

### EROSION AND SEDIMENT CONTROL NOTES:

- 1. MINIMIZE ALL AREA(S) TO BE DISTURBED DURING CONSTRUCTION.
- 2. PROTECT ALL EXPOSED SURFACES FROM EROSION. 3. CONTROL RUNOFF DURING CONSTRUCTION.
- 4. ALL EROSION CONTROL MEASURES ARE TO BE IN PLACE AND INSPECTED BY A QUALIFIED PERSON BEFORE STARTING CONSTRUCTION AND REMAIN IN PLACE UNTIL RESTORATION IS COMPLETE.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING AND MAINTAINING ALL EROSION AND SEDIMENT CONTROL MEASURES. ANY FAILURES OF THE IMPLEMENTED E&SC PLAN WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NOT THE CONTRACT ADMINISTRATOR. 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING BUT NOT LIMITED TO, MAINTAINING FENCING, DIVERSION SULT SACKS, TEMPORARY SEDIMENTATION BASINS, AND REMOVING ALL ACCUMULATED SEDIMENT FROM THESE CONTROLS WHEN WARRANTED.
- 7. ALL SOIL DEEMED TO BE EXCESS SOILS SHALL BE MANAGED IN ACCORDANCE WITH O. REG. 406/19 ON-SITE AND EXCESS SOIL MANAGEMENT REGULATIONS AND THE SOIL RULES. 8. ALL DISTURBED AREAS WHERE WORK WILL NOT OCCUR FOR 30 DAYS OR MORE SHALL BE STABILIZED IN ACCORDANCE WITH OPSS MUNI 804. IF GRADING IS COMPLETED DURING OFF-SEASON CONSTRUCTION MONTHS, THE SLOPES WILL BE STABILIZED, AS PER OPSS MUNI 804, WHEN WEATHER PERMITS. 9. ANY SOIL STOCKPILES (EXCLUDING TOPSOIL) SHALL BE SURROUNDED WITH SILT FENCE AND STABILIZED IN ACCORDANCE WITH OPSS MUNI 804. TOPSOIL PILES ARE NOT REQUIRED TO HAVE SILT FENCING AROUND THEM BUT SHALL BE PLACED AND PROTECTED SO THAT THERE ARE NO NEGATIVE IMPACTS ON SURROUNDING PRIVATE PROPERTIES.
- 10. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL SITE RESTORATION IS COMPLETE. 11. UNLESS OTHERWISE SPECIFIED, ALL GEOTEXTILE (CLASS II PER OPSD OR APPROVED EQUIVALENT) SHALL BE INSTALLED IN ALL MAINTENANCE HOLES AND PIPE ENDS TO PROTECT THE STORM SEWER SYSTEM FROM SEDIMENT ACCUMULATION.
- 12. ALL ACCUMULATED SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED LOCATION, IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.
- 14. PROTECT ALL CATCHBASINS FROM SEDIMENT INTRUSION USING CATCHBASIN FILTER SACKS OR EQUIVALENT. 15. PROTECT ALL CURB INLET CATCHBASINS FROM SEDIMENT INTRUSION USING CATCHBASIN FILTER SACKS AND PROTECT THE CURB INLET PORTION WITH THE USE OF SECTIONS OF LINEAR FILTER SOCKS OR EQUIVALENT.
- 16. KEEP ALL SUMPS CLEAN DURING CONSTRUCTION AND IDENTIFY A REGULAR MAINTENANCE PROGRAM TO DO SO. 17. HAVE A PLAN TO MINIMIZE/PREVENT WIND-BLOWN DUST SUCH AS SPRAYING CALCIUM CHLORIDE, WATER AND APPLYING GROUND SOIL TACKIFIERS (PAM) VIA HYDROSEED OR STRAW AND REGULAR STREET SCRAPING/SWEEPING TO REMOVE DEBRIS.
- 18. STRAW BALES AND/OR WATTLES TO BE USED IN LOCALIZED OVERLAND FLOW AREAS AS SHOWN AND AS DIRECTED BY THE ENGINEER DURING CONSTRUCTION FOR WORKS.
- 19. STRAW BALES, WATTLES AND SILT FENCE ARE TO BE TERMINATED BY ROUNDING THE ENDS (J-HOOKING) TO CONTAIN AND FILTER RUNOFF. 20. ALL REFUELING AND MAINTENANCE OF EQUIPMENT SHOULD BE AT A MINIMUM OF 30 METERS AWAY FROM ANY SURFACE WATER FEATURE. WHERE SITE CONSTRAINTS CANNOTACCOMMODATE THIS SEPARATION, ALL FUEL AND EQUIPMENT SHALL BE PLACED WITHIN AN APPROVED SPILL CONTAINMENT KIT.

EXISTING CATCH BASIN SEE NOTE 14 & 15 ON THIS

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DRAWING (TYP.)

EXISTING CATCH BASIN SEE NOTE 14 & 15 ON THIS

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PROP. SEDIMENT CONTROL FENCE

/ (OPSD 219.110)

PROPERTY LINE

EXISTING CATCH BASIN SEE NOTE 14 & 15 ON THIS

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DRAWING (TYP.)

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-EXISTING CATCH BASIN-

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13. ALL DEWATERING MUST BE CONDUCTED USING AN APPROVED OUTLET CONTROL METHOD SUCH AS A SEDIMENTATION BASIN OR FILTER BAG. EFFLUENT MONITORING SHALL BE CONDUCTED IN ACCORDANCE WITH THE ACCEPTED E&SC MONITORING PROGRAM REQUIREMENTS AND TO ENSURE DISCHARGE IS CONSISTENT WITH THE RECEIVER'S BACKGROUND WATER QUALITY REQUIREMENTS.



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-EXISTING CATCH BASIN-

DRAWING (TYP.)

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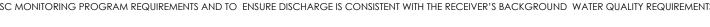
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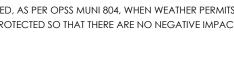
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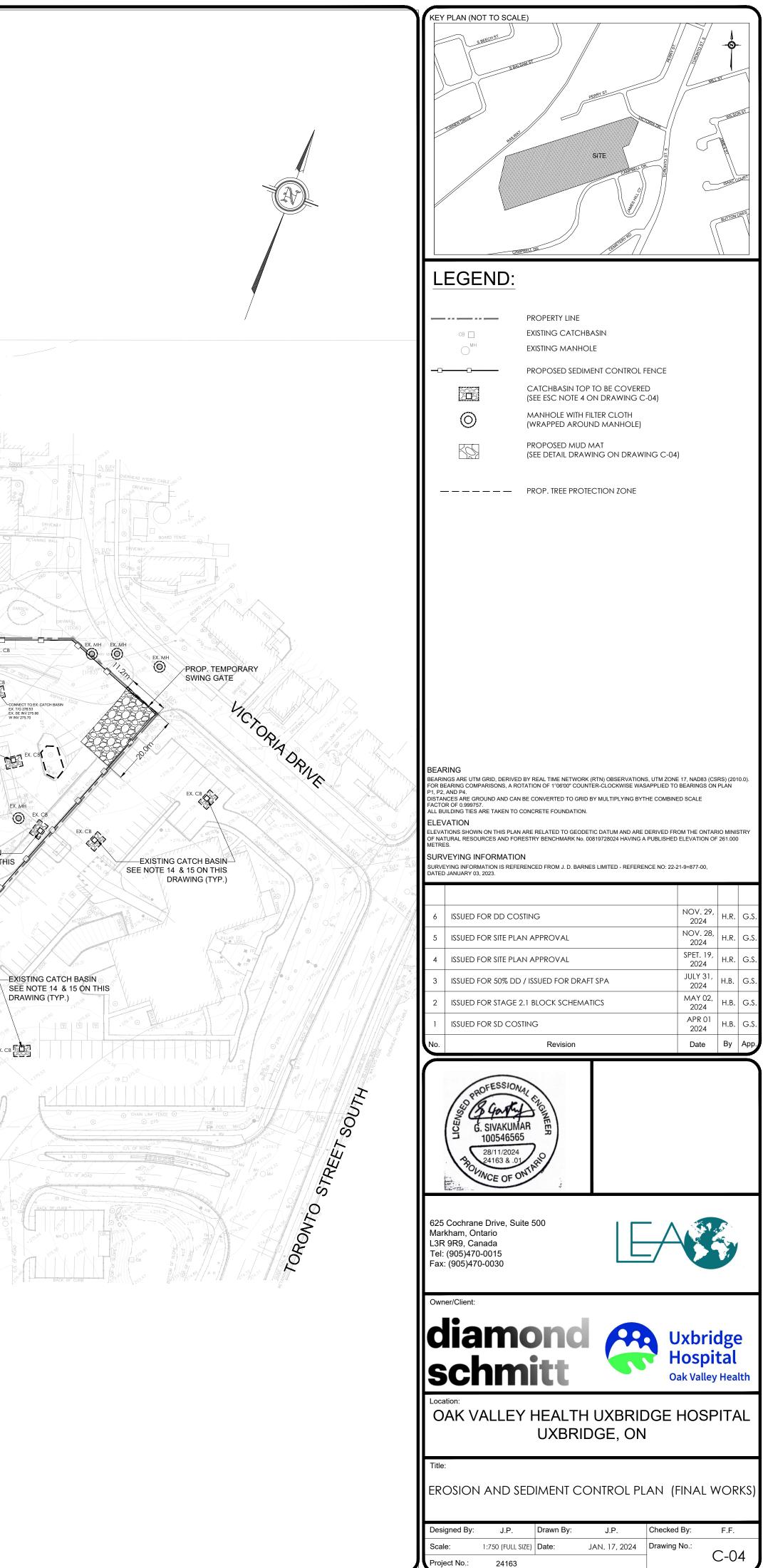
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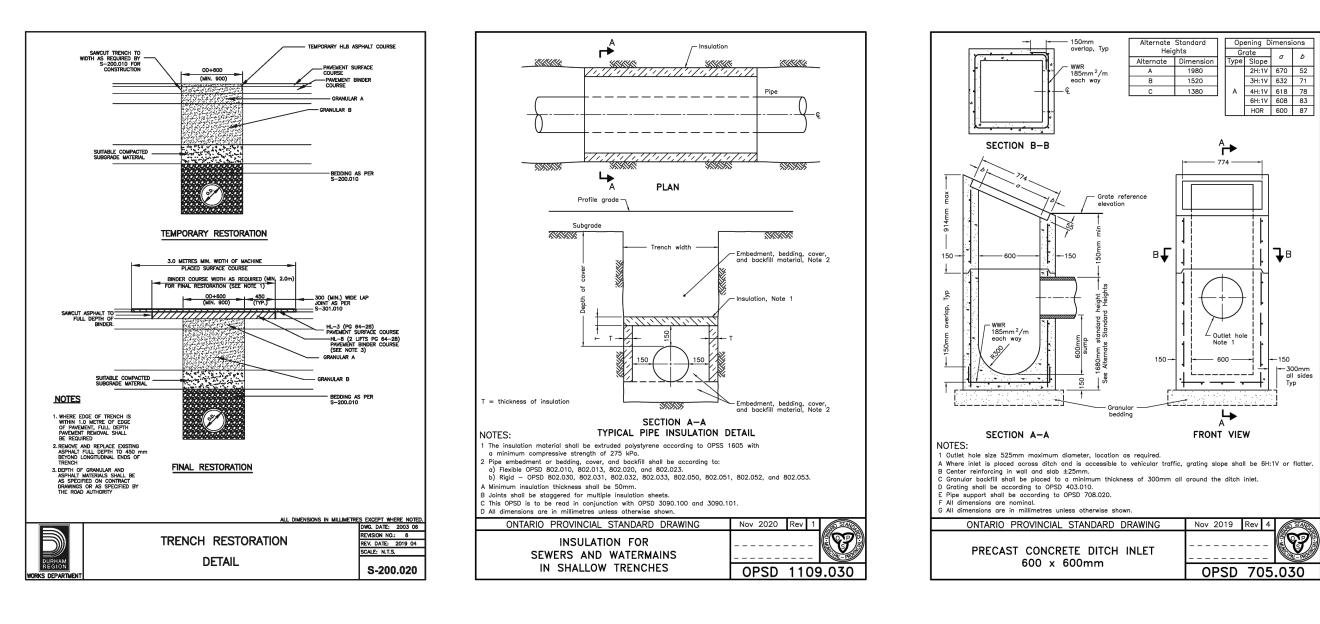
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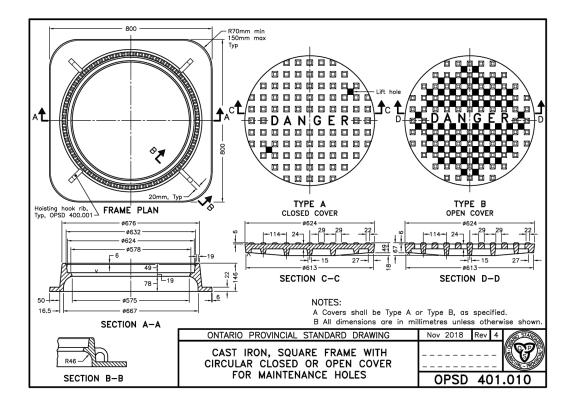


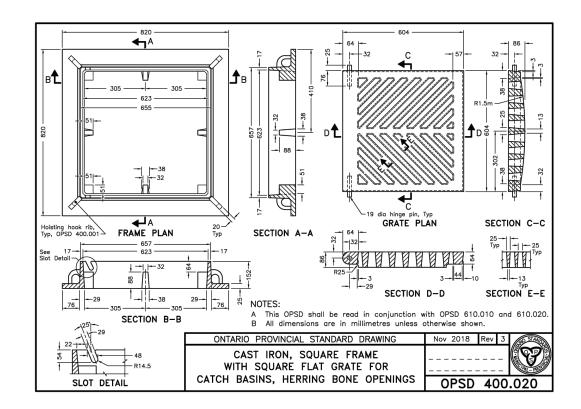


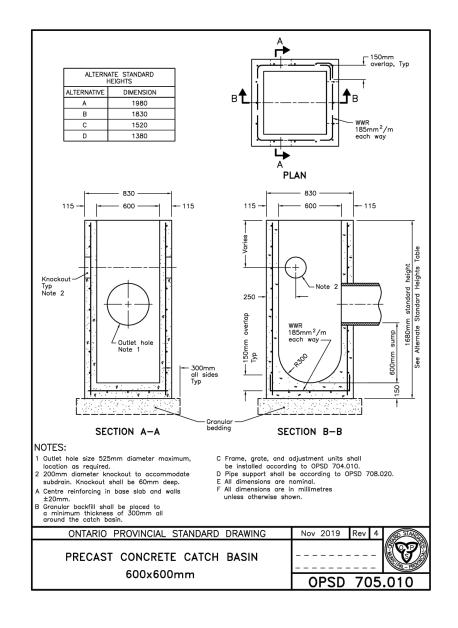


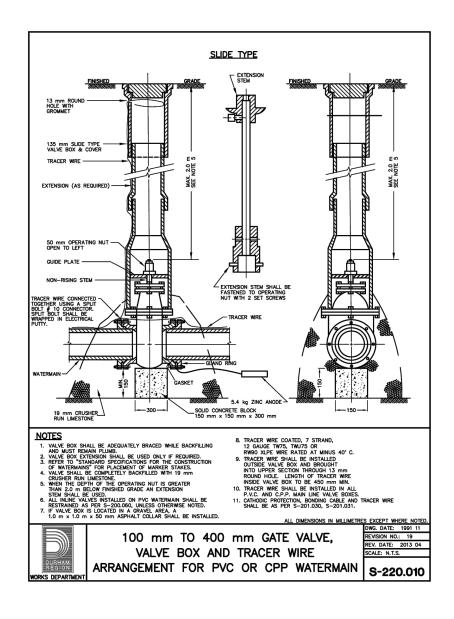


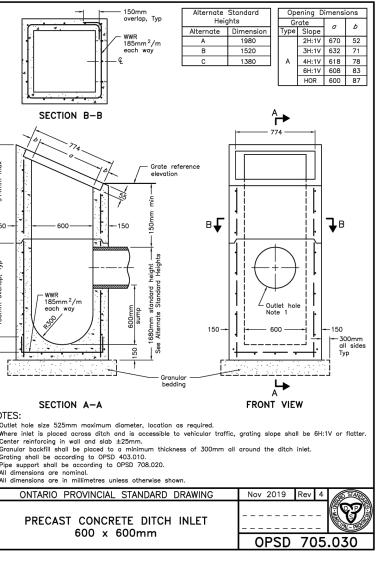


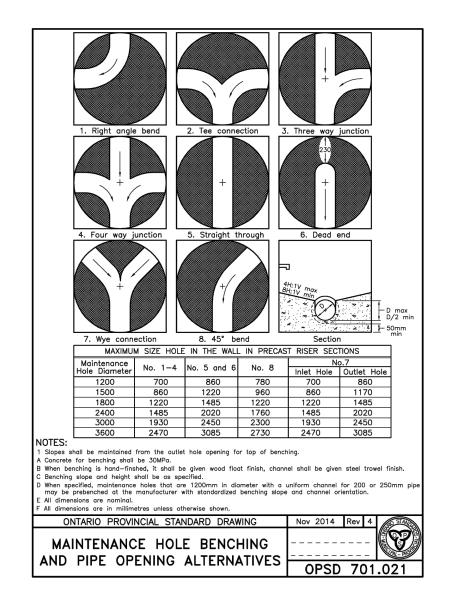


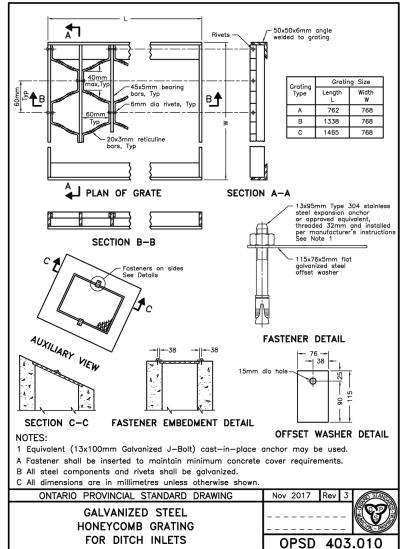


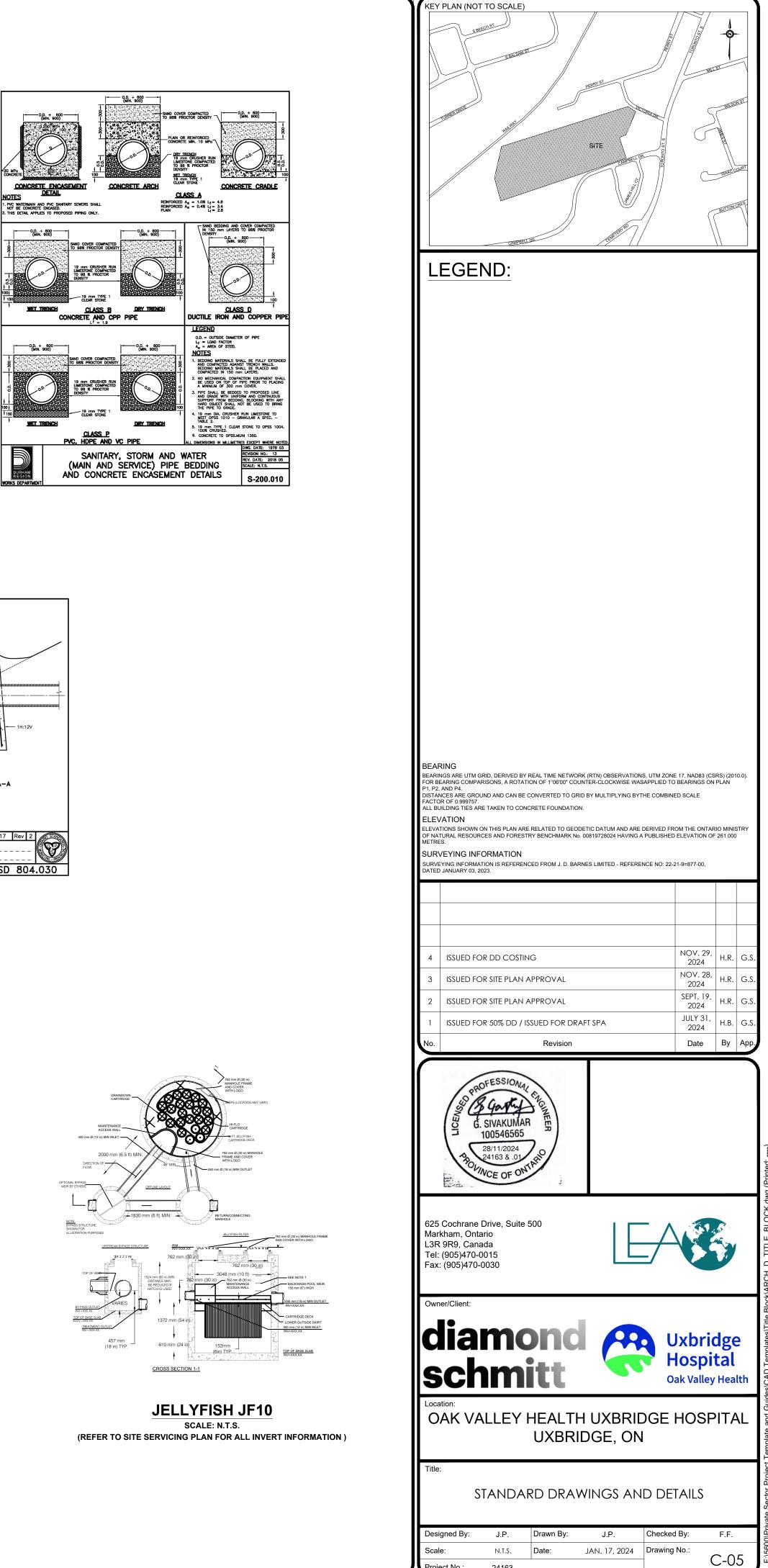






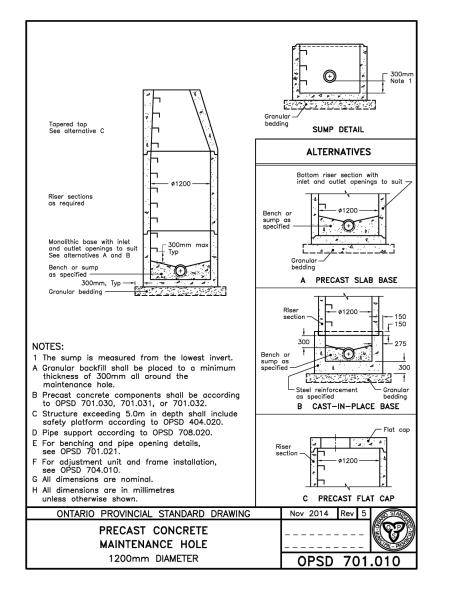


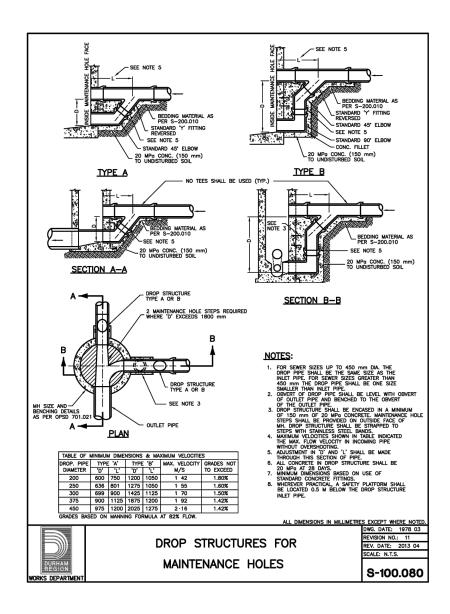


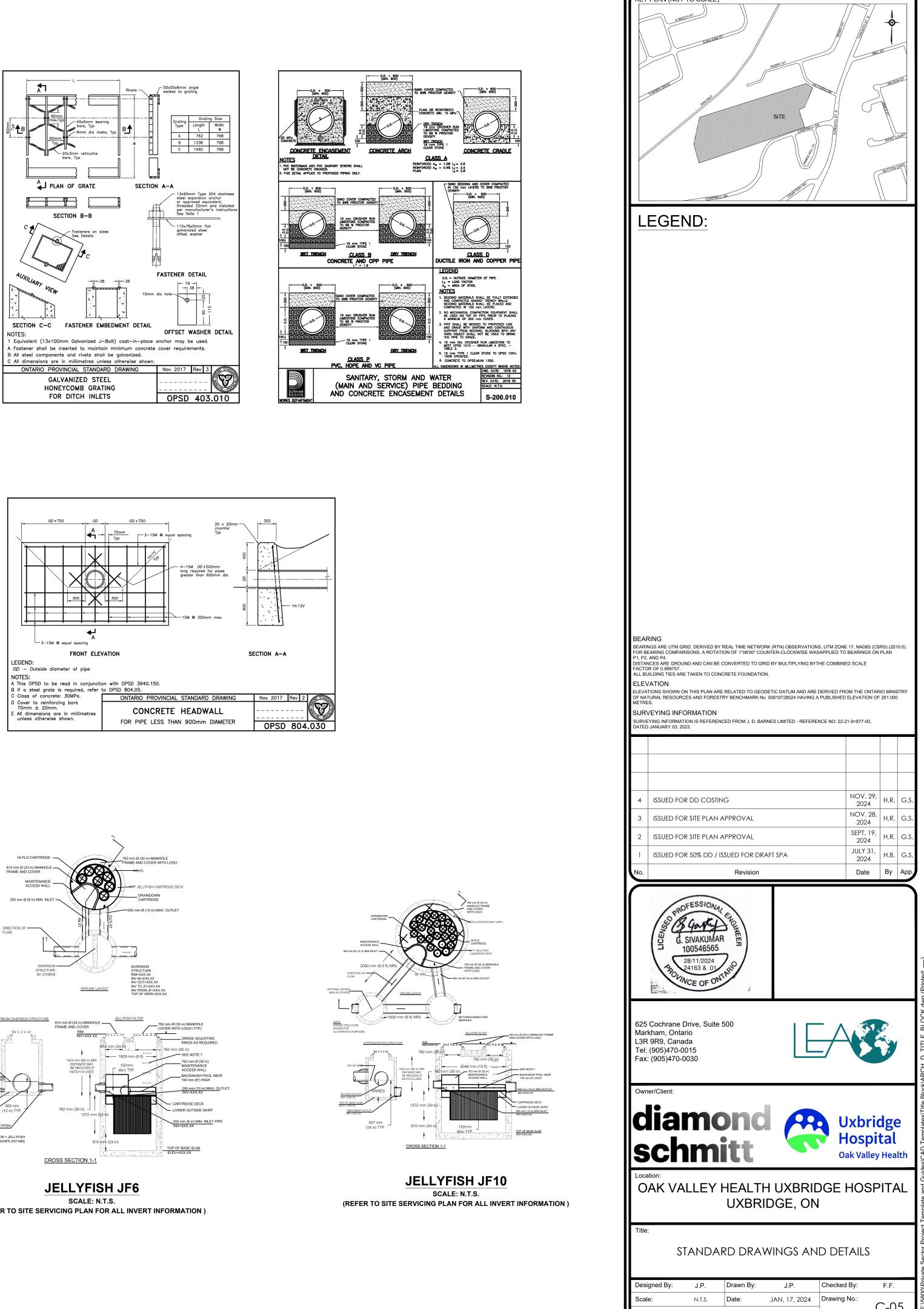


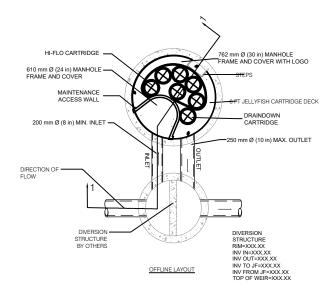
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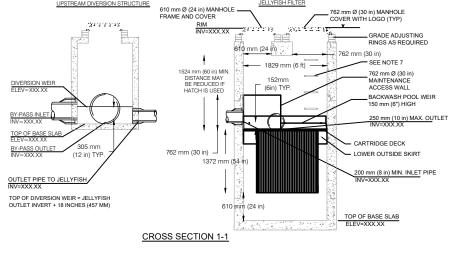
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(REFER TO SITE SERVICING PLAN FOR ALL INVERT INFORMATION)

## GENERAL NOTES

- 1. UNLESS INDICATED OTHERWISE, ALL WORKS WITHIN THE TOWNSHIP RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH REGION MUNICIPALTY OF DURHAM AND THE TOWNSHIP OF UXBRIDGE DESIGN STANDARDS AND SPECIFICATIONS. ONTARIO PROVINCIAL STANDARDS.
- 2. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE CURRENT "OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.'
- PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL RIGHT-OF-WAY, THE CONTRACTOR WILL OBTAIN ALL NECESSARY ROAD PERMITS FROM THE TRANSIT INFRASTRUCTURE PROJECTS SECTION OF TRANSPORTATION SERVICES.
- 4. PREPARE AND SUBMIT THE DESIGN AND CONSTRUCTION DRAWINGS OF THE PROJECT LIMITS TO THE SERVICE / UTILITY COMPANIES FOR MARK UP OF THEIR EXISTING / PROPOSED PLANT AND SIGN-OFF DOCUMENTS.
- PRIOR TO ANY EXCAVATION, ALL UTILITY OWNERS MUST BE CONTACTED TO OBTAIN SANCTIONED LOCATES, AS STIPULATED BY THE OCCUPATIONAL HEALTH AND SAFETY ACT.
- 6. CONTRACTOR SHALL CONTACT ENBRIDGE GAS AND OTHER UTILITY COMPANIES TO ADVISE WELL IN ADVANCE OF THEIR REQUIREMENT ON SITE WHERE THE EXCAVATION TAKE PLACE IN THE VICINITY OF ANY UTILITIES DURING CONSTRUCTION PERIOD.
- CONTRACTOR TO EXERCISE EXTREME CAUTION WHILE EXCAVATING AND BACKFILLING IN THE VICINITY OF THE UNDERGROUND UTILITIES. WHICH ARE NOT TO BE DISTURBED AND HAND DIGGING MAY BE REQUIRED.
- 8. CONTRACTOR IS RESPONSIBLE FOR LOCATING, SUPPORTING AND PROTECTING ALL UNDERGROUND AND OVERHEAD UTILITIES AND STRUCTURES PRIOR TO AND DURING CONSTRUCTION IN THE AREA OF HIS WORK. WHETHER SHOWN ON THE PLANS OR NOT.
- COORDINATED ACCESS SHALL BE PROVIDED TO ALL SERVICE / UTILITY COMPANIES MAINTENANCE VEHICLES DURING CONSTRUCTION OPERATIONS AS DEFINED IN THE CONSTRUCTION MANAGEMENT PLAN.
- 10. INFORMATION REGARDING ANY EXISTING SERVICES AND UTILITIES SHOWN ON THIS SET OF PLANS IS FURNISHED AS THE BEST AVAILABLE INFORMATION. ALL EXISTING MUNICIPAL SERVICES (IE. WATERMAINS) THAT CROSS PROPOSED SERVICES ARE TO BE DAYLIGHTED AND DEPTHS CONFIRMED, PRIOR TO CONSTRUCTION OF PROPOSED SERVICES, ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- 11. SUPPORTING OF EXISTING UTILITIES AND SERVICES SHALL BE IN ACCORDANCE WITH TOWNSHIP OF UXBRIDGE STANDARD AND/OR PROVIDE THE DESIGN OF THE UTILITY SUPPORT SYSTEM (IF APPLICABLE). THE CONTRACTOR IS RESPONSIBLE TO SUBMIT ALL SHOP DRAWINGS FOR REVIEW AND APPROVAL.
- 12. CONTRACTOR SHALL COORDINATE WITH SERVICE / UTILITY COMPANIES THAT ARE IMPACTED BY THE CONTRACTOR'S OPERATIONS.
- 13. ALL TRENCHES WITHIN EXISTING RIGHT-OF-WAYS SHALL BE BACKFILLED PER THE GEOTECHNICAL REPORT. TEMPORARY REPAIRS TO UTILITY CUTS SHALL BE IN ACCORDANCE WITH MUNICIPAL CONSENT REQUIREMENTS.
- 14. WHERE THE STABILITY, SAFETY OR FUNCTION OF THE EXISTING ROADWAY OR UNDERGROUND FACILITIES MAY BE IMPAIRED DUE TO THE CONTRACTOR'S METHOD OF OPERATIONS, THE CONTRACTOR SHALL PROVIDE SUCH PROTECTION AS MAY BE REQUIRED.
- 15. ALL DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS AS DEFINED BY CONTRACT PLANS WILL BE RESTORED PER TOWNSHIP OF UXBRIDGE REQUIREMENTS
- 16. SERVICE CONNECTIONS AND UTILITY CUTS SHALL BE BACKFILLED WITH PER S-200.010 AND PER THE GEOTECHNICAL REPORT.
- 17. TEMPORARY TRAFFIC CONTROL AND SIGNAGE DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT ONTARIO TRAFFIC MANUAL BOOK 7: TEMPORARY CONDITIONS.
- 18. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AND MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES TO COMPLY WITH CURRENT DURHAM REGION AND CITY OF OSHAWA BY-LAWS, CLOCA STANDARDS AND APPLICABLE LAW, AND IN ACCORDANCE WITH SECTION 6.7.2 - EROSION AND SEDIMENT CONTROL OF SCHEDULE 17 - ENVIRONMENTAL OBLIGATIONS.
- 19. IF REQUIRED, DEWATERING SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH ONTARIO WATER TAKING REGULATION (O.REG. 387/04). IF REQUIRED, PERMIT TO TAKE WATER (PTTW) SHALL BE OBTAINED BY THE CONTRACTOR FROM MINISTRY OF THE ENVIRONMENT IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN 'PERMIT TO DISCHARGE TO THE CITY STORM OR SANITARY SEWER' DIRECTLY FROM THE REGION OF DURHAM OR THE TOWNSHIP OF UXBRODGE. THE CONTRACTOR IS NOT PERMITTED UNDER THE CITY'S SEWERS BY-LAW TO DISCHARGE WATER TO THE CITY'S SEWERS WITHOUT A PERMIT ISSUED BY THE DURHAM REGION OR THE TOWN OF UXBRIDGE AS APPLICABLE.
- 20. NO PROJECT RELATED CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY ARE TO BE UNDERTAKEN UNTIL AN AGREEMENT HAS BEEN ESTABLISHED WITH THE PROPERTY OWNER.
- 21. THE CONCRETE CURB AND CONCRETE CURB AND GUTTER, CONCRETE SIDEWALK (IF APPLICABLE), AND ALL RESTORATION OF ROADWAYS TO THE SITE SHALL BE CONSTRUCTED AND CARRIED OUT IN ACCORDANCE WITH ALL APPLICABLE AND CURRENT DURHAM REGION STANDARDS.
- 22. THE CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING DEBRIS ON THE CONSTRUCTION SITE AND ALSO REMOVE ALL HOARDING UPON COMPLETION OF THE WORK.
- 23. THE ROADWAY PAVEMENT STRUCTURE WILL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH REGION OF DURHAM AND TOWNSHIP OF UXBRIDGE REQUIREMENTS.
- 24. ALL EXISTING MAINTENANCE HOLE TOPS, VALVE CHAMBERS, CATCH BASINS, GAS VALVE BOXES, WATER VALVE BOXES ETC. TO BE ADJUSTED TO FINISHED GRADE.
- 25. THE LOCATION OF ALL UNDER/ABOVE GROUND UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN AND, WHERE SHOWN ON THE DRAWING(S), THE ACCURACY OF THE LOCATION OF SUCH UTILITIES ARE NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE THE LOCATION AND DIMENSION OF ALL SUCH UTILITIES AND STRUCTURES BY CONSULTING THE APPROPRIATE AUTHORITIES OR UTILITY COMPANIES CONCERNED. THE CONTRACTORS SHALL PROVE THE LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE OR RESTORATION TO SAME.

- SHALL BE IMMEDIATELY REPORTED THE ENGINEER.
- UNLESS OTHERWISE NOTED.
- 98% OF MAXIMUM DRY DENSITY.
- UTILITY AND SHALL BE LIABLE FOR ALL OR ANY DAMAGE
- TO ALLOW FOR MINIMUM 150mm ADJUSTMENT.
- FUTURE SIDEWALK CONSTRUCTION.
- SIDEWALK AND PAVEMENT UNLESS OTHERWISE SHOWN.

### WATERMAINS

- WHICHEVER IS DEEPER.
- WATER SERVICES ARE TO HAVE MINIMUM 1.70m COVER.
- (NFPA) STANDARDS.
- AND MAIN LINE VALVES.
- MAINLINE VALVES TO BE MECHANICALLY RESTRAINED.
- CONSULTANT.
- INSTALLED AROUND THE CLOSED OPERATING VALVE.

# STORM SEWERS

26. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON THE SITE PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER BEFORE PROCEEDING.

27. ANY DISCREPANCIES BETWEEN SITE CONDITIONS AND CONSTRUCTION DRAWINGS MUST BE REPORTED TO THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION AND APPROPRIATE ACTION TAKEN TO THE SATISFACTION OF THE CONTRACT ADMINISTRATION.

28. ALL SURVEY STAKE LAYOUT POINTS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE LAYOUT

29. ALL DIMENSION ARE EXPRESSED IN METERS AND PIPE SIZES ARE EXPRESSED IN MILLIMETERS

30. ALL MATERIAL FOR SEWER, FORCEMAIN, WATERMAIN, HYDRANTS AND APPURTENANCES SHALL BE ACCORDING TO REGION OF DURHAM AND TOWNSHIP OF UXBRIDGE STANDARDS.

31. AT ALL LOCATIONS WHERE THE PROPOSED WATERMAIN CROSSES UNDER OR ABOVE THE EXISTING SEWERS, OR UTILITIES, GRANULAR A BEDDING MATERIAL IS TO EXTEND FROM THE LOWER PIPE TO THE TOP OF THE UPPER PIPE. GRANULAR A TO BE COMPACTED TO MINIMUM

32. CONTRACTOR TO PROVIDE ADEQUATE SUPPORT DURING CONSTRUCTION BETWEEN THE NEW WATERMAIN AND EXISTING GAS MAINS. MAINTAIN 300mm MINIMUM VERTICAL CLEARANCES BETWEEN THE NEW WATERMAIN AND EXISTING GAS MAINS LESS THAN 300mm IN DIAMETER. MAINTAIN 600mm MINIMUM VERTICAL CLEARANCES BETWEEN THE NEW WATERMAIN AND EXISTING GAS MAINS EQUAL TO OR GREATER THAN 300mm IN DIAMETER.

33. ALL EXISTING UTILITIES SHOWN ON DRAWINGS ARE FOR REFERENCE PURPOSES ONLY. THE CONTRACTOR SHALL SATISFY THEMSELVES AS TO THE ACTUAL LOCATION AND DEPTH OF ANY

34. ADJUST ALL STRUCTURES (MAINTENANCE HOLES, CATCH BASINS, ETC.) TO SUIT NEW DESIGN ELEVATIONS INCLUDING BREAKING DOWN AND REMOVAL OF PORTION OF TOP OF STRUCTURES

35. ALL CURB SHALL BE CONSTRUCTED WITH A LEDGE AT THE BACK OF THE CURB TO FACILITATE

36. FULL DEPTH SAW-CUTS ARE REQUIRED AT CONSTRUCTION LIMITS OF EXISTING CURB,

37. SAW CUT EXISTING PAVEMENT, SIDEWALK, CURB, GUTTER, DRIVEWAYS, WALKWAYS, ETC. AT CONSTRUCTION LIMITS TO PROVIDE A CLEAN JOINT FOR THE PROPOSED WORK.

38. PROVIDE SITE GRADING AND SITE SERVICING "AS-BUILT" AND "RECORD DRAWINGS" AND "SEWERS CCTV SURVEY" FOR THE PROJECT CLOSEOUT SUBMISSIONS, AT NO EXTRA COST TO THE OWNER. CCTV INSPECTION OF THE INSTALLED PIPES SHALL BE PER OPSS-409.

### 1. P.V.C. WATERMAIN TO CONFORM TO LATEST A.W.W.A. SPECIFICATIONS.

2. WATERMAIN TO HAVE A MINIMUM 1.70m COVER OR 1.9m BELOW CENTRELINE OF ROAD,

4. WATER SERVICES TO HAVE 1.2m MINIMUM HORIZONTAL CLEARANCE FROM MAINTENANCE HOLES AND CATCHBASINS, AND 1.00m MINIMUM HORIZONTAL CLEARANCE FROM ALL OTHER UTILITIES.

FIRE HYDRANTS TO CONFORM TO A.W.W.A C502 AND TO BE INSTALLED AS PER S-210.010. HYDRANTS SHALL BE PAINTED IN ACCORDANCE WITH NATIONAL FIRE PROTECTION ASSOCIATION

WATERMAIN BEDDING SHALL BE AS PER S-200.010, CLASS P AND BEDDING MATERIAL TO BE PER S-200.010 UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

7. ALL PVC WATERMAINS SHALL BE INSTALLED WITH A WHITE PLASTIC COATED 12 GAUGE SOLID COPPER TRACER WIRE WHICH SHALL BE BROUGHT TO THE SURFACE AT ALL SECONDARY VALVES

VALVE IN BOXES SHALL BE INSTALLED AS PER S-220.010 AND CONFORM TO A.W.W.A. C500.

9. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS. WEIGHT OF THE ANODES TO BE MINIMUM 5.4 kg (12 lbs.), UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL

10. ALL PLUGS, CAPS, TEES AND BENDS SHALL BE MECHANICALLY RESTRAINED. RESTRAINING JOINTS SHALL BE AS PER UNI-FLANGE SERIES 1300, OR APPROVED EQUAL.

11. THE NEW WATERMAIN TO BE TAPPED FOR WATER SERVICES MUST BE ISOLATED FROM THE EXISTING WATERMAIN. TO MAINTAIN PRESSURE IN THE NEW MAIN DURING INSTALLATION OF SERVICES, A 50mm BY-PASS WITH AN APPROVED DIFFERENTIAL BACKFLOW PREVENTER IS TO BE

12. UNLESS OTHERWISE NOTED, THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE WATERMAIN AND ANY SEWER SHALL BE 2.5m. A MINIMUM VERTICAL SEPARATION OF 0.3m MUST BE MAINTAINED IF WATERMAIN IS ABOVE SEWER, OR 0.5m IF SEWER IS ABOVE WATERMAIN. CLEARANCES ARE MEASURED FROM OUTSIDE EDGES OF PIPES.

13. MINIMUM CURVATURE OF ANY WATERMAIN SHALL BE COMPLETED BY PIPE DEFLECTION IN ACCORDANCE WITH THE MANUFACTURER'S RADIUS GUIDELINES.

14. VALVES SHALL BE RESILIENT SEAT GATE VALVES FOR 300mm DIAMETER OR LESS

A TEST FITTING SHALL BE INSTALLED AT THE PROPERTY LINE.

ALL SERVICE CONNECTIONS TO BE MARKED WITH A 50mm x 100mm WOOD STAKE, PROJECTING 1.0m ABOVE THE GROUND, WITH THE TOP 300mm PAINTED ORANGE.

3. SEWER BEDDING SHALL BE AS PER S-200.010, CLASS P AND BEDDING MATERIAL TO BE PER S-200.010 UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

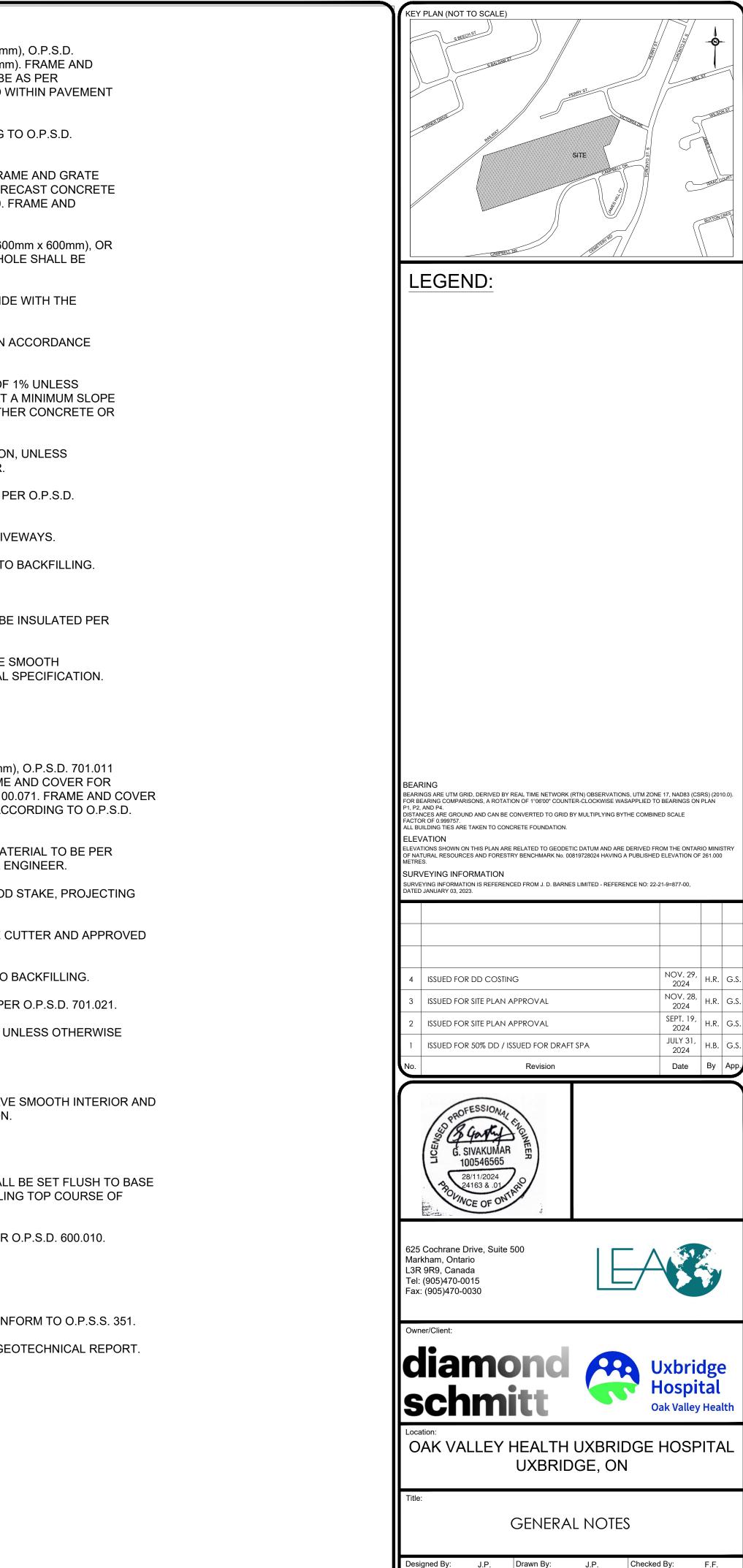
- MAINTENANCE HOLES SHALL BE ACCORDING TO O.P.S.D. 701.010 (1200mm), O.P.S.D. 701.011 (1500mm), O.P.S.D. 701.012 (1800mm), OR O.P.S.D. 701.013 (2400mm). FRAME AND COVER FOR MAINTENANCE HOLE LOCATED WITHIN PAVEMENT SHALL BE AS PER S-100.071. FRAME AND COVER FOR MAINTENANCE HOLE NOT LOCATED WITHIN PAVEMENT SHALL BE ACCORDING TO O.P.S.D. 401.010 (TYPE B - OPEN).
- 4. FRAME AND COVER FOR CATCHBASIN MANHOLE SHALL BE ACCORDING TO O.P.S.D. 400.020.
- 5. SINGLE CATCHBASINS TO BE PRECAST CONCRETE WITH CAST IRON FRAME AND GRATE CONFORMING TO O.P.S.D. 705.010 AND DOUBLE CATCHBASINS TO BE PRECAST CONCRETE WITH CAST IRON FRAME AND GRATE CONFORMING TO O.P.S.D. 705.020. FRAME AND COVER SHALL BE ACCORDING TO O.P.S.D. 400.020.
- 6. DITCH INLET CATCHBASIN SHALL BE ACCORDING TO O.P.S.D. 705.030 (600mm x 600mm). OR 705.040 (600mm x 1200mm). FRAME AND COVER FOR CATCHBASIN MANHOLE SHALL BE ACCORDING TO O.P.S.D. 403.010.
- 7. CONTRACTOR SHALL ENSURE THAT THE LOW POINT OF CURBS COINCIDE WITH THE LOCATION OF CATCHBASINS INSTALLED AT ROADWAY SAG AREAS.
- 8. CATCHBASIN CONNECTIONS TO THE CURB SUBDRAIN SYSTEM TO BE IN ACCORDANCE WITH O.P.S.D. 216.021.
- 9. SINGLE CATCHBASIN LEADS TO BE 250mm LAID AT A MINIMUM SLOPE OF 1% UNLESS OTHERWISE NOTED. DOUBLE CATCHBASIN LEADS TO BE 300mm LAID AT A MINIMUM SLOPE OF 1% UNLESS OTHERWISE NOTED. ALL CATCHBASIN LEADS TO BE EITHER CONCRETE OR P.V.C. SDR-35 UNLESS OTHERWISE NOTED.
- 10. ROAD CATCHBASIN LEAD INVERTS TO BE 1.5m BELOW GRATE ELEVATION, UNLESS OTHERWISE REQUIRED FOR POSITIVE DRAINAGE TO MAIN LINE SEWER.
- 11. MAINTENANCE HOLE BENCHING AND PIPE OPENING DETAILS TO BE AS PER O.P.S.D. 701.021.
- 12. NO CATCH BASIN SHALL BE LOCATED IN THE PROPOSED AREAS OF DRIVEWAYS.
- 13. ALL SEWERS SHALL BE INSTALLED WITH LASER AND CHECKED PRIOR TO BACKFILLING.
- 14. FROST STRAPS TO BE INSTALLED AS PER O.P.S.D # 701.100.
- 15. WHERE DEPTH OF COVER IS LESS THAN 1.2m, STORM SEWERS SHALL BE INSULATED PER O.P.S.D. 1109.030.
- 16. ALL STORM SEWER PIPES SMALLER THAN 375 SHALL BE PVC AND HAVE SMOOTH INTERIOR AND EXTERIOR WALL AND CONFORM TO OPSS 1841 MATERIAL SPECIFICATION.

# SANITARY SEWERS

- 1. A TEST FITTING SHALL BE INSTALLED AT THE PROPERTY LINE.
- 2. MAINTENANCE HOLES SHALL BE ACCORDING TO O.P.S.D. 701.010 (1200mm), O.P.S.D. 701.011 (1500mm), O.P.S.D. 701.012 (1800mm) OR O.P.S.D. 701.013 (2400mm). FRAME AND COVER FOR MAINTENANCE HOLE LOCATED WITHIN PAVEMENT SHALL BE AS PER S-100.071. FRAME AND COVER FOR MAINTENANCE HOLE NOT LOCATED WITHIN PAVEMENT SHALL BE ACCORDING TO O.P.S.D. 401.010 (TYPE A - CLOSED).
- 3. SEWER BEDDING SHALL BE AS PER S-200.010, CLASS P AND BEDDING MATERIAL TO BE PER S-200.010 UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- 4. ALL SERVICE CONNECTIONS TO BE MARKED WITH A 50mm x 100mm WOOD STAKE, PROJECTING 1.0m ABOVE THE GROUND, WITH THE TOP 300mm PAINTED GREEN.
- CONNECTIONS TO EXISTING SANITARY SEWER TO BE MADE USING PIPE CUTTER AND APPROVED SADDLES.
- ALL SEWERS SHALL BE INSTALLED WITH LASER AND CHECKED PRIOR TO BACKFILLING.
- 7. MAINTENANCE HOLE PIPE OPENING AND BENCHING DETAILS TO BE AS PER O.P.S.D. 701.021.
- 8. SANITARY SERVICES TO HAVE A MIN. 2.7m COVER AT THE STREET LINE, UNLESS OTHERWISE NOTED.
- 9. FROST STRAPS TO BE INSTALLED AS PER O.P.S.D # 701.100
- 10. ALL SANITARY SEWER PIPES SMALLER THAN 375 SHALL BE PVC AND HAVE SMOOTH INTERIOR AND EXTERIOR WALL AND CONFORM TO OPSS 1841 MATERIAL SPECIFICATION.

# ROADS, SIDEWALKS AND WALKWAYS

- 1. CATCHBASIN, MAINTENANCE HOLE AND VALVE CHAMBER COVERS SHALL BE SET FLUSH TO BASE COURSE ASPHALT LEVEL AND ADJUSTED TO GRADE PRIOR TO INSTALLING TOP COURSE OF ASPHALT.
- 2. SINGLE STAGE CURB AND WIDE GUTTER IF REQUIRED SHALL BE AS PER O.P.S.D. 600.010.
- 3. CONCRETE FOR CURBS TO CONFORM TO 0.P.S.S. 353.
- 4. TEMPORARY ASPHALT CURB SHALL BE AS PER O.P.S.D. 601.010.
- 5. SIDEWALKS SHALL BE AS PER O.P.S.D. 310.010 WITH CONCRETE TO CONFORM TO O.P.S.S. 351
- 6. THE PAVEMENT STRUCTURE DESIGN WILL BE SPECIFIED AS PER THE GEOTECHNICAL REPORT.



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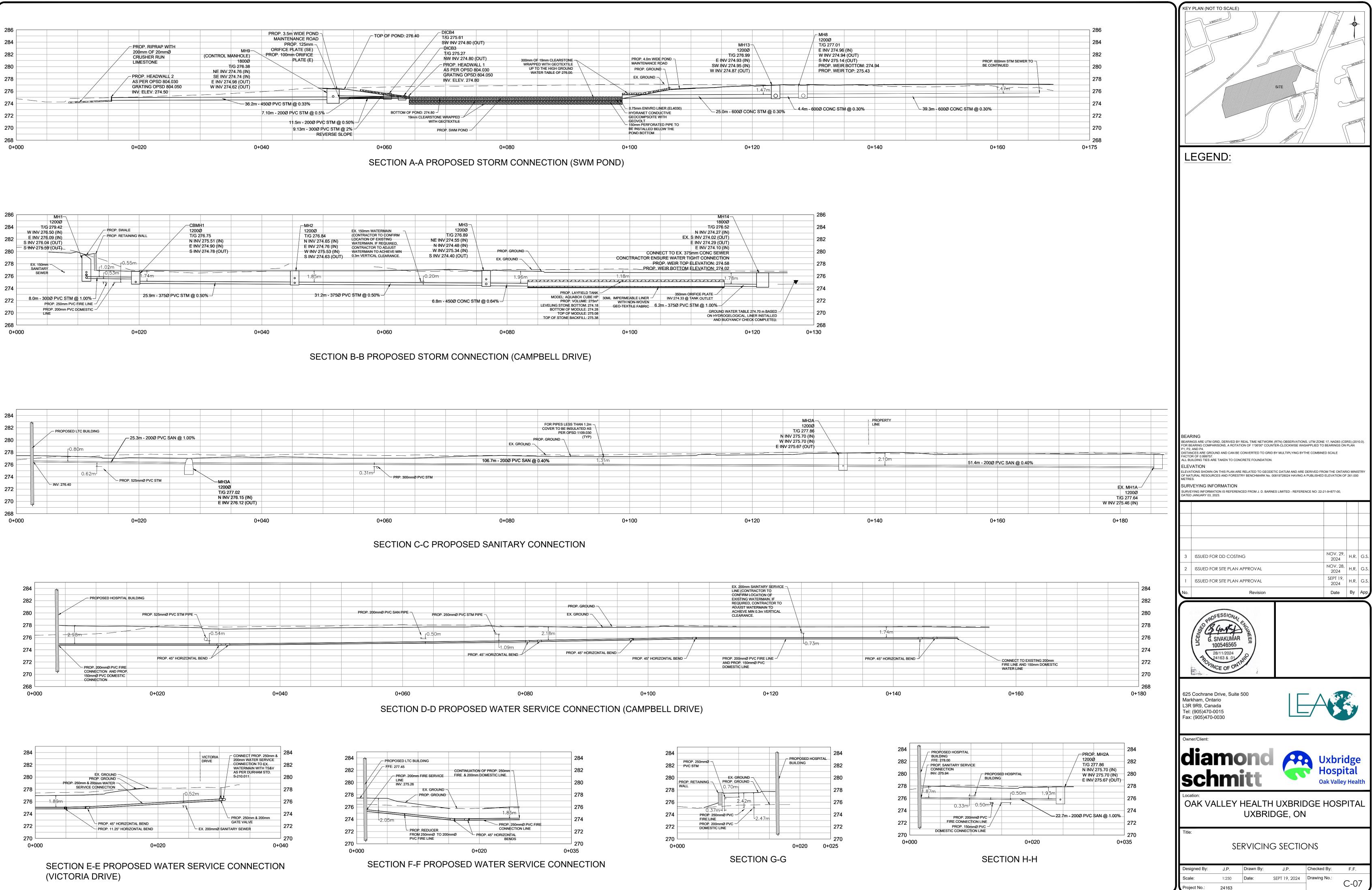
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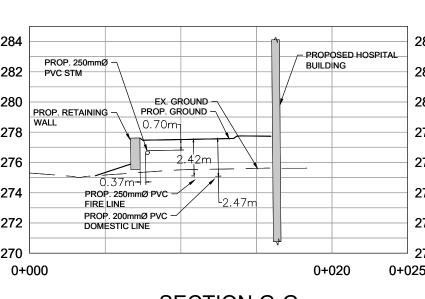
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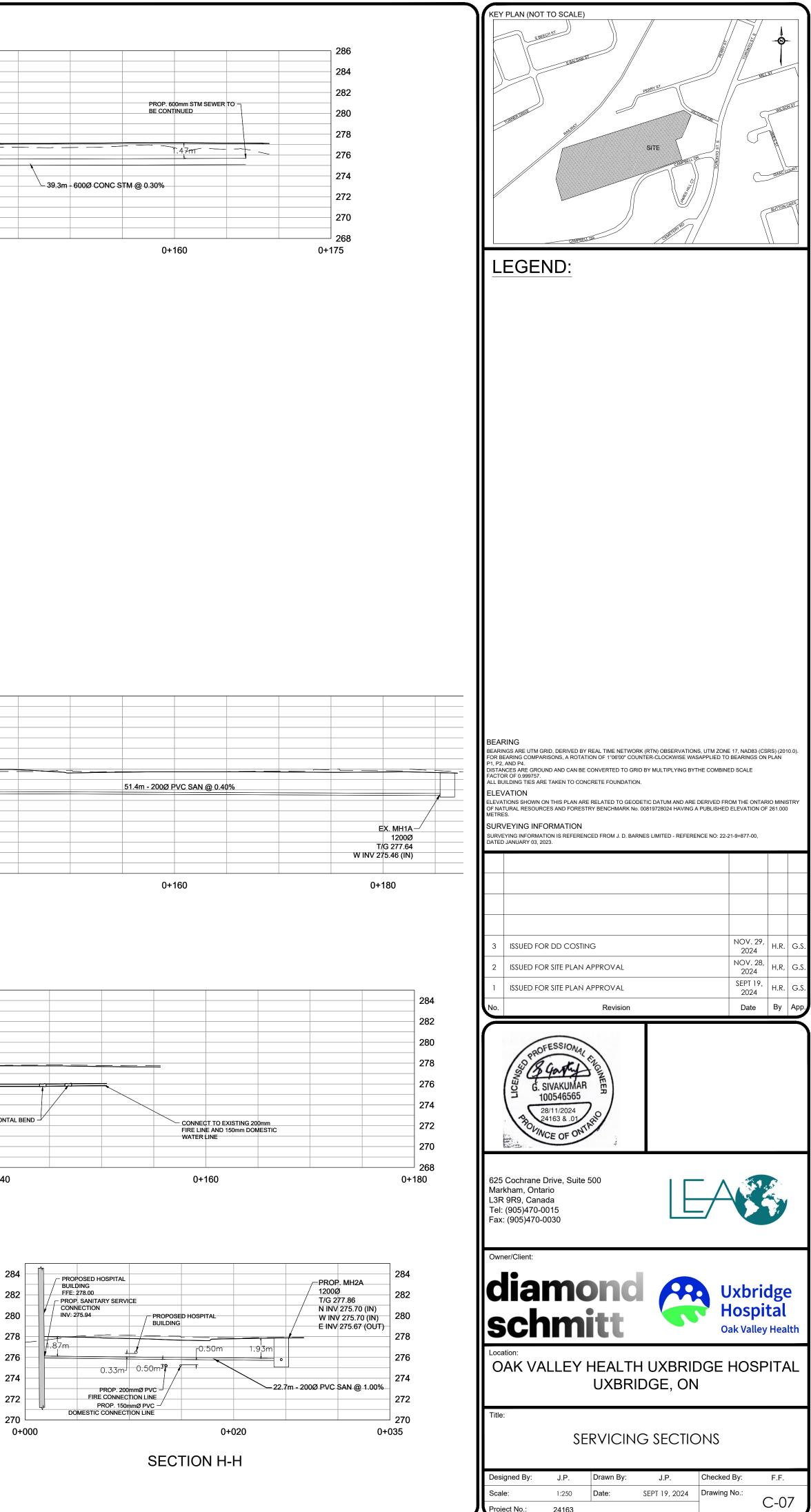
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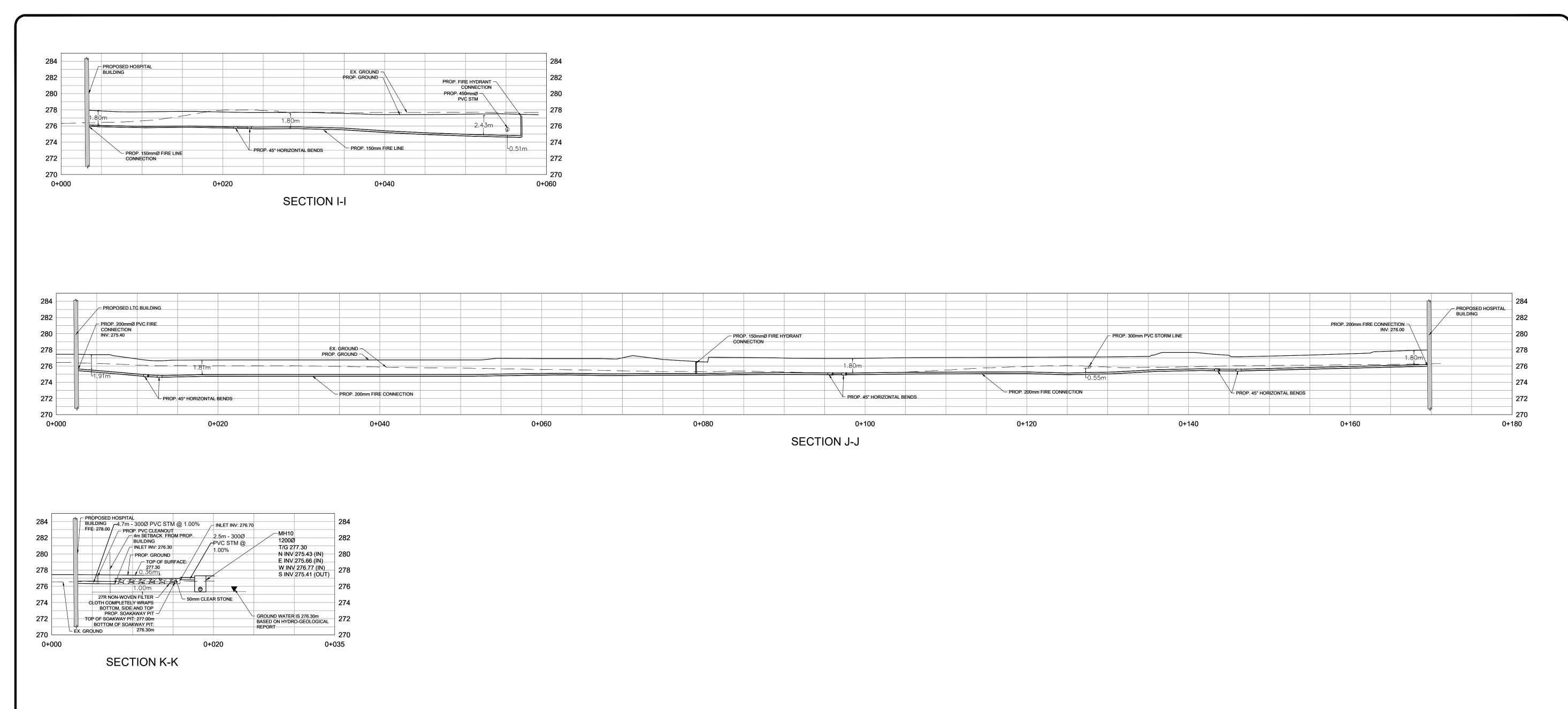
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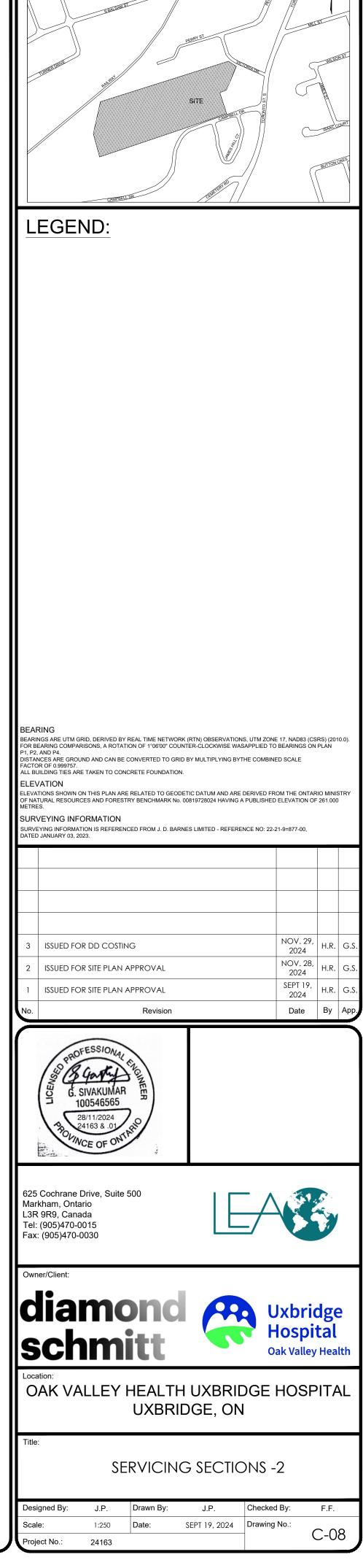
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KEY PLAN (NOT TO SCALE)

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