




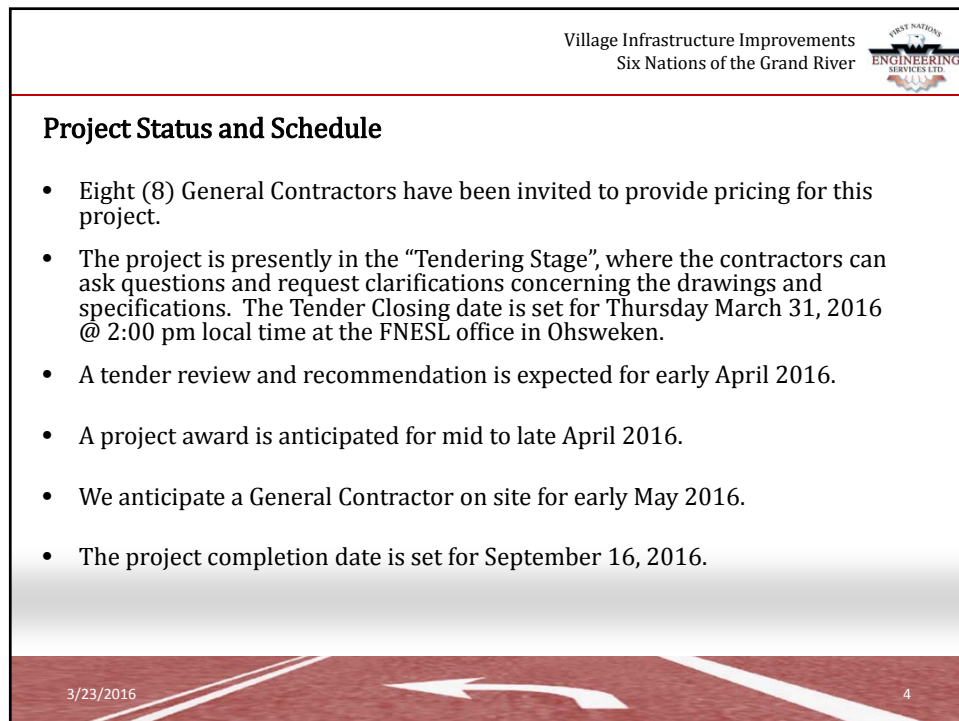
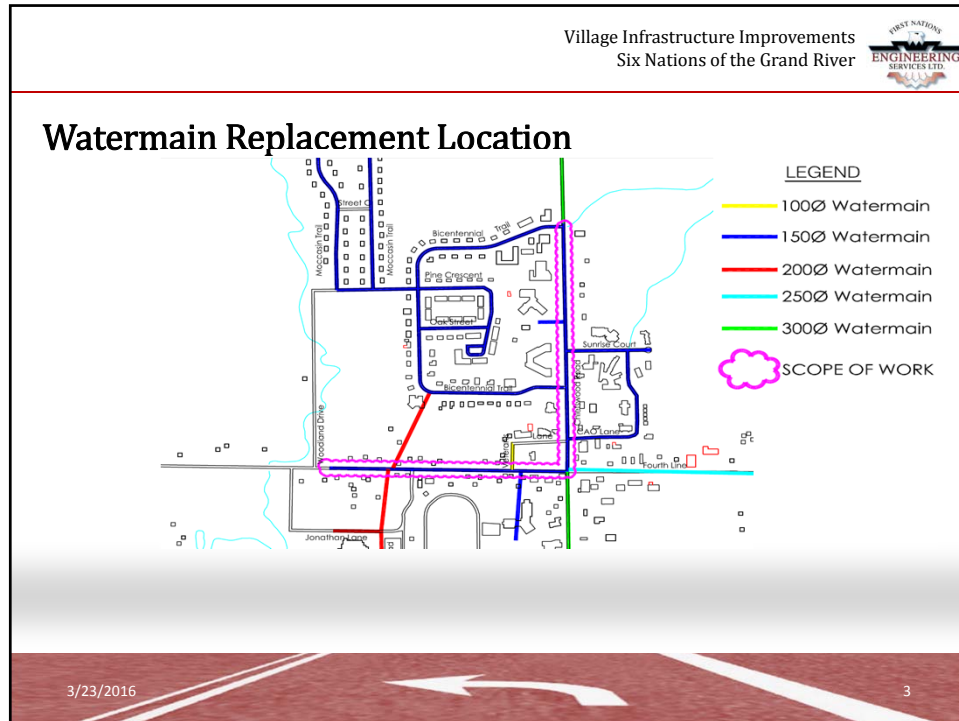
Village Infrastructure Improvements  
Six Nations of the Grand River 

---

## Introductions

- First Nations Engineering Services Ltd. (FNESL) has completed the design of a new water supply system in the down town village area of Ohsweken. Along with the water system upgrades, Chiefswood Road shall be widened by 1.5m to accommodate a left hand turning lane in the down town area.
- Why the water system upgrades ? The existing water supply system in the village area is out dated and is severely under sized to meet present and future design flows and demands.
- The existing ductile iron 150mm (6 inch) watermain act as a bottleneck, impacting fire protection capabilities.

3/23/2016 2





## General Scope of Work

- 1,300m - 400mm PVC DR 18 Watermain
- 13 - New Hydrant Assemblies
- 40 - Water Service Connections
- 2,100m<sup>2</sup> - Road Reconstruction (New Asphalt & Granulars)
- 10, 500m<sup>2</sup> - Asphalt Scarify & Repave (40mm HL3)
- 1,500m - New Concrete Curb & Sub drain
- New Traffic Lights and Cross Walks @ New Intersection
- New Line Painting
- Final Site Works and Restoration
- Temporary Water Supply System

3/23/2016

5



## Proposed Construction Phases

- Precondition site survey. (video construction areas)
- Install construction signage
- Site preparation and layout, locating existing utilities.
- Assembly of temporary water supply system and services.  
Temporary water supply shall be provide to homes and businesses through existing hose bibs or curb stop.
- Watermain and water service construction
- Road reconstruction, road widening and intersection electrical works for new traffic lights
- Concrete curbs and sub drain

3/23/2016

6



### Proposed Construction Phases - continued

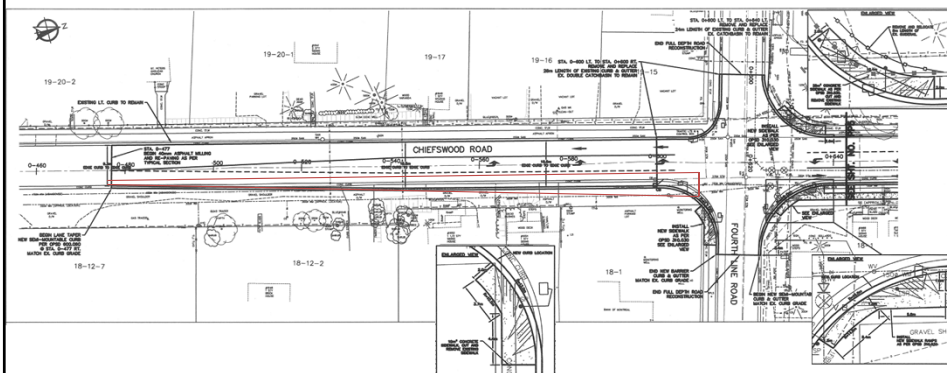
- HL8 road sub base and watermain trench restoration
- Asphalt grinding in preparation for HL3 (scarify & repave)
- New Concrete sidewalks and concrete pads
- Site restoration, top soiling and hydro seeding
- HL3 top coat asphalt and asphalt apron restoration
- Roadway line painting
- Contractor is responsible for maintaining traffic control. One lane shall remain open at all times.

3/23/2016

7



### Intersection Layout (Chiefswood Rd, South of 4<sup>th</sup> Line)

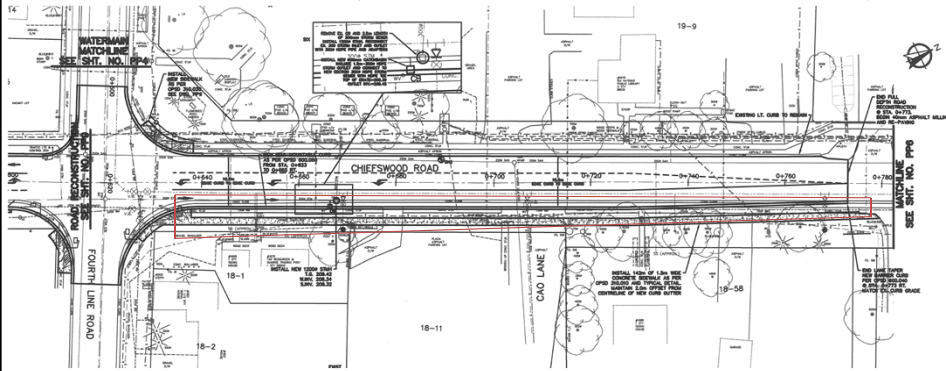


3/23/2016

8



### Intersection Layout (Chiefswood Rd, North of 4<sup>th</sup> Line)

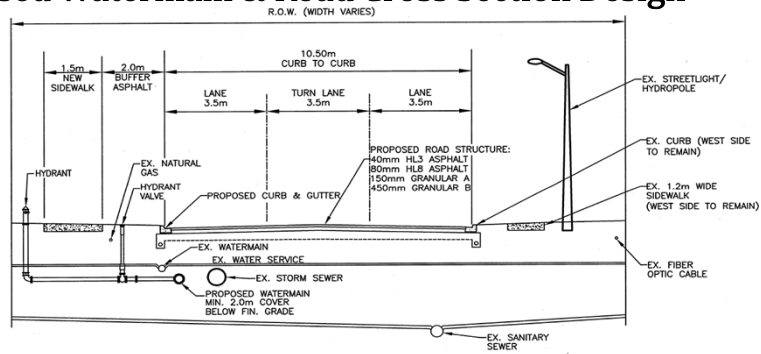


3/23/2016

9



### Proposed Watermain & Road Cross Section Design



LOOKING SOUTH ON CHIEFSWOOD ROAD

3/23/2016

10



### Local Employment – Local Content

- The awarded contractor has carried a \$250,000.00 allowance in their tender for Local Content.
- This consist of local labor, materials, equipment and or services from Six Nations that are associated with this project.
- Interested individuals experienced in this line of work shall submit an updated resume to Grand River Employment & Training.
- Individuals that get hired will be working directly for the General Contractor.

3/23/2016

11



### Interruptions and Inconveniences

- Homes and businesses that are on the temporary water main will experience 2 interruptions. One from the switch over from the old watermain to the temporary watermain. And a second will occur during the switch over from the temporary to the new watermain. Services will be connected so there is little disruption as possible. Residents shall be notified 48 hours prior to any shut offs.
- Temporary services will be connected at one's hose bib (garden hose connection outside of the house) or at the existing property line shut off (or curb box). Curb box connections will require excavating to complete the connection.

3/23/2016

12





### Interruptions and Inconveniences – continued

- Expect traffic delays. During construction, the roadway may be limited to one lane. Traffic will be controlled by two or more flaggers, with flagger at each end of the construction zone.
- Reduced speeds through construction zones. This is a safety concern and will be strongly enforced. Speeding through construction zones will be reported to Police.
- Roadway travelling surface may be rough or elevated. Contractor shall grade roadway periodically throughout the day.
- Dust Control. Contractor shall maintain dust control during construction activities.
- The existing traffic intersection will be converted to a four way stop, as the traffic lights will be disconnected.
- Access to driveways during the day will be interrupted but will be accessible ASAP and before the days end.

3/23/2016

13



### Contractor Submissions

- Detailed Construction Schedule (start up, switch over's, commissioning & completion dates)
- Detailed Temporary Water Supply Plan (watermain size, location, service information to be provided. Health care and emergency services shall be included)
- Traffic Control Plan (day & night time control plan)
- Construction Sequencing Plan (watermain construction via trench box, sub contractor works to be included)

3/23/2016

14



### New Intersection Traffic Control Lights

- New LED traffic signal lights, aluminum poles, conduits, wire, LED cross walk signals and LED Street lights will be supplied and installed by the Contractor.
- Chiefswood Road traffic lights will be configured with a left hand turn signal. Duration of left hand turn shall be set and controlled by Six Nations Public Works.
- Durations of left hand turn signal can be modified in the programming of the new system.



**Thank You!**

Any questions?