GENERAL NOTES

- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION, PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
- OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION. 4. BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$5,000,000,000, INSURANCE POLICY TO NAME OWNERS. ENGINEERS AND ARCHITECTS AS
- COMPLETE ALL WORKS IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS USING THE CURRENT GUIDELINES, BYLAWS AND STANDARDS INCLUDING MATERIALS OF CONSTRUCTION, DISINFECTION AND ALL RELEVANT REFERENCES TO OPSS, OPSD & AWWA GUIDELINES - ALL CURRENT VERSIONS AND 'AS AMENDED'.
- RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
- REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
- ALL ELEVATIONS ARE GEODETIC.
- 9. REFER TO THE GEOTECHNICAL INVESTIGATION REPORT (NO. PG6394-1, REV. 3, DATED MAY 31, 2023) AND THE GEOTECHNICAL RECOMMENDATIONS MEMORANDUM (NO. PG6394-MEMO.02, DATED MAY 30, 2023) BOTH PREPARED BY PATERSON GROUP INC., FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL
- 10. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACED AREAS AND DIMENSIONS.
- 11. REFER TO THE 'SITE SERVICING AND STORMWATER MANAGEMENT REPORT' (R-2022-209) PREPARED BY NOVATECH.
- 12. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS
- 13. PROVIDE LINE / PARKING LOT PAINTING AS REQUIRED BY ARCHITECT.
- 14. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A SERVICING PLAN OF 122151-GP1 AND 122151-GP2 INDICATING ALL SERVICING AS-BUILT INFORMATION SHOWN ON THE SERVICING PLANS. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.

SEWER NOTES:

SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS - ALL CURRENT VERSIONS AND 'AS AMENDED'.

REFERENCE

2. SPECIFICATIONS: ITEM

| CATCHBASIN (600x600mm) | 705.010 | OPSD |
|---|---------------|---------------|
| STORM / SANITARY MANHOLE (1200mmØ) | 701.010 | OPSD |
| STORM / CATCHBASIN MANHOLE (2400mmØ) | 701.013 | OPSD |
| CB, FRAME & COVER | 400.020 | OPSD |
| STORM / SANITARY MH FRAME & COVER | 401.010 | OPSD |
| WATERTIGHT MH FRAME AND COVER | 401.030 | OPSD |
| SEWER TRENCH | S6 | CITY OF OTTAV |
| SANITARY / STORM SEWER / CB LEAD | PVC DR 35 | |
| STORM SLIDED DIDE (600mm DIAMETER AND OVED) | CONCRETE 65 D | |

- THE WEEPING TILE SERVICE SHALL BE EQUIPPED WITH A BACKFLOW PREVENTION DEVICE AS PER THE CITY OF OTTAWA
- INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 1.8m COVER WITH HI-40 INSULATION PER INSULATION DETAIL FOR SHALLOW SEWERS. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
- 5. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
- 6. PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM
- DRY DENSITY. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.
- FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SEAL, PSX: POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED
- THE OWNER SHALL REQUIRE THAT THE SITE SERVICING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410.07.16, 410.07.16.04 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL
- ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS. TYPICAL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED. ALL CATCHBASINS ARE TO HAVE 600mm SUMPS UNLESS OTHERWISE INDICATED.
- 10. ALL CATCHBASINS, MANHOLES AND/OR CATCHBASIN MANHOLES THAT ARE TO HAVE <u>ICD'S INSTALLED</u> WITHIN THEM ARE
- 1. ALL WEEPING TILE CONNECTIONS TO BE MADE TO THE PROPOSED STORM SEWER SYSTEM DOWNSTREAM OF ANY INLET
- 12. THE CONTRACTOR IS TO TELEVISE (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT, UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH, CLEAN AND RE-TELEVISE (CCTV) ALL SEWERS & APPURTENANCES. PROVIDE A COPY OF ALL CCTV INSPECTION REPORTS TO THE ENGINEER FOI

GRADING NOTES

- ALL TOPSOIL. ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS AS DIRECTED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER.
- EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF GRANULARS.
- ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUB-EXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- THE GRANULAR BASE SHOULD BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE PROPOSED PAVEMENT SHOULD BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
- MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
- MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTED.
- 7. ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS OTHERWISE INDICATED.
- 8. ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER CITY OF OTTAWA STANDARDS (SC1.1).
- 9. REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS.
- 10. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING AS-BUILT ELEVATIONS OF ALL DESIGN GRADES SHOWN ON PLANS 122151-GR1 AND 122151-GR2.

PAVEMENT STRUCTURES:

- LIGHT DUTY PAVEMENT 1 50mm HL-3 or SUPERPAVE 12.5 150mm GRANULAR "A" 300mm GRANULAR "B" TYPE II ASPHALT GRADE PG 58-34 - TRAFFIC LEVEL 'B' *INSTALLED PER GEOTECHNICAL REPORT
- HEAVY DUTY PAVEMENT 40mm HL-3 or SUPERPAVE 12.5 50mm HL-8 or SUPERPAVE 19.0 150mm GRANULAR "A" 400mm GRANULAR "B" TYPE II ASPHALT GRADE PG 58-34 - TRAFFIC LEVEL 'B' *INSTALLED PER GEOTECHNICAL REPORT
- HEAVY DUTY CONCRETE PAD CONCRETE AND HEAVY DUTY GRANULAR BASE INSTALLED PER GEOTECHNICAL REPORT
- SLOPED CONCRETE (ADJACENT TO LOADING RAMPS) 150mm CONCRETE PER CITY STANDARD SC22 (MAX. 2:1 SLOPE)
- <u> IEAVY DUTY PAVEMENT ROADWAY RE-INSTATEMEN'</u> MATCH EXISTING GRANULAR STRUCTURE OF ROADWAY IN TRENCHES MATCH EXISTING ASPHALT THICKNESSES IN TRENCHES NEW ASPHALT GRADE: PG 58-34 PROVIDE MUNICIPAL ROADWAY ASPHALT OVERLAY AS SHOWN, PER CITY STANDARD DETAIL R10. REFER TO AMENDED ROAD ACTIVITY
- BY-LAW 2003-445

EROSION AND SEDIMENT CONTROL NOTES

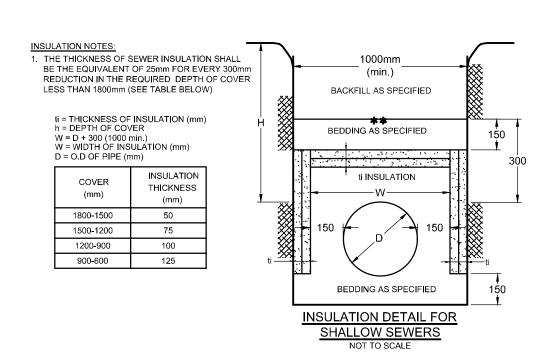
- THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES. TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY
- 1. ALL EROSION AND SEDIMENT CONTROLS ARE TO BE INSTALLED TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF OTTAWA. THEY ARE TO BE APPROPRIATE TO THE SITE CONDITIONS, PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING, REMOVAL OF VEGETATION, ETC.) AND DURING ALL PHASES OF SITE PREPARATION AND CONSTRUCTION, THESE PRACTICES ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL AND SHOULD INCLUDE AS A MINIMUM THOSE MEASURES INDICATED ON THE PLAN.
- 2. EROSION AND SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED DURING CONSTRUCTION IN ACCORDANCE WITH THE "GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES" (GOVERNMENT OF ONTARIO, MAY 1987). THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEETING ALL REGULATORY AGENCY REQUIREMENTS.
- 3. TO PREVENT SURFACE EROSION FROM ENTERING ANY STORM SEWER SYSTEM DURING CONSTRUCTION, FILTER BAGS WILL BE PLACED UNDER GRATES OF NEARBY CATCHBASINS AND STRUCTURES. A LIGHT DUTY SILT FENCE BARRIER WILL ALSO BE INSTALLED AROUND THE CONSTRUCTION AREA (WHERE APPLICABLE). THESE CONTROL MEASURES WILL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
- 4. TO LIMIT EROSION: MINIMIZE THE AMOUNT OF EXPOSED SOILS AT ANY GIVEN TIME, RE-VEGETATE EXPOSED AREAS AND SLOPES AS SOON AS POSSIBLE AND PROTECT EXPOSED SLOPES WITH NATURAL OR SYNTHETIC MULCHES.
- 5. FOR MATERIAL STOCKPILING: MINIMIZE THE AMOUNT OF EXPOSED MATERIALS AT ANY GIVEN TIME; APPLY TEMPORARY SEEDING, TARPS, COMPACTION AND/OR SURFACE ROUGHENING AS REQUIRED TO STABILIZE STOCKPILED MATERIALS THAT WILL NOT BE USED WITHIN 14
- 6. THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE ENGINEER, THE MEASURES ARE NO LONGER REQUIRED. NO CONTROL MEASURES MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE ENGINEER.
- 7. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO ANY STORM SEWER SYSTEM. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.
- 8. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
- 9. ROADWAYS ARE TO BE SWEPT AS REQUIRED OR AS DIRECTED BY THE ENGINEER AND/OR THE MUNICIPALITY.
- 10. THE CONTRACTOR SHALL ENSURE PROPER DUST CONTROL IS PROVIDED WITH THE APPLICATION OF WATER (AND IF REQUIRED, CALCIUM CHLORIDE) DURING DRY PERIODS. MONITOR DUST LEVELS DURING SITE PREPARATION/EXCAVATION, AND CONSTRUCTION ACTIVITIES, AND WHEN DUST LEVELS BECOME VISUALLY APPARENT SPRAY WATER TO MINIMIZE THE RELEASE OF DUST FROM GRAVEL, PAVED AREAS AND EXPOSED SOILS. USE CHEMICAL DUST SUPPRESSANTS ONLY WHERE NECESSARY ON PROBLEM AREAS.

WATERMAIN NOTES:

WATERMAIN MATERIAL

- 1. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS - ALL CURRENT VERSIONS AND 'AS AMENDED'. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN BY CITY OF OTTAWA FORCES. CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE CITY OF OTTAWA FORCES.
- 2. SPECIFICATIONS: WATERMAIN TRENCHING HYDRANT INSTALLATION CITY OF OTTAWA THERMAL INSULATION IN SHALLOW TRENCHES CITY OF OTTAWA THERMAL INSULATION AT OPEN STRUCTURES CITY OF OTTAWA W23 VALVE BOX ASSEMBLY CITY OF OTTAWA W24 WATERMAIN CROSSING BELOW SEWER W25 CITY OF OTTAWA WATERMAIN CROSSING OVER SEWER W25.2 CITY OF OTTAWA CONCRETE THRUST BLOCKS W25.3 & W25.4 CITY OF OTTAWA CITY OF OTTAWA CATHODIC PROTECTION ANODE INSTALLATION W42 CITY OF OTTAWA
- 3. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
- 4. PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS, WHERE POSSIBLE UNLESS OTHERWISE INDICATED.
- 5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

PVC DR 18



| INLET CONTROL DEVICE DATA TABLE: AREA A-1 (OUTLET PIPE of CB 01) | | | | | | | | |
|--|-------------------------|------------------------------------|------------------------------|--------------------------------|--------------------|------------------------|----------------|----------------------|
| DESIGN EVENT | ICD TYPE (PLUG TYPE) | DIAMETER OF OUTLET PIPE (mm) | PEAK DESIGN FLOW (L/s) | ½ PEAK DESIGN FLOW (L/s) | DESIGN HEAD (m) | WATER ELEVATION (m) | VOLUME (m³) | AVAILABLE STORAGE |
| 1:2 YR | CIRCULAR | 050 | 61.2 | 30.6 | 0.94 | 101.55 | 8.9 | |
| 1:5 YR | 171mmØ | 250mmØ PVC DR35 | 62.8 | 31.4 | 0.99 | 101.60 | 17.5 | > 120 m ³ |
| 1:100 YR | ORIFICE PLUG | 1 10 0103 | 65.6 | 32.8 | 1.08 | 101.69 | 55.7 | |

| | INLET CONTROL DEVICE DATA TABLE: AREA A-4 (OUTLET PIPE of STM MH 04) | | | | | | | | |
|---|--|-------------------------|------------------------------------|------------------------------|--------------------------------|--------------------|------------------------|------------------------|----------------------|
| | DESIGN EVENT | ICD TYPE (PLUG TYPE) | DIAMETER OF OUTLET PIPE (mm) | PEAK DESIGN FLOW (L/s) | ½ PEAK DESIGN FLOW (L/s) | DESIGN HEAD (m) | WATER ELEVATION (m) | VOLUME (m³) | AVAILABLE STORAGE |
| ſ | 1:2 YR | CIRCULAR | 075 0 | 109.4 | 54.7 | 1.32 | 99.15 | 230 | |
| | 1:5 YR | 210mmØ PVC DR35 | 145.0 | 72.5 | 2.32 | 100.15 | 311 | > 1,100 m ³ | |
| | 1:100 YR | ORIFICE PLUG | 1 00 0103 | 167.0 | 83.5 | 3.08 | 100.91 | 721 | |

| TATION | SURFACE ELEVATION | T/WM ELEVATION | COMMENTS |
|----------------|----------------------|-------------------|--|
| 0+000 | 102.05± | 99.65 * | CONNECTION TO EXISTING 300mmØ WATERMAIN TEE |
| -009.5 | 102.10 | 99.70 | 300mmØ VALVE & VALVE BOX @ PROPERTY LINE |
| 012.2 | 102.05 | 99.65 | 300 x 300 x 300 TEE (1+000) |
| 013.0 | 102.05 | 99.65 | 300mmØ VALVE & VALVE BOX |
| +025 +050 | 102.03 | 99.63 | |
| +075 | 102.40 | 99,86 | |
| +100 | 102.33 | 99.93 | |
| +125 | 102.24 | 99.84 | |
| 139.0 | 102.10 | 99.70 | 45° HORIZONTAL BEND |
| 141.9 | 102.10 | 99.70 | 45° HORIZONTAL BEND |
| +150 | 102.10 | 99.70 | |
| 151.6 | 102.09 | 99.69 | 300 x 150 x 300 TEE (HYDRANT No. 05) |
| +175 | 102.21 | 99.81 | |
| +200 | 101.95 | 99.55 | |
| +225 | 101.87 | 99.47 | |
| +250 | 101.84 | 99.44 | |
| +275 | 101.56 | 99.16 | 200 v 450 v 200 TEE (HVDDANT No. 04) |
| 295.8 297.4 | 101.43 | 99.03 | 300 x 150 x 300 TEE (HYDRANT No. 04) 300mmØ VALVE & VALVE BOX |
| 298.4 298.4 | 101.40 | 98.98 | 22.5° HORIZONTAL BEND |
| 320.6 | 101.25 | 98,85 | CROSS BELOW 250mmØ STM [Inv=99.68m] (±0.8m CLEARANCE) |
| 321.7 | 101.30 | 98.90 | 22.5° HORIZONTAL BEND |
| +350 | 101.65 | 98.75 | |
| +375 | 101.60 | 98.45 | |
| 386.6 | 101.45 | 98.45 | 45° HORIZONTAL BEND |
| 390.9 | 101.00 | 98.45 | 45° HORIZONTAL BEND |
| +400 | 100.85 | 98.45 | |
| 407.7 | 101.00 | 98.60 | 45° HORIZONTAL BEND |
| 410.5 | 101.05 | 98.65 | 45° HORIZONTAL BEND |
| 419.0 | 101.15 | 98.75 | 300 x 250 x 300 TEE (2+000) |
| +425 | 101.15 | 98.75 | |
| 433.5 | 101.15 | 98.75 | 300 x 250 x 300 TEE (3+074.9) |
| 442.0 | 101.15 | 98.75 | 22.5° VERTICAL BEND |
| 444.2 | 100.90 | 97.90 | 22.5° VERTICAL BEND |
| 448.6 | 100.28 | 97.88 | 300mmØ VALVE & VALVE BOX @ PROPERTY LINE (5+000) |
| +000 | 102.05 | 99.65 | 300 x 300 x 300 TEE (0+012.2) |
| 000.5 | 102.05 | 99.65 | 45° HORIZONTAL BEND |
| 001.1 | 102.04 | 99.64 | 300 x 250 REDUCER |
| 001.7 | 102.03 | 99.63 99.90 ** | 22.5° VERTICAL BEND |
| 003.0 | 102.02 | 99.90 | 22.5° VERTICAL BEND CROSS AROVE 250mm (\$ SAN JON) (-0.9 0.4m.) (+1.6m. CLEARANCE) |
| 004.1 006.4 | 101.99 | 99 90 ** * | CROSS ABOVE 250mmØ SAN [Obv=98.01m] (±1.6m CLEARANCE) CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) |
| 010.0 | 101.96 | 99.90 ** | |
| 012.5 | 102.17 | 99.90 *** | CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) |
| 013.7 | 102.20 | 99.85 | 250 x 150 x 250 TEE (HYDRANT No. 06) |
| 015.2 | 102.07 | 99.85 ** | 22.5° VERTICAL BEND |
| 016.0 | 102.07 | 100.20 ** | 22.5° VERTICAL BEND |
| -018.1 | 102.06 | 100.20*** | CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) |
| 021.0 | 102.05 | 100.20*** | CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) |
| +025 | 102.07 | 100.00 ** | |
| 025.5 | 102.07 | 99.90 ** | 22.5° VERTICAL BEND |
| 026.3 | 102.08 | 99.68 | 22.5° VERTICAL BEND |
| 029.0 | 102.08 | 99.68 | 250 x 200 REDUCER |
| 037.7 | 102.01 | 99.61 | 45° HORIZONTAL BEND |
| 038.7 | 102.03 | 99.63 | 200 x 200 x 200 TEE (HYDRANT No. 07) |
| 042.9 047.1 | 102.13 | 99.73 | 200mmØ VALVE & VALVE BOX 200mmØ BUILDING 'B' SERVICE CAP (1.0m FROM FOUNDATION WALI |
| | | | |
| +000 | 101.15 | 98.75 | 300 x 250 x 300 TEE (0+419.0) |
| 012.0 | 101.57 | 99.17 | 250mmØ VALVE & VALVE BOX |
| +025 | 101.55 | 99.15 | |
| +050 +075 | 101.85 | 99.45 99.20 | |
| +075 095.2 | 101.60 | 99.20 | 250 x 150 x 250 TEE (3+000 @ HYDRANT No. 02) |
| 095.2 | 101.63 | 99.23 | 250 x 150 x 250 1EE (3+000 @ HYDRAN1 No. 02) |
| 099.2 | 101.63 | 99.23 | 200mmØ VALVE & VALVE BOX |
| +100 | 101.64 | 99.24 | |
| +125 | 101.75 | 99.35 | |
| 140.2 | 101.63 | 99.23 | 200 x 200 x 200 BUILDING 'A' SERVICE TEE (4+000) |
| +150 | 101.71 | 99.30 | |
| 150.6 | 101.71 | 99.30 | 45° HORIZONTAL BEND |
| 152.0 | 101.69 | 99.30 | 45° HORIZONTAL BEND |
| 153.5 | 101.67 | 99.27 | 200mmØ VALVE & VALVE BOX |
| 154.8 | 101.65 | 99.25 | 200 x 150 REDUCER |
| 157.4 | 101.75 | 99.25 | FIRE HYDRANT No. 01 |
| +000 | 101.63 | 99.23 | 200 x 150 x 200 TEE (2+066.0) |
| 002.0 | 101.61 | 99.20 | 150mmØ VALVE & VALVE BOX |
| 006.8 | 101.75 | 99.20 | FIRE HYDRANT No. 02 |
| | 101.63 | 99.23 | 200 x 200 x 200 BUILDING 'A' SERVICE TEE (2+140.2) |
| +000 | | | |
| +000 ·002.5 | 101.68 | 99.28 | 200mmØ VALVE & VALVE BOX |
| | 101.68 101.75 | 99.28 | 200mmØ BUILDING 'A' SERVICE CAP (1.0m FROM FOUNDATION WAL |

- W25.2 TO AVOID CONFLICTS, WHERE POSSIBLE.

| SURFACE LEVATION | T/WM ELEVATION | COMMENTS | | SITE BOUNDARY © SWALE AND DIRECTION OF FLOW |
|---|---|---|--|--|
| 102.05± | 99.65 * | CONNECTION TO EXISTING 300mmØ WATERMAIN TEE | | _ |
| 102.10 | 99.70 | 300mmØ VALVE & VALVE BOX @ PROPERTY LINE | 127.55 * 127.45 | PROPOSED ELEVATION EXISTING ELEVATION |
| 102.05 | 99.65 | 300 x 300 x 300 TEE (1+000) | 127.55(S) | PROPOSED SWALE ELEVATION |
| 102.05 | 99.65 | 300mmØ VALVE & VALVE BOX | | |
| 102.03 | 99.63 | | 127.55 | PROPOSED TERRACE ELEVATION |
| 102.46 | 100.06 | | 7,,,,, | MAXIMUM 3: 1 SIDESLOPE |
| 102.26 | 99.86 | | _ | DARKING ORANG AND DIRECTION |
| 102.33 102.24 | 99.93 99.84 | | 2.0% | PARKING GRADE AND DIRECTION |
| 102.24 | 99.70 | 45° HORIZONTAL BEND | FFE | PROPOSED FINISHED FLOOR ELEVATION |
| 102.10 | 99.70 | 45° HORIZONTAL BEND | USF | PROPOSED UNDER SIDE OF FOOTING ELEVA |
| 102.10 | 99.70 | | | PROPOSED BUILDING ENTRANCE |
| 102.09 | 99.69 | 300 x 150 x 300 TEE (HYDRANT No. 05) | | PROPOSED LIMIT OF BUILDING OVERHANG |
| 102.21 | 99.81 | | T/G= | TOP OF GRATE ELEVATION |
| 101.95 | 99.55 | | MH100 (| PROPOSED STORM MANHOLE |
| 101.87 | 99.47 | | CB1☐ | PROPOSED CATCHBASIN |
| 101.84 | 99.44 | | CB1 | PROPOSED CATCHBASIN WITH TEMPORARY |
| 101.56 | 99.16 | | СВТ1 | PROPOSED CATCHBASIN TEE |
| 101.43 | 99.03 | 300 x 150 x 300 TEE (HYDRANT No. 04) | CBE1 | PROPOSED CATCHBASIN ELBOW |
| 101.40 | 99.00 | 300mmØ VALVE & VALVE BOX | - | PROPOSED STORM SEWER AND DIRECTION OF FLOW |
| 101.38 101.25 | 98.98 98.85 | 22.5° HORIZONTAL BEND CROSS BELOW 250mmØ STM [Inv=99.68m] (±0.8m CLEARANCE) | | PROPOSED CATCHBASIN LEAD AND |
| 101.30 | 98.90 | 22.5° HORIZONTAL BEND | | DIRECTION OF FLOW |
| 101.65 | 98.75 | | | PROPOSED CATCHBASIN SUBDRAIN AND DIRECTION OF FLOW |
| 101.60 | 98.45 | | MH101 | PROPOSED SANITARY MANHOLE |
| 101.45 | 98.45 | 45° HORIZONTAL BEND | | PROPOSED SANITARY SEWER AND |
| 101.00 | 98.45 | 45° HORIZONTAL BEND | | DIRECTION OF FLOW |
| 100.85 | 98.45 | | | PROPOSED WATERMAIN |
| 101.00 | 98.60 | 45° HORIZONTAL BEND | BEND | PROPOSED BEND AND THRUSTBLOCK 11.25°, 22.5°, 45° OR TEE |
| 101.05 | 98.65 | 45° HORIZONTAL BEND | VVB ⊗ | PROPOSED VALVE AND VALVE BOX |
| 101.15 | 98.75 | 300 x 250 x 300 TEE (2+000) | HYD - (| PROPOSED HYDRANT C/W VALVE & LEAD |
| 101.15 | 98.75 | | | |
| 101.15 | 98.75 | 300 x 250 x 300 TEE (3+074.9) | | PROPOSED CAP |
| 101.15 | 98.75 | 22.5° VERTICAL BEND | (A) | PIPE CROSSING LOCATION |
| 100.90 | 97.90 | 22.5° VERTICAL BEND | Ø | PROPOSED ROOF DRAIN |
| 100.28 | 97.88 | 300mmØ VALVE & VALVE BOX @ PROPERTY LINE (5+000) | | PROPOSED BARRIER CURB |
| 102.05 | 99.65 | 300 x 300 x 300 TEE (0+012.2) | DC | PROPOSED DEPRESSED CURB |
| 102.05 | 99.65 | 45° HORIZONTAL BEND | 00000 | TACTILE WALKING SURFACE INDICATOR (TW |
| 102.04 | 99.64 | 300 x 250 REDUCER | <u>ြို့ ဝိုင်</u> ဝ | |
| 102.03 | 99.63 | 22.5° VERTICAL BEND | | CURB CUTOUT |
| 102.02 101.99 | 99.90 ** | 22.5° VERTICAL BEND | Į | PROPOSED LIGHT STANDARD |
| 101 GG 1 | 99.90 *** | | | |
| | | CROSS ABOVE 250mmØ SAN [Obv=98.01m] (±1.6m CLEARANCE) | — | PROPOSED SIAMESE CONNECTION |
| 101.98 | 99.90 *** | CROSS ABOVE 250mmØ SAN [Obv=98.01m] (±1.6m CLEARANCE) CROSS ABOVE 610mmØ STM [Obv=99,29m] (±0.3m CLEARANCE) | > — ⊚M | PROPOSED SIAMESE CONNECTION PROPOSED GAS METER LOCATION |
| 101.98 101.96 | 99.90 *** 99.90 ** | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) | > ⊚M ⊕M | |
| 101.98 101.96 102.17 | 99.90 *** 99.90 ** | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) | (HM) | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION |
| 101.98 101.96 | 99.90 *** 99.90 ** | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) | | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS |
| 101.98 101.96 102.17 102.20 | 99.90 *** 99.90 ** 99.90 *** 99.85 | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) | (HM) | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION |
| 101.98 101.96 102.17 102.20 102.07 | 99.90 *** 99.90 *** 99.85 99.85 ** | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND | | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS |
| 101.98 101.96 102.17 102.20 102.07 102.07 | 99.90 *** 99.90 *** 99.90 *** 99.85 99.85 100.20 ** 100.20 *** | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND | | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 |
| 101.98 101.96 102.17 102.20 102.07 102.07 102.06 | 99.90 *** 99.90 *** 99.90 *** 99.85 99.85 ** 100.20 ** 100.20 ** 100.20 ** | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) | | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE |
| 101.98 101.96 102.17 102.20 102.07 102.07 102.06 102.05 | 99.90 *** 99.90 *** 99.90 *** 99.85 99.85 100.20 ** 100.20 *** | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) | | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE STRAW BALES AS PER OPSD 219.100 |
| 101.98 101.96 102.17 102.20 102.07 102.06 102.05 102.07 102.07 102.08 | 99.90 *** 99.90 ** 99.90 ** 99.85 99.85 ** 100.20 ** 100.20 ** 100.00 ** 99.90 ** | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) 22.5° VERTICAL BEND 22.5° VERTICAL BEND | | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE |
| 101.98 101.96 102.17 102.20 102.07 102.07 102.06 102.05 102.07 102.07 102.08 102.08 | 99.90 *** 99.90 *** 99.90 *** 99.85 99.85 ** 100.20 ** 100.20 ** 100.90 ** 99.90 ** 99.90 ** 99.68 | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) 22.5° VERTICAL BEND 22.5° VERTICAL BEND 22.5° VERTICAL BEND | | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE STRAW BALES AS PER OPSD 219.100 |
| 101.98 101.96 102.17 102.20 102.07 102.06 102.05 102.07 102.07 102.08 102.08 | 99.90 *** 99.90 ** 99.90 ** 99.85 99.85 ** 100.20 ** 100.20 ** 100.00 ** 99.90 ** 99.68 99.68 99.61 | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) 22.5° VERTICAL BEND 22.5° VERTICAL BEND 250 x 200 REDUCER 45° HORIZONTAL BEND | MM M M | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE STRAW BALES AS PER OPSD 219.100 CONSTRUCTION ACCESS MUD MAT |
| 101.98 101.96 102.17 102.20 102.07 102.07 102.06 102.05 102.07 102.07 102.08 102.08 102.08 102.01 102.03 | 99.90 *** 99.90 *** 99.90 *** 99.85 99.85 ** 100.20 ** 100.20 ** 100.20 ** 100.68 99.68 99.68 99.61 99.63 | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) 22.5° VERTICAL BEND 22.5° VERTICAL BEND 22.5° VERTICAL BEND 250 x 200 REDUCER 45° HORIZONTAL BEND 200 x 200 x 200 TEE (HYDRANT No. 07) | HM MM ICD ■ | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE STRAW BALES AS PER OPSD 219.100 CONSTRUCTION ACCESS MUD MAT |
| 101.98 101.96 102.17 102.20 102.07 102.06 102.05 102.07 102.08 102.08 102.08 102.01 102.03 102.13 | 99.90 *** 99.90 ** 99.90 ** 99.85 99.85 ** 100.20 ** 100.20 ** 100.00 ** 99.90 ** 99.68 99.68 99.61 99.63 99.73 | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) 22.5° VERTICAL BEND 22.5° VERTICAL BEND 22.5° VERTICAL BEND 250 x 200 REDUCER 45° HORIZONTAL BEND 200 x 200 x 200 TEE (HYDRANT No. 07) | MM M M | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE STRAW BALES AS PER OPSD 219.100 CONSTRUCTION ACCESS MUD MAT PROPOSED INLET CONTROL DEVICE |
| 101.98 101.96 102.17 102.20 102.07 102.06 102.05 102.07 102.08 102.08 102.01 102.03 102.13 102.38 | 99.90 *** 99.90 ** 99.90 ** 99.85 99.85 99.85 ** 100.20 ** 100.20 ** 100.00 ** 99.90 ** 99.68 99.68 99.61 99.63 99.73 99.75 | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) 22.5° VERTICAL BEND 22.5° VERTICAL BEND 22.5° VERTICAL BEND 250 x 200 REDUCER 45° HORIZONTAL BEND 200 x 200 x 200 TEE (HYDRANT No. 07) 200mmØ VALVE & VALVE BOX 200mmØ BUILDING 'B' SERVICE CAP (1.0m FROM FOUNDATION WALL) | HM MM ICD ■ | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE STRAW BALES AS PER OPSD 219.100 CONSTRUCTION ACCESS MUD MAT PROPOSED INLET CONTROL DEVICE APPROXIMATE PONDING LIMITS |
| 101.98 101.96 102.17 102.20 102.07 102.07 102.06 102.05 102.07 102.07 102.08 102.08 102.08 102.01 102.03 102.13 102.38 101.15 | 99.90 *** 99.90 *** 99.90 *** 99.85 ** 100.20 *** 100.20 *** 100.00 ** 99.90 ** 99.68 99.68 99.68 99.61 99.63 99.73 99.75 98.75 | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) 22.5° VERTICAL BEND 22.5° VERTICAL BEND 22.5° VERTICAL BEND 250 x 200 REDUCER 45° HORIZONTAL BEND 200 x 200 x 200 TEE (HYDRANT No. 07) 200mmØ VALVE & VALVE BOX 200mmØ BUILDING 'B' SERVICE CAP (1.0m FROM FOUNDATION WALL) | HM MM ICD ■ | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE STRAW BALES AS PER OPSD 219.100 CONSTRUCTION ACCESS MUD MAT PROPOSED INLET CONTROL DEVICE |
| 101.98 101.96 102.17 102.20 102.07 102.06 102.05 102.07 102.08 102.08 102.01 102.03 102.13 102.38 101.15 101.57 | 99.90 *** 99.90 ** 99.90 ** 99.85 99.85 99.85 ** 100.20 ** 100.20 ** 100.00 ** 99.90 ** 99.68 99.61 99.63 99.73 99.75 98.75 99.17 | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) 22.5° VERTICAL BEND 22.5° VERTICAL BEND 22.5° VERTICAL BEND 250 x 200 REDUCER 45° HORIZONTAL BEND 200 x 200 x 200 TEE (HYDRANT No. 07) 200mmØ VALVE & VALVE BOX 200mmØ BUILDING 'B' SERVICE CAP (1.0m FROM FOUNDATION WALL) 300 x 250 x 300 TEE (0+419.0) 250mmØ VALVE & VALVE BOX | HM MM ICD ■ | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE STRAW BALES AS PER OPSD 219.100 CONSTRUCTION ACCESS MUD MAT PROPOSED INLET CONTROL DEVICE APPROXIMATE PONDING LIMITS |
| 101.98 101.96 102.17 102.20 102.07 102.07 102.06 102.05 102.07 102.07 102.08 102.08 102.08 102.01 102.03 102.13 102.38 101.15 101.57 101.55 | 99.90 *** 99.90 ** 99.90 ** 99.85 99.85 ** 100.20 ** 100.20 ** 100.00 ** 99.90 ** 99.68 99.68 99.68 99.61 99.63 99.73 99.75 98.75 99.17 99.15 | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) 22.5° VERTICAL BEND 22.5° VERTICAL BEND 22.5° VERTICAL BEND 250 x 200 REDUCER 45° HORIZONTAL BEND 200 x 200 x 200 TEE (HYDRANT No. 07) 200mmØ VALVE & VALVE BOX 200mmØ BUILDING 'B' SERVICE CAP (1.0m FROM FOUNDATION WALL) 300 x 250 x 300 TEE (0+419.0) 250mmØ VALVE & VALVE BOX | HM MM ICD ■ 1:5 YR | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE STRAW BALES AS PER OPSD 219.100 CONSTRUCTION ACCESS MUD MAT PROPOSED INLET CONTROL DEVICE APPROXIMATE PONDING LIMITS STORM DRAINAGE BOUNDARY AREA (ha) SUB-CATCHMENT AREA ID |
| 101.98 101.96 102.17 102.20 102.07 102.06 102.05 102.07 102.08 102.08 102.01 102.03 102.13 102.38 101.15 101.57 101.85 | 99.90 *** 99.90 ** 99.90 ** 99.85 99.85 99.85 ** 100.20 ** 100.20 ** 100.00 ** 99.90 ** 99.68 99.61 99.63 99.63 99.73 99.75 98.75 99.17 99.15 99.45 | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) 22.5° VERTICAL BEND 22.5° VERTICAL BEND 22.5° VERTICAL BEND 250 x 200 REDUCER 45° HORIZONTAL BEND 200 x 200 x 200 TEE (HYDRANT No. 07) 200mmØ VALVE & VALVE BOX 200mmØ BUILDING 'B' SERVICE CAP (1.0m FROM FOUNDATION WALL) 300 x 250 x 300 TEE (0+419.0) 250mmØ VALVE & VALVE BOX | 1:5 YR | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE STRAW BALES AS PER OPSD 219.100 CONSTRUCTION ACCESS MUD MAT PROPOSED INLET CONTROL DEVICE APPROXIMATE PONDING LIMITS STORM DRAINAGE BOUNDARY AREA (ha) |
| 101.98 101.96 102.17 102.20 102.07 102.07 102.06 102.05 102.07 102.07 102.08 102.08 102.08 102.01 102.03 102.13 102.38 101.15 101.57 101.55 101.60 | 99.90 *** 99.90 ** 99.90 ** 99.85 99.85 ** 100.20 ** 100.20 ** 100.00 ** 99.90 ** 99.68 99.68 99.68 99.61 99.63 99.73 99.75 98.75 99.17 99.15 99.45 99.20 | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) 22.5° VERTICAL BEND 22.5° VERTICAL BEND 22.5° VERTICAL BEND 22.5° VERTICAL BEND 2200 x 200 REDUCER 45° HORIZONTAL BEND 200 x 200 x 200 TEE (HYDRANT No. 07) 200mmØ VALVE & VALVE BOX 200mmØ BUILDING 'B' SERVICE CAP (1.0m FROM FOUNDATION WALL) 300 x 250 x 300 TEE (0+419.0) 250mmØ VALVE & VALVE BOX | 1:5 YR 0.637 A-1 0.36 | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE STRAW BALES AS PER OPSD 219.100 CONSTRUCTION ACCESS MUD MAT PROPOSED INLET CONTROL DEVICE APPROXIMATE PONDING LIMITS STORM DRAINAGE BOUNDARY AREA (ha) SUB-CATCHMENT AREA ID 1:5 YR POST-DEVELOPMENT RUNOFF COEFF |
| 101.98 101.96 102.17 102.20 102.07 102.06 102.05 102.07 102.08 102.08 102.01 102.03 102.13 102.38 101.15 101.57 101.85 | 99.90 *** 99.90 ** 99.90 ** 99.85 99.85 99.85 ** 100.20 ** 100.20 ** 100.00 ** 99.90 ** 99.68 99.61 99.63 99.63 99.73 99.75 98.75 99.17 99.15 99.45 | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) 22.5° VERTICAL BEND 22.5° VERTICAL BEND 22.5° VERTICAL BEND 250 x 200 REDUCER 45° HORIZONTAL BEND 200 x 200 x 200 TEE (HYDRANT No. 07) 200mmØ VALVE & VALVE BOX 200mmØ BUILDING 'B' SERVICE CAP (1.0m FROM FOUNDATION WALL) 300 x 250 x 300 TEE (0+419.0) 250mmØ VALVE & VALVE BOX | 1:5 YR 0.637 A-1 | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE STRAW BALES AS PER OPSD 219.100 CONSTRUCTION ACCESS MUD MAT PROPOSED INLET CONTROL DEVICE APPROXIMATE PONDING LIMITS STORM DRAINAGE BOUNDARY AREA (ha) SUB-CATCHMENT AREA ID 1:5 YR POST-DEVELOPMENT RUNOFF COEFF |
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| 101.98 101.96 102.17 102.20 102.07 102.07 102.06 102.05 102.07 102.07 102.08 102.08 102.03 102.13 102.38 101.15 101.57 101.55 101.60 101.63 101.63 | 99.90 *** 99.90 *** 99.90 *** 99.85 99.85 ** 100.20 ** 100.20 ** 100.00 ** 99.90 ** 99.68 99.68 99.68 99.61 99.63 99.73 99.75 98.75 99.17 99.15 99.45 99.20 99.23 99.23 | CROSS ABOVE 610mmØ STM [Obv=99.29m] (±0.3m CLEARANCE) CROSS ABOVE 450mmØ STM [Obv=99.34m] (±0.3m CLEARANCE) 250 x 150 x 250 TEE (HYDRANT No. 06) 22.5° VERTICAL BEND 22.5° VERTICAL BEND CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) CROSS ABOVE 200mmØ STM [Obv=99.70m] (±0.25m CLEARANCE) 22.5° VERTICAL BEND 22.5° VERTICAL BEND 250 x 200 REDUCER 45° HORIZONTAL BEND 200 x 200 x 200 TEE (HYDRANT No. 07) 200mmØ VALVE & VALVE BOX 200mmØ BUILDING 'B' SERVICE CAP (1.0m FROM FOUNDATION WALL) 300 x 250 x 300 TEE (0+419.0) 250mmØ VALVE & VALVE BOX 250 x 150 x 250 TEE (3+000 @ HYDRANT No. 02) 250 x 200 REDUCER | 1:5 YR 0.637 A-1 0.36 | PROPOSED GAS METER LOCATION PROPOSED HYDRO METER LOCATION PROPOSED TRANSFORMER PAD & BOLLARDS CLAY DIKE AS PER CITY DETAIL S8 SILT FENCE AS PER OPSD 219.110 MAJOR OVERLAND FLOW ROUTE STRAW BALES AS PER OPSD 219.100 CONSTRUCTION ACCESS MUD MAT PROPOSED INLET CONTROL DEVICE APPROXIMATE PONDING LIMITS STORM DRAINAGE BOUNDARY AREA (ha) SUB-CATCHMENT AREA ID 1:5 YR POST-DEVELOPMENT RUNOFF COEFF |
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KEY PLAN BENCHMARK INFO

OLS JOB BENCHMARK No. 2 ON THE TOP OF SPINDLE OF THE EXISTING MUNICIPAL FIRE HYDRANT LOCATED NEAR THE NORTH-EAST CORNER OF THE INTERSECTION OF JOURNEYMAN STREET AND CAMPEAU DRIVE. GEODETIC ELEVATION = 102.98m. (JOB BENCHMARKS No.1 + No.3 & 4 ARE ALSO SHOWN ON THE SURVEYOR'S PLAN Ref. No. 23334-22 Rosefellow PtL 4 CI HU T DI)

ALL ELEVATIONS ARE REFERRED TO THE CGVD28 GEODETIC DATUM. BEARINGS ARE GRID, DERIVED FROM THE NORTHERLY LIMIT OF CAMPEAU DRIVE SHOWN TO BE N48°07'05"E ON PLAN 4R-28637 AND ARE REFERRED TO THE CENTRAL MERIDIAN OF MTM ZONE 9 (76°30' WEST LONGITUDE) NAD-83 (ORIGINAL) THE EXISTING GRADES SHOWN ON THE PLANS ARE TAKEN DIRECTLY FROM TOPOGRAPHICAL

SURVEY PLAN (Ref. No. 23334-22 Rosefellow PtL 4 CI HU T DI), PREPARED BY ANNIS, O'SULLIVAN, VOLLEBEKK SIGNED AND DATED SEPTEMBER 27, 2021 SURROUNDING BACKGROUND TOPO INFORMATION BEYOND THE LIMITS OF THE SITE SURVEY

ARE SHOWN FROM CITY OF OTTAWA 1:2000 MAPPING FOR CONTEXT ONLY.

PROPOSED 300mmØ WATERMAIN TABLE: OFF-SITE EXTENSION STATION SURFACE T/WM

SUB-CATCHMENT AREA ID 1:5 YR POST-DEVELOPMENT RUNOFF COEFFICIENT

LEGEND

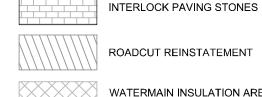
TACTILE WALKING SURFACE INDICATOR (TWSI)

PROPOSED UNDER SIDE OF FOOTING ELEVATION

PROPOSED CATCHBASIN WITH TEMPORARY SILTSACK

EXISTING TREES / SHRUBS

HEAVY DUTY ASPHALT/FIRE ROUTE



WATERMAIN INSULATION AREA AS PER CITY OF OTTAWA DETAIL W22

| STATION | ELEVATION | ELEVATION | COMMENTS |
|---------|-----------|-----------|---|
| 5+000 | 100.26 | 97.86 | 300mmØ VALVE & VALVE BOX @ PROPERTY LINE (0+448.6) |
| 5+009.6 | 99.62 | 97.82 ** | INSULATE WATERMAIN AT CROSSING BELOW ROADSIDE DITCH |
| 5+025 | 100.42 | 67.65 | |
| 5+025.6 | 100.31 | 67.65 *** | CROSS BELOW EX. STREETLIGHT WIRING (±1.7m CLEARANCE) |
| 5+026.7 | 100.09 | 67.64 *** | CROSS BELOW EX. 150mmØ GAS MAIN (±1.4m CLEARANCE) |
| 5+028.5 | 100.00 | 97.60 | 45° HORIZONTAL BEND |
| 5+032.8 | 99.98 | 97.58 | 45° HORIZONTAL BEND |
| 5+050 | 99.96 | 97.50 | |
| 5+075 | 100.17 | 97.58 | |
| 5+087.3 | 99.99 | 97.60 | 45° HORIZONTAL BEND |
| 5+088.2 | 99.99 | 97.60 | 300 x 200 REDUCER |
| 5+090.2 | 99.99 | 97.55 | 200mmØ VALVE & VALVE BOX |
| 5+091.7 | 99.98± | 97.55 * | CONNECTION TO EXISTING WATERMAIN - NEW 200 x 200 x 200 TE |

** PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAILS W22 IN SHALLOW TRENCHES WHERE COVER IS LESS THAN 2.4m AND/OR W23 ADJACENT TO OPEN STRUCTURES.

*** PIPE CROSSINGS WITH WATERMAINS ARE TO BE IN ACCORDANCE WITH CITY STANDARDS W25 AND W25.2 TO AVOID CONFLICTS, WHERE POSSIBLE.

CRITICAL SEWER PIPE CROSSING TABLE CROSSING LOWER PIPE HIGHER PIPE 250mmØ SAN OBV=97.79 | 300mmØ U/S WM=99.36 ± 102.06 m 250mmØ SAN OBV=97.80 | 200mmØ STM INV=100.00 + 102 06 m 101.99 m 250mmØ SAN OBV=98.01 | 250mmØ U/S WM=99.65 ± 1.6m 610mmØ STM OBV=99.29 | 250mmØ U/S WM=99.65 101.98 m 450mmØ STM OBV=99.34 | 250mmØ U/S WM=99.65 ± 0.3m 102.17 m 450mmØ STM OBV=99.35 | 150mmØ U/S WM=99.75 102.07 m ± 0.4m 200mmØ STM OBV=99.70 | 250mmØ U/S WM=99.95 102.06 m 200mmØ STM OBV=99.70 | 250mmØ U/S WM=99.95 102.05 m 250mmØ SAN OBV=98.08 | 250mmØ STM INV=100.04 | 101.92 m ± 2.0m 250mmØ SAN OBV=96.70 | 610mmØ STM INV=97.82 101.45 m

★ SEE 122151-GP1 AND GP2 PLANS FOR SEWER CROSSING LOCATIONS

300mmØ T/WM=98.85 | 250mmØ STM INV=99.68 |

ALL PROJECT NOTES, DETAILS AND SPECIFICATIONS ARE TO MEET THE MOST CURRENT AND AMENDED VERSIONS OF THE CITY OF OTTAWA AND PROVINCIAL STANDARDS

THIS PLAN IS TO BE READ IN CONJUNCTION WITH CIVIL PLANS 122151-GP1&2, 122151-GR1&2 AND 122151-PR1

THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN. THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR

DAMAGE TO THEM.

SCALE SM / BM / DDE NOT TO SCALE ISSUED FOR SITE PLAN APPROVAL AUG 4/23 DDI ISSUED FOR BUILDING PERMIT JUL 14/23 | DDE REVISED PER CITY COMMENTS MAY 31/23 DDI REVISED PER CITY COMMENTS MAR 30/23 BM / DDE DEC 16/22 ISSUED FOR CITY OF OTTAWA REVIEW REVISION DATE





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Facsimile

CITY of OTTAWA 105 HUNTMAR DRIVE - WAREHOUSE DEVELOPMENT DRAWING NAME

± 0.8m

NOTES, LEGEND AND DETAILS

REV # 5 122151-NLD1

101.30 m