

CITY OF ELGIN STREET LIGHT STANDARDS

Street light poles and fixtures (luminaires) shall be City Of Elgin standard, unless approved in writing by the Electrical Division of Public Works Department.

The street lighting circuit shall have a disconnect prior to the connection from the ComEd power source as specified by Public Works. The disconnect shall be as close to the power source as practical. This disconnect is required for single street light photocell controlled circuits as well as multiple lights with individual photocells. Lighting systems operated by a central lighting controller shall provide a disconnect means appropriately sized to the needs of the system.

Street light poles shall be numbered per Electrical Division direction prior to acceptance by the City for maintenance.

ACCESS

All electrical cable and concrete foundations must be installed in publicly accessible areas. This means that all areas occupied by any part of the street light installation or construction activities must be on public property or will have an easement for use and access. Construction easements may be required during the actual installation. Any required easements will have been acquired by the City of Elgin prior to the start of construction.

EXISTING UTILITIES

The contractor shall be responsible for locating all utilities that might be located within the project area. This includes contacting J.U.L.I.E., the City of Elgin, and any other utilities that might be installed in the area. City of Elgin locates for water, sewer and electrical features may be arranged for by contacting the City of Elgin, Department of Public Works at (847) 697-3160. The contractor shall coordinate the location of utilities for both horizontal and vertical location of any buried utility. All utilities that will be crossed by the proposed street light circuit shall be exposed and crossing observed. In the event that directional boring is used then crossed utility shall be hand dug and exposed. If the utility to be crossed is located in a driveway or roadway then the smallest practical "window" opening shall be made in the driveway or roadway and the utility shall be exposed. After the new electrical circuit has been run past the exposed utility the window shall be repaired as soon as possible. The repair shall return the driveway or roadway to at least the same condition as previously existed. Roadway repairs shall be approved by the City of Elgin.

Each observation "window" shall be properly repaired within 10 days of its opening regardless of the number of windows in the project, the size of the project, or the state of progress of the project. The intent of this paragraph is to insure that no observation "window" is present in any roadway or driveway to present a hazard to vehicular traffic. No observation window shall be left open overnight for any reason. If access to a window is required on another day then the window shall be filled with gravel overnight or a steel plate of sufficient size shall be placed over the window to allow vehicular traffic to travel over the window without any danger of damage to the vehicle or the utility exposed in the window. The contractor shall be responsible to maintain any gravel filled observation window on this project. No observation window shall be allowed to fall more than three inches below the roadway surface during times that traffic is allowed to travel over the window.

ELECTRICAL INSTALLATION

Existing street light electrical circuit: If there is an existing street light circuit passing the site along the right of way then the existing street light circuit shall be considered as the power source for the new light. Proper consideration must be given to the capacity of the existing street light circuit to supply the energy requirements of the proposed light.

No existing street light electrical circuit: If no existing street light circuit exists within the right of way then the closest available source of 240 volt power shall be identified and a path between that source and the proposed location of the new street light shall be proposed. If the proposed path includes any driveways or street crossings then the electrical circuit shall be installed in galvanized electrical conduit or schedule 40 PVC conduit as it passes under the driveway or under the roadway. The conduit shall extend 2 feet past the limits of any driveway or back of curb on each side of the roadway crossed. If two or more adjacent driveways must be crossed and the separation distance between any two of the driveways is 5 feet or less then the conduit shall run continuous as if the adjacent driveways were one driveway.

The electrical cable and conduit may be installed using open trench and backfill or directional boring process. If directional boring is used then the electrical cable shall be installed in a continuous PVC conduit or uniduct. The PVC conduit or uniduct shall be installed as one continuous piece between light poles or the power source and the light pole. There shall be no brake in the PVC conduit or uniduct even if it passes through a conduit which is serving as a driveway or roadway crossing. All electrical cables, conduit, and uniduct shall be installed at a minimum depth of 30 inches but not more than 36 inches from the finished grade unless otherwise approved. Any trench shall be back filled with 12 inches of sand. A 6-inch red warning tape of an approved type shall be placed above the sand and 12 inches above the electrical cable. The balance of the trench shall be filled with compacted granular backfill in paved areas or compacted earth in landscaped areas.

SITE RESTORATION

The City of Elgin municipal code, section 13.20.080 requires that site restoration must be completed within thirty days after final inspection and approval. The contractor shall restore disturbed grass areas with sod and shall provide the necessary watering to assure the survival of the sod. It is suggested that the contractor become fully familiar with the terms and conditions of this ordinance.

The contractor is reminded that any construction materials or equipment stored on a vehicular right of way shall be protected by proper traffic control barricades. Construction materials or equipment shall not be stored on roadways during overnight hours.

STREET LIGHT POLE FOUNDATION

The normal street light pole installed in the City of Elgin consists of a 24-inch diameter concrete foundation seven feet deep below grade. At least the top 18 inches of the foundation is to be formed using a round form. The form used shall result in a smooth uniform finish along at least the top 18 inches of the foundation. The top of the form shall produce a 1-inch chamfer around the top of the finished concrete. The balance of the foundation shall be poured against undisturbed earth. The concrete foundation shall include reinforcing wire as shown on an attached drawing. The anchor bolts shall be galvanized and a minimum of 1-inch diameter by 40 inches long unless otherwise specified by the street light pole manufacturer. One 5/8-inch by 10-foot copperweld ground rod shall be cast into the concrete foundation with at least 6 inches protruding above the top of surface of the concrete. The ground rod shall exit the foundation at a point 30 inches below grade and shall be in continuous contact with earth for the rest of its length. Two 2-inch PVC conduit stubs with 90 degree elbows at the bottom shall exit the foundation at 30 inches below the established or proposed grade of the surrounding area. If grade is not established then the grade shall normally be considered to be level with the top of any adjoining roadway curb. The two conduit stubs shall be located to align with the source of electrical cable. If one conduit is not used for electrical cable at this time then it shall be located parallel to the back of the adjoining roadway curb or edge of pavement. If no curb exists then the stubs shall be lined up with the proposed path of the electrical service. The anchor bolts shall be installed so that the base casting of the street light pole base is parallel to the back of the curb or edge of pavement.

STREET LIGHT POLE AND FIXTURE

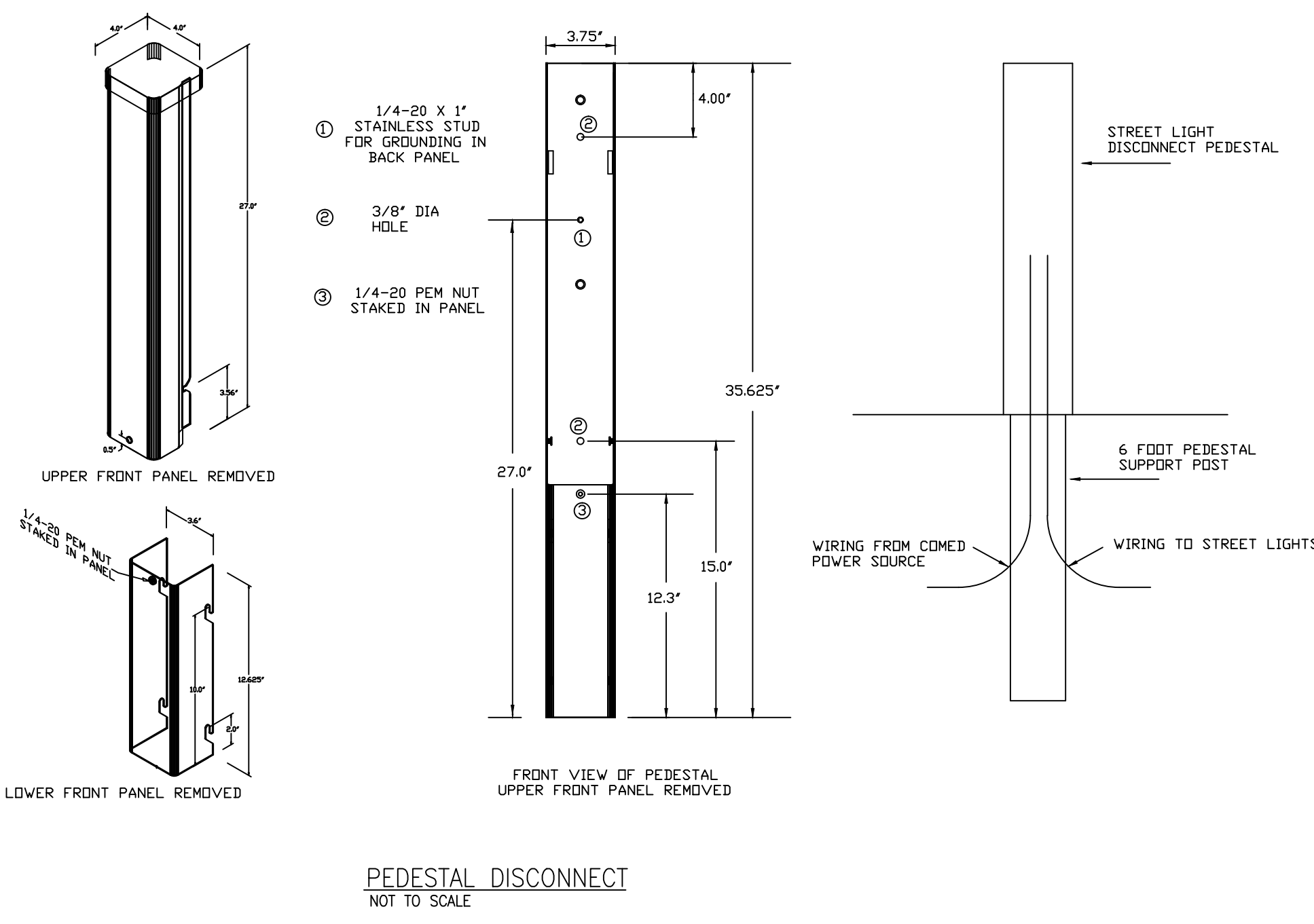
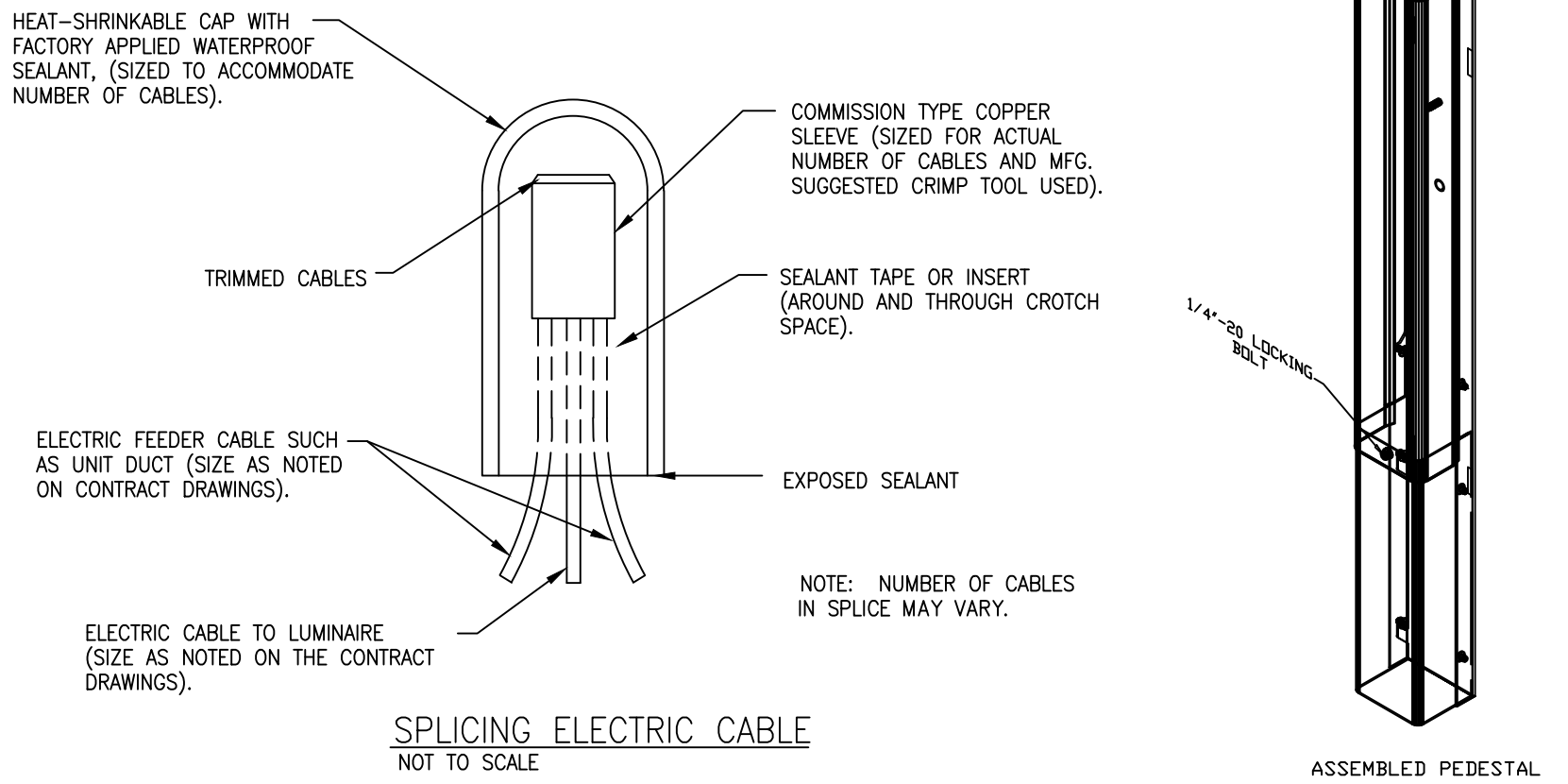
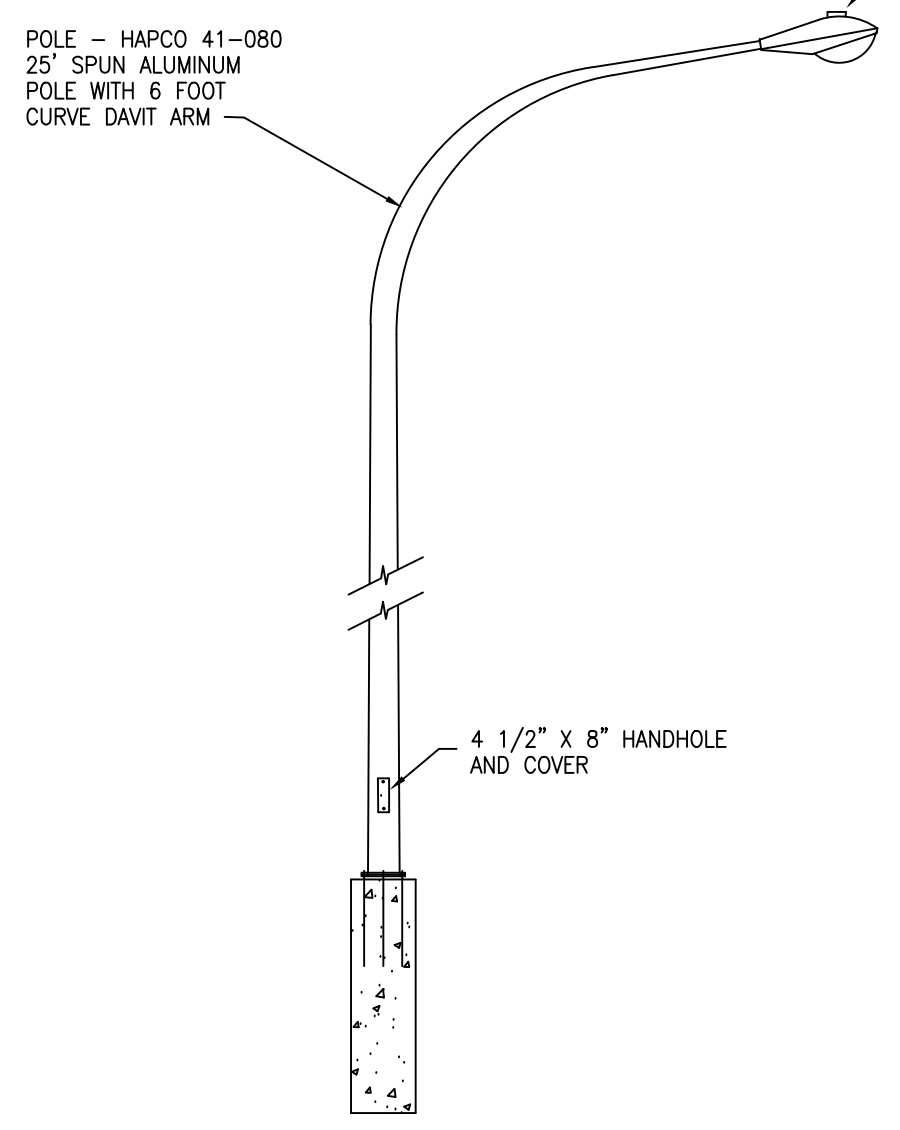
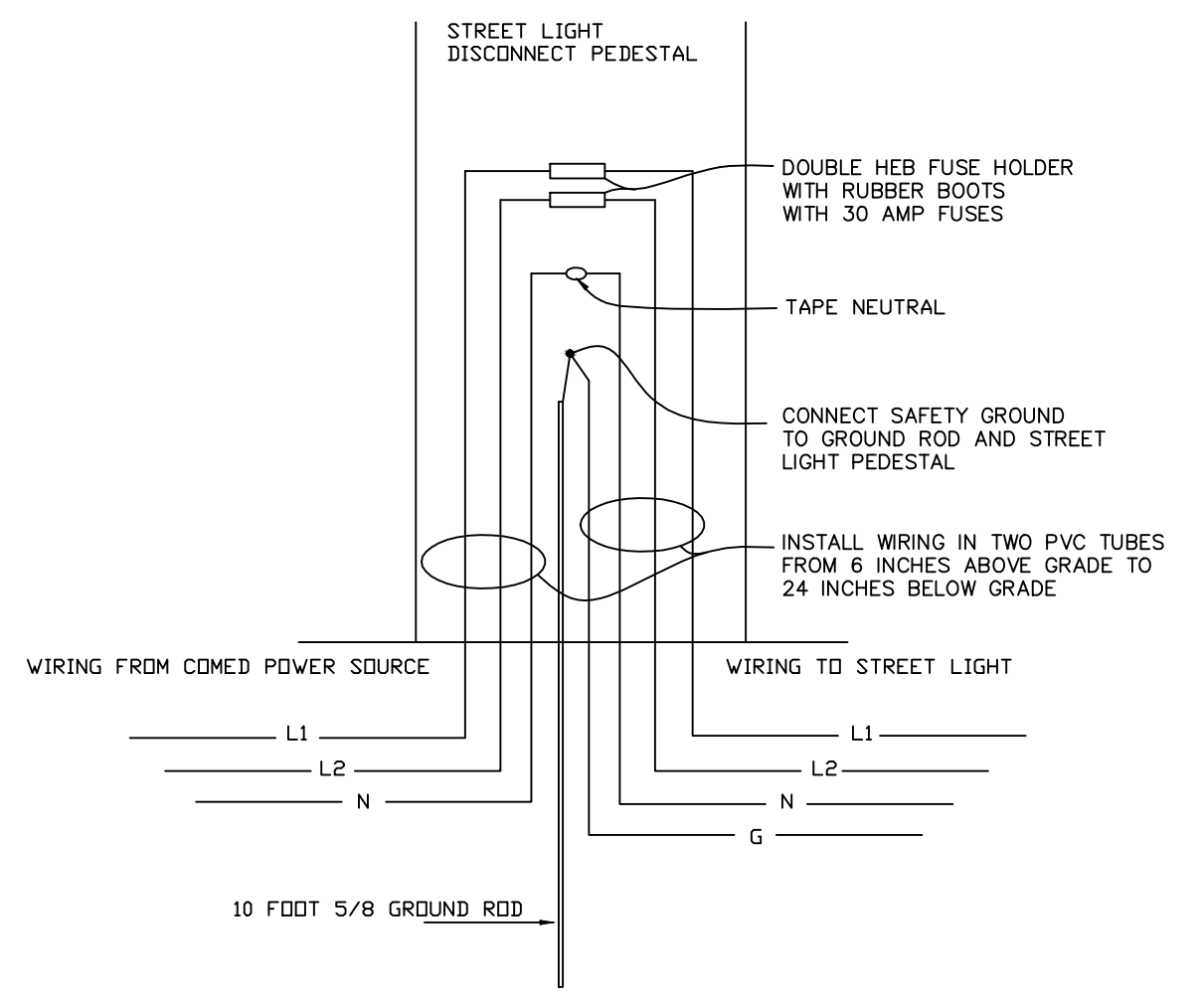
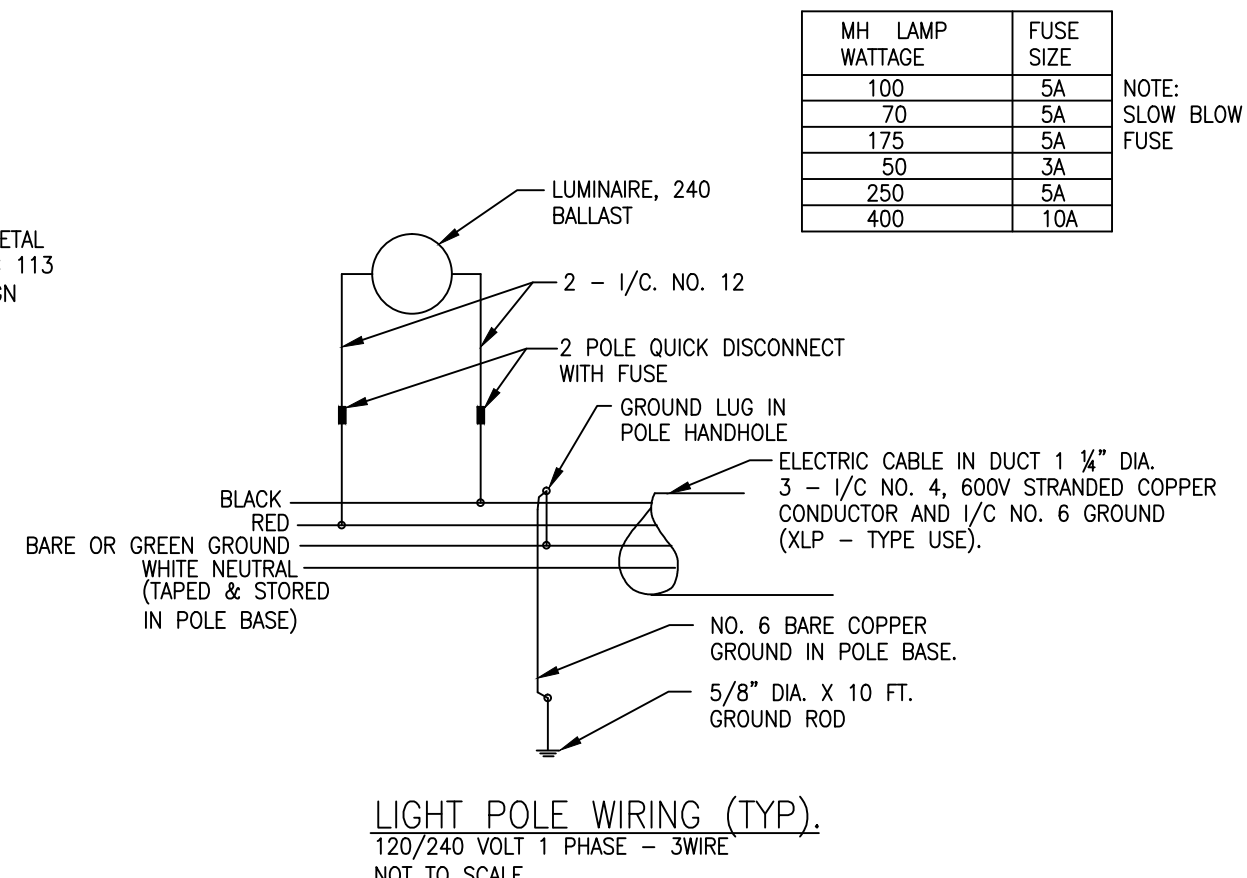
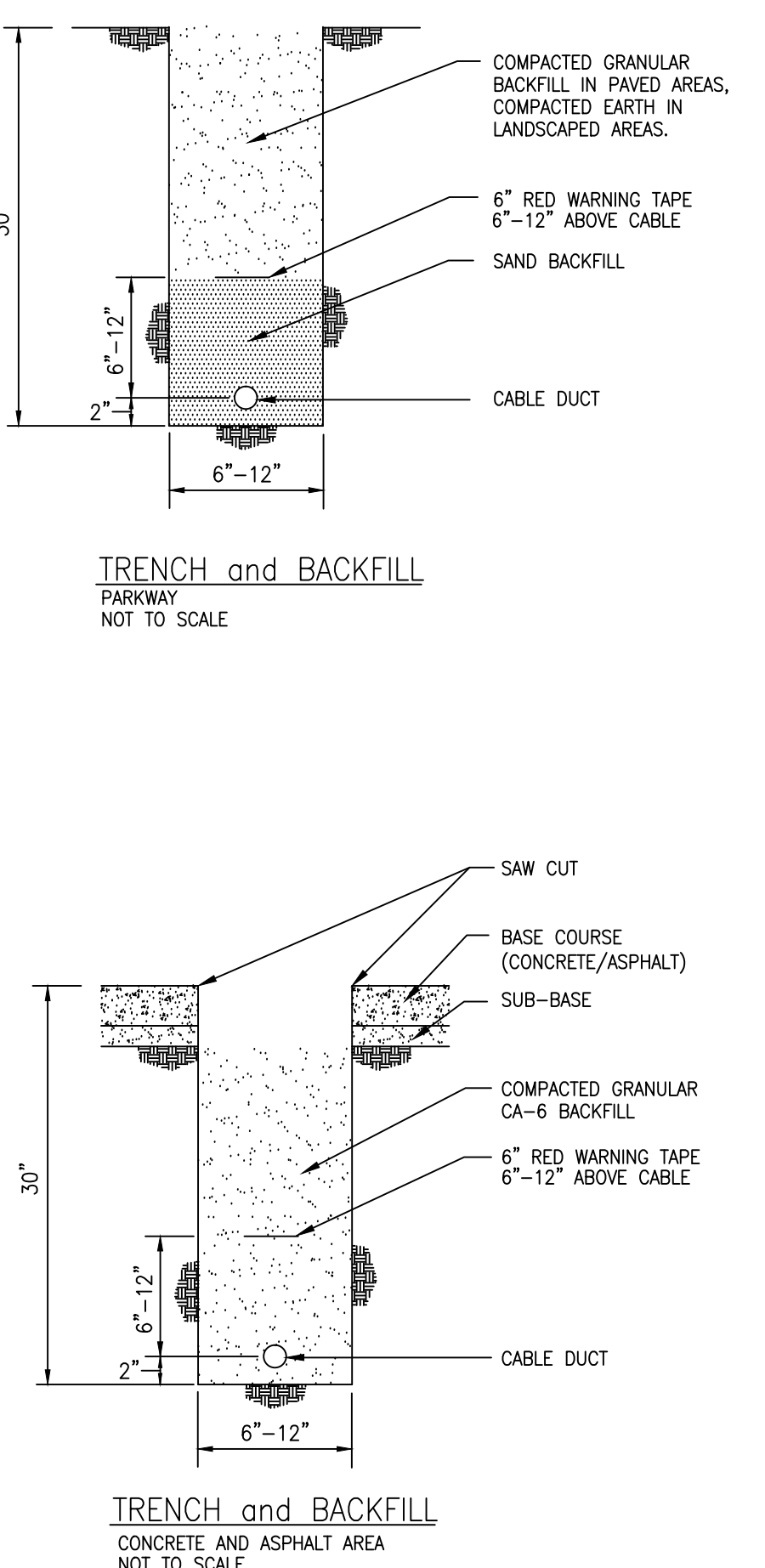
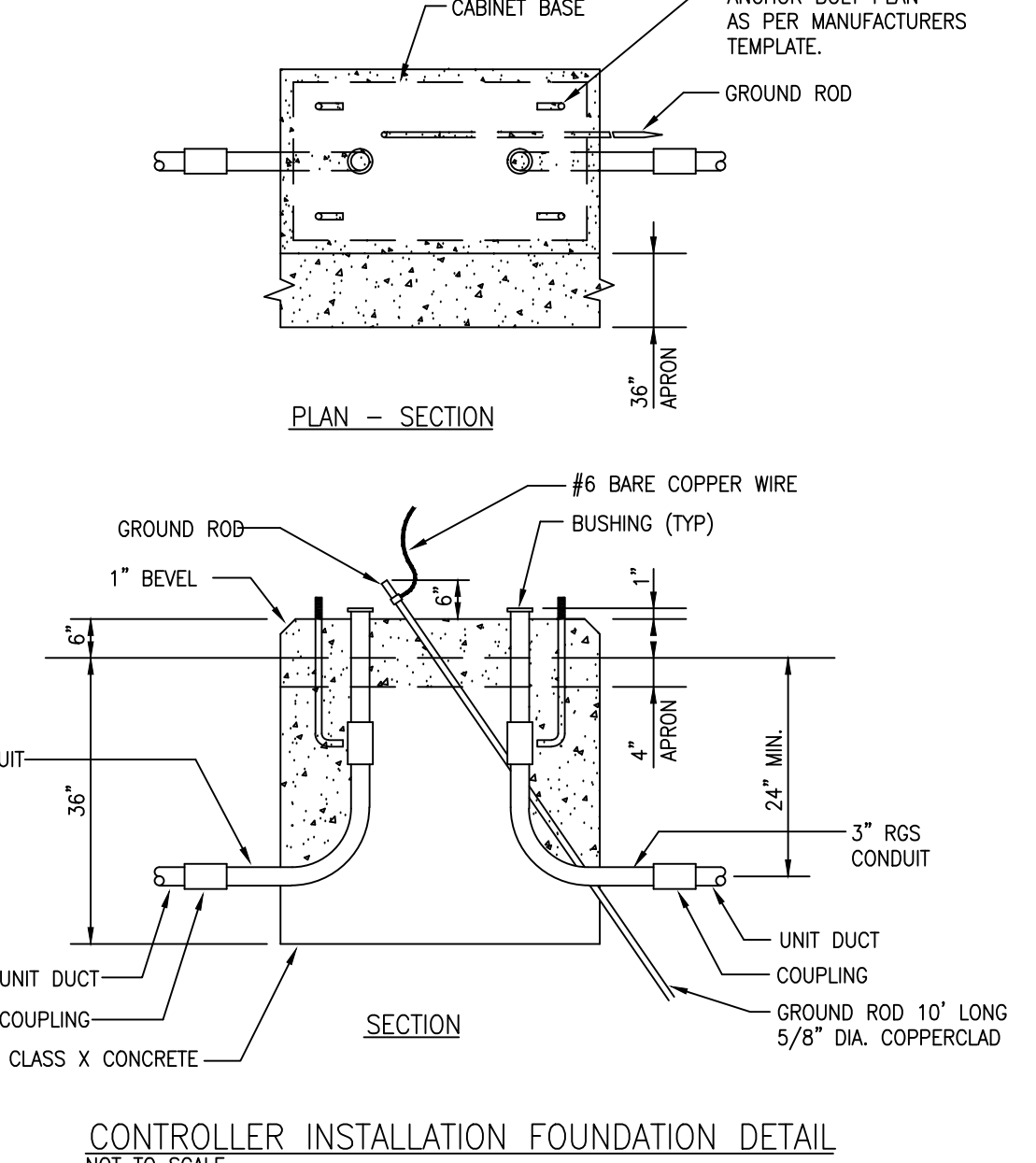
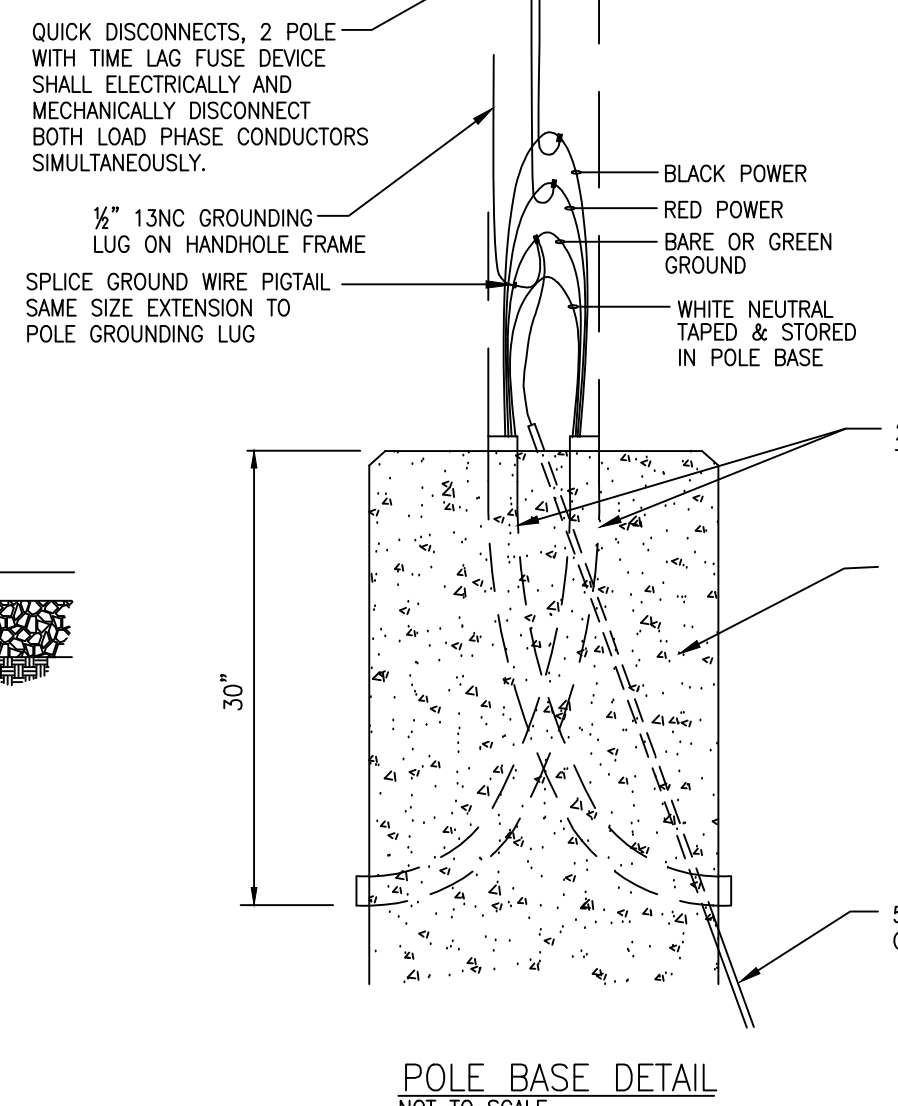
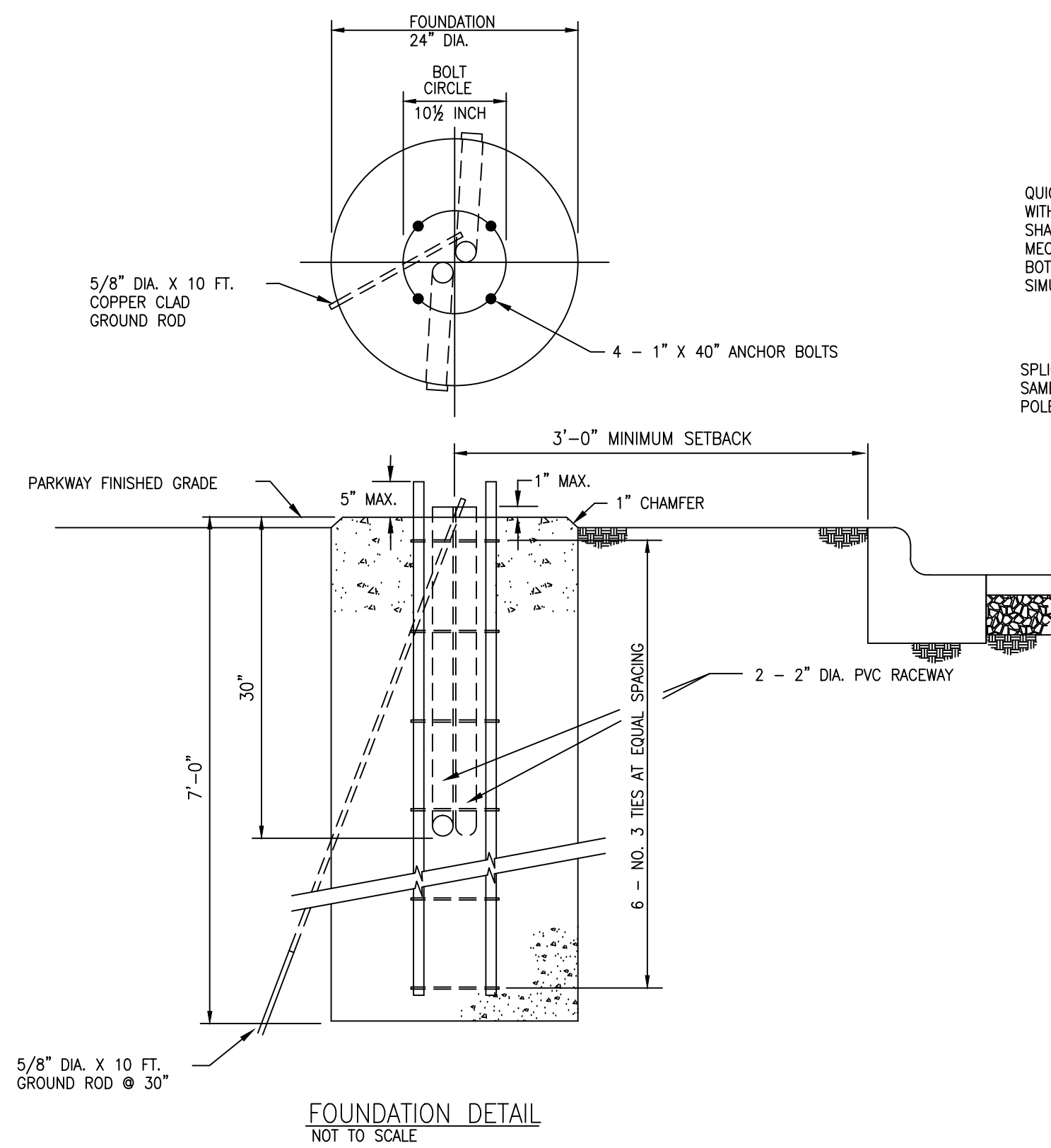
Street light pole: The street light pole shall be similar and equal to a Hapco 41-080 25-foot spun aluminum pole with a 6-foot curve davit arm. The service handhole shall be located on the side of the pole opposite from the roadway. A ground lug shall be welded to the inside of the street light pole opposite the service handhole entrance.

Street light fixture: The street light fixture shall be similar to American Electric 113 series cobra head design with a drop lens unless otherwise specified by the engineer. The lamp shall be metal halide. The wattage of the lamp shall be as appropriate for the location of the street light. In general that wattage will be 175-watt for mid-block located lights and 250-watt for intersection mounted lights. Any lights installed in commercial areas shall be 400-watt. The wattage's listed are for metal halide lamps. Any other lamp type must be approved by the engineer. The light fixture ballast shall be a high efficiency multi tap type wired for 240 volts. Power door type fixtures shall not be installed. The fixture shall be equipped with a photocell mounted on the top of the fixture. The photocell shall be of a delay type so that lightning or vehicle headlights do not cause the photocell to turn the light off. Fuses shall be installed in the pole base at the service handhole. The fuse holder shall be a two circuit design such that opening the fuse holder will disconnect both sides of the electrical circuit.

ELECTRICAL CABLE

The electric cable shall be a minimum 8awg stranded copper type rhh/rhw-use-xlp single conductor cable. A minimum of four conductors shall be pulled into the base of each pole. The neutral wire shall be taped and stored in the base of the pole. All street lights shall be initially wired for 240 volt operation.

No underground splices shall be permitted. All splices shall be made in either concrete hand holes approved by the engineer or in the service hand hole in the street light pole. All splices shall be made with split bolt or compression type copper sleeve terminals. All split bolts or compression sleeves shall be sized to match the electrical conductors being spliced. The splice shall be covered with a heat shrink cap with factory applied waterproof sealant. The splicing materials shall be specifically designed for this type of application.



MH LAMP WATTAGE	FUSE SIZE	NOTE:
100	5A	SLOW BLOW FUSE
70	5A	
175	5A	
50	3A	
250	5A	
400	10A	

DATE	
REVISIONS	
DRAWN BY	
CHECK BY	

**STREET LIGHT
DETAIL SHEET**

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**ENGINEERING
DEPARTMENT**



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SCALE: N.T.S.