

## Dome Project 2021/2022



1 - Alectra's truck.



2 - November 30th. Installation of three phase transformer by Alectra utilities for the supply of extra power to the Dome's electrical equipment.



3 - Installation of the three phase transformer and additional wiring..



4 - Demik Construction LP from Hamilton is the general contractor and they are responsible for the construction of the grade beam( foundation) , utilities and all related services required for the operation of the Dome.

The Farley Group from Guelph will deliver and install the mechanical equipment this summer and erect the winter Dome by October 1st, 2022.



5 - Burlington Fence removing the court fences.



6 - Fence removal.



7 - Almost completed except the fence posts



8 - View of the courts without fences.



9 - Removal of wooden deck to be replaced by a concrete one ( fire regulation).



10 - Orange markers indicating building envelope. Location where the Dome fabric meets the grade beam.



11 - Tarp on fencing materials.



12 - Excavation equipment.



13 - Orange markers indicating building envelope.



14 - Cutting of the asphalt.



15 - Asphalt strip to be removed for the construction of the grade beam.



16 - Asphalt strip to be removed for the construction of the grade beam.



17 - Spreading of wood chips to protect the tree roots.



18 - North access route.



19 - Compaction of access road gravel base.



20 - Removal of asphalt.



21 - Delivery of reinforcing steel.



22 - Reinforcing steel.



23 - Reinforcing steel cage for the grade beam.



24 - Reinforcing steel cage for the grade beam.



25 - Dec. 13th. Grade beam trench ready to receive concrete.



26 - A 9 cubic meter concrete delivery truck.



27 - Taking concrete test cylinders for compression tests. Air entrainment tests were carried out on the site.



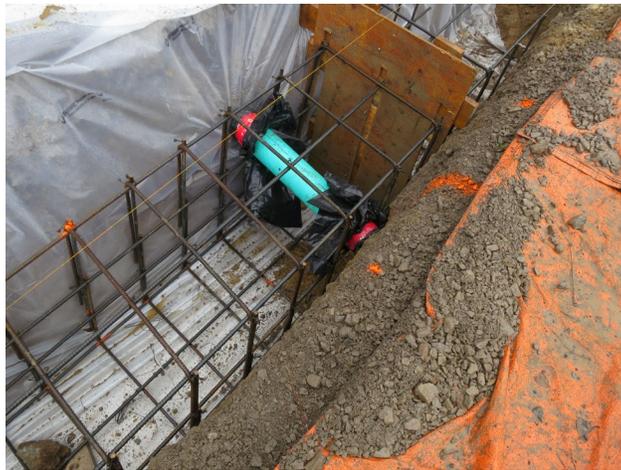
28 - Construction of the grade beam.



29 - Phase I of the grade beam completed. Phase II will be the concrete cap on top of Phase I, and this cap will house the aluminum rail holding the Dome fabric in place.



30 - Grade beam across from proposed mechanical pad. Note 6" diam. PVC pipes for electrical conduits to slip through.



31 - Close up of 6" diam. PVC pipe.



32 - December 17th. No, they are not building an "archway". The lowering of reinforcing steel into the trench and the concrete was poured this afternoon.



33 - December 20th. Construction of the grade beam at the South/East corner of the courts.



34 - December 20th. Pouring of the concrete at the South/East corner of the courts. The height of this section will gradually change from deck level to ground level.



35 - Dec. 22nd. Helical Pile installation. Helical piles are a manufactured steel foundation anchor. The purpose of a helical pile is to provide foundational support for structures. In our case, required for the construction of the concrete deck and the wood deck, immediately south of the clubhouse..



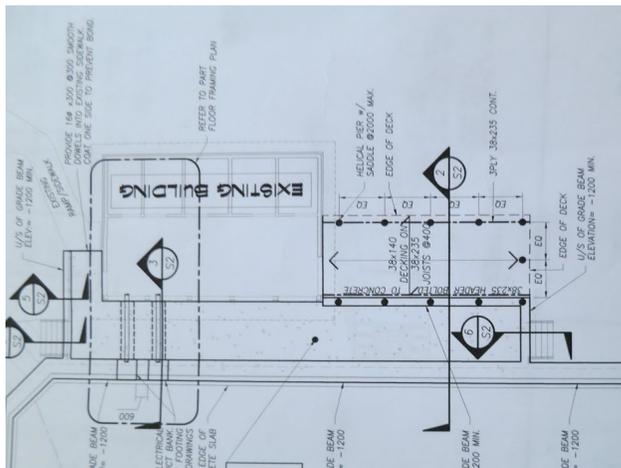
36 - Dec.22nd. A total of 11 helical piles (screw piles) were necessary on the south side of the club house. Based on the site specific ground conditions, each pile ended up approximately 21 ft. long.



37 - Dec. 23rd. This just poured concrete foundation sits on helical piles and is for the backwall of the concrete deck, adjacent to and south of the clubhouse.



38 - Dec. 23rd. The pouring of concrete for the continuation of the foundation for the deck wall. The Dome fabric will be attached to the top of the wall . The deck will be a concrete one (fire regulation).



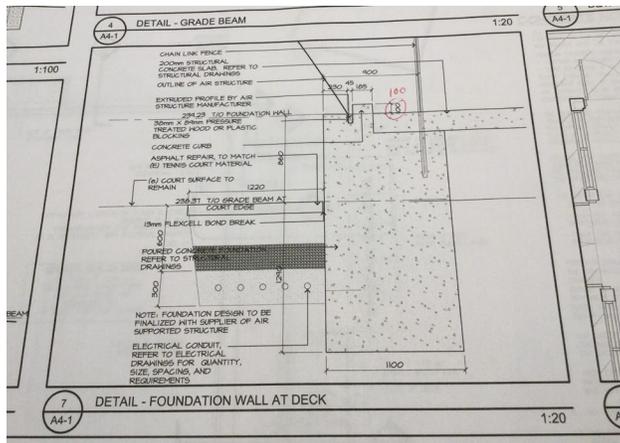
39 - This plan indicates, with black dots, the location of the eleven helical piles.



40 - Dec. 29th. Installation of the reinforcing steel for the foundation of the deck wall. Please note the polyethylene sheet. This sheet is to provide a "slip-plane" to prevent frost adhesion between the soil and the foundation wall concrete.



41 - Dec. 29th. The pouring of concrete for the foundation of the deck wall. Today, they poured 13 cubic meters of concrete.



42 - Dec. 29th. Cross section of the foundation of the deck wall. The wall is 1.1m thick or 3.6 feet. The Dome fabric will be attached to the top of this deck wall ( note on the drawing: "outline of air structure").



43 - Dec.30th. View of the construction at the North/East corner.



44 - Dec. 30th. Form work to create two slots, each 1 m wide X 0.2 m high, required to slip electrical conduits through.



45 - Dec. 30th. This picture shows the foundation for the deck wall with the location of the form work for the two slots.



46 - Jan. 5th, 2022. Pouring of concrete for the foundation of the grade beam at the main entrance to the Dome. At this location, there will be a revolving door and an entrance for wheel chairs.



47 - Jan. 5th, 2022. A picture of a revolving door and a wheel chair entrance to the right of it..



48 - Jan. 13th. One more day and the crew will be at the N/W corner of the courts and than they can tackle the remaining side, namely the west side.



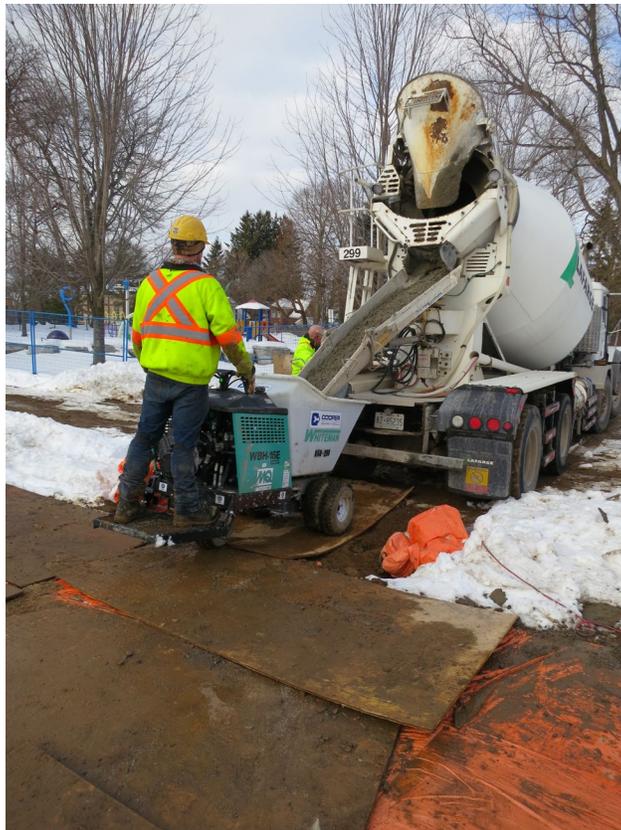
49 - Jan. 13th. Please note the steam coming off the heated concrete. In winter, most producers will try to have the concrete be between 20C - 25C when it leaves the plant.



50 - Jan. 18th. Snow clearing today before construction can continue. Three days of good "construction weather" will complete the foundation of the grade beam around the courts.



51 - Jan. 19th. N/W corner of the courts. Trench ready to receive 18 cubic meters of concrete mix.



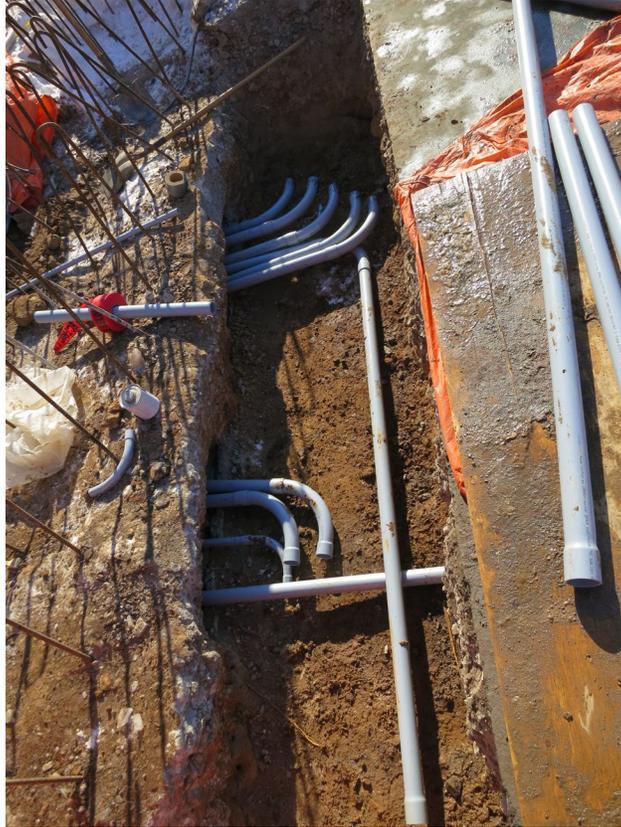
52 - Jan. 19th. Delivery of the concrete mix for the N/W corner of the courts.



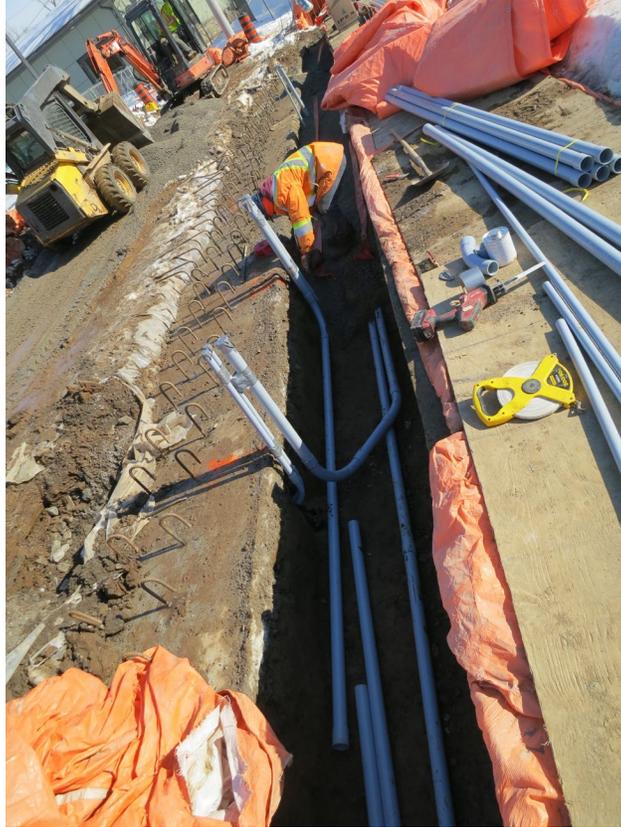
53 - Jan. 19th. All that excavated material piled up has to be removed from the site and can now be hauled away, since the test results of the soil samples determined that it is "clean soil".



54 - Ja, 27th. Ten holes drilled into the lower wall of the club house for the electrical and security PVC conduits.



55 - Jan. 31st. Installation of the electrical conduits. Club house is on the left side of the picture.



56 - Feb. 9th. Installation of electrical conduits on the north side of the courts. Risers at the "combination" entrance unit to the Dome.



57 - Feb. 9th. Compaction of the granular fill.



58 - Feb.25. It took twenty truck loads to remove the excavated soil to a construction site in the east end of the City.



59 - Feb. 23rd. Since the frost is at least 4 feet down, Demik has to use a Hydraulic Breaker/ Jackhammer to loosen the soil. The trench is for the installation of the electrical conduits to be installed on the south side of the courts.



60 - March 1st. Installing electrical conduits on the south side of the courts.



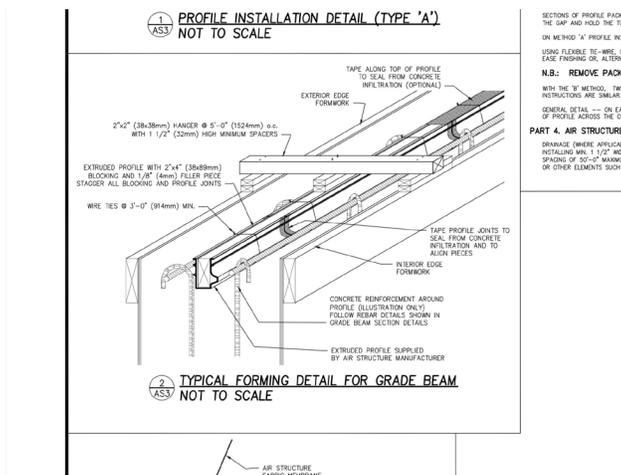
61 - March 1st. Conduit risers at the inside of the grade beam for the installation of the electrical junction boxes.

The top of these boxes will be flush with the court surface.



62 - March 7th. Demik started today forming the top piece of the grade beam. The extruded aluminum profile will sit in the middle of the top of the grade beam. See next slide for details.

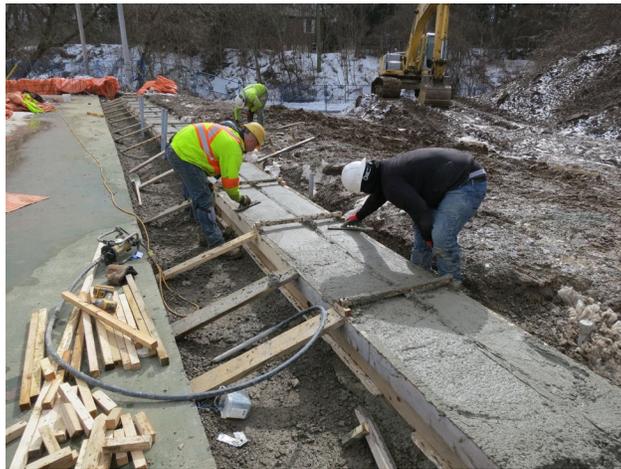
The electrical conduits were installed in front of the grade beam and the trench was backfilled with granular "A" gravel.



63 - March 7th. Detail of the forming of the top of the grade beam. Dome fabric to be inserted in the extruded aluminum channel



64 - March 8th. Twenty two meters of formwork for the top section of the grade beam ready for the concrete. The concrete will be poured on March 9th. Please note the aluminum channel in the middle of the form work. The bottom of the Dome fabric will be inserted in this channel.



65 - March 9th. Seven cubic meters ( $m^3$ ) of concrete was used to fill the 22 m of form work.



66 - March 9th. Clear view of the aluminum channel. The top of the channel is covered with tape to prevent concrete accumulating in the channel.



67 - March 14th. A great view of part of the grade beam on the south side.



68 - March 18th. S/W corner of court. Top section of grade beam was poured in this area on March 17th and the forms were removed on March 18th.



69 - March 18th. Need and clean construction of one of the 45 degree corners.



70 - March 25, Top of the grade beam approaching the deck wall on the north side of the courts, concrete will be poured on Monday, March 28th.



71 - March 25. Reinforcing steel of the deck wall and Demik will be forming the wall very soon.



72 - March 25. Mark Demik and Jeremy Goodwin of Demik Construction at the official soil-turning ceremony.



73 - March 25. Rogers and Tennis Canada organized an official soil-turning ceremony and a National announcement at our Club.



74 - March 25. Rogers Communications Representative Mr. Phillippe Oille made the official announcement of granting ATC, \$210,000 for the Dome project.



75 - March 28th, Overall view of the courts with the grade beam almost completed on three sides. The last section on the north side was poured this morning. Tomorrow, Tuesday March 29th, Demik will start the construction of the deck walls.



76 - March 28th. Installation of PVC junction boxes by Hillmer Electric.



77 - March 29th. Foundation was poured for the north deck wall. The forming of all the deck walls will take place early next week.



78 - April 1st. Reinforcing steel for the transition wall installed.



79 - April 1st. Deck wall ready for forming and the electricians are installing conduits for the electrical outlets in the wall facing the court. The Dome is attached to the top of the deck wall and also on top of the two transition walls on either side of the deck wall.



80 - April 5th. A sub- contractor installed the forms for the deck walls.



81 - April 5th. A side view of the formed deck walls.

The walls will be poured on Monday, April 11th.



82 - April 6th. Notice the fine cut composite angels of the aluminum channel.



83 - April 7th. Trenches for the installation of the electrical conduits and the two hand holes at the mechanical pad location.



84 - April 8th. Trenches have been backfilled.



85 - April 13th. Big day for pouring/pumping concrete, 54 cubic meters



86 - April 13th. The long extension of the pumper's arm.



87 - April 13th. Construction of the deck wall.



88 - April 13th. Working on the transition wall.



89 - April 14th, Deck walls and the forms were removed today.



90 - April 14th. Front view of the deck wall and the exposed side of the wall will be cleaned up.



91 - April 14th. Transition wall.



92 - April 14th. When the concrete is poured a 2x4 is inserted in the extrusion channel in which the dome is attached to. The back portion of the deck, beside the clubhouse, will be made out of wood. The posts will sit on the visible tubes (helical piles).



93 - April 19th. Granular base for the concrete deck



94 - April 21st. Installation of all the electrical equipment necessary for the operation of the Dome's mechanical equipment and lights.



95 - April 21st. Installation of two transformers in the electrical room (former Pro's room).



96 - April 22nd. Installation of the fence posts on the south side of the courts. The area between the posts and the grade beam will be concrete. Note workman compacting the gravel before Burlington Paving will be paving the conduit trenches on Monday, April 25th.



97 - April 25th. Burlington Paving paved all the conduit trenches this morning and they were finished by noon.



98 - April 25th. Construction of the mechanical and storage shed pad. Notice the fence posts around the proposed pad.



99 - April 25th. Installation of the deck drainage system.



100 - April 25th. One of the drains to catch the runoff from the deck.



101 - April 26th. The four exit doors for the Dome were delivered today. These doors will be installed permanently.  
The combination unit (revolving door and pressure chamber) is under construction and will be delivered asap.



102 - April 26th. Installation of the reinforcing steel for the mechanical and storage shed pad. Concrete will be poured this coming Friday.



103 - April 29th. Pumping concrete for the mechanical and storage shed pad.



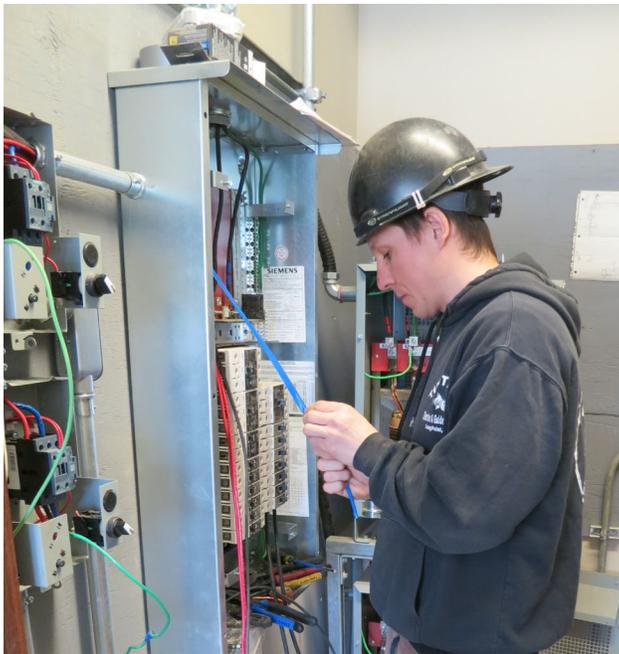
104 - 1st. week of May. Deck steps and concrete deck.



105 - 1st. week of May. View of completed concrete deck from Court 1.



106 - 1st. week of May. Mechanical and storage shed pad. Court fence being installed.



107 - May 10th. Installation of electrical panels for the dome in the former Pro room.



108 - May 10th. Electrical panels will be on three walls of the electrical room.



109 - May 10th. Installation of the interlocking walkway by the landscapers. Beneath the walkway is the existing infiltration system and therefore we had to use interlocking stones and not concrete.



110 - May 12th. Construction of the deck extension.



111 - May 13th. The Combo unit was delivered this morning and Demik is completing the installation.



112 - May 13th. Completed Combo unit.



113 - May 13th. Interlocking walkway leading to the main entrance of the Dome and to the entrance and exit gates for summer play.



114 - May 13th. Wood deck and railings near completion.



115 - May 13th. Another view of the larger wood deck extension.



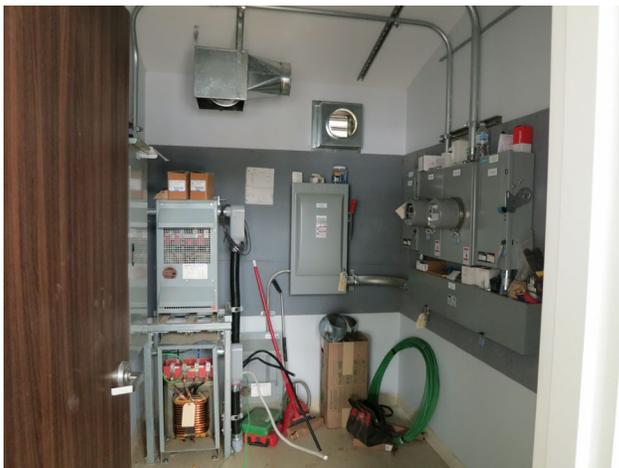
116 - May 17th. Construction of the storm water management infiltration system. This trench will be filled with 2 inch clear stone.



117 - May 17th. Construction of the path on the south side of the courts.



118 - May 19th. Infiltration unit backfilled and path to be graveled. The hoarding around the construction site was removed today.



119 - May 19th. The electrical room is full of panels, switches and transformers to operate the Dome.

Note the two transformers in the left corner of the room. This room requires proper ventilation and that was being installed today.



120 - May 20th. Path almost completed and top soil being spread for sodding the areas starting next week.



121 - May 21st. Big day today. Nets and windscreens are being installed by an army of volunteers.



122 - May 21st. Just to make sure that the net is 36 inches high.



123 - May 21st. Great team work and the work was completed before the storm.



124 - May 21st. Cleaning crew hard at work to ensure club house is in top shape.



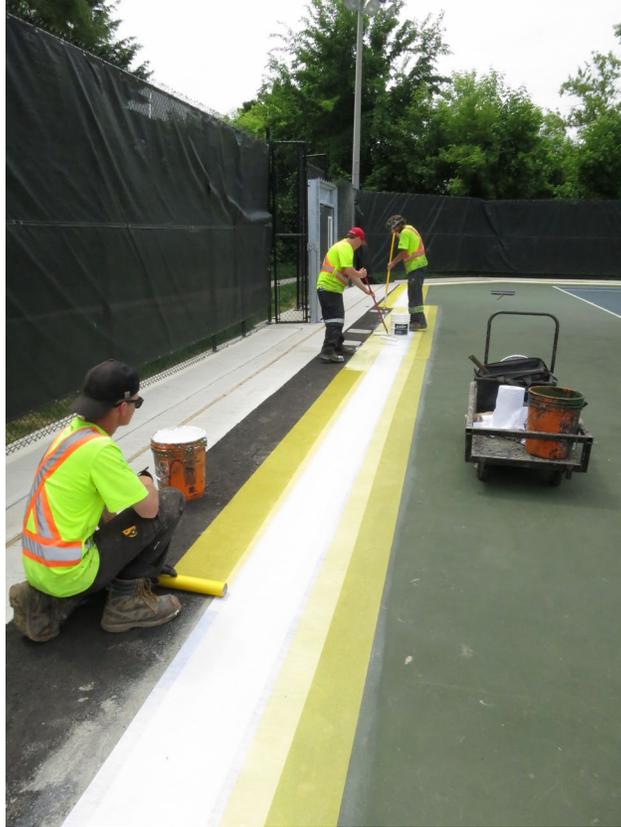
125 - May 25th. Today is a big day since the landscapers are laying sod, which gives the whole area a finished appearance.



126 - June 9th. Electricians drilling holes for the installation of the electrical cabinet. I trust the fellow in the cabinet is wearing his safety boots.



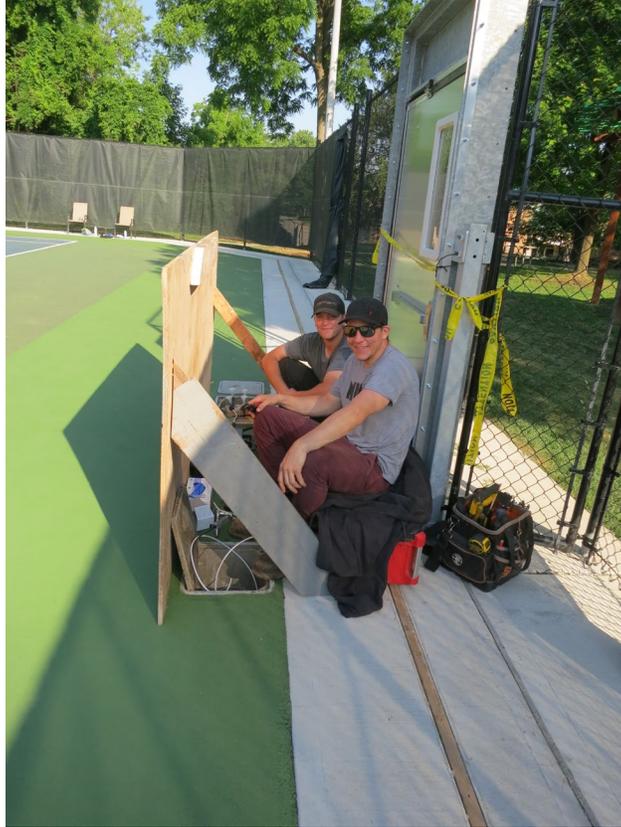
127 - June 10th. This cabinet will be in the storage shed when it is build.



128 - June 15th. Repair of court surface by Ancaster Court Services (ACS). Laying and gluing of fiberglass screens prior to painting.



129 - June 22nd. Final repaired section of the court surface. ACS used the previous US Open green paint when the courts were constructed.



130 - June 22nd. We need protection from "incoming fire". Electricians are installing the plugs in the electrical boxes necessary to connect the LED lights when the Dome is up.