



Report to: Development Services Committee Date Report Authored: January 24, 2012

SUBJECT: Markham Centre: Additional Street Light Standard
PREPARED BY: Ronji Borooah, Town Architect

RECOMMENDATION:

- 1) That the report entitled “Markham Centre: Additional Street Light Standard” be received;
- 2) And that the Additional Street Light Standard for arterial and collector roads in Markham Centre be approved;
- 3) And that Staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

To obtain Council’s approval for the Additional Street Light Standard for Markham Centre.

BACKGROUND:

Markham Centre has an approved Street Light Standard.

The Development Services Committee of Council endorsed the current Markham Centre Street Light Standard at its meeting on 5 October, 2004. It was proposed as an enhancement of the Town standard at the time, which consisted of a “Cobra Head” light fixture or luminaire (Fig. 1A and 1B).

The approved Markham Centre Street Light Standard consists of a concrete pole manufactured by Stresscrete, and a luminaire manufactured by King Lumaires (Fig. 2A and 2B). It is currently used on several streets in Markham Centre. “Cobra Head” lights have been required at intersections in Markham Centre because the current King luminaire/Stresscrete pole does not meet intersection lighting requirements.

Proposed VIVA/York Region Light Standards

VIVA is proceeding with the EA approved reconstruction of the roads and boulevards on Highway 7 and other streets through Markham to accommodate new dedicated bus lanes, including new street lights that are an enhancement of the traditional “Cobra Head” and Markham Centre lights.

VIVA’s choice for a street light is made by Lumec/Capella. It consists of a metal pole and a light fixture (luminaire) design called “Capella” (Fig 3A and 3B). The Capella luminaire can accommodate a range of lamps, including the brighter output lamps required at intersections, thereby maintaining a consistent look of light fixtures along streets and at intersections, rather than reverting to the traditional solution of “Cobra Heads” at intersections. This is one of the reasons that influenced the VIVA choice of illumination. Finally, the Capella luminaire accepts either HPS (High Pressure Sodium) lamps, currently in use as street lamps, or energy conserving LED lamps which are the future direction for street lights.

VIVA is proposing to install these lights along its transit route through Hwy 7, Town Centre Boulevard South, Cedarland Drive and Warden Avenue, and along its future expansion route along Kennedy Road and Hwy 7 east of Markham Centre. VIVA has chosen pedestrian scale lights along the Civic Mall from Warden Ave. to Birchmount Road but has not confirmed lighting on Enterprise. This will require further coordination with the Town and the Remington Group. It is anticipated that York Region will install these lights in the reconstruction of Hwy 7 between Town Centre Boulevard and Sciberras Road (eventually to Kennedy).

Implication of VIVA lights for Town of Markham

While the Region assumes the capital costs for street lights along VIVA routes as part of VIVA project costs, the local municipality assumes the responsibility for the operation and maintenance of these lights (except at intersections, which remain the Region's responsibility). The Town of Markham will own these lights and be responsible for their operation, maintenance and capital replacement. Staff will monitor the operational costs for these new lights and future operating budgets will be adjusted accordingly if necessary. Any differential in the replacement cost will be incorporated in the 2012 Life Cycle Reserve Study update

Lighting Requirements for Times Markham Uptown

The proposed Times Markham Uptown development in the northern part of Markham Centre, adjoining Hwy 7, is proceeding to construction for its first phase on either side of Birchmount Road between Hwy 7 and the Rouge Valley. This development will include the construction of two major collector roads: Birchmount Road from Hwy 7 via a bridge to the south side of the Rouge Valley and a portion of Rougeside Promenade (extension of Clegg Road east of Warden Avenue) at Birchmount Road. These two important streets are expected to have street lights with pedestrian scale lights, banners, intersection lights and traffic signals where necessary. The developer assumes the capital costs for street lights within their development, with the local municipality taking over operation and maintenance following assumption.

Comparison of VIVA's Lumic/Capella and Markham Centre's Stresscrete/King Light Standards

The current Markham Centre Stresscrete/King light standard was chosen in 2004 to provide a Neo-traditional character for Markham Centre instead of the "Cobra Head" light standard. It is lower in height, has less light output, and its spacing is more frequent than the "Cobra Head" in order to create a more intimate scale. It can accommodate a street light, but not a pedestrian scale light. The existing concrete pole is not tall enough to be used at intersections, nor is it designed to accept the load of a traffic signal arm, while the current lamp cannot provide the higher wattage required for signalization intersections, and LED lamps are not currently available for existing King luminaires. Stresscrete and King have indicated that they can design and build new systems to meet these requirements.

The Lumec/Capella design can meet all the requirements identified above with its current inventory of poles, arms, luminaires and lamps. Its existing Lumec metal poles come in different heights for use along streets and at intersections; the poles can accommodate street lights, pedestrian scale lights and traffic signal arms; and the Capella luminaire can accommodate lower wattage lamps as well as higher wattage lamps for intersections. The Capella luminaire can currently accept both HPS (High Pressure Sodium) and LED lamps. In addition, the Capella system can be spaced further apart for a more efficient system on arterial and collector roads.

Street Light Selection for Times Markham Uptown

It is recommended that the Lumec/Capella light standard or an approved equivalent be authorized for use on arterial and collector roads in Markham Centre, commencing with Birchmount Road and Rouge Side Promenade in the Times Markham Uptown site. The commonality of light poles, fillings, arms, light fixtures and lamps between the street lights along Hwy 7 and the above two streets will allow for visual consistency.

Need for an Additional Street Light Standard for Markham Centre

For the reasons outlined above, it is recommended that the Lumec/Capella light or an approved equivalent be authorized as an approved street light standard for arterial and collector roads in Markham Centre. The existing King luminaires can still be used on local residential streets.

FINANCIAL CONSIDERATIONS AND TEMPLATE:

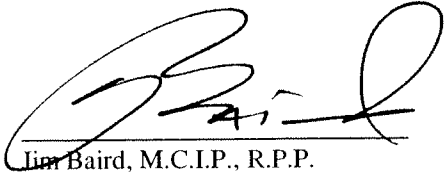
The Region and the developer are responsible for the capital cost of lighting installation. The Town ultimately assumes responsibility for operations and maintenance (except at Regional road intersections, which remain the Region's responsibility).

ALIGNMENT WITH STRATEGIC PRIORITIES:

Infrastructure and servicing

BUSINESS UNITS CONSULTED AND AFFECTED: The Asset Management, Financial Services and Engineering Departments have reviewed and commented on the report. Engineering staff are coordinating with the Times Group regarding use of the proposed new standard for Birchmount Road and Rouge Side Promenade.

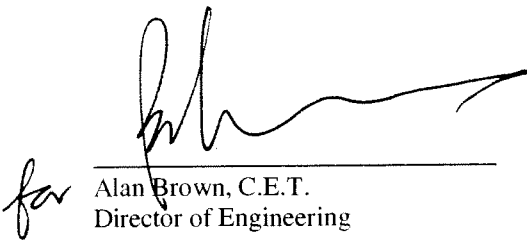
RECOMMENDED BY:



Jim Baird, M.C.I.P., R.P.P.
Commissioner of Development Services



Ronji Borooah, M.Arch, MSC(PL),
FRAIC, OAA, MCIP, RPP
Town Architect



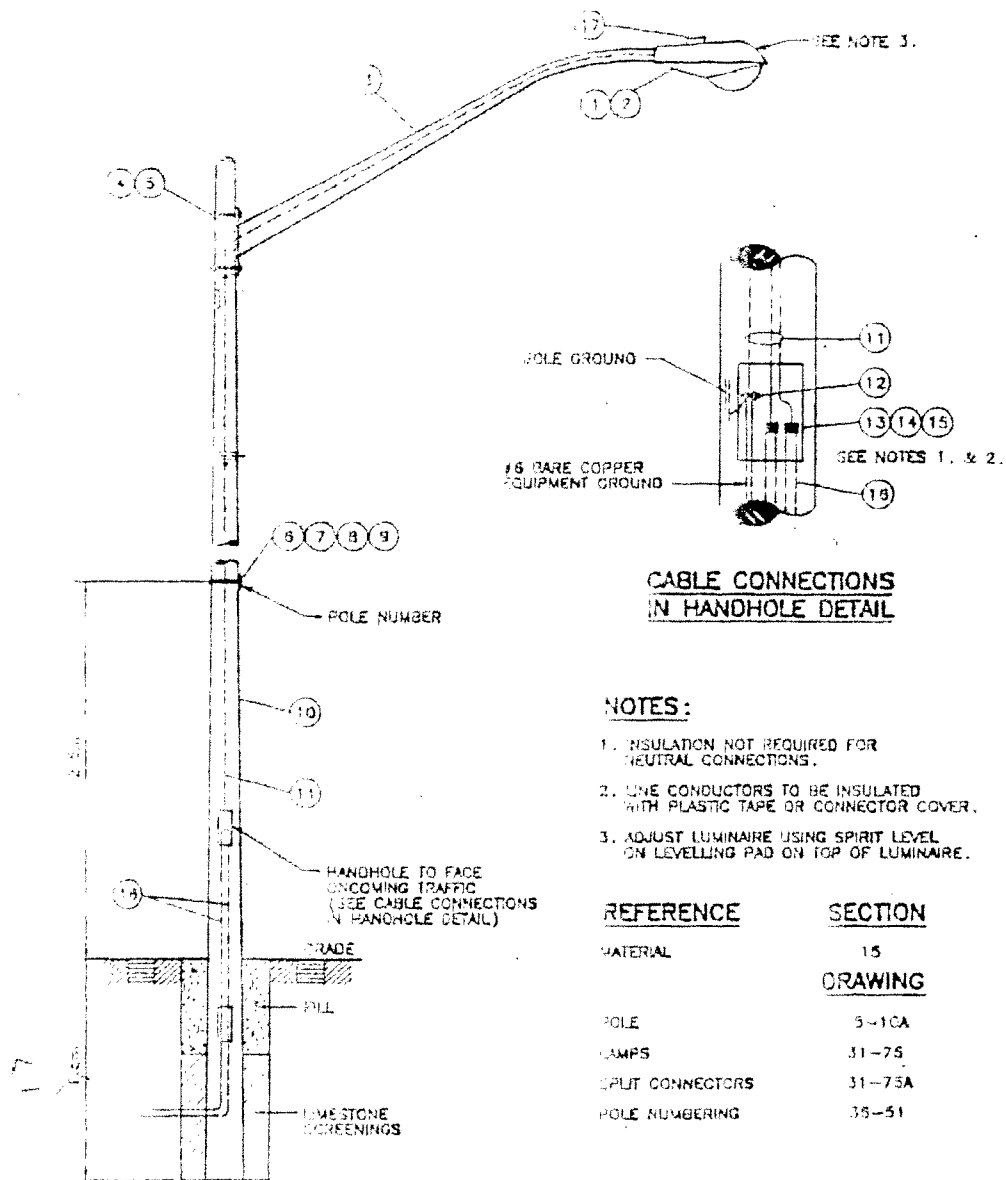
for Alan Brown, C.E.T.
Director of Engineering

ATTACHMENTS:

- Fig 1 "Cobra Head" Light Standard
- Fig 2 Current Markham Centre Street Light Standard
- Fig 3 Markham Centre Additional Light Standard

MARKHAM HYDRO

31-10A



CHECKED: *[Signature]*
 APPROVED: *[Signature]*
 ORIGINAL ISSUE: 1398-05-C6

INSTALLATION OF 10.67m (35')
 CSA CLASS A
 ROUND CONCRETE
 STREET LIGHT POLE

Fig 1A: Town Standard "Cobra Head" Design

Fig 1B: "Cobra Head" Street Light



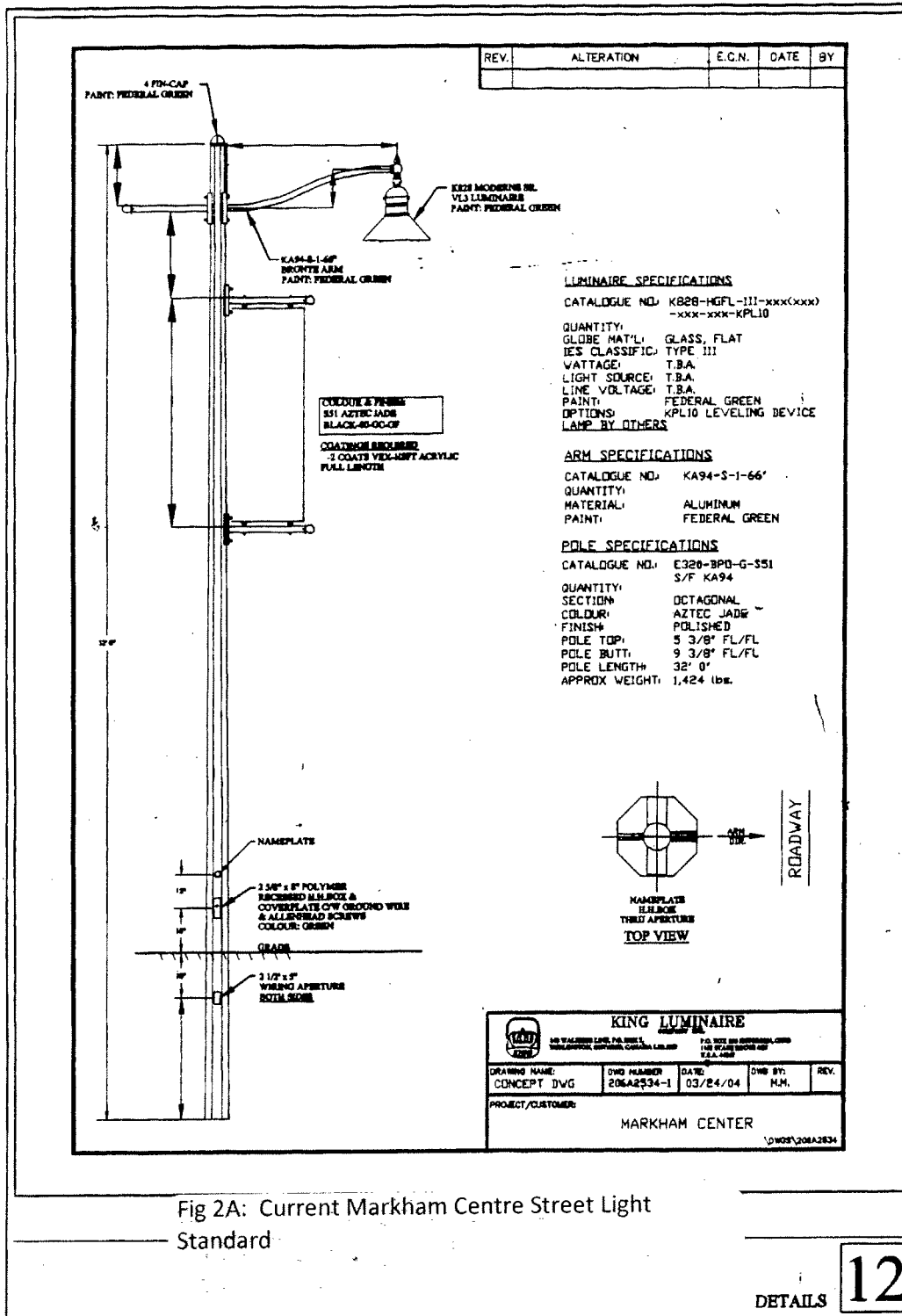


Fig 2A: Current Markham Centre Street Light
Standard

DETAILS

Fig 2B: Stresscrete/King Street Light

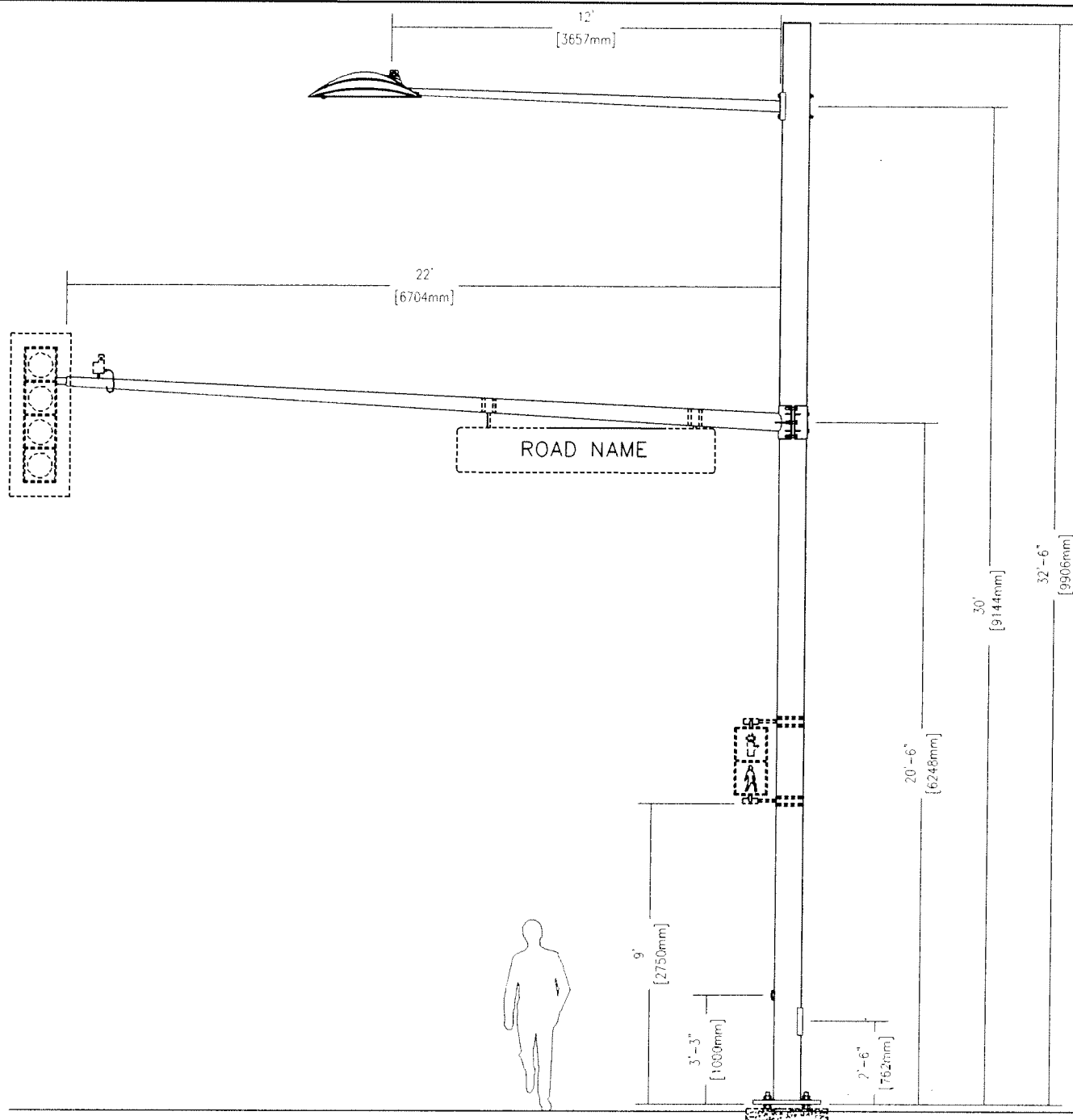


PHILIPS

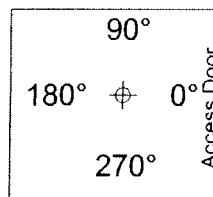
LUMEC

640, Curé-Boivin
Boisbriand (Québec)
Canada, J7G 2A7

Presentation



ALL TRAFFIC,
PEDESTRIAN AND
SURVEILLANCE
EQUIPEMENT BY OTHER



Markham vivaNext - H3 Project Mock-up parts, 10"Ø poles Rev. (57218)

Type: Street Light Traffic Signal Pole CPLM-400HPS-TH3F-120-PH8-[PC8-003]-1A-180deg-WDE-[B-LCP-064]-F-180deg-[VSPS-012]-32.5-CAP1-MPL-20.5-[SC-002]

Order N° 121992

55023-57218-314-JC 20120201_132126.DOCX

CPLM-TA-

Fig 3A1: Lumec/Capella street light

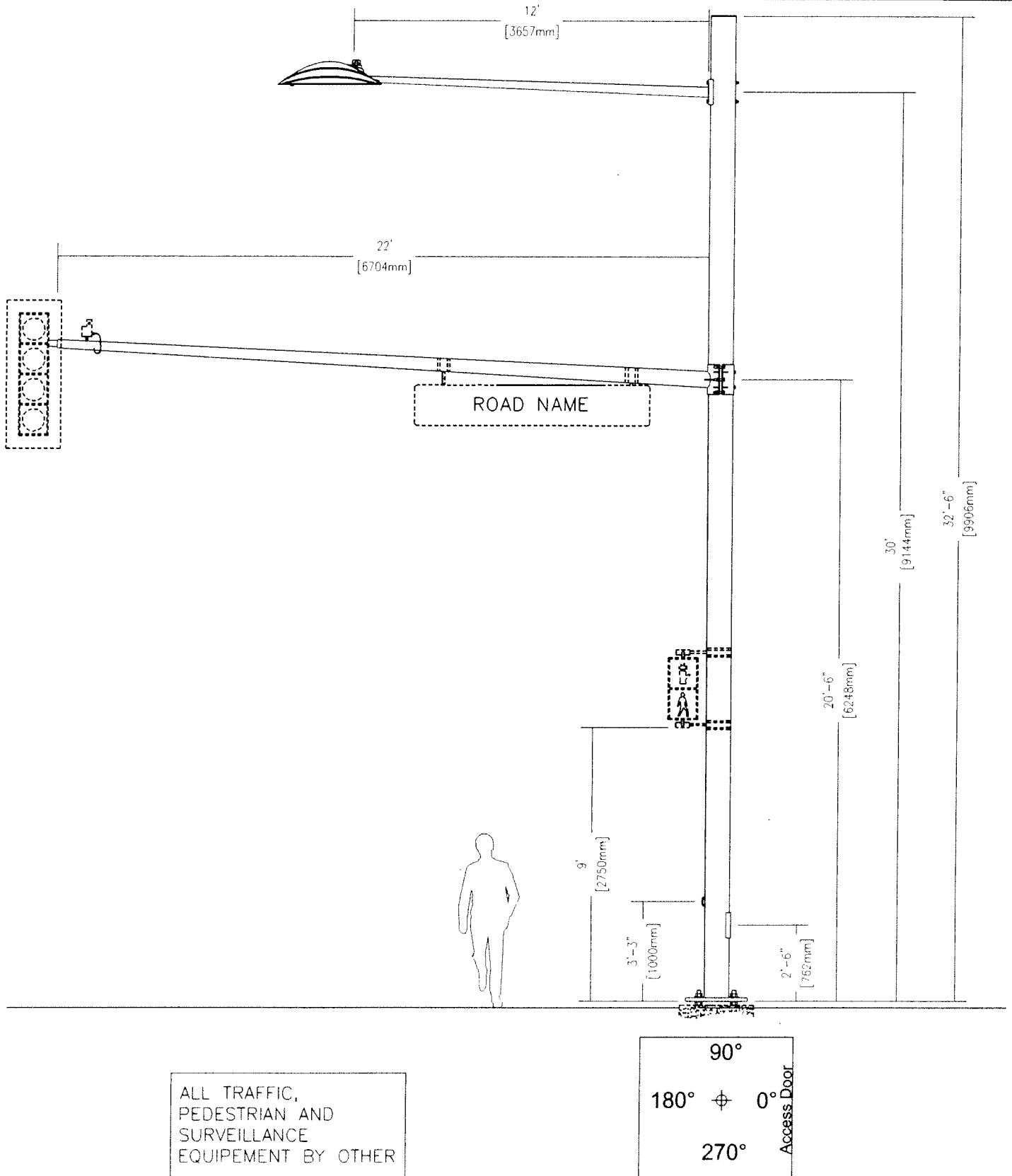




Fig 3B: Lumec/Capella Street Light