 1"=5'

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REGISTERED PROFESSIONAL ENGINEER
KEVIN R. GRAY
NO. 52295
STATE OF CALIFORNIA
03/13/2023

SURFACE IMPROVEMENTS 4

C-61

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SURFACE IMPROVEMENTS 4

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 64 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
ELHAM LOTFI PRINT DCE NAME — C91224 RCE#

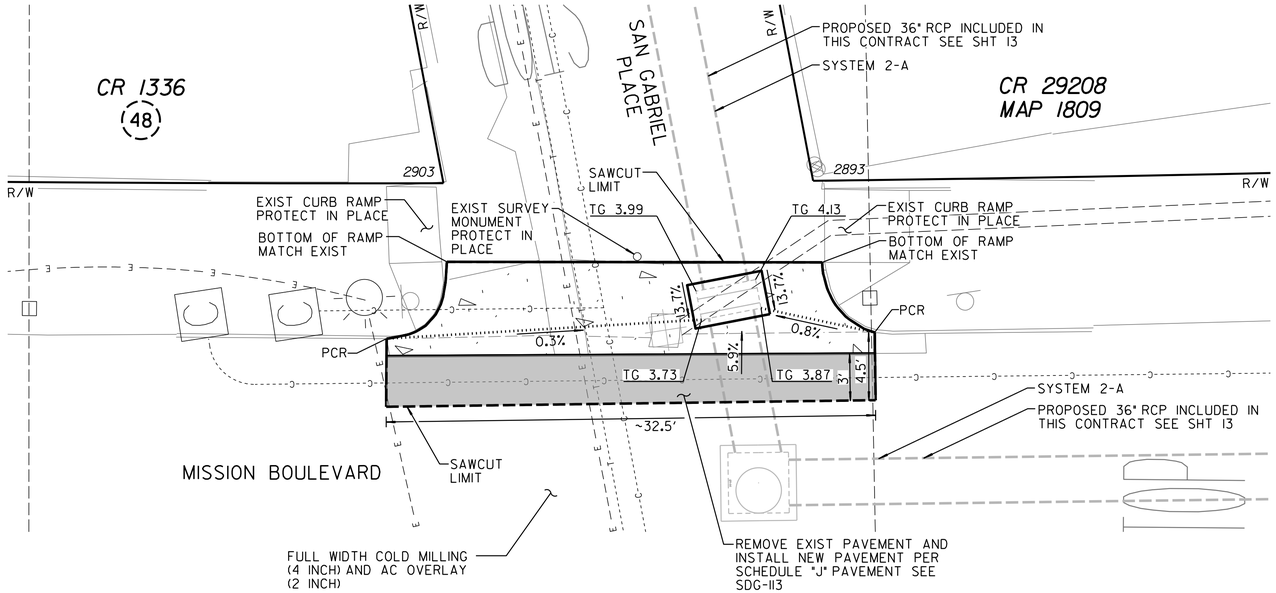
SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-64-D



NOTE:
FOR LIMITS OF COLD MILLING AND AC OVERLAY SEE STREET RESURFACING PLAN ON SHT 57.

DETAIL: ALLEY 26

SURFACE IMPROVEMENTS 5

C-62

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SURFACE IMPROVEMENTS 5

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 65 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

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ELHAM LOTFI, PRINT DOE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
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DESCRIPTION	BY	APPROVED	DATE	FILMED
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1858-6249 CCS83 COORDINATE

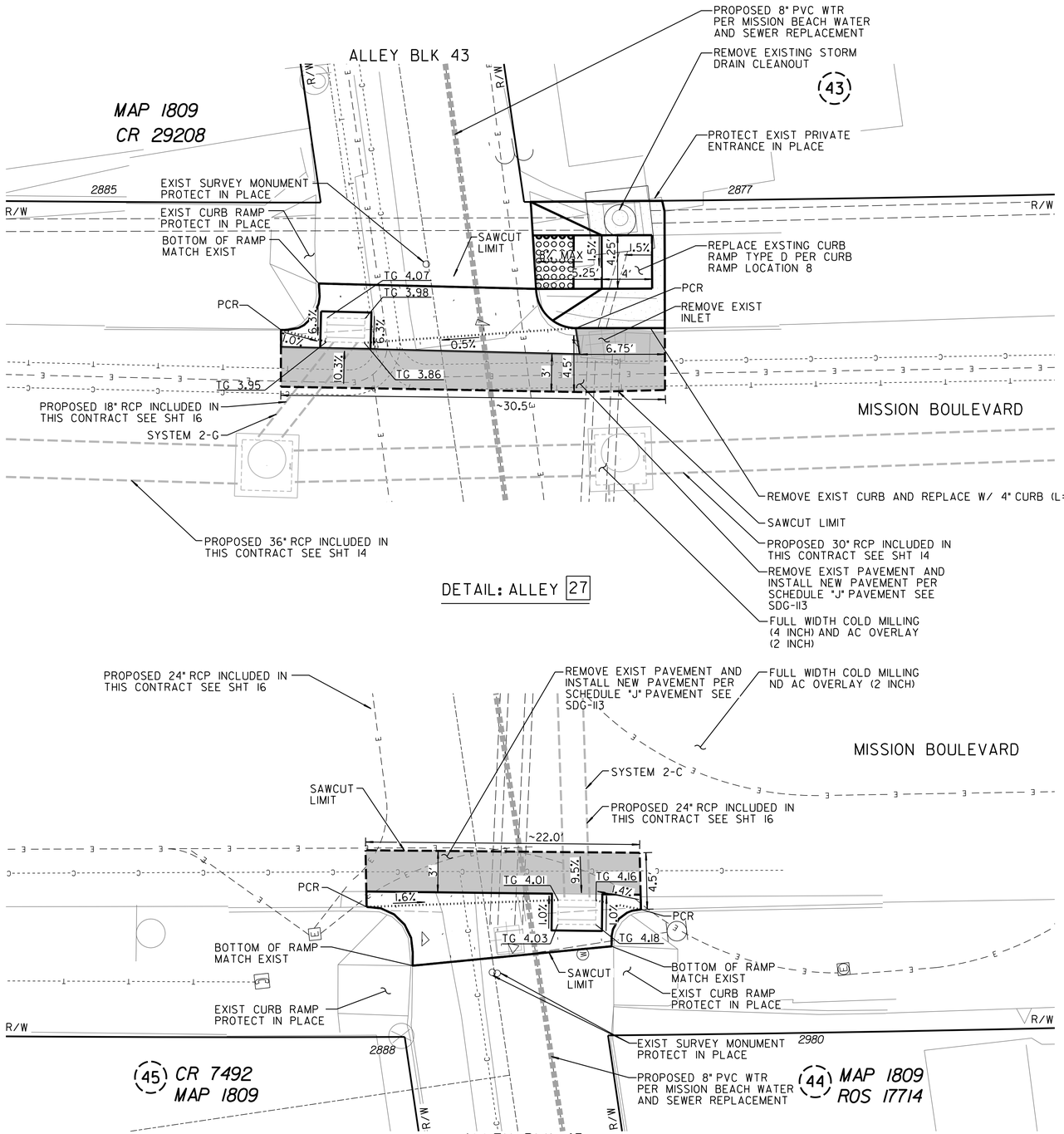
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-65-D

0 5 10 15
SCALE 1" = 5'

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DETAIL: ALLEY 27

DETAIL: ALLEY 15

NOTE:
FOR LIMITS OF COLD MILLING AND AC OVERLAY SEE STREET RESURFACING PLAN ON SHT 57.

SCALE 1"=5'

SURFACE IMPROVEMENTS 6

C-63

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SURFACE IMPROVEMENTS 6

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 66 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
ELHAM LOTFI PRINT DCE NAME — C91224 RCE#

SUBMITTED BY: KAREN VERA PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

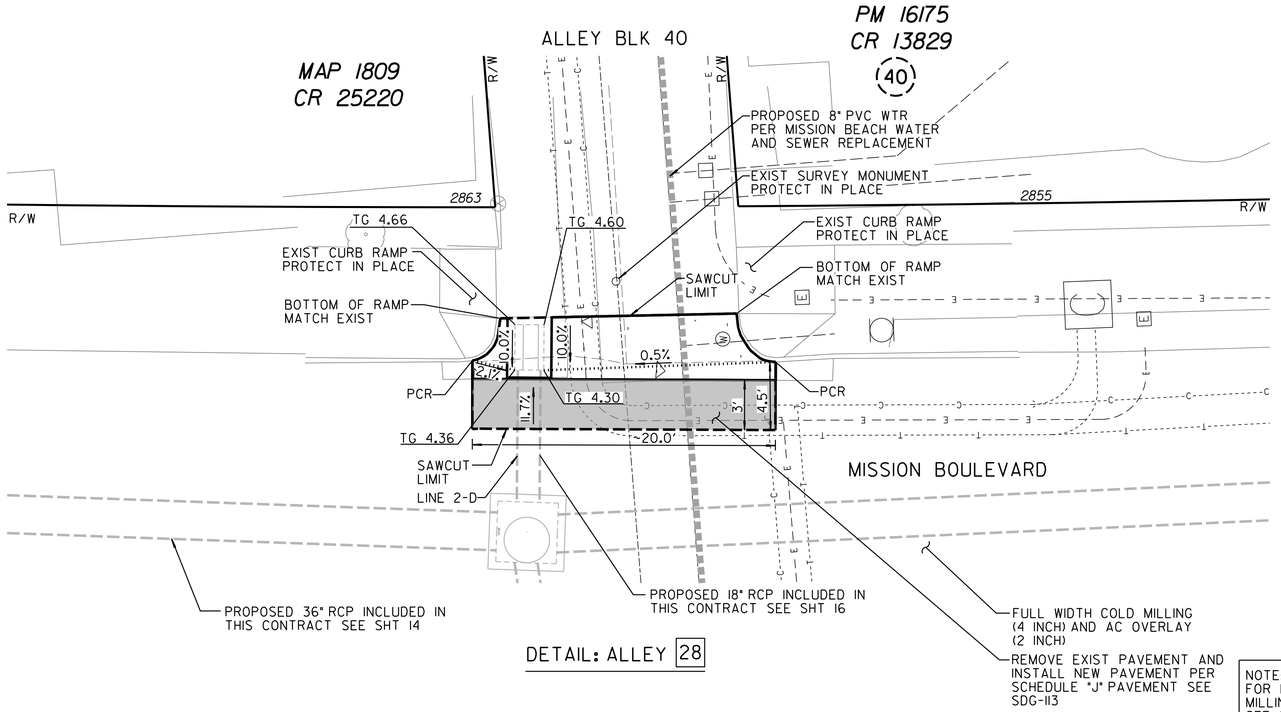
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-66-D

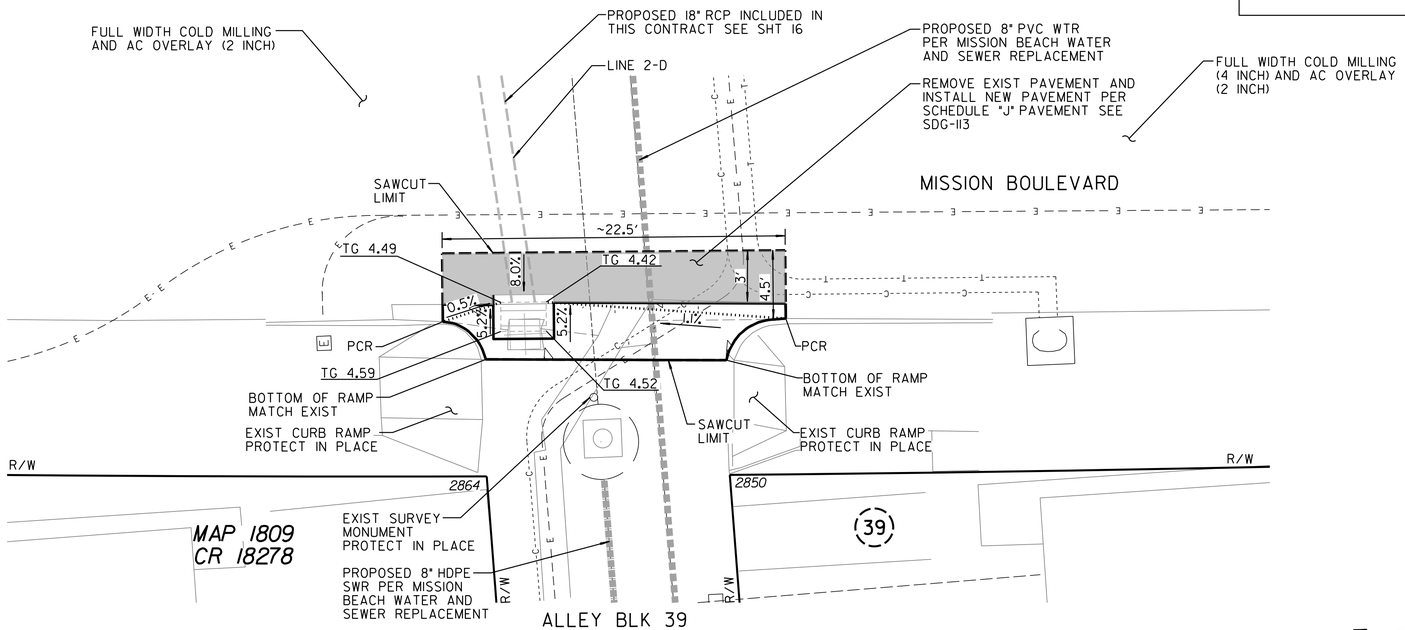
REGISTERED PROFESSIONAL ENGINEER KEVIN R. GRAY NO. 52295 STATE OF CALIFORNIA 03/13/2023

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DETAIL: ALLEY 28

NOTE:
FOR LIMITS OF COLD MILLING AND AC OVERLAY SEE STREET RESURFACING PLAN ON SHT 57.



DETAIL: ALLEY 16

0 5 10 15
SCALE 1"=5'

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SURFACE IMPROVEMENTS 7

C-64

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SURFACE IMPROVEMENTS 7

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 67 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — RCE# C91224
PRINT DCE NAME

SUBMITTED BY: KAREN VERA — PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI — PROJECT ENGINEER

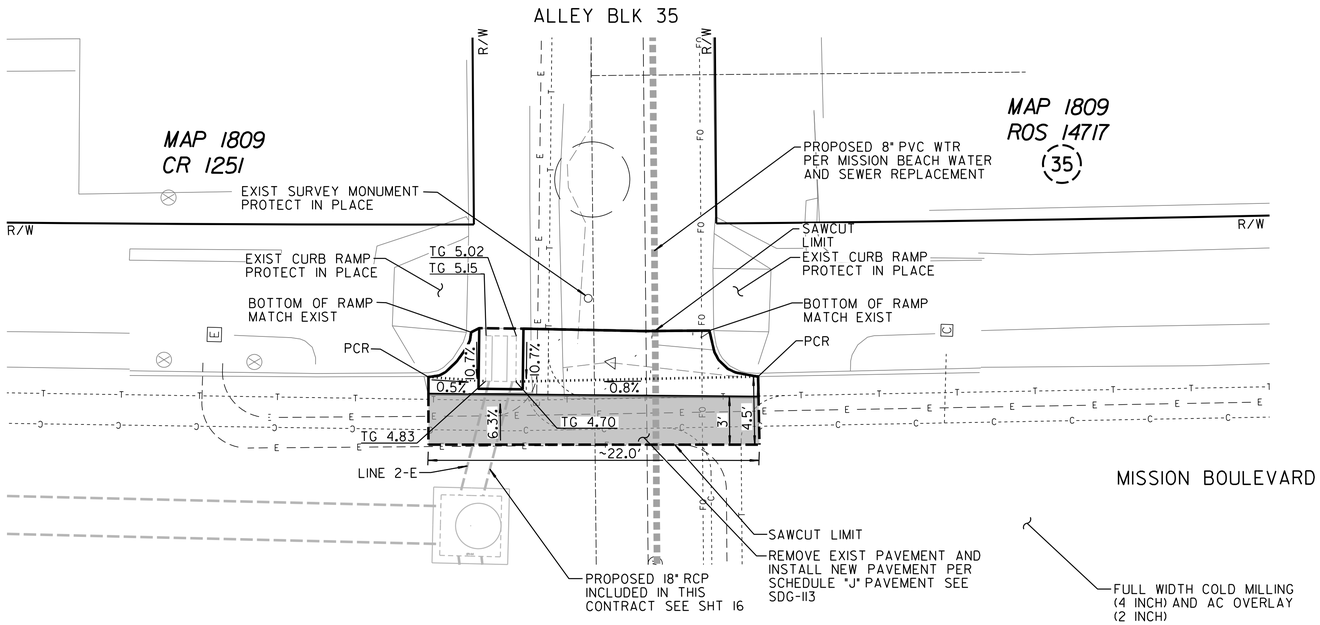
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GRAY — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

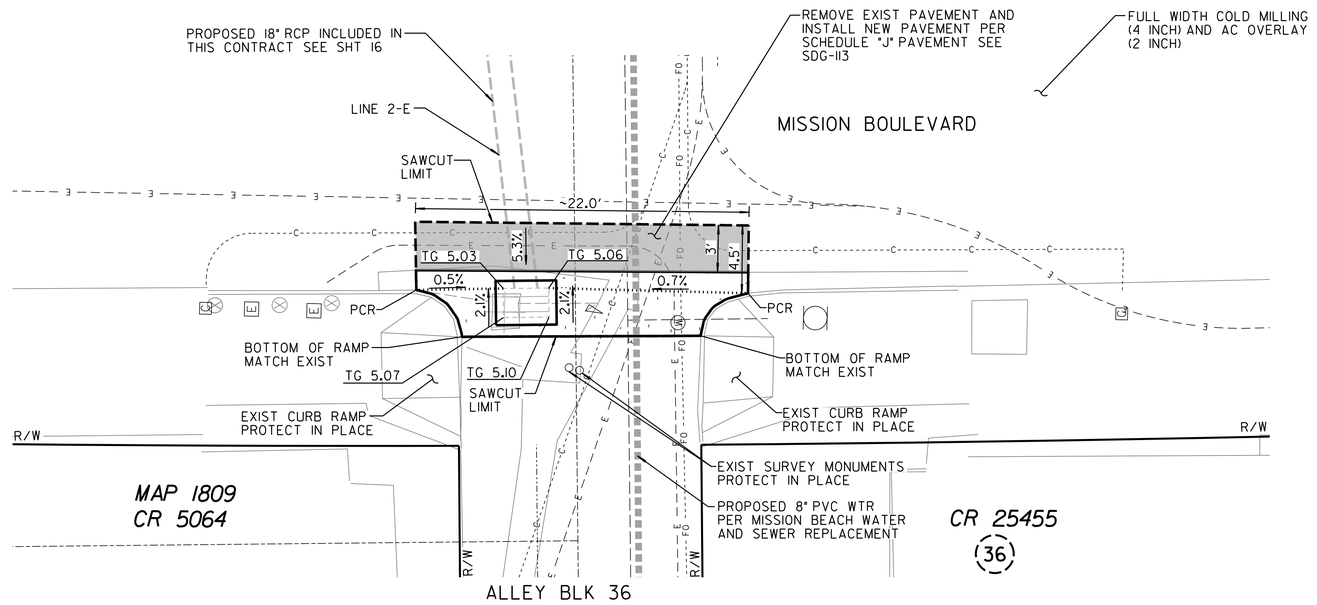
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-67-D



DETAIL: ALLEY 29

NOTE:
FOR LIMITS OF COLD MILLING AND AC OVERLAY SEE STREET RESURFACING PLAN ON SHT 57.



DETAIL: ALLEY 17

0 5 10 15
SCALE 1"=5'

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SURFACE IMPROVEMENTS 8

C-65

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
SURFACE IMPROVEMENTS 8

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 68 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — 12/18/2023 DATE
ELHAM LOTFI PRINT DOE NAME — C91224 RCE#

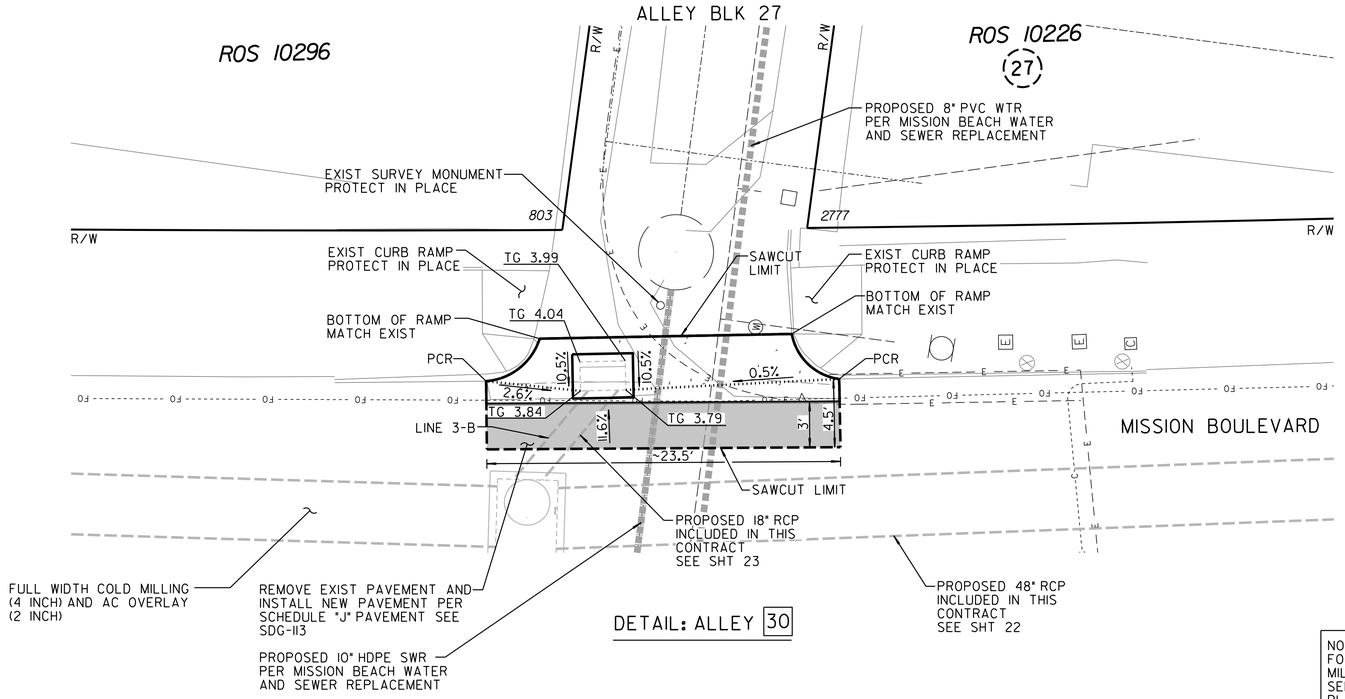
SUBMITTED BY: KAREN VERA PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCSD COORDINATE
41306-68-D

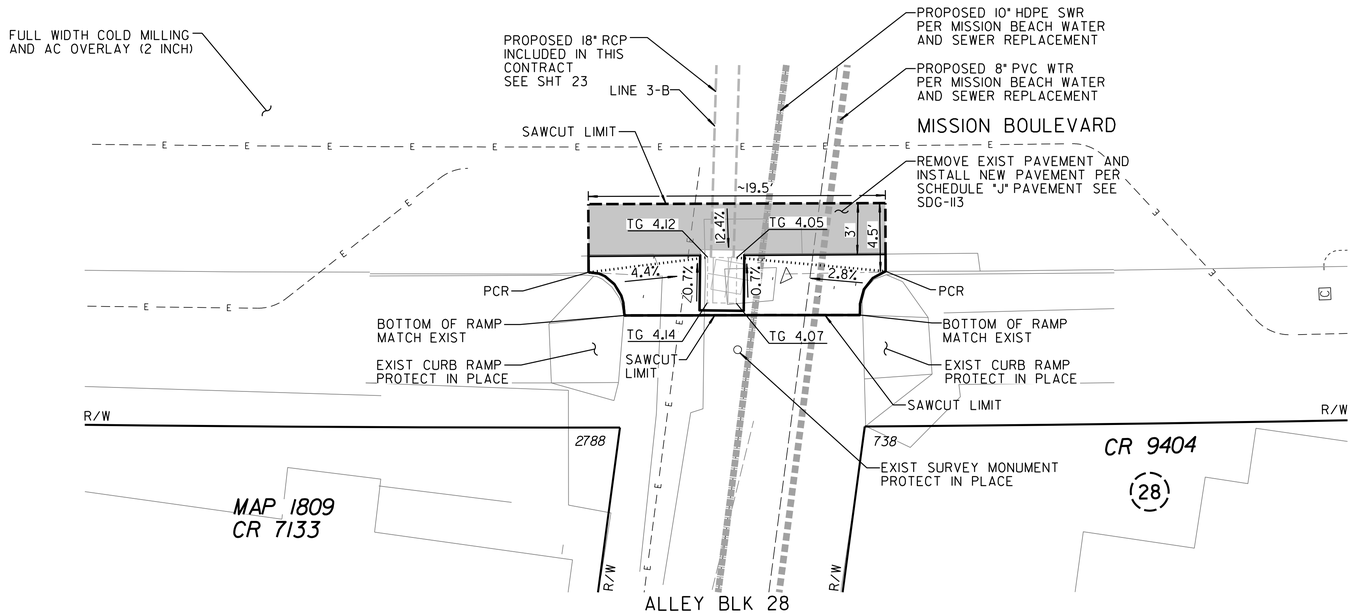
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GILL — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

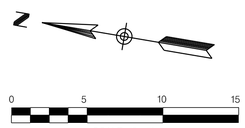


DETAIL: ALLEY 30

NOTE:
FOR LIMITS OF COLD MILLING AND AC OVERLAY SEE STREET RESURFACING PLAN ON SHT 57.



DETAIL: ALLEY 18



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REGISTERED PROFESSIONAL ENGINEER
KEVIN R. GRAY
NO. 52295
STATE OF CALIFORNIA
03/13/2023

SURFACE IMPROVEMENTS 9

C-66

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SURFACE IMPROVEMENTS 9

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 69 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — PRINT DCE NAME — RCE# C91224

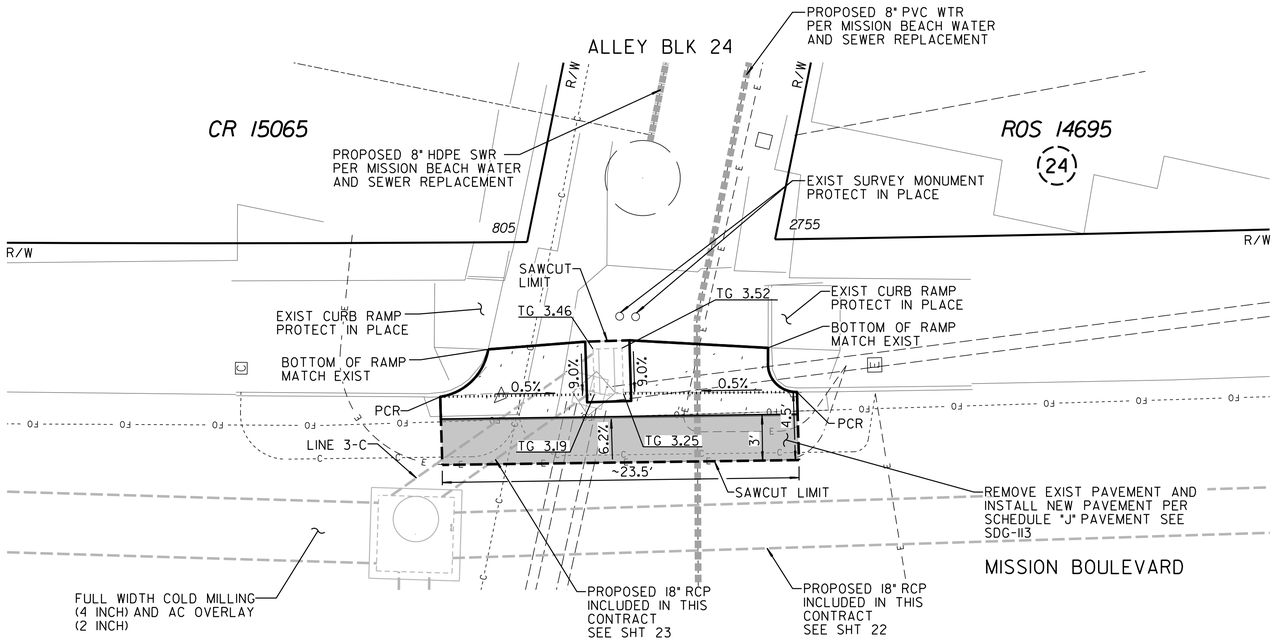
SUBMITTED BY: KAREN VERA — PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI — PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

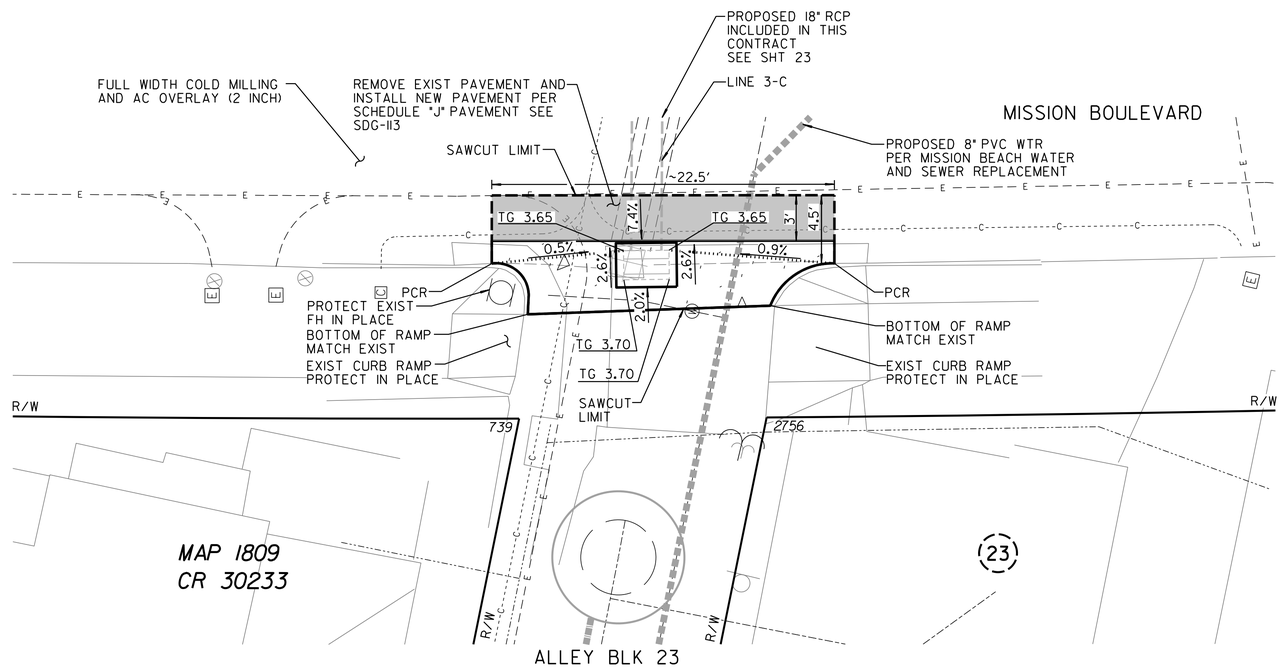
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-69-D

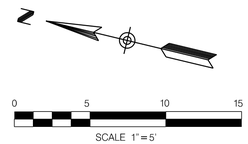


DETAIL: ALLEY 31

NOTE:
FOR LIMITS OF COLD MILLING AND AC OVERLAY SEE STREET RESURFACING PLAN ON SHT 57.



DETAIL: ALLEY 19



SURFACE IMPROVEMENTS 10

C-67

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SURFACE IMPROVEMENTS 10

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 70 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

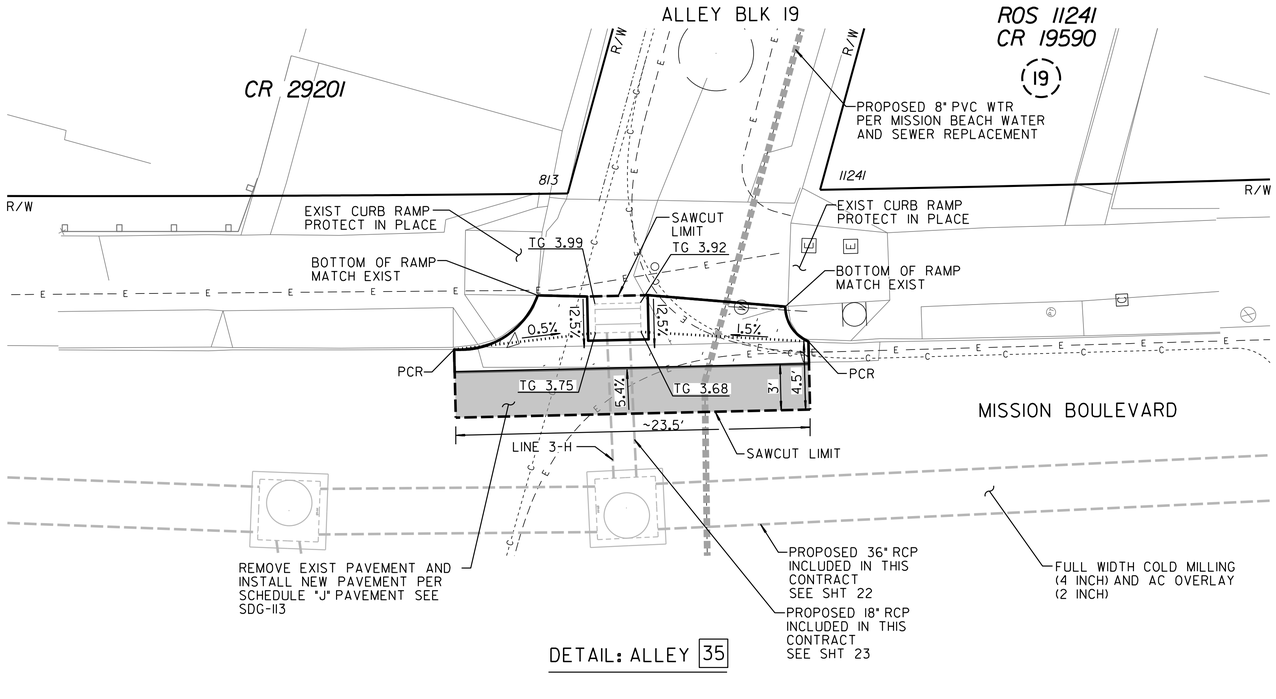
REGISTERED PROFESSIONAL ENGINEER — KEVIN R. COX — NO. 52295 — STATE OF CALIFORNIA — 03/13/2023

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

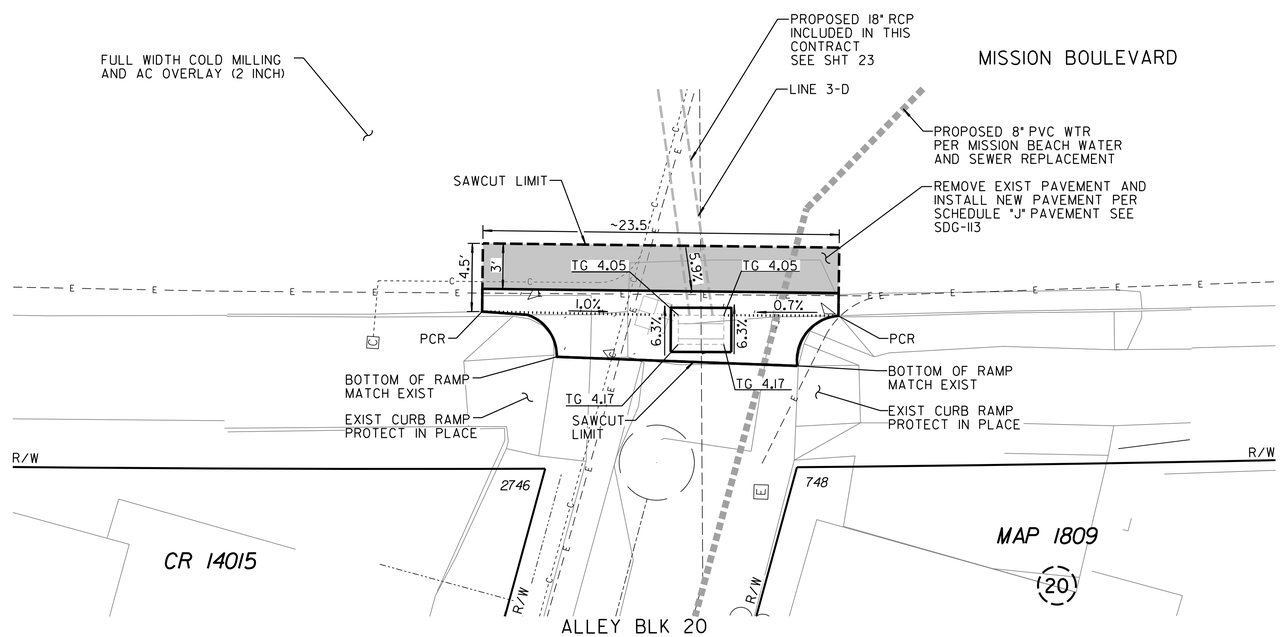
41306-70-D

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DETAIL: ALLEY 35

NOTE:
FOR LIMITS OF COLD MILLING AND AC OVERLAY SEE STREET RESURFACING PLAN ON SHT 57.



DETAIL: ALLEY 20

SCALE 1" = 5'

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SURFACE IMPROVEMENTS 11

C-68

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SURFACE IMPROVEMENTS 11

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 71 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — RCE# C91224
PRINT DCE NAME

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

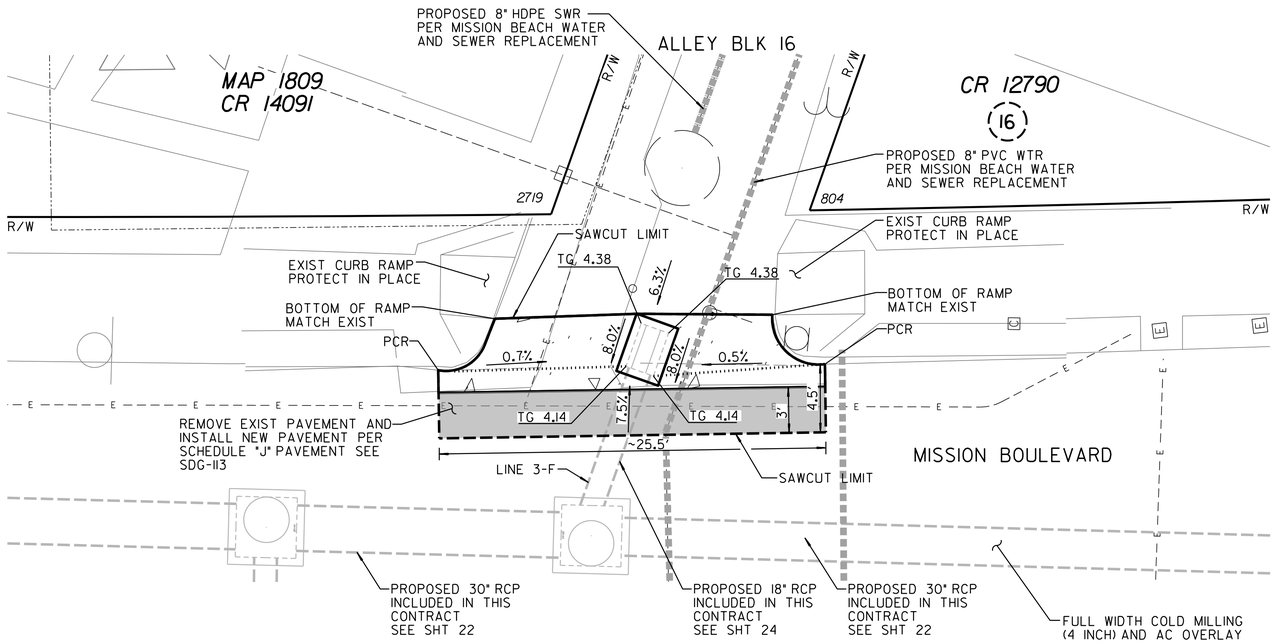
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GIBBS — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

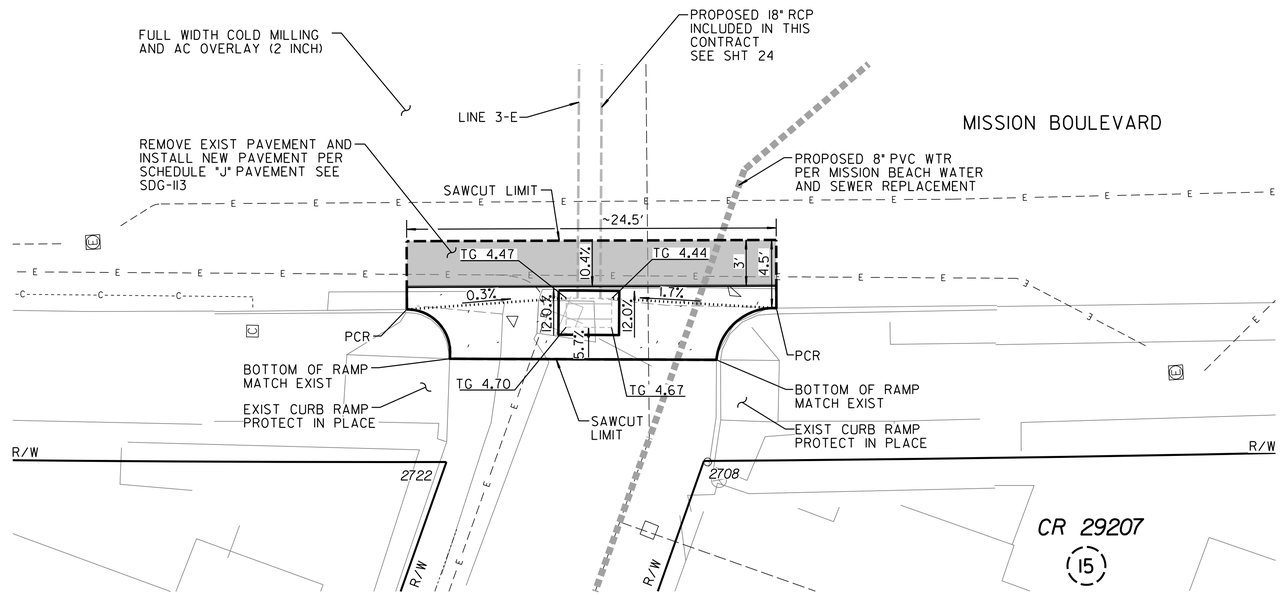
CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-71-D



DETAIL: ALLEY 32

NOTE:
FOR LIMITS OF COLD
MILLING AND AC OVERLAY
SEE STREET RESURFACING
PLAN ON SHT 57.



DETAIL: ALLEY 21

0 5 10 15
SCALE 1" = 5'

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SURFACE IMPROVEMENTS 12

C-69

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SURFACE IMPROVEMENTS 12

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 72 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI, PRINT DCE NAME — RCE# C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

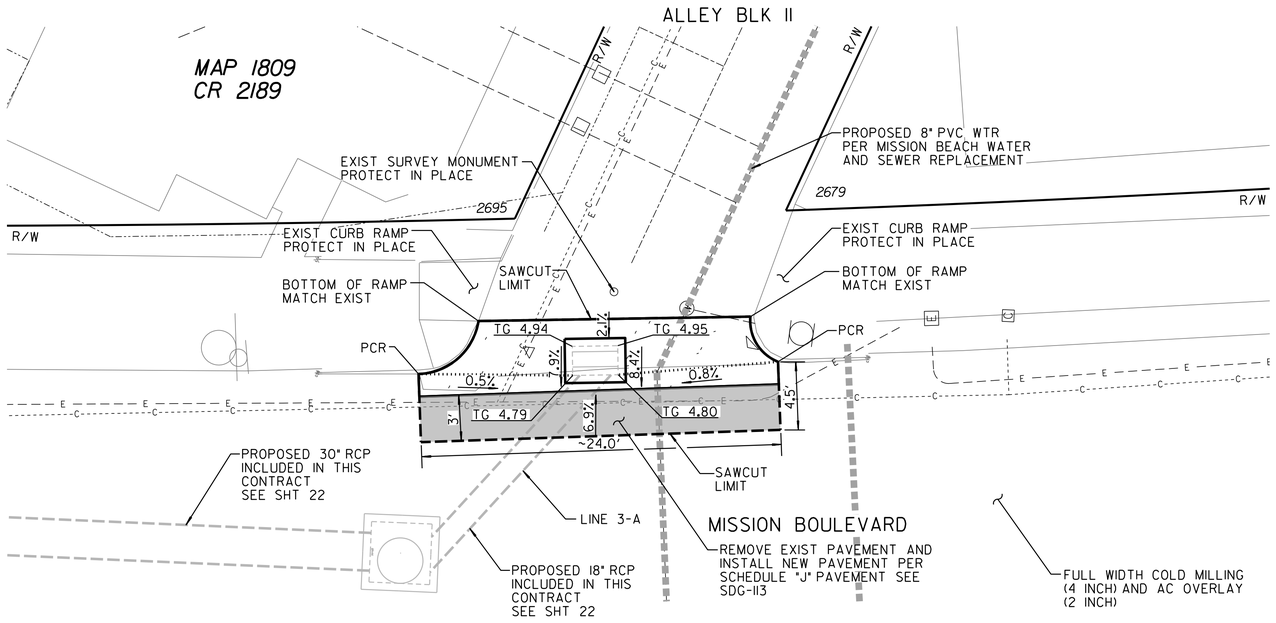
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

REGISTERED PROFESSIONAL ENGINEER — KEVIN R. GIBBS — NO. 52295 — STATE OF CALIFORNIA
03/13/2023

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

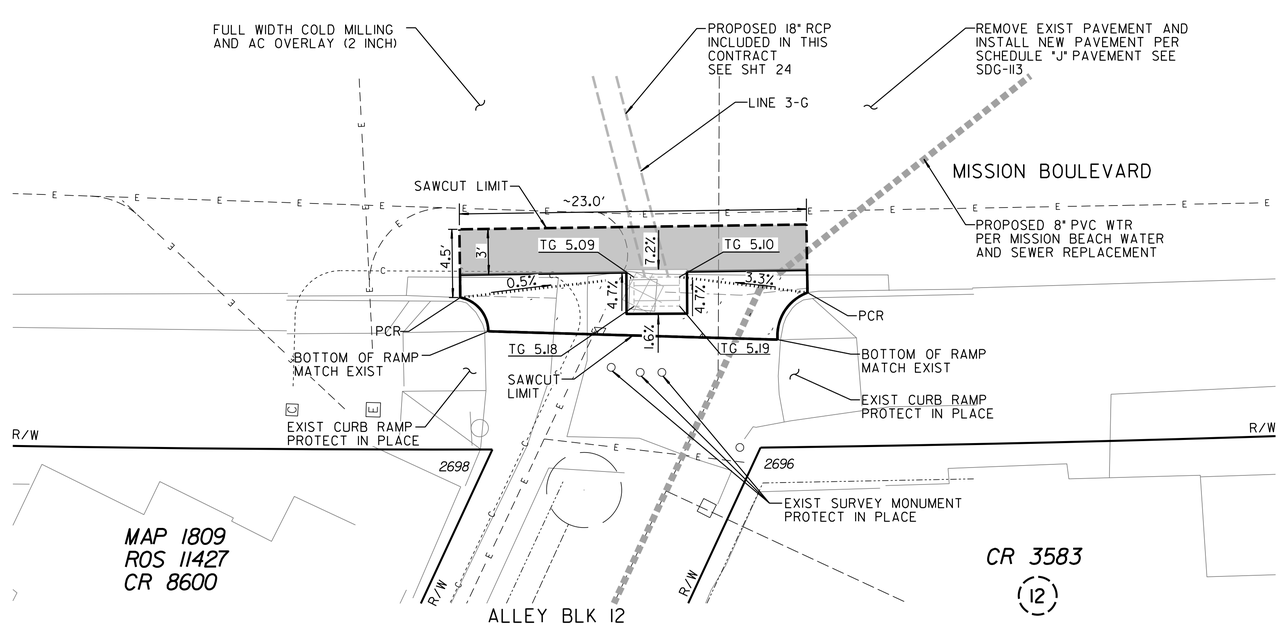
CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-72-D



DETAIL: ALLEY 33

NOTE:
FOR LIMITS OF COLD MILLING AND AC OVERLAY SEE STREET RESURFACING PLAN ON SHT 57.



DETAIL: ALLEY 22

0 5 10 15
SCALE 1" = 5'

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KEVIN R. GIBBS
NO. 52295
STATE OF CALIFORNIA
03/13/2023

SURFACE IMPROVEMENTS 13

C-70

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE
SURFACE IMPROVEMENTS 13

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 73 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — RCE# C91224
PRINT DCE NAME

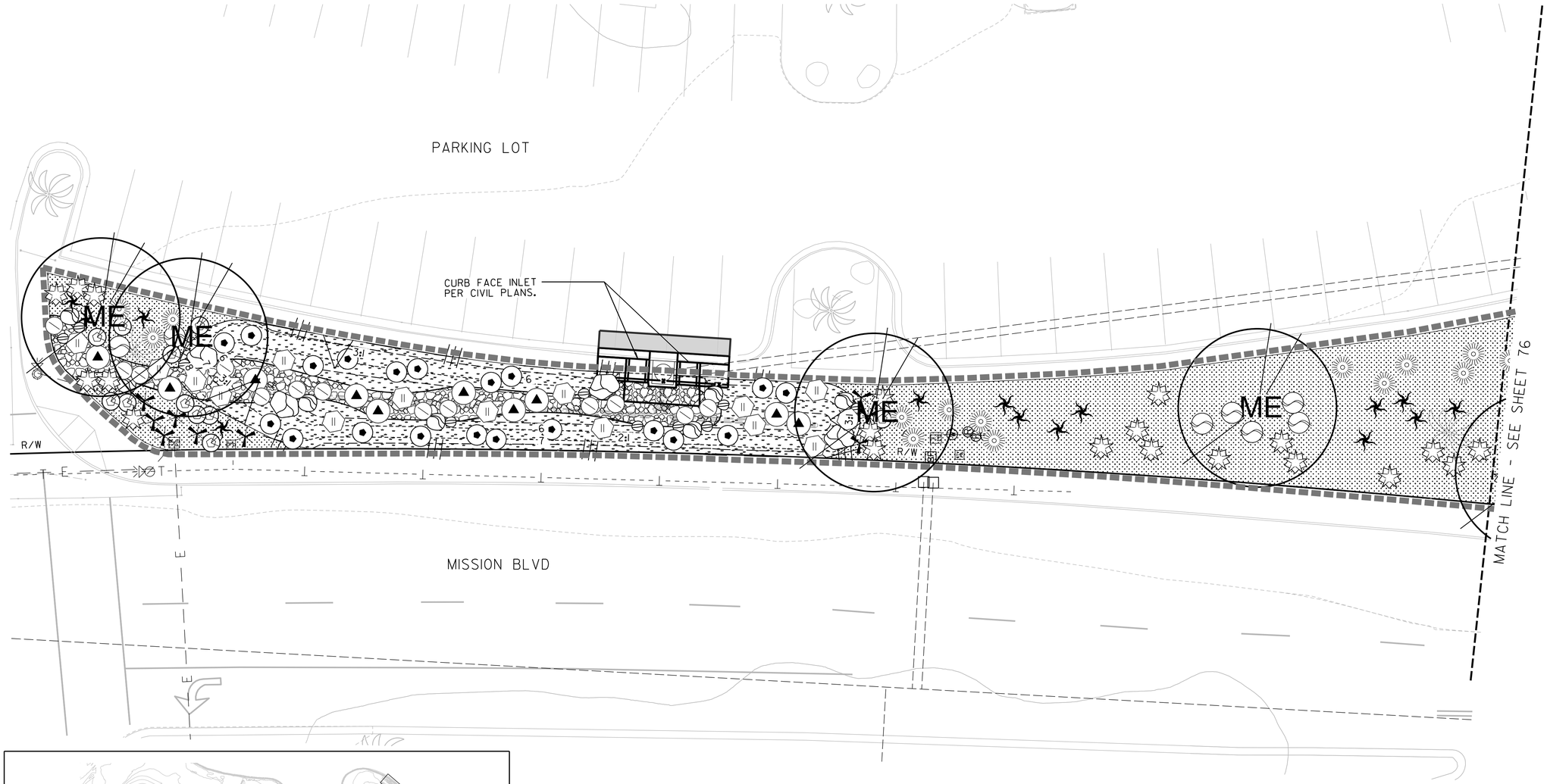
SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK		12/18/23	

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

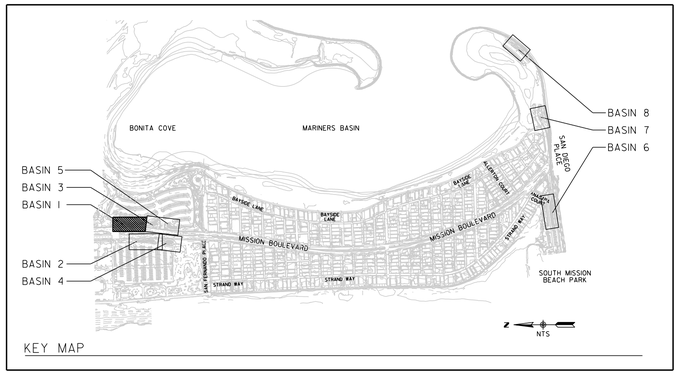
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-73-D



PLANT LEGEND

SYMBOL	BOTANICAL NAME/COMMON NAME
TREES & PALMS (PROPOSED)	
ME	METROSIDEROS EXCELSA/ NEW ZEALAND CHRISTMAS TREE (MULTI-TRUNK)
	WASHINGTONIA FILIFERA 'HYB.' / CALIFORNIA FAN PALM
TREES & PALMS (EXISTING)	
	EXISTING DRACAENA DRACO. (1-3' HT. & 1-2' HT. TO BE RELOCATED PER PLAN)
	EXISTING TREE (TYP.), PROTECT IN PLACE UNLESS OTHERWISE NOTED ON PLANS
	EXISTING WASHINGTONIA FILIFERA 'HYB.' (1-8' BTH, 1-4' BTH & 1-3' BTH TO BE RELOCATED PER PLAN)
	EXISTING CHAMAEROPS HUMILIS 'MULTI' (1-3' MULTI & 1-2' MULTI TO BE RELOCATED PER PLAN)
SHRUBS & GROUNDCOVER	
	AGAVE ATTENUATTA VAR/ FOXTAIL AGAVE
	AGAVE VILMORINIANA/ OCTOPUS AGAVE
	ALOE STRIATA/ CORAL AGAVE
	DALEA CAPITATA/ GOLDEN DALEA
	HESPERALOE PARVIFLORA/ RED YUCCA
	DASYLIRION WHEELERI/ DESERT SPOON
WATER QUALITY BASINS	
	JUNCUS PATENS 'ELK BLUE'/ ELK BLUE GREY RUSH
	CHONDROPETALUM TECTORUM/ CAPE RUSH
	MUHLENBERGIA RIGENS/ DEER GRASS
II	ELYMUS GLAUCUS/ BLUE WILD RYE
	CAREX TUMULICOLA/ FOOTHILL SEDGE
	LANDSCAPE PLANTING LIMIT OF WORK LINE, TYP.



PLANTING NOTES

1. THE PLANTING PLAN IS DIAGRAMMATIC. PLANT SYMBOLS TAKE PRECEDENCE OVER PLANT QUANTITIES SPECIFIED.
2. FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE SPOTTED BY THE LANDSCAPE ARCHITECT, PRIOR TO PLANTING.
3. CONTRACTOR TO REMOVE ALL NURSERY STAKES AFTER INSTALLATION OF TREES.
4. NOTIFY LANDSCAPE ARCHITECT OF ALL INSPECTIONS. PROVIDE 48 HOUR NOTICE PRIOR TO EACH INSPECTION.
5. ROOT BARRIER REQUIRED WHEN TREE/PALM TRUNK IS WITHIN 10' OF HARDSCAPE, WALLS, BUILDINGS, BROW DITCHES OR OTHER IMPROVEMENTS.
6. REFER TO CIVIL PLANS FOR ALL EXISTING UTILITIES, TYP.
7. REFER TO CIVIL PLANS FOR ALL VERTICAL AND HORIZONTAL CONTROL, TYP.
8. REFER TO CIVIL PLANS FOR TREE DEMO/PRESERVATION WORK.
9. FOR IRRIGATION PLANS SEE SHEETS L-9 THRU L-15.
10. SEE CIVIL PLANS FOR ALL TREES AND PALMS TO BE SALVAGED. ALL SALVED TREES AND PALMS TO BE RE-PLANTED PER LANDSCAPE PLANS.

CONSTRUCTION LEGEND

BOULDERS

- SMALL (1-3')
- MEDIUM (2-4')
- LARGE (4-6')

NOTE: AT LEAST ONE DIMENSION SHALL MEET THE LARGEST DIMENSION SPECIFIED ABOVE.

- LOW-FLOW ROCK COBBLE CHANNEL
- 3/4" CRUSHED STONE

NOTE: SEE FINISH SCHEDULE ON SHEET L-8.

0 10 20 30
SCALE 1" = 10'

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(FAX) 619-291-4165
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LICENSED LANDSCAPE ARCHITECT — Victoria Trauth — 3747 — Signature & 11/30/2023 — Renewal Date — STATE OF CALIFORNIA
03/13/23

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

L-1

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

PLANTING PLAN
BASIN 1

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 74 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

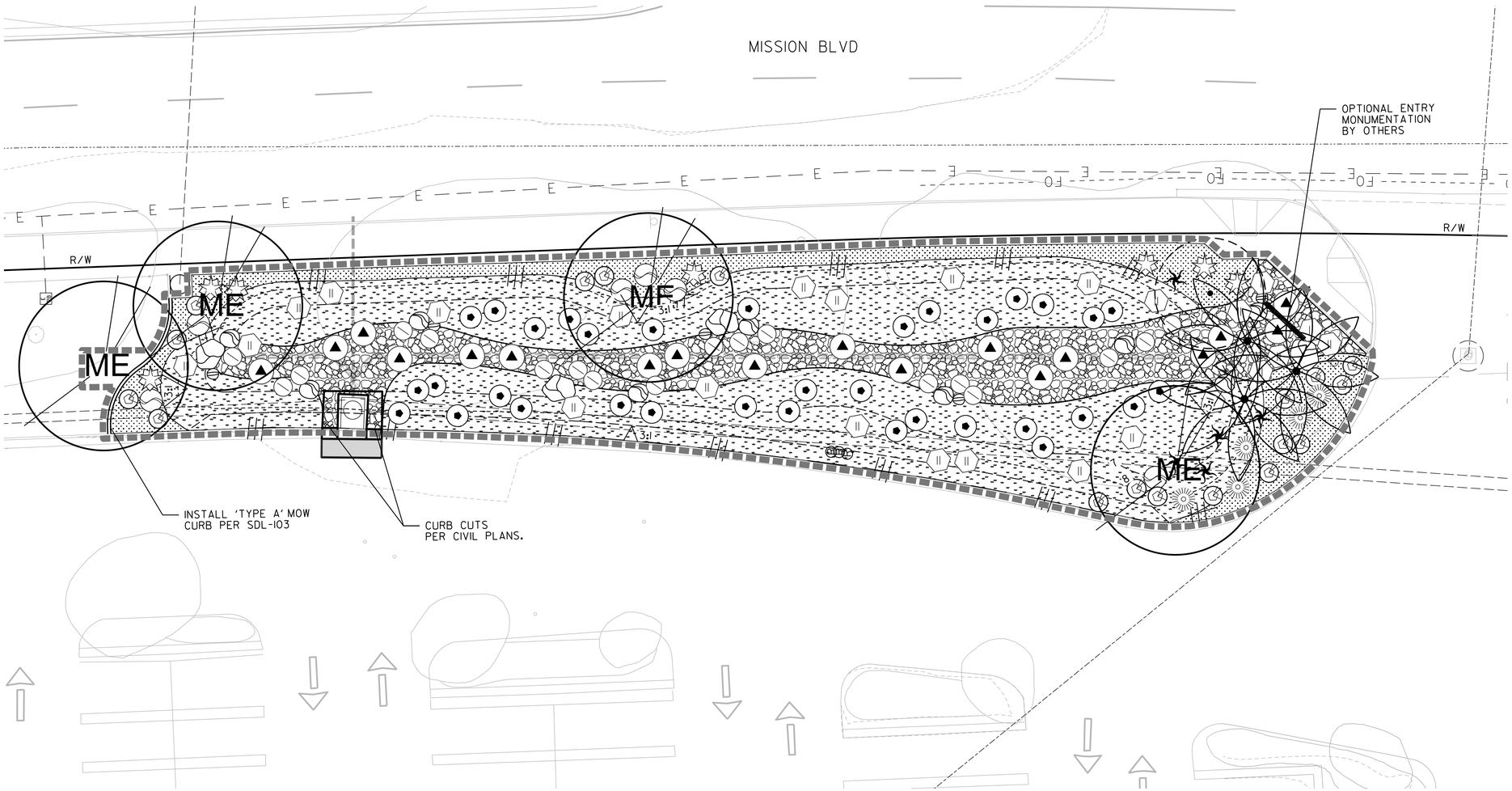
SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

218-1689 CCS27 COORDINATE

1858-6249 CCS83 COORDINATE

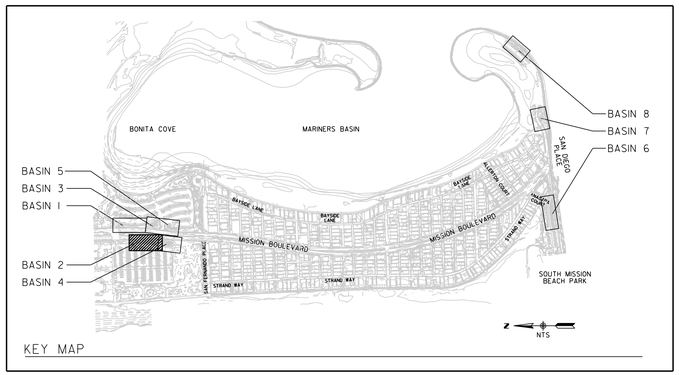
41306- 74-D

PLANTING PLAN



PLANT LEGEND

SYMBOL	BOTANICAL NAME/COMMON NAME
TREES & PALMS (PROPOSED)	
ME	METROSIDEROS EXCELSA/ NEW ZEALAND CHRISTMAS TREE (MULTI-TRUNK)
	WASHINGTONIA FILIFERA 'HYB.' / CALIFORNIA FAN PALM
TREES & PALMS (EXISTING)	
	EXISTING DRACAENA DRACO. (1-3' HT. & 1-2' HT. TO BE RELOCATED PER PLAN)
	EXISTING TREE (TYP.), PROTECT IN PLACE UNLESS OTHERWISE NOTED ON PLANS
	EXISTING WASHINGTONIA FILIFERA 'HYB.' (1-8' BTH, 1-4' BTH & 1-3' BTH TO BE RELOCATED PER PLAN)
	EXISTING CHAMAEROPS HUMILIS 'MULTI' (1-3' MULTI & 1-2' MULTI TO BE RELOCATED PER PLAN)
SHRUBS & GROUNDCOVER	
	AGAVE ATTENUATTA VAR/ FOXTAIL AGAVE
	AGAVE VILMORINIANA/ OCTOPUS AGAVE
	ALOE STRIATA/ CORAL AGAVE
	DALEA CAPITATA/ GOLDEN DALEA
	HESPERALOE PARVIFLORA/ RED YUCCA
	DASYLIRION WHEELERI/ DESERT SPOON
WATER QUALITY BASINS	
	JUNCUS PATENS 'ELK BLUE'/ ELK BLUE GREY RUSH
	CHONDROPETALUM TECTORUM/ CAPE RUSH
	MUHLENBERGIA RIGENS/ DEER GRASS
	ELYMUS GLAUCUS/ BLUE WILD RYE
	CAREX TUMULICOLA/ FOOTHILL SEDGE
	LANDSCAPE PLANTING LIMIT OF WORK LINE, TYP.



PLANTING NOTES

1. THE PLANTING PLAN IS DIAGRAMMATIC. PLANT SYMBOLS TAKE PRECEDENCE OVER PLANT QUANTITIES SPECIFIED.
2. FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE SPOTTED BY THE LANDSCAPE ARCHITECT, PRIOR TO PLANTING.
3. CONTRACTOR TO REMOVE ALL NURSERY STAKES AFTER INSTALLATION OF TREES.
4. NOTIFY LANDSCAPE ARCHITECT OF ALL INSPECTIONS. PROVIDE 48 HOUR NOTICE PRIOR TO EACH INSPECTION.
5. ROOT BARRIER REQUIRED WHEN TREE/PALM TRUNK IS WITHIN 10' OF HARDSCAPE, WALLS, BUILDINGS, BROW DITCHES OR OTHER IMPROVEMENTS.
6. REFER TO CIVIL PLANS FOR ALL EXISTING UTILITIES, TYP.
7. REFER TO CIVIL PLANS FOR ALL VERTICAL AND HORIZONTAL CONTROL, TYP.
8. REFER TO CIVIL PLANS FOR TREE DEMO/PRESERVATION WORK.
9. FOR IRRIGATION PLANS SEE SHEETS L-9 THRU L-15.
10. SEE CIVIL PLANS FOR ALL TREES AND PALMS TO BE SALVAGED. ALL SALVED TREES AND PALMS TO BE RE-PLANTED PER LANDSCAPE PLANS.

CONSTRUCTION LEGEND

BOULDERS

- SMALL (1-3')
- MEDIUM (2-4')
- LARGE (4-6')

NOTE: AT LEAST ONE DIMENSION SHALL MEET THE LARGEST DIMENSION SPECIFIED ABOVE.

- LOW-FLOW ROCK COBBLE CHANNEL
- 3/4" CRUSHED STONE

NOTE: SEE FINISH SCHEDULE ON SHEET L-8.

0 10 20 30
SCALE 1" = 10'

RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
San Diego
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

LICENSED LANDSCAPE ARCHITECT — Patricia Trauth — 3357 — Signature — 11/30/2023 — Renewal Date — STATE OF CALIFORNIA
03/13/23

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

L-2

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

PLANTING PLAN
BASIN 2

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 75 OF 128 SHEETS

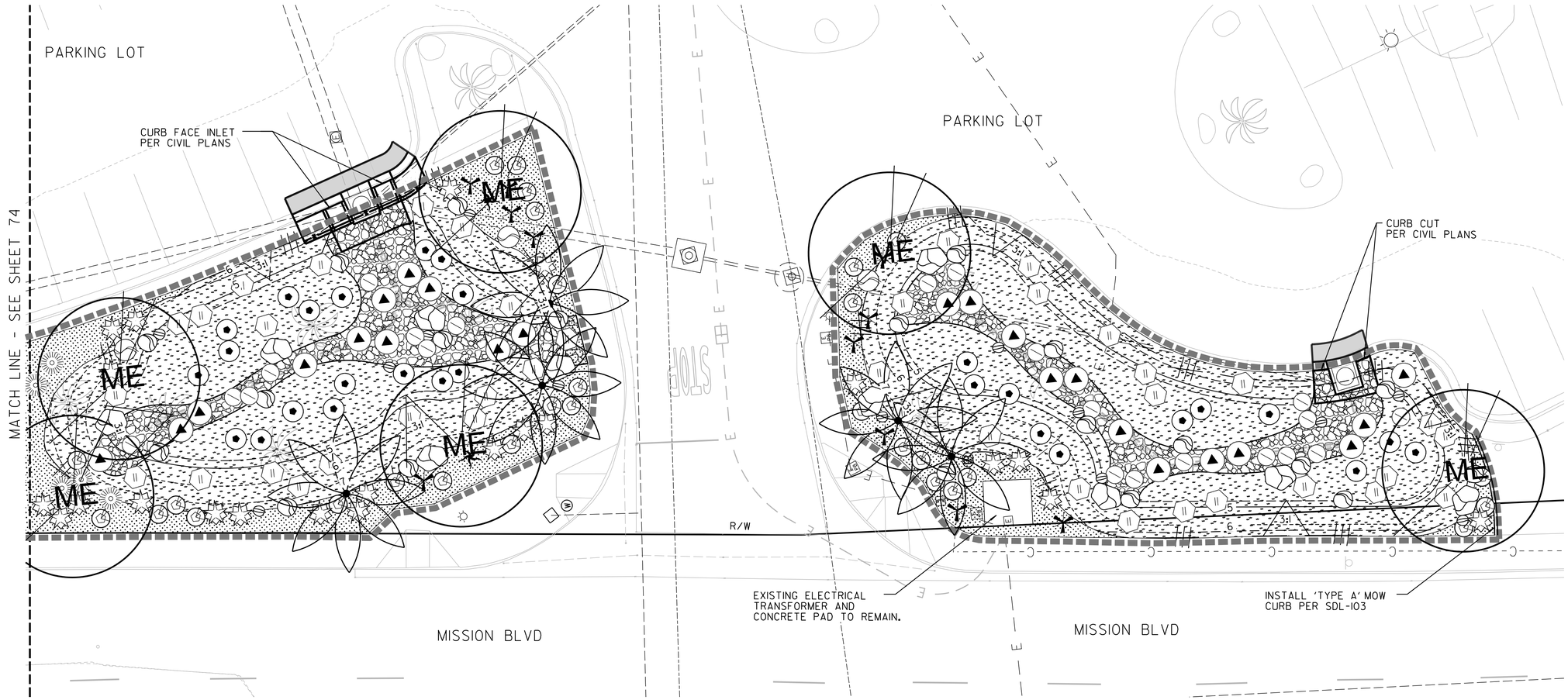
WBS B-18118 (GI) B-18117 (SD)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

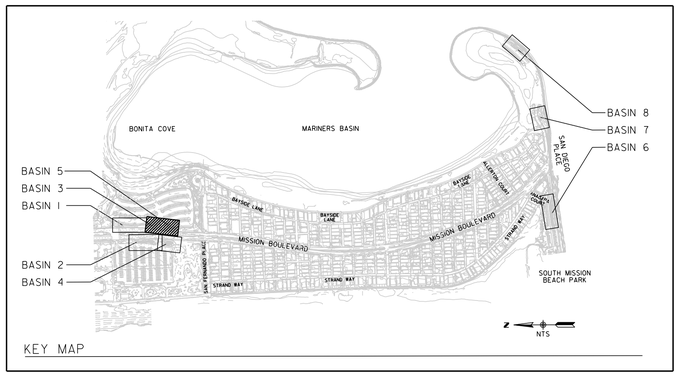
41306-75-D

PLANTING PLAN



PLANT LEGEND

SYMBOL	BOTANICAL NAME/COMMON NAME
TREES & PALMS (PROPOSED)	
ME	METROSIDEROS EXCELSA/ NEW ZEALAND CHRISTMAS TREE (MULTI-TRUNK)
	WASHINGTONIA FILIFERA 'HYB.' / CALIFORNIA FAN PALM
TREES & PALMS (EXISTING)	
	EXISTING DRACAENA DRACO. (1-3' HT. & 1-2' HT. TO BE RELOCATED PER PLAN)
	EXISTING TREE (TYP.), PROTECT IN PLACE UNLESS OTHERWISE NOTED ON PLANS
	EXISTING WASHINGTONIA FILIFERA 'HYB.' (1-8' BTH, 1-4' BTH & 1-3' BTH TO BE RELOCATED PER PLAN)
	EXISTING CHAMAEROPS HUMILIS 'MULTI' (1-3' MULTI & 1-2' MULTI TO BE RELOCATED PER PLAN)
SHRUBS & GROUNDCOVER	
	AGAVE ATTENUATTA VAR/ FOXTAIL AGAVE
	AGAVE VILMORINIANA/ OCTOPUS AGAVE
	ALOE STRIATA/ CORAL AGAVE
	DALEA CAPITATA/ GOLDEN DALEA
	HESPERALOE PARVIFLORA/ RED YUCCA
	DASYLIRION WHEELERI/ DESERT SPOON
WATER QUALITY BASINS	
	JUNCUS PATENS 'ELK BLUE'/ ELK BLUE GREY RUSH
	CHONDROPETALUM TECTORUM/ CAPE RUSH
	MUHLENBERGIA RIGENS/ DEER GRASS
	ELYMUS GLAUCUS/ BLUE WILD RYE
	CAREX TUMULICOLA/ FOOTHILL SEDGE
	LANDSCAPE PLANTING LIMIT OF WORK LINE, TYP.



KEY MAP

PLANTING NOTES

1. THE PLANTING PLAN IS DIAGRAMMATIC. PLANT SYMBOLS TAKE PRECEDENCE OVER PLANT QUANTITIES SPECIFIED.
2. FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE SPOTTED BY THE LANDSCAPE ARCHITECT, PRIOR TO PLANTING.
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CONSTRUCTION LEGEND

BOULDERS

- SMALL (1-3')
- MEDIUM (2-4')
- LARGE (4-6')

NOTE: AT LEAST ONE DIMENSION SHALL MEET THE LARGEST DIMENSION SPECIFIED ABOVE.

- LOW-FLOW ROCK COBBLE CHANNEL
- 3/4" CRUSHED STONE

NOTE: SEE FINISH SCHEDULE ON SHEET L-8.

N

0 10 20 30

SCALE 1" = 10'

RICK ENGINEERING COMPANY
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SAN DIEGO, CA 92110
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(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

LICENSED LANDSCAPE ARCHITECT
Patricia Trauth 3331
signature
11/30/2023
renewal date
STATE OF CALIFORNIA
03/13/23

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

PLANTING PLAN

L-3

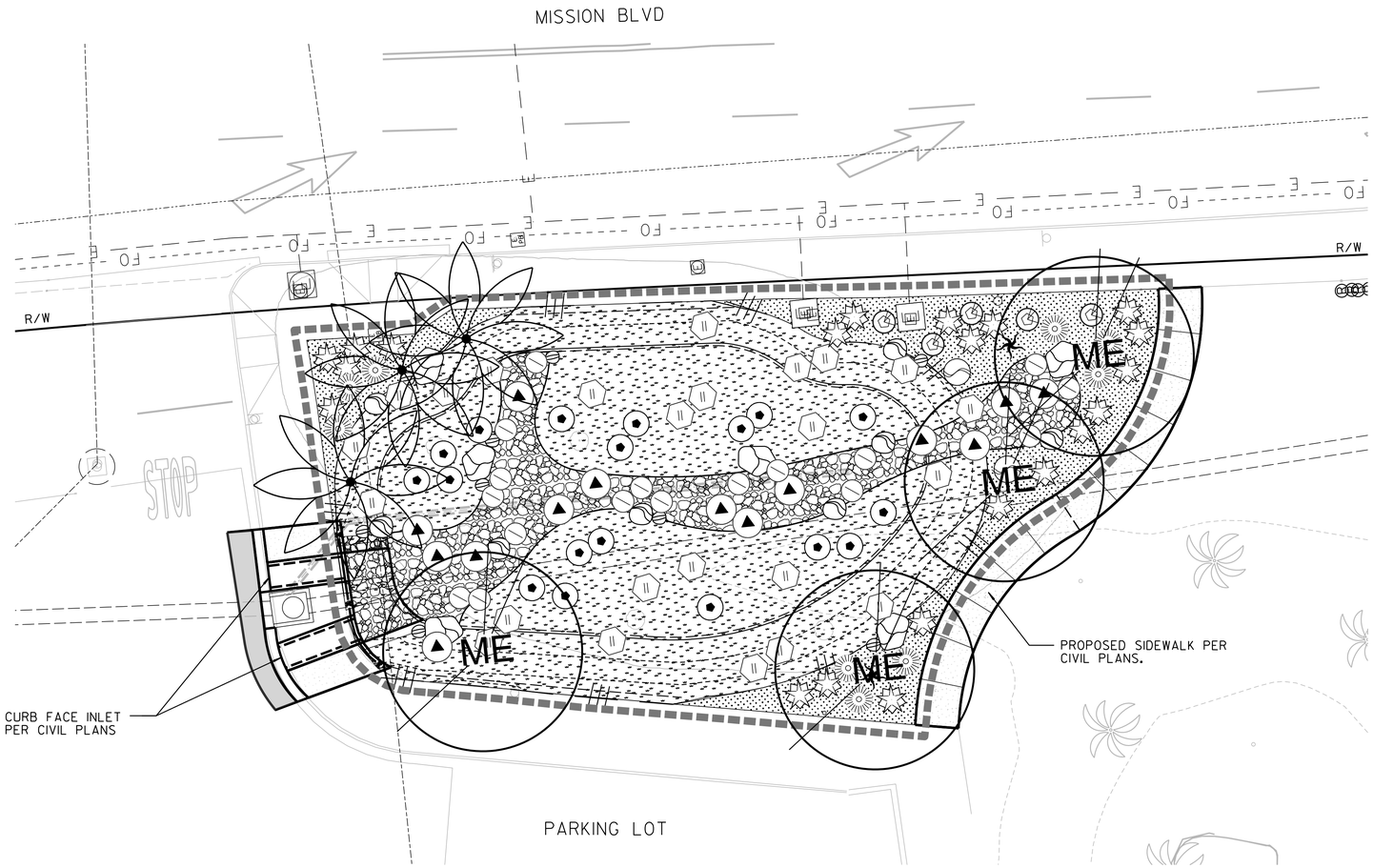
SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

PLANTING PLAN
BASIN 3 & 5

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 76 OF 128 SHEETS

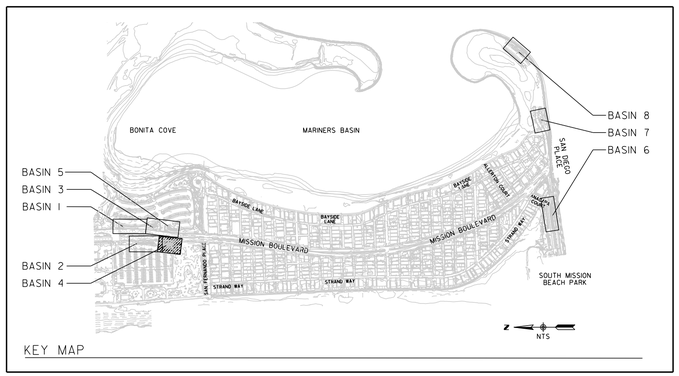
WBS B-18118 (GI)
B-18117 (SD)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
41306-76-D



PLANT LEGEND

SYMBOL	BOTANICAL NAME/COMMON NAME
TREES & PALMS (PROPOSED)	
ME	METROSIDEROS EXCELSA/ NEW ZEALAND CHRISTMAS TREE (MULTI-TRUNK)
	WASHINGTONIA FILIFERA 'HYB.' / CALIFORNIA FAN PALM
TREES & PALMS (EXISTING)	
	EXISTING DRACAENA DRACO. (1-3' HT. & 1-2' HT. TO BE RELOCATED PER PLAN)
	EXISTING TREE (TYP.), PROTECT IN PLACE UNLESS OTHERWISE NOTED ON PLANS
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	AGAVE ATTENUATTA VAR/ FOXTAIL AGAVE
	AGAVE VILMORINIANA/ OCTOPUS AGAVE
	ALOE STRIATA/ CORAL AGAVE
	DALEA CAPITATA/ GOLDEN DALEA
	HESPERALOE PARVIFLORA/ RED YUCCA
	DASYLIRION WHEELERI/ DESERT SPOON
WATER QUALITY BASINS	
	JUNCUS PATENS 'ELK BLUE'/ ELK BLUE GREY RUSH
	CHONDROPETALUM TECTORUM/ CAPE RUSH
	MUHLENBERGIA RIGENS/ DEER GRASS
	ELYMUS GLAUCUS/ BLUE WILD RYE
	CAREX TUMULICOLA/ FOOTHILL SEDGE
	LANDSCAPE PLANTING LIMIT OF WORK LINE, TYP.



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MEDIUM (2-4')
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LOW-FLOW ROCK COBBLE CHANNEL

3/4" CRUSHED STONE

NOTE: SEE FINISH SCHEDULE ON SHEET L-8.

0 10 20 30
SCALE 1" = 10'

LICENSED LANDSCAPE ARCHITECT — Licia Trauth — 2321 — Signed 11/30/2023 — Renewal Date — STATE OF CALIFORNIA
03/13/23

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

L-4

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

PLANTING PLAN
BASIN 4

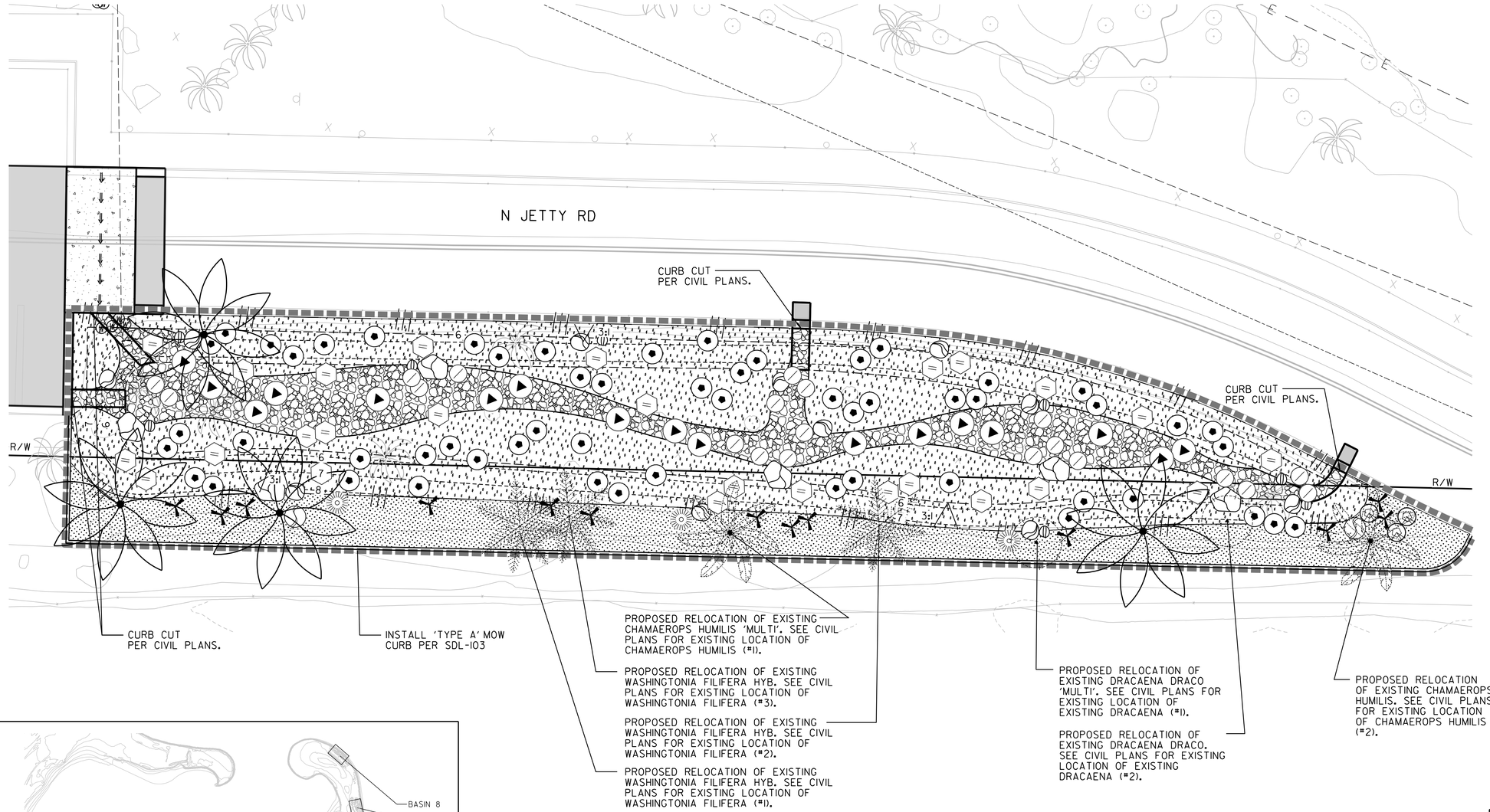
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 77 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
41306-77-D

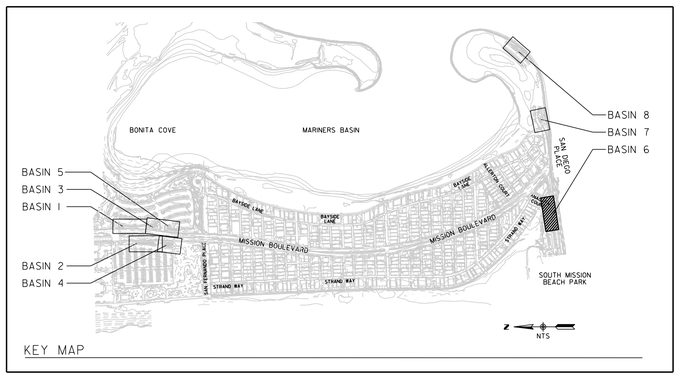
PLANTING PLAN

RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver



PLANT LEGEND

SYMBOL	BOTANICAL NAME/COMMON NAME
TREES & PALMS (PROPOSED)	
ME	METROSIDEROS EXCELSA/ NEW ZEALAND CHRISTMAS TREE (MULTI-TRUNK)
	WASHINGTONIA FILIFERA 'HYB.' / CALIFORNIA FAN PALM
TREES & PALMS (EXISTING)	
	EXISTING DRACAENA DRACO. (1-3' HT. & 1-2' HT. TO BE RELOCATED PER PLAN)
	EXISTING TREE (TYP.), PROTECT IN PLACE UNLESS OTHERWISE NOTED ON PLANS
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	EXISTING CHAMAEROPS HUMILIS 'MULTI' (1-3' MULTI & 1-2' MULTI TO BE RELOCATED PER PLAN)
SHRUBS & GROUNDCOVER	
	AGAVE ATTENUATTA VAR/ FOXTAIL AGAVE
	AGAVE VILMORINIANA/ OCTOPUS AGAVE
	ALOE STRIATA/ CORAL AGAVE
	DALEA CAPITATA/ GOLDEN DALEA
	HESPERALOE PARVIFLORA/ RED YUCCA
	DASYLIRION WHEELERI/ DESERT SPOON
WATER QUALITY BASINS	
	JUNCUS PATENS 'ELK BLUE'/ ELK BLUE GREY RUSH
	CHONDROPETALUM TECTORUM/ CAPE RUSH
	MUHLENBERGIA RIGENS/ DEER GRASS
	ELYMUS GLAUCUS/ BLUE WILD RYE
	CAREX TUMULICOLA/ FOOTHILL SEDGE
	LANDSCAPE PLANTING LIMIT OF WORK LINE, TYP.



PLANTING NOTES

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CONSTRUCTION LEGEND

BOULDERS

- SMALL (1-3')
- MEDIUM (2-4')
- LARGE (4-6')

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- LOW-FLOW ROCK COBBLE CHANNEL
- 3/4" CRUSHED STONE

NOTE: SEE FINISH SCHEDULE ON SHEET L-8.

N

0 10 20 30

SCALE 1" = 10'

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rickengineering.com
San Diego
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

LICENSED LANDSCAPE ARCHITECT — Patricia Trauth — 3717 — Signature Date 11/30/2023 — Renewal 10/31 — STATE OF CALIFORNIA

03/13/23

CONTRACTOR _____ NTP DATE _____

INSPECTOR _____ NOC DATE _____

L-5

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

PLANTING PLAN
BASIN 6

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 78 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

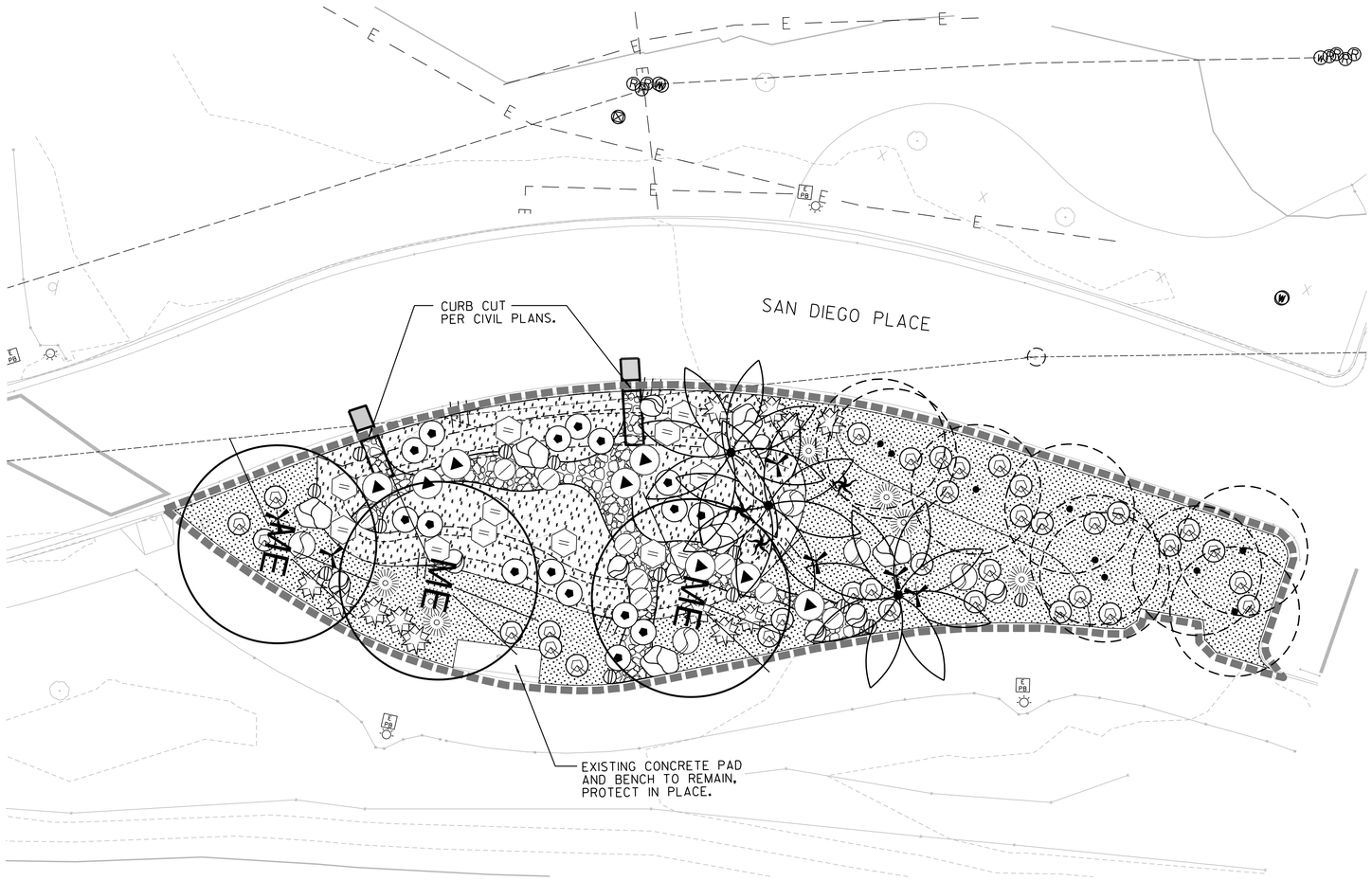
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ORIGINAL	RICK			

218-1689 CCS27 COORDINATE

1858-6249 CCS83 COORDINATE

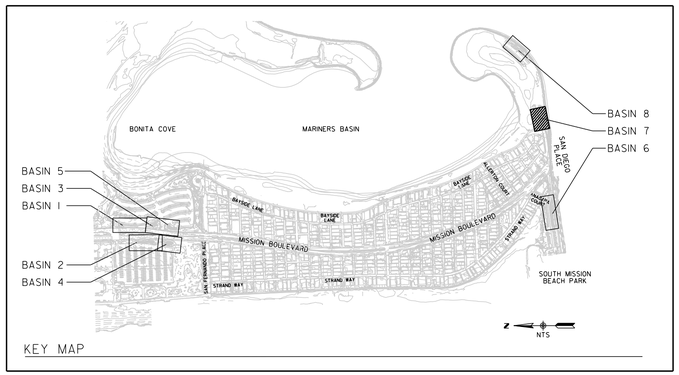
41306-78-D

PLANTING PLAN



PLANT LEGEND

SYMBOL	BOTANICAL NAME/COMMON NAME
TREES & PALMS (PROPOSED)	
ME	METROSIDEROS EXCELSA/ NEW ZEALAND CHRISTMAS TREE (MULTI-TRUNK)
	WASHINGTONIA FILIFERA 'HYB.' / CALIFORNIA FAN PALM
TREES & PALMS (EXISTING)	
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	DALEA CAPITATA/ GOLDEN DALEA
	HESPERALOE PARVIFLORA/ RED YUCCA
	DASYLIRION WHEELERI/ DESERT SPOON
WATER QUALITY BASINS	
	JUNCUS PATENS 'ELK BLUE'/ ELK BLUE GREY RUSH
	CHONDROPETALUM TECTORUM/ CAPE RUSH
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	ELYMUS GLAUCUS/ BLUE WILD RYE
	CAREX TUMULICOLA/ FOOTHILL SEDGE
	LANDSCAPE PLANTING LIMIT OF WORK LINE, TYP.



KEY MAP

PLANTING NOTES

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CONSTRUCTION LEGEND

BOULDERS

- SMALL (1-3')
- MEDIUM (2-4')
- LARGE (4-6')

NOTE: AT LEAST ONE DIMENSION SHALL MEET THE LARGEST DIMENSION SPECIFIED ABOVE.

- LOW-FLOW ROCK COBBLE CHANNEL
- 3/4" CRUSHED STONE

NOTE: SEE FINISH SCHEDULE ON SHEET L-8.

N

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SCALE 1" = 10'

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LICENSED LANDSCAPE ARCHITECT — Patricia Trauth — 3357 — Signature 11/30/2023 — Renewal 10/31 — STATE OF CALIFORNIA

03/13/23

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

L-6

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

PLANTING PLAN
BASIN 7

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 79 OF 128 SHEETS

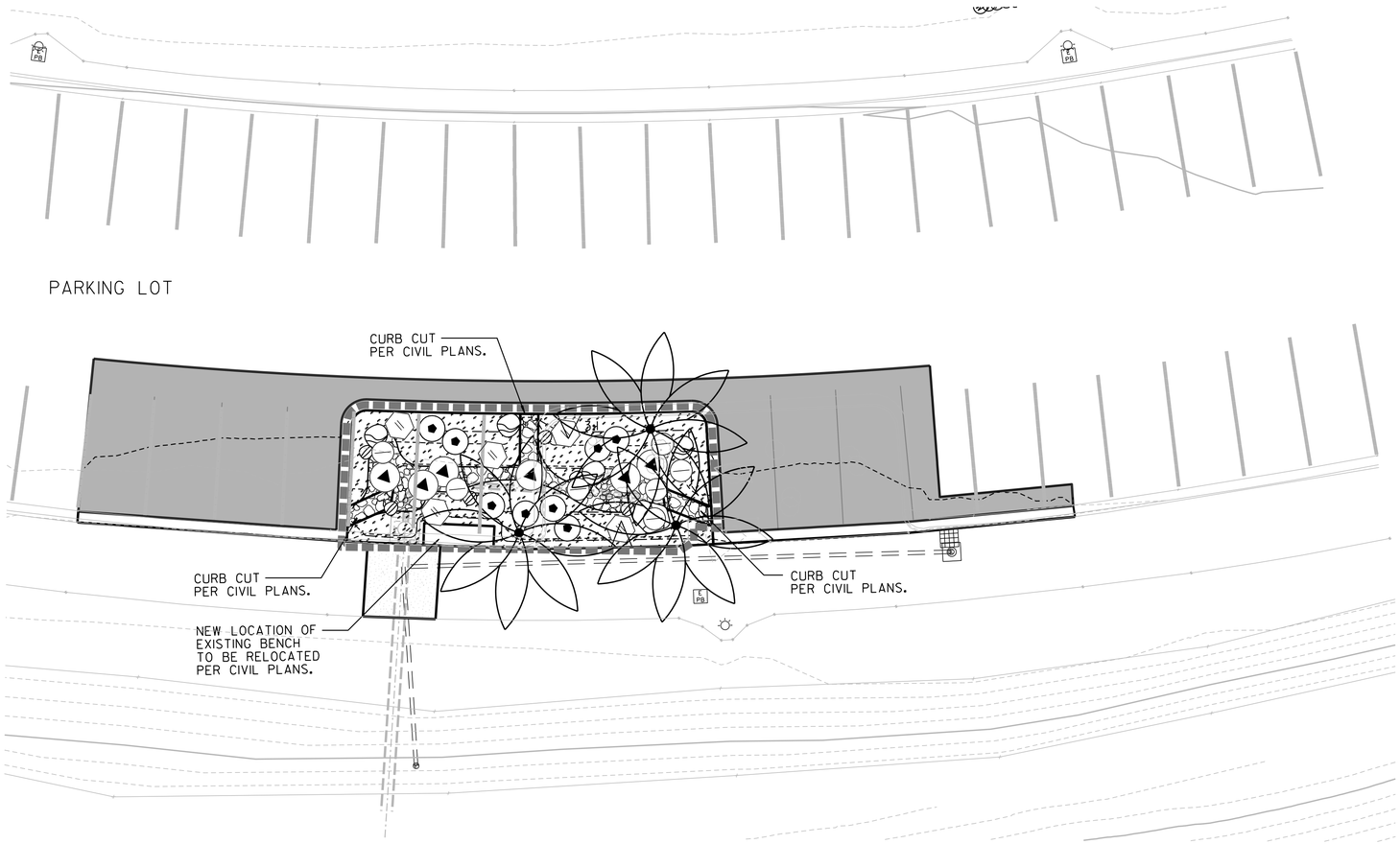
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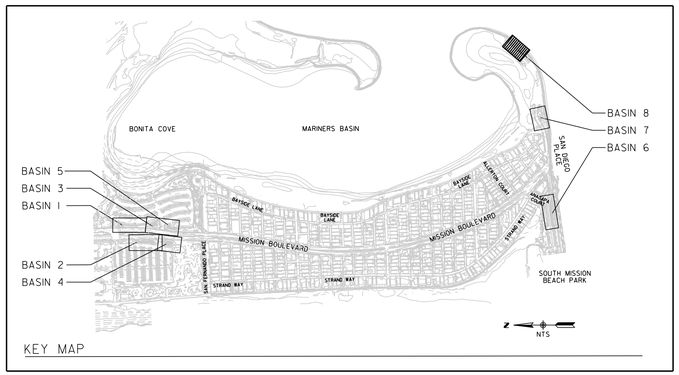
SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

41306-79-D

PLANTING PLAN





PLANT LEGEND

SYMBOL	BOTANICAL NAME/COMMON NAME
TREES & PALMS (PROPOSED)	
ME	METROSIDEROS EXCELSA/ NEW ZEALAND CHRISTMAS TREE (MULTI-TRUNK)
	WASHINGTONIA FILIFERA 'HYB.' / CALIFORNIA FAN PALM
TREES & PALMS (EXISTING)	
	EXISTING DRACAENA DRACO. (1-3' HT. & 1-2' HT. TO BE RELOCATED PER PLAN)
	EXISTING TREE (TYP.), PROTECT IN PLACE UNLESS OTHERWISE NOTED ON PLANS
	EXISTING WASHINGTONIA FILIFERA 'HYB.' (1-8' BTH, 1-4' BTH & 1-3' BTH TO BE RELOCATED PER PLAN)
	EXISTING CHAMAEROPS HUMILIS 'MULTI' (1-3' MULTI & 1-2' MULTI TO BE RELOCATED PER PLAN)
SHRUBS & GROUNDCOVER	
	AGAVE ATTENUATTA VAR/ FOXTAIL AGAVE
	AGAVE VILMORINIANA/ OCTOPUS AGAVE
	ALOE STRIATA/ CORAL AGAVE
	DALEA CAPITATA/ GOLDEN DALEA
	HESPERALOE PARVIFLORA/ RED YUCCA
	DASYLIRION WHEELERI/ DESERT SPOON
WATER QUALITY BASINS	
	JUNCUS PATENS 'ELK BLUE'/ ELK BLUE GREY RUSH
	CHONDROPETALUM TECTORUM/ CAPE RUSH
	MUHLENBERGIA RIGENS/ DEER GRASS
	ELYMUS GLAUCUS/ BLUE WILD RYE
	CAREX TUMULICOLA/ FOOTHILL SEDGE
	LANDSCAPE PLANTING LIMIT OF WORK LINE, TYP.

PLANTING NOTES

1. THE PLANTING PLAN IS DIAGRAMMATIC. PLANT SYMBOLS TAKE PRECEDENCE OVER PLANT QUANTITIES SPECIFIED.
2. FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE SPOTTED BY THE LANDSCAPE ARCHITECT, PRIOR TO PLANTING.
3. CONTRACTOR TO REMOVE ALL NURSERY STAKES AFTER INSTALLATION OF TREES.
4. NOTIFY LANDSCAPE ARCHITECT OF ALL INSPECTIONS. PROVIDE 48 HOUR NOTICE PRIOR TO EACH INSPECTION.
5. ROOT BARRIER REQUIRED WHEN TREE/PALM TRUNK IS WITHIN 10' OF HARDSCAPE, WALLS, BUILDINGS, BROW DITCHES OR OTHER IMPROVEMENTS.
6. REFER TO CIVIL PLANS FOR ALL EXISTING UTILITIES, TYP.
7. REFER TO CIVIL PLANS FOR ALL VERTICAL AND HORIZONTAL CONTROL, TYP.
8. REFER TO CIVIL PLANS FOR TREE DEMO/PRESERVATION WORK.
9. FOR IRRIGATION PLANS SEE SHEETS L-9 THRU L-15.
10. SEE CIVIL PLANS FOR ALL TREES AND PALMS TO BE SALVAGED. ALL SALVED TREES AND PALMS TO BE RE-PLANTED PER LANDSCAPE PLANS.

CONSTRUCTION LEGEND

BOULDERS

- SMALL (1-3')
- MEDIUM (2-4')
- LARGE (4-6')

NOTE: AT LEAST ONE DIMENSION SHALL MEET THE LARGEST DIMENSION SPECIFIED ABOVE.

- LOW-FLOW ROCK COBBLE CHANNEL
- 3/4" CRUSHED STONE

NOTE: SEE FINISH SCHEDULE ON SHEET L-8.

0 10 20 30

SCALE 1" = 10'

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SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

LICENSED LANDSCAPE ARCHITECT — Alicia Trauth — 3924 — Signature & Renewal Date — 11/30/2023 — STATE OF CALIFORNIA
03/13/23

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

L-7

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

PLANTING PLAN
BASIN 8

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 80 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER
218-1689, CCS27 COORDINATE
1858-6249, CCS83 COORDINATE
41306-80-D

PLANTING PLAN

PLANTING NOTES

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2. FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE SPOTTED BY THE LANDSCAPE ARCHITECT, PRIOR TO PLANTING.
3. CONTRACTOR TO REMOVE ALL NURSERY STAKES AFTER INSTALLATION OF TREES.
4. NOTIFY LANDSCAPE ARCHITECT OF ALL INSPECTIONS. PROVIDE 48 HOUR NOTICE PRIOR TO EACH INSPECTION.
5. ROOT BARRIER REQUIRED WHEN TREE/PALM TRUNK IS WITHIN 10' OF HARDSCAPE, WALLS, BUILDINGS, BROW DITCHES OR OTHER IMPROVEMENTS.
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9. FOR IRRIGATION PLANS SEE SHEETS L-9 THRU L-15.
10. SEE CIVIL PLANS FOR ALL TREES AND PALMS TO BE SALVAGED. ALL SALVED TREES AND PALMS TO BE RE-PLANTED PER LANDSCAPE PLANS.

CONSTRUCTION LEGEND

BOULDERS	QUANTITY
SMALL (1-2')	65
MEDIUM (2-4')	68
LARGE (4-6')	37

NOTE: AT LEAST ONE DIMENSION SHALL MEET THE LARGEST DIMENSION SPECIFIED ABOVE.

LOW-FLOW ROCK COBBLE CHANNEL	6,485 SQ. FT.
3/4" CRUSHED STONE	10,762 SQ. FT.

NOTE: REFER TO FINISH SCHEDULE BELOW.

CONSTRUCTION NOTES

1. ALL BOULDERS TO BE TAGGED BY LANDSCAPE ARCHITECT PRIOR TO DELIVERY.
2. ALL BOULDERS TO BE SPOTTED IN FIELD BY LANDSCAPE ARCHITECT.

FINISH SCHEDULE

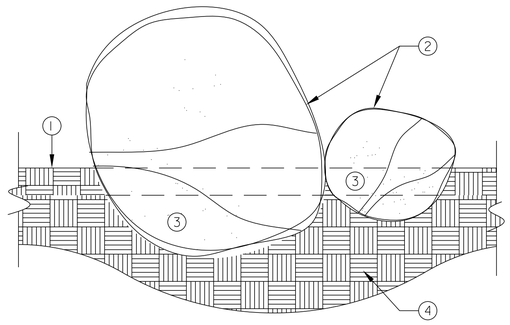
ROCK COBBLE:
SHALL BE MISSION COBBLE OR APPROVED EQUAL. SIZE SHALL BE 50% 1-5" / 50% 4-10", UNFRACTURED.

BOULDERS:
SHALL BE CRESTA BLONDE OR APPROVED EQUAL. SIZE PER PLAN.

3/4" CRUSHED STONE
SHALL BE MOJAVE GOLD OR APPROVED EQUAL, 3/4" IN SIZE.

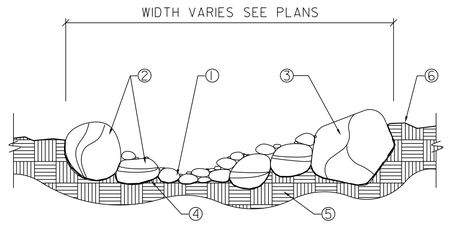
LANDSCAPE FABRIC:
AT ROCK COBBLE AND 3/4" CRUSHED STONE, TYPICAL. SHALL BE MIRAFI 160N, TAN IN COLOR OR APPROVED EQUAL.

CONCRETE MOW CURB:
6" MOW CURB TO BE 'TYPE A' PER SDL-103, NATURAL GRAY MEDIUM BROOM FINISH.



1. FINISH GRADE
2. LANDSCAPE BOULDERS, TYP. SEE LANDSCAPE CONSTRUCTION PLANS FOR SIZE AND LOCATION.
3. SET 1/4 TO 1/3 OF ROCK INTO GRADE.
4. UNDISTURBED SOIL.

A BOULDER INSTALLATION (TYP.)
NOT TO SCALE



1. ROCK COBBLE, SEE FINISH SCHEDULE FOR SIZES.
2. LANDSCAPE BOULDER. SIZES VARY. (SEE FINISH SCHED. THIS SHT)
3. SET 1/3 OF BOULDERS INTO GRADE, TYP.
4. LANDSCAPE FABRIC (SEE FINISH SCHED. THIS SHT.)
5. UNDISTURBED SOIL.
6. FINISH GRADE SEE PLANS

B LOW-FLOW ROCK COBBLE CHANNEL (TYP.)
NOT TO SCALE

PLANT LEGEND

SYMBOL	BOTANICAL NAME/COMMON NAME	WUCOLS	SIZE	SPACING	MIN. H' x W'	QUANTITY	CITY SD STD DWG
TREES & PALMS (PROPOSED)							
ME	METROSIDEROS EXCELSA/ NEW ZEALAND CHRISTMAS TREE (MULTI-TRUNK, 3 TRUNK MIN.)	M	36" BOX	PLAN	30x15	22	SDL-101, -106, -107
	WASHINGTONIA FILIFERA 'HYB.' / CALIFORNIA FAN PALM	M	12' BTH	PLAN	12' BTH	21	SDL-106, -107
TREES & PALMS (EXISTING)							
	EXISTING DRACAENA DRACO (1-3' HT. & 1-2' HT. TO BE RELOCATED PER PLAN)	VL	EXTG.	PLAN	EXTG.	N/A	N/A
	EXISTING TREE (TYP.), PROTECT IN PLACE UNLESS OTHERWISE NOTED ON PLANS	N/A	EXTG.	PLAN	EXTG.	N/A	N/A
	EXISTING WASHINGTONIA FILIFERA 'HYB.' (1-8' BTH, 1-4' BTH & 1-3' BTH TO BE RELOCATED PER PLAN)	M	EXTG.	PLAN	EXTG.	N/A	N/A
	EXISTING CHAMAEROPS HUMILIS 'MULTI' (1-3' MULTI & 1-2' MULTI TO BE RELOCATED PER PLAN)	L	EXTG.	PLAN	EXTG.	N/A	N/A
SHRUBS & GROUNDCOVER							
	AGAVE ATTENUATTA VAR/ FOXTAIL AGAVE	L	15 GAL	PLAN	3x3	26	SDL-102
	AGAVE VILMORINIANA/ OCTOPUS AGAVE	L	15 GAL	PLAN	3x3	26	SDL-102
	ALOE STRIATA/ CORAL AGAVE	VL	5 GAL	PLAN	1x1	79	SDL-102
	DALEA CAPITATA/ GOLDEN DALEA	VL	1 GAL	PLAN	1x3	103	SDL-102
	HESPERALOE PARVIFLORA/ RED YUCCA	VL	1 GAL	PLAN	2x2	38	SDL-102
	DASYLIRION WHEELERI/ DESERT SPOON	VL	1 GAL	PLAN	2x2	42	SDL-102
WATER QUALITY BASINS							
	JUNCUS PATENS 'ELK BLUE'/ ELK BLUE GREY RUSH	L	1 GAL	PLAN	3x2	107	SDL-102
	CHONDROPETALUM TECTORUM/ CAPE RUSH	L	1 GAL	PLAN	3x3	99	SDL-102
	MUHLENBERGIA RIGENS/ DEER GRASS	L	5 GAL	PLAN	3x3	180	SDL-102
	ELYMUS GLAUCUS/ BLUE WILD RYE	L	1 GAL	PLAN	1x1	149	SDL-102
	CAREX TUMULICOLA/ FOOTHILL SEDGE	L	4" POTS	2' O.C.	1x1	20,200 SQ. FT. 5,873 EA.	SDL-102

PLANTING LEGEND, NOTES, DETAILS & FINISH SCHEDULE

L-8

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

PLANTING LEGEND, NOTES, DETAILS & FINISH SCHEDULE

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 81 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

LICENSED LANDSCAPE ARCHITECT — Patricia Trauth 3371 — Signature 11/30/2023 Renewal Date — STATE OF CALIFORNIA
03/15/2023

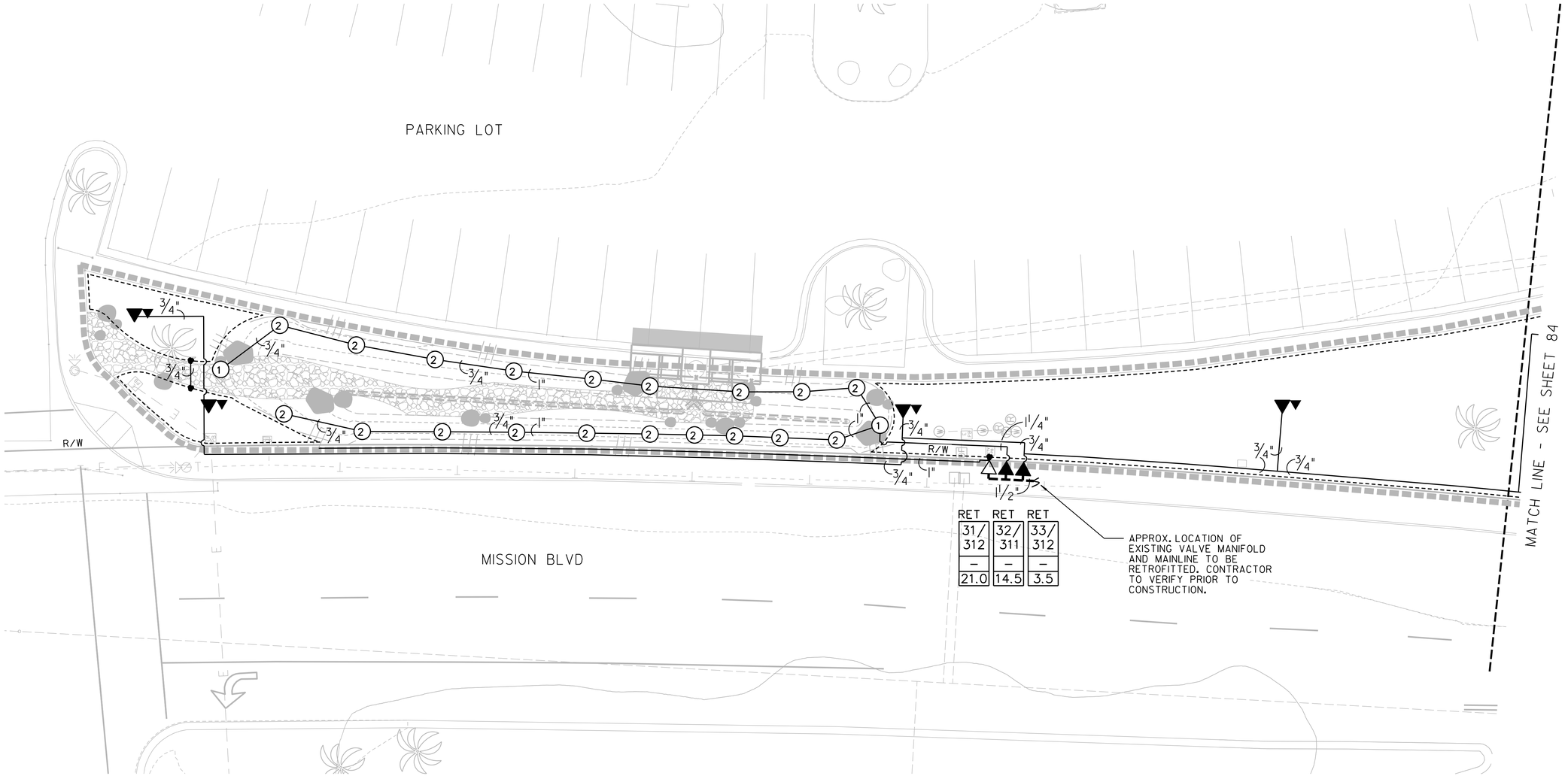
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

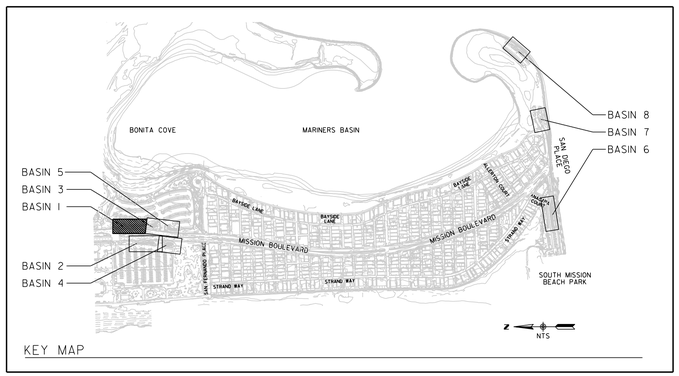
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-81-D

RICK ENGINEERING COMPANY
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619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver





IRRIGATION NOTES

1. IRRIGATION PLANS ARE DIAGRAMMATIC. ALL PIPING, VALVE BOXES, ETC., SHALL BE LOCATED IN LANDSCAPE AREAS UNLESS OTHERWISE NOTES ON THE PLANS, OR REQUIRED BY UNAVOIDABLE SITE CONDITIONS. NO IRRIGATION EQUIPMENT SHALL BE LOCATED IN HARDSCAPE. GROUP VALVE BOXES AND LOCATE IN SHRUB AREAS.
2. VALVE MANIFOLDS AND MAINLINE SHALL BE LOCATED WITHIN RIGHT-OF-WAY. VERIFY ACTUAL LOCATIONS IN FIELD WITH RESIDENT ENGINEER PRIOR TO COMMENCING WORK.
3. IRRIGATION EQUIPMENT SHOWN OUTISDE LIMIT OF WORK AREAS ARE FOR CLARITY ONLY. ALL IRRIGATION EQUIPMENT SHALL BE INSTALLED WITHIN THE LIMIT OF WORK LINES. VERIFY ALL LAYOUT IN FIELD WITH RESIDENT ENGINEER PRIOR TO INSTALLATION.
4. THE CONTRACTOR SHALL VERIFY THE AVAILABLE WATER PRESSURE AT THE P.O.C.'S AND PROVIDE THE LANDSCAPE ARCHITECT AND RESIDENT ENGINEER WITH TESTING RESULTS, IN WRITING PRIOR TO THE INITIATION OF ANY LANDSCAPE WORK.
5. SEE SHEETS L-1 THRU L-7 FOR PLANTING PLANS; SEE SHEET L-8 FOR FULL PLANTING LEGEND.
6. SEE SHEET L-16 FOR IRRIGATION LEGEND, NOTES AND DETAILS.
7. CONTRACTOR TO COORDINATE ALL WORK WITH CITY MAINTENANCE STAFF, PRIOR TO CONSTRUCTION.
8. ALL EXISTING MAINLINE AND WIRING TO BE PROTECTED IN PLACE, CONTRACTOR TO POTHOLE AND LOCATE AS REQUIRED.

IRRIGATION LEGEND

LANDSCAPE IRRIGATION
LIMIT OF WORK LINE, TYP.

0 10 20 30
SCALE 1" = 10'

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IRRIGATION PLAN

L-9

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

IRRIGATION PLAN
BASIN 1

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 82 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

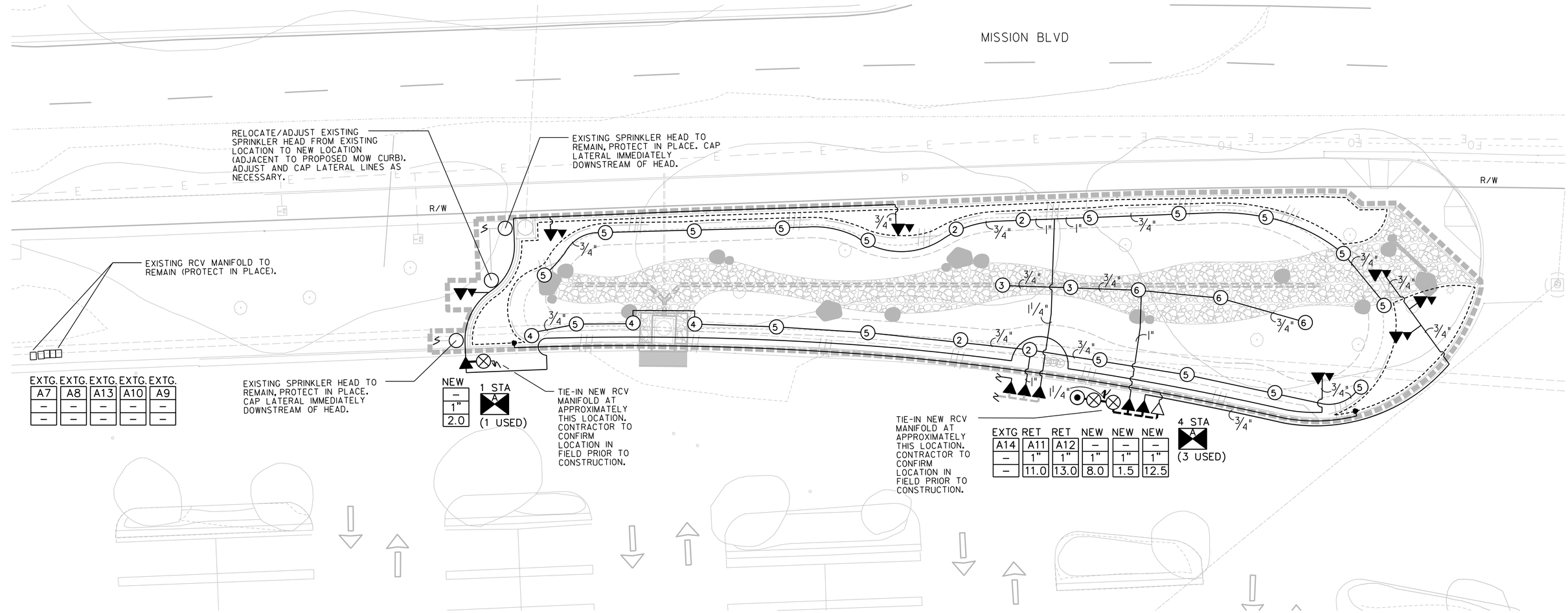
LICENSED LANDSCAPE ARCHITECTS — Patricia Trauth — 3327 — Signature 11/30/2023 — Renewal Date — STATE OF CALIFORNIA
03/13/23

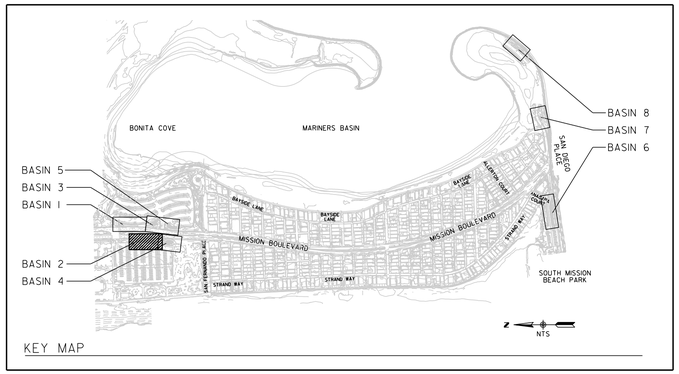
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-82-D





IRRIGATION NOTES

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6. SEE SHEET L-16 FOR IRRIGATION LEGEND, NOTES AND DETAILS.
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8. ALL EXISTING MAINLINE AND WIRING TO BE PROTECTED IN PLACE, CONTRACTOR TO POTHOLE AND LOCATE AS REQUIRED.

IRRIGATION LEGEND

LANDSCAPE IRRIGATION LIMIT OF WORK LINE, TYP.

0 10 20 30
SCALE 1" = 10'

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IRRIGATION PLAN

L-10

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

IRRIGATION PLAN
BASIN 2

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 83 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

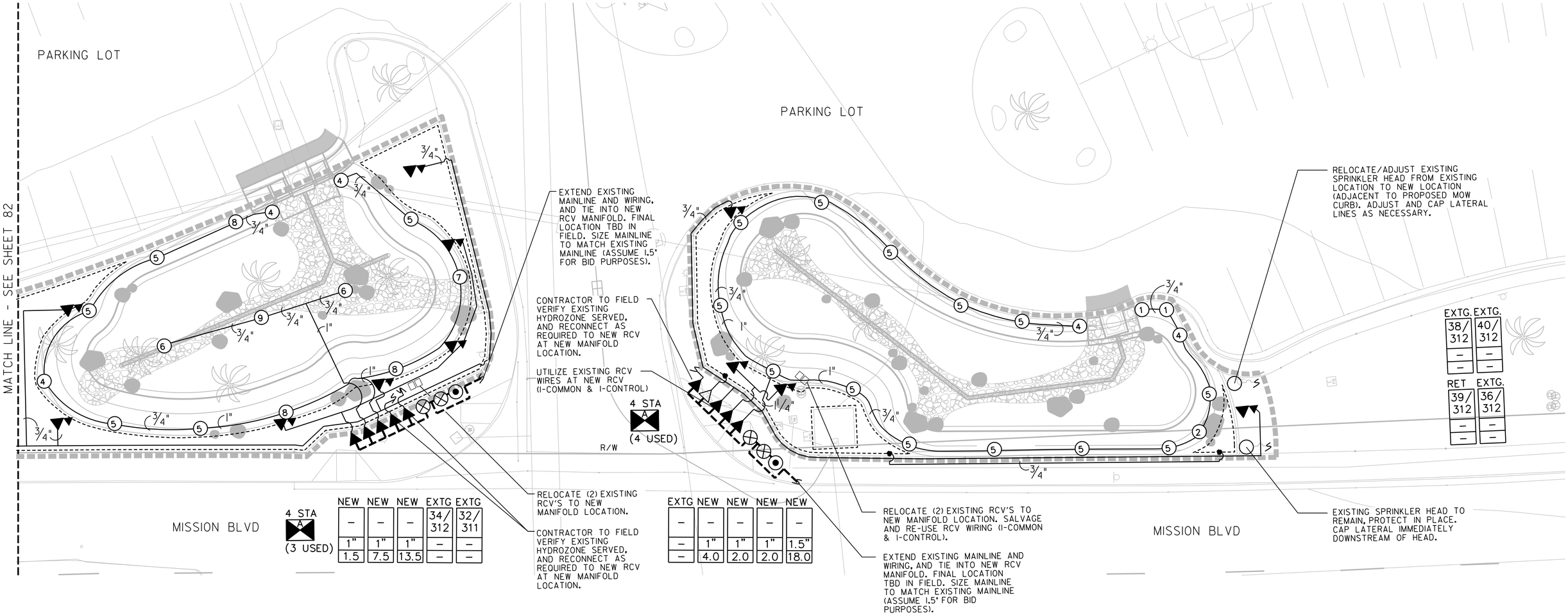
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

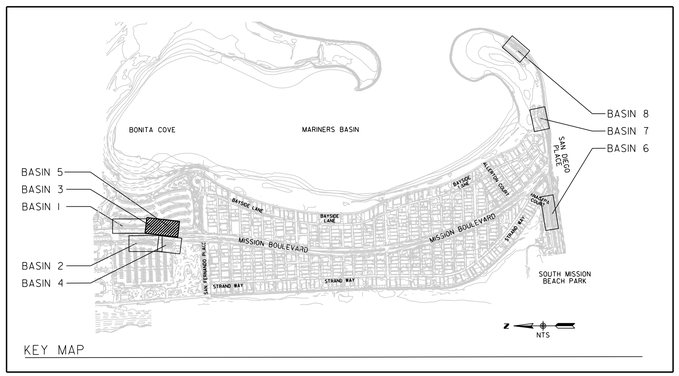
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

LICENSED LANDSCAPE ARCHITECT — Victoria Trauth, 3291 — Signature 11/30/2023 Renewal Date — STATE OF CALIFORNIA
03/13/23

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-83-D



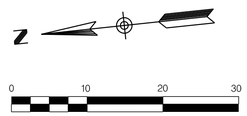


IRRIGATION NOTES

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IRRIGATION LEGEND

LANDSCAPE IRRIGATION LIMIT OF WORK LINE, TYP.



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L-11

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

IRRIGATION PLAN
BASIN 3 & 5

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 84 OF 128 SHEETS

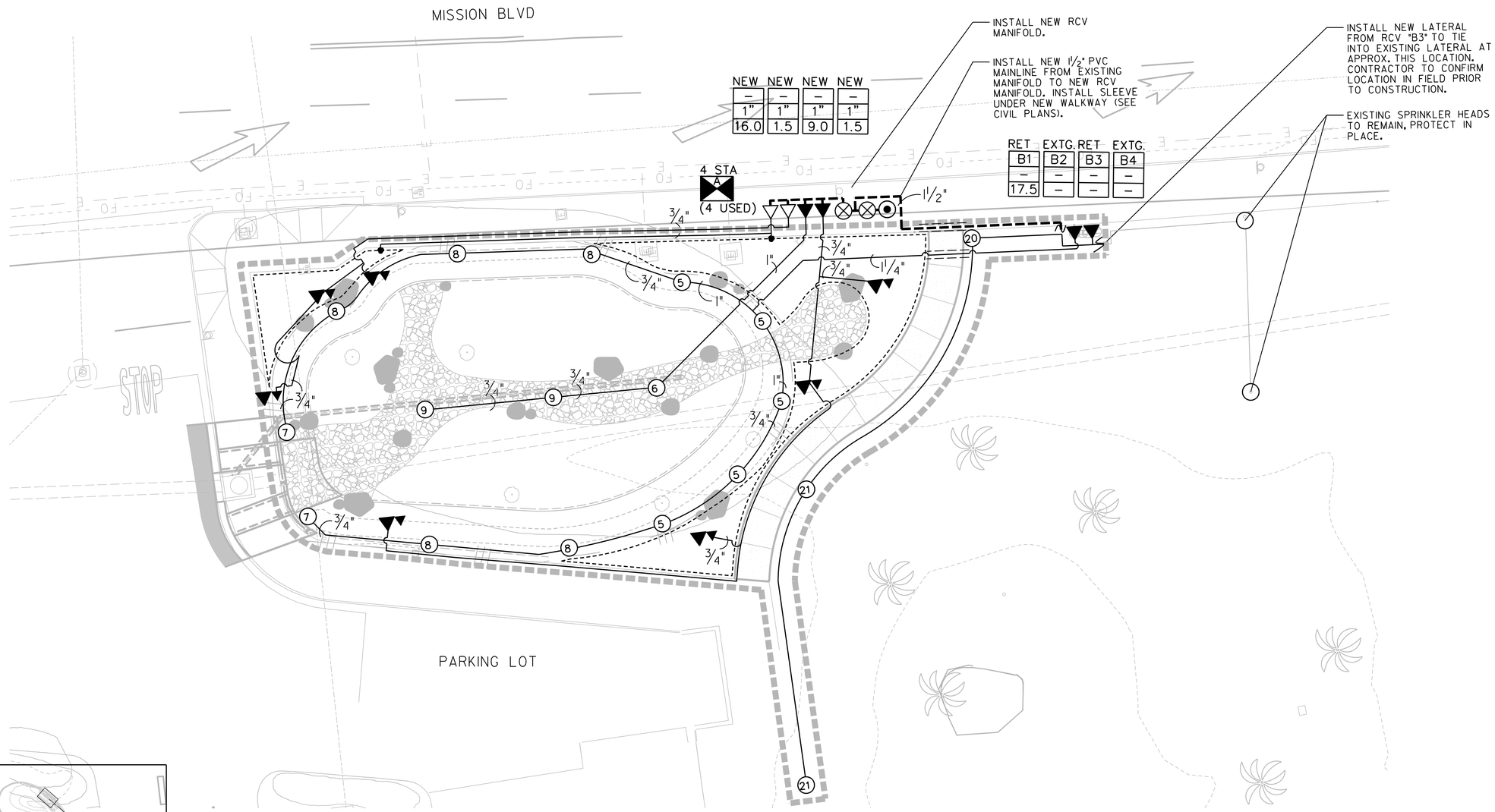
WBS B-18118 (GI) / B-18117 (SD)

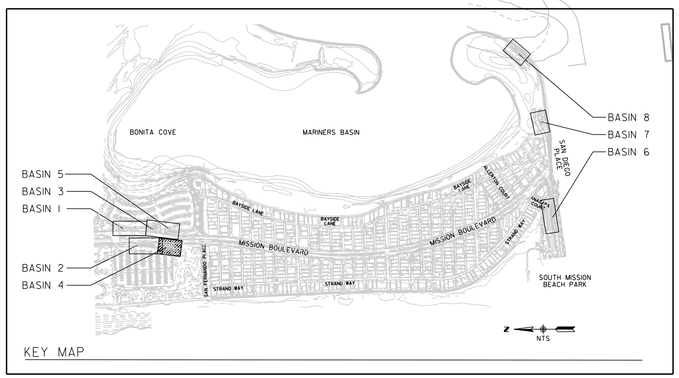
LICENSED LANDSCAPE ARCHITECT — Julia Trauth — 3224 — Signature — 11/30/2023 — Renewal Date — STATE OF CALIFORNIA
03/13/23

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE
41306-84-D

IRRIGATION PLAN





IRRIGATION NOTES

1. IRRIGATION PLANS ARE DIAGRAMMATIC. ALL PIPING, VALVE BOXES, ETC., SHALL BE LOCATED IN LANDSCAPE AREAS UNLESS OTHERWISE NOTES ON THE PLANS, OR REQUIRED BY UNAVOIDABLE SITE CONDITIONS. NO IRRIGATION EQUIPMENT SHALL BE LOCATED IN HARDSCAPE. GROUP VALVE BOXES AND LOCATE IN SHRUB AREAS.
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IRRIGATION LEGEND

LANDSCAPE IRRIGATION LIMIT OF WORK LINE, TYP.

0 10 20 30
SCALE 1" = 10'

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Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

LICENSED LANDSCAPE ARCHITECT — Patricia Trauth — 3357 — Signature 11/30/2023 — Renewal 10/31 — STATE OF CALIFORNIA
03/13/23

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

IRRIGATION PLAN

L-12

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

IRRIGATION PLAN
BASIN 4

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 85 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)
SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE
41306-85-D

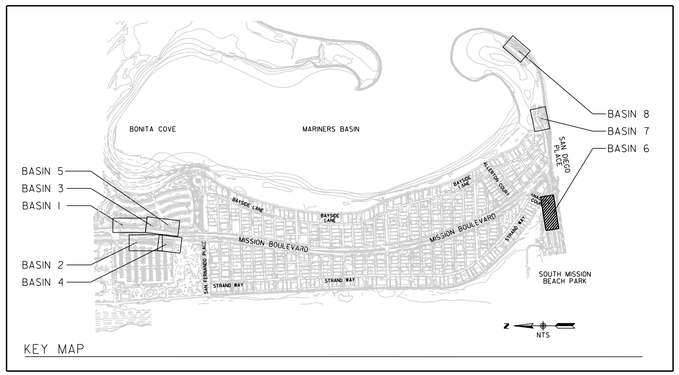
INSTALL NEW 2" PVC MAINLINE FROM EXISTING VALVE MANIFOLD. TIE IN AT THIS LOCATION.

N JETTY RD

NEW	NEW	NEW	NEW
–	–	–	–
1.5"	1"	1"	1"
23.0	16.5	5.0	16.5

4 STATION SOLAR CONTROLLER. FINAL LOCATION TO BE DETERMINED IN FIELD VERIFIED PRIOR TO INSTALLATION.

R/W



KEY MAP

IRRIGATION NOTES

1. IRRIGATION PLANS ARE DIAGRAMMATIC. ALL PIPING, VALVE BOXES, ETC., SHALL BE LOCATED IN LANDSCAPE AREAS UNLESS OTHERWISE NOTES ON THE PLANS, OR REQUIRED BY UNAVOIDABLE SITE CONDITIONS. NO IRRIGATION EQUIPMENT SHALL BE LOCATED IN HARDSCAPE. GROUP VALVE BOXES AND LOCATE IN SHRUB AREAS.
2. VALVE MANIFOLDS AND MAINLINE SHALL BE LOCATED WITHIN RIGHT-OF-WAY. VERIFY ACTUAL LOCATIONS IN FIELD WITH RESIDENT ENGINEER PRIOR TO COMMENCING WORK.
3. IRRIGATION EQUIPMENT SHOWN OUTISDE LIMIT OF WORK AREAS ARE FOR CLARITY ONLY. ALL IRRIGATION EQUIPMENT SHALL BE INSTALLED WITHIN THE LIMIT OF WORK LINES. VERIFY ALL LAYOUT IN FIELD WITH RESIDENT ENGINEER PRIOR TO INSTALLATION.
4. THE CONTRACTOR SHALL VERIFY THE AVAILABLE WATER PRESSURE AT THE P.O.C.'S AND PROVIDE THE LANDSCAPE ARCHITECT AND RESIDENT ENGINEER WITH TESTING RESULTS, IN WRITING PRIOR TO THE INITIATION OF ANY LANDSCAPE WORK.
5. SEE SHEETS L-1 THRU L-7 FOR PLANTING PLANS; SEE SHEET L-8 FOR FULL PLANTING LEGEND.
6. SEE SHEET L-16 FOR IRRIGATION LEGEND, NOTES AND DETAILS.
7. CONTRACTOR TO COORDINATE ALL WORK WITH CITY MAINTENANCE STAFF, PRIOR TO CONSTRUCTION.
8. ALL EXISTING MAINLINE AND WIRING TO BE PROTECTED IN PLACE. CONTRACTOR TO POTHOLE AND LOCATE AS REQUIRED.

IRRIGATION LEGEND

LANDSCAPE IRRIGATION LIMIT OF WORK LINE, TYP.

N

0 10 20 30

SCALE 1" = 10'

RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

LICENSED LANDSCAPE ARCHITECT — Alicia Trauth — 3222 — Signature — 11/30/2023 — Renewal Date — STATE OF CALIFORNIA

03/13/23

L-13

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

IRRIGATION PLAN
BASIN 6

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 86 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

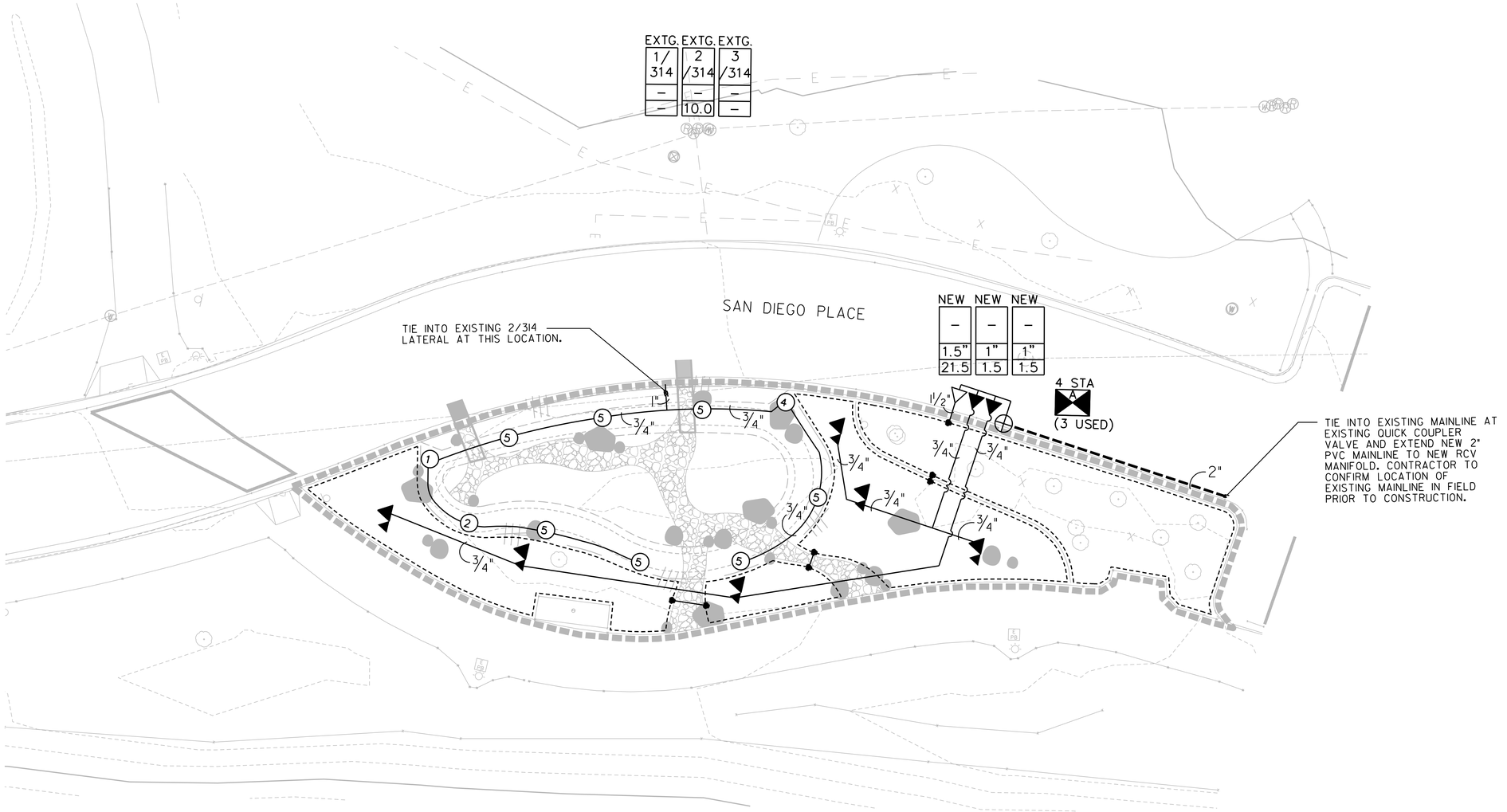
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

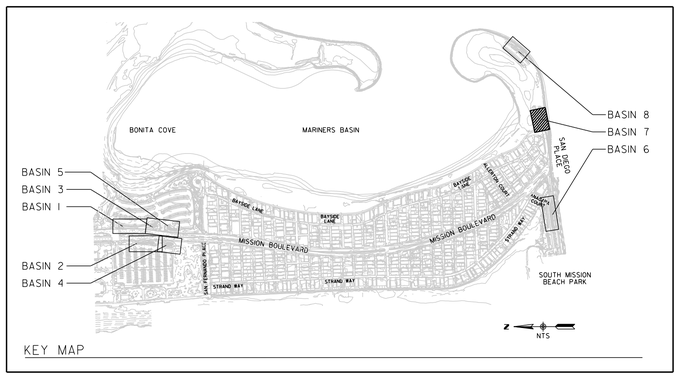
218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

41306-86-D

IRRIGATION PLAN



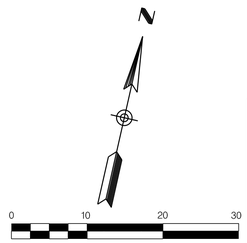


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IRRIGATION LEGEND

LANDSCAPE IRRIGATION
LIMIT OF WORK LINE, TYP.



RICK ENGINEERING COMPANY
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5620 FRIARS ROAD
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rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

LICENSED LANDSCAPE ARCHITECT
Patricia Traath - 2424
Signature
11/30/2023
Renewal Date
STATE OF CALIFORNIA
03/13/23

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

L-14

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

IRRIGATION PLAN
BASIN 7

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 87 OF 128 SHEETS

WBS B-18118 (GI)
B-18117 (SD)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

41306-87-D

IRRIGATION PLAN

EXTG. 7	EXTG. 8	EXTG. 13	EXTG. #
–	–	–	–
–	–	–	–

EXISTING VALVE MANIFOLD TO REMAIN, PROTECT IN PLACE.

PARKING LOT

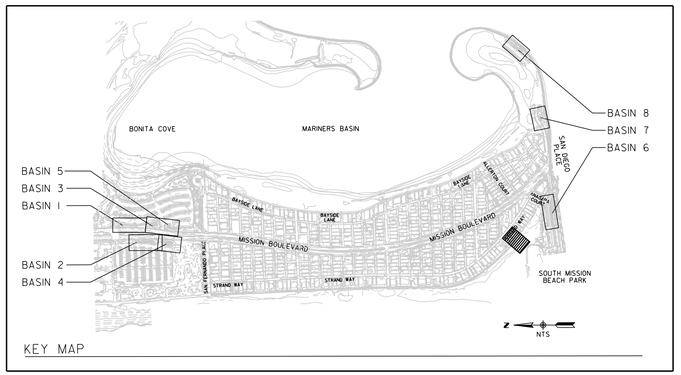
2 STA A (2 USED)

NEW A1	NEW A2
1"	1"
10.0	1.0

CONTRACTOR TO TIE INTO EXISTING MAINLINE WITHIN PLANTER AT IRRIGATION DRIVEWAY CROSSING. EXTEND MAINLINE AND SLEEVE BEYOND EXISTING SIDEWALK AND INSTALL NEW RCV MANIFOLD BEHIND SIDEWALK. CAP EXISTING LATERAL WITHIN EXISTING SLEEVE. CONTRACTOR TO CONFIRM LOCATION OF EXISTING MAINLINE IN FIELD PRIOR TO CONSTRUCTION.

3/4"

1 1/2"



KEY MAP

IRRIGATION NOTES

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LANDSCAPE IRRIGATION LIMIT OF WORK LINE, TYP.

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SCALE 1" = 10'

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Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

LICENSED LANDSCAPE ARCHITECT Lydia Trauth - 2521 Signature 11/30/2023 Renewal Date STATE OF CALIFORNIA 03/13/23

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

CONTRACTOR _____ NTP DATE _____

INSPECTOR _____ NOC DATE _____

IRRIGATION PLAN

L–15

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

IRRIGATION PLAN
BASIN 8

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 88 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

218-1689 CCS27 COORDINATE

1858-6249 CCS83 COORDINATE

41306–88–D

IRRIGATION NOTES

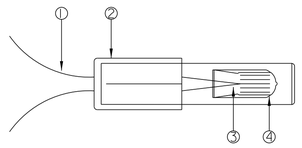
1. ALL LOCAL MUNICIPAL AND STATE LAWS, RULES, WATER PURVEYOR LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN ON THESE SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL OBTAIN ANY PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.
5. THE MAINLINE AND SLEEVING IS DIAGRAMMATIC. ALL PIPING IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED WITHIN LIMIT OF WORK BOUNDARIES AND IN SHRUB PLANTING AREAS WHERE POSSIBLE. AVOID ANY CONFLICTS BETWEEN THE SPRINKLER SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.
6. IRRIGATION EQUIPMENT AS SHOWN IS DIAGRAMMATIC. INSTALL ALL THE IRRIGATION REMOTE CONTROL VALVES, QUICK COUPLERS, MASTER VALVES, FLOW SENSOR, BACKFLOWS, AIR/VACUUM DEVICES, AND BALL VALVES, IN SHRUB PLANTING AREAS APPROVED BY OWNER'S REPRESENTATIVE AND/OR THE LANDSCAPE IRRIGATION DESIGNER.
7. DO NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.
8. INSTALL ALL EQUIPEMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
9. ACTUAL LOCATION FOR THE INSTALLATION OF THE AUTOMATIC CONTROLLER IS TO BE DETERMINED IN THE FIELD BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
10. ALL PIPE UNDER PAVED AREAS, HARDSCAPE, OR AS DIRECTED BY OWNER'S REPRESENTATIVE TO BE INSTALLED IN SLEEVING, TWICE THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED. ALL 2" AND 3" SLEEVING SHALL BE PVC 1220 SCH. 40, TYPE 1, GRADE 2 MATERIAL CONFORMING TO ASTM STANDARD D-1785-4. ALL 4" AND LARGER SLEEVING SHALL BE PVC 1220 CLASS 200 SDR21. SLEEVES UNDER BROW DITCHES SHALL BE ENCASED IN CONCRETE A MINIMUM OF 6" THICK ON ALL SIDES OF PIPE. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF PAVING. ALL WIRING SHALL BE SLEEVED UNDER PAVING AND HARDSCAPE. SEPERATE WIRING CONDUITS AND PULL BOXES FOR 120V, 24V, FS, MV, ETC. PULL BOXES EVERY 200' OR 270 DEGREES OF BEND IN CONDUIT.
11. ALL QUICK COUPLER VALVES TO BE INSTLALED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL QUICK COUPLER VALVES WITHIN 18" OF HARDSCAPE.
12. THE IRRIGATION CONTRACTOR SHALL ADJUST THE PRESSURE REGULATOR (PRS) ON EACH ELECTRIC CONTROL VALVE SO THAT THE SPRINKLER HEAD FARTHEST AND HIGHEST IN ELEVATION FROM ITS RESPECTIVE CONTROL VALVE OPERATES WITHIN THE OPERATING PRESSURE SHOWN ON THE IRRIGATION LEGEND. NOT TO EXCEED FIVE (5) PSI ABOVE THE GIVEN OPERATING PRESSURE FROM THE SPECIFIED PRESSURED LOCATED ON THE IRRIGATION LEGEND.
13. THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS ON EACH POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO START OF CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS, AND COSTS ASSOCIATED WITH REVISIONS.
14. SHOULD FIELD CONDITIONS REQUIRE PIPE INSTALLATION OTHER THAN THAT SHOWN ON PLANS, THE CONTRACTOR SHALL LIMIT EXCEESS FLOW AND SIZE ALL PIPE NOT TO EXCEED A VELOCITY OF 5 FEET PER SECOND (FPS) IN PVC PIPE. FLOW THROUGH ANCILLARY EQUIPMENT, COPPER PIPE SHALL NOT EXCEED A VELOCITY OF 7.5 FPS. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.

IRRIGATION LEGEND (EQUIPMENT)

SYMBOL	MANUFACTURER	MODEL NUMBER / DESCRIPTION	CITY OF SAN DIEGO STANDARD DRAWING
A	LEIT	SOLAR CONTROLLER MODEL XRC-EFT-6 W/SKIT 8821-4, STAINLESS STEEL ENCLOSURE ENCL-X, MOUNTING POST MCOLXL, MOUNT TO POST. CONTROLLER SHALL HAVE A DESIGNATED RECTUANGULAR PULL BOX INSTALLED AT PEDESTAL BASE. INCLUDE RADIO REMOTE HANDSET AND HUNTER MINI-CLIK WITHIN STAINLESS STEEL ENSLOSURE (SG-MC), WIRE AS REQUIRED. ALSO USE LEMA 1600HE SOLENOIDS & ADAPTER FOR REMOTE CONTROL VALVES AND THE LEIT, SKIT 8821-4 ADAPTER RAIN SENSOR KIT 8821-4. FINAL LOCATION SHALL BE IN FULL SUN, CONFIRM WITH RESIDENT ENGINEER PRIOR TO INSTALLATION. NOTE: IRRIGATION CONTROLLER SHALL BE CERTIFIED BY MANUFACTURER'S REPRESENTATIVE AFTER ALL COMPONENTS HAVE BEEN INSTALLED AS REQUIRED.	SDI-116
A	HUNTER	WVC-100 (SINGLE RCV) W/ DC-LATCHING SOLENOID (458200). WVC-200 & WVC-400 (MULTIRCV) W/ DC-LATCHING SOLENOID (458200). CONTRACTOR TO PROVIDE TWO (2) WVP. INSTALL PER MANUFACTUERER'S RECOMMENDATIONS.	--
▼	RAINBIRD	EFB-CP SERIES BRASS REMOTE CONTROL VALVE W/ LEMA 1600HE 30-921, SIZE AS SHOWN. INSTALL ONE VALVE IN VALVE BOX PER STANDARD DETAIL. EFB-CP SERIES SHALL BE USED ONLY WHEN FLOW DEMAND IS 5 GPM OR GREATER (PER PLAN).	SDI-114, -126
▼	RAINBIRD	PEB SERIES PLASTIC REMOTE CONTROL VALVE, SIZE AS SHOWN. INSTALL ONE VALVE IN VALVE BOX PER STANDARD DETAIL. PEB SERIES SHALL BE USED ONLY WHEN SYSTEM DEMAND IS LESS THAN 5 GPM (PER PLAN).	SDI-114, -126
▽	RAINBIRD	PRESSURE REGULATING DRIP CONTROL ZONE KIT (21-40 GAL - XCS-150-PRB-COM, 3-20 GAL - XCZ-100-PRB-COM). INSTALL ONE VALVE IN VALVE BOX PER STANDARD DETAIL.	SDI-127
⊗	NIBCO	GLOBE/GATE VALVE WITH CROSS HANDLE (2" OR SMALLER), DUCTILE IRON FLANGE W/ SQUARE NUT TOP (3" AND LARGER). SIZE TO BE LINE SIZE.	SDI-106
◉	RAINBIRD	44LRC QUICK COUPLING VALVE. EACH QCV SHALL BE ISOLATED FROM THE MAINLINE BY A 1" GLOBE VALVE, TYP.	SDI-105
PB	AS APPROVED	PULL BOXES FOR WIRE SPLICES SHALL BE LOCATED AT CHANGES IN DIRECTION AND AT THE ENDS OF ALL SLEEVES UNDER PAVING. PULL BOXES SHALL BE INSTALLED PER STANDARD DETAIL.	SDI-115
———	AS APPROVED	PVC PIPE 3/4" - 2" SCHEDULE 40 AS LATERAL LINES. SHALL BE SOLVENT WELD W/ SCHEDULE 80 FITTINGS, 15" BELOW GRADE; WHERE 12" POP-UPS ARE USED, LATERAL LINES SHALL BE 18" BELOW GRADE.	SDI-120, -123
- - - - -	AS APPROVED	PVC PIPE MAINLINES, 2-2.5" SHALL BE SOLVENT WELD CLASS 315 WITH SCHEDULE 80 SOLVENT WELD FITTINGS. ALL FITTINGS SHALL HAVE THRUST BLOCKS 21" BELOW GRADE. COORDINATE WITH SPECIFICATIONS.	SDI-110, -119
= = = = =	AS APPROVED	PVC PIPE AS SLEEVING, TWICE THE DIAMETER OF PIPE OR WIRE BUNDLE BELOW ALL PAVING, HARDSCAPE ETC., AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE. ALL 2" AND 3" SLEEVING SHALL BE PVC 1220 SCHEDULE 40 TYPE 1, GRADE 2 MATERIAL CONFORMING TO ASTM STANDARD D-1785-4. ALL 4" AND LARGER SLEEVING SHALL BE PVC 1220 CLASS 200 SDR21, TYPE 1, GRADE 2 MATERIAL CONFORMING TO ASTM STANDARD D-2241.	
	PEN-TITE	WIRE CONNECTORS, USE ON ALL WIRE CONNECTIONS - DRISPLICE 100 CONNECTORS FILLED WITH DRISPLICE EPOXY.	A
	DIRECT BURIAL	IRRIGATION CONTROL WIRE	SDI-119

IRRIGATION LEGEND (SPRINKLER HEADS, BUBBLERS & DRIP IRRIGATION)

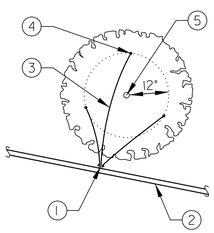
SYMBOL (O H F)	MANUFACTURER	MODEL NUMBER / DESCRIPTION	GPM	PRECIP	PSI	RADIUS (FT.)	CITY OF SAN DIEGO STANDARD DRAWING
1 2 3	RAINBIRD	RD-06/12-SP45NP-R-VAN14 / R8-14F	0.32, 0.73, 1.27	0.62	45	8-14	SDI-103
4 5 6	RAINBIRD	RD-06/12-SP45NP-R-VAN18 / R13-18F	0.50, 1.17, 1.85	0.64	45	13-18	SDI-103
7 8 9	RAINBIRD	RD-06/12-SP45NP-R-VAN24 / R17-24F	0.84, 1.96, 3.48	0.61	45	17-24	SDI-103
20 21	HUNTER	I-40 (FIELD VERIFY AND MATCH EXISTING NOZZLE TYPE)	--, --, --	--	--	--	SDI-103
●▸	RAINBIRD	XBT-05-6 SERIES - MULTI-PORT DRIP EMITTER	.5 GPH / OUTLET		20		SDI-127, -128, -129 B, C
▼▼	RAINBIRD	1- RWS-B-1401 W/ 1RWS W/ PROS-02-PRS40 & 1401 BUBBLER	.25 EA (.5 / SYMBOL)		40		SDI-103 SDI-104



① LOW VOLTAGE WIRES, 3 MAXIMUM
② OUTER CASE OF CONNECTOR
③ STRIP AND TWIST WIRES FOR PROPER CONNECTION
④ WIRE NUT

NOTE:
INSPECT, TEST, AND VERIFY PROPER SYSTEM CONNECTION BEFORE INSERTION INTO SEALANT CARTRIDGE. DO NOT RESUSE SEALANT CARTRIDGES.

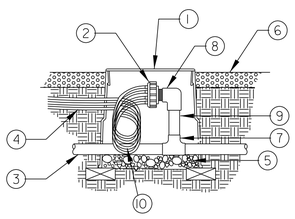
A WIRE CONNECTOR
NOT TO SCALE



① MULTI-OUTLET DRIP EMITTER
② PVC LATERAL
③ 1/4" DISTRIBUTION TUBING
④ DISCHARGE POINT, TO BE 1" ABOVE FINISH GRADE
⑤ TRUNK

EMITTER SCHEDULE	
SHRUB SIZE	EMITTERS PER SHRUB
1 GAL	2
5 GAL	2
15 GAL	3

B EMITTER PLACEMENT AT SHRUBS
NOT TO SCALE



① 6" ROUND VALVE BOX
② MULTI-OUTLET DRIP EMITTER PER LEGEND
③ PVC LATERAL
④ 1/4" DISTRIBUTION TUBING
⑤ 3" MIN. DEPTH OF 3/4" WASHED GRAVEL
⑥ FINISH GRADE
⑦ PVC SCH 40 TEE
⑧ PVC SCH 40 ELL
⑨ 1/2" PVC RISER
⑩ PROVIDE 12" LOOP OF ADDITIONAL 1/4" TUBING IN EACH BOX.

C MULTI-OUTLET DRIP EMITTER
NOT TO SCALE

VALVE CALLOUT KEY

SYMBOL	NEW	RET.	EXTG.
VALVE I.D.	A1	A1	A1
VALVE SIZE	1"	1"	—
GPM	8.0	8.0	—

NEW RCV:
INSTALL NEW RCV MANIFOLD (PER SDI-126) & MAINLINE PER PLAN, TO SERVE NEW IRRIGATION SYSTEM PER PLAN. INSTALL NEW BATTERY OPERATED CONTROLLER AS SHOWN ON IRRIGATION PLANS.

RETROFIT EXISTING RCV:
EXISTING RCV TO BE PROTECTED IN PLACE. RETROFIT NEW IRRIGATION SYSTEM DIRECTLY DOWNSTREAM FROM EXISTING RCV PER PLAN. UTILIZE EXISTING RCV IN PLACE.

EXISTING RCV TO REMAIN:
EXISTING RCV TO BE PROTECTED IN PLACE, ALONG WITH EXISTING IRRIGATION SYSTEM BEING SERVED DOWNSTREAM.

NOTE: VALVE I.D. ON VALVE BOX TO BE PROVIDED BY CITY.

PIPE SIZING CHART

MAINLINE PIPE SIZING SCH 40/CL 315

SIZE	GPM
1"	9-12
1-1/4"	13-22
1-1/2"	23-30
2"	31-50
2-1/2"	51-70
3"	71-100

LATERAL PIPE SIZING SCH 40

SIZE	GPM
3/4"	0-8
1"	9-12
1-1/4"	13-22
1-1/2"	23-30
2"	31-50
2-1/2"	51-70

NOTE: VELOCITY SHALL NOT EXCEED 5 FPS

RICK ENGINEERING COMPANY
San Diego
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165
rickengineering.com
Riverside - Orange - Sacramento - San Luis Obispo - Phoenix - Tucson - Denver

L-16

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

IRRIGATION LEGEND, NOTES & DETAILS

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 89 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

LICENSED LANDSCAPE ARCHITECT — Patricia Traath — 3742 — Signature 11/30/2023 Renewal Date — STATE OF CALIFORNIA
03/13/2023

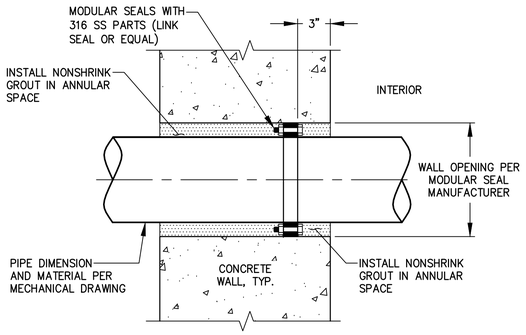
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

218-1689 CCS27 COORDINATE
1858-6249 CCS83 COORDINATE

CONTRACTOR _____ NTP DATE _____
INSPECTOR _____ NOC DATE _____

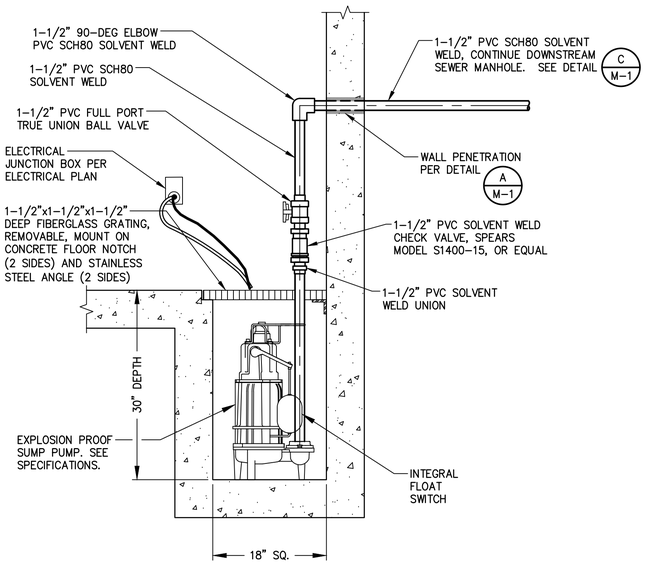
41306-89-D

IRRIGATION LEGEND, NOTES & DETAILS



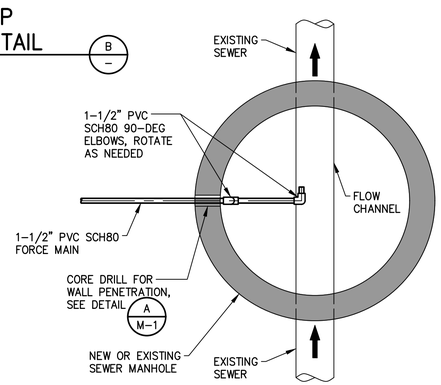
WALL PENETRATION DETAIL (A / VAR)

NO SCALE

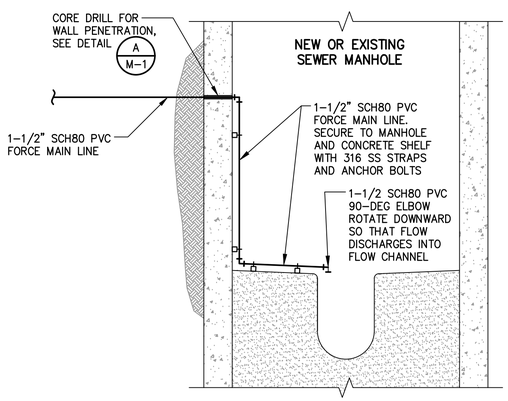


VAULT SUMP AND PUMP DETAIL (B / –)

NO SCALE



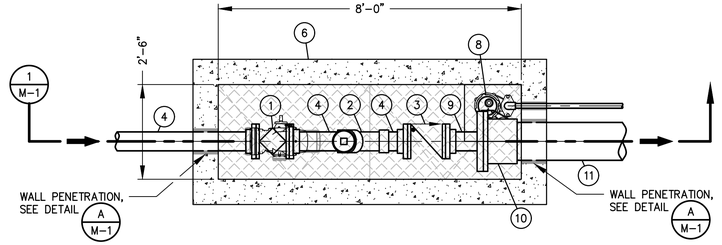
PLAN



SECTION

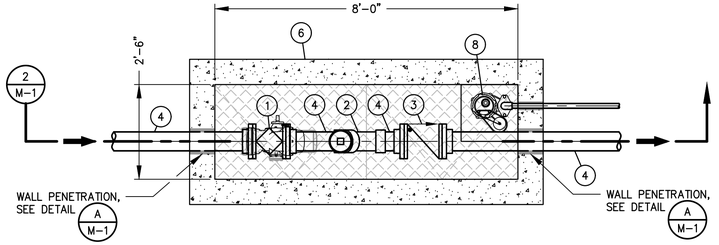
FORCE MAIN DISCHARGE DETAIL (C / –)

NO SCALE



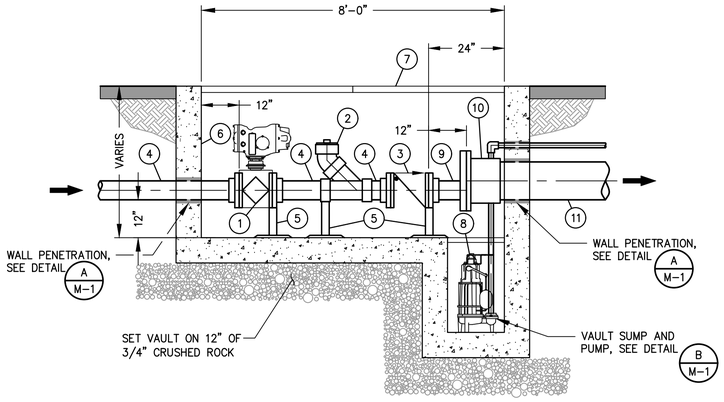
LOW FLOW DIVERSION 12" DISCHARGE GRAVITY VAULT PLAN

NO SCALE

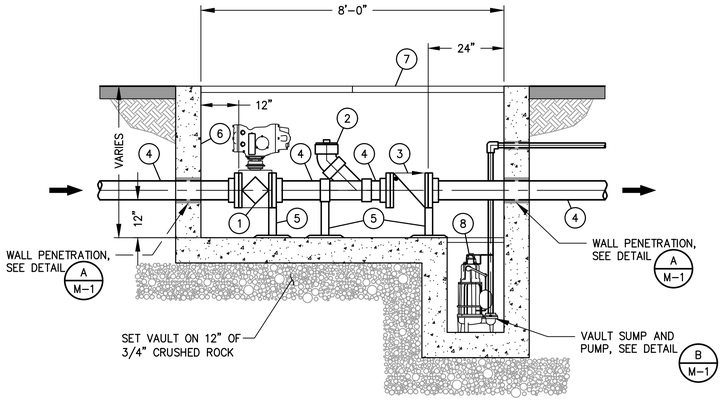


LOW FLOW DIVERSION 6" DISCHARGE GRAVITY VAULT PLAN

NO SCALE



LOW FLOW DIVERSION 12" DISCHARGE GRAVITY VAULT SECTION (1 / M-1)



LOW FLOW DIVERSION 6" DISCHARGE GRAVITY VAULT SECTION (2 / M-1)

MATERIALS LIST

1. 6" ECCENTRIC PLUG VALVE, CLASS 150 FLANGED, WITH ELECTRIC MOTOR ACTUATOR AND MANUAL BYPASS HAND WHEEL, SEE SPECIFICATIONS.
2. 6" PVC SCH 80 DWV COMBINATION WYE AND 45-DEG ELBOW, SOLVENT WELDED, SPEARS PART NO. 3977-060 OR EQUAL, WITH 6" THREADED CAP ON WYE
3. WAPRO WASTOP NPS 6" INLINE CHECK VALVE MODEL PVC SCH 80 BODY AND FLANGES, CLASS 125 LB FLANGE DRILL PATTERN, SEE SPECIFICATIONS.
4. 6" PVC SCH 80 DWV PIPE, FLANGED x SOLVENT WELD END
5. PIPE SUPPORT, ALL 304 STAINLESS STEEL COMPONENTS INCLUDING ANCHOR BOLTS TO CONCRETE VAULT FLOOR, TYP. OF 3
6. 2'-6" x 8'-0" INSIDE DIMENSION x DEPTH AS REQUIRED PRECAST CONCRETE VAULT, WITH INTEGRAL FLOOR SUMP, MINIMUM 6" WALLS AND FLOORS, VAULT SUPPLIER TO SUBMIT CALCULATIONS FOR REQUIRED THICKNESS OF WALLS AND FLOOR. COAT OUTSIDE OF VAULT WITH CONCRETE CURING/WATERPROOFING COMPOUND. SEAL JOINTS WITH WATERPROOF MASTIC.
7. TWO-PIECE GALVANIZED CHECKER PLATE VAULT COVER RATED FOR H20 TRAFFIC LOADING, WITH 316 STAINLESS STEEL HOLD-DOWN BOLTS, FOUR PER PANEL.
8. 18" x 18" x 30" DEEP SUMP INTEGRAL TO VAULT WITH 1/2 HP EXPLOSION PROOF PER SPECIFICATIONS SUMP PUMP, AND 1-1/2" SCH80 PVC PUMP DISCHARGE ROUTED TO SEWER MANHOLE.
9. 6" x 12" PVC SCH 80 ECCENTRIC FLANGED REDUCER, CUSTOM FABRICATED BY SPEARS MANUFACTURING COMPANY, DWG NO. C-3996-666, PART NO. C-3996-666
10. 12" PVC SCH 80 DWV SLIP ON SOLVENT WELD FLANGE
11. 12" PVC SCH 80 DWV PIPE, SOLVENT WELD

DEXTER WILSON ENGINEERING, INC.
CONSULTING ENGINEERS
2234 FARADAY AVENUE
CARLSBAD, CA 92008
(760) 438-4422

LOW FLOW DIVERSION DETAILS 1

M-1

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

LOW FLOW DIVERSION DETAILS 1

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 90 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DCE NAME — DATE 12/18/2023 — RCE# C91224

SUBMITTED BY: KAREN VERA PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	DWEI		12/18/23	

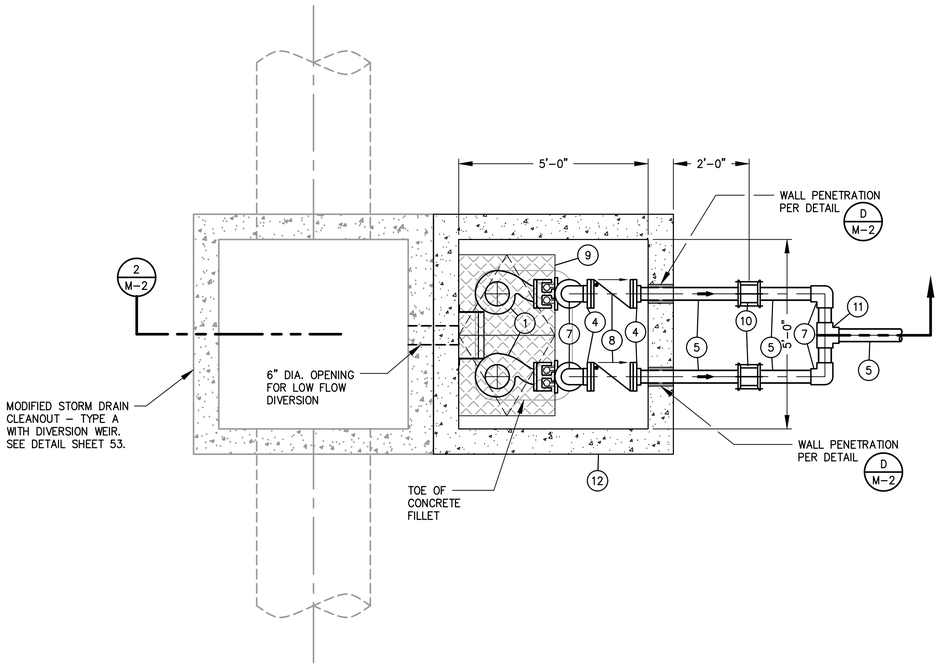
SEE EACH SHEET CCS27 COORDINATE

SEE EACH SHEET CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — ANDREW M. OVERY — No. 41068 — EXP. 3/31/23 — CIVIL — STATE OF CALIFORNIA
3-6-2023

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-90-D

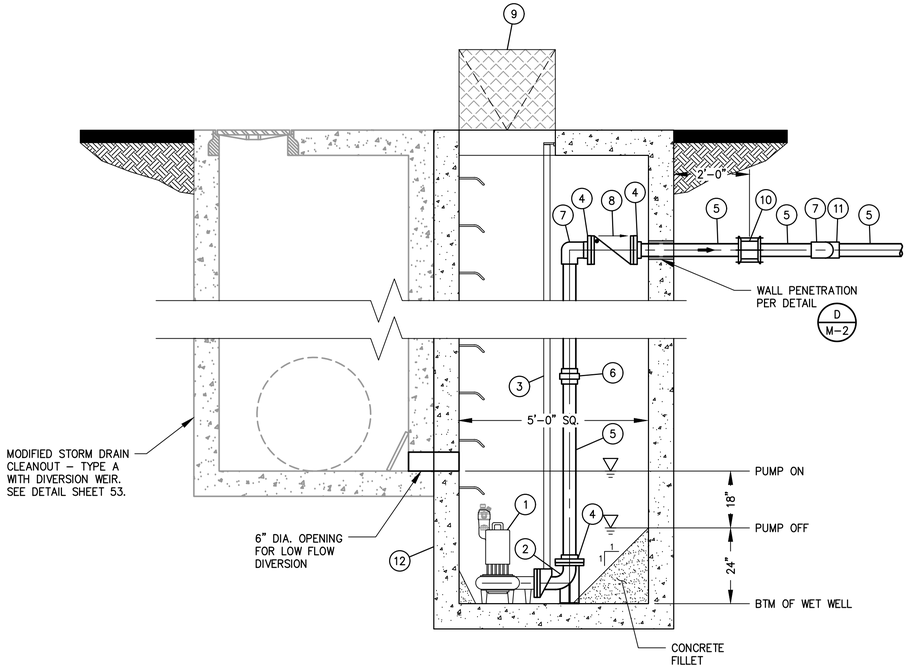


LOW FLOW DIVERSION WET WELL VAULT PLAN

NO SCALE

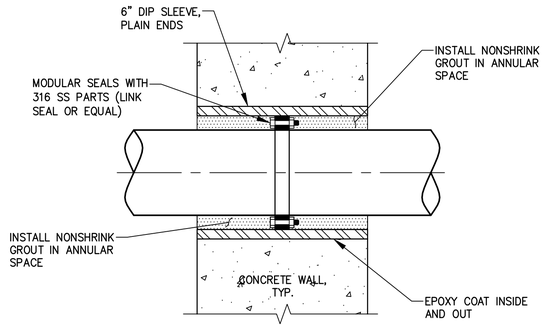
MATERIALS LIST

1. 210 GPM AT 36 FEET TOTAL DYNAMIC HEAD. PUMPS SHALL BE DRIVEN BY MAXIMUM 5 HORSEPOWER, 1,750 RPM, 240 VOLT, THREE PHASE MOTOR. SEE PUMP AND MOTOR SPECIFICATIONS.
2. 4" DIP 90-DEG FLANGED BASE ELBOW, FUSION BONDED EPOXY LINED AND COATED
3. STAINLESS STEEL GUIDE RAIL SYSTEM PER SPECIFICATIONS
4. 4" PVC FLANGE ONE PIECE, SOLVENT WELDED
5. 4" PVC SCH 80 PIPE WITH SOLVENT WELDED JOINTS (FORCE MAIN)
6. 4" PVC SCH 80 UNION, SOLVENT WELDED
7. 4" PVC SCH 80 90-DEG ELBOW, SOLVENT WELDED
8. 4" FLEXIBLE DISK CHECK VALVE, FLANGED, MILLIKEN FIG. 851 OR APPROVED EQUAL, INTERIOR AND EXTERIOR EPOXY COATING
9. STEEL CHECKER PLATE ACCESS HATCH, APPROXIMATELY 30.5" x 51" TO BE CONFIRMED WITH PUMP SUPPLIER TO ENSURE PROPER SIZE FOR REMOVAL OF PUMPS. DOUBLE LEAF HATCH RATED FOR H20 LOAD. PANELS SHALL HAVE SPRING ASSISTED OPENING MECHANISM WITH ALL 316 STAINLESS STEEL HARDWARE REQUIRING A MAXIMUM OF 40 LB. PULL TO OPEN. PANELS SHALL HAVE AUTOMATIC POSITIVE HOLD-OPEN MECHANISM. PROVIDE WITH SINGLE, HINGED ACCESS, RECESSED LOCKING HASP CAPABLE OF SECURING BOTH PANELS.
10. 4" FLEXIBLE COUPLING
11. 4" PVC SCH 80 TEE, SOLVENT WELDED
12. CAST-IN-PLACE STORM DRAIN WET WELL. SEE STANDARD DRAWING D-09 AND SSD-114 FOR RIENFORCEMENT, WALL THICKNESS, AND STEP DETAILS.



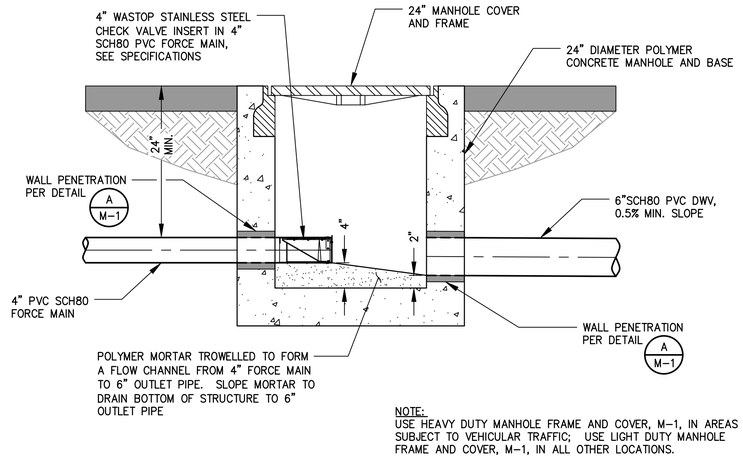
LOW FLOW DIVERSION WET WELL VAULT SECTION

NO SCALE



WALL PENETRATION DETAIL

NO SCALE



NOTE:
USE HEAVY DUTY MANHOLE FRAME AND COVER, M-1, IN AREAS SUBJECT TO VEHICULAR TRAFFIC; USE LIGHT DUTY MANHOLE FRAME AND COVER, M-1, IN ALL OTHER LOCATIONS.

FORCE MAIN DIVERSION STRUCTURE DETAIL

NO SCALE

DEXTER WILSON ENGINEERING, INC.
CONSULTING ENGINEERS
2234 FARADAY AVENUE
CARLSBAD, CA 92008
(760) 438-4422

LOW FLOW DIVERSION DETAILS 2

M-2

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

LOW FLOW DIVERSION DETAILS 2

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 91 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI PRINT DOE NAME — RCE # C91224

SUBMITTED BY: KAREN VERA PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

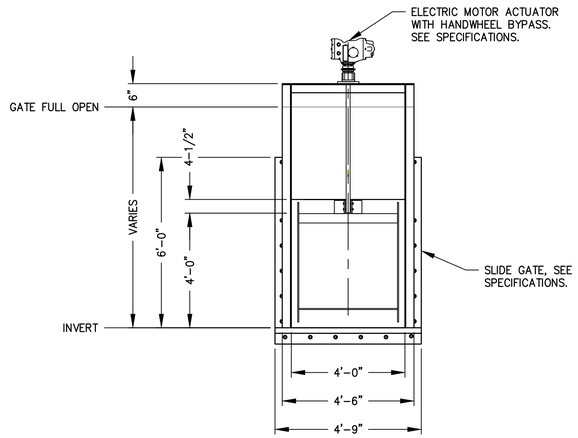
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	DWEI		12/18/23	

REGISTERED PROFESSIONAL ENGINEER ANDREW M. OVERLY No. 41068 CIVIL STATE OF CALIFORNIA 3-6-2023 — 3/31/23

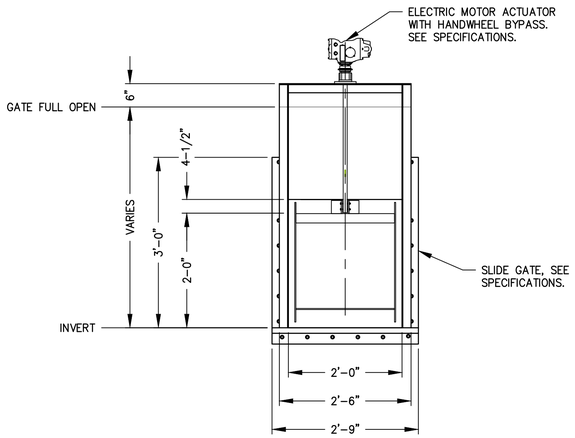
SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

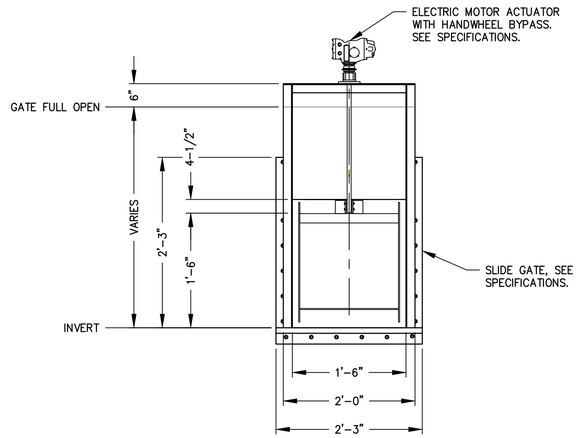
41306-91-D



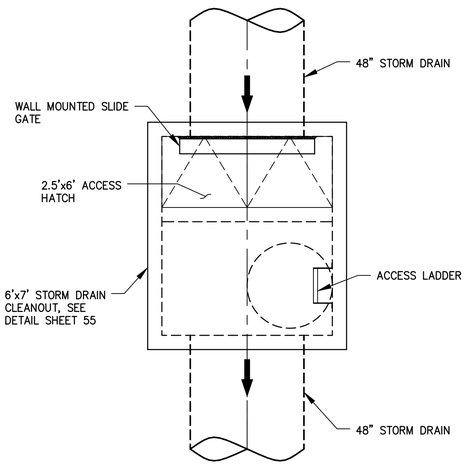
48" SLIDE GATE
NO SCALE



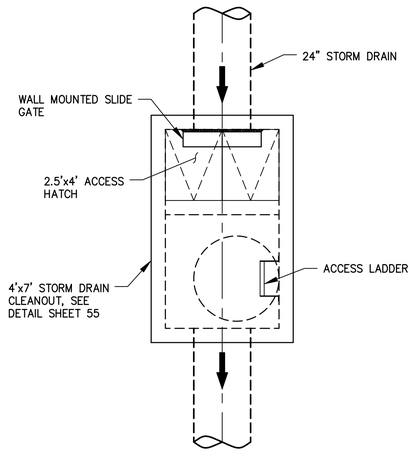
24" SLIDE GATE
NO SCALE



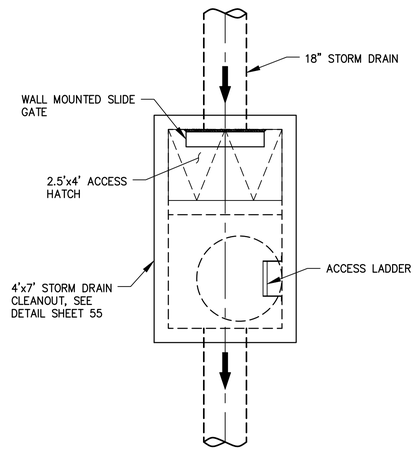
18" SLIDE GATE
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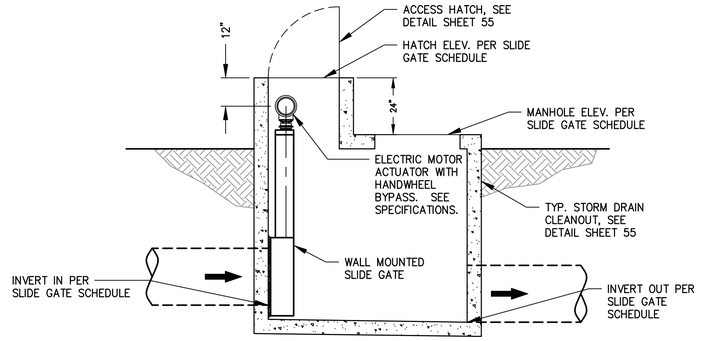
48" SLIDE VAULT PLAN
NO SCALE



24" SLIDE VAULT PLAN
NO SCALE



18" SLIDE VAULT PLAN
NO SCALE



TYPICAL SECTION
NO SCALE

SOUTH MISSION BEACH STORM DRAIN SLIDE GATE SCHEDULE							
LABEL	STRUCTURE	STATION	GATE SIZE, SQUARE	MANHOLE RIM ELEV	HATCH ELEV	INVERT IN AT GATE	INVERT OUT
1A	MOD TYPE A-7 CO W/ SLIDE GATE	4+95.83	48"	7.15	9.15	-7.79	-8.39
2A	MOD TYPE A-6 CO W/ SLIDE GATE	4+25.36	48"	5.52	7.52	-9.61	-10.21
3A	MOD TYPE A-6 CO W/ SLIDE GATE	3+38.45	48"	6.89	8.89	-9.81	-10.41
5A	MOD TYPE A-4 CO W/ SLIDE GATE	3+48.30	18"	7.22	9.22	-2.86	-3.46
6A	MOD TYPE A-4 CO W/ SLIDE GATE	3+75.74	18"	6.32	8.32	-1.80	-2.40
7A	MOD TYPE A-4 CO W/ SLIDE GATE	1+46.27	18"	9.43	11.43	1.88	1.28
9A	MOD TYPE A-4 CO W/ SLIDE GATE	5+46.99	24"	10.00	12.00	-3.03	-3.61

SLIDE GATE DETAILS
NO SCALE
F
VAR

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CARLSBAD, CA 92008
(760) 438-4422

SLIDE GATE DETAILS

M-3

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

SLIDE GATE DETAILS

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 92 OF 128 SHEETS

WBS B-18118 (GI) B-18117 (SD)

REGISTERED PROFESSIONAL ENGINEER ANDREW M. OVERLY No. 41068 CIVIL STATE OF CALIFORNIA
3-31-25
3-6-2023

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI PRINT DCE NAME — RCE# C91224

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	DWEI		12/18/23	

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER
SEE EACH SHEET, CCS27 COORDINATE
SEE EACH SHEET, CCS83 COORDINATE

CONTRACTOR
INSPECTOR
NTP DATE
NOC DATE

41306-92-D

ELECTRICAL SYMBOLS AND ABBREVIATIONS

CONDUIT PLAN	SINGLE LINE DIAGRAM	SCHEMATIC DIAGRAM	DESCRIPTION
	50A 3P		CIRCUIT BREAKER. UPPER NUMBER IS TRIP RATING. LOWER NUMBER IS NUMBER OF POLES
■			THREE POSITION SWITCH. MAINTAINED CONTACT FUNCTION MAY VARY AS NOTED ON DIAGRAMS. CENTER IS OFF.
■			TWO POSITION SWITCH. MAINTAINED CONTACT FUNCTION MAY VARY AS NOTED ON DIAGRAMS
■			MOMENTARY CONTACT PUSHBUTTON. FUNCTION MAY VARY AS NOTED ON DIAGRAMS.
■ LOS		LOS	MOMENTARY CONTACT PUSHBUTTON WITH PROVISION FOR LOCKOUT.
			LOCKABLE DISCONNECT SWITCH. RATING AND DETAILS AS NOTED ON DRAWINGS.
■ ZS			LIMIT SWITCH. NORMALLY OPEN
■ ZS			LIMIT SWITCH. NORMALLY CLOSED
		ICTO	TIME DELAY RELAY CONTACT. OFF DELAY, INSTANTANEOUS CLOSED, TIME OPEN
		ICTC	TIME DELAY RELAY CONTACT. OFF DELAY, INSTANTANEOUS CLOSED, TIME CLOSED
		NOTC	TIME DELAY RELAY CONTACT. ON DELAY, NORMALLY OPEN, TIME CLOSED
		NCTO	TIME DELAY RELAY CONTACT. ON DELAY, NORMALLY CLOSED, TIME OPEN
■ SOV			SOLENOID OPERATED VALVE
			MOTOR CONTROL CENTER DRAWOUT STABS
☒	2		MOTOR STARTER WITH THERMAL OVERLOADS. NUMBER INDICATES NEMA SIZE
			MOTOR OVERLOAD CONTACT
(2)	(2)	(2)	MOTOR, NUMBER INDICATES HORSEPOWER
		(R)	INDICATING LIGHT, PUSH-TO-TEST. LETTER INDICATES COLOR. R=RED B=BLUE G=GREEN A=AMBER W=WHITE
		M	CONTACTOR OR RELAY COIL. LETTER OR NUMBER IS DESIGNATION
		M	NORMALLY CLOSED CONTACT. LETTER OR NUMBER IS DESIGNATION
		M	NORMALLY OPEN CONTACT. LETTER OR NUMBER IS DESIGNATION
		RTM	RUNNING TIME METER, NON-RESETTABLE
	20A	5A	FUSE, NUMBER INDICATES RATING
			CONTROL TRANSFORMER. RATING AS NOTED ON DRAWINGS OR AS REQUIRED BASED ON LOAD SERVED.

CONDUIT PLAN	SINGLE LINE DIAGRAM	SCHEMATIC DIAGRAM	DESCRIPTION
T			POWER TRANSFORMER. RATINGS AS NOTED ON DRAWINGS
			DUPLEX RECEPTACLE. 20A, SPEC GRADE GROUNDING TYPE. UNLESS OTHERWISE NOTED ON DRAWINGS.
	◀		TELEPHONE OUTLET
J			JUNCTION BOX OR CONDUIT FITTING AS NOTED OR REQUIRED. (SHOWN WITH CONDUIT TURNING UP)
■ LS			LEVEL SWITCH, CONTACT ACTION AS NOTED ON DRAWINGS
			CONTROL PANEL OR EQUIPMENT AS NOTED.
■ FS			FLOW SWITCH, CONTACT ACTION AS NOTED ON DRAWINGS
$			FLUSH TOGGLE SWITCH, SINGLE POLE, SINGLE THROW
$3			FLUSH TOGGLE SWITCH, THREE WAY
			FLUORESCENT FIXTURE. SEE LIGHTING SCHEDULE.
			LIGHTING FIXTURE, WALL MOUNTED SEE LIGHTING SCHEDULE
PB			MH-MANHOLE PB-PULLBOX HH-HANDHOLE OR AS NOTED ON DRAWINGS
T			TELEPHONE CONDUIT. SIZE AS NOTED
G			GROUNDING GRID OR GROUNDING CONDUCTOR SIZE AS REQUIRED OR AS NOTED ON DRAWINGS.
G			GROUND PIGTAIL. SIZE AS NOTED ON DRAWINGS.
G			EXOTHERMIC GROUND CONNECTION
G			BOLTED GROUND CONNECTION
			CONDUIT BENDING UP
			CONDUIT BENDING DOWN
			UNDERGROUND OR CONCEALED CONDUIT, 1" MINIMUM.
			EXPOSED CONDUIT, 3/4" MINIMUM.
PB1 1,3,5			HOMERUN CONDUIT WITH 3 CONDUCTORS, NEUTRAL, AND GROUND, CIR. 1,3,5 PANEL PB1, NO HASHMARKS INDICATE 2 CONDUCTORS AND GROUND

CONDUIT PLAN	SINGLE LINE DIAGRAM	SCHEMATIC DIAGRAM	DESCRIPTION
$M	M	M	MANUAL MOTOR STARTER
			GROUND
			HEATER, RATING AS NOTED ON DRAWING
			HORN OR AUDIBLE SIGNAL
			PHASE
			TERMINAL, INTERNAL WIRING
			TERMINAL, FIELD WIRING
■ DS			DOOR SWITCH
			CONDUIT STUB OUT
F XX	XX		DISC SWITCH, F = FUSED NF = NON-FUSED XX = AMP RATING
			TELEMETRY INPUT POINT
			PLC INPUT POINT AT RTU
			KILOWATT METER
■ PS			PRESSURE SWITCH. CONTACT ACTION AS NOTED ON DRAWINGS
			LIQUIDTIGHT FLEXIBLE CONDUIT
XXX	XXX		CONDUIT NUMBER 'XXX', REFER TO CONDUIT SCHEDULE FOR DESCRIPTION DESCRIPTION
			DRIVEN GROUND ROD/TEST WELL 3/4" X 10' Cu CLAD STEEL
		▬	PANELBOARD OR AS NOTED ON DRAWING

STANDARD ABBREVIATIONS

A	AMPERES
AC	ALTERNATING CURRENT
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
BC	BARE COPPER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
C.O.	CONDUIT ONLY
CPT	CONTROL POWER TRANSFORMER
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
CU	COPPER
CR	CONTROL RELAY
DC	DIRECT CURRENT
DISC	DISCONNECT
DWG	DRAWING
DS	DOOR SWITCH
EL,ELEV	ELEVATION
EXIST	EXISTING
FBO	FURNISHED BY OWNER
FLA	FULL LOAD AMPS
FM	FLOW METER
FS	FLOW SWITCH
FT OR '	FEET OR FOOT
FT	FLOW TRANSMITTER
FUT	FUTURE
FVNR	FULL VOLTAGE NON REVERSING
GD	GAS DETECTORS
GFI	GROUND FAULT INTERRUPTER
G	GROUND
HH	HANDHOLE
HOA	HAND/OFF/AUTO
HTR	HEATER
ICTO	INSTANTANEOUS CLOSED, TIME OPEN
IN OR "	INCHES OR INCH
IOTC	INSTANTANEOUS OPEN, TIME CLOSE
JB OR J	JUNCTION BOX, CONDULET OR FITTING AS REQUIRED BY NEC. UNLESS OTHERWISE NOTED
KAIC	KILOAMPS INTERRUPTING CURRENT
KW	KILOWATTS
LCL	LONG CONTINUOUS LOAD
LCP	LOCAL CONTROL PANEL
LR	LOCAL/REMOTE
LOS	LOCKOUT STOP STATION
LS	LEVEL OR LIMIT SWITCH
LSIG	LONG, SHORT, INSTANTANEOUS AND GROUND FAULT ADJUSTMENT
LT	LIGHT
LV	LOW VOLTAGE
MA	MILLIAMPERE
MAN	MANUAL
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MCP	MOTOR CIRCUIT PROTECTOR
MH	MANHOLE
MIN	MINIMUM OR MINUTE
MLO	MAIN LUGS ONLY
MOV	MTR OPERATED VALVE ACTUATOR
MSB	MAIN SWITCHBOARD
MTR	MOTOR
N	NEUTRAL
NC	NORMALLY CLOSED
NCTO	NORMALLY CLOSE, TIME OPEN
NEC	NATIONAL ELECTRIC CODE
No	NUMBER
NO	NORMALLY OPEN
NOTC	NORMALLY OPEN, TIME CLOSE
NTS	NOT TO SCALE
OL	OVERLOAD
PB	PUSHBUTTON
PB	PULLBOX
PC	PHOTOCELL
PNL	PANEL
PRI	PRIMARY
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
PVC/RGS	PVC JACKETED RIGID GALVANIZED STEEL CONDUIT
RCP	REMOTE CONTROL PANEL
RGS	RIGID GALVANIZED STEEL CONDUIT
RTU	REMOTE TERMINAL UNIT
SCE	SOUTHERN CALIFORNIA EDISON
SEC	SECONDARY
SPD	SURGE PROTECTION DEVICE
SPEC	SPECIFICATION
SS	STAINLESS STEEL
SSRV	SOLID STATE REDUCED VOLTAGE STARTER
STP	SHIELDED TWISTED PAIR
STT	SHIELDED TWISTED TRIPLET
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
TB	TERMINAL BOX
TEL	TELEPHONE
TEMP	TEMPERATURE
TS	TEMPERATURE SWITCH
TYP	TYPICAL
UG	UNDERGROUND
W	VOLTS
	WATTS
WP	WEATHERPROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
ZS	POSITION SWITCH OR LIMIT SWITCH
3W	THREE WIRE
4W	FOUR WIRE

E-1

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

ELECTRICAL SYMBOLS AND ABBREVIATIONS

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 93 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: _____ 12/18/2023
FOR CITY ENGINEER ELHAM LOTFI — DATE
PRINT DCE NAME — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC	_____	12/18/23	

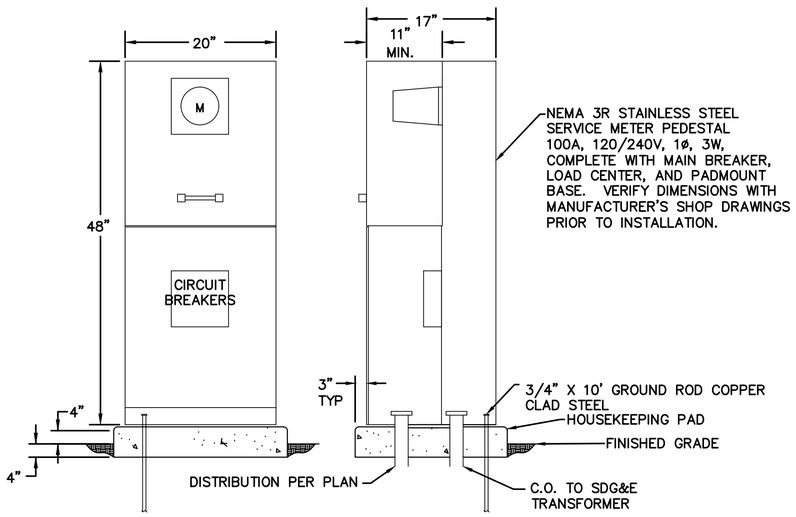
SEE EACH SHEET — CCS27 COORDINATE
SEE EACH SHEET — CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

CONTRACTOR: _____ NTP DATE: _____
INSPECTOR: _____ NOC DATE: _____

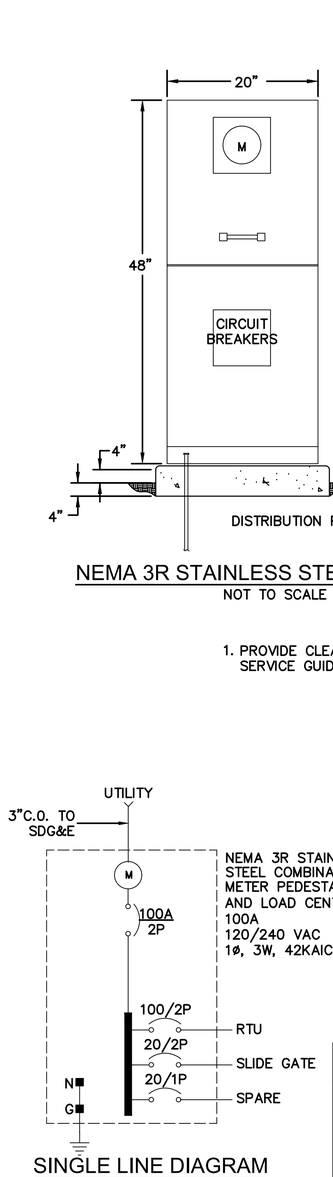
41306-93-D



NEMA 3R STAINLESS STEEL METER PEDESTAL | 1 / E-2

NOT TO SCALE

1. PROVIDE CLEARANCES PER SDG&E SERVICE GUIDE REQUIREMENTS.



SINGLE LINE DIAGRAM

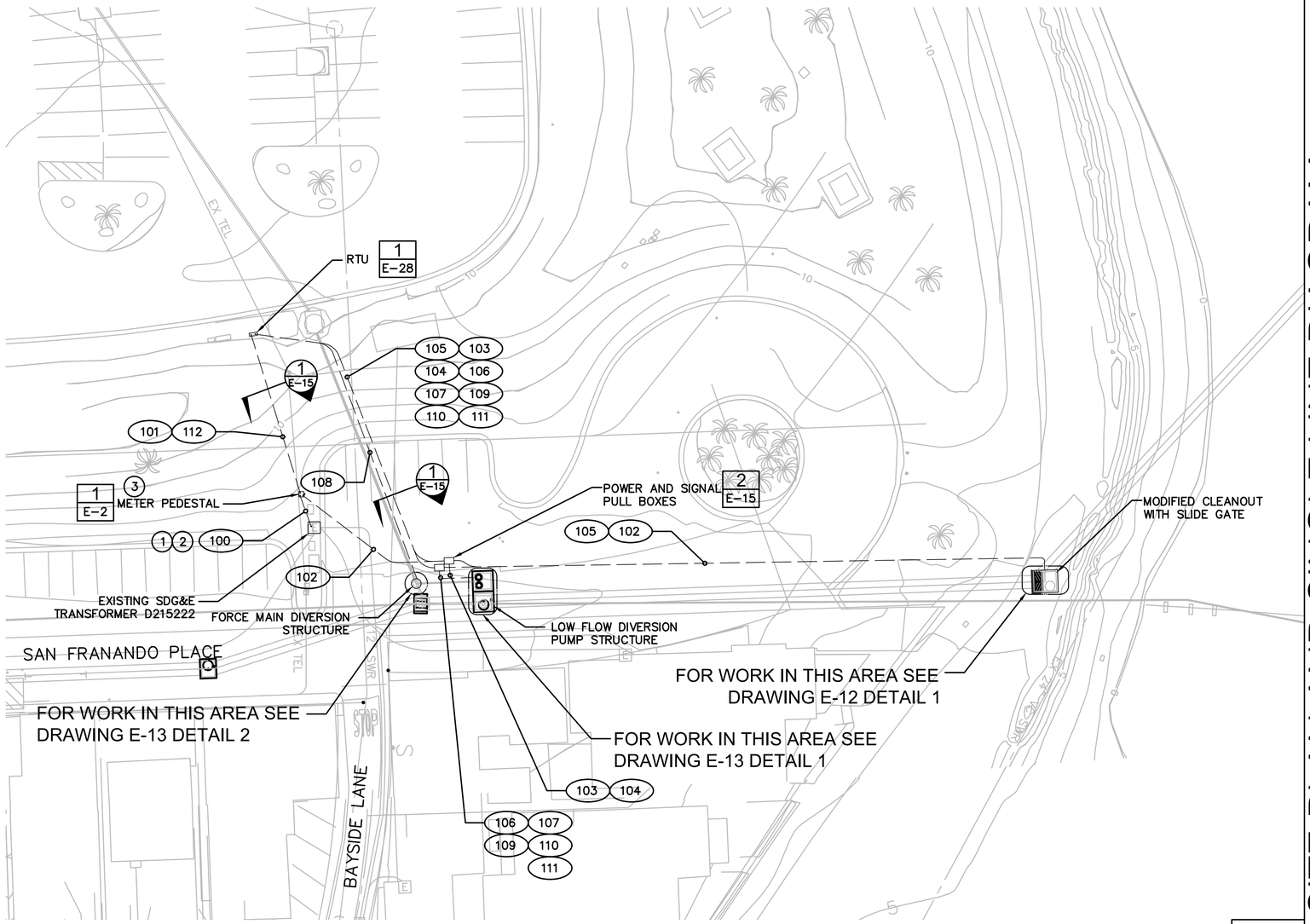
LOAD CALCULATION	
RTU	43.00A
SLIDE GATE	8.00A
25% LARGEST MOTOR	10.75A
TOTAL LOAD	60.75A @240V, 1ϕ

UTILITY COMPANY
SAN DIEGO GAS & ELECTRIC PROJECT MANAGEMENT – 8316 CENTURY PARK CT. SAN DIEGO, CA 92123 CONTACT: JEFF MOUSER (760) 492–2948

NOTE:
CONTRACTOR SHALL REFER TO SDG&E JOB NO. 3–308291 WHEN APPLYING FOR SDG&E ELECTRICAL SERVICE.

NOTES:

1. REFER TO SDG&E INSTALLATION STANDARDS.
2. REPAIR EXISTING ASPHALT PAVEMENT AND CONCRETE. REPAIRS TO BE FROM EXPANSION JOINT TO EXPANSION JOINT. ACCEPTANCE PER RESIDENT ENGINEER.
3. PLACE METER PEDESTAL 5 FEET BEHIND CURB.





ELECTRICAL SITE PLAN

0 20 40 60

SCALE 1"=20'

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM

E-2

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM
LOW FLOW DIVERSION PUMP SYSTEM 1-A

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 94 OF 128 SHEETS

WATER B–18118 (GI)
WBS B–18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DCE NAME — 12/18/2023 DATE — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

DESIGNED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET, CCS27 COORDINATE

SEE EACH SHEET, CCSB3 COORDINATE

41306-94-D

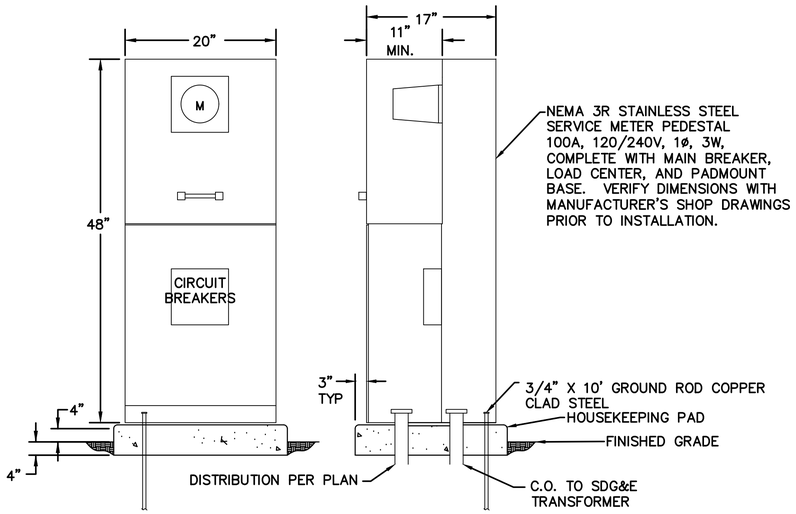
REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA

12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

CONTRACTOR: _____ NTP DATE: _____

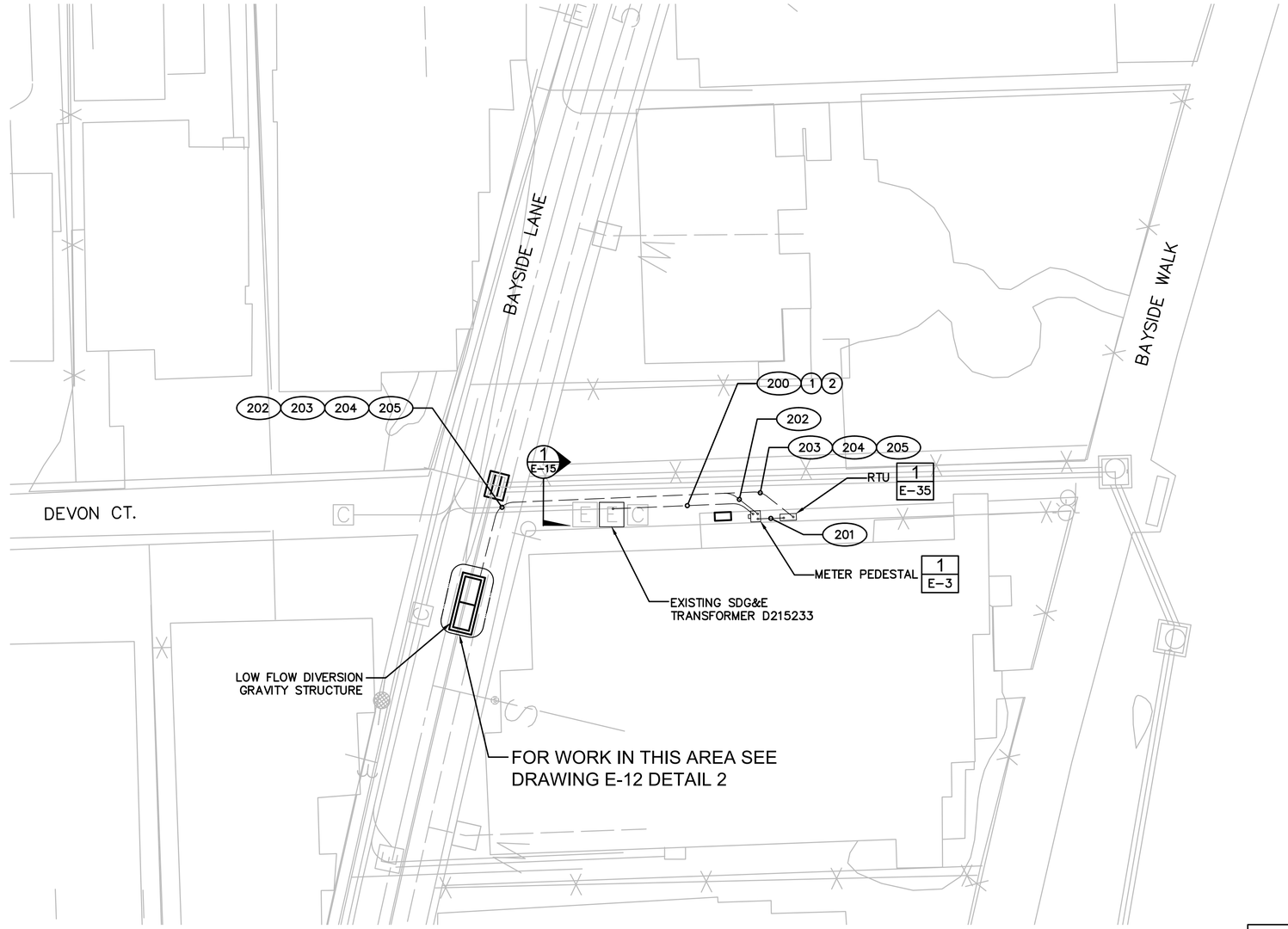
INSPECTOR: _____ NOC DATE: _____

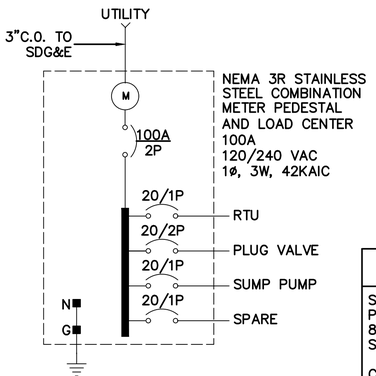


NEMA 3R STAINLESS STEEL METER PEDESTAL | 1 / E-3

NOT TO SCALE

1. PROVIDE CLEARANCES PER SDG&E SERVICE GUIDE REQUIREMENTS.





SINGLE LINE DIAGRAM

LOAD CALCULATION	
RTU	0.75A
PLUG VALVE	4.90A
SUMP PUMP	2.90A
25% LARGEST MOTOR	1.22A
TOTAL LOAD	9.8A @240V, 1ø

UTILITY COMPANY

SAN DIEGO GAS & ELECTRIC
PROJECT MANAGEMENT –
8316 CENTURY PARK CT.
SAN DIEGO, CA 92123

CONTACT:
JEFF MOUSER
(760) 492-2948

NOTE:
CONTRACTOR SHALL REFER TO SDG&E JOB NO. 3-308292 WHEN APPLYING FOR SDG&E ELECTRICAL SERVICE.

NOTES:

1. REFER TO SDG&E INSTALLATION STANDARDS.
2. REPAIR EXISTING ASPHALT PAVEMENT AND CONCRETE. REPAIRS TO BE FROM EXPANSION JOINT TO EXPANSION JOINT. ACCEPTANCE PER RESIDENT ENGINEER.



ELECTRICAL SITE PLAN

0 10 20 30

SCALE 1"=10'

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

REGISTERED PROFESSIONAL ENGINEER
SCOTT D. NELSON
No. E18069
Exp. 6/30/23
ELECTRICAL
STATE OF CALIFORNIA

12/14/21

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM

E-3

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM
LOW FLOW DIVERSION GRAVITY SYSTEM 2-B

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 95 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI — PRINT DCE NAME — DATE 12/18/2023 — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

DRAWN BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

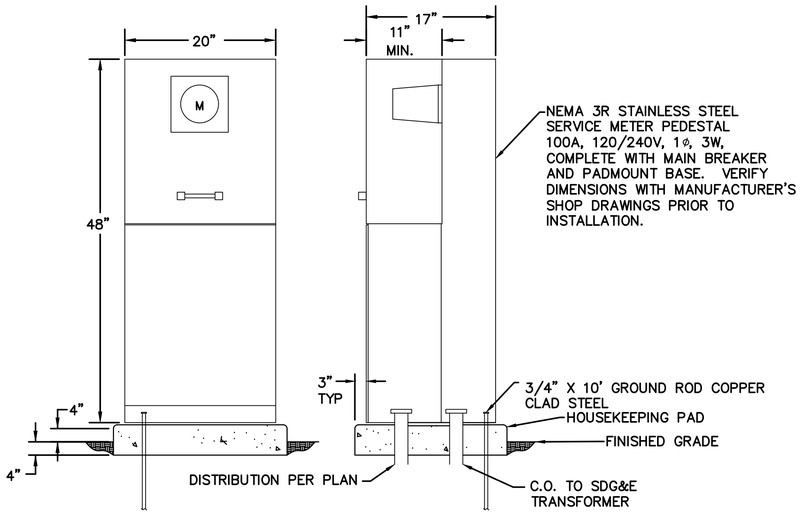
SEE EACH SHEET — CCS27 COORDINATE

SEE EACH SHEET — CCS83 COORDINATE

CONTRACTOR: _____ NTP DATE: _____

INSPECTOR: _____ NOC DATE: _____

41306-95-D

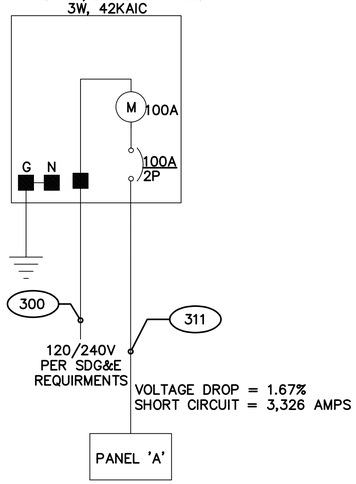


NEMA 3R STAINLESS STEEL METER PEDESTAL | 1 / E-4

NOT TO SCALE

1. PROVIDE CLEARANCES PER SDG&E SERVICE GUIDE REQUIREMENTS.

NEMA 3R STAINLESS STEEL METER PEDESTAL
100A, 120/240V, 1 PHASE, 3W, 42KAIC



UTILITY COMPANY
SAN DIEGO GAS & ELECTRIC PROJECT MANAGEMENT – 8316 CENTURY PARK CT. SAN DIEGO, CA 92123 CONTACT: JEFF MOUSER (760) 492–2948

NOTE:
CONTRACTOR SHALL REFER TO SDG&E JOB NO. 3–308293 WHEN APPLYING FOR SDG&E ELECTRICAL SERVICE.

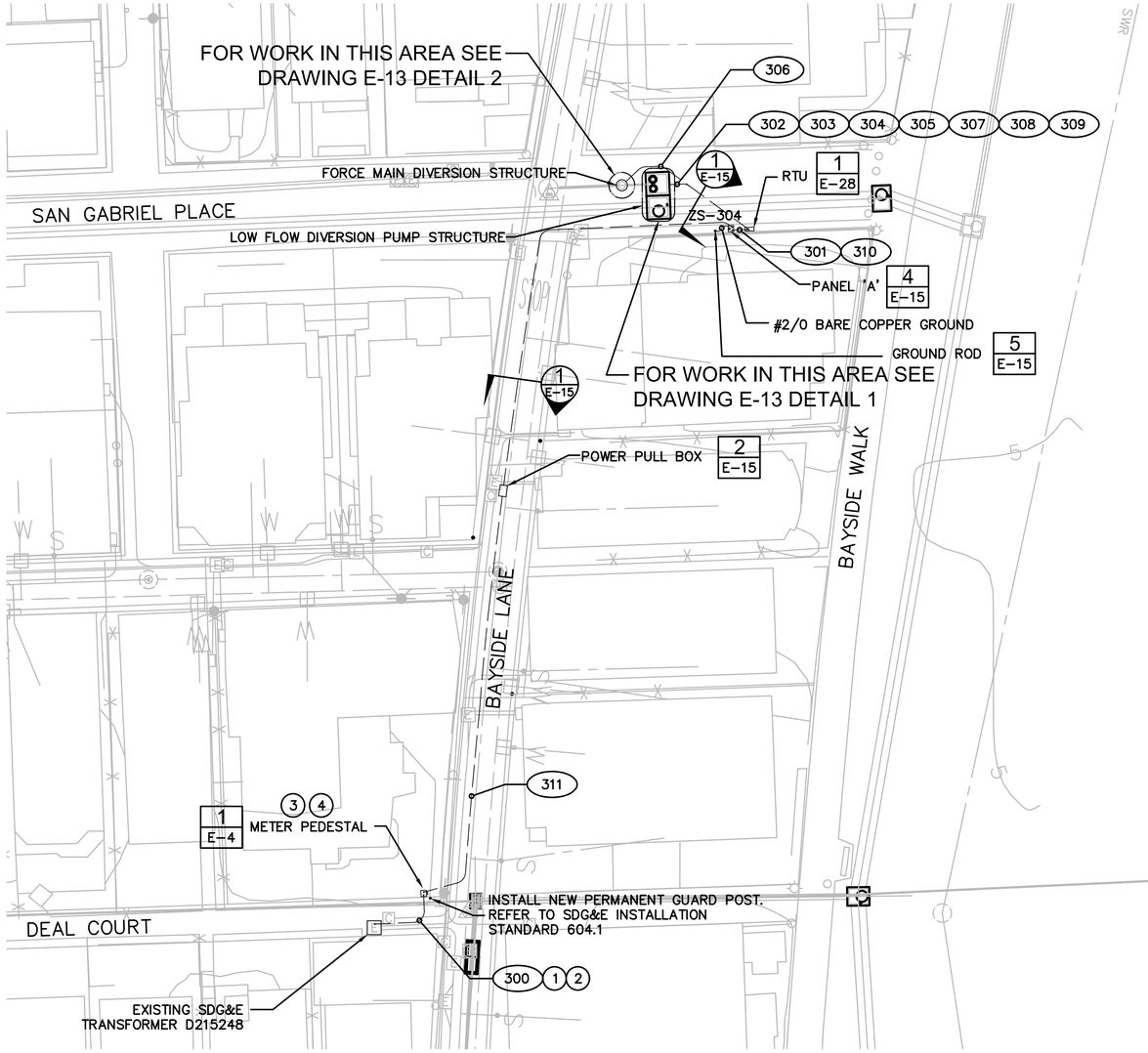
NOTES:

1. REFER TO SDG&E INSTALLATION STANDARDS.
2. REPAIR EXISTING ASPHALT PAVEMENT AND CONCRETE. REPAIRS TO BE FROM EXPANSION JOINT TO EXPANSION JOINT. ACCEPTANCE PER RESIDENT ENGINEER.
3. FACE METER PEDESTAL EAST TOWARDS BAYSIDE WALK.
4. EXISTING FENCE TO BE MOVED BACK 2 FEET FOR A LENGTH OF 12 FEET TO GAIN ACCESS TO 2 FEET OF EASEMENT ON THE NORTH SIDE OF DEAL CT. (EASEMENT IS A TOTAL OF 10 FEET)

SINGLE LINE DIAGRAM

MOUNTING SURFACE — PANEL 'A' — 10,000 A.I.C. SYM.
120/240 VOLT 1 PHASE 3 WIRE — MAIN 100 — BUS 100A CU

LOCATION	WATTAGE ØA	WATTAGE ØB	REC	LTG	POLE	BKR	CKT NO.	ØA ØB	CKT NO.	BKR	POLE	LTG	REC	WATTAGE ØA	WATTAGE ØB	LOCATION
RTU	5160				2	100	1		2	20	1					SPARE
–		5160			–	–	3		4	20	1					SPARE
SPARE					1	20	5		6	20	1					SPARE
SPARE					1	20	7		8	20	1					SPARE
	5160	5160	WATTS/LINE											0	0	
ØA= 5160															0B= 5160	
TOTAL WATTS= 10,320						AMPS/LINE= 53.0									LCL AMPS= 1.0	





ELECTRICAL SITE PLAN

0 20 40 60

SCALE 1"=20'

E-4

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM
LOW FLOW DIVERSION PUMP SYSTEM 2-A

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 96 OF 128 SHEETS

WATER B–18118 (GI)
WBS B–18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI — DATE 12/18/2023 — RCE # C91224
PRINT DCE NAME

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

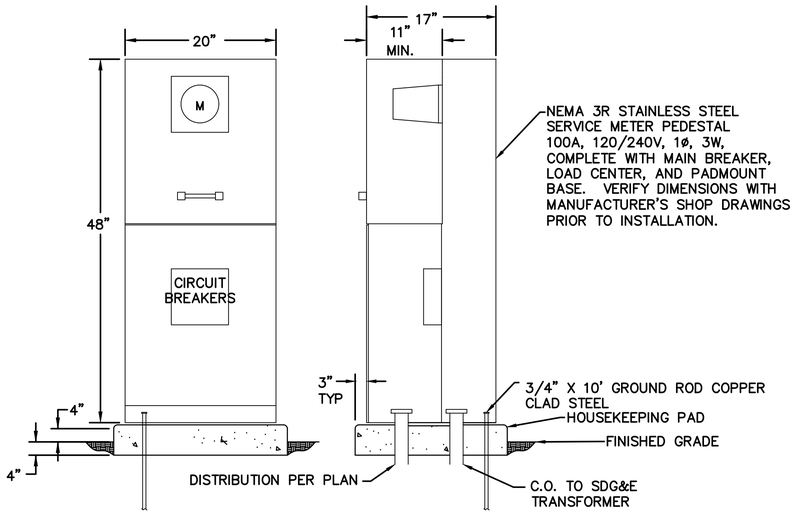
CONTRACTOR:
INSPECTOR:
NTP DATE:
NOC DATE:

41306-96-D

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

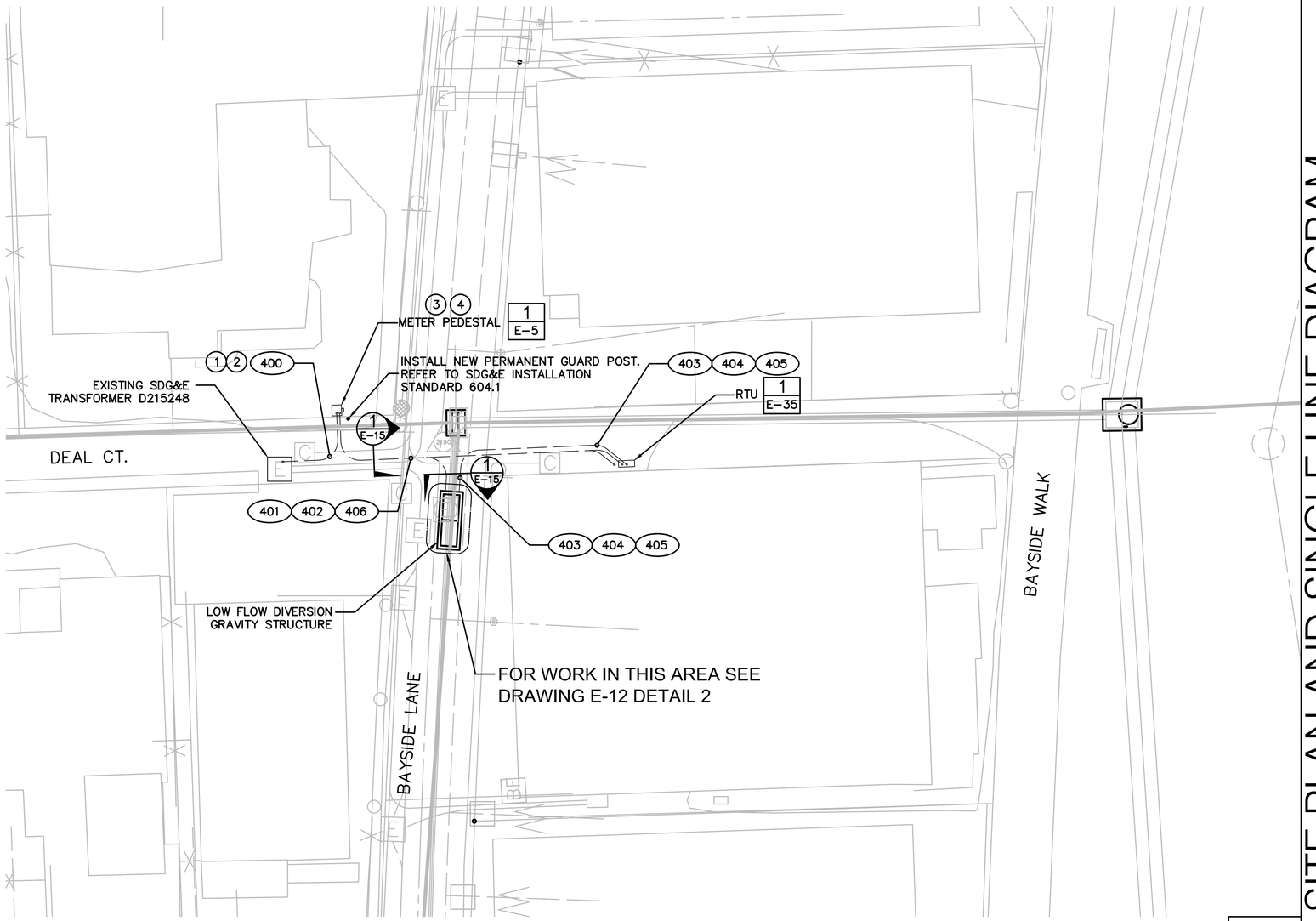
ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM

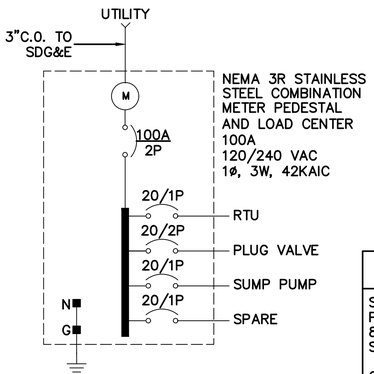


NEMA 3R STAINLESS STEEL METER PEDESTAL | 1 / E-5

NOT TO SCALE

1. PROVIDE CLEARANCES PER SDG&E SERVICE GUIDE REQUIREMENTS.





SINGLE LINE DIAGRAM

LOAD CALCULATION	
RTU	0.75A
PLUG VALVE	4.90A
SUMP PUMP	2.90A
25% LARGEST MOTOR	1.22A
TOTAL LOAD	9.8A @240V, 1ø

UTILITY COMPANY

SAN DIEGO GAS & ELECTRIC
PROJECT MANAGEMENT –
8316 CENTURY PARK CT.
SAN DIEGO, CA 92123

CONTACT:
JEFF MOUSER
(760) 492–2948

NOTE:
CONTRACTOR SHALL REFER TO SDG&E JOB NO. 3–308294 WHEN APPLYING FOR SDG&E ELECTRICAL SERVICE.

NOTES:

1. REFER TO SDG&E INSTALLATION STANDARDS.
2. REPAIR EXISTING ASPHALT PAVEMENT AND CONCRETE. REPAIRS TO BE FROM EXPANSION JOINT TO EXPANSION JOINT. ACCEPTANCE PER RESIDENT ENGINEER.
3. FACE METER PEDESTAL EAST TOWARDS BAYSIDE WALK.
4. EXISTING FENCE TO BE MOVED BACK 2 FEET FOR A LENGTH OF 12 FEET TO GAIN ACCESS TO 2 FEET OF EASEMENT ON THE NORTH SIDE OF DEAL CT. (EASEMENT IS A TOTAL OF 10 FEET)



ELECTRICAL SITE PLAN

0 10 20 30

SCALE 1"=10'

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

REGISTERED PROFESSIONAL ENGINEER
SCOTT D. NELSON
No. E18069
Exp. 6/30/23
ELECTRICAL
STATE OF CALIFORNIA
12/14/21

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM

E-5

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM
LOW FLOW DIVERSION GRAVITY SYSTEM 4-A

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 97 OF 128 SHEETS

WATER B–18118 (GI)
WBS B–18117 (SD)

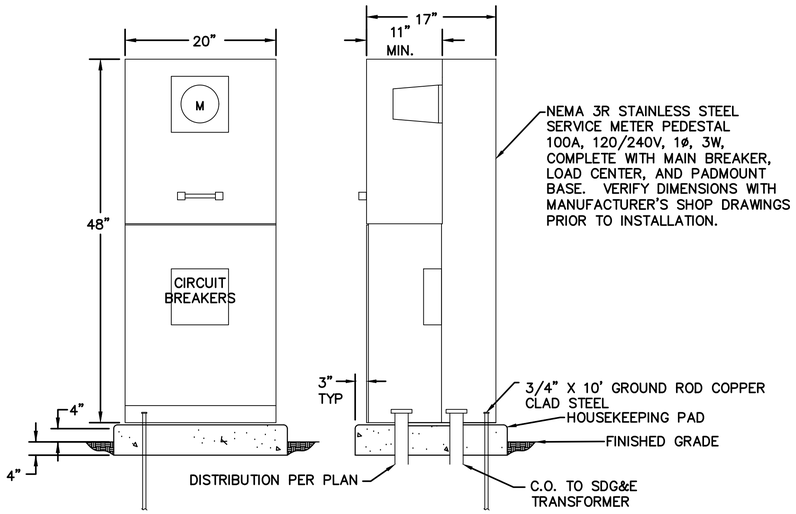
APPROVED: FOR CITY ENGINEER ELHAM LOTFI — PRINT DCE NAME — 12/18/2023 DATE — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER
SEE EACH SHEET, CCS27 COORDINATE
SEE EACH SHEET, CCS83 COORDINATE

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

CONTRACTOR: _____ NTP DATE: _____
INSPECTOR: _____ NOC DATE: _____

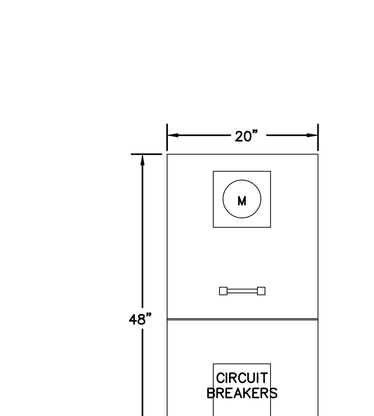
41306-97-D



NEMA 3R STAINLESS STEEL METER PEDESTAL | 1 / E-6

NOT TO SCALE

1. PROVIDE CLEARANCES PER SDG&E SERVICE GUIDE REQUIREMENTS.



SINGLE LINE DIAGRAM

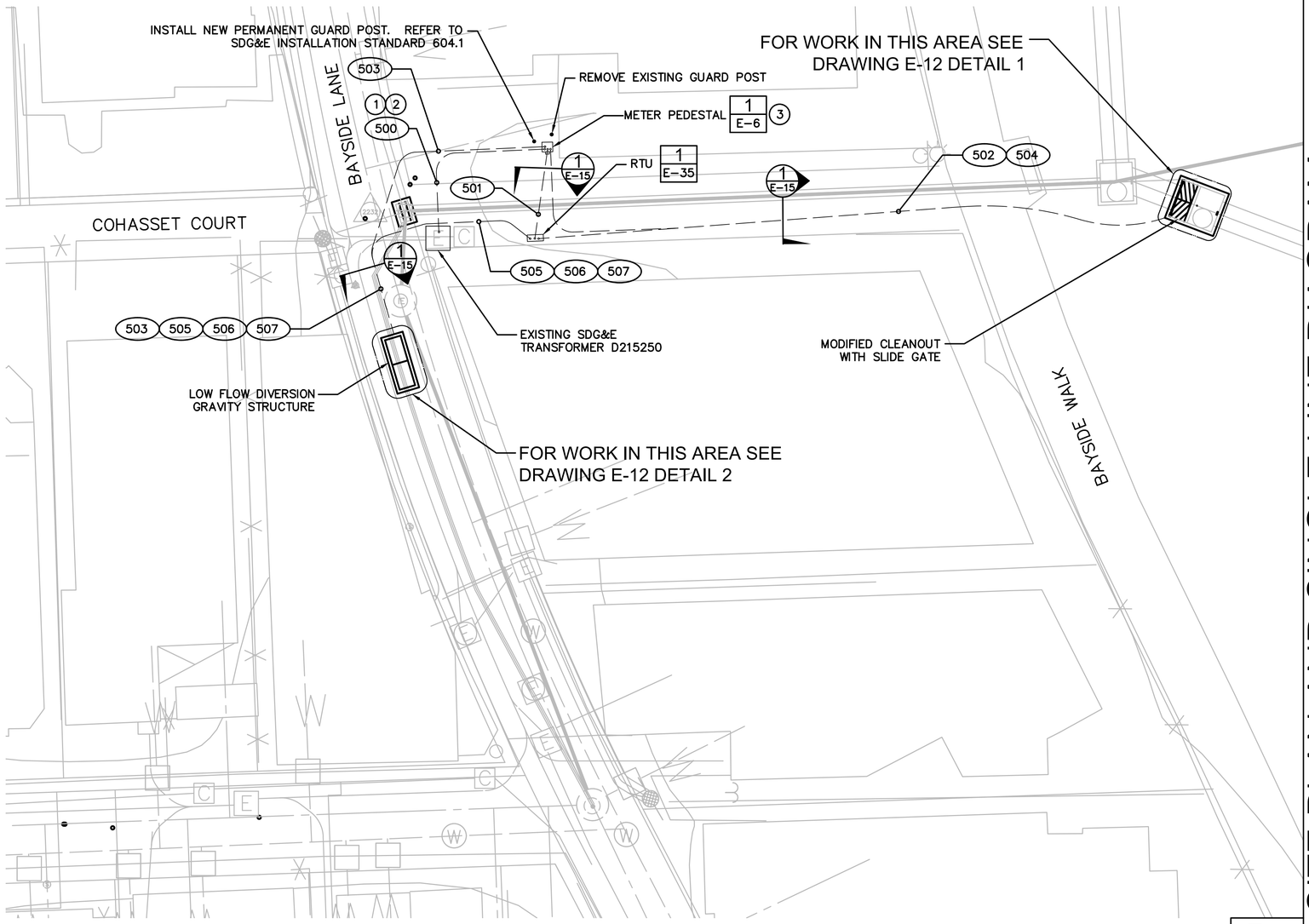
LOAD CALCULATION	
RTU	0.75A
SLIDE GATE	8.00A
PLUG VALVE	4.90A
SUMP PUMP	2.90A
25% LARGEST MOTOR	2.00A
TOTAL LOAD	18.6A @240V, 1ø

UTILITY COMPANY

SAN DIEGO GAS & ELECTRIC
PROJECT MANAGEMENT –
8316 CENTURY PARK CT.
SAN DIEGO, CA 92123

CONTACT:
JEFF MOUSER
(760) 492-2948

NOTE:
CONTRACTOR SHALL REFER TO SDG&E JOB NO. 3-308295 WHEN APPLYING FOR SDG&E ELECTRICAL SERVICE.



NOTES:

1. REFER TO SDG&E INSTALLATION STANDARDS.
2. REPAIR EXISTING ASPHALT PAVEMENT AND CONCRETE. REPAIRS TO BE FROM EXPANSION JOINT TO EXPANSION JOINT. ACCEPTANCE PER RESIDENT ENGINEER.
3. FACE METER PEDESTAL SOUTH TOWARDS WALKWAY.



ELECTRICAL SITE PLAN

0 10 20 30

SCALE 1"=10'

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

REGISTERED PROFESSIONAL ENGINEER SCOTT D. NELSON No. E18069 Exp. 6/30/23 ELECTRICAL STATE OF CALIFORNIA

12/14/21

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM

E-6

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

LOW FLOW DIVERSION GRAVITY SYSTEM 2-F
ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 98 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DGE NAME — 12/18/2023 DATE — C91224 RCE #

SUBMITTED BY: KAREN VERA PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

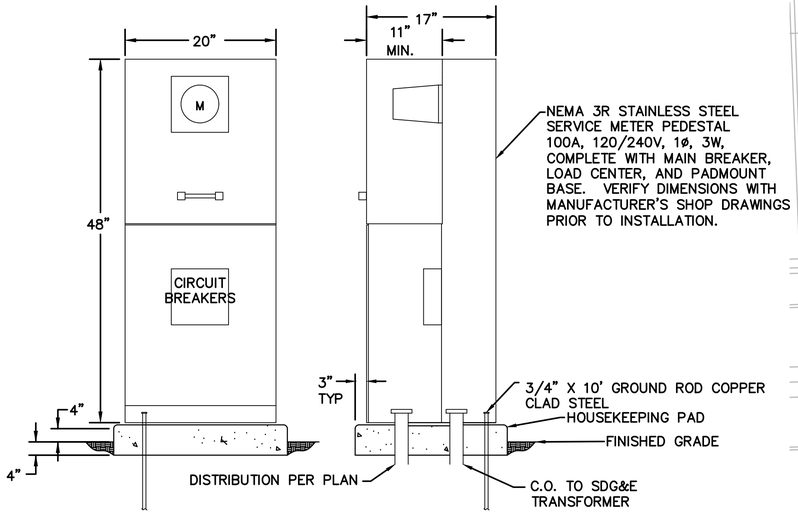
SEE EACH SHEET CCS27 COORDINATE

SEE EACH SHEET CCS83 COORDINATE

CONTRACTOR: _____ NTP DATE: _____

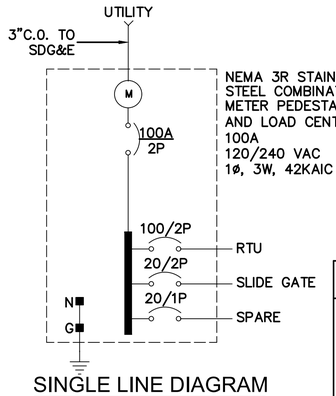
INSPECTOR: _____ NOC DATE: _____

41306-98-D



NEMA 3R STAINLESS STEEL METER PEDESTAL | 1 / E-7
NOT TO SCALE

1. PROVIDE CLEARANCES PER SDG&E SERVICE GUIDE REQUIREMENTS.



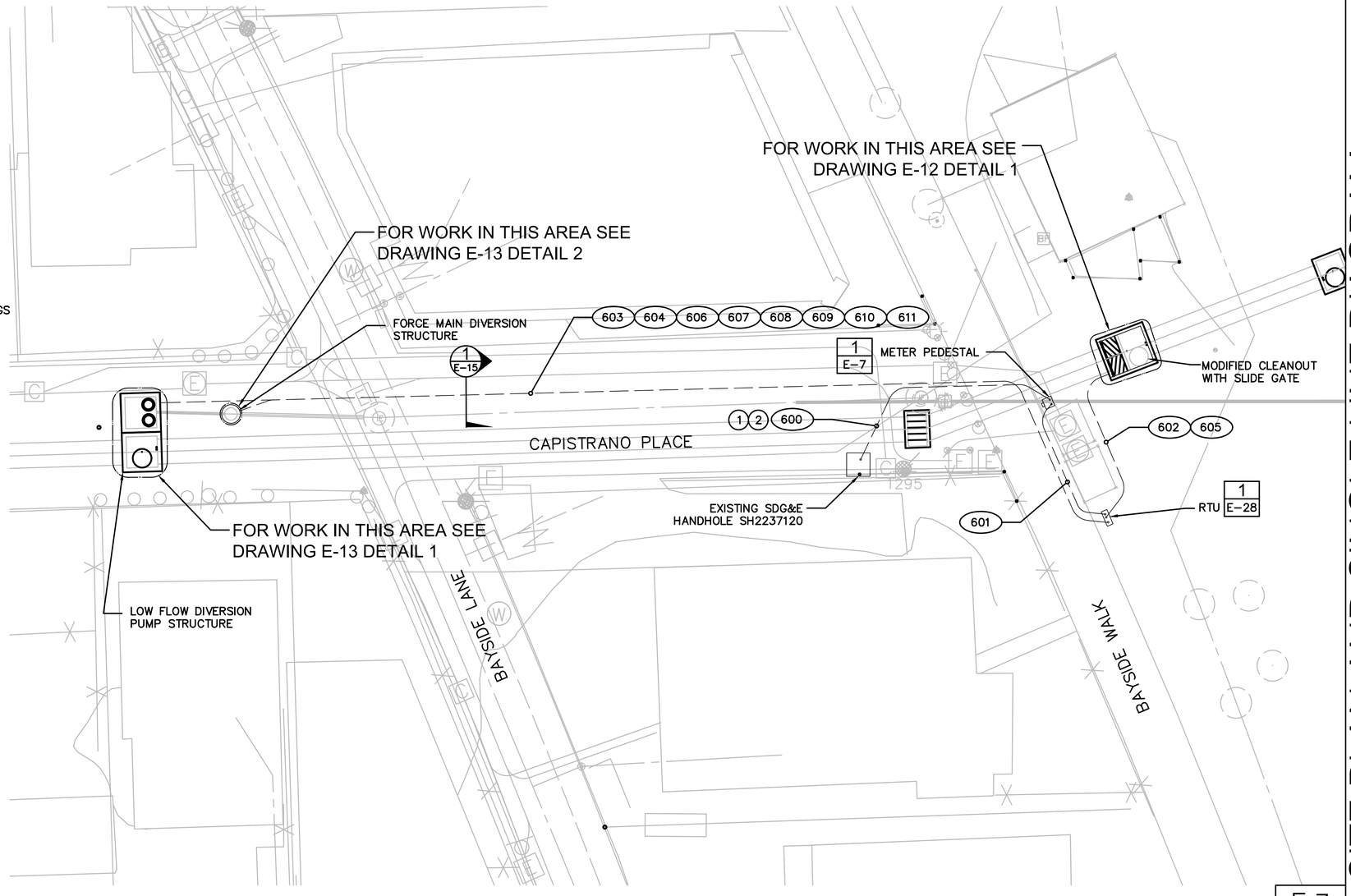
NEMA 3R STAINLESS STEEL COMBINATION METER PEDESTAL AND LOAD CENTER
100A
120/240 VAC
1ø, 3W, 42KAIC

SINGLE LINE DIAGRAM

LOAD CALCULATION	
RTU	43.00A
SLIDE GATE	8.00A
25% LARGEST MOTOR	10.75A
TOTAL LOAD	61.75A @240V, 1ø

UTILITY COMPANY
SAN DIEGO GAS & ELECTRIC PROJECT MANAGEMENT – 8316 CENTURY PARK CT. SAN DIEGO, CA 92123 CONTACT: JEFF MOUSER (760) 492-2948

NOTE:
CONTRACTOR SHALL REFER TO SDG&E JOB NO. 3-308296 WHEN APPLYING FOR SDG&E ELECTRICAL SERVICE.



NOTES:
1. REFER TO SDG&E INSTALLATION STANDARDS.
2. REPAIR EXISTING ASPHALT PAVEMENT AND CONCRETE. REPAIRS TO BE FROM EXPANSION JOINT TO EXPANSION JOINT. ACCEPTANCE PER RESIDENT ENGINEER.

N W E S

ELECTRICAL SITE PLAN

0 10 20 30
SCALE 1"=10'

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18063 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM

E-7

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM
LOW FLOW DIVERSION PUMP SYSTEM 3-A

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 99 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: TYPE
FOR CITY ENGINEER ELHAM LOTFI
PRINT DGE NAME
12/18/2023 DATE
RCE # C91224

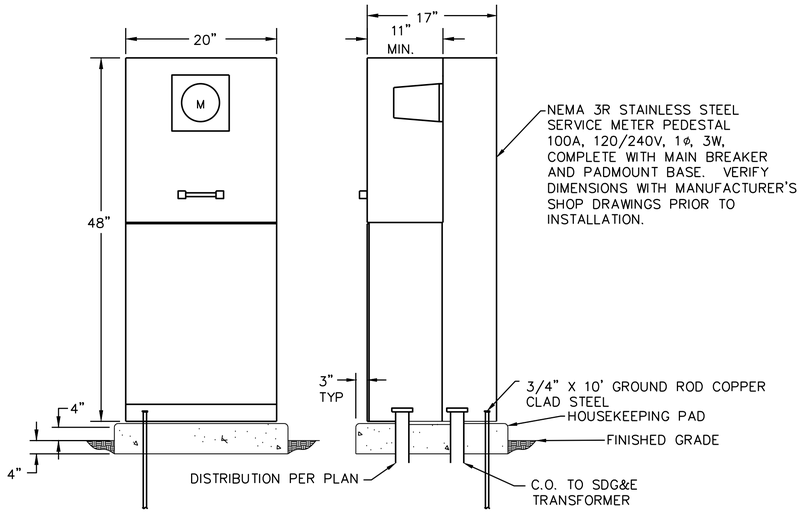
SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC	TYPE	12/18/23	

SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

CONTRACTOR:
INSPECTOR:
NTP DATE:
NOC DATE:

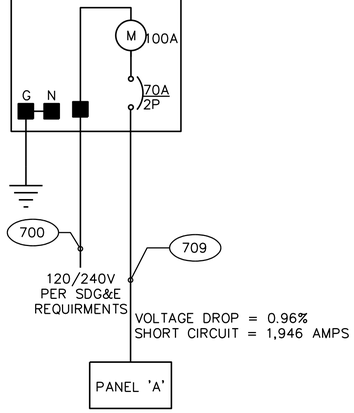
41306-99-D



NEMA 3R STAINLESS STEEL METER PEDESTAL | 1 / E-8

NOT TO SCALE

1. PROVIDE CLEARANCES PER SDG&E SERVICE GUIDE REQUIREMENTS.



SINGLE LINE DIAGRAM

UTILITY COMPANY
SAN DIEGO GAS & ELECTRIC PROJECT MANAGEMENT – 8316 CENTURY PARK CT. SAN DIEGO, CA 92123 CONTACT: JEFF MOUSER (760) 492-2948

NOTE:
CONTRACTOR SHALL REFER TO SDG&E JOB NO. 3-308297 WHEN APPLYING FOR SDG&E ELECTRICAL SERVICE.

NOTES:

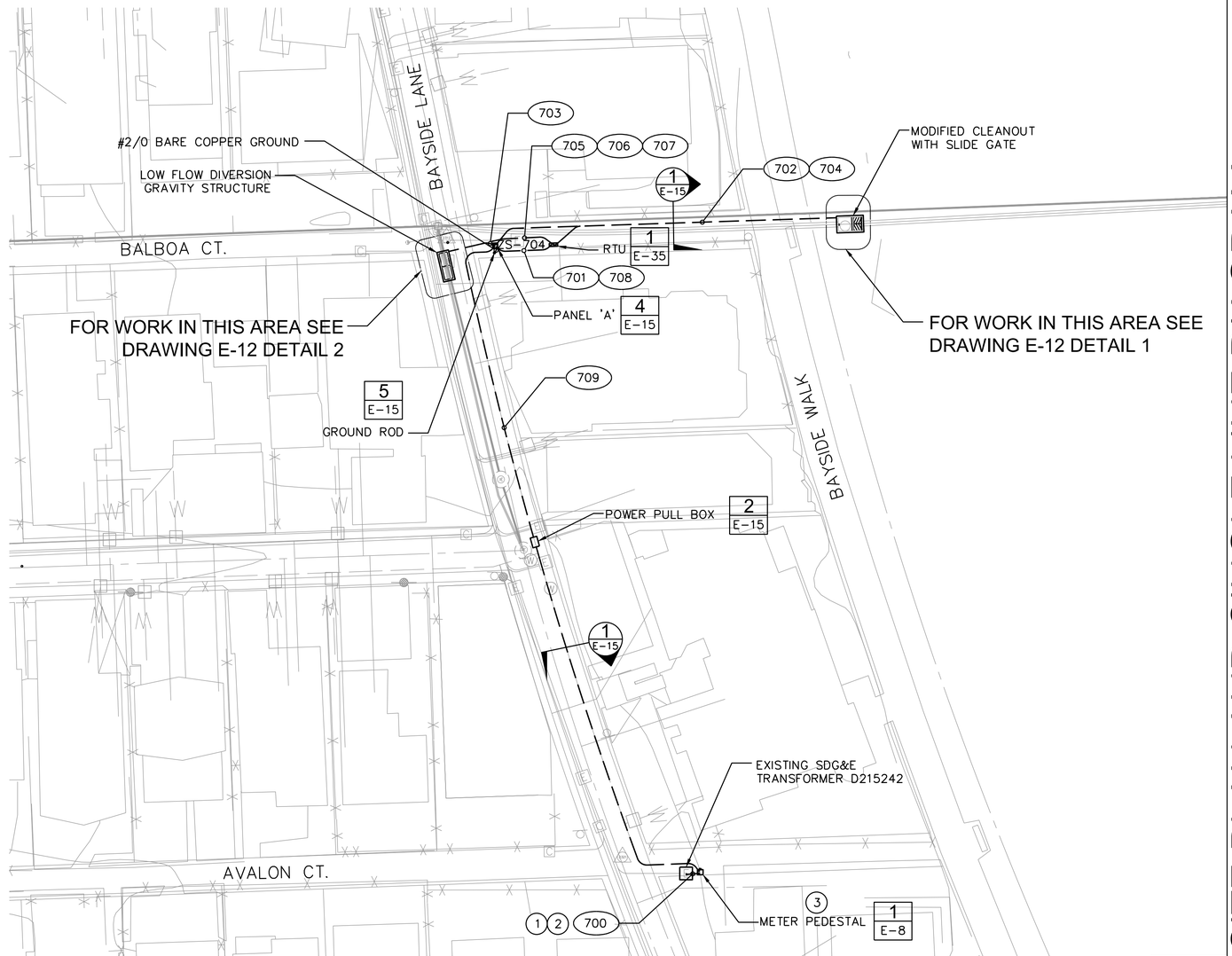
1. REFER TO SDG&E INSTALLATION STANDARDS.
2. REPAIR EXISTING ASPHALT PAVEMENT AND CONCRETE. REPAIRS TO BE FROM EXPANSION JOINT TO EXPANSION JOINT. ACCEPTANCE PER RESIDENT ENGINEER.
3. FACE METER PEDESTAL TOWARDS WALKWAY.

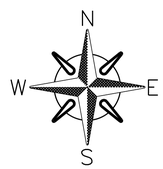
MOUNTING SURFACE MOUNT — PANEL 'A' — 10,000 A.I.C. SYM.
120/240 VOLT — 1 PHASE — 3 WIRE — MAIN 50 — BUS 100A CU

LOCATION	WATTAGE ØA	WATTAGE ØB	REC	LTG	POLE	BKR	CKT NO.	ØA	ØB	CKT NO.	BKR	POLE	LTG	REC	WATTAGE ØA	WATTAGE ØB	LOCATION
RTU	250				1	20	1			2	20	2			960		SLIDE GATE
SUMP PUMP		384			1	20	3			4	–	–				960	–
SPARE					1	20	5			6	20	2			588		PLUG VALVE
SPARE					1	20	7			8	–	–				588	–
	250	384	WATTS/LINE												1548	1548	

ØA= 1798 — 0B= 1932

TOTAL WATTS= 3,730 — AMPS/LINE= 17.8 — LCL AMPS= 1.0





ELECTRICAL SITE PLAN

0 20 40 60

SCALE 1"=20'

E-8

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM
LOW FLOW DIVERSION GRAVITY SYSTEM 5-A

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 100 OF 128 SHEETS

WATER WBS: B-18118 (GI) / B-18117 (SD)

APPROVED: FOR CITY ENGINEER — ELHAM LOTFI — PRINT DGE NAME — 12/18/2023 DATE — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET — CCS27 COORDINATE

SEE EACH SHEET — CCS83 COORDINATE

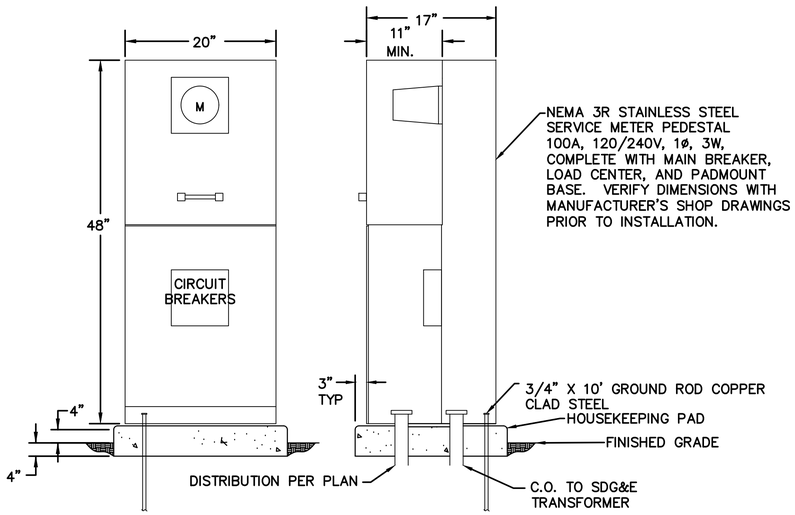
41306-100-D

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA — 12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

CONTRACTOR: _____ NTP DATE: _____
INSPECTOR: _____ NOC DATE: _____

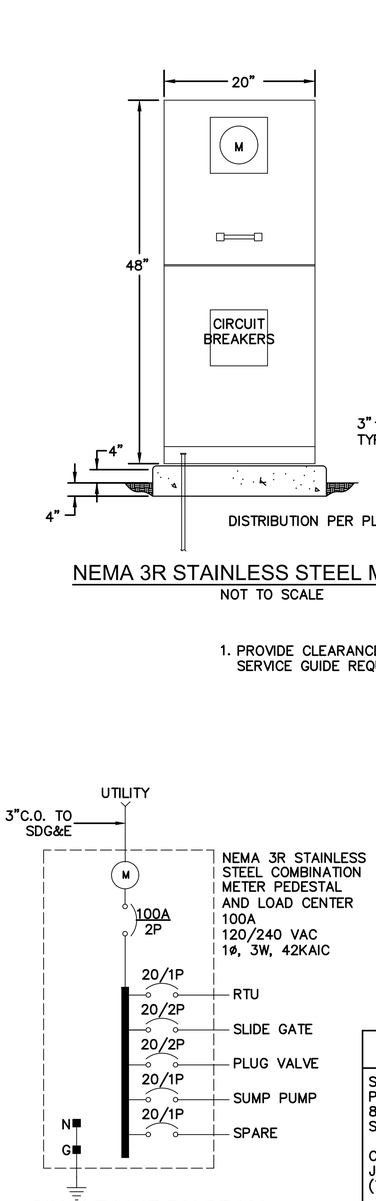
ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM



NEMA 3R STAINLESS STEEL METER PEDESTAL | 1 / E-9

NOT TO SCALE

1. PROVIDE CLEARANCES PER SDG&E SERVICE GUIDE REQUIREMENTS.



SINGLE LINE DIAGRAM

LOAD CALCULATION	
RTU	0.75A
SLIDE GATE	8.00A
PLUG VALVE	4.90A
SUMP PUMP	2.90A
25% LARGEST MOTOR	2.00A
TOTAL LOAD	18.6A @240V, 1ø

UTILITY COMPANY

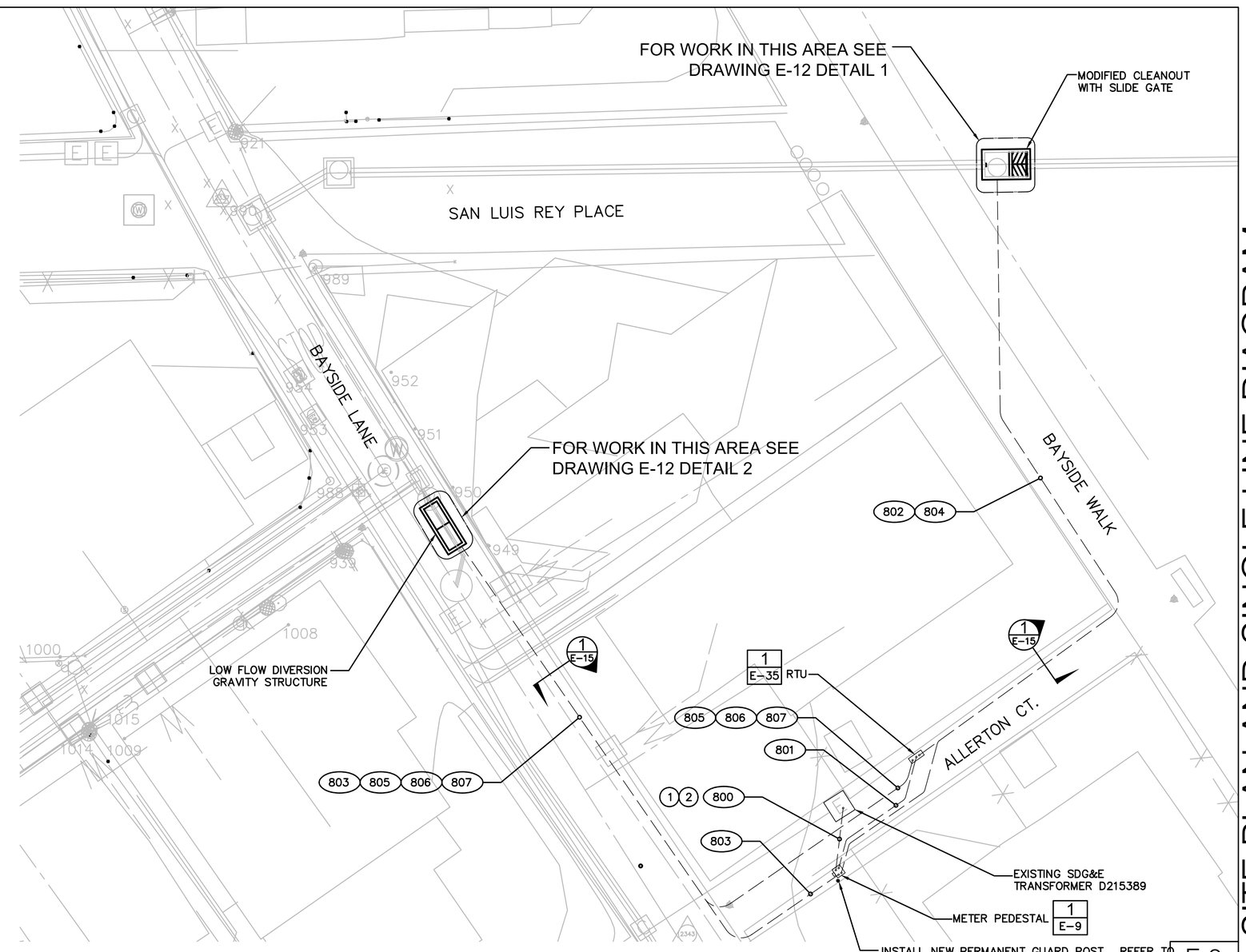
SAN DIEGO GAS & ELECTRIC
PROJECT MANAGEMENT –
8316 CENTURY PARK CT.
SAN DIEGO, CA 92123

CONTACT:
JEFF MOUSER
(760) 492-2948

NOTE:
CONTRACTOR SHALL REFER TO SDG&E JOB NO. 3-308298 WHEN APPLYING FOR SDG&E ELECTRICAL SERVICE.

NOTES:

1. REFER TO SDG&E INSTALLATION STANDARDS.
2. REPAIR EXISTING ASPHALT PAVEMENT AND CONCRETE. REPAIRS TO BE FROM EXPANSION JOINT TO EXPANSION JOINT. ACCEPTANCE PER RESIDENT ENGINEER.





ELECTRICAL SITE PLAN

0 10 20 30

SCALE 1"=10'

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

REGISTERED PROFESSIONAL ENGINEER
SCOTT D. NELSON
No. E18069
Exp. 6/30/23
ELECTRICAL
STATE OF CALIFORNIA
12/14/21

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM
LOW FLOW DIVERSION GRAVITY SYSTEM 6-A

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 101 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI, PRINT DCE NAME — DATE 12/18/2023 — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

DESIGNED BY: SAMER ALSHAMI, PROJECT ENGINEER

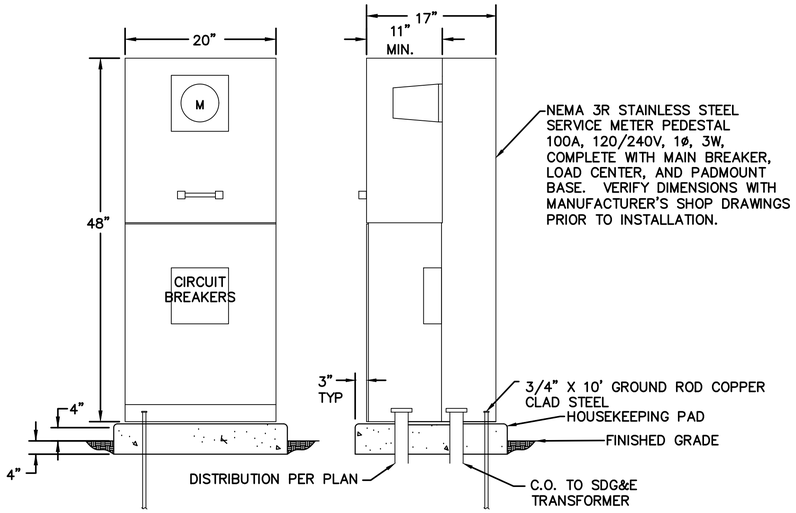
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET — CCS27 COORDINATE
SEE EACH SHEET — CCS83 COORDINATE

CONTRACTOR: NTP DATE:
INSPECTOR: NOC DATE:

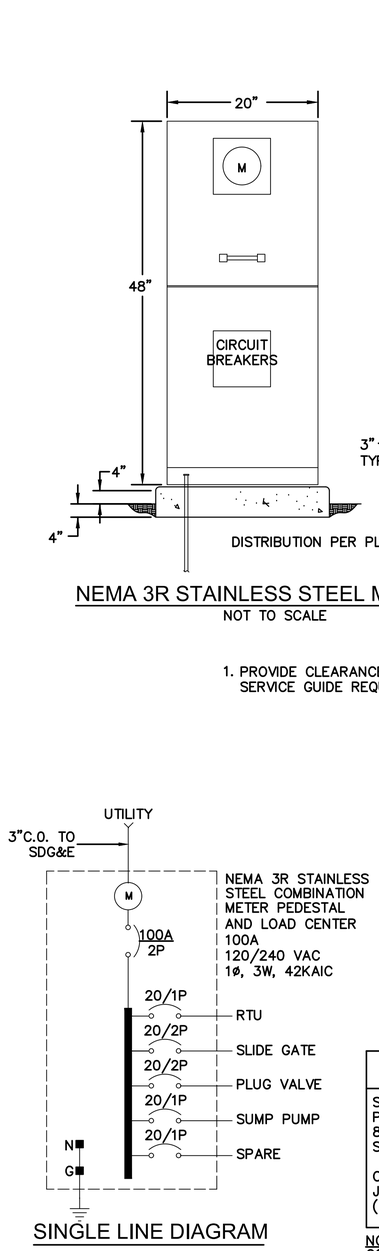
41306-101-D

E-9



NEMA 3R STAINLESS STEEL METER PEDESTAL [1 / E-2]
NOT TO SCALE

1. PROVIDE CLEARANCES PER SDG&E SERVICE GUIDE REQUIREMENTS.



SINGLE LINE DIAGRAM

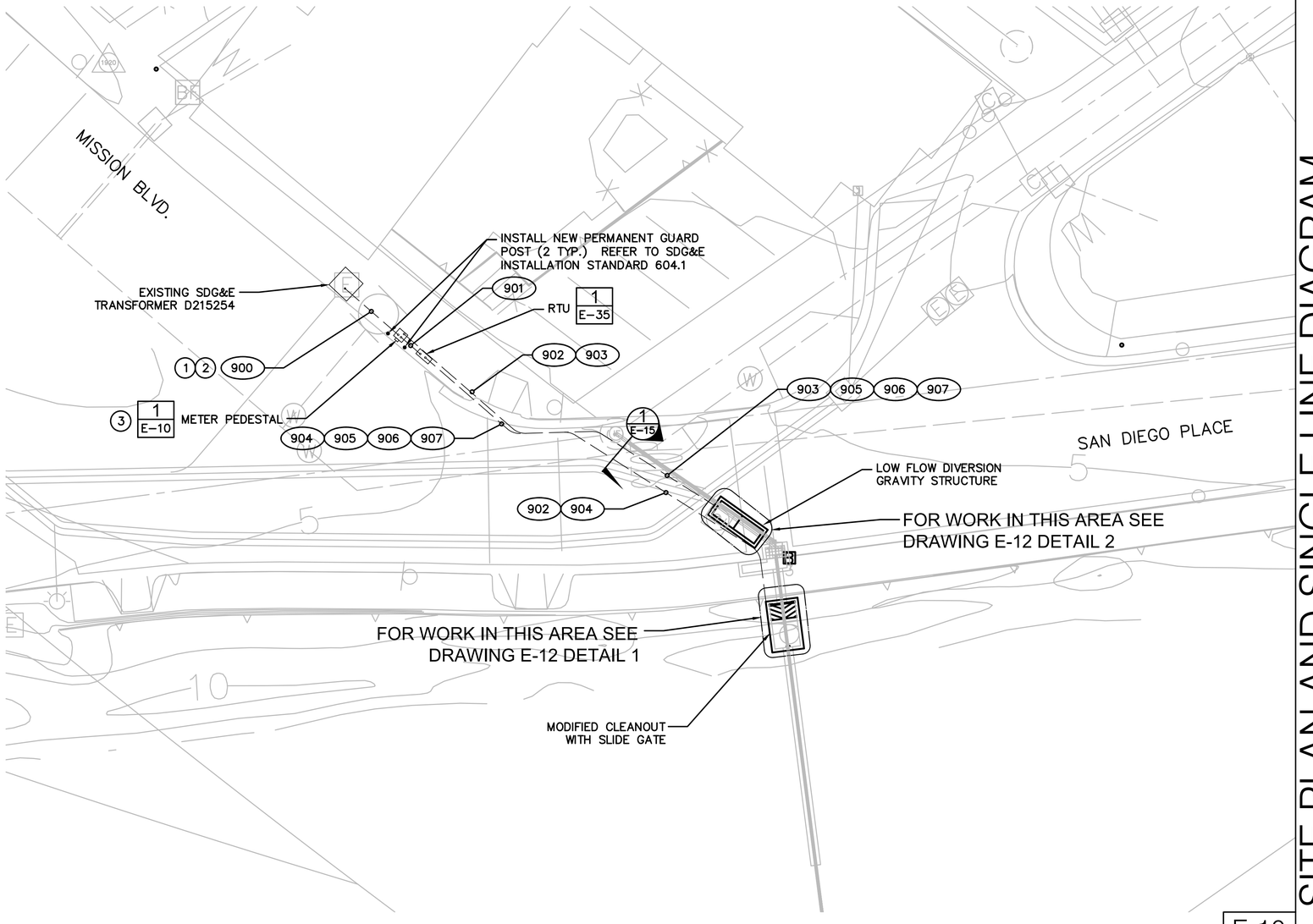
LOAD CALCULATION	
RTU	0.75A
SLIDE GATE	8.00A
PLUG VALVE	4.90A
SUMP PUMP	2.90A
25% LARGEST MOTOR	2.00A
TOTAL LOAD	18.6A @240V, 1ø

UTILITY COMPANY

SAN DIEGO GAS & ELECTRIC
PROJECT MANAGEMENT –
8316 CENTURY PARK CT.
SAN DIEGO, CA 92123

CONTACT:
JEFF MOUSER
(760) 492-2948

NOTE:
CONTRACTOR SHALL REFER TO SDG&E JOB NO. 3-308331 WHEN APPLYING FOR SDG&E ELECTRICAL SERVICE.



NOTES:
1. REFER TO SDG&E INSTALLATION STANDARDS.
2. REPAIR EXISTING ASPHALT PAVEMENT AND CONCRETE. REPAIRS TO BE FROM EXPANSION JOINT TO EXPANSION JOINT. ACCEPTANCE PER RESIDENT ENGINEER.
3. SET METER PEDESTAL 1 FOOT BEHIND CURB PER SDG&E SERVICE ORDER.

N W E S

ELECTRICAL SITE PLAN

0 10 20 30
SCALE 1"=10'

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18063 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM
LOW FLOW DIVERSION GRAVITY SYSTEM 7-A

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 102 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
ELHAM LOTFI — PRINT DCE NAME — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

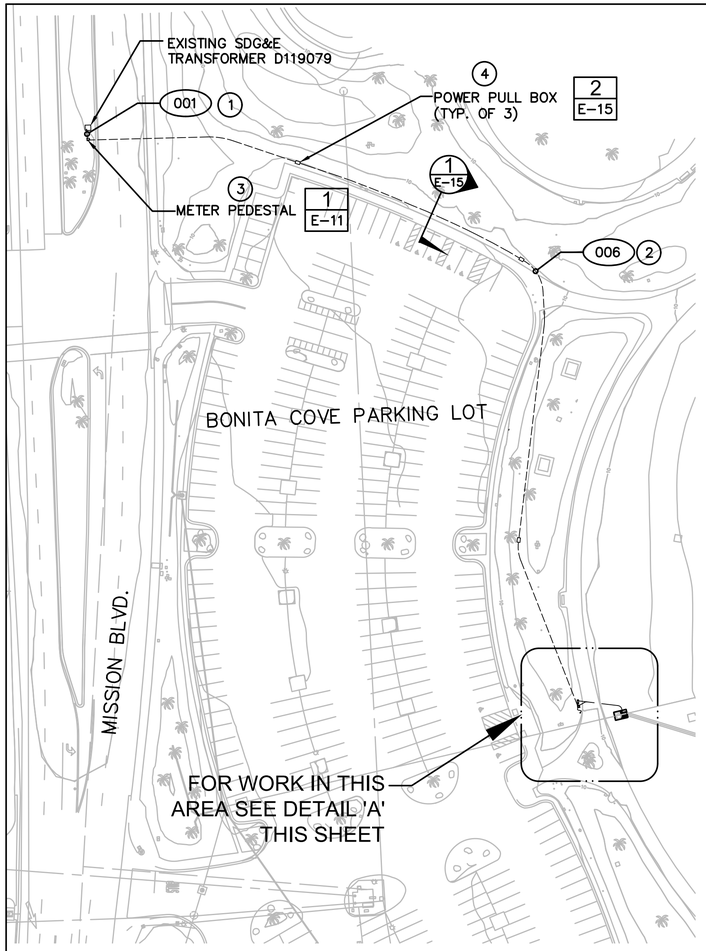
SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

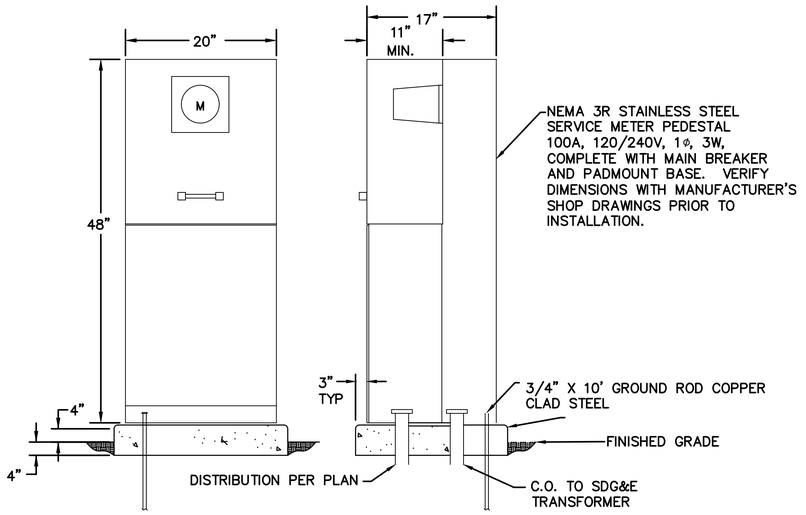
CONTRACTOR: NTP DATE:
INSPECTOR: NOC DATE:

41306-102-D

E-10

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM

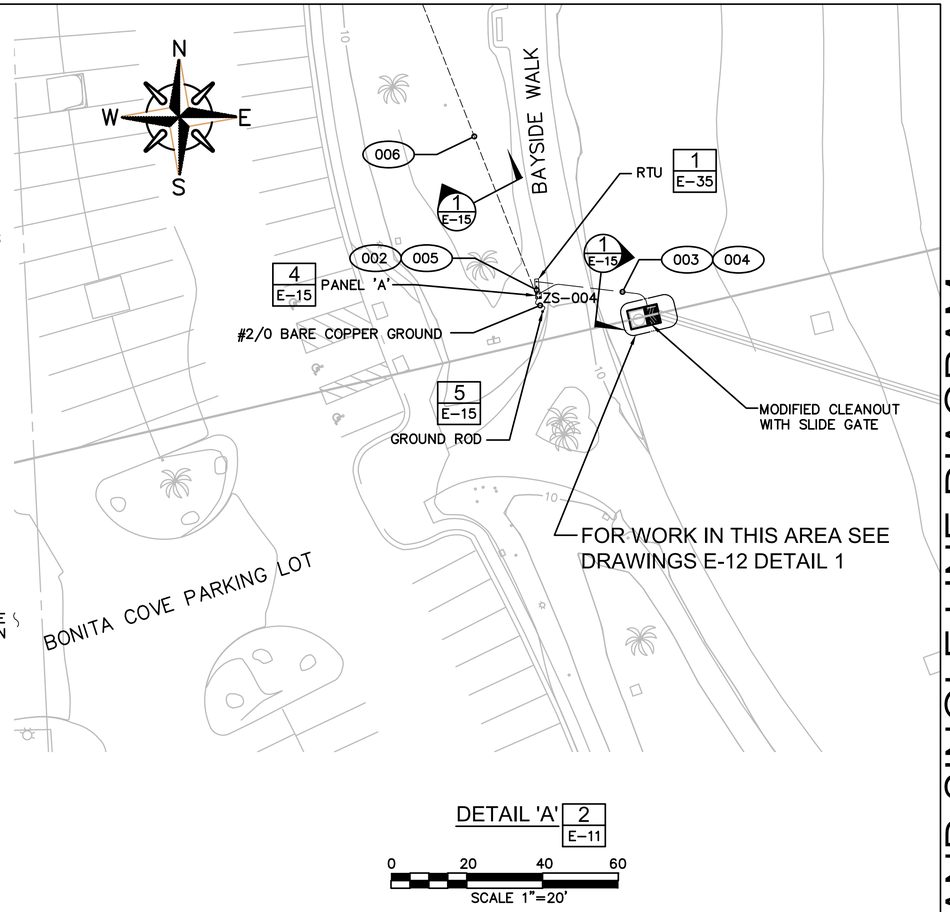




NEMA 3R STAINLESS STEEL METER PEDESTAL 1 E-11

NOT TO SCALE

1. PROVIDE CLEARANCES PER SDG&E SERVICE GUIDE REQUIREMENTS.



SEE ELECTRICAL SITE PLAN FOR CONTINUATION

DETAIL 'A' 2 E-11

0 20 40 60

SCALE 1"=20'



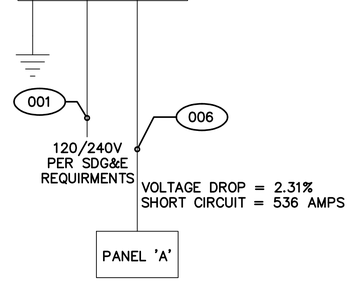
ELECTRICAL SITE PLAN

0 50 100 150

SCALE 1"=50'

NOTES:

1. REFER TO SDG&E INSTALLATION STANDARDS.
2. REPAIR EXISTING ASPHALT PAVEMENT AND CONCRETE. REPAIRS TO BE FROM EXPANSION JOINT TO EXPANSION JOINT. ACCEPTANCE PER RESIDENT ENGINEER.
3. SET METER PEDESTAL WITHIN 10 FEET SOUTH OF SDG&E TRANSFORMER D119079
4. POWER PULL BOXES SHALL BE PLACED EVERY 200 FEET MAXIMUM.



SINGLE LINE DIAGRAM

MOUNTING SURFACE — PANEL 'A' — MAIN 50 — BUS 100A CU — 120/240 VOLT 1 PHASE 3 WIRE — 10,000 A.I.C. SYM.

LOCATION	WATTAGE ØA	WATTAGE ØB	REC	LTG	POLE	BKR	CKT NO.	ØA ØB	CKT NO.	BKR	POLE	LTG	REC	WATTAGE ØA	WATTAGE ØB	LOCATION
RTU	250				1	20	1		2	20	2			960		SLIDE GATE
SPARE					1	20	3		4	–	–				960	–
SPARE					1	20	5		6	20	1					SPARE
SPARE					1	20	7		8	20	1					SPARE
	250	0	WATTS/LINE											960	960	

ØA= 1210 — ØB= 960

TOTAL WATTS= 2,170 — AMPS/LINE= 11.3 — LCL AMPS= 1.0

UTILITY COMPANY

SAN DIEGO GAS & ELECTRIC
PROJECT MANAGEMENT –
8316 CENTURY PARK CT.
SAN DIEGO, CA 92123

CONTACT:
STEPHEN STRATTON
(858) 654–8232

NOTE:
CONTRACTOR SHALL REFER TO SDG&E JOB NO. 3–312339 WHEN APPLYING FOR SDG&E ELECTRICAL SERVICE.

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

REGISTERED PROFESSIONAL ENGINEER SCOTT D. NELSON No. E18069 Exp. 6/30/23 ELECTRICAL STATE OF CALIFORNIA

12/14/21

E-11

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM
SLIDE GATE SYSTEM 9-A

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 103 OF 128 SHEETS

WATER B–18118 (GI)
WBS B–18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI — DATE 12/18/2023 — PRINT DCE NAME — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

DESIGNED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET CCS27 COORDINATE

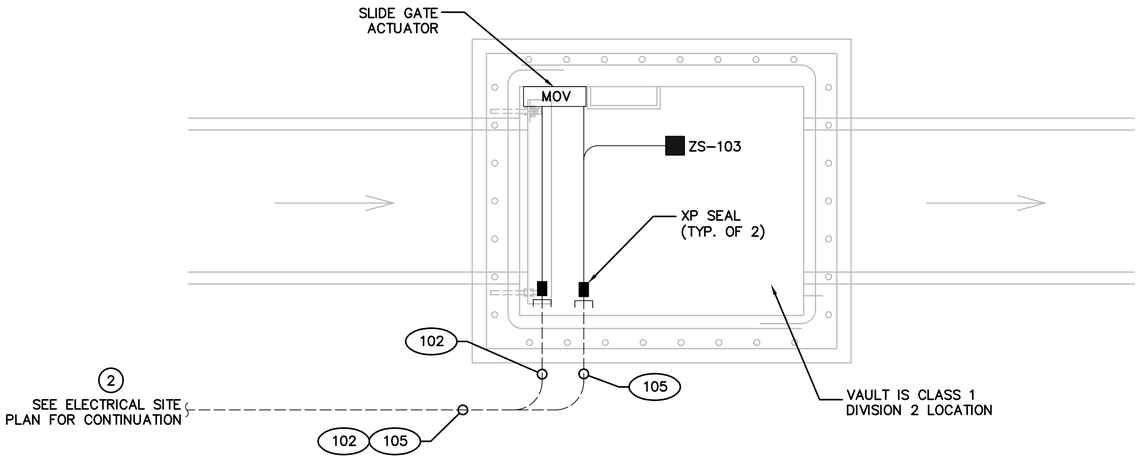
SEE EACH SHEET CCS83 COORDINATE

CONTRACTOR: NTP DATE:

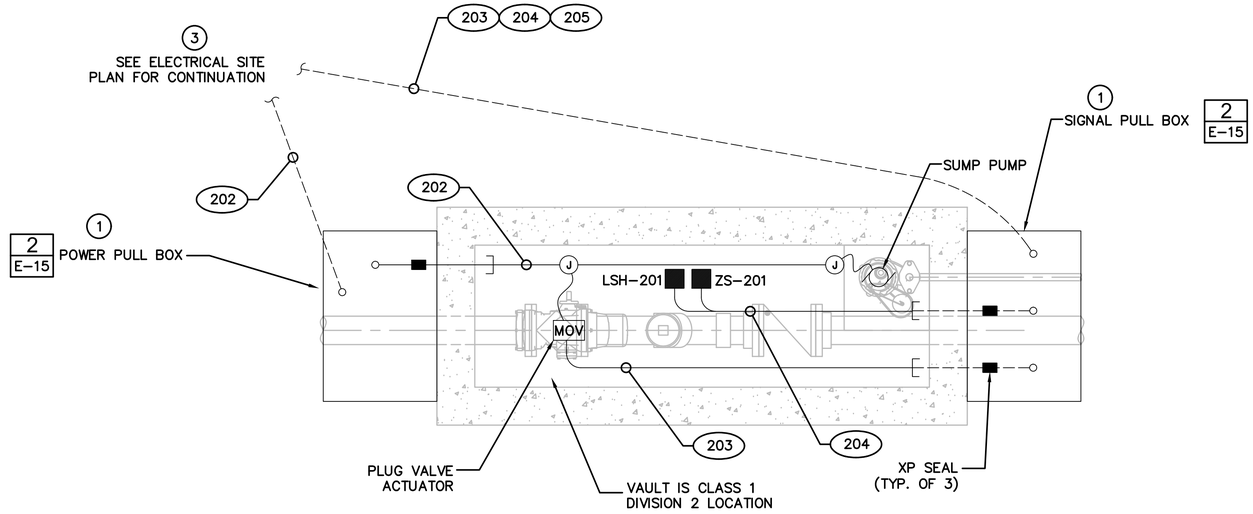
INSPECTOR: NOC DATE:

41306-103-D

ELECTRICAL SITE PLAN AND SINGLE LINE DIAGRAM



TYPICAL MODIFIED CLEANOUT WITH SLIDE GATE 1
SCALE: 3/4"=1'-0" E-12



TYPICAL LOW FLOW DIVERSION (GRAVITY) STRUCTURE 2
SCALE: 3/4"=1'-0" E-12

NOTES:

1. PROVIDE XP SEAL FOR CONDUIT RUNS BETWEEN THE STRUCTURE AND PULLBOX. FOR CONDUIT RUNS BETWEEN PULLBOX AND THE RTU, PROVIDE SEALANT AROUND CONDUCTORS TO SEAL CONDUIT.
2. SIMILAR FOR PUMP AND GRAVITY SYSTEMS 1-A, 2-F, 3-A, 5-A, 6-A, 7-A, AND 9-A.
3. SIMILAR FOR GRAVITY SYSTEMS 2-B, 2-F, 4-A, 5-A, 6-A, 7-A, AND 9-A.

TYPICAL POWER AND SIGNAL PLAN 1

E-12

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL POWER AND SIGNAL PLAN 1

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 104 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: [signature] FOR CITY ENGINEER
ELHAM LOTFI PRINT DCE NAME
12/18/2023 DATE
C91224 RCE #

SUBMITTED BY: KAREN VERA PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER
SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

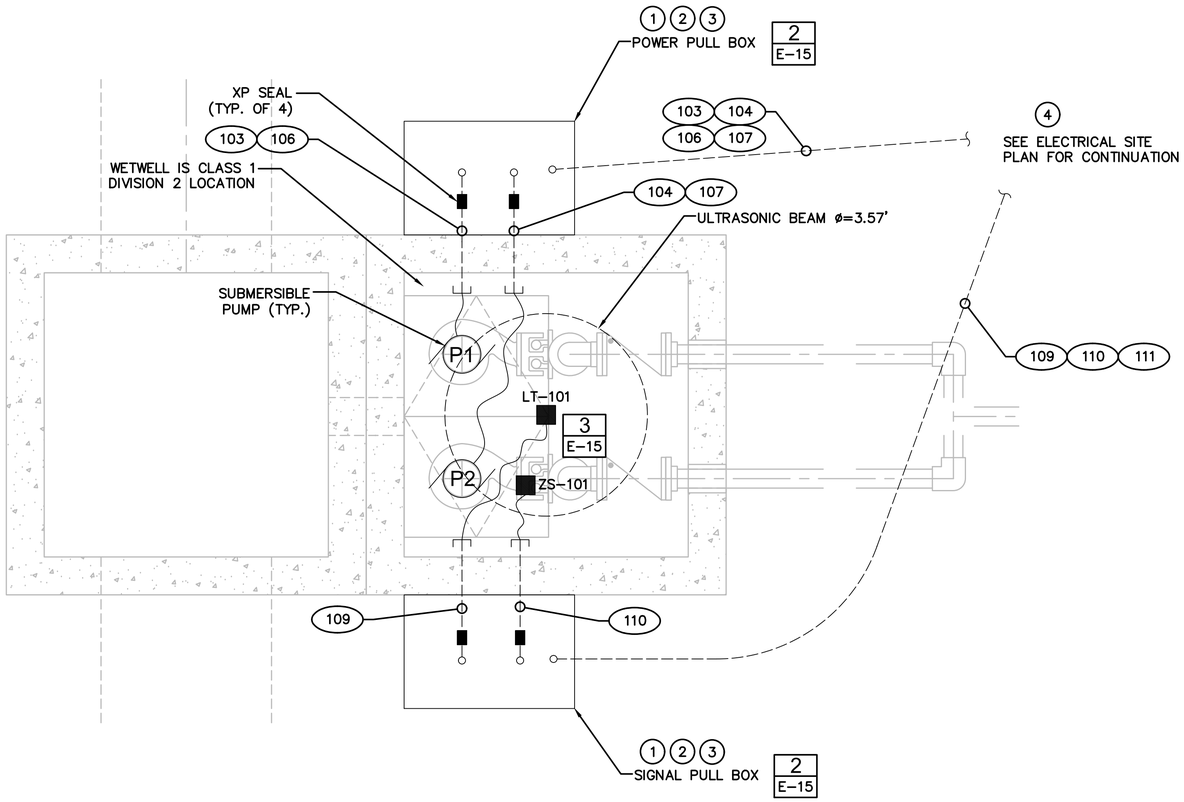
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC	[signature]	12/18/23	

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

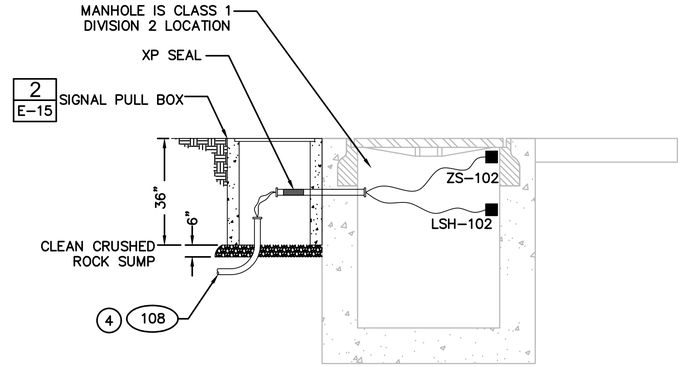
NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

CONTRACTOR:
INSPECTOR:
NTP DATE:
NOC DATE:

41306-104-D



TYPICAL LOW FLOW DIVERSION (PUMP) STRUCTURE 1/E-13
SCALE: 3/4"=1'-0"



TYPICAL FORCE MAIN DIVERSION STRUCTURE 2/E-13
SCALE: 3/4"=1'-0"

NOTES:

1. VFD CONDUIT RUNS BETWEEN WETWELL PULLBOXES AND RTU SHALL BE PVC COATED RGS. CONDUITS PENETRATING WETWELL SHALL BE PVC SCHEDULE 80.
2. PROVIDE XP SEAL FOR CONDUIT RUNS BETWEEN WETWELL AND PULLBOX. FOR CONDUIT RUNS BETWEEN PULLBOX AND THE RTU, PROVIDE SEALANT AROUND CONDUCTORS TO SEAL CONDUIT.
3. PROVIDE SUBMERSIBLE SPLICE FOR PUMP CABLE AND INTRUSION SWITCH. ULTRASONIC CABLE SHALL NOT BE SPLICED.
4. SIMILAR FOR PUMP SYSTEMS 1-A, 2-A, AND 3-A.

TYPICAL POWER AND SIGNAL PLAN 2

E-13

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL POWER AND SIGNAL PLAN 2

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 105 OF 128 SHEETS

WATER WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DCE NAME — 12/18/2023 DATE — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

DESIGNED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET CCS27 COORDINATE

SEE EACH SHEET CCSB3 COORDINATE

41306-105-D

CONTRACTOR: NTP DATE:
INSPECTOR: NOC DATE:

REGISTERED PROFESSIONAL ENGINEER
SCOTT D. NELSON
No. E18069
Exp. 6/30/23
ELECTRICAL
STATE OF CALIFORNIA
12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

CONDUIT SCHEDULE

CONDUIT NO.	CONDUIT SIZE	FROM	TO	CABLE QTY.	CABLE SIZE	CABLE GND.*	VOLTAGE		REMARKS
001	3"	EXISTING SDG&E PAD MOUNT XFMR	METER PEDESTAL	–	–	–	–	–	C.O. PER SDG&E REQUIREMENTS
002	1"	PANEL 'A'	RTU	2	#12	#12	120V	POWER	
003	1"	PANEL 'A'	SLIDE GATE ACTUATOR	2	#12	#12	240V	POWER	
004	1"	RTU	SLIDE GATE ACTUATOR	12	#14	#14	24VDC	CONTROL	STATUS, CONTROL, INTRUSION ZS-003
005	1"	PANEL 'A'	RTU	2	#14	#14	24VDC	CONTROL	ZS-004
006	1-1/2"	METER PEDESTAL	PANEL 'A'	3	#4	#8	120/240V	POWER	
100	3"	EXISTING SDG&E PAD MOUNT XFMR	METER PEDESTAL	–	–	–	–	–	C.O. PER SDG&E REQUIREMENTS
101	1-1/2"	METER PEDESTAL	RTU	2	#2	#8	240V	POWER	
102	1"	METER PEDESTAL	SLIDE GATE ACTUATOR	2	#12	#12	240V	POWER	
103	1"	RTU	PUMP 1	3	#10	#10	240V	POWER	RIGID GALVANIZED STEEL CONDUIT
				2	#14	#14	120V	CONTROL	HTR
104	1"	RTU	PUMP 2	3	#10	#10	240V	POWER	RIGID GALVANIZED STEEL CONDUIT
				2	#14	#14	120V	CONTROL	HTR
105	1"	RTU	SLIDE GATE ACTUATOR	12	#14	#14	24VDC	CONTROL	STATUS, CONTROL, INTRUSION ZS-103
106	1"	RTU	PUMP 1	4	#14	#14	24VDC	CONTROL	TS, SEAL FAIL
107	1"	RTU	PUMP 2	4	#14	#14	24VDC	CONTROL	TS, SEAL FAIL
108	1"	RTU	FLOOD SWITCH LSH-102	4	#14	#14	24VDC	CONTROL	FLOOD, INTRUSION ZS-102
109	1"	RTU	LEVEL TRANSMITTER LT-101	1	#16STP	–	24VDC	SIGNAL	
110	1"	RTU	INTRUSION SWITCH ZS-101	2	#14	#14	24VDC	CONTROL	
111	(2)1"	RTU	LOW FLOW DIVERSION STRUCTURE	–	–	–	–	–	C.O.
112	1-1/2"	METER PEDESTAL	STUB UP @ RTU	–	–	–	–	–	C.O.
200	3"	EXISTING SDG&E PAD MOUNT XFMR	METER PEDESTAL	–	–	–	–	–	C.O. PER SDG&E REQUIREMENTS
201	1"	METER PEDESTAL	RTU	2	#12	#12	120V	POWER	
202	1"	METER PEDESTAL	PLUG VALVE	2	#12	#12	240V	POWER	
				2	#12	#12	120V	POWER	SUMP PUMP
203	1"	RTU	PLUG VALVE ACTUATOR	10	#14	#14	24VDC	CONTROL	STATUS, CONTROL
204	1"	RTU	FLOOD SWITCH LSH-201	4	#14	#14	24VDC	CONTROL	FLOOD, INTRUSION ZS-201
205	(2)1"	RTU	LOW FLOW DIVERSION STRUCTURE	–	–	–	–	–	C.O.
300	3"	EXISTING SDG&E PAD MOUNT XFMR	METER PEDESTAL	–	–	–	–	–	C.O. PER SDG&E REQUIREMENTS
301	1-1/2"	PANEL 'A'	RTU	2	#2	#8	240V	POWER	
302	1"	RTU	PUMP 1	3	#10	#10	240V	POWER	RIGID GALVANIZED STEEL CONDUIT
				2	#14	#14	120V	CONTROL	HTR
303	1"	RTU	PUMP 2	3	#10	#10	240V	POWER	RIGID GALVANIZED STEEL CONDUIT
				2	#14	#14	120V	CONTROL	HTR
304	1"	RTU	PUMP 1	4	#14	#14	24VDC	CONTROL	TS, SEAL FAIL
305	1"	RTU	PUMP 2	4	#14	#14	24VDC	CONTROL	TS, SEAL FAIL
306	1"	RTU	FLOOD SWITCH LSH-302	4	#14	#14	24VDC	CONTROL	FLOOD, INTRUSION ZS-302
307	1"	RTU	LEVEL TRANSMITTER LT-301	1	#16STP	–	24VDC	SIGNAL	
308	(2)1"	RTU	LOW FLOW DIVERSION STRUCTURE	–	–	–	–	–	C.O.
309	1"	RTU	INTRUSION SWITCH ZS-301	2	#14	#14	24VDC	CONTROL	
310	1"	PANEL 'A'	RTU	2	#14	#14	24VDC	CONTROL	ZS-304
311	2"	METER PEDESTAL	PANEL 'A'	3	#1	#8	120/240V	POWER	
400	3"	EXISTING SDG&E PAD MOUNT XFMR	METER PEDESTAL	–	–	–	–	–	C.O. PER SDG&E REQUIREMENTS
401	1"	METER PEDESTAL	RTU	2	#12	#12	120V	POWER	
402	1"	METER PEDESTAL	PLUG VALVE	2	#12	#12	240V	POWER	
				2	#12	#12	120V	POWER	SUMP PUMP
403	1"	RTU	PLUG VALVE ACTUATOR	10	#14	#14	24VDC	CONTROL	STATUS, CONTROL
404	1"	RTU	FLOOD SWITCH LSH-401	4	#14	#14	24VDC	CONTROL	FLOOD, INTRUSION ZS-401
405	(2)1"	RTU	LOW FLOW DIVERSION STRUCTURE	–	–	–	–	–	C.O.
406	1-1/2"	METER PEDESTAL	STUB UP @ RTU	–	–	–	–	–	C.O.
500	3"	EXISTING SDG&E PAD MOUNT XFMR	METER PEDESTAL	–	–	–	–	–	C.O. PER SDG&E REQUIREMENTS
501	1"	METER PEDESTAL	RTU	2	#12	#12	120V	POWER	
502	1"	METER PEDESTAL	SLIDE GATE ACTUATOR	2	#12	#12	240V	POWER	
503	1"	METER PEDESTAL	PLUG VALVE	2	#12	#12	240V	POWER	
				2	#12	#12	120V	POWER	SUMP PUMP
504	1"	RTU	SLIDE GATE ACTUATOR	12	#14	#14	24VDC	CONTROL	STATUS, CONTROL, INTRUSION ZS-502
505	1"	RTU	PLUG VALVE ACTUATOR	10	#14	#14	24VDC	CONTROL	STATUS, CONTROL
506	1"	RTU	FLOOD SWITCH LSH-501	4	#14	#14	24VDC	CONTROL	FLOOD, INTRUSION ZS-501
507	(2)1"	RTU	LOW FLOW DIVERSION STRUCTURE	–	–	–	–	–	C.O.
600	3"	EXISTING SDG&E HANDHOLE	METER PEDESTAL	–	–	–	–	–	C.O. PER SDG&E REQUIREMENTS
601	1-1/2"	METER PEDESTAL	RTU	2	#2	#8	240V	POWER	

* ONE GROUND CONDUCTOR PER CONDUIT

CONDUIT NO.	CONDUIT SIZE	FROM	TO	CABLE QTY.	CABLE SIZE	CABLE GND.*	VOLTAGE		REMARKS
602	1"	METER PEDESTAL	SLIDE GATE ACTUATOR	2	#12	#12	240V	POWER	
603	1"	RTU	PUMP 1	3	#10	#10	240V	POWER	RIGID GALVANIZED STEEL CONDUIT
				2	#14	#14	120V	CONTROL	HTR
604	1"	RTU	PUMP 2	3	#10	#10	240V	POWER	RIGID GALVANIZED STEEL CONDUIT
				2	#14	#14	120V	CONTROL	HTR
605	1"	RTU	SLIDE GATE ACTUATOR	12	#14	#14	24VDC	CONTROL	STATUS, CONTROL, INTRUSION ZS-603
606	1"	RTU	PUMP 1	4	#14	#14	24VDC	CONTROL	TS, SEAL FAIL
607	1"	RTU	PUMP 2	4	#14	#14	24VDC	CONTROL	TS, SEAL FAIL
608	1"	RTU	FLOOD SWITCH LSH-602	4	#14	#14	24VDC	CONTROL	FLOOD, INTRUSION ZS-602
609	1"	RTU	LEVEL TRANSMITTER LT-601	1	#16STP	–	24VDC	SIGNAL	
610	1"	RTU	INTRUSION SWITCH ZS-601	2	#14	#14	24VDC	CONTROL	
611	(2)1"	RTU	LOW FLOW DIVERSION STRUCTURE	–	–	–	–	–	C.O.
700	3"	EXISTING SDG&E PAD MOUNT XFMR	METER PEDESTAL	–	–	–	–	–	C.O. PER SDG&E REQUIREMENTS
701	1"	PANEL 'A'	RTU	2	#12	#12	120V	POWER	
702	1"	PANEL 'A'	SLIDE GATE ACTUATOR	2	#12	#12	240V	POWER	
703	1"	PANEL 'A'	PLUG VALVE	2	#12	#12	240V	POWER	
				2	#10	#10	120V	POWER	SUMP PUMP
704	1"	RTU	SLIDE GATE ACTUATOR	12	#14	#14	24VDC	CONTROL	STATUS, CONTROL, INTRUSION ZS-702
705	1"	RTU	PLUG VALVE ACTUATOR	10	#14	#14	24VDC	CONTROL	STATUS, CONTROL
706	1"	RTU	FLOOD SWITCH LSH-701	4	#14	#14	24VDC	CONTROL	FLOOD, INTRUSION ZS-701
707	(2)1"	RTU	LOW FLOW DIVERSION STRUCTURE	–	–	–	–	–	C.O.
708	1"	PANEL 'A'	RTU	2	#14	#14	24VDC	CONTROL	ZS-704
709	1-1/2"	METER PEDESTAL	PANEL 'A'	3	#4	#8	120/240V	POWER	
800	3"	EXISTING SDG&E PAD MOUNT XFMR	METER PEDESTAL	–	–	–	–	–	C.O. PER SDG&E REQUIREMENTS
801	1"	METER PEDESTAL	RTU	2	#12	#12	120V	POWER	
802	1"	METER PEDESTAL	SLIDE GATE ACTUATOR	2	#12	#12	240V	POWER	
803	1"	METER PEDESTAL	PLUG VALVE	2	#12	#12	240V	POWER	
				2	#12	#12	120V	POWER	SUMP PUMP
804	1"	RTU	SLIDE GATE ACTUATOR	12	#14	#14	24VDC	CONTROL	STATUS, CONTROL, INTRUSION ZS-802
805	1"	RTU	PLUG VALVE ACTUATOR	10	#14	#14	24VDC	CONTROL	STATUS, CONTROL
806	1"	RTU	FLOOD SWITCH LSH-801	4	#14	#14	24VDC	CONTROL	FLOOD, INTRUSION ZS-801
807	(2)1"	RTU	LOW FLOW DIVERSION STRUCTURE	–	–	–	–	–	C.O.
900	3"	EXISTING SDG&E PAD MOUNT XFMR	METER PEDESTAL	–	–	–	–	–	C.O. PER SDG&E REQUIREMENTS
901	1"	METER PEDESTAL	RTU	2	#12	#12	120V	POWER	
902	1"	METER PEDESTAL	SLIDE GATE ACTUATOR	2	#12	#12	240V	POWER	
903	1"	METER PEDESTAL	PLUG VALVE	2	#12	#12	240V	POWER	
				2	#12	#12	120V	POWER	SUMP PUMP
904	1"	RTU	SLIDE GATE ACTUATOR	12	#14	#14	24VDC	CONTROL	STATUS, CONTROL, INTRUSION ZS-902
905	1"	RTU	PLUG VALVE ACTUATOR	10	#14	#14	24VDC	CONTROL	STATUS, CONTROL
906	1"	RTU	FLOOD SWITCH LSH-901	4	#14	#14	24VDC	CONTROL	FLOOD, INTRUSION ZS-901
907	(2)1"	RTU	LOW FLOW DIVERSION STRUCTURE	–	–	–	–	–	C.O.

* ONE GROUND CONDUCTOR PER CONDUIT

E-14

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

CONDUIT SCHEDULE

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 106 OF 128 SHEETS

WATER B-18118 (G)
WBS B-18117 (SD)

APPROVED: FOR CITY ENGINEER — DATE 12/18/2023
PRINT DCE NAME: ELHAM LOTFI — RCE #: C91224

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER
SEE EACH SHEET, CCS27 COORDINATE
SEE EACH SHEET, CCS83 COORDINATE

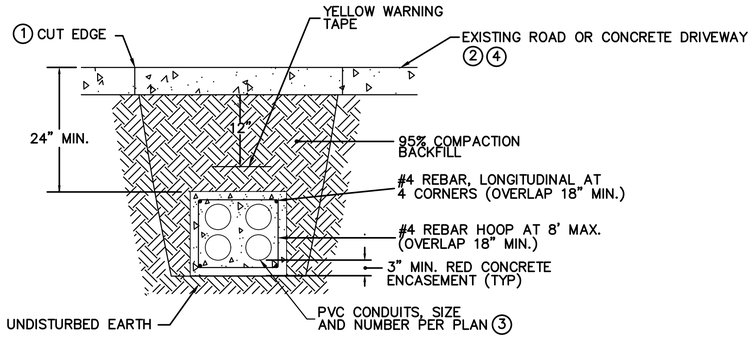
CONTRACTOR: NTP DATE:
INSPECTOR: NOC DATE:

41306-106-D

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

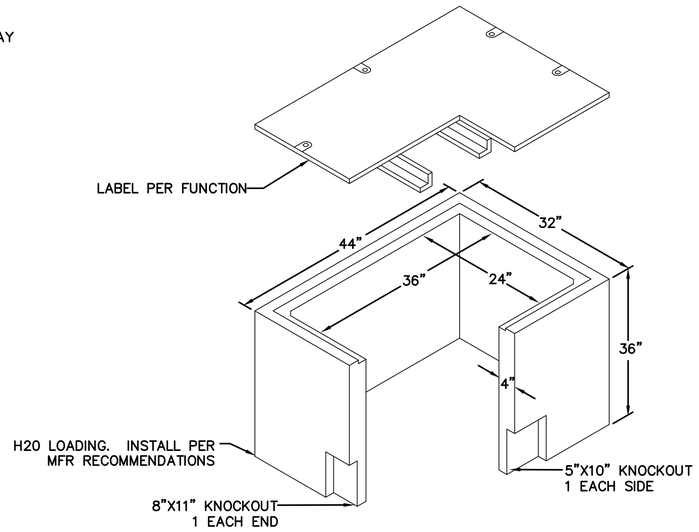
REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18063 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA

12/14/21

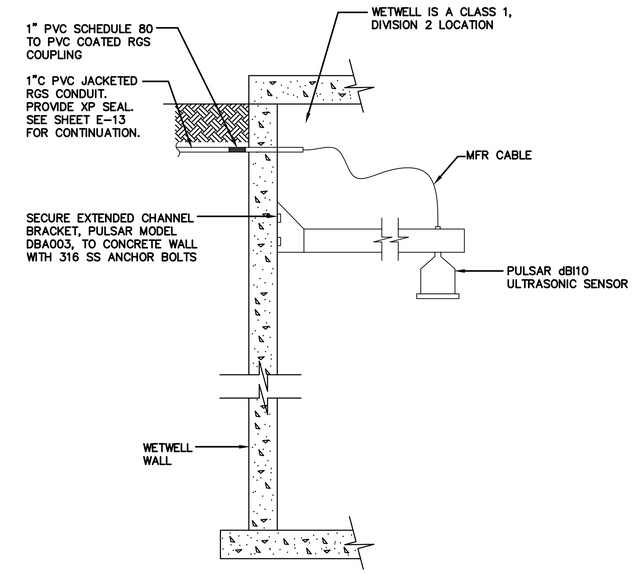


CONCRETE ENCASED CONDUIT 1
NOT TO SCALE E-15

1. TO BE STRAIGHT AND FULL DEPTH.
2. TACK COAT TO CUT EDGE. CUT TO BE 1" BEYOND EDGE OF PIT
3. REFER TO SPECIFICATIONS FOR CONDUIT REQUIREMENTS.
4. REPAIR EXISTING ASPHALT PAVEMENT AND CEMENT CONCRETE. CEMENT CONCRETE REPAIRS TO BE FROM EXPANSION JOINT TO EXPANSION JOINT.

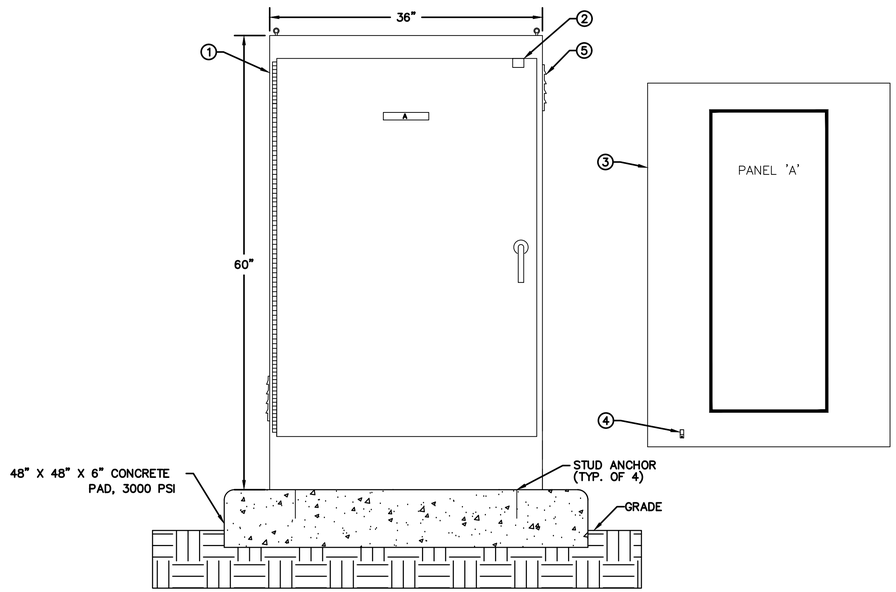


2'X3'X3' PULLBOX 2
NOT TO SCALE E-15



WETWELL ENTRY/ULTRASONIC LEVEL TRANSMITTER DETAIL 3
NOT TO SCALE E-15

1. ALL CABLES SHALL BE FIRMLY SUPPORTED VIA TIEWRAPS AND SHALL BE ROUTED FREE FROM OBSTRUCTIONS.
2. INSTALL EXTENDED CHANNEL BRACKET NEAR ACCESS HATCH OR CHECKERED PLATE. PLACE THE LEVEL TRANSMITTER 17 FEET ABOVE THE BOTTOM OF THE WET WELL AND 30 INCHES FROM THE WALL.
3. ALL HARDWARE IN WETWELL AREA SHALL BE 316 S.S.
4. ULTRASONIC CABLE SHALL NOT BE SPLICED.



PANEL 'A' ENCLOSURE DETAIL 4
NOT TO SCALE E-15

ENGRAVING SCHEDULE				
ITEM	LINE 1	LINE 2	(H x W x LTR)	DEVICE
A	PANEL 'A'		1" x 6" x 3/8"	

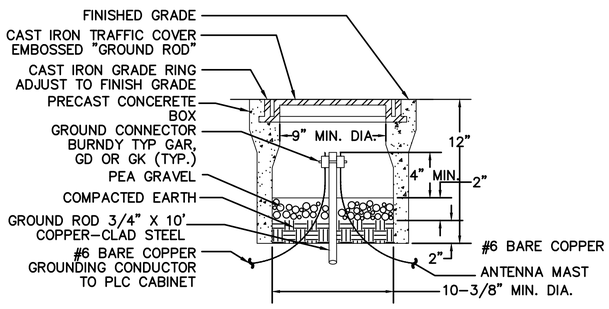
ALL NAMEPLATES ARE BLACK WITH WHITE LETTERING

PANEL 'A' ENCLOSURE

1. HOFFMAN STAINLESS STEEL ENCLOSURE WITH LOCKABLE DOOR, MODEL A603624SSFSN4 (60"Hx36"Wx24"D).
2. INTRUSION SWITCH
3. HOFFMAN STEEL BACK PANEL, MODEL A60P36F1G (48"Hx32"W)
4. GROUND LUG
5. VENT LOUVERS (BOTH SIDES)

BACK PANEL
NOT TO SCALE

1. ALL STUB-UPS THROUGHOUT THE JOB SHALL BE PVC JACKETED RGS. INSIDE OF CONDUIT SHALL ALSO BE PVC COATED. AS MANUFACTURED BY ROBROY OR APPROVED EQUAL.
2. SECURE ENCLOSURE TO 6 INCH 3000 PSI CONCRETE PAD WITH 3/8" X 3" EXPANSION TYPE STUD ANCHOR AND 316 S.S. FLATWASHER (TYP. OF 4)



GROUND ROD AND BOX INSTALLATION 5
NOT TO SCALE E-15

ELECTRICAL DETAILS

E-15

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

ELECTRICAL DETAILS

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 107 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI — PRINT DCE NAME
DATE 12/18/2023
RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER
SEE EACH SHEET, CCS27 COORDINATE
SEE EACH SHEET, CCS83 COORDINATE

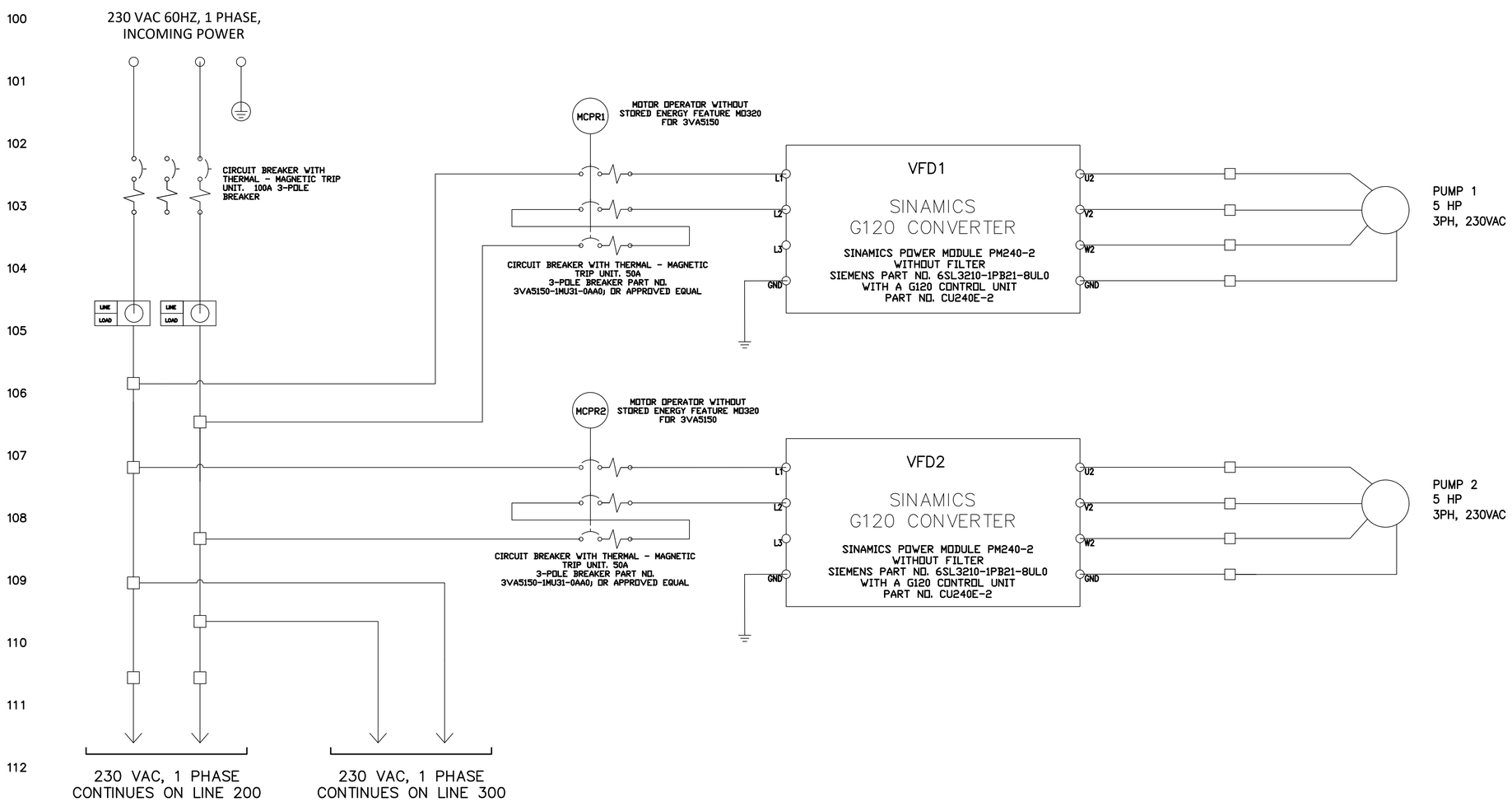
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

CONTRACTOR: _____ NTP DATE: _____
INSPECTOR: _____ NOC DATE: _____

41306-107-D



TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 1

E-16

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL PUMP SYSTEM RTU
CONTROL DIAGRAM 1

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 108 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI (PRINT DCE NAME) — 12/18/2023 (DATE) — C91224 (RCE #)

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC	[illegible]	12/18/23	

SEE EACH SHEET — CCS27 COORDINATE

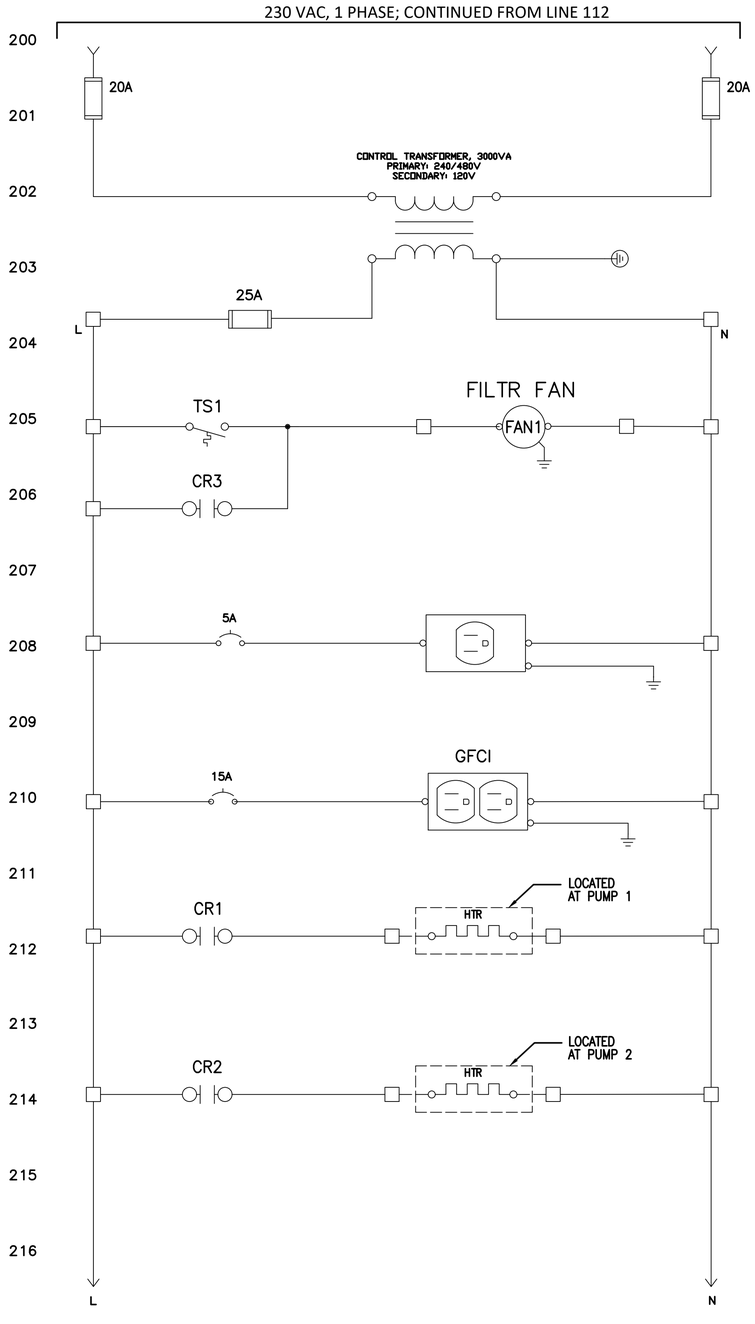
SEE EACH SHEET — CCS83 COORDINATE

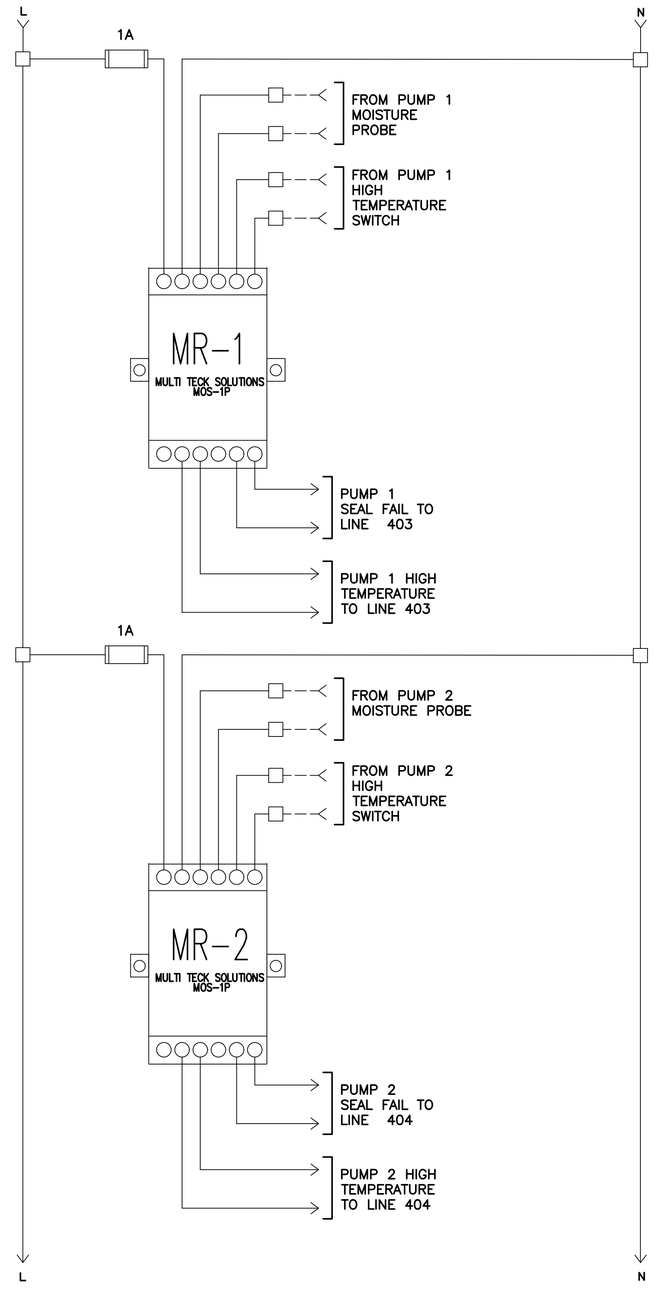
41306-108-D

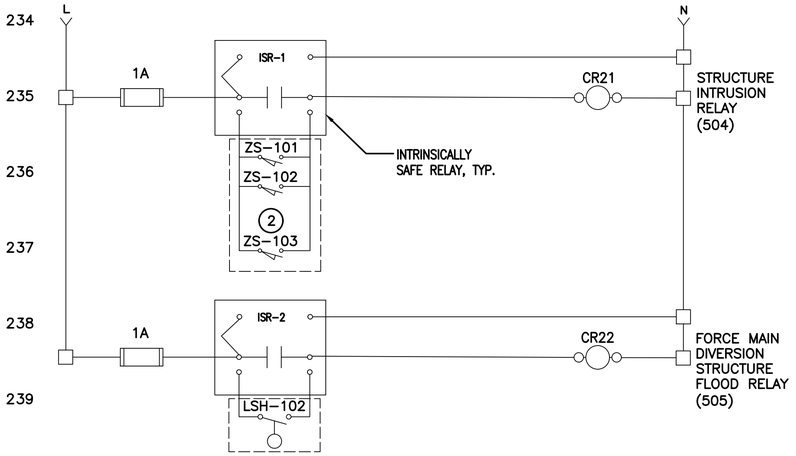
REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

CONTRACTOR: _____ NTP DATE: _____
INSPECTOR: _____ NOC DATE: _____







NOTES:

1. IO IS SIMILAR FOR PUMP SYSTEMS 1, 3, AND 6.
2. IO IS NOT REQUIRED AT PUMP SYSTEM 3.

TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 2

E-17

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 2

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 109 OF 128 SHEETS

WATER WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI — DATE 12/18/2023
PRINT DCE NAME — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

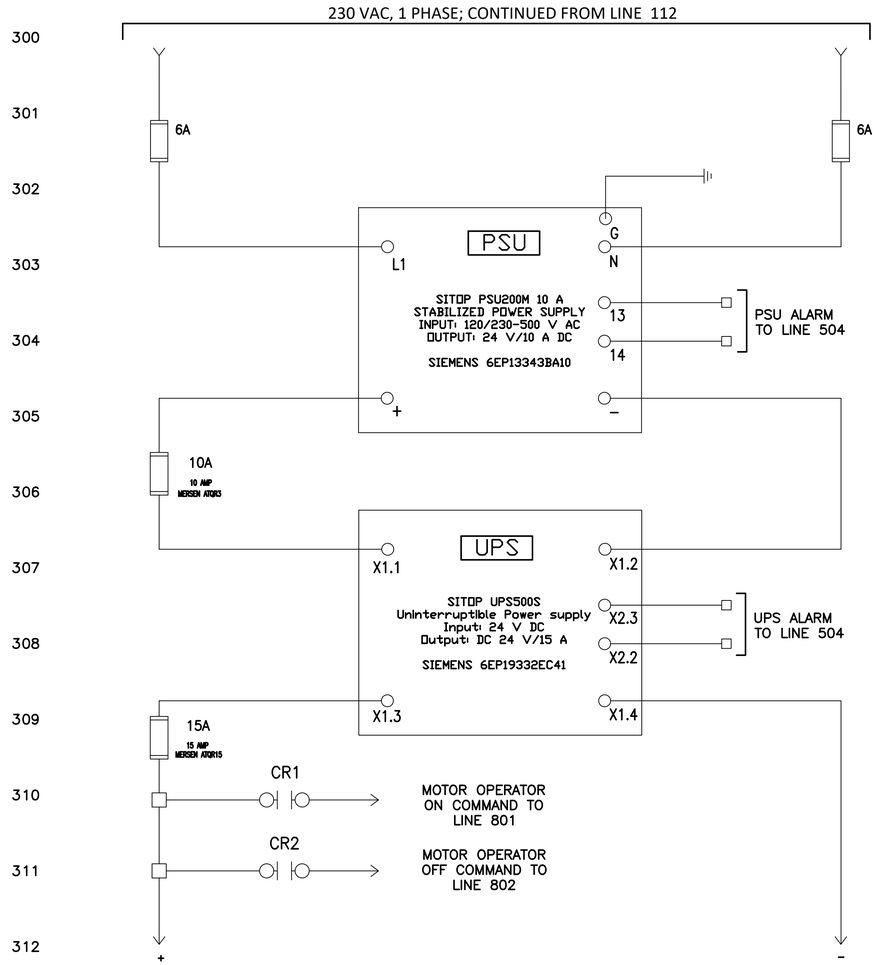
SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

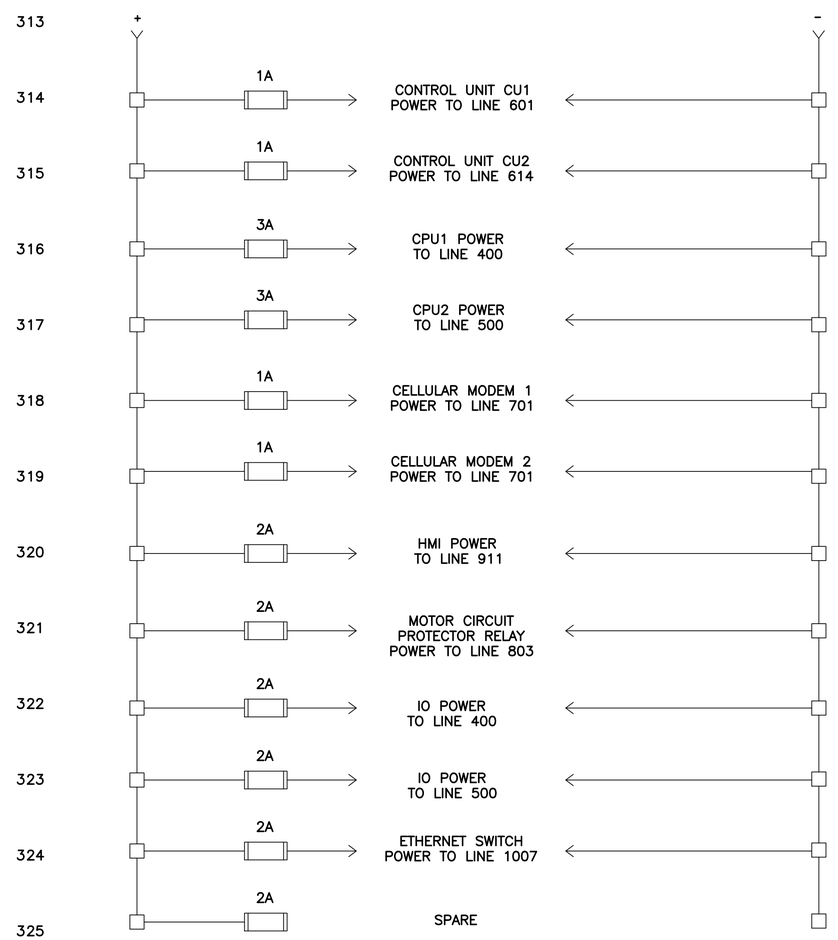
CONTRACTOR: NTP DATE:
INSPECTOR: NOC DATE:

41306-109-D

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA — 12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409





TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 3

E-18

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL PUMP SYSTEM RTU
CONTROL DIAGRAM 3

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 110 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: _____ 12/18/2023
FOR CITY ENGINEER ELHAM LOTFI — DATE
PRINT DCE NAME — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET — CCS27 COORDINATE
SEE EACH SHEET — CCS83 COORDINATE

CONTRACTOR: _____ NTP DATE: _____
INSPECTOR: _____ NOC DATE: _____

41306-110-D

REGISTERED PROFESSIONAL ENGINEER
SCOTT D. NELSON
No. E18069
Exp. 6/30/23
ELECTRICAL
STATE OF CALIFORNIA
12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

PLC 1

IO POWER FROM LINE 322 (+ / −)

CPU POWER FROM LINE 316 (+ / −)

- (5) PUMP 1 SEAL FAIL — MR−1
- (5) PUMP 1 HIGH TEMPERAURE — MR−1
- (5) PUMP 2 SEAL FAIL — MR−2
- (5) PUMP 2 HIGH TEMPERAURE — MR−2
- SPARE
- SPARE
- SPARE
- SPARE
- SPARE
- SPARE
- SPARE
- SPARE
- SPARE
- SPARE

ULTRACONIC LEVEL TRANSMITTER LT 101 (+ / −) 4−20mA — 125mA

X11: 3M 0 AI ANALOG INPUTS; 2M 0 AQ ANALOG OUTPUTS

X50 (MC)

CPU 1215C DC/DC/RLY

DI a .0 .1 .2 .3 .4 .5 .6 .7 — DI b .0 .1 .2 .3 .4 .5

DQ a .0 .1 — DQ b .0 .1

215-1HG40-0XB0

RELAY OUTPUTS — X12: 1L .0 .1 .2 .3 .4 .5 2L .6 .7 .0 .1

- CR1 — MOTOR OPERATORS ON RELAY (310) (2)(3)(4)
- CR2 — MOTOR OPERATORS OFF RELAY (311) (2)(3)(4)
- CR3 — SPARE (416)
- CR4 — SPARE (415)
- CR5 — SPARE (415)
- CR6 — SPARE (416)
- CR7 — SPARE (416)
- CR8 — SPARE (416)
- CR9 — SPARE (416)
- CR10 — SPARE (416)

SB 1231 AI AI 1 x 12 BIT +/- 10VDC / 0-20mA 6ES7 231-4HA30-0XB0

AI 0 AI

X19: AI R 0+ 0+ 0-

AI-A-M

X10: 1M .0 .1 .2 .3 .4 .5 .6 .7 DI a; 1M .0 .1 .2 .3 .4 .5 .6 .7 DI b; L+ M 24VDC; L+ M 24VDC — 24VDC INPUTS

MAINT
ERROR
RUN / STOP

LINK — Rx / Tx —

X1 P2 PROFINET (LAN)

X1 P1 MAC ADDRESS

CAT 5 → TO ETHERNET SWITCH ON LINE 1007

NOTES:

1. IO IS SIMILAR FOR PUMP SYSTEMS 1−A, 2−A, AND 3−A.
2. PUMPS SHALL BE RUN IN A DUTY STANDBY FASHION. THE DUTY PUMP STARTS WHEN THE WET WELL LEVEL RISES ABOVE A USER ADJUSTABLE DUTY START LEVEL SETPOINT. THE DUTY PUMP SHALL BE STAGED OFF WHEN THE WET WELL LEVEL FALLS BELOW A USER ADJUSTABLE DUTY STOP LEVEL SETPOINT. THE OPERATOR MAY SELECT ALL SETPOINTS VIA THE HMI SYSTEM.
3. A DUTY SELECTOR SWITCH AT THE HMI SHALL SELECT THE DUTY PUMP AND THE STANDBY PUMP. ONLY ONE PUMP IS ALLOWED TO RUN AT A GIVEN TIME.
4. THE PLC WILL AUTOMATICALLY ROTATE THE PUMPS EVERY 24 HOURS AT NOON, OR AFTER THE DUTY PUMP IS TURNED OFF, WHICH EVER OCCURS FIRST. HOWEVER, THE OPERATOR MAY OVERRIDE THE PUMP ALTERNATION LOGIC AND SELECT WHICH PUMP WILL RUN VIA THE HMI SYSTEM. THE PLC WILL AUTOMATICALLY PROMOTE THE STANDBY PUMP TO DUTY UPON FAILURE OF THE DUTY PUMP.
5. WHEN MOISTURE INTRUSION OR HIGH MOTOR WINDING TEMPERATURE IS DETECTED, THE PUMP STOPS. MANUAL RESET AT THE HMI IS REQUIRED.

- CR3 — SPARE
- CR4 — SPARE
- CR5 — SPARE
- CR6 — SPARE
- CR7 — SPARE
- CR8 — SPARE
- CR9 — SPARE
- CR10 — SPARE

TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 4

E-19

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 4

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 111 OF 128 SHEETS

WATER B−18118 (GI)
WBS B−18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI — PRINT DCE NAME — 12/18/2023 DATE — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

SEE EACH SHEET, CCS27 COORDINATE

SEE EACH SHEET, CCS83 COORDINATE

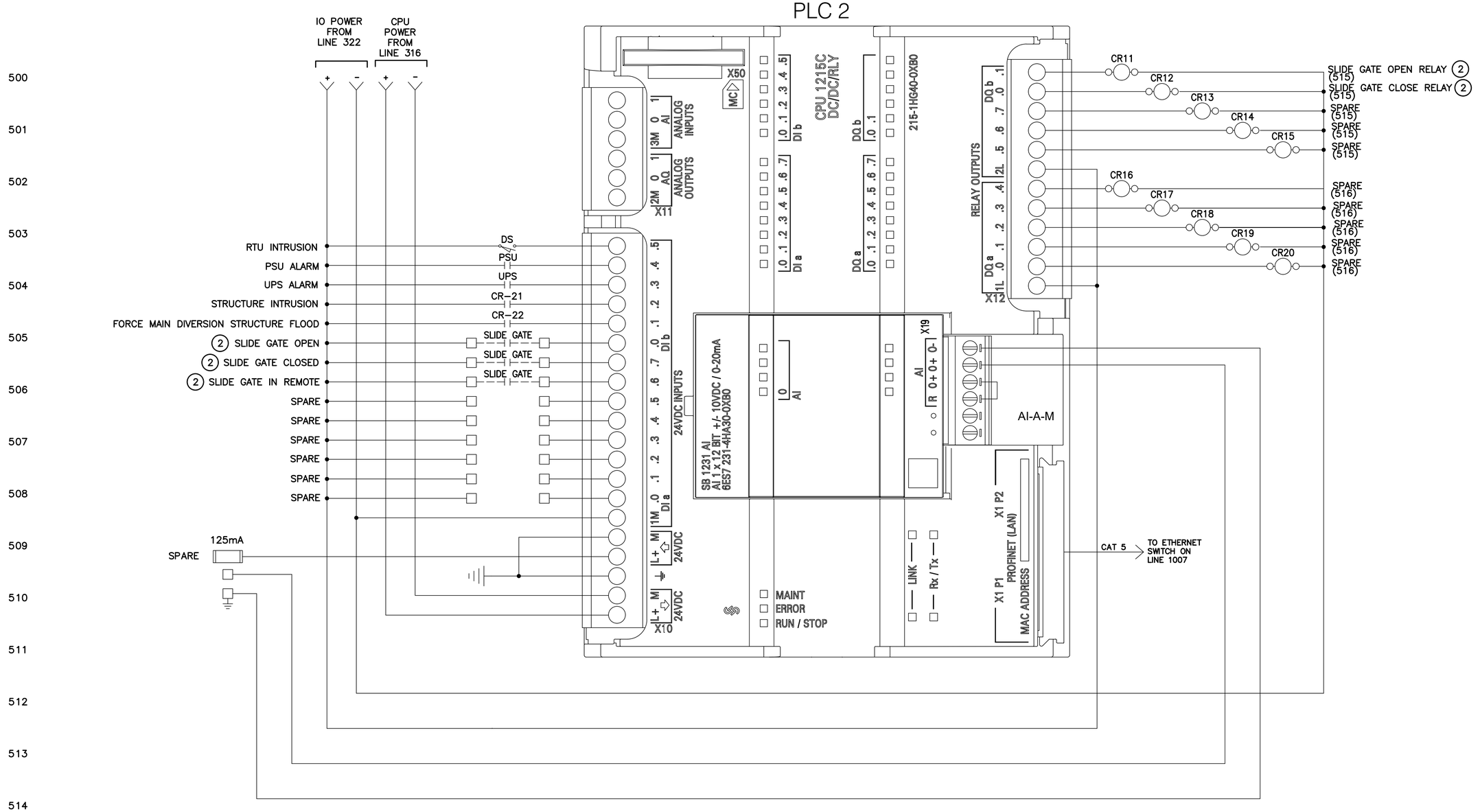
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA — 12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

CONTRACTOR: _____ NTP DATE: _____
INSPECTOR: _____ NOC DATE: _____

41306-111-D



NOTES:

1. IO IS SIMILAR FOR PUMP SYSTEMS 1–A, 2–A, AND 3–A.
2. IO POINT IS NOT REQUIRED AT PUMP SYSTEM SYSTEM 2–A.

TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 5

E-20

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 5

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 112 OF 128 SHEETS

WATER B–18118 (GI)
WBS B–18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DCE NAME — 12/18/2023 DATE — C91224 RCE #

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET CCS27 COORDINATE

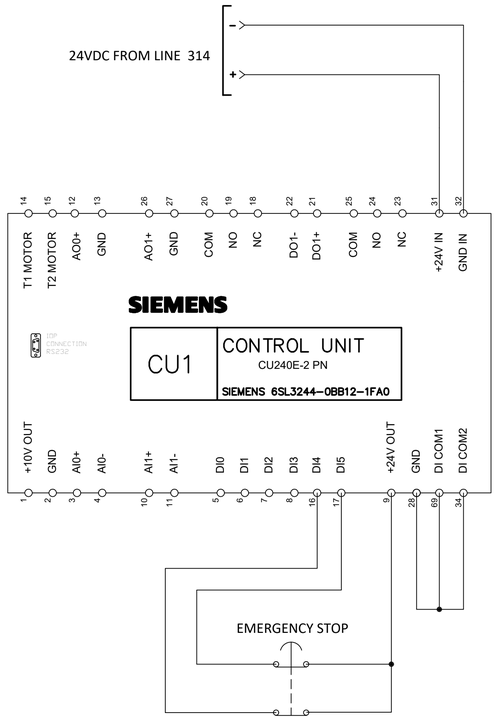
SEE EACH SHEET CCS83 COORDINATE

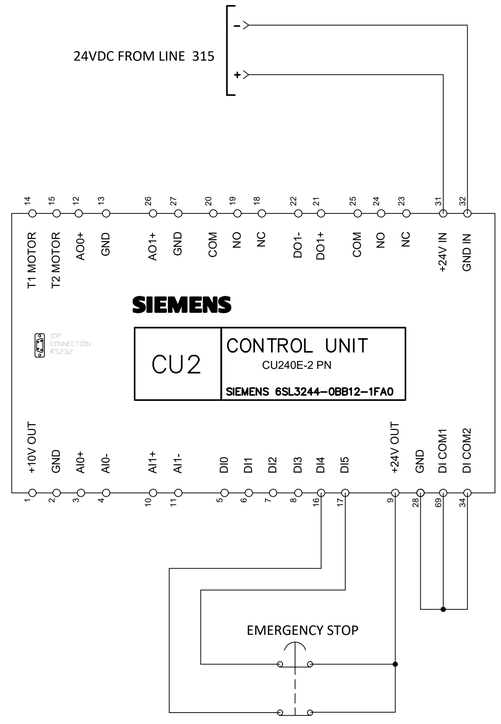
REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA — 12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
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CONTRACTOR: NTP DATE:
INSPECTOR: NOC DATE:

41306-112-D





TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 6

E-21

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL PUMP SYSTEM RTU
CONTROL DIAGRAM 6

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 113 OF 128 SHEETS

WATER WBS B-18118 (GI)
B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI — DATE 12/18/2023
PRINT DCE NAME — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER
SEE EACH SHEET, CCS27 COORDINATE
SEE EACH SHEET, CCS83 COORDINATE

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC	[signature]	12/18/23	

CONTRACTOR:
INSPECTOR:
NTP DATE:
NOC DATE:

41306-113-D

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

REGISTERED PROFESSIONAL ENGINEER — ERIC D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

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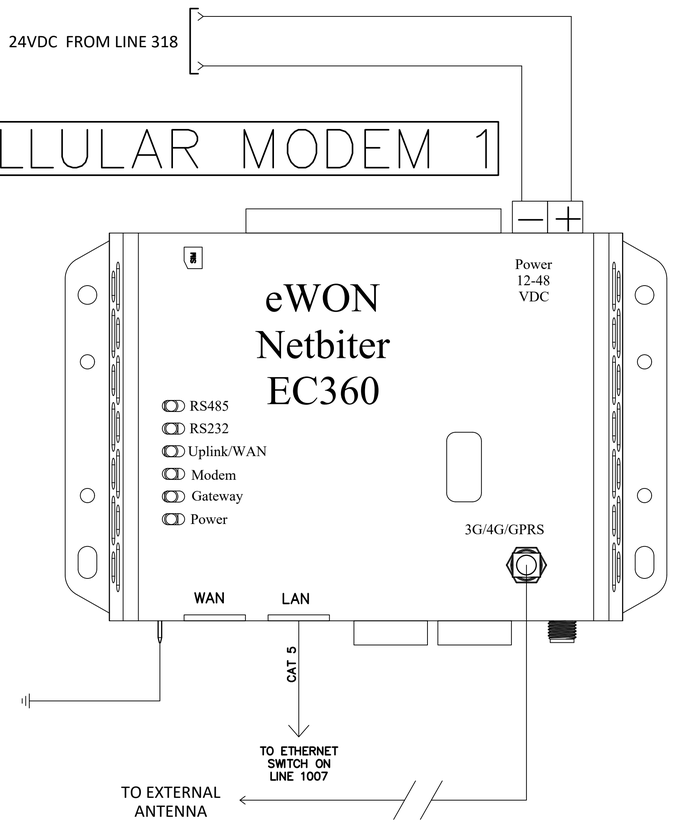
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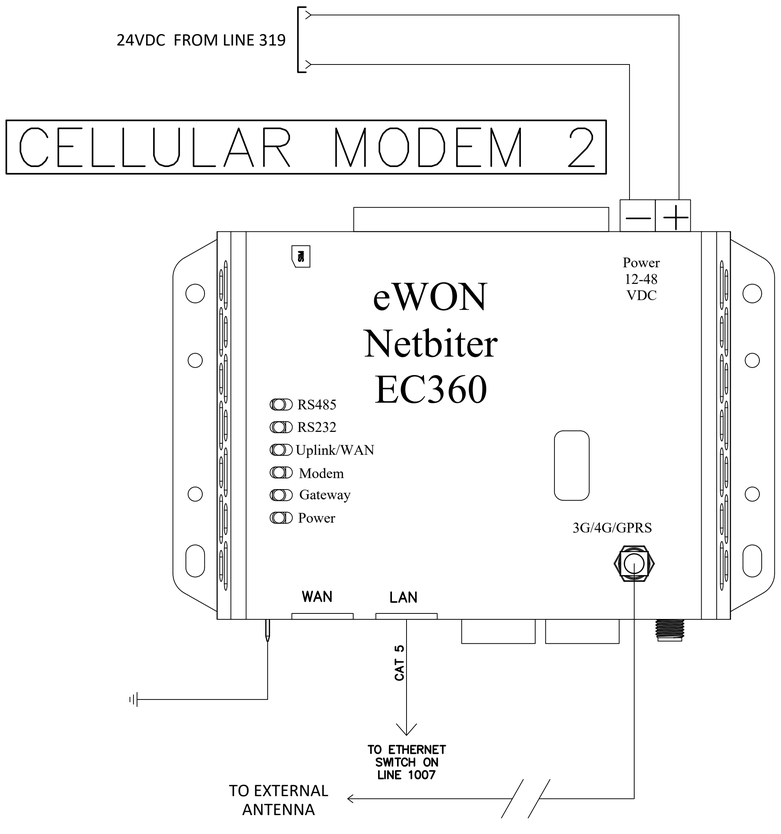
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TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 7

E-22

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL PUMP SYSTEM RTU
CONTROL DIAGRAM 7

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 114 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: _____ 12/18/2023
FOR CITY ENGINEER ELHAM LOTFI — DATE C91224
PRINT DCE NAME — RCE #

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC	_____	12/18/23	

SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

NEC Nelson Engineering Company
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Tel. (760) 274-4409

CONTRACTOR: _____ NTP DATE: _____
INSPECTOR: _____ NOC DATE: _____

41306-114-D

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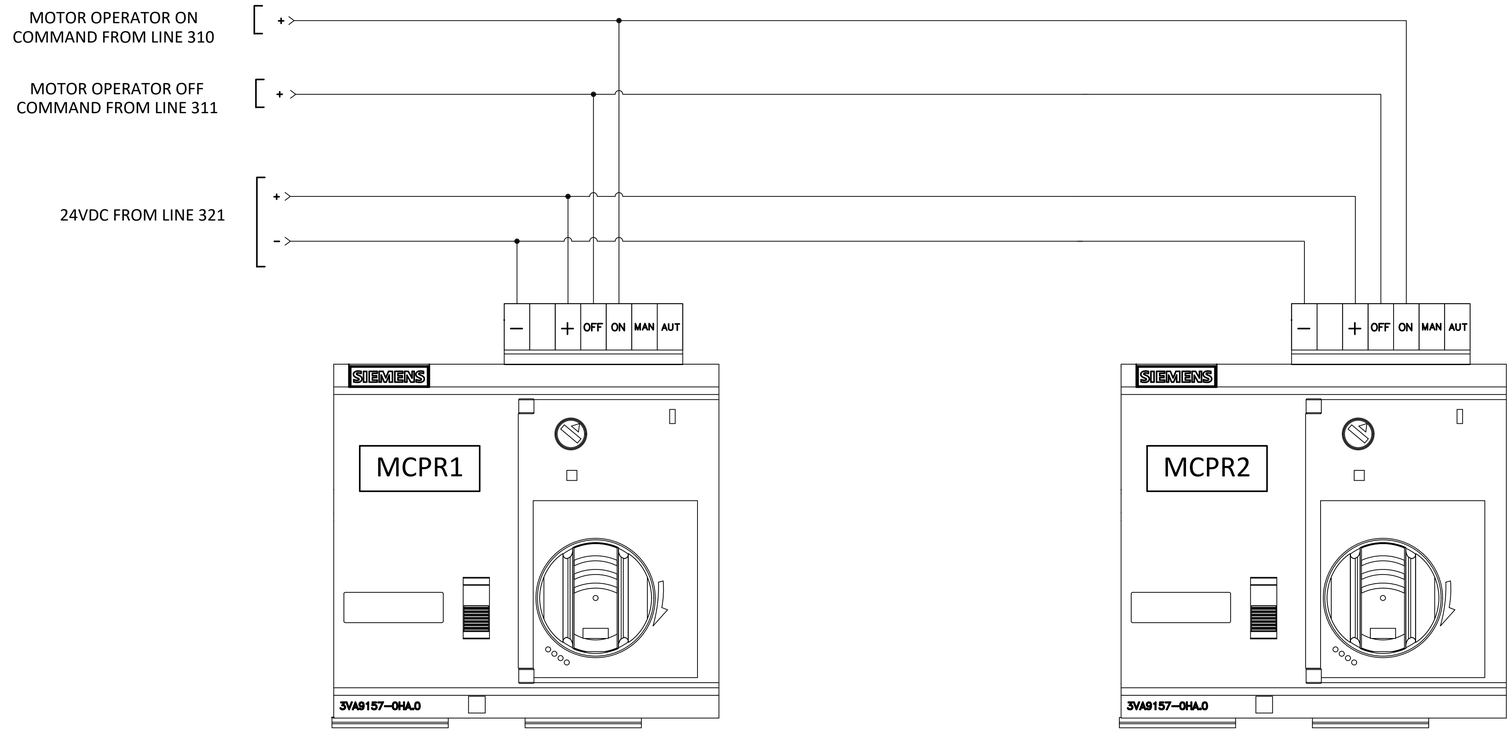
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TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 8

E-23

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 8

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 115 OF 128 SHEETS

WATER B–18118 (GI)
WBS B–18117 (SD)

APPROVED: _____ 12/18/2023
FOR CITY ENGINEER — DATE
ELHAM LOTFI — C91224
PRINT DGE NAME — RCE #

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET — CCS27 COORDINATE
SEE EACH SHEET — CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

CONTRACTOR: _____ NTP DATE: _____
INSPECTOR: _____ NOC DATE: _____

41306-115-D

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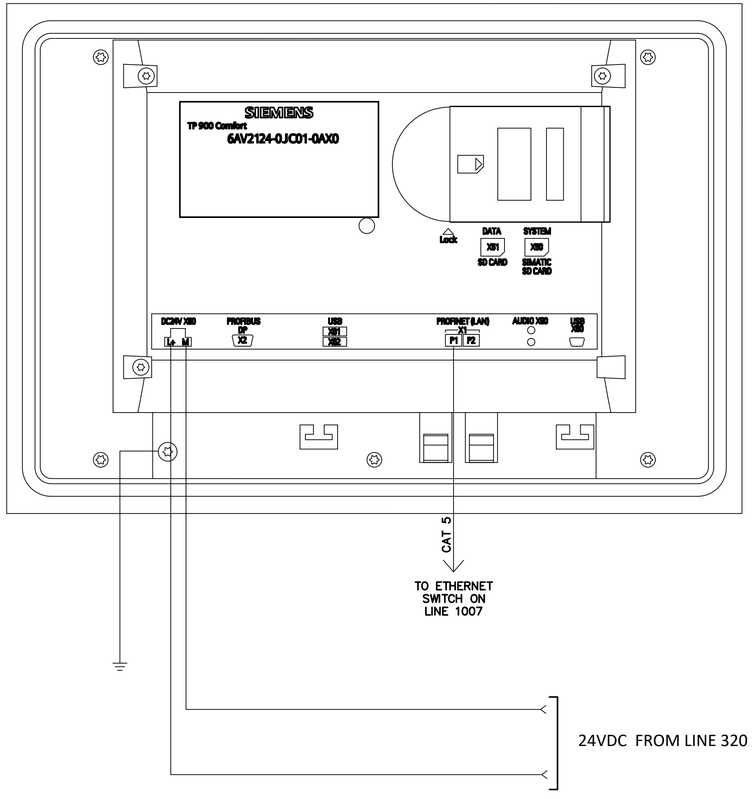
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24VDC FROM LINE 320

TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 9

E-24

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL PUMP SYSTEM RTU
CONTROL DIAGRAM 9

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 116 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: _____
FOR CITY ENGINEER
ELHAM LOTFI
PRINT DCE NAME

12/18/2023
DATE
C91224
RCE #

SUBMITTED BY
KAREN VERA
PROJECT MANAGER

DESIGNED BY
SAMER ALSHAMI
PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC	_____	12/18/23	

SEE EACH SHEET
CCS27 COORDINATE

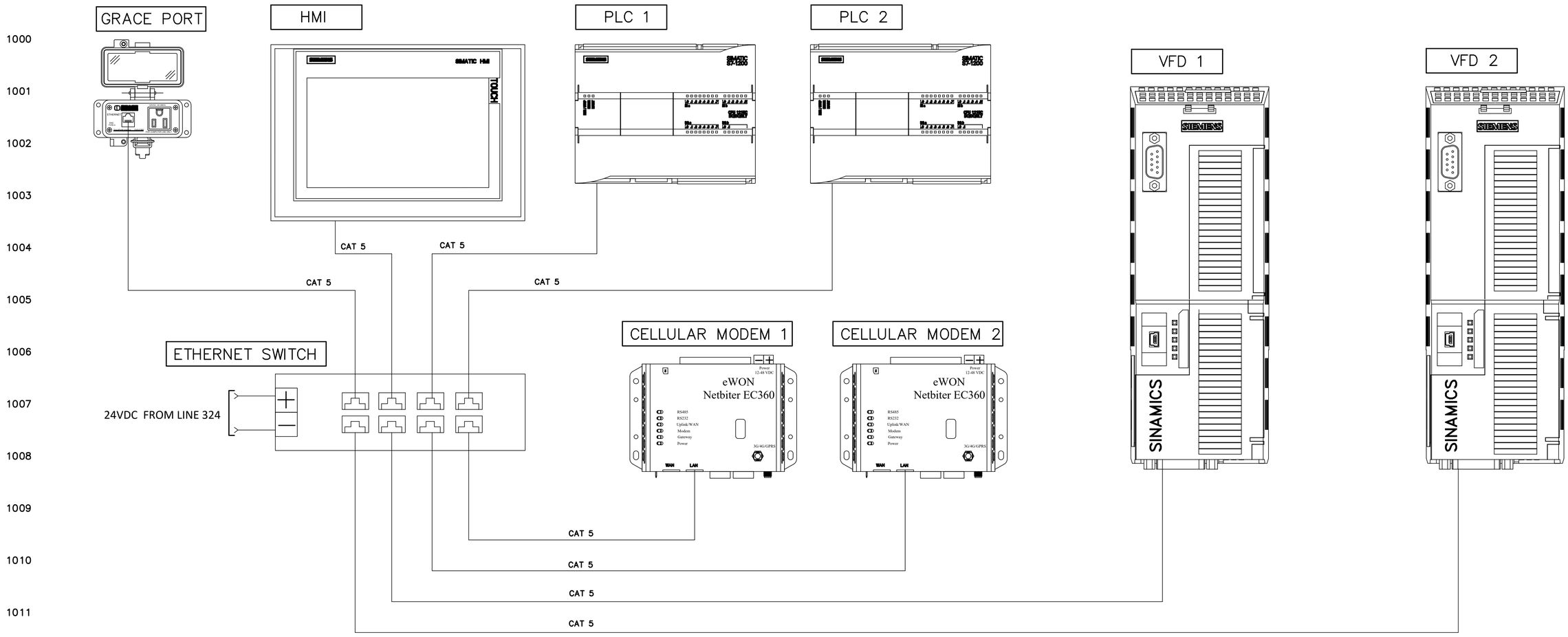
SEE EACH SHEET
CCS83 COORDINATE

41306-116-D

REGISTERED PROFESSIONAL ENGINEER
SCOTT D. NELSON
No. E18069
Exp. 6/30/23
ELECTRICAL
STATE OF CALIFORNIA
12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

CONTRACTOR: _____
INSPECTOR: _____
NTP DATE: _____
NOC DATE: _____



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TYPICAL PUMP SYSTEM RTU CONTROL DIAGRAM 10

E-25

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL PUMP SYSTEM RTU
CONTROL DIAGRAM 10

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 117 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: _____ 12/18/2023
FOR CITY ENGINEER ELHAM LOTFI — DATE
PRINT DCE NAME — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET — CCS27 COORDINATE
SEE EACH SHEET — CCS83 COORDINATE

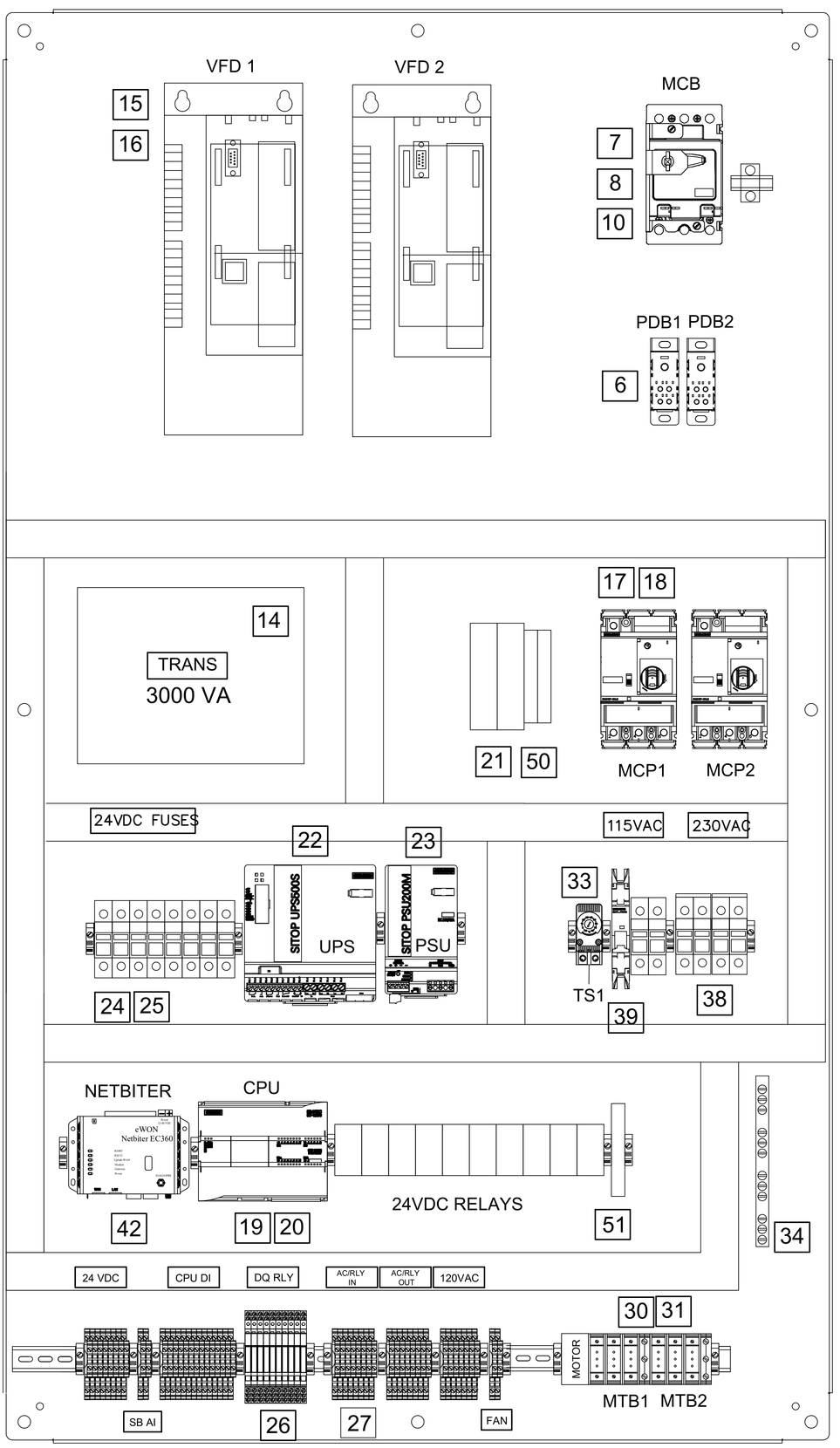
CONTRACTOR: _____ NTP DATE: _____
INSPECTOR: _____ NOC DATE: _____

41306-117-D

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

LEFT SIDE SUB-PLATE LAYOUT
[60" x 32"]



TYPICAL PUMP SYSTEM RTU BACK PANEL LAYOUT 1

NEC Nelson Engineering Company
3065 Laurel Stone Way
Dacula, GA 30019
Tel. (760) 274-4409

CONTRACTOR: _____
INSPECTOR: _____
12/14/21

REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA — EXP 6/30/23

NO.	DESCRIPTION	BY	APPROVED	DATE	FILMED
	ORIGINAL	NEC		12/18/23	

NTP DATE: _____
NOC DATE: _____

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 118 OF 128 SHEETS

APPROVED: _____
FOR CITY ENGINEER
ELHAM LOTFI
RCE #
12/18/2023
DATE
C91224
DATE SIGNED

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

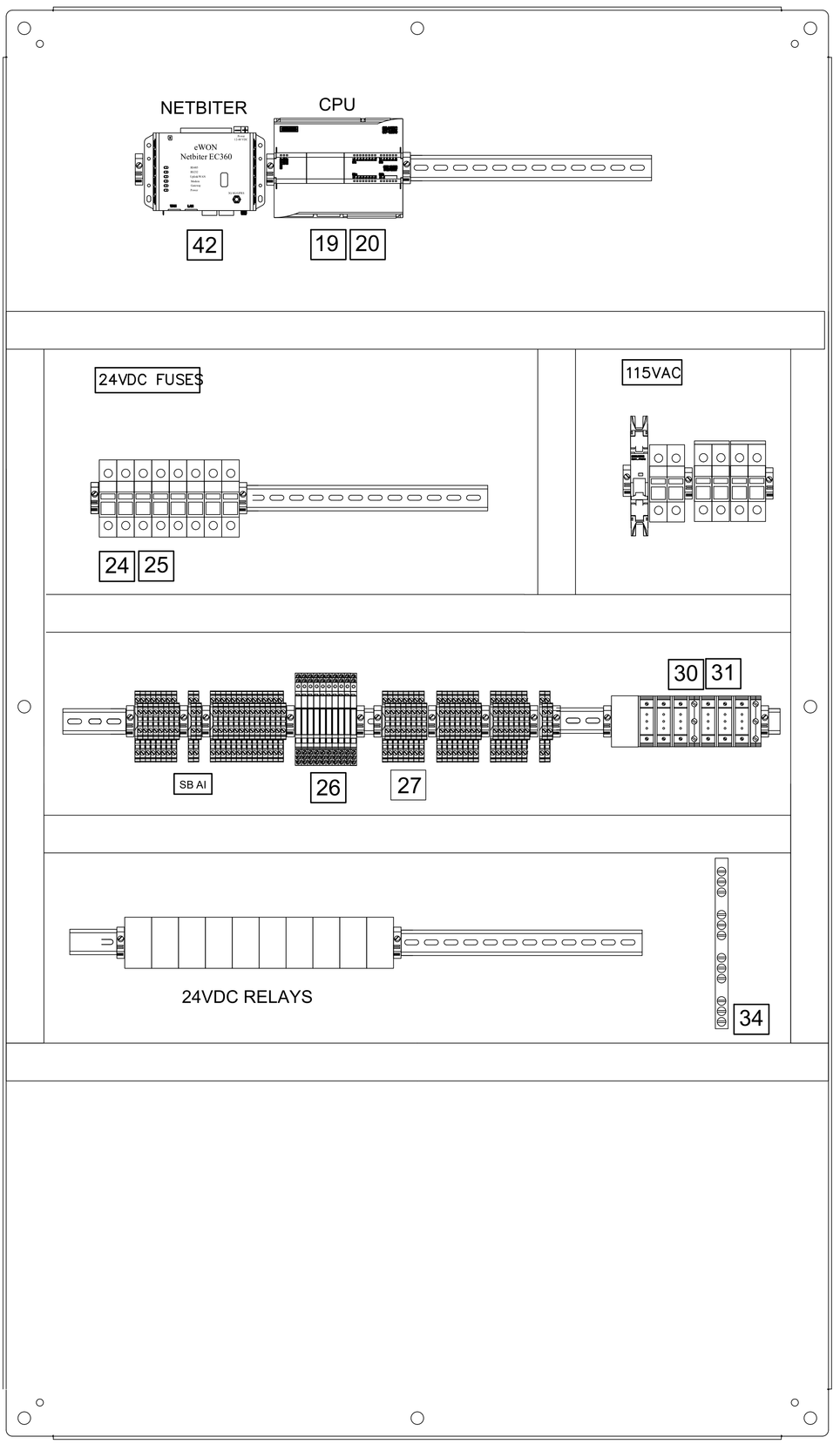
TYPICAL PUMP SYSTEM RTU
BACK PANEL LAYOUT 1

E-26

WATER WBS	B-18118 (G)
	B-18117 (SD)
DRAWN BY	KAREN VERA
	PROJECT MANAGER
DESIGNED BY	SAMER ALSHAMI
	PROJECT ENGINEER
CONSTRUCTION	SEE EACH SHEET
	CONSTRUCTION
DESIGN	SEE EACH SHEET
	DESIGN COORDINATE

41306-118-D

RIGHT SIDE SUB-PLATE LAYOUT
[60" x 32"]



NEC Nelson Engineering Company
3065 Laurel Stone Way
Dacula, GA 30019
Tel. (760) 274-4409

REGISTERED PROFESSIONAL ENGINEER
SAMER ALSHAMI
No. E 28685
EXP. 6/30/23
STATE OF CALIFORNIA
ELECTRICAL

CONTRACTOR: _____
INSPECTOR: _____
12/14/21

NTP DATE: _____
NOC DATE: _____

BY	APPROVED	DATE	FILMED
NEC		12/18/23	

DESCRIPTION
ORIGINAL

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 119 OF 128 SHEETS

APPROVED
FOR CITY ENGINEER
ELHAM LOTFI
PRINT DOE NAME

12/18/2023
DATE

RCE #
C91224
EXP. DATE

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL PUMP SYSTEM RTU
BACK PANEL LAYOUT 2

E-27

APPROVED
WATER
WBS
B-18118 (G)
B-18117 (SD)

APPROVED
KAREN VERA
PROJECT MANAGER

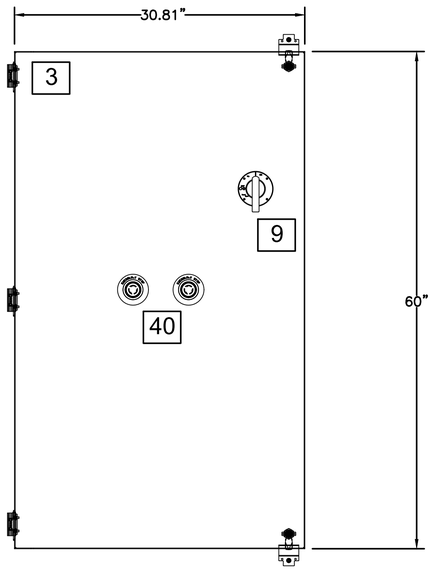
DESIGNED
SAMER ALSHAMI
PROJECT ENGINEER

SEE EACH SHEET
DESIGN COORDINATE

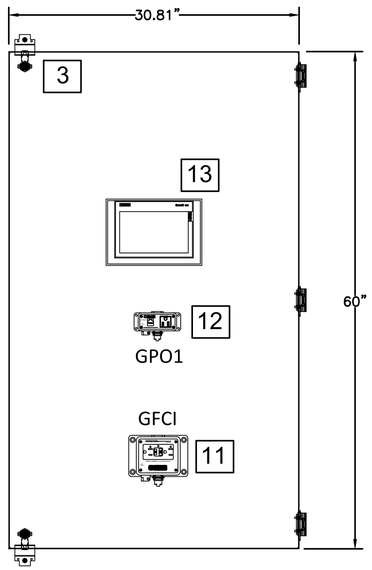
SEE EACH SHEET
DRAWN COORDINATE

41306-119-D

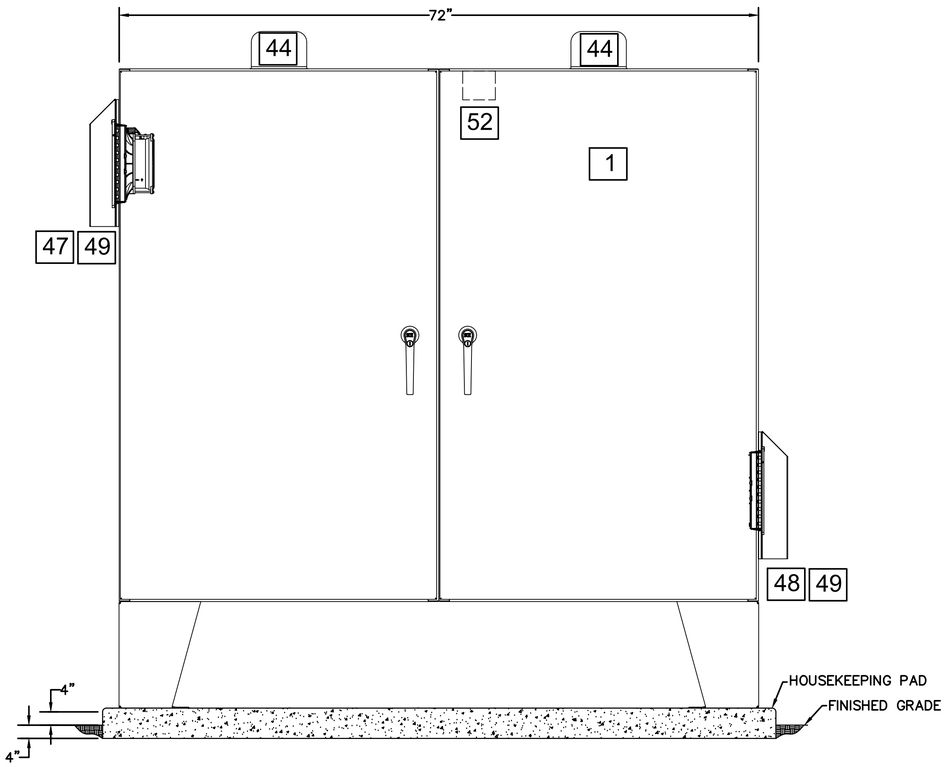
TYPICAL PUMP SYSTEM RTU BACK PANEL LAYOUT 2



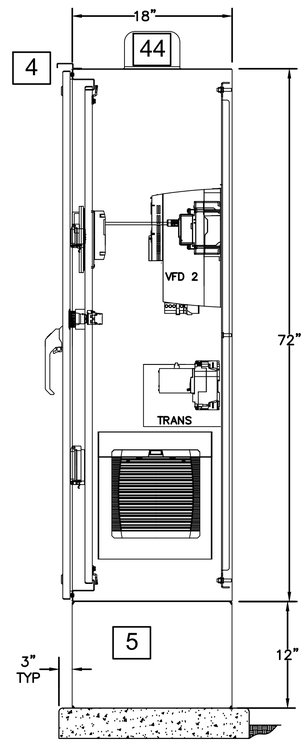
LEFT SIDE SWING-OUT PANEL
NOT TO SCALE



RIGHT SWING-OUT PANEL
NOT TO SCALE



FRONT VIEW 1
NOT TO SCALE E-28



SIDE VIEW
NOT TO SCALE

TYPICAL PUMP SYSTEM RTU ELEVATION DIAGRAM

E-28

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL PUMP SYSTEM RTU
ELEVATION DIAGRAM

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 120 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI — DATE 12/18/2023
PRINT DCE NAME — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET — CCS27 COORDINATE
SEE EACH SHEET — CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — Scott D. Nelson — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

CONTRACTOR:
INSPECTOR:
NTP DATE:
NOC DATE:

41306-120-D

ITEM	DESCRIPTION	MFR	MODEL No.	APPROXIMATE QTY.
1	NEMA 4X STAINLESS STEEL ENCLOSURE, 72"H X 36"W X 18"D **CUSTOM BUILD: CHANGE MATERIAL TO 316 STAINLESS STEEL.**	HOFFMAN	A727218SSFSDN4	1
2	SUBPANEL, 60"H X 32"W	HOFFMAN	A72P36F1	2
3	SWING-OUT PANEL, 60"H X 30.81"W	HOFFMAN	A72SP36F3	2
4	DRIP SHIELD, 316 STAINLESS STEEL **CUSTOM BUILD: CHANGE LENGTH TO 72 INCHES.**	HOFFMAN	ADK36SS6	1
5	STAINLESS STEEL FLOOR STAND KIT, 12"H X 9"W X 18D	HOFFMAN	AFK-1218SS	1
6	DISTRIBUTION BLOCK	MERSEN	FSPDB2C	2
7	SIEMENS LOW VOLTAGE G FRAME CIRCUIT BREAKER WITH THERMAL - MAGNETIC TRIP UNIT. UL LISTED NGG FRAME WITH STANDARD BREAKING CAPACITY. 100A 3-POLE (14KAIC AT 600Y/347V) (25KAIC AT 480V)	SIEMENS	NGG3B100L	1
8	Breaker CQD/NGG HNDL OPERATORNEMA 3R/4x	SIEMENS	CQDOP34	1
9	SIEMENS LOW VOLTAGE SENTRON MOLDED CASE CIRCUIT BREAKER EXTERNAL ACCESSORY. HANDLE FOR ROTARY OPERATING MECHANISM.	SIEMENS	CRHOH	1
10	12" SHAFT	SIEMENS	RHOSVD	1
11	GFCI DUAL RECEPTACLE	GRACEPORT	H-RF0-K2	1
12	SINGLE OUTLET WITH RJ45 PORT	GRACE PORT	P-R2-F3R0	1
13	SIMATIC HMI TP900 COMFORT, COMFORT PANEL, TOUCH OPERATION, 9" WIDESCREEN TFT DISPLAY, 16 MILLION COLORS, PROFINET INTERFACE, MPI/PROFIBUS DP INTERFACE	SIEMENS	6AV21240JC010AX0	1
14	CONTROL POWER TRANSFORMER, 3000va, PRI 240x480 230x460 220 440v, SEC 120/115/110v, DOMESTIC	SIEMENS	MT3000A	1
15	SINAMICS POWER MODULE PM240-2 WITHOUT FILTER WITH BUILT IN BRAKING CHOPPER 1/3AC200-240V +10/-10% 47-63HZ OUTPUT HIGH OVERLOAD: 2,2KW FOR 200% 3S,150% 57S,100% 240S AMBIENT TEMP -10 TO +50 DEG C OUTPUT LOW OVERLOAD: 3KW FOR 150% 3S,110% 57S,100% 240S AMBIENT TEMP -10 TO +40 DEG C 355 X 140 X 165 (HXWXD)	SIEMENS	6SL3210-1PB21-8UL0	2
16	SINAMICS G120 CONTROL UNIT CU240E-2 PN E-TYPE SAFETY INTEGRATED STO PROFINET 6DI, 3DO, 2AI, 2AO, MAX 1F-DI PTC/KTY INTERFACE USB- AND SD/MMC-INTERFACE PROTECTION	SIEMENS	6SL3244-0BB12-1FA0	2
17	SIEMENS LOW VOLTAGE 3VA MOLDED CASE CIRCUIT BREAKER WITH THERMAL - MAGNETIC TRIP UNIT. MEETS UL 489 / IEC 60947-2 / CSA 22.2 STANDARDS. BREAKER 3VA51 FRAME. 30A 3-POLE BREAKER (65KA AT 480V). MOTOR CIRCUIT PROTECTION (TM120M) ADJUSTABLE MAGNETIC (LOW RANGE). DIMENSIONS (W x H x D) IN: 4.1 x 7.3 x 4.2.	SIEMENS	3VA51501MU310AA0	2
18	MOTOR OPERATORS WITHOUT STORED ENERGY FEATURE MO320 FOR 3VA51 24 TO 60 V DC	SIEMENS	3VA9137-0HA10	2
19	SIMATIC S7-1200, CPU 1215C, COMPACT CPU, DC/DC/RELAY, 2 PROFINET PORT, ONBOARD I/O: 14 DI 24V DC; 10 DO RELAY 2A, 2 AI 0-10V DC, 2 AO 0-20MA DC,	SIEMENS	6ES72151HG400XB0	2
20	ANALOG INPUT, SB 1231, 1 AI, +/-10 V DC (12 bit resol.) or 0-20 Ma	SIEMENS	6ES7231-4HA30-0XB0	2
21	SEAL FAIL RELAY	MULTI TECK SOLUTIONS	MOS-1P	2
22	SITOP UPS500S MAINTENANCE FREE UNINTERRUPTIBLE POWER SUPPLY WITH USB INTERFACE BASIC DEVICE 2.5 kWs INPUT: 24 V DC OUTPUT: DC 24 V/15 A	SIEMENS	6EP19332EC41	1
23	SITOP PSU200M 10 A STABILIZED POWER SUPPLY INPUT: 120/230-500 V AC OUTPUT: 24 V/10 A DC	SIEMENS	6EP13343BA10	1
24	SINGLE FUSE BLOCK for HMI, PLC, P.S. XFORMER, SPARE	MERSEN	USCC1I-DC24	10
25	ATQR FUSES from 1.0 to 30 amp	MERSEN	ATQR ---	17
26	OUTPUT COUPLER WITH PLUG-IN RELAY, 1 CHANGE-OVER CONTACT SCREW TERMINAL 24 V AC/DC ENCLOSURE WITH 6.2 mm THERMAL CURRENT 6A	FINDER	38.51.7.024.0050	10
27	DOUBLE-LEVEL TERMINAL BLOCK, CONNECTION METHOD: SCREW CONNECTION, CROSS SECTION: 0.14 mm² - 4 mm², AWG: 26 - 12, WIDTH: 5.2 mm, COLOR: GRAY	PHOENIX	3044636	63
28	END COVERr - D-UTTB 2,5/4	PHOENIX	3047293	10
29	Plug-in bridge - FBS 20-5	PHOENIX	3030226	10
30	MOTOR TERMINAL BLOCKS. THROUGH-TYPE TERMINAL THERMOPL SCREW TERMINAL BOTH ENDS BLOCK 3 TERMINALS	SIEMENS	8WA1304	2
31	MOTOR GROUND BLOCK TERMINAL	SIEMENS	8WA10111PM00	2
32	ANGLED BRACKET	SIEMENS	8WA746	4
33	THERMOSTAT	PFANNENBERG	17121000010	1
34	GROUND STRIP	SIEMENS	EC1GB8	2
35	INCOMING GROUND	SIEMENS	8WA1011-1PM00	1
36	CONTACT MODULE WITH 1 CONTACT ELEMENT, 1 NC, SCREW TERMINAL, FOR FRONT PLATE MOUNTING	SIEMENS	3SU14001AA101CA0	2
37	PATCH CABLES (2) 7FT / (2) 3FT / (1) 1FT		PC5-BL - 01 / 03 / 07	5
38	DOUBLE FUSE HOLDER	MERSEN	USCC2I-DC24	2
39	MINIATURE CIRCUIT BREAKER 240V 14kA, 1-pole, C, 5A, D=70 mm ACCORDING TO UL 489	SIEMENS	5SJ4111-7HG41	1
40	PROTECTIVE COLLAR FOR EMERGENCY STOP MUSHROOM PUSHBUTTON, 40 mm, FOR 5 PADLOCKS, YELLOW	SIEMENS	3SU19500DX300AA0	2
41	EMERGENCY STOP MUSHROOM PUSHBUTTON, 22 mm, ROUND, METAL, SHINY, RED, 40 mm, POSITIVE LATCHING	SIEMENS	3SU11501HB201CG0	2
42	NETBITER EASYCONNECT CELLULAR MODEM EC360 METAL HOUSING	HMS	NB1023	2
43	DIN RAIL MOUNTING KIT FOR NETBITER EASYCONNECT CELLULAR MODEM	HMS	M-008	2
44	NETBITER COMBINATION ANTENNA EXTERNAL MOUNT	HMS	NB3004	2
45	NETBITER ARGOS MANAGE & ANALYZ 12 MONTH SERVICE	HMS	NB4000	2
46	AT&T US, CAN, MX SIM CARD NEW SUBSCRIPTION 10MB	HMS	NB5201	2
47	PF 43000; 10"H x 10"W Filter Fan	PFANNENBERG	11643154055	1
48	PFA 40000; 10"H x 10"W Exhaust Filter	PFANNENBERG	11740004055	1
49	STAINLESS STEEL Rain Hoods	PFANNENBERG	18182000017	2
50	INTRINSICALLY SAFE RELAY	STAHL	9251-01-40	2
51	ETHERNET SWITCH	HIRSCHMANN	943 957-001	1
52	PLUG-IN STYLE OILTIGHT LIMIT SWITCH SPRING RETURN	ALLEN BRADLEY	802Y-AP	1
53	ADJUSTABLE OPERATION LEVER FOR LIMIT SWITCH	ALLEN BRADLEY	802T-W17	1

TYPICAL PUMP SYSTEM RTU BILL OF MATERIALS

E-29

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL PUMP SYSTEM RTU
BILL OF MATERIALS

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 121 OF 128 SHEETS

WATER WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DGE NAME — 12/18/2023 DATE — C91224 RCE #

SUBMITTED BY: KAREN VERA PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET CCS27 COORDINATE

SEE EACH SHEET CCS83 COORDINATE

41306-121-D

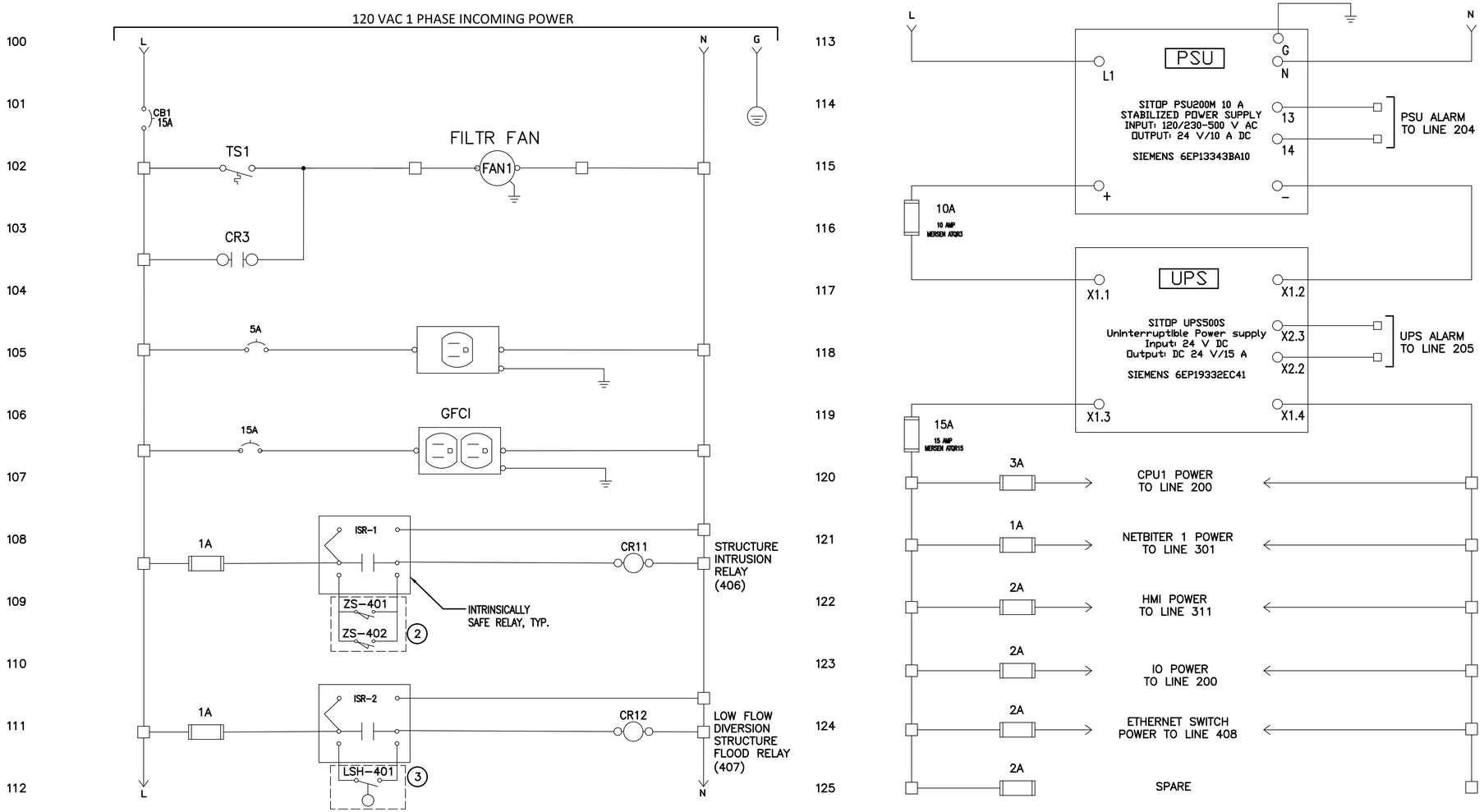
NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA

12/14/21

CONTRACTOR: _____ NTP DATE: _____

INSPECTOR: _____ NOC DATE: _____



NOTES:

1. IO IS SIMILAR FOR GRAVITY SYSTEMS 2-B, 2-F, 4-A, 5-A, 6-8, 7-A, AND 9-A.
2. IO POINT IS NOT REQUIRED AT GRAVITY SYSTEM 2-B AND 4-A.
3. IO POINT IS NOT REQUIRED AT BONITA COVE.

TYPICAL GRAVITY SYSTEM RTU CONTROL DIAGRAM 1

E-30

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL GRAVITY SYSTEM RTU CONTROL DIAGRAM 1

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 122 OF 128 SHEETS

WATER B-18118 (GI)
WBS B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI
PRINT DCE NAME
12/18/2023 DATE
RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

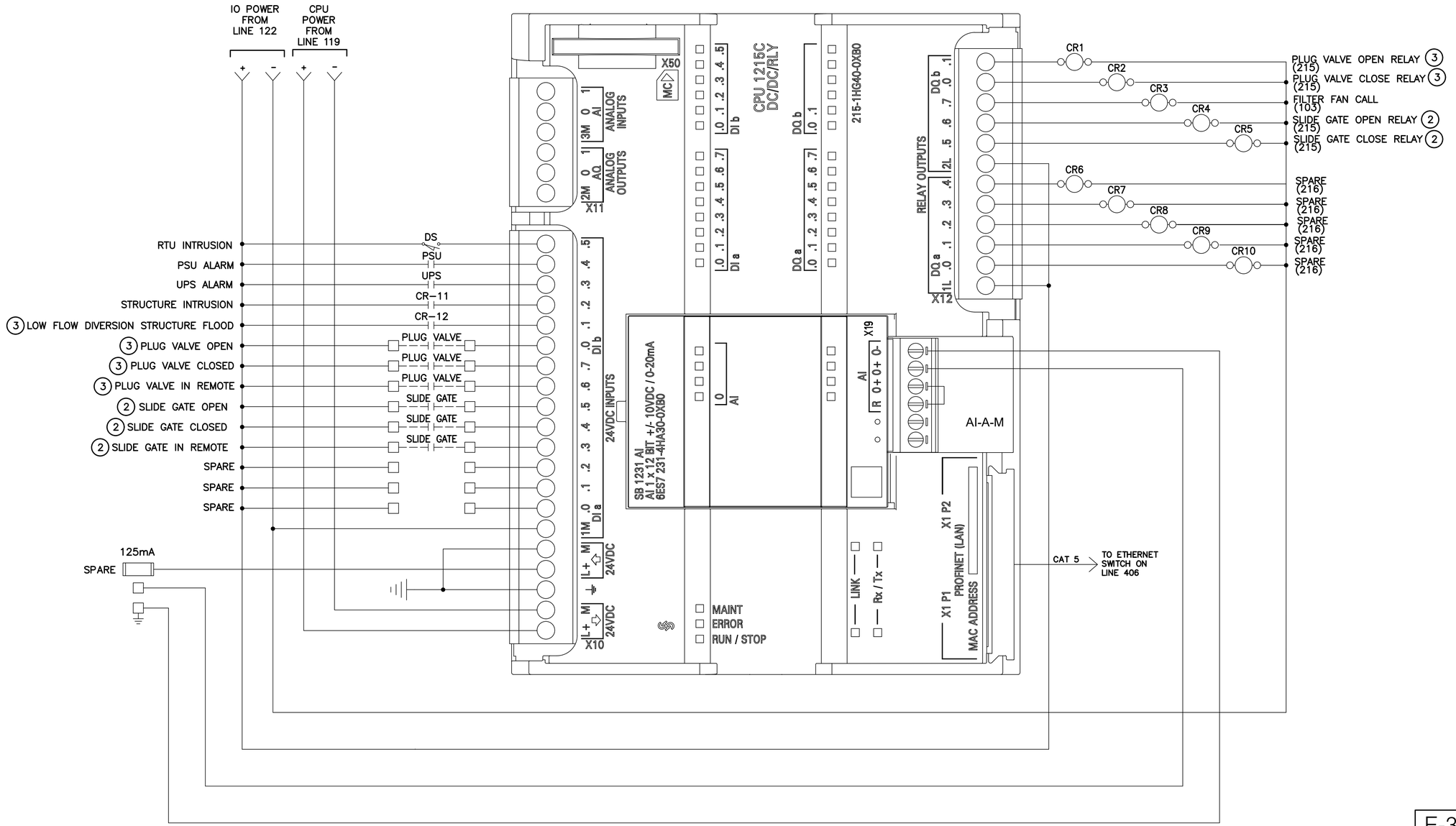
SEE EACH SHEET CCS27 COORDINATE
SEE EACH SHEET CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER SCOTT D. NELSON No. E18069 Exp. 6/30/23 ELECTRICAL STATE OF CALIFORNIA
12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

CONTRACTOR:
INSPECTOR:
NTP DATE:
NOC DATE:

41306-122-D



CR1 — PLUG VALVE OPEN COMMAND

CR2 — PLUG VALVE CLOSE COMMAND

CR4 — SLIDE GATE OPEN COMMAND (2)

CR5 — SLIDE GATE CLOSE COMMAND (2)

CR6 — SPARE

CR7 — SPARE

CR8 — SPARE

CR9 — SPARE

CR10 — SPARE

NOTES:

(1) IO IS SIMILAR FOR GRAVITY SYSTEMS 2–B, 2–F, 4–A, 5–A, 6–A, 7–A, AND 9–A.

(2) IO POINT IS NOT REQUIRED AT GRAVITY SYSTEM 2–B AND 4–A.

(3) IO POINT IS NOT REQUIRED AT BONITA COVE.

TYPICAL GRAVITY SYSTEM RTU CONTROL DIAGRAM 2

E-31

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL GRAVITY SYSTEM RTU CONTROL DIAGRAM 2

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 123 OF 128 SHEETS

WATER B–18118 (GI)
WBS B–18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DCE NAME — 12/18/2023 DATE — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET CCS27 COORDINATE

SEE EACH SHEET CCS83 COORDINATE

CONTRACTOR: NTP DATE:

INSPECTOR: NOC DATE:

41306-123-D

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA

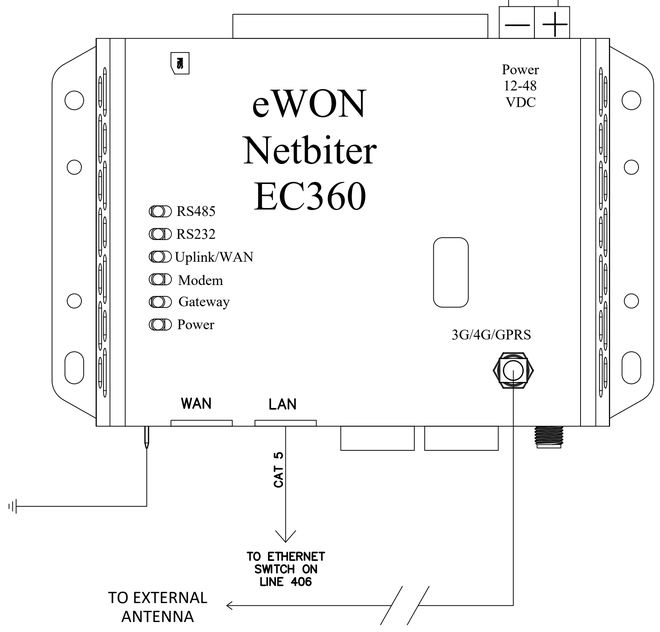
12/14/21

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Dacula, GA 30019
Tel. (760) 274-4409

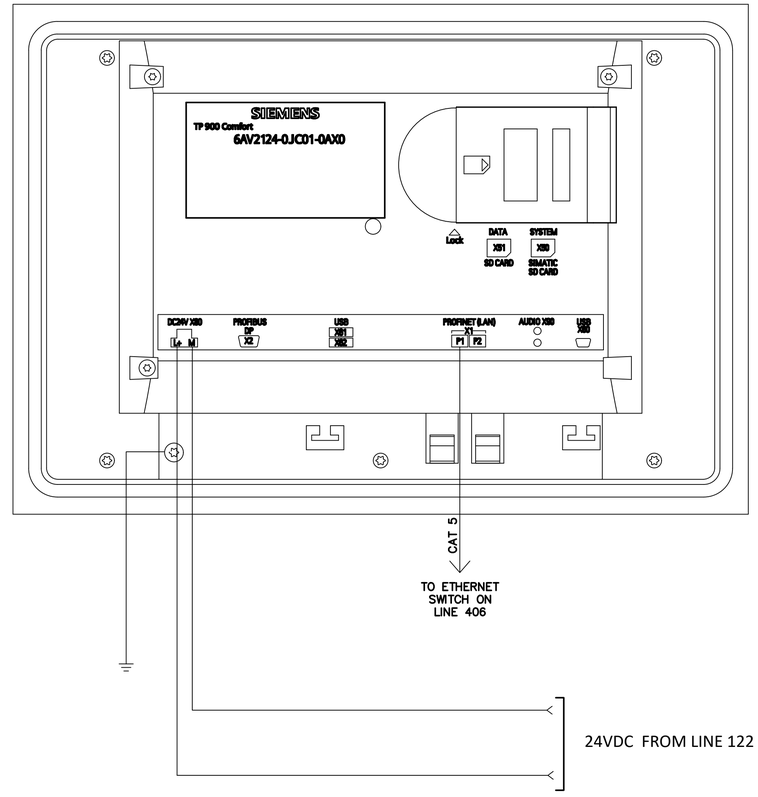
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24VDC FROM LINE 121

CELLULAR MODEM



HMI



24VDC FROM LINE 122

TYPICAL GRAVITY SYSTEM RTU CONTROL DIAGRAM 3

E-32

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL GRAVITY SYSTEM RTU CONTROL DIAGRAM 3

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 124 OF 128 SHEETS

WATER WBS B-18118 (GI) B-18117 (SD)

APPROVED: _____ 12/18/2023
FOR CITY ENGINEER ELHAM LOTFI — DATE C91224
PRINT DCE NAME — RCE #

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
CHECKED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET — CCS27 COORDINATE
SEE EACH SHEET — CCS83 COORDINATE

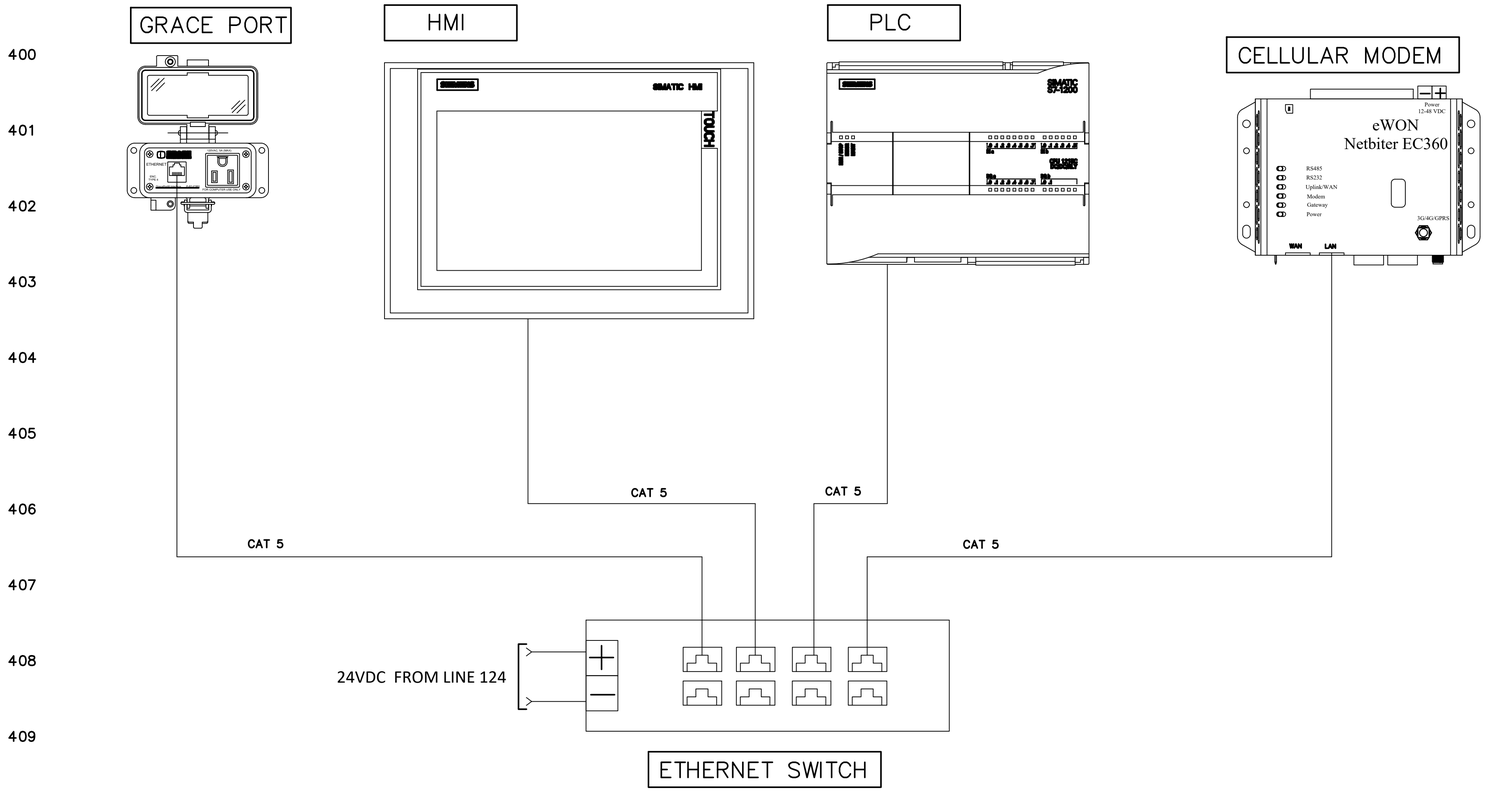
CONTRACTOR: _____ NTP DATE: _____
INSPECTOR: _____ NOC DATE: _____

41306-124-D

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

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TYPICAL GRAVITY SYSTEM RTU CONTROL DIAGRAM 4

E-33

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL GRAVITY SYSTEM RTU CONTROL DIAGRAM 4

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 125 OF 128 SHEETS

WATER WBS: B-18118 (GI) / B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI — DATE 12/18/2023
PRINT DCE NAME — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER
DESIGNED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET — CCS27 COORDINATE
SEE EACH SHEET — CCS83 COORDINATE

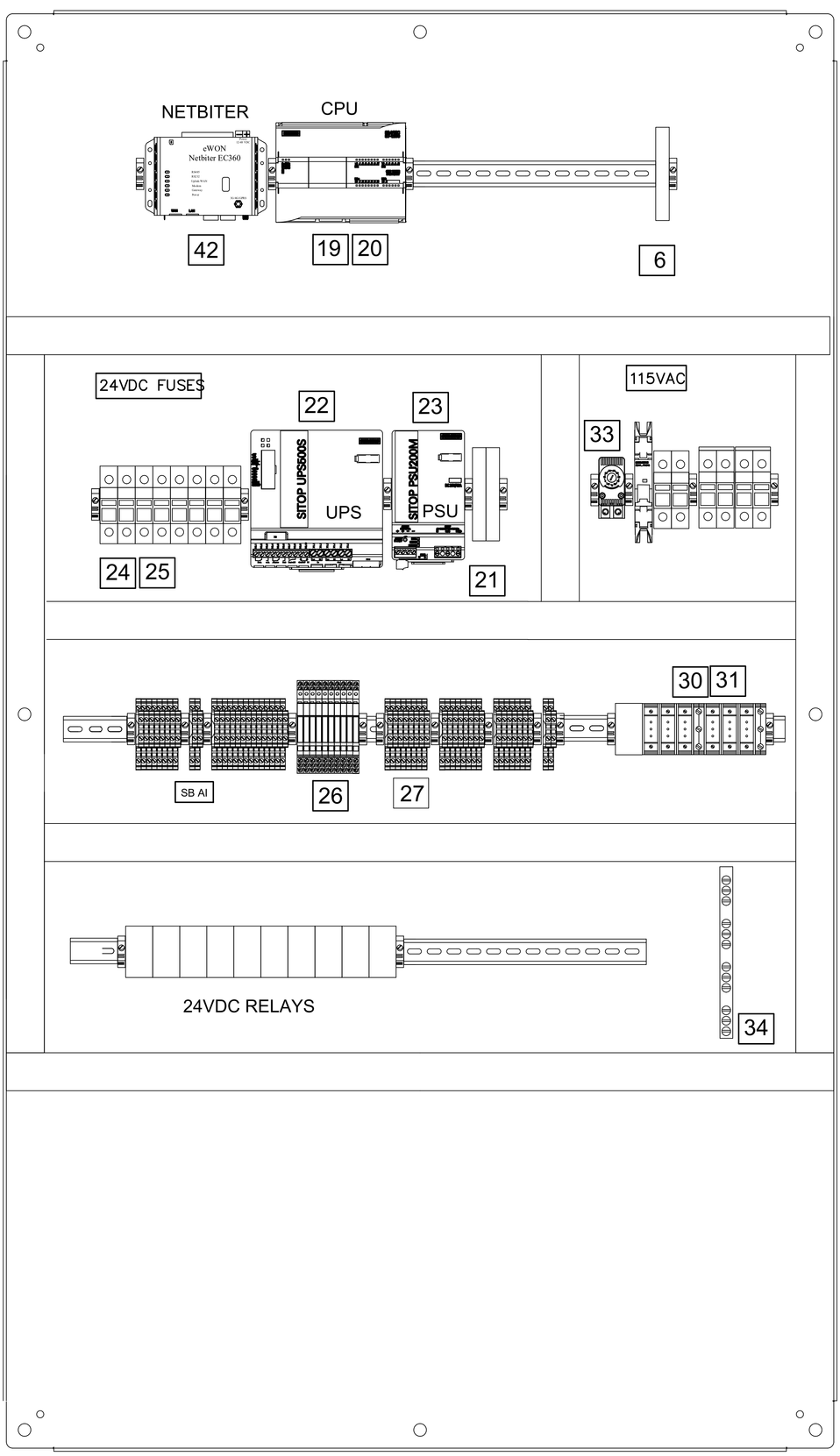
CONTRACTOR:
INSPECTOR:
NTP DATE:
NOC DATE:

41306-125-D

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

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3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

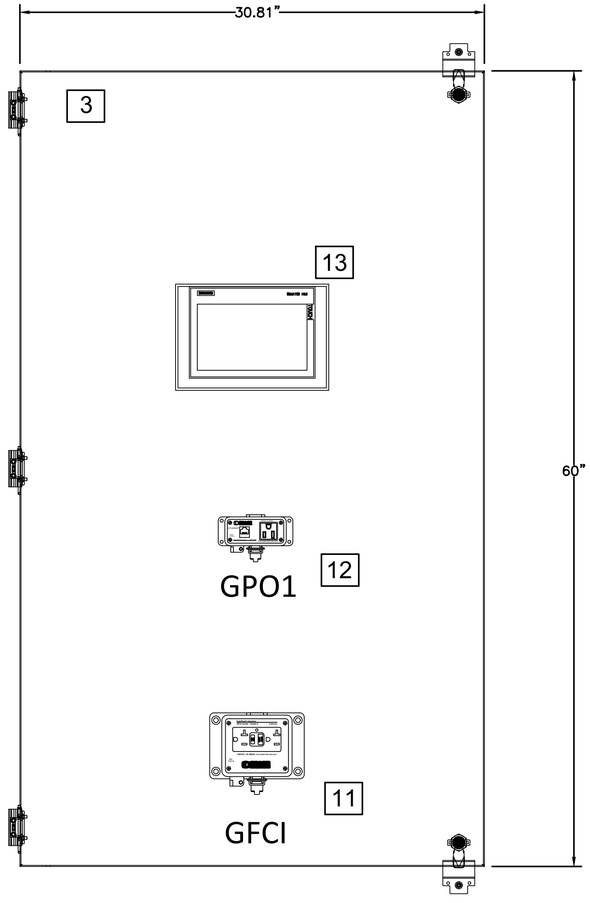
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[60' x 32"]



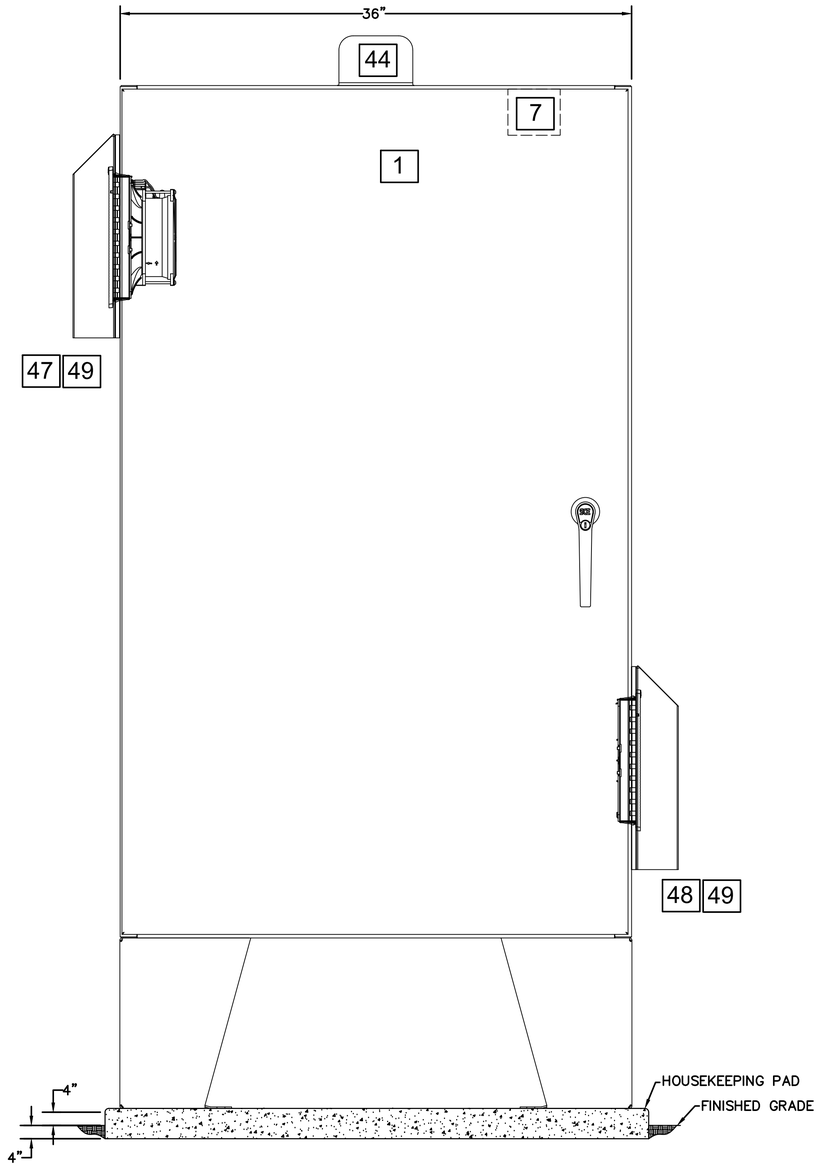
NEC Nelson Engineering Company
3065 Laurel Stone Way
Dacula, GA 30019
Tel. (760) 274-4409

REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
SAMER ALSHAMI
No. E-30723
Exp. 6/30/23
ELECTRICAL

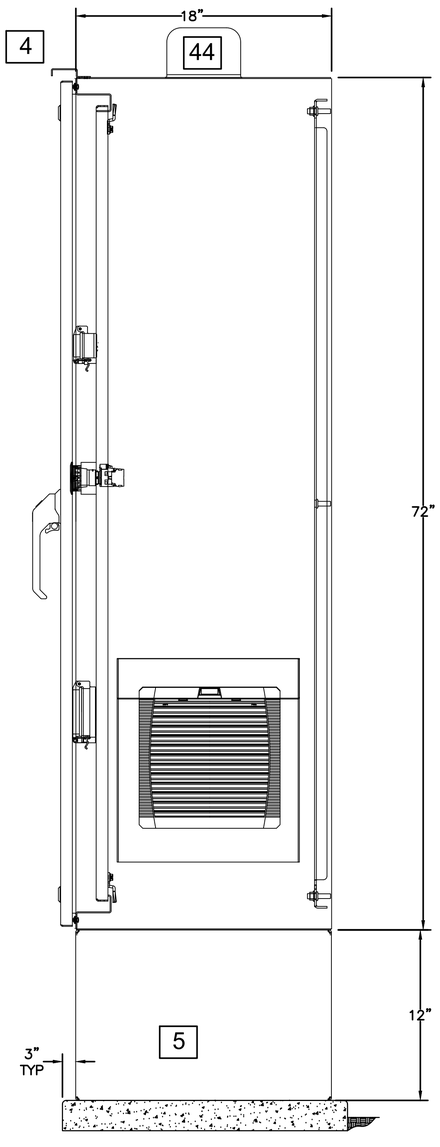
CONTRACTOR: _____ 12/14/21
INSPECTOR: _____



SWING-OUT PANEL
NOT TO SCALE



FRONT VIEW 1
NOT TO SCALE E-35



SIDE VIEW
NOT TO SCALE

TYPICAL GRAVITY SYSTEM RTU ELEVATION DIAGRAM

E-35

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL GRAVITY SYSTEM RTU
ELEVATION DIAGRAM

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 127 OF 128 SHEETS

WATER WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DCE NAME — DATE 12/18/2023 — RCE # C91224

SUBMITTED BY: KAREN VERA, PROJECT MANAGER

DESIGNED BY: SAMER ALSHAMI, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC	[signature]	12/18/23	

SEE EACH SHEET CCS27 COORDINATE

SEE EACH SHEET CCS83 COORDINATE

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

CONTRACTOR: _____ NTP DATE: _____
INSPECTOR: _____ NOC DATE: _____

41306-127-D

ITEM	DESCRIPTION	MFR	MODEL No.	APPROXIMATE QTY.
1	NEMA 4X STAINLESS STEEL ENCLOSURE, 72"H X 36"W X 18"D **CUSTOM BUILD: CHANGE MATERIAL TO 316 STAINLESS STEEL**	HOFFMAN	A723618SSFSN4	1
2	SUBPANEL, 60"H X 32"W	HOFFMAN	A72P36F1	1
3	SWING-OUT PANEL, 60"H X 30.81"W	HOFFMAN	A72SP36F3	1
4	DRIP SHIELD, 316 STAINLESS STEEL	HOFFMAN	ADK36SS6	1
5	STAINLESS STEEL FLOOR STAND KIT, 12"H X 9"W X 18D	HOFFMAN	AFK-1218SS	1
6	ETHERNET SWITCH	HIRSCHMANN	943 957-001	1
7	PLUG-IN STYLE OILTIGHT LIMIT SWITCH SPRING RETURN	ALLEN BRADLEY	802Y-AP	1
8	ADJUSTABLE OPERATION LEVER FOR LIMIT SWITCH	ALLEN BRADLEY	802T-W17	1
9	NOT USED	–	–	–
10	NOT USED	–	–	–
11	GFCI DUAL RECEPTACLE	GRACEPORT	H-RF0-K2	1
12	SINGLE OUTLET WITH RJ45 PORT	GRACE PORT	P-R2-F3R0	1
13	SIMATIC HMI TP900 COMFORT, COMFORT PANEL, TOUCH OPERATION, 9" WIDESCREEN TFT DISPLAY, 16 MILLION COLORS, PROFINET INTERFACE, MPI/PROFIBUS DP INTERFACE	SIEMENS	6AV2124OJC010AX0	1
14	NOT USED	–	–	–
15	NOT USED	–	–	–
16	NOT USED	–	–	–
17	NOT USED	–	–	–
18	NOT USED	–	–	–
19	SIMATIC S7-1200, CPU 1215C, COMPACT CPU, DC/DC/RELAY, 2 PROFINET PORT, ONBOARD I/O: 14 DI 24V DC; 10 DO RELAY 2A, 2 AI 0-10V DC, 2 AO 0-20MA DC,	SIEMENS	6ES72151HG400XB0	1
20	ANALOG INPUT, SB 1231, 1 AI, +/-10 V DC (12 bit resol.) or 0-20 Ma	SIEMENS	6ES7231-4HA30-0XB0	1
21	INTRINSICALLY SAFE RELAY	STAHL	9251-01-40	2
22	SITOP UPS500S MAINTENANCE FREE UNINTERRUPTIBLE POWER SUPPLY WITH USB INTERFACE BASIC DEVICE 2.5 kWs INPUT: 24 V DC OUTPUT: DC 24 V/15 A	SIEMENS	6EP19332EC41	1
23	SITOP PSU200M 10 A STABILIZED POWER SUPPLY INPUT: 120/230-500 V AC OUTPUT: 24 V/10 A DC	SIEMENS	6EP13343BA10	1
24	SINGLE FUSE BLOCK for HMI, PLC, P.S. XFORMER, SPARE	MERSEN	USCC1I-DC24	10
25	ATQR FUSES from 1.0 to 30 amp	MERSEN	ATQR ---	17
26	OUTPUT COUPLER WITH PLUG-IN RELAY, 1 CHANGE-OVER CONTACT SCREW TERMINAL 24 V AC/DC ENCLOSURE WITH 6.2 mm THERMAL CURRENT 6A	FINDER	38.51.7.024.0050	10
27	DOUBLE-LEVEL TERMINAL BLOCK, CONNECTION METHOD: SCREW CONNECTION, CROSS SECTION: 0.14 mm² - 4 mm², AWG: 26 - 12, WIDTH: 5.2 mm, COLOR: GRAY	PHOENIX	3044636	63
28	END COVERr - D-UTTB 2,5/4	PHOENIX	3047293	10
29	Plug-in bridge - FBS 20-5	PHOENIX	3030226	10
30	MOTOR TERMINAL BLOCKS. THROUGH-TYPE TERMINAL THERMOPL SCREW TERMINAL BOTH ENDS BLOCK 3 TERMINALS	SIEMENS	8WA1304	2
31	MOTOR GROUND BLOCK TERMINAL	SIEMENS	8WA10111PM00	2
32	ANGLED BRACKET	SIEMENS	8WA746	4
33	THERMOSTAT	PFANNENBERG	17121000010	1
34	GROUND STRIP	SIEMENS	EC1GB8	2
35	INCOMING GROUND	SIEMENS	8WA1011-1PM00	1
36	CONTACT MODULE WITH 1 CONTACT ELEMENT, 1 NC, SCREW TERMINAL, FOR FRONT PLATE MOUNTING	SIEMENS	3SU14001AA101CA0	2
37	PATCH CABLES (2) 7FT / (2) 3FT / (1) 1FT		PC5-BL - 01 / 03 / 07	5
38	NOT USED	–	–	–
39	NOT USED	–	–	–
40	NOT USED	–	–	–
41	NOT USED	–	–	–
42	NETBITER EASYCONNECT CELLULAR MODEM EC360 METAL HOUSING	HMS	NB1023	1
43	DIN RAIL MOUNTING KIT FOR NETBITER EASYCONNECT CELLULAR MODEM	HMS	M-008	1
44	NETBITER COMBINATION ANTENNA EXTERNAL MOUNT	HMS	NB3004	1
45	NETBITER ARGOS MANAGE & ANALYZ 12 MONTH SERVICE	HMS	NB4000	1
46	AT&T US, CAN, MX SIM CARD NEW SUBSCRIPTION 10MB	HMS	NB5201	1
47	PF 43000; 10"H x 10"W Filter Fan	PFANNENBERG	11643154055	1
48	PFA 40000; 10"H x 10"W Exhaust Filter	PFANNENBERG	11740004055	1
49	STAINLESS STEEL Rain Hoods	PFANNENBERG	18182000017	2

TYPICAL GRAVITY SYSTEM RTU BILL OF MATERIALS

E-36

SOUTH MISSION BEACH STORM DRAIN AND GREEN INFRASTRUCTURE

TYPICAL GRAVITY SYSTEM RTU BILL OF MATERIALS

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 128 OF 128 SHEETS

WATER WBS B-18118 (GI) B-18117 (SD)

APPROVED: FOR CITY ENGINEER ELHAM LOTFI PRINT DGE NAME — 12/18/2023 DATE — C91224 RCE #

SUBMITTED BY: KAREN VERA PROJECT MANAGER

CHECKED BY: SAMER ALSHAMI PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	NEC		12/18/23	

SEE EACH SHEET CCS27 COORDINATE

SEE EACH SHEET CCS83 COORDINATE

41306-128-D

NEC Nelson Engineering Company
3065 Laurel Song Way
Dacula, GA 30019
Tel. (760) 274-4409

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. NELSON — No. E18069 Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA
12/14/21

CONTRACTOR: _____ NTP DATE: _____
INSPECTOR: _____ NOC DATE: _____