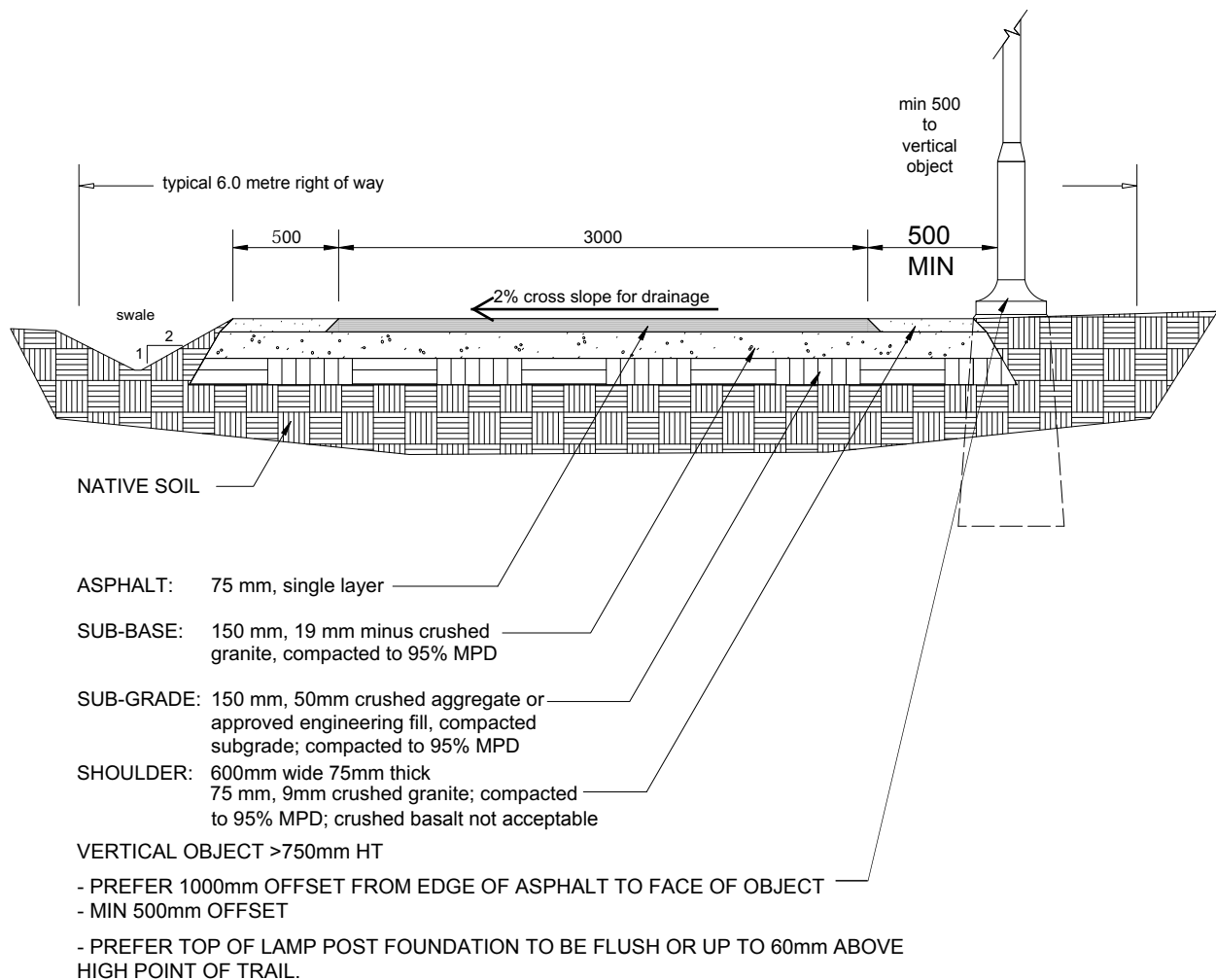


NOTES:

1. ALL DIMENSIONS IN MILLIMETRES (mm), EXCEPT WHERE NOTED.
2. REFER TO SECTION FOR MATERIAL SPECIFICATIONS.
3. ALL SIGNS LOCATED AT NON ROAD SIDE OF VALLEY TRAIL OTHER THAN STOP, YIELD AND CROSSWALK.
4. BOULDERS MAY BE USED TO SHORE UP STEEP SLOPES.
5. ON STEEP CUT BANKS > 2:1 SLOPE A COMBINATION OF HYDRO-SEEDING, STRAW AND NETTING IS TO BE APPLIED TO STABILIZE UNTIL PLANTING ESTABLISHED.
6. THIS DRAWING SUPPLEMENTS THE "VALLEY TRAIL DESIGN GUIDELINES" (2019) AND MAY NOT REPRESENT ALL DESIGN AND CONSTRUCTION DETAILS. REFER TO THE GUIDELINES FOR ALL DETAILS.
7. FOR NORDIC GROOMED VALLEY TRAILS SHOULDER & SWALE CLEARED TO A MIN. 1600mm.



RESORT MUNICIPALITY OF WHISTLER

TYPE 1A - RURAL / FOREST
 MULTI USE RECREATIONAL 'VALLEY TRAIL'

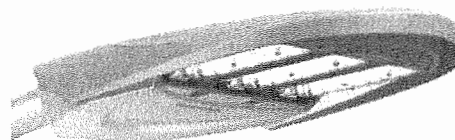
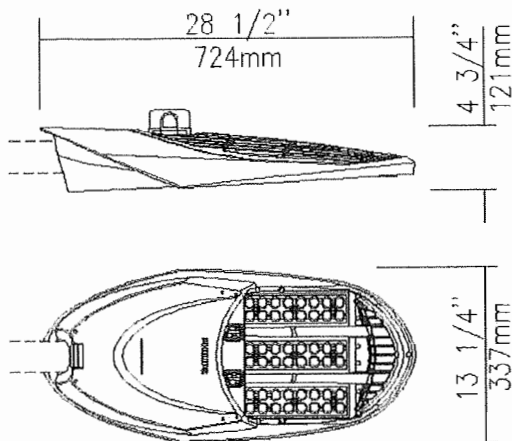
DRAWN BY: KM/MP

DATE: OCTOBER 8, 2020

SCALE: N.T.S.

DWG. NO.:

Whistler Valley Trail at Cheakamus Lake Rd (62993)



APPROVED

JASON FENTIMAN
[Signature]
OCT. 25, 2018

EPA: 0.65 sq ft / weight: 17 lb (7.7 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.

| | | | |
|-----|----|-----------|---|
| Qty | 10 | Luminaire | GPLS-16L700NW-G2-R2M-UNV-DMG-RCD-BE2TX |
|-----|----|-----------|---|

Description of Components:

Housing: The upper grid and lower part of the housing are made of a low copper die cast Aluminum alloy (A360), 0.100" (2.5mm) minimum thickness. Fits on a 1.66" (42mm) O.D. (1.25" NPS), 1.9" (48mm) O.D. (1.5" NPS) or 2 3/8" (60mm) O.D. (2" NPS) by 7 3/4" (197mm) minimum long tenon. Comes with two zinc plated clamps fixed by 4 zinc plated hexagonal bolts 3/8 16 UNC for ease of installation. Provides an easy step adjustment of +/- 5° tilt in 2.5° increments. Includes integral bubble level standard (always included). A quick release, tool less entry, single latch, hinged, removable door opens downward to provide access to electronic components and to a terminal block. Door is secured to prevent accidental dropping or disengagement. Complete with a bird guard protecting against birds and similar intruders. ANSI label to identify wattage and source included in box.

Light Engine: Composed of 4 main components: **Heat Sink / LED Module / Optical System / Driver**
Electrical components are RoHS compliant, IP66 sealed light engine. LEDs tested by ISO 17025-2005 accredited lab in accordance with IESNA LM-80 guidelines in compliance with EPA ENERGY STAR, extrapolations in accordance with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

Heat Sink: Built in the housing, designed to ensure high efficacy and superior cooling by natural convection air flow pattern always close to LEDs and driver optimising their efficiency and life. Product does not use any cooling device with moving parts (only passive cooling). Entire luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +40°C / +104°F.

LED Module: Composed of 16 high-performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (3985K +/- 275K or 3710K to 4260K), CRI 70 Min. 75 Typical.

Optical System: (R2M), IES type II medium (asymmetrical). Composed of high-performance UV stabilized optical grade

Whistler Valley Trail at Cheakamus Lake Rd (62993)

polymer refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. System is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. 0% uplight and U0 per IESNA TM-15.

Driver: High power factor of 90% minimum%. Electronic driver, operating range 50/60 Hz. Auto-adjusting universal voltage input from 120 to 277 VAC rated for both application line to line or line to neutral, Class 2, THD of 20% max. **Driver comes with dimming compatible 0-10 volts.**

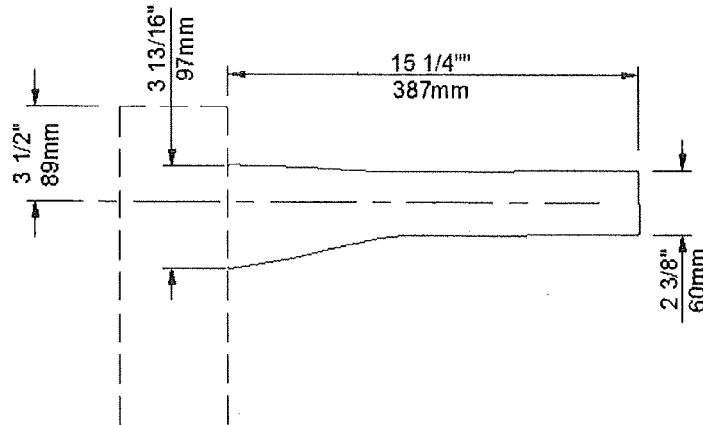
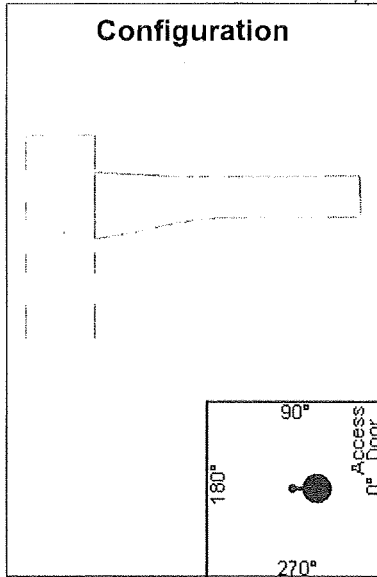
The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built-in driver surge protection of 2.5kV (min).

Driver Options: (DMG), Dimming compatible 0-10 volts. For applicable warranty, certification and operation guide see "*Philips Lumec dimmable luminaire specification document for unapproved device installed by other*". To get document, click on this link: [Specification document](http://www.lumec.com/Lumec3DV2/PdfWebLink/Philips%20Lumec%20dimmable%20luminaire%20specification%20document%20for%20unapproved%20device%20installed%20by%20other.pdf) or go on web site on this address: <http://www.lumec.com/Lumec3DV2/PdfWebLink/Philips Lumec dimmable luminaire specification document for unapproved device installed by other.pdf>

Surge Protector: Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

Luminaire Options: (RCD), Receptacle with 5 pins enabling dimming, can be used with a twist-lock control device or photoelectric cell or a shorting cap. Use of photocell or shorting cap is required to ensure proper illumination.

Whistler Valley Trail at Cheakamus Lake Rd (62993)



| | | | |
|-----|----|---------|--------------------|
| Qty | 10 | Bracket | RLAR-1A-R5@6-BE2TX |
|-----|----|---------|--------------------|

Description of Components:

Arm: (RLAR) Made of cast A356 aluminum, mechanically assembled to the pole.

Bracket Properties (Weight and EPA): 3 lbs (1.4 kg), .25 ft²

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JASON FENTIMAN

OCT-25, 2018

Whistler Valley Trail at Cheakamus Lake Rd (62993)

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JASON FENTIMAN

OCT. 25, 2018

| | | | |
|-----|----|-------------|-----|
| Qty | 10 | Accessories | PH8 |
|-----|----|-------------|-----|

Description of Components:

Accessories: (PH8), Photoelectric Cell, Twist-lock Type. UNV (120-277V)

| |
|---------------|
| Miscellaneous |
|---------------|

Description of Components:

Wiring: The connection of the luminaire is done using a terminal block connector 600V, 85A for use with #2-14 AWG. wires from the primary circuit, located inside the housing. Due to the inrush current that occurs with electronic drivers, recommend using a 10Amp time delay fuse to avoid unwanted fuse blowing (false tripping) that can occur with normal or fast acting fuses.

Hardware: All exposed screws shall be complete with Ceramic primer-seal basecoat to reduce seizing of the parts and offers a high resistance to corrosion. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

Finish: Color to be **textured dark blue (BE2TX)** and in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with ± 1 mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard.

The surface treatment achieves a minimum of 3000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

Pole Information: (R5@6), Bracket to be side mounted on a round pole from 5" min. to 6" (127mm min. to 152mm).

LED products manufacturing standard: The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

Quality Control: The manufacturer must provide a written confirmation of its ISO 9001-2008 and ISO 14001-2004 International Quality Standards Certification.

Certification: The manufacturer will have to supply a copy of approval products certificate, CSA or UL.

Vibration Resistance: The GPLS meets the **ANSI C136.31**, American National Standard for Roadway Luminaire Vibration specifications for Bridge/overpass applications (Tested for 3G over 100 000 cycles).

The GPLS meets the **California Test 611, Testing durability of mast arm mounted luminaires**, specifications (a 2 000 000 cycles test).

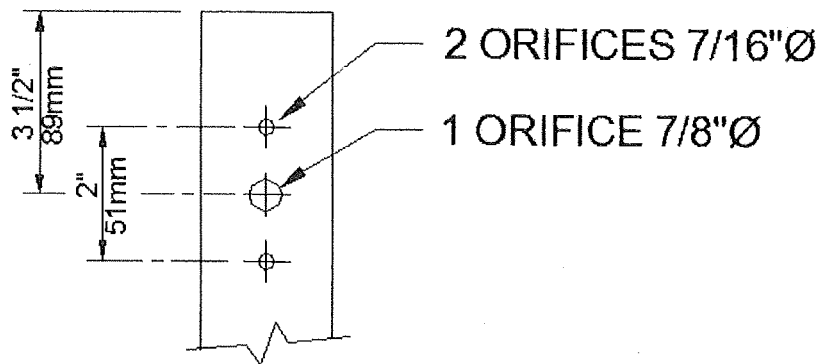
Web site information details: Click on any specific information details you need:

[Paint finish](#) / [Warranties](#) / [Installation pictures](#) / [ISO 9001-2008 Certification](#) / [ISO 14001-2004 Certification](#) / [cULus Certification](#)

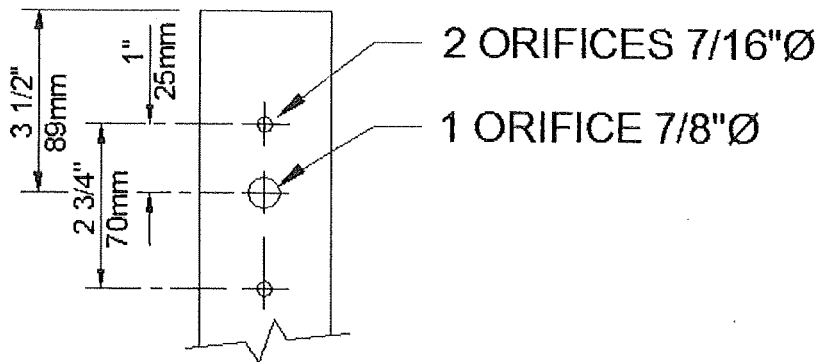
Whistler Valley Trail at Cheakamus Lake Rd (62993)

Coordination

This bracket can accept both coordinations.
Cette console est conçue pour accepter ces deux coordinations.



or



Whistler Valley Trail at Cheakamus Lake Rd (62993)

| LED light engine technical information for GPLS | | | | | | | | | | | |
|---|--------------------------|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------|----------------------------------|------------|
| CRI = 70, CCT = 4000K (3985K +/- 275K or 3710K to 4260K) | | | | | | | | | | | |
| System (LED + driver) rated life = 100,000 hrs ¹ | | | | | | | | | | | |
| LED Module | Typical delivered lumens | Typical system wattage ² (W) | Typical current @ 120 V (A) | Typical current @ 208 V (A) | Typical current @ 240 V (A) | Typical current @ 277 V (A) | Typical current @ 347 V (A) | Typical current @ 480 V (A) | LED current (mA) | Luminaire Efficacy Rating (lm/W) | BUG rating |
| 16L530NW-G2-R2M | 3033 | 27 | 0.23 | 0.14 | 0.12 | 0.11 | 0.10 | 0.08 | 530 | 111 | B1-U0-G1 |
| 16L530NW-G2-R2S | 3339 | 27 | 0.23 | 0.14 | 0.12 | 0.11 | 0.10 | 0.08 | 530 | 123 | B1-U0-G0 |
| 16L530NW-G2-R3M | 3124 | 27 | 0.23 | 0.14 | 0.12 | 0.11 | 0.10 | 0.08 | 530 | 115 | B1-U0-G1 |
| 16L530NW-G2-R3S | 3089 | 27 | 0.23 | 0.14 | 0.12 | 0.11 | 0.10 | 0.08 | 530 | 113 | B1-U0-G1 |
| 16L530NW-G2-R3W | 3059 | 27 | 0.23 | 0.14 | 0.12 | 0.11 | 0.10 | 0.08 | 530 | 112 | B1-U0-G1 |
| 16L530NW-G2-4 | 3165 | 27 | 0.23 | 0.14 | 0.12 | 0.11 | 0.10 | 0.08 | 530 | 116 | B1-U0-G1 |
| 16L530NW-G2-5 | 3054 | 27 | 0.23 | 0.14 | 0.12 | 0.11 | 0.10 | 0.08 | 530 | 112 | B2-U0-G1 |
| 16L700NW-G2-R2M | 3816 | 38 | 0.32 | 0.19 | 0.17 | 0.15 | 0.12 | 0.10 | 700 | 100 | B1-U0-G1 |
| 16L700NW-G2-R2S | 4201 | 38 | 0.32 | 0.19 | 0.17 | 0.15 | 0.12 | 0.10 | 700 | 111 | B1-U0-G1 |
| 16L700NW-G2-R3M | 3930 | 38 | 0.32 | 0.19 | 0.17 | 0.15 | 0.12 | 0.10 | 700 | 103 | B1-U0-G1 |
| 16L700NW-G2-R3S | 3886 | 38 | 0.32 | 0.19 | 0.17 | 0.15 | 0.12 | 0.10 | 700 | 102 | B1-U0-G1 |
| 16L700NW-G2-R3W | 3849 | 38 | 0.32 | 0.19 | 0.17 | 0.15 | 0.12 | 0.10 | 700 | 101 | B1-U0-G1 |
| 16L700NW-G2-4 | 3982 | 38 | 0.32 | 0.19 | 0.17 | 0.15 | 0.12 | 0.10 | 700 | 105 | B1-U0-G1 |
| 16L700NW-G2-5 | 3843 | 38 | 0.32 | 0.19 | 0.17 | 0.15 | 0.12 | 0.10 | 700 | 101 | B2-U0-G1 |
| 16L1050NW-G2-R2M | 5227 | 55 | 0.46 | 0.27 | 0.23 | 0.20 | 0.17 | 0.13 | 1050 | 95 | B1-U0-G1 |
| 16L1050NW-G2-R2S | 5754 | 55 | 0.46 | 0.27 | 0.23 | 0.20 | 0.17 | 0.13 | 1050 | 104 | B1-U0-G1 |
| 16L1050NW-G2-R3M | 5383 | 55 | 0.46 | 0.27 | 0.23 | 0.20 | 0.17 | 0.13 | 1050 | 98 | B1-U0-G1 |
| 16L1050NW-G2-R3S | 5323 | 55 | 0.46 | 0.27 | 0.23 | 0.20 | 0.17 | 0.13 | 1050 | 97 | B1-U0-G2 |
| 16L1050NW-G2-R3W | 5272 | 55 | 0.46 | 0.27 | 0.23 | 0.20 | 0.17 | 0.13 | 1050 | 96 | B1-U0-G2 |
| 16L1050NW-G2-4 | 5454 | 55 | 0.46 | 0.27 | 0.23 | 0.20 | 0.17 | 0.13 | 1050 | 99 | B1-U0-G2 |
| 16L1050NW-G2-5 | 5264 | 55 | 0.46 | 0.27 | 0.23 | 0.20 | 0.17 | 0.13 | 1050 | 96 | B3-U0-G1 |
| 32L530NW-G2-R2M | 6046 | 53 | 0.45 | 0.27 | 0.24 | 0.22 | 0.17 | 0.14 | 530 | 114 | B2-U0-G1 |
| 32L530NW-G2-R2S | 6656 | 53 | 0.45 | 0.27 | 0.24 | 0.22 | 0.17 | 0.14 | 530 | 126 | B2-U0-G1 |
| 32L530NW-G2-R3M | 6227 | 53 | 0.45 | 0.27 | 0.24 | 0.22 | 0.17 | 0.14 | 530 | 118 | B2-U0-G1 |
| 32L530NW-G2-R3S | 6158 | 53 | 0.45 | 0.27 | 0.24 | 0.22 | 0.17 | 0.14 | 530 | 117 | B1-U0-G2 |
| 32L530NW-G2-R3W | 6099 | 53 | 0.45 | 0.27 | 0.24 | 0.22 | 0.17 | 0.14 | 530 | 115 | B1-U0-G2 |
| 32L530NW-G2-4 | 6309 | 53 | 0.45 | 0.27 | 0.24 | 0.22 | 0.17 | 0.14 | 530 | 119 | B1-U0-G2 |
| 32L530NW-G2-5 | 6089 | 53 | 0.45 | 0.27 | 0.24 | 0.22 | 0.17 | 0.14 | 530 | 115 | B3-U0-G1 |
| 32L700NW-G2-R2M | 7594 | 71 | 0.60 | 0.34 | 0.295 | 0.27 | 0.23 | 0.18 | 700 | 107 | B2-U0-G2 |

¹ L70 = 100,000 hrs (at ambient temperature = 25°C)

² System wattage or total luminaire wattage includes the LED module and the LED driver.

Note that LED files with HS house side shield option are also available – contact the factory.

Note: Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Philips.

Whistler Valley Trail at Cheakamus Lake Rd (62993)

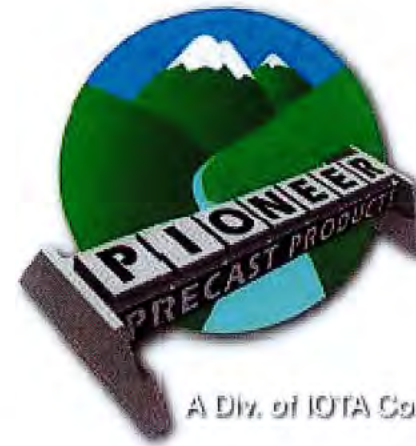
| LED light engine technical information for GPLS | | | | | | | | | | | |
|---|--------------------------|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------|----------------------------------|------------|
| CRI = 70, CCT = 4000K (3985K +/- 275K or 3710K to 4260K) | | | | | | | | | | | |
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| 32L700NW-G2-R2M | 7594 | 71 | 0.60 | 0.34 | 0.295 | 0.27 | 0.23 | 0.18 | 700 | 107 | B2-U0-G2 |
| 32L700NW-G2-R2S | 8360 | 71 | 0.60 | 0.34 | 0.295 | 0.27 | 0.23 | 0.18 | 700 | 118 | B2-U0-G1 |
| 32L700NW-G2-R3M | 7822 | 71 | 0.60 | 0.34 | 0.295 | 0.27 | 0.23 | 0.18 | 700 | 110 | B2-U0-G2 |
| 32L700NW-G2-R3S | 7735 | 71 | 0.60 | 0.34 | 0.30 | 0.27 | 0.23 | 0.18 | 700 | 109 | B1-U0-G2 |
| 32L700NW-G2-R3W | 7660 | 71 | 0.60 | 0.34 | 0.30 | 0.27 | 0.23 | 0.18 | 700 | 108 | B1-U0-G2 |
| 32L700NW-G2-4 | 7925 | 71 | 0.60 | 0.34 | 0.30 | 0.27 | 0.23 | 0.18 | 700 | 111 | B1-U0-G2 |
| 32L700NW-G2-5 | 7648 | 71 | 0.60 | 0.34 | 0.30 | 0.27 | 0.23 | 0.18 | 700 | 106 | B3-U0-G2 |
| 32L1050NW-G2-R2M | 10341 | 110 | 0.91 | 0.53 | 0.47 | 0.41 | 0.32 | 0.24 | 1050 | 94 | B2-U0-G2 |
| 32L1050NW-G2-R2S | 11384 | 110 | 0.91 | 0.53 | 0.47 | 0.41 | 0.32 | 0.24 | 1050 | 104 | B2-U0-G2 |
| 32L1050NW-G2-R3M | 10651 | 110 | 0.91 | 0.53 | 0.47 | 0.41 | 0.32 | 0.24 | 1050 | 97 | B2-U0-G2 |
| 32L1050NW-G2-R3S | 10532 | 110 | 0.91 | 0.53 | 0.47 | 0.41 | 0.32 | 0.24 | 1050 | 96 | B1-U0-G2 |
| 32L1050NW-G2-R3W | 10431 | 110 | 0.91 | 0.53 | 0.47 | 0.41 | 0.32 | 0.24 | 1050 | 95 | B2-U0-G2 |
| 32L1050NW-G2-4 | 10791 | 110 | 0.91 | 0.53 | 0.47 | 0.41 | 0.32 | 0.24 | 1050 | 98 | B2-U0-G2 |
| 32L1050NW-G2-5 | 10414 | 110 | 0.91 | 0.53 | 0.47 | 0.41 | 0.32 | 0.24 | 1050 | 95 | B3-U0-G2 |
| 48L530NW-G2-R2M | 9037 | 78 | 0.66 | 0.39 | 0.35 | 0.31 | 0.24 | 0.18 | 530 | 116 | B2-U0-G2 |
| 48L530NW-G2-R2S | 9949 | 78 | 0.66 | 0.39 | 0.35 | 0.31 | 0.24 | 0.18 | 530 | 127 | B2-U0-G2 |
| 48L530NW-G2-R3M | 9308 | 78 | 0.66 | 0.39 | 0.35 | 0.31 | 0.24 | 0.18 | 530 | 119 | B2-U0-G2 |
| 48L530NW-G2-R3S | 9204 | 78 | 0.66 | 0.39 | 0.35 | 0.31 | 0.24 | 0.18 | 530 | 118 | B1-U0-G2 |
| 48L530NW-G2-R3W | 9116 | 78 | 0.66 | 0.39 | 0.35 | 0.31 | 0.24 | 0.18 | 530 | 117 | B2-U0-G2 |
| 48L530NW-G2-4 | 9431 | 78 | 0.66 | 0.39 | 0.35 | 0.31 | 0.24 | 0.18 | 530 | 121 | B2-U0-G2 |
| 48L530NW-G2-5 | 9101 | 78 | 0.66 | 0.39 | 0.35 | 0.31 | 0.24 | 0.18 | 530 | 117 | B3-U0-G2 |
| 48L700NW-G2-R2M | 11327 | 107 | 0.89 | 0.52 | 0.46 | 0.39 | 0.32 | 0.24 | 700 | 106 | B2-U0-G2 |
| 48L700NW-G2-R2S | 12469 | 107 | 0.89 | 0.52 | 0.46 | 0.39 | 0.32 | 0.24 | 700 | 117 | B3-U0-G2 |
| 48L700NW-G2-R3M | 11666 | 107 | 0.89 | 0.52 | 0.46 | 0.39 | 0.32 | 0.24 | 700 | 110 | B2-U0-G2 |
| 48L700NW-G2-R3S | 11536 | 107 | 0.89 | 0.52 | 0.46 | 0.39 | 0.32 | 0.24 | 700 | 108 | B2-U0-G2 |
| 48L700NW-G2-R3W | 11426 | 107 | 0.89 | 0.52 | 0.46 | 0.39 | 0.32 | 0.24 | 700 | 107 | B2-U0-G2 |
| 48L700NW-G2-4 | 11820 | 107 | 0.89 | 0.52 | 0.46 | 0.39 | 0.32 | 0.24 | 700 | 111 | B2-U0-G2 |
| 48L700NW-G2-5 | 11407 | 107 | 0.89 | 0.52 | 0.46 | 0.39 | 0.32 | 0.24 | 700 | 107 | B4-U0-G2 |
| 48L1050NW-G2-R2M | 15312 | 161 | 1.33 | 0.76 | 0.67 | 0.58 | 0.47 | 0.34 | 1050 | 95 | B3-U0-G3 |
| 48L1050NW-G2-R2S | 16856 | 161 | 1.33 | 0.76 | 0.67 | 0.58 | 0.47 | 0.34 | 1050 | 105 | B3-U0-G2 |
| 48L1050NW-G2-R3M | 15770 | 161 | 1.33 | 0.76 | 0.67 | 0.58 | 0.47 | 0.34 | 1050 | 98 | B3-U0-G2 |
| 48L1050NW-G2-R3S | 15595 | 159 | 1.33 | 0.76 | 0.67 | 0.58 | 0.47 | 0.34 | 1050 | 98 | B2-U0-G3 |
| 48L1050NW-G2-R3W | 15445 | 162 | 1.33 | 0.76 | 0.67 | 0.58 | 0.47 | 0.34 | 1050 | 95 | B2-U0-G3 |
| 48L1050NW-G2-4 | 15979 | 162 | 1.33 | 0.76 | 0.67 | 0.58 | 0.47 | 0.34 | 1050 | 99 | B2-U0-G3 |
| 48L1050NW-G2-5 | 15420 | 161 | 1.33 | 0.76 | 0.67 | 0.58 | 0.47 | 0.34 | 1050 | 96 | B4-U0-G2 |

¹ L70 = 100,000 hrs (at ambient temperature = 25°C).

² System wattage or total luminaire wattage includes the LED module and the LED driver.

Note that IES files with HS house side shield option are also available – contact the factory.

Note: Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Philips.



[REDACTED]
 4.30m wide x 9.60m Lg. - CL 625
CONCRETE SLAB BRIDGE

| DRAWING LIST | | |
|----------------|---|----------|
| DRAWING NUMBER | DESCRIPTION | REVISION |
| 1601-085-00-01 | SPECIFICATIONS | 1 |
| 1601-085-00-02 | BRIDGE ASSEMBLY | 2 |
| 1601-085-00-03 | PRECAST CONCRETE SLAB EXTERIOR 9.6m CL 625 MK-A | 2 |
| 1601-085-00-04 | PRECAST CONCRETE SLAB INTERIOR 9.6m CL 625 MK-B | 1 |
| 1601-085-00-05 | PRECAST CONCRETE CAP AND BALLAST WALL 895 DEEP | 1 |
| 1601-085-00-06 | PRECAST CONCRETE S1 FOOTING 1800x1800 | 1 |



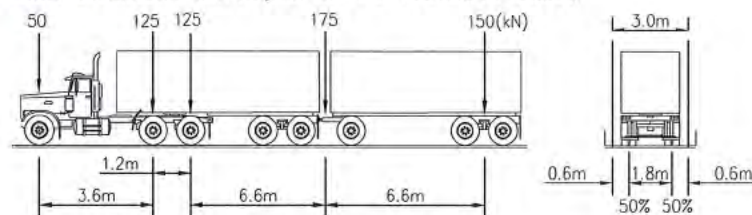
| | | | | | | | |
|-----|----------|-------------------------|-----|-----|--------------------------|--------------|----------------|
| 2 | 19/05/06 | ISSUED FOR CONSTRUCTION | TJB | WBM | PROJECT NO.: 1601-085-00 | DRWN BY: TJB | DATE: 19/04/29 |
| 1 | 19/05/02 | ISSUED FOR CONSTRUCTION | TJB | WBM | DRAWING SIZE: ANSI "B" | DSND BY: RI | DATE: 19/04/29 |
| 0 | 19/02/06 | ISSUED FOR REVIEW | WBM | WBM | SCALE: AS NOTED | APPD BY: WBM | DATE: 19/05/06 |
| REV | YY/MM/DD | DESCRIPTION | DR | APP | DWG. NO.: 1601-085-00-00 | REV: | 2 |

DESIGN LOADS:

- DEAD LOAD - UNIT WEIGHTS AND MATERIALS ARE AS FOLLOWS:
 CONCRETE (INCLUDING REINFORCING STEEL) = 24kN/m³
 STRUCTURAL STEEL = 77kN/m³
 SOIL = 22kN/m³
 TIMBER = 6kN/m³

LIVE LOAD:

LOADING DIAGRAM CL-625 ON HIGHWAY G.V.W. = 63 500kg;
 DESIGN IN ACCORDANCE WITH CAN/CSA-S6-14 WITH LOADING AS FOLLOWS:



- CONSTRUCTION LIVE LOAD:
 CONSTRUCTION LIVE LOAD NOT TO EXCEED 36500kg UNTIL SLABS ARE CONNECTED.

- THERMAL ACTION:
 MAXIMUM DAILY MEAN TEMPERATURE IS 40°C.
 MINIMUM DAILY MEAN TEMPERATURE IS -40°C.

NOTE: ALL DIMENSIONS ON DRAWINGS TAKEN @ 15°C. IF TEMPERATURE DIFFERS AT TIME OF INSTALLATION OF BEARING, COMPENSATION WILL BE REQUIRED BY SITE ENGINEER.

DESIGN SPECIFICATIONS:

- DESIGN IN ACCORDANCE WITH CAN/CSA-S6-14.
- FATIGUE CATEGORY: 1,000,000 CYCLES AS PER CAN/CSA-S6-14 (DYNAMIC LOAD ALLOWANCE INCLUDED), ALL MATERIAL SHALL BE NEW.
- STRUCTURE HAS BEEN DESIGNED FOR FUTURE 50mm ASPHALT OVERLAY.

HANDLING SPECIFICATIONS:

- THE BRIDGE WILL BE HANDLED, DURING TRANSPORTATION AND ERECTION, IN SUCH A MANNER AS TO NOT CAUSE HARM TO THE BRIDGE OR TO THE COMPONENTS OF THE BRIDGE.

BRIDGE IDENTIFICATION:

- THE BRIDGE SHALL HAVE LOAD RATING, DATE OF MANUFACTURE, STRUCTURE NUMBER, MANUFACTURER'S NAME CLEARLY STAMPED OR PERMANENTLY MARKED ON ONE SIDE OF THE STRUCTURE. THE HEIGHT OF LETTERING USED SHALL BE MINIMUM 50mm UNLESS NOTED OTHERWISE.

GENERAL NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- ROAD DESIGN BY OTHERS.
- ALL MATERIALS SHALL BE NEW.
- FOR INSTALLATION BY OTHERS. HMR ENGINEERING ACCEPTS NO RESPONSIBILITY FOR WORK BY OTHERS.

GROUT:

- GROUT TO BE TARGET TRAFFIC PATCH. GROUT SHALL BE MIXED AND PLACED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND SHALL ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 35MPa @ 28 DAY.

TRANSPORTATION AND ERECTION:

- THE BRIDGE WILL BE HANDLED DURING TRANSPORTATION AND ERECTION, IN SUCH A MANNER AS TO NOT CAUSE HARM TO THE BRIDGE OR TO THE COMPONENTS OF THE BRIDGE.
- GIRDERS MUST BE SUPPORTED WITHIN 1m OF BEARING LOCATIONS DURING TRANSPORTATION AND STORAGE.
- ONLY LOW IMPACT LIFTS ARE PERMITTED, ANGLE OF LIFT MUST NOT EXCEED 30° FROM THE VERTICAL.
- GIRDER IS DESIGNED FOR CANTILEVERED LAUNCH. GIRDER MUST NOT CANTILEVER MORE THAN HALF ITS LENGTH DURING LAUNCHING.

CONCRETE:

- ALL PRECAST CONCRETE SHALL BE DESIGNED, MIXED, TRANSPORTED, CAST AND CURED ACCORDING TO CSA A23.4-16 "PRECAST CONCRETE - MATERIALS AND CONSTRUCTION".
- CONCRETE SHALL HAVE THE FOLLOWING SPECIFICATIONS:
 - EXPOSURE CLASS C-1
 - 35MPa STRENGTH AT 28 DAYS
 - MAX. AGGREGATE SIZE 20mmØ
 - MIN. ENTRAINED AIR 5% TO 8%
 - MAX. W/C RATIO BY MASS 0.40
 - DECK SURFACE FINISH, ROUGH TRANSVERSE BROOM
- MINIMUM REINFORCING COVER REQUIREMENTS UNLESS NOTED OTHERWISE:
 - TOP = 50mm
 - BOTTOM = 30mm
 - SIDE = 50mm
- PRECAST COMPONENTS TO BE MADE IN CSA APPROVED SHOP.
- ALL EXPOSED CORNERS SHALL HAVE A 20mm CHAMFER OF FILLET UNLESS NOTED OTHERWISE.
- ALL REINFORCING STEEL TO BE DEFORMED BARS CONFORMING TO CSA G30.18-M, GRADE 400. ALL BARS TO BE CONTINUOUS LENGTH.
- CONCRETE TEST CERTIFICATES TO BE FORWARDED TO THE ENGINEER.
- ALL LIFTING RECESSES TO BE GROUTED AFTER COMPONENT INSTALLATION.

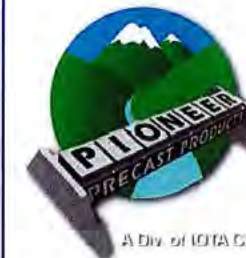
FOOTINGS:

- FOOTINGS HAVE BEEN DESIGNED FOR 200kPa MAXIMUM ALLOWABLE BEARING PRESSURE. A MINIMUM THICKNESS OF 300MM OF GRANULAR MATERIAL SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY. BELOW EACH FOOTING, UNDER THE DIRECT SUPERVISION OF THE ENGINEER.

BRIDGE RAIL NOTES:

- GUARDRAILS HAVE BEEN DESIGNED BY OTHERS

SCHEDULE 2



PROJECT:
 4.30m wide x 9.60m Lg. - CL 625
 CONCRETE SLAB BRIDGE

TITLE:
 SPECIFICATIONS

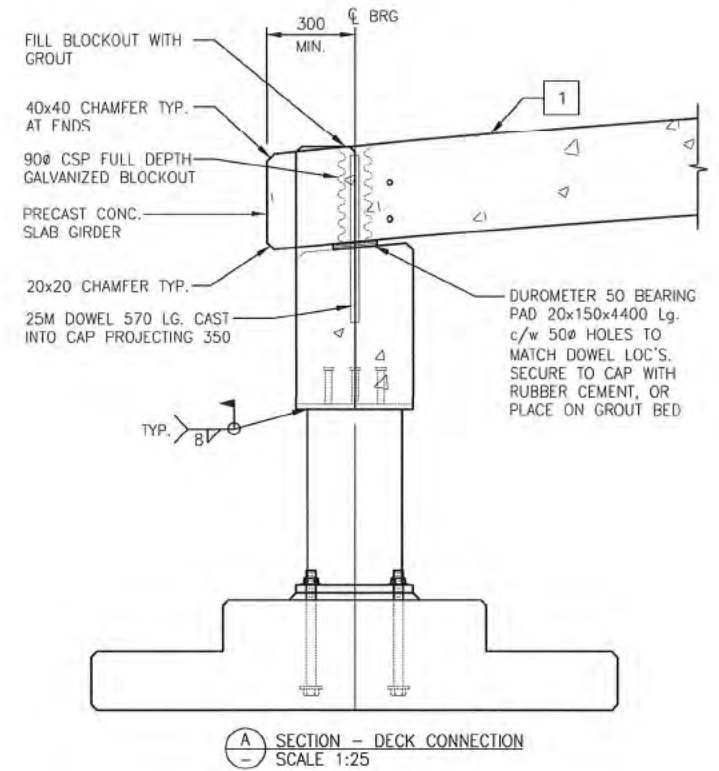
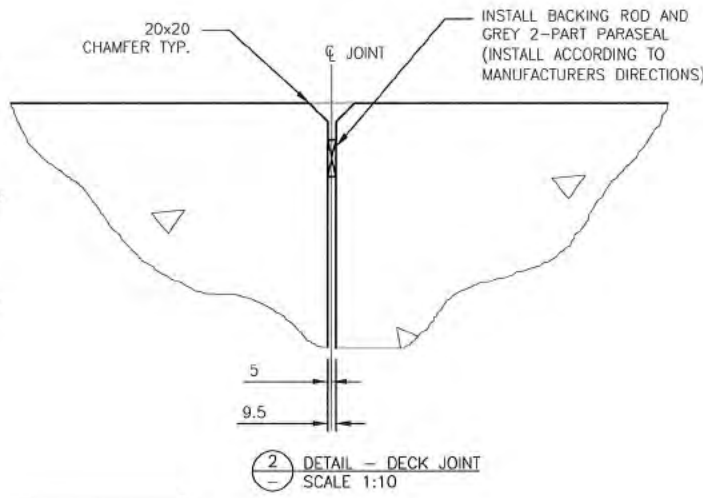
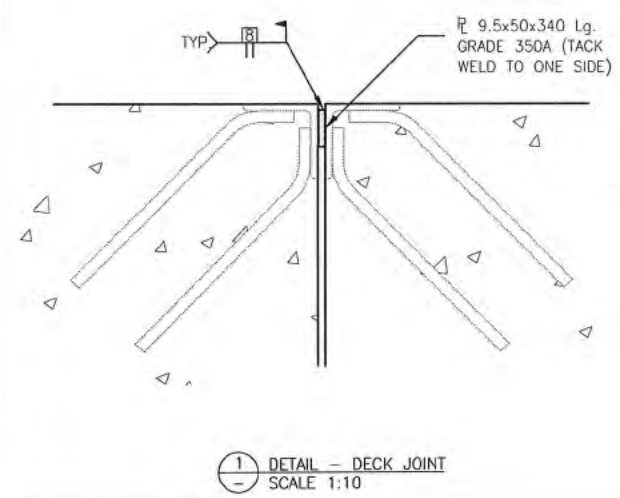
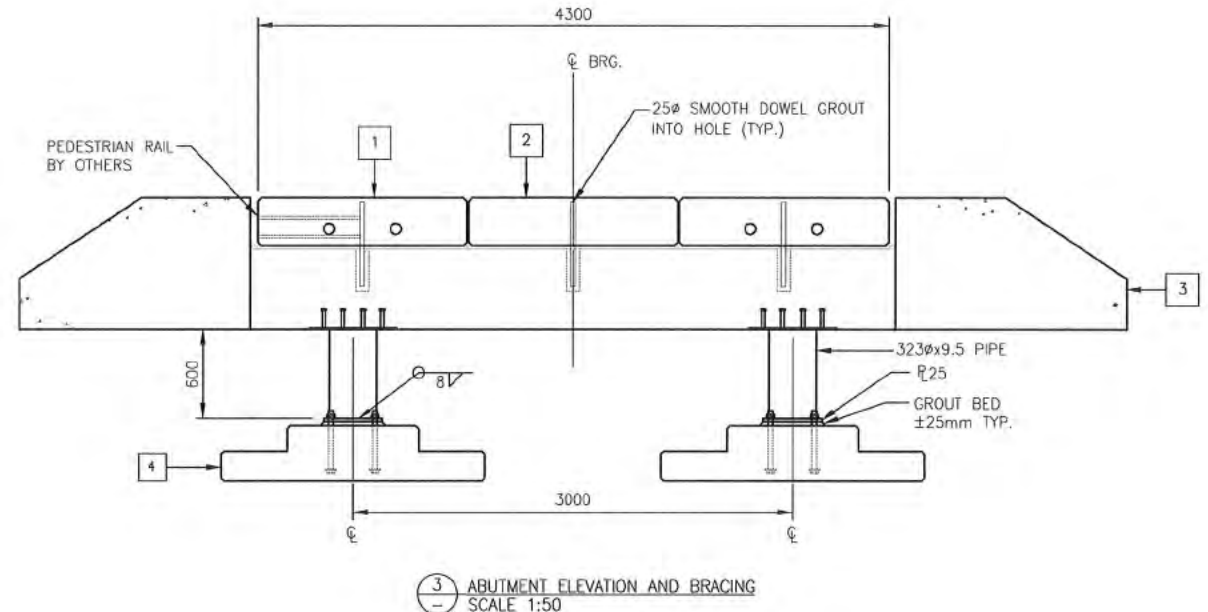
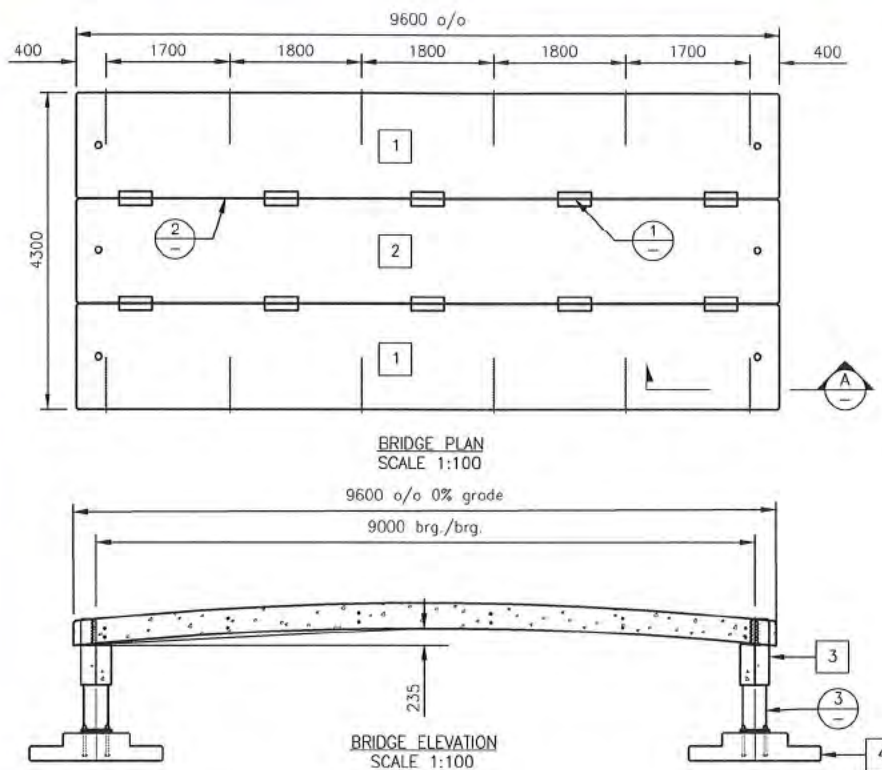
PROJECT NO.: 1601-085-00 DRWN BY: TJB DATE: 19/04/29

DRAWING SIZE: ANSI "B" DSND BY: RI DATE: 19/04/29

SCALE: AS NOTED APPD BY: WBM DATE: 19/05/02

OWG. NO.: 1601-085-00-01 REV: 1

| REV | YY/MM/DD | DESCRIPTION | DR | APP | TJB | WBM |
|-----|----------|-------------------------|----|-----|-----|-----|
| 1 | 19/05/02 | ISSUED FOR CONSTRUCTION | | | TJB | WBM |
| 0 | 19/04/30 | ISSUED FOR REVIEW | | | TJB | WBM |
| | | | | | DR | APP |



| MATERIAL LIST | | | |
|---------------|--------|----------|--|
| ITEM | PAGE # | QUANTITY | DESCRIPTION |
| 1 | 3 | 2 | PRECAST CONCRETE SLAB EXTERIOR 9.6m CL 625 MK-A. |
| 2 | 4 | 1 | PRECAST CONCRETE SLAB INTERIOR 9.6m CL 625 MK-B |
| 3 | 5 | 2 | PRECAST CONCRETE CAP AND BALLAST WALL 895 DEEP |
| 4 | 6 | 4 | PRECAST CONCRETE S1 FOOTING 1800x1800 |



PROJECT: [REDACTED]
4.30m wide x 9.60m Lg. - CL 625
CONCRETE SLAB BRIDGE

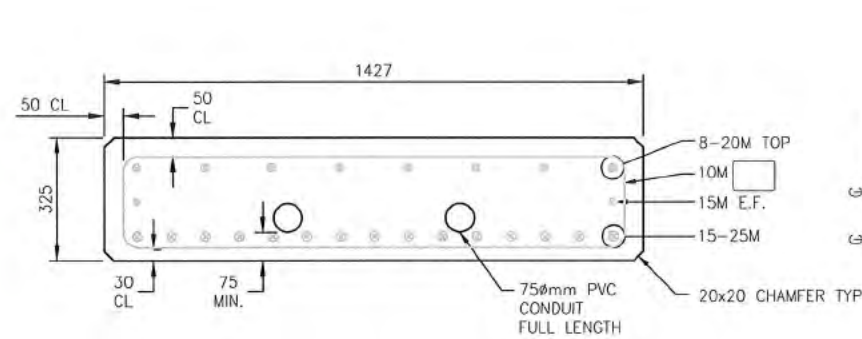
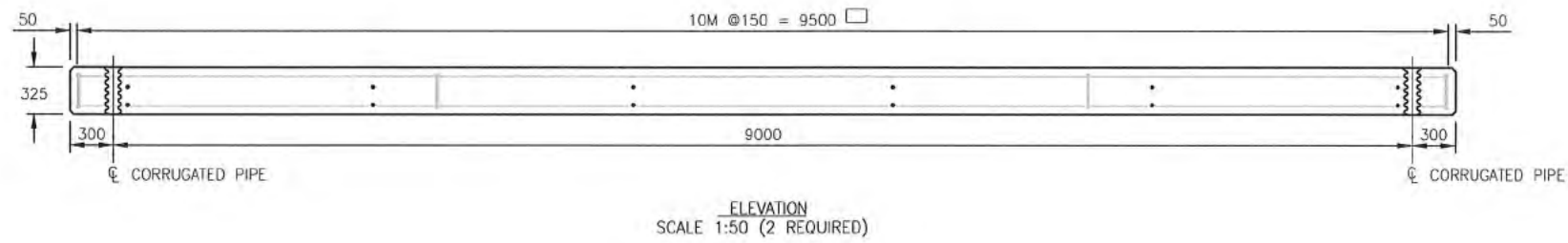
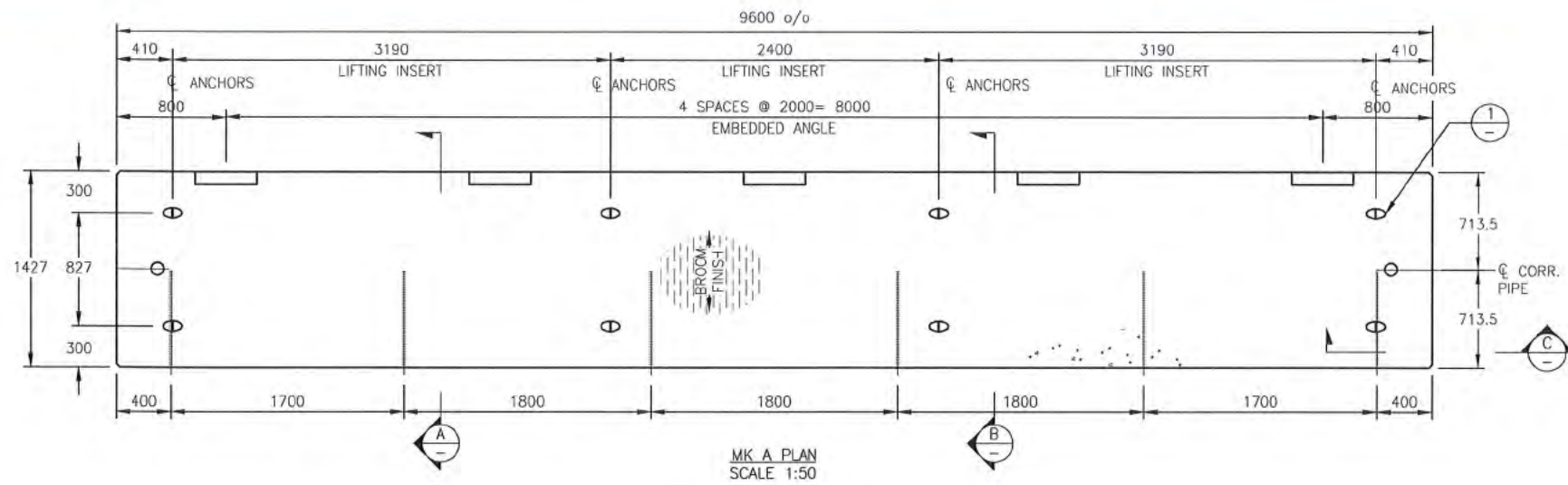
TITLE:
BRIDGE ASSEMBLY

| | | | | | |
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| PROJECT NO.: | 1601-085-00 | DRWN BY: | TJB | DATE: | 19/04/29 |
| DRAWING SIZE: | ANSI "D" | DSND BY: | RI | DATE: | 19/04/29 |
| SCALE: | AS NOTED | APPD BY: | WBM | DATE: | 19/05/06 |
| DWG. NO.: | 1601-085-00-02 | REV: | | | |

| REV | YY/MM/DD | DESCRIPTION | DR | APP |
|-----|----------|-------------------------|-----|-----|
| 2 | 19/05/06 | ISSUED FOR CONSTRUCTION | TJB | WBM |
| 1 | 19/05/02 | ISSUED FOR CONSTRUCTION | TJB | WBM |
| 0 | 19/04/30 | ISSUED FOR REVIEW | TJB | WBM |

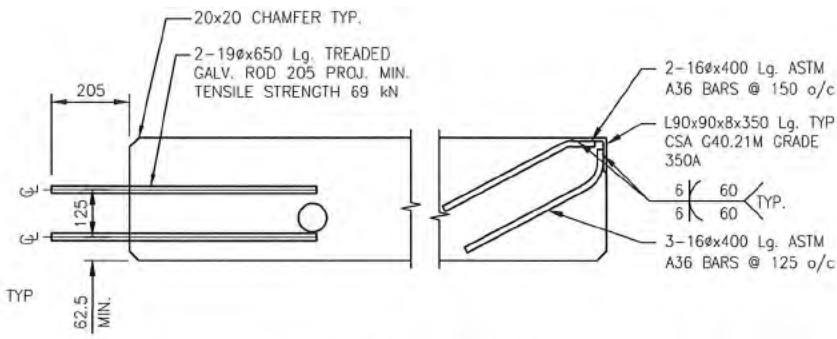


NOTE:
1. ESTIMATED MASS = 10,895Kg.



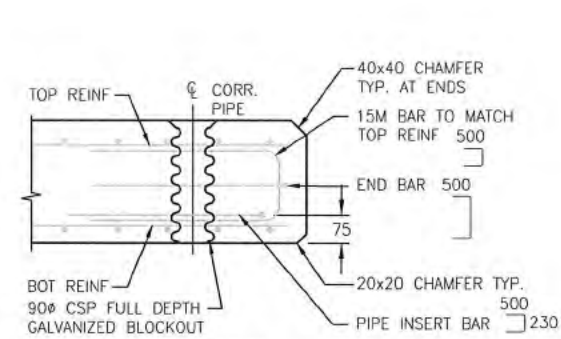
SEE ELEVATION FOR TIE SPACING

SECTION A SCALE 1:20

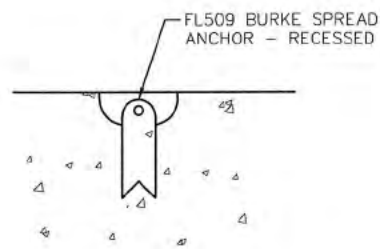


NOTE REBAR NOT SHOWN FOR CLARITY
POST SUPPORT ANCHOR CL 625 EMBEDDED ANGLE

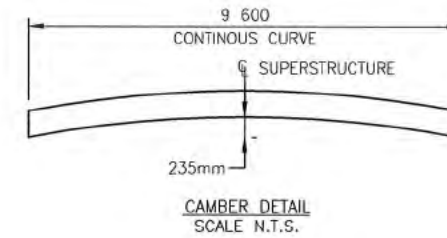
SECTION B SCALE 1:20



SECTION C SCALE 1:20



DETAIL 1 SCALE 1:20

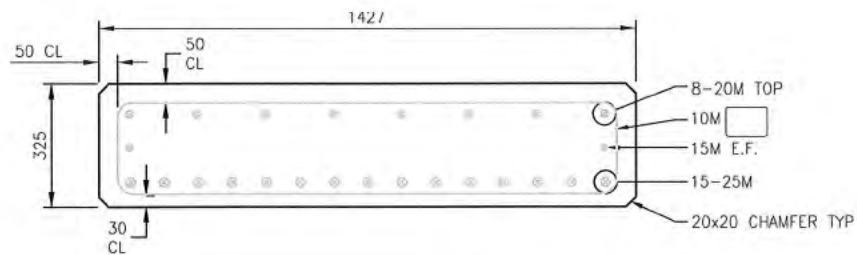
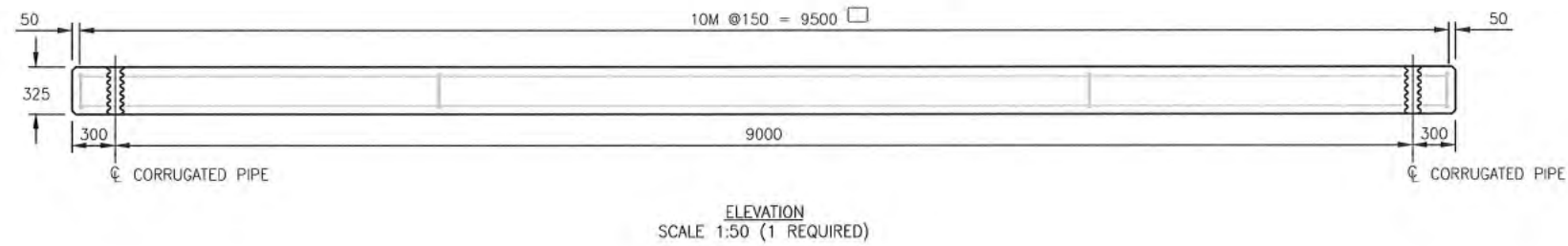
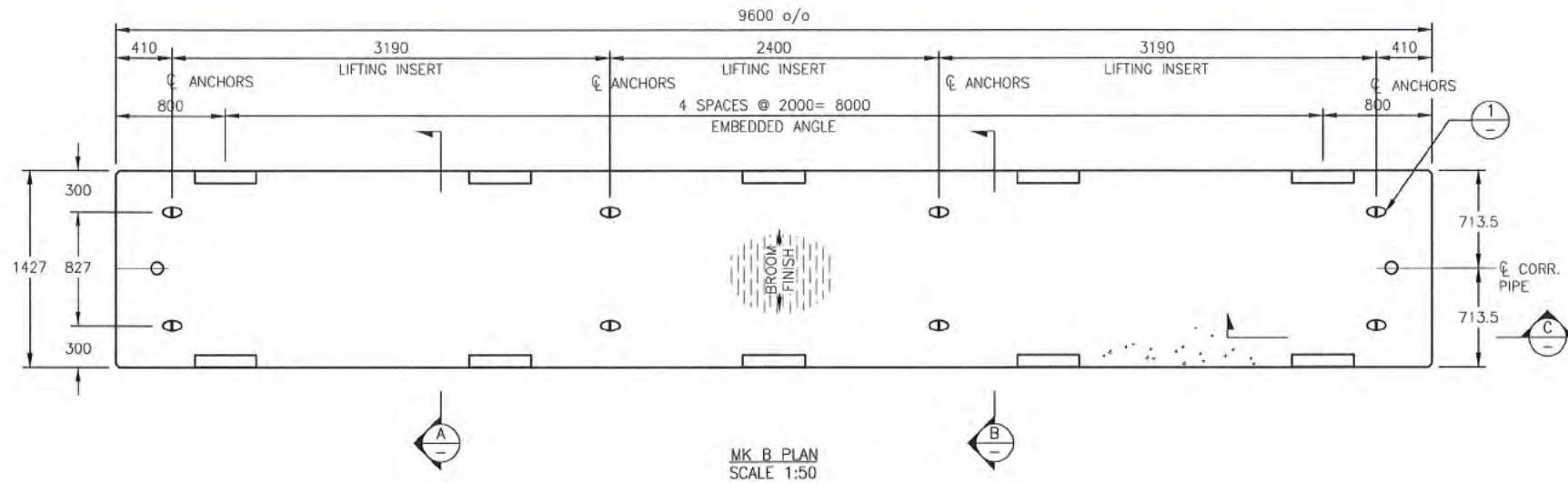


PROJECT: [REDACTED]
4.30m wide x 9.60m Lg. - CL 625
CONCRETE SLAB BRIDGE
TITLE: PRECAST CONCRETE SLAB
EXTERIOR 9.6m CL 625
MK-A

| | | | | | | | |
|-----|----------|-------------------------|-----|-----|--------------------------|--------------|----------------|
| 2 | 19/05/06 | ISSUED FOR CONSTRUCTION | TJB | WBM | PROJECT NO.: 1601-085-00 | DRWN BY: TJB | DATE: 19/04/29 |
| 1 | 19/05/02 | ISSUED FOR CONSTRUCTION | TJB | WBM | DRAWING SIZE: ANSI "B" | DSND BY: RI | DATE: 19/04/29 |
| 0 | 19/04/30 | ISSUED FOR REVIEW | TJB | WBM | SCALE: AS NOTED | APPD BY: WBM | DATE: 19/04/29 |
| REV | YY/MM/DD | DESCRIPTION | DR | APP | DWG. NO.: 1601-085-00-03 | REV: | 2 |

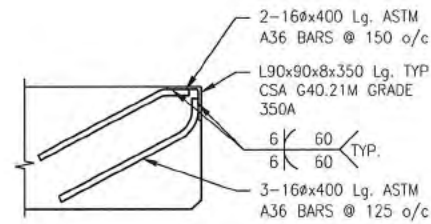


NOTE:
1. ESTIMATED MASS = 10,895Kg.



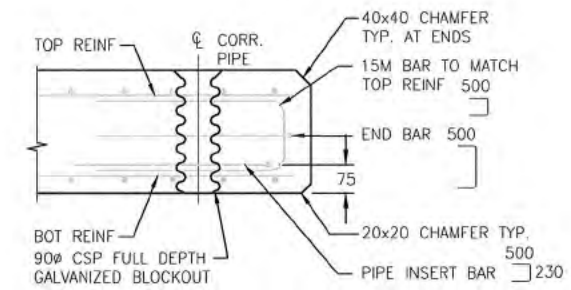
SEE ELEVATION FOR TIE SPACING

SECTION A SCALE 1:20

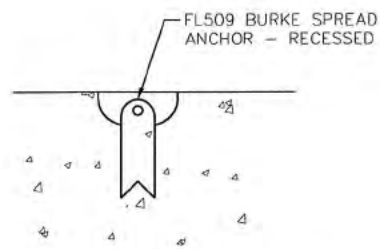


CL 625 EMBEDDED ANGLE

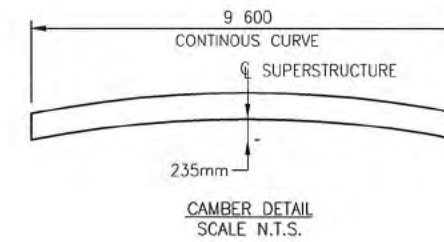
SECTION B SCALE 1:20



SECTION C SCALE 1:20



DETAIL 1 - LIFTING INSERT SCALE 1:20

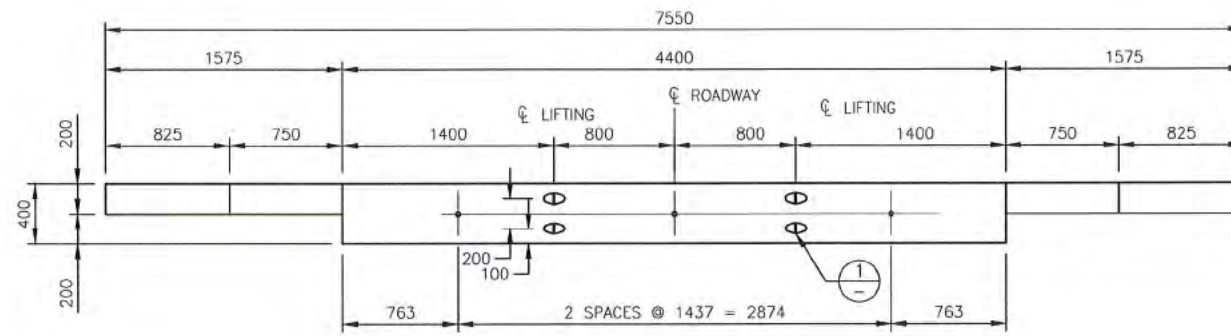


PROJECT:
4.30m wide x 9.60m Lg. - CL 625
CONCRETE SLAB BRIDGE

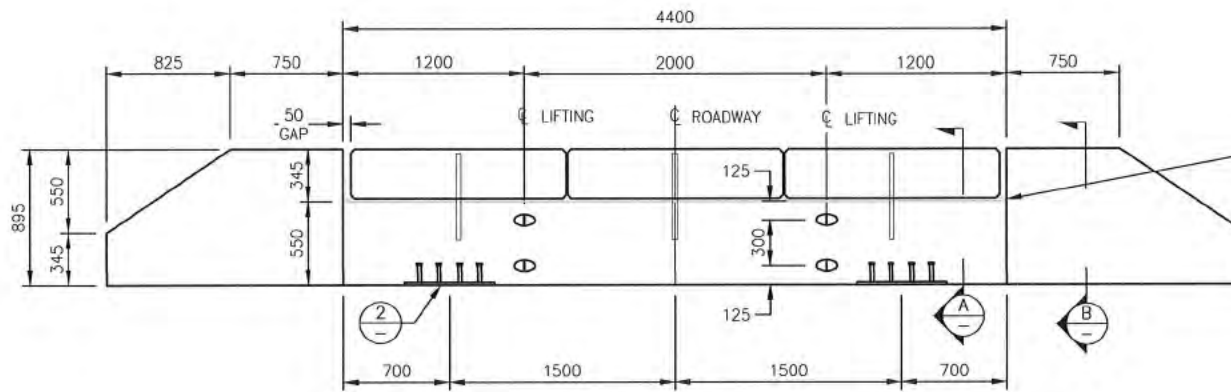
TITLE:
PRECAST CONCRETE SLAB
INTERIOR 9.6m CL 625
MK-B

| | | | | | |
|---------------|----------------|----------|-----|-------|----------|
| PROJECT NO.: | 1601-085-00 | DRWN BY: | TJB | DATE: | 19/04/29 |
| DRAWING SIZE: | ANSI "B" | DSND BY: | RI | DATE: | 19/04/29 |
| SCALE: | AS NOTED | APPD BY: | WBM | DATE: | 19/05/02 |
| DWG. NO.: | 1601-085-00-04 | REV: | | | |

| REV | YY/MM/DD | DESCRIPTION | DR | APP |
|-----|----------|-------------------------|-----|-----|
| 1 | 19/05/02 | ISSUED FOR CONSTRUCTION | TJB | WBM |
| 0 | 19/04/30 | ISSUED FOR REVIEW | TJB | WBM |



BALLAST WALL PLAN
SCALE 1:50



BALLAST WALL ELEVATION
SCALE 1:50 (2 REQUIRED)

DUROMETER 50 BEARING
PAD 20x150x4400 Lg. c/w
50Ø HOLES TO MATCH DOWEL
LOC'S. SECURE TO CAP WITH
RUBBER CEMENT, OR PLACE
ON GROUT BED

NOTE:

1. ESTIMATED MASS = 3527Kg.



PROJECT:
4.30m wide x 9.60m Lg. - CL 625
CONCRETE SLAB BRIDGE

TITLE:
PRECAST CONCRETE
CAP AND BALLAST WALL
895 DEEP

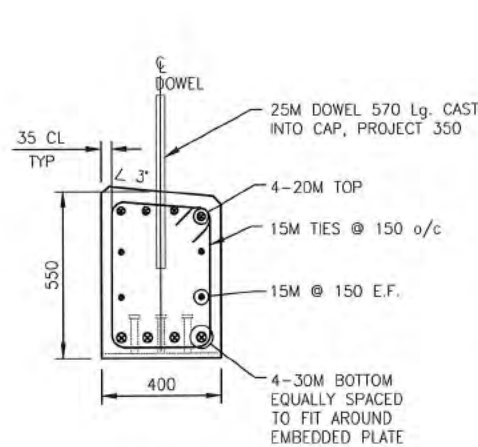
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DRAWING SIZE: ANSI "B" DESIGNED BY: RI DATE: 19/04/29

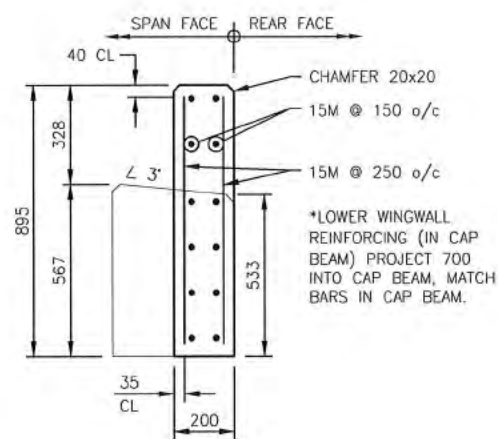
SCALE: AS NOTED APPROVED BY: WBM DATE: 19/05/02

DWG. NO.: 1601-085-00-05 REV: 1

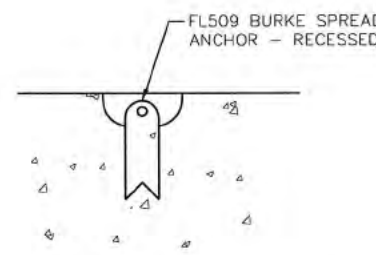
REV: 1601-085-00-05 1



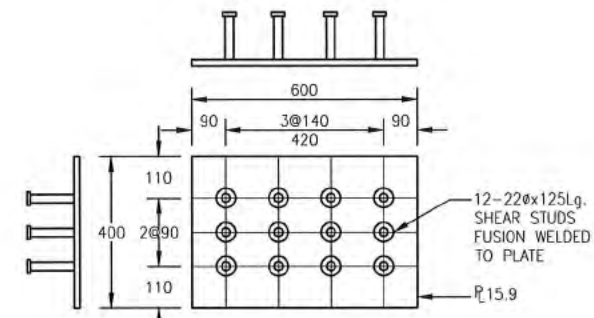
SECTION A
SCALE 1:25



SECTION B
SCALE 1:25



DETAIL 1 - LIFTING INSERT
SCALE 1:20



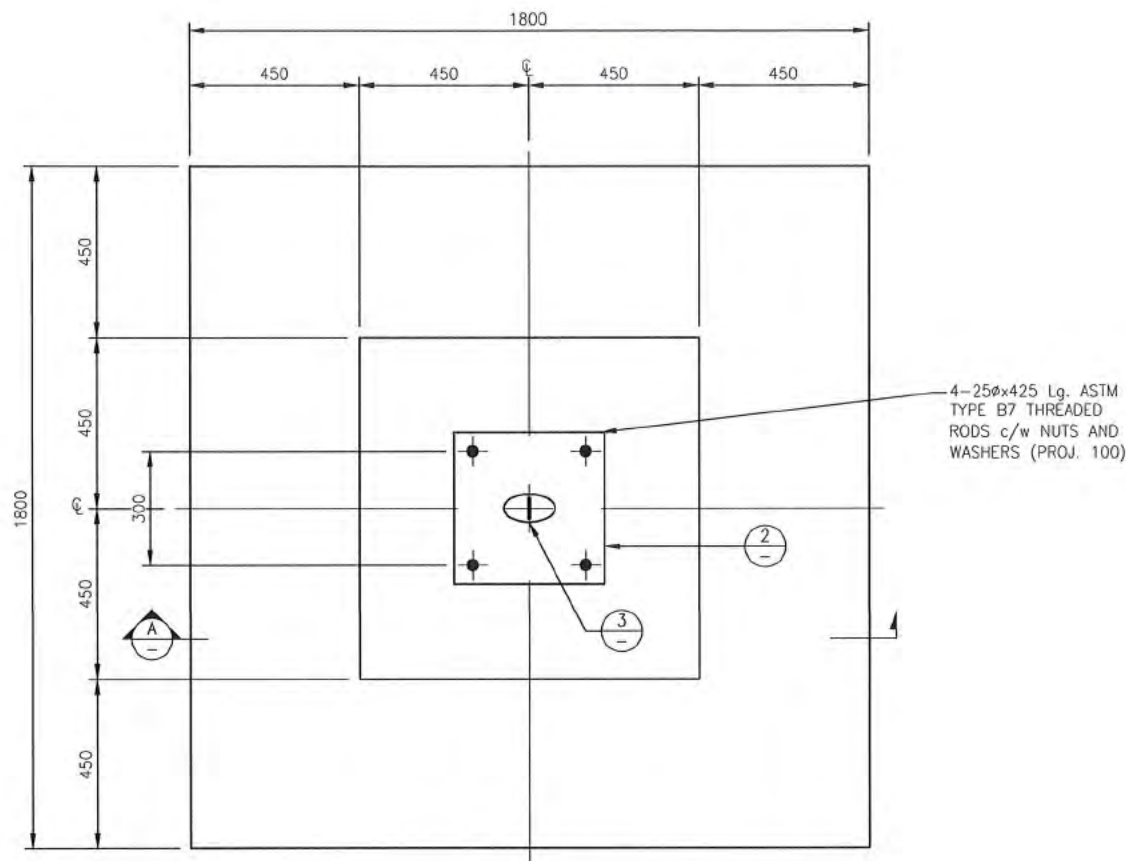
DETAIL 2
SCALE 1:20

| REV | YY/MM/DD | DESCRIPTION | DR | APP |
|-----|----------|-------------------------|-----|-----|
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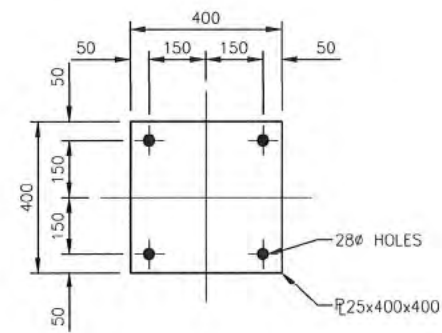


NOTE:

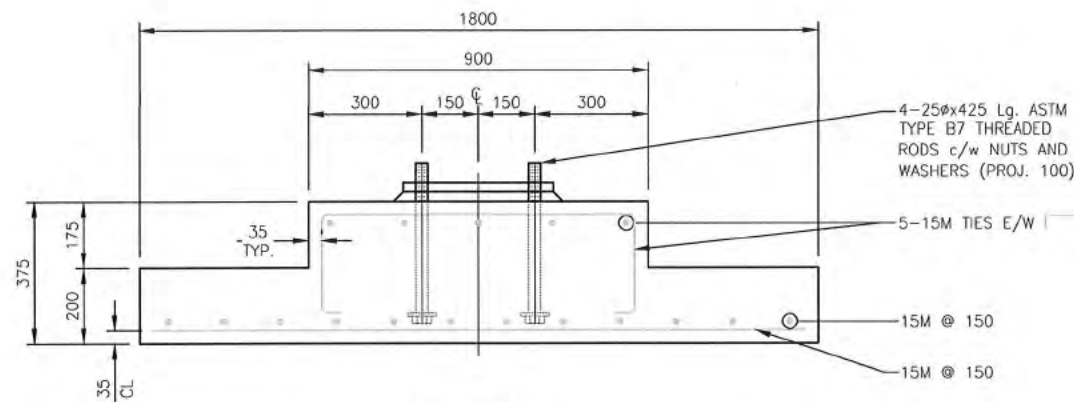
1. ESTIMATED MASS = 1960Kg.



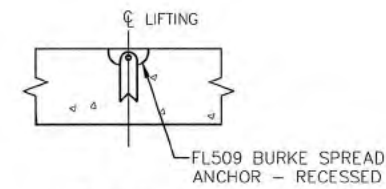
S1 FOOTING PLAN
SCALE 1:20 (4 REQUIRED)



2 DETAIL - BASE PLATE
SCALE 1:20



A SECTION
SCALE 1:20



3 DETAIL
SCALE 1:20



PROJECT:
4.30m wide x 9.60m Lg. - CL 625
CONCRETE SLAB BRIDGE

TITLE:
PRECAST CONCRETE
S1 FOOTING
1800x1800

PROJECT NO.: 1601-085-00 DRWN BY: TJB DATE: 19/04/29
DRAWING SIZE: ANSI "B" DSND BY: RI DATE: 19/04/29

SCALE: AS NOTED APPD BY: WBM DATE: 19/05/02

| REV | YY/MM/DC | DESCRIPTION | DR | APP | TJB | WBM | DR | APP | DWG. NO.: | REV: |
|-----|----------|-------------------------|----|-----|-----|-----|----|-----|----------------|------|
| 1 | 19/05/02 | ISSUED FOR CONSTRUCTION | | | TJB | WBM | | | 1601-085-00-06 | 1 |
| 0 | 19/04/30 | ISSUED FOR REVIEW | | | TJB | WBM | | | | |