



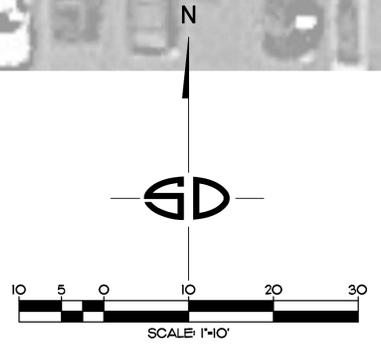
Dove Library
 PARCEL 2 OF PARCEL MAP NO. 16044
 APN: 215-050-70-00

CONSTRUCTION NOTES:

- A** EX. PAVERS TO REMAIN. PROTECT IN PLACE.
- B** EX. CONCRETE SIDEWALK/PAVEMENT TO REMAIN. PROTECT IN PLACE.
- C** EX. AC PAVEMENT TO REMAIN. PROTECT IN PLACE.
- D** EX. WALL TO REMAIN. PROTECT IN PLACE.
- E** EX. LANDSCAPE AND IRRIGATION TO BE PATCHED AND REPAIRED AS REQUIRED, SEE L.I.O.
- F** EX. 6" CONCRETE CURB TO REMAIN. PROTECT IN PLACE.
- G** EX. BOLLARD TO REMAIN. PROTECT IN PLACE.
- H** EX. TRUNCATED DOMES TO REMAIN. PROTECT IN PLACE.
- J** EX. 0" CONCRETE CURB TO REMAIN. PROTECT IN PLACE.
- K** EX. 8" PVC SEWER MAIN PER DWG. 305-6 TO REMAIN. PROTECT IN PLACE.
- L** EX. ROP STORM DRAIN PER DWG. 301-2 TO REMAIN. PROTECT IN PLACE.
- M** EX. 6" DUCTILE IRON RECLAIMED WATER PER DWG. 305-6 TO REMAIN. PROTECT IN PLACE.
- 1** 2" GRIND & OVERLAY A.C. PAVING PER DETAIL 1, SHT. C3.O. MATCH EX. FLUSH.
- 3** INSTALL 6" CURB PER CITY OF CARLSBAD STANDARD DETAIL GS-18. MATCH EX. FLUSH.
- 4** INSTALL TRUNCATED DOMES PER LANDSCAPE DETAILS.
- 6** REMOVE EX. 6" CONCRETE CURB.
- 8** RE-STRIPE PARKING STALLS WITHIN OVERLAY AREA.
- 8** 4" WIDE WHITE STRIPES AT 45° PER CITY OF CARLSBAD STANDARD DETAILS.
- 9** INSTALL 6" CONCRETE WHEEL STOP PER DETAIL 6/AII ON ARCHITECT'S PLANS.
- 10** DISABLED PARKING STALL PER CITY OF CARLSBAD STANDARD DETAILS.
- 11** REMOVE EX. LANDSCAPING.
- 14** INSTALL ACCESSIBILITY PAVEMENT SYMBOL PER CITY OF CARLSBAD STANDARD DETAILS.
- 14** INSTALL ACCESSIBILITY SIGN PER CITY OF CARLSBAD STANDARD DETAILS.
- 15** INSTALL SA-SO SOLAR POWERED DOUBLE SIDED SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON, PART # RRFBI02. PATCH AND REPAIR EX. CONCRETE AS NECESSARY IN LIKE-KIND, MATCH EX. FLUSH. SEE DETAIL, SHEET C4.O.
- 16** REMOVE EX. PAVERS/PAVEMENT AND INSTALL FIRE LANE RATED CONCRETE PAVEMENT PER DETAIL 3, SHEET C3.O. MATCH EX. FLUSH.
- 17** SAWCUT LINE.
- 18** PAINT CURB PER CITY OF CARLSBAD STANDARD DETAILS.
- 19** INSTALL PEDESTRIAN CONCRETE PAVEMENT PER DETAIL 2, SHEET C3.O. MATCH EX. FLUSH.



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 MATTHEW P. KURTZ
 4-23-22
 R.C.E. 79546
 EXPIRES 09-30-20



| STRUCTURAL (POST-CONSTRUCTION) BMP TABLE | | | | | |
|--|-------------|-----------|---|-----------|-----------------------|
| STORMWATER REQUIREMENTS THAT APPLY: | | | EXEMPT FROM HYDROMODIFICATION? | | |
| <input checked="" type="checkbox"/> STANDARD STORMWATER REQUIREMENTS | | | <input type="checkbox"/> YES (SEE SWMP FOR DOCUMENTATION) | | |
| <input type="checkbox"/> PRIORITY PROJECT REQUIREMENTS | | | <input type="checkbox"/> NO | | |
| TYPE | DESCRIPTION | OWNERSHIP | MAINTENANCE AGREEMENT | SHEET NO. | MAINTENANCE FREQUENCY |
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| DATE | INITIAL | REVISION DESCRIPTION | DATE | INITIAL | DATE | INITIAL |
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| SHEET 1 | CITY OF CARLSBAD ENGINEERING DEPARTMENT | SHEETS 4 |
| IMPROVEMENT PLANS FOR: City of Carlsbad Dove Library Parking Relocation 1775 DOVE LANE, CARLSBAD, CA 92011 GRADING PLAN C1.0 | | |
| DWN BY: _____ | PROJECT NO. 4744 | DRAWING NO. 320-7E |
| CHKD BY: _____ | | |
| RVWD BY: _____ | | |

S:\SNIPES\CAL441 Carlsbad Fire Station - EX-1700-Dove Library ParcelMap\CAL441-01-02.dwg - Printed: Tuesday, July 21, 2020, 10:39am, by mack



Rectangular Rapid Flashing Beacon (RRFB) Specifications

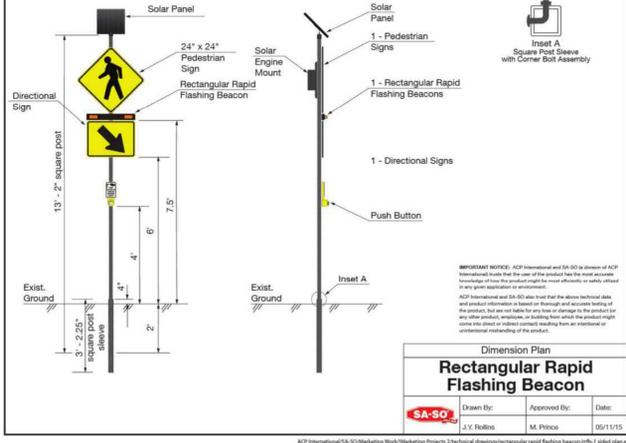


Part #
RRFB101 Single Sided Solar
RRFB103 Single Sided AC
RRFB102 Double Sided Solar
RRFB104 Double Sided AC

Technical Data Sheet

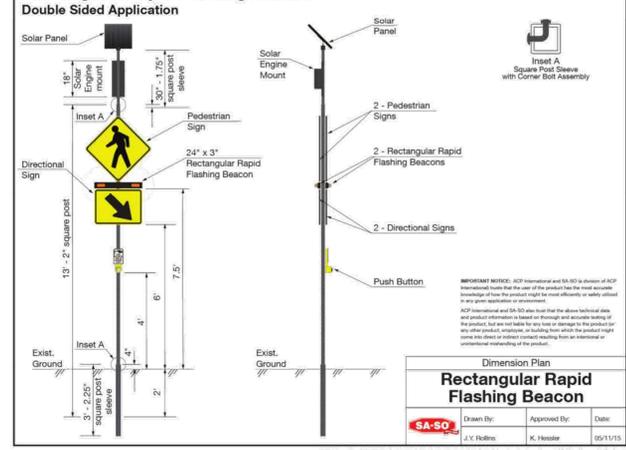
Scope
This specification covers the method and procedures of the manufacturing process, physical dimensions, and properties of the Rectangular Rapid Flashing Beacon (RRFB) as manufactured by SA-SO. The SA-SO RRFB meets the specifications of FHWA Interim Approval IA-21, from March 20, 2018, which replaces previous IA-11 from 2008.

Rectangular Rapid Flashing Beacon Single Sided Application



Dimension Plan
Rectangular Rapid Flashing Beacon
SA-SO
Drawn By: J.V. Rollins, M. Prince, 05/11/15
Approved By: A. Hester, 05/11/15
Date: 05/11/15

Rectangular Rapid Flashing Beacon Double Sided Application



Dimension Plan
Rectangular Rapid Flashing Beacon
SA-SO
Drawn By: J.V. Rollins, A. Hester, 05/11/15
Approved By: A. Hester, 05/11/15
Date: 05/11/15

Technical Description, Design, and Material

Technical Description:

The RRFB is a pedestrian-actuated (push button) conspicuity enhancement used in combination with a pedestrian, school, or trail crossing warning sign to improve safety at uncontrolled, marked crosswalks. They are powered by a 12v Lithium Ion Battery and 30 watt Solar Panel, or alternatively with AC power. The visibility enhancing feature consists of a light bar with alternately flashing LED lights that flash in an attention-getting pattern.

Application:

RRFBs are generally used in pairs, with one being on each side of a crosswalk. In boulevard situations, a third RRFB can be used if desirable.

Push buttons are located on both sides of the crosswalk. They activate their respective RRFB, and a wireless signal activates the RRFB across the street.

MUTCD Requirements:

An RRFB shall only be installed to function as a pedestrian-actuated conspicuity enhancement.

An RRFB shall only be used to supplement a post-mounted W11-2 (Pedestrian), S1-1 (School), or W11-15 (Trail) crossing warning sign with a diagonal downward arrow (W16-7P) plaque, or an overhead-mounted W11-2, S1-1, or W11-15 crossing warning sign, located at or immediately adjacent to an

uncontrolled marked crosswalk.

Except for crosswalks across the approach to or egress from a roundabout, an RRFB shall not be used for crosswalks across approaches controlled by YIELD signs, STOP signs, traffic control signals, or pedestrian hybrid beacons.

In the event sight distance approaching the crosswalk at which RRFBs are used is less than deemed necessary by the engineer, an additional RRFB may be installed on that approach in advance of the crosswalk, as a pedestrian-actuated conspicuity enhancement to supplement a W11-2 (Pedestrian), S1-1 (School), or W11-15 (Trail) crossing warning sign with an AHEAD (W16-9P) or distance (W16-2P or W16-2aP) plaque. If an additional RRFB is installed on the approach in advance of the crosswalk, it shall be supplemental to and not a replacement for the RRFBs at the crosswalk itself.

References:

FHWA Interim Approval IA-21, from March 20, 2018

Dimensions

Independent Study Results:

The Federal Highway Administration (FHWA) conducted Report Number FHWA-HRT-10-043 the effectiveness of Rectangular Rapid Flashing Beacons in September of 2010. The title of the report: *Effects of Yellow Rectangular Rapid Flashing Beacons on Yielding at Multilane Uncontrolled Crosswalks.*

The primary finding: The two-beacon RRFB increased yielding compliance from 18 to 81 percent.

The entire report can be found at:
<https://www.fhwa.dotgov/publications/research/safety/pedbike/10043/10043.pdf>

Mechanical Properties

Solar Panel Properties:

Monocrystalline 30W Panel
Maximum Power: 30W
Optimum Operating Voltage (Vmp): 17.5V
Optimum Operating Current (Imp): 1.71A
Weight: 6.2 lbs.
Maximum System Voltage: 600V DC (UL)
Open-Circuit Voltage (Voc): 21.6V
Short-Circuit Current (Isc): 1.85A
Dimensions: 13.5 X 23.8 X 1.0 In
Glass: 3.2 mm tempered glass.
Resists 5400 PA snow loads and 2400 PA wind load.
Film: main component is 30%-33% EVA, coated with fluoro-resin to prevent aging.
Frame: Corrosion-resistant aluminum
Mounting Bracket: Corrosion-resistant aluminum

Battery Properties:

12.6v Rechargeable Lithium-Ion (Li-ion) battery pack
20.8 Ah Capacity
Built in IC chip to prevent over charge and over discharge

3000 Cycle Life Expectancy
8 month Shelf Life exceeds NiMH batteries
High Temperature Tolerance: 60C
Charge rate = 1C, Discharge rate = 2C
Weight = 2.4 lb, Dimensions = 5.79 L x 2.9 H x 2.2 W

Solar Charge Controller Properties:

99% efficient MPPT tracking (15Hz Speed)
Operating Consumption of 0.150mA (150uA)
CC-CV Charging Profile
-40°C to 85°C Operating Temperature
99.85% Electrical Efficiency

Solar Engine Housing:

Corrosion resistant Polycarbonate.
Lockable Latches.
Cover has a recessed Silicon Sponge Gasket.
Meets IP65 of IED529 and NEMA 1, 2, 3, 4, 4x, 12, and 13 specifications.

Light Bar and Flashing Lights:

6061 Powder Coated Aluminum, 2" x 4" x 24"
Rectangular tubing plugs on both ends
IP68 Rated for long-term dust and water-intrusion
Flashing Light Dimension: 7" x 3"
Current Draw: 1.25a Average

Push Button Properties:

ADA Compliant
303 Stainless Steel Button
3-5 lb. Operating Force
Diameter: 2" minimum
Maximum Travel of button: 1/8"
Heat Treated Aluminum Housing

Flashing Specifications:

- The RRFB indication on the left-hand side shall be illuminated for approximately 50 milliseconds. Both RRFB indications shall be dark for approximately 50 milliseconds.
- The RRFB indication on the right-hand side shall be illuminated for approximately 50 milliseconds. Both RRFB indications shall be dark for approximately 50 milliseconds.
- The RRFB indication on the left-hand side shall be illuminated for approximately 50 milliseconds. Both RRFB indications shall be dark for approximately 50 milliseconds.
- The RRFB indication on the right-hand side shall be illuminated for approximately 50 milliseconds. Both RRFB indications shall be dark for approximately 50 milliseconds.
- Both RRFB indications shall be illuminated for approximately 50 milliseconds. Both RRFB indications shall be dark for approximately 50 milliseconds.
- Both RRFB indications shall be illuminated for approximately 50 milliseconds. Both RRFB indications shall be dark for approximately 250 milliseconds.

IMPORTANT NOTICE: ACP International and SA-SO (a division of ACP International) trusts that the user of the product has the most accurate knowledge of how the product might be most efficiently or safely utilized in any given application or environment.

ACP International and SA-SO also trust that the above technical data and product information is based on thorough and accurate testing of the product, but are not liable for any loss or damage to the product (or any other product, employee, or building from which the product might come into direct or indirect contact) resulting from an intentional or unintentional mishandling of the product.



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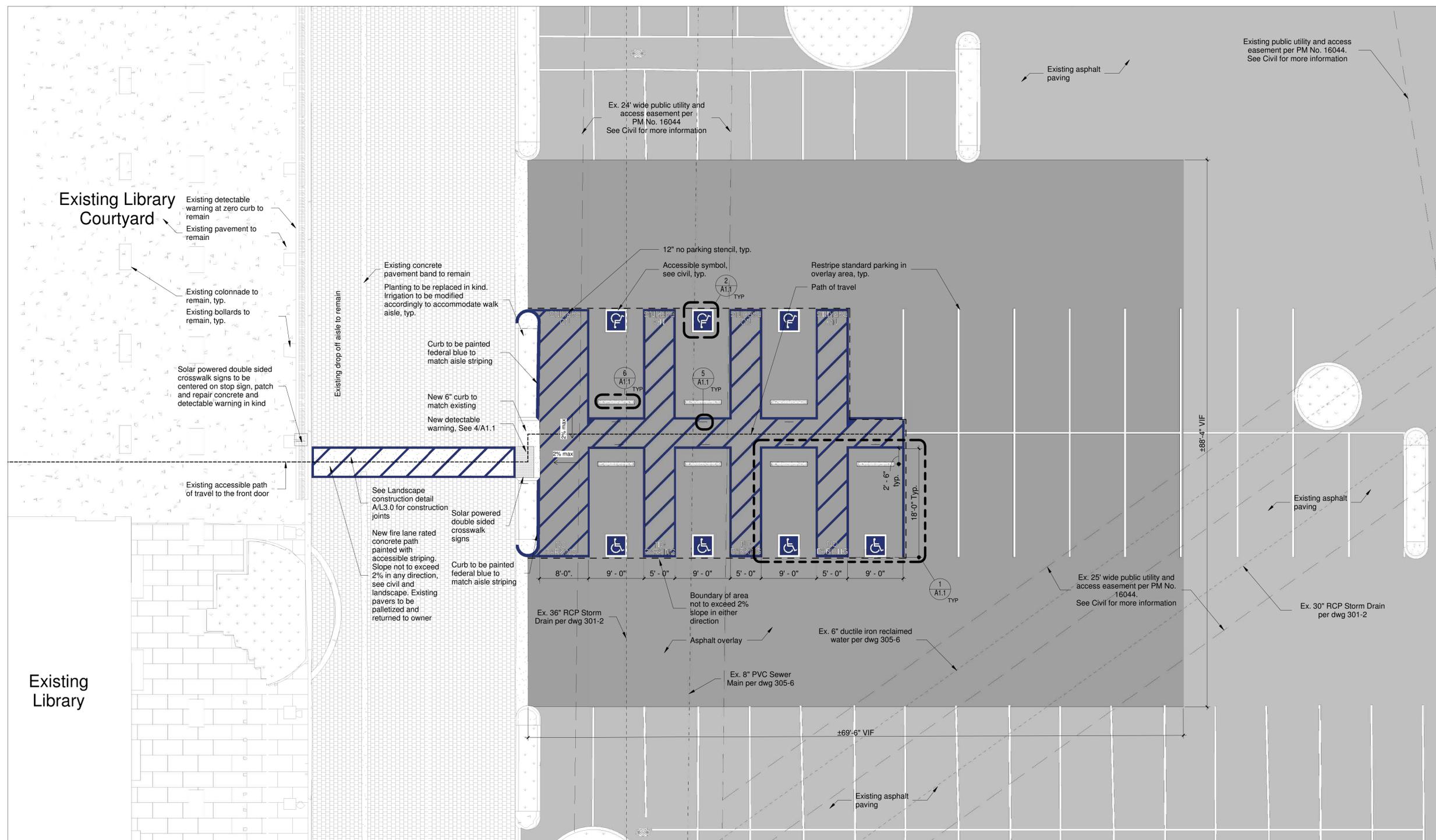
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|---|---------|---|----------------|--------------------|---------------|---------|
| SHEET 4 | | CITY OF CARLSBAD ENGINEERING DEPARTMENT | | SHEETS 4 | | |
| IMPROVEMENT PLANS FOR: City of Carlsbad Dove Library Parking Relocation 1775 DOVE LANE, CARLSBAD, CA 92011 DETAIL SHEET C4.0 | | | | | | |
| DATE | INITIAL | REVISION DESCRIPTION | DATE | INITIAL | DATE | INITIAL |
| ENGINEER OF WORK | | | OTHER APPROVAL | | CITY APPROVAL | |
| DWN BY: _____ | | PROJECT NO. 4744 | | DRAWING NO. 320-7E | | |
| CHKD BY: _____ | | | | | | |
| RVWD BY: _____ | | | | | | |



CONSISTENCY DETERMINATION EXHIBIT
 FOR ORIGINAL PROJECT NO. 4744
 CD NO. 2020-004

Don Neu, City Planner Date: _____
 RECOMMENDED BY: _____
 DATE: _____



domusstudio architecture



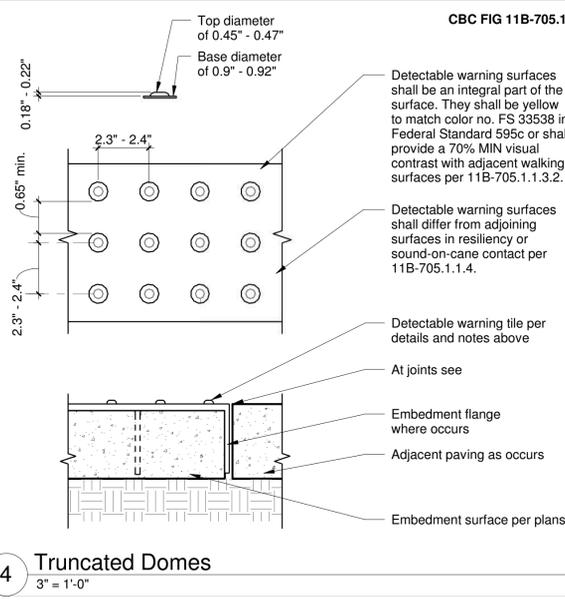
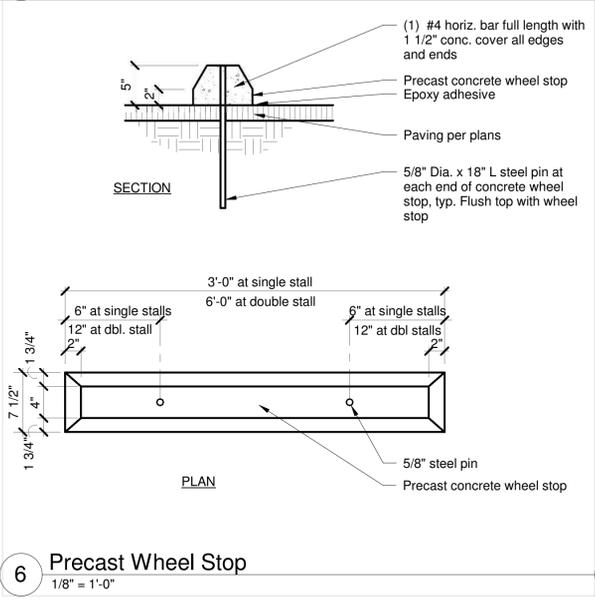
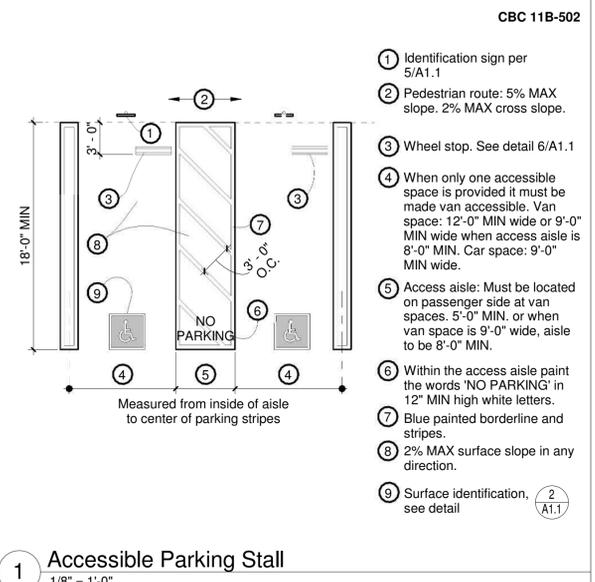
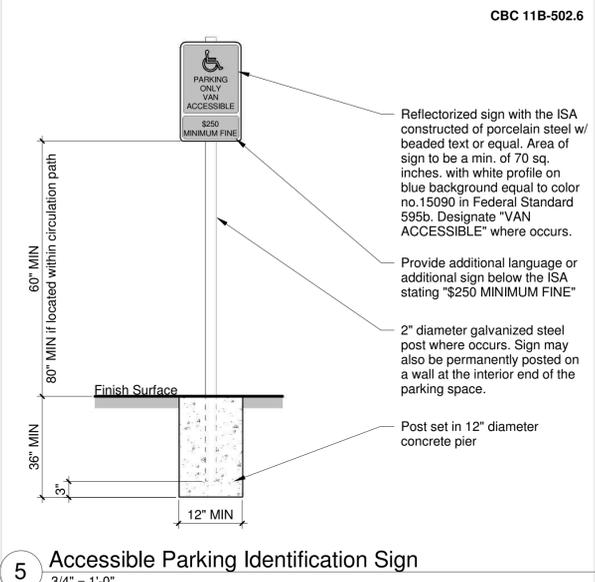
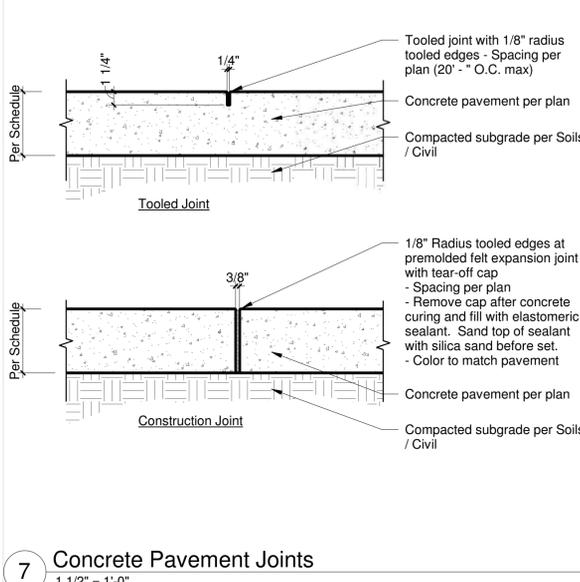
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 1/8" = 1'-0"



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| STORMWATER REQUIREMENTS THAT APPLY: | | | EXEMPT FROM HYDROMODIFICATION? | | |
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| <input type="checkbox"/> | PRIORITY PROJECT REQUIREMENTS | <input type="checkbox"/> | NO | | |
| TYPE | DESCRIPTION | OWNERSHIP | MAINTENANCE AGREEMENT | SHEET NO. | MAINTENANCE FREQUENCY |
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| SHEET 7 | CITY OF CARLSBAD ENGINEERING DEPARTMENT | SHEETS 12 |
| IMPROVEMENT PLANS FOR: City of Carlsbad Dove Library Parking Relocation 1775 Dove Lane Carlsbad, CA 92011 | | |
| Site Plan | | A1.0 |
| DWN BY: _____ | PROJECT NO. 4744 | DRAWING NO. 320-7E |
| CHKD BY: _____ | | |
| RWVD BY: _____ | | |



CONSISTENCY DETERMINATION EXHIBIT FOR ORIGINAL PROJECT NO. 4744 - CD NO. 2020-004

Don Neu, City Planner
RECOMMENDED BY: _____
DATE: _____



domustudio architecture



| STRUCTURAL (POST-CONSTRUCTION) BMP TABLE | | | | | |
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| SHEET 8 | CITY OF CARLSBAD ENGINEERING DEPARTMENT | SHEETS 12 |
| IMPROVEMENT PLANS FOR: City of Carlsbad Dove Library Parking Relocation 1775 Dove Lane Carlsbad, CA 92011 | | |
| Details | | A1.1 |
| DWN BY: _____ | PROJECT NO. 4744 | DRAWING NO. 320-7E |
| CHKD BY: _____ | | |
| RWVD BY: _____ | | |

