

M:\Projects\23.2311.001_Town of Drumheller\Drawing Set\2_IFR 50% COVER-232311001-CONSTRUCTION NOTES AND LEGEND.dwg, G-002, 2023/03/09 11:54 am Kyle
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CONSTRUCTION NOTES:

- ROAD & UNIT ELEVATIONS ARE METRIC GEODETIC.
- WHERE THERE ARE DISCREPANCIES BETWEEN REFERENCED STANDARDS, PROJECT DRAWINGS GOVERN OVER PROJECT SPECIFICATIONS. DISCUSS ANY UNCERTAINTIES WITH THE ENGINEER PRIOR TO CONSTRUCTION AND/OR INSTALLATION.
- TOPOGRAPHIC SURVEY IS PROVIDED ON AN AS-IS BASIS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM INDEPENDENT PRE AND POST DISTURBANCE SURVEY FOR THE PURPOSES OF CONSTRUCTION LAYOUT AND QUANTITY RECONCILIATION AS APPLICABLE TO EXECUTE AND RECORD PROGRESS OF THE WORKS.
- CONTRACTOR TO LAYOUT CLEARING DESIGN LIMITS FOR FIELD REVIEW. FIELD REVIEW BY ENGINEER AND OWNER IS REQUIRED PRIOR TO PERFORMING CLEARING ACTIVITY. VEGETATION DISTURBANCE AND VEGETATION DAMAGE IS TO BE MINIMIZED ON A BEST-EFFORT BASIS TO MAINTAIN A NATURAL FEEL OF THE SITE. NO VEGETATION DISTURBANCE OUTSIDE OF DESIGN LIMITS IS PERMITTED UNLESS DIRECTED BY ENGINEER.
- IF ANY GROUNDWATER IS ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
- ALL EXISTING ROADS AND GROUND AREAS INCLUDING LANDSCAPING, SIDEWALKS, AND PATHS THAT ARE DISTURBED DURING CONSTRUCTION OR BY CONSTRUCTION ACTIVITIES ARE TO BE RETURNED TO PRE-CONSTRUCTION CONDITION OR BETTER AFTER CONSTRUCTION IS COMPLETE PRIOR TO DEMOBILIZATION.
- THE CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE CONVEYANCE STRUCTURES AND FEATURES DURING CONSTRUCTION AS NECESSARY TO PROTECT ROADS AND PROPERTY.
- NO SILT LADEN WATER OR OTHER DELETERIOUS MATERIAL SHALL BE ALLOWED TO FLOW FROM SITE, INCLUDING INTO THE RED DEER RIVER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES INCURRED FROM SILT LADEN WATER OR OTHER DELETERIOUS MATERIAL LEAVING THE SITE. NO MUD TRACKING ON TO THE SURROUNDING ROADS IS PERMITTED. CONTRACTOR TO PROVIDE ENVIRONMENTAL PROTECTION PLAN FOR APPROVAL PRIOR TO BEGINNING WORKS.
- SITE SAFETY AND SECURITY IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR. THE ENGINEER IS NOT RESPONSIBLE FOR SAFETY IN, ON, OR ABOUT THE PROJECT SITE, NOR FOR CONTRACTOR COMPLIANCE.
- TEMPORARY SIGNAGE AND FENCING MAINTENANCE DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR. THE SITE MUST BE FULLY FENCED FROM PUBLIC ACCESS WHEN CONSTRUCTION ACTIVITY IS NOT TAKING PLACE.
- TRAFFIC CONTROL DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO SUBMIT A TRAFFIC MANAGEMENT AND SIGNAGE PLAN TO THE OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.
- REGARDING PAVEMENT INSTALLATION, CONTRACTOR TO SUBMIT ALL APPLICABLE QUALITY CONTROL DOCUMENTATION TO ENGINEER FOR REVIEW NO LESS THAN 7 DAYS BEFORE PAVEMENT INSTALLATION.
- FINISHED GRADE TO MATCH SURROUNDING TYPE AND ELEVATION.
- THE CONTRACTOR SHALL DISTRIBUTE TOPSOIL AND PLANT SOD WHERE EXISTING GROUND HAS BEEN DISTURBED. THE CONTRACTOR IS NOT RESPONSIBLE FOR SOD WATERING OR MAINTENANCE AFTER DEMOBILIZATION.
- THE CONTRACTOR SHALL REPLACE EACH TREE CLEARED WITH FIVE NEW TREES PLANTED WITHIN THE ROTARY PARK.
- THE CONTRACTOR SHALL REQUEST A PRE-DISTURBANCE WILDLIFE AND BIRD SWEEP FROM THE OWNER A MINIMUM OF 7 DAYS BEFORE DISTURBANCE OF SITE IS PLANNED TO OCCUR. THE CONTRACTOR SHALL NOT DISTURB THE SITE UNTIL THE CLEARANCE IS GIVEN BY THE OWNER. IN THE EVENT THAT MITIGATION'S OR ADDITIONAL WORK IS REQUIRED AS A RESULT OF THE WILDLIFE AND BIRD SWEEP, THESE WILL BE DISCUSSED WITH THE PROJECT TEAM AND HANDLED AS A CHANGE, AS APPLICABLE.

SOIL MANAGEMENT:

- THE CONTRACTOR IS NOTIFIED THAT HAZARDOUS SOILS AND MATERIALS ARE PRESENT ON SITE.
- CONTRACTOR TO SUBMIT A HAZARDOUS WASTE HANDLING PLAN FOR ATCO AND OWNER'S APPROVAL.
- CONTRACTOR TO ASSUME ALL EXCAVATED MATERIALS FROM THE SITE ARE CONTAMINATED AND REMOVE AND DISPOSE OF THEM ACCORDING TO AN APPROVED HAZARDOUS WASTE HANDLING PLAN.
- THE CONTRACTOR SHALL RECORD VOLUME OF CONTAMINATED SOIL AND DELETERIOUS MATERIAL REMOVED FROM SITE AND LOCATION OF DISPOSAL FOR SUBMITTAL TO ATCO.
- THE CONTRACTOR SHALL RETAIN RECORDS OF CONTAMINATED SOIL AND DELETERIOUS MATERIAL DISPOSAL FROM DRUMHELLER AND DISTRICT REGIONAL LANDFILL. SUBMITTAL OF THESE RECORDS FOR VERIFICATION OF CONTAMINATED SOIL AND DELETERIOUS MATERIAL DISPOSAL MAY BE REQUESTED.
- THE CONTRACTOR MAY ENCOUNTER DELETERIOUS MATERIAL SUCH AS BRICKS, REBAR, OR CONCRETE DURING EXCAVATION. DELETERIOUS MATERIAL ENCOUNTERED DIRECTLY IMPACTING THE WORK SHALL BE REMOVED AS NECESSARY AND DISPOSED OF ACCORDING TO APPROVED HAZARDOUS WASTE HANDLING PLAN. DELETERIOUS MATERIAL ENCOUNTERED, BUT NOT IMPACTING THE WORKS, TO BE LEFT BURIED IN PLACE.
- SOIL STOCKPILES AND EQUIPMENT DISTURBANCE ONLY PERMITTED WITHIN DESIGN DISTURBANCE FOOTPRINT TO PRESERVE EXISTING VEGETATION AND ECOLOGY. ENCROACHMENT OF STOCKPILES OR DISTURBANCE LIMITS BEYOND PROJECT LIMITS WILL NOT BE TOLERATED.
- CONTRACTOR SHALL SOURCE AND SUPPLY CLEAN SOIL BACKFILL. BACKFILL SOURCE IS SUBJECT TO ENVIRONMENTAL COMPLIANCE TESTING. ENVIRONMENTAL COMPLIANCE TESTING TO BE AT THE COST OF THE CONTRACTOR. BACKFILL SOURCE AND TESTING RESULTS SUBJECT TO APPROVAL PRIOR TO DELIVERY OF FILL TO SITE.
- SUBMITTED BACKFILL SOURCE ENVIRONMENTAL COMPLIANCE TESTING RESULTS WILL BE COMPARED AGAINST ALBERTA TIER 1 SOIL AND GROUNDWATER REMEDIATION GUIDELINES FOR RESIDENTIAL/PARKLAND. TESTING SHALL INCLUDE RESULTS FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX), PETROLEUM HYDROCARBON FRACTIONS F1 TO F4, POLYCYCLIC AROMATIC HYDROCARBONS, METALS, SALINITY, AND SOIL STERILANTS.

UTILITIES:

- THE CONTRACTOR IS NOTIFIED THAT HIGH VOLTAGE BURIED UTILITIES ARE PRESENT WITHIN THE SITE. ADDITIONAL BURIED UTILITIES ARE PRESENT WITHIN THE SITE.
- THE CONTRACTOR IS NOTIFIED THAT ALL ELECTRIC UTILITIES WILL REMAIN ENERGIZED THROUGHOUT THE DURATION OF THE WORK. SUCH UTILITIES WILL BE SUBJECT TO INDUCED VOLTAGES AND CURRENTS AND ARE ASSUMED TO BE HAZARDOUS TO PERSONS AND PROPERTY.
- THE CONTRACTOR IS WARNED THAT CONFLICTS WITH EXISTING UTILITY SERVICES BEYOND THOSE ALREADY IDENTIFIED MAY EXIST. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ALL APPROPRIATE UTILITY COMPANIES FOR LINE LOCATIONS, AND CONTRACTOR SHALL THEN LOCATE ALL UTILITIES (INCLUDING DEPTH). SWEETECH ENGINEERING CONSULTANTS ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. ANY CONFLICTS WITH THE CONSTRUCTION, NOT IDENTIFIED ON THE DRAWINGS, SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY SO THAT MITIGATION OF CONFLICTS WITH THESE EXISTING UTILITIES CAN BE CONSIDERED.
- THE CONTRACTOR SHALL CONTACT ATCO A MINIMUM OF 2 WEEKS BEFORE ATCO ON-SITE REPRESENTATION IS REQUIRED. THE CONTRACTOR IS REQUIRED TO HAVE AN ATCO ON-SITE REPRESENTATIVE PRESENT FOR ALL WORK SURROUNDING ATCO LINES WITHIN 1 m OF THE LOCATE MARKINGS, INCLUDING HYDROVACING, EXPOSING LINES, INSTALLING CONCRETE UTILITY MECHANICAL SEPARATION PAD, BACKFILL OPERATIONS, AND ALL OTHER WORK OCCURRING WITHIN 1 m OF ATCO UTILITIES.
- ALL EXISTING UTILITIES SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. UTILITIES THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER OR ENGINEER.
- ALL HYDROVAC WORK SHALL BE COMPLETED USING AN EQUIPOTENTIAL BONDING MAT AND USING A WATER PRESSURE OF NO MORE THAN 1500 PSI.
- CONTRACTOR TO SUBMIT PROPOSED MANHOLE TIE-IN CONNECTION METHOD TO ENGINEER FOR REVIEW 7 DAYS BEFORE MANHOLE TIE-IN WORK CAN COMMENCE.
- CONTRACTOR SHALL ABANDON EXISTING PIPES ACCORDING TO THE SPECIFICATIONS GIVEN IN SECTION 403.14.01 OF THE CITY OF CALGARY 2022 STANDARD SPECIFICATIONS FOR SEWER CONSTRUCTION. PIPES ARE TO BE ABANDONED IN PLACE.

REFERENCE:

- EXISTING GROUND CONTOURS FROM HUNTER WALLACE SURVEYS LTD. RECEIVED ON NOVEMBER 19, 2021.
- 2019 AERIAL IMAGERY PROVIDED BY DRUMHELLER RESILIENCY AND FLOOD MITIGATION OFFICE.
- UTILITY LOCATIONS PROVIDED BY DRUMHELLER RESILIENCY AND FLOOD MITIGATION OFFICE.
- APPROXIMATE ENVIRONMENTAL WATER MONITORING WELLS AND BURIED ATCO POWER PLANT FOUNDATIONS FROM ATCO ELECTRIC LTD. DRUMHELLER POWER PLANT SITE PLAN (24984-SP17) OCTOBER, 2017.
- ELECTRIC AND GAS UTILITY LOCATIONS AND ELEVATIONS HAVE BEEN APPROXIMATED BASED ON INTERPOLATION OF DAYLIGHTED AND SURVEYED LINES PROVIDED BY HUNTER WALLACE SURVEYS LTD. (2022/03/30).
- RED DEER RIVER BANK LINE PROVIDED BY HUNTER WALLACE SURVEYS LTD.
- PROJECT COORDINATE SYSTEM: NAD83-3TM114.

SURVEY CONTROL				
PROJECT HORIZONTAL DATUM IS GRID FOR ALBERTA NAD83, 3 DEGREE ZONE, CENTRE AT 114° WEST (CANAB3-3TM114). ALL ELEVATIONS ARE SHOWN IN METRES TO CANADIAN GEODETIC VERTICAL DATUM 1928 (CGVD28), CONFIRMED BY TIES TO ALBERTA SURVEY CONTROL MARKERS (ASCM) IN THE PROJECT AREA:				
POINT #	NORTHING	EASTING	ELEV	DESC.
371419	5704120.994	89897.383	682.345	ASCM
333930	5704070.443	90098.890	681.449	ASCM
417469	5703757.371	90303.534	684.371	ASCM
639732	5703523.309	90272.646	681.725	ASCM
418636	5704765.602	89475.019	686.227	ASCM

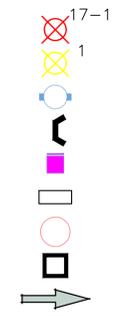
DRAWING ABBREVIATIONS			
APPROX	APPROXIMATELY	DR	DRIVE
FB	FREEBOARD	ST	STREET
ELEV	ELEVATION	AVE	AVENUE
DWG	DRAWING	STA	STATION
€	CENTRE LINE	IFT	ISSUED FOR TENDER
TYP	TYPICAL	HW	HEAD WALL
SPMDD	STANDARD PROCTOR MAXIMUM DRY DENSITY	RS	RIVER STATION
OMC	OPTIMUM MOISTURE CONTENT	D	DIKE STATION
C/W	COMES WITH	PVI	POINT OF VERTICAL INFLECTION
W/	WITH	BVCS	BEGINNING VERTICAL CURVE STATION
PE	POLYETHYLENE	BVCE	BEGINNING VERTICAL CURVE ELEVATION
INV	INVERT	EVCS	END VERTICAL CURVE STATION
STM	STORM	EVCE	END VERTICAL CURVE ELEVATION
SAN	SANITARY	LVC	LENGTH OF VERTICAL CURVE
PR	PROPOSED		
EX.	EXISTING		
MIN	MINIMUM		
MAX	MAXIMUM		
TBD	TO BE DETERMINED		
TBC	TO BE CONFIRMED		

EXISTING LEGEND:

EX. LEGAL LINES	---	EX. MONITORING WELL	⊗
EX. FORMER BUILDING FOOTPRINT	----	EX. UTILITY CROSSING	⊗
EX. EDGE OF PAVEMENT	----	EX. FIRE HYDRANT	⊗
EX. GAS UTILITY	---	EX. OUTFALL	⊗
EX. WATER UTILITY	---	EX. GAS METER	⊗
EX. ELECTRICAL UTILITY	---	EX. CATCH BASIN	⊗
EX. SANITARY UTILITY	---	EX. MANHOLE	⊗
EX. STORM UTILITY	---	EX. PEDESTAL	⊗
EX. TELUS UTILITY	---	EX. DIRECTION OF FLOW	→
EX. MAJOR CONTOUR (INTERVAL= 5.0m)	---		
EX. MINOR CONTOUR (INTERVAL= 1.0m)	---		

PROPOSED LEGEND:

PR. APPROX. TRENCH EXCAVATION	---	PR. SANITARY MANHOLE	⊗
PR. SANITARY UTILITY	---	PR. LOW MPa CONC. PAD	⊗
PR. ABANDONED STM UTILITY	---	PR. APPROX. REMOVALS	⊗

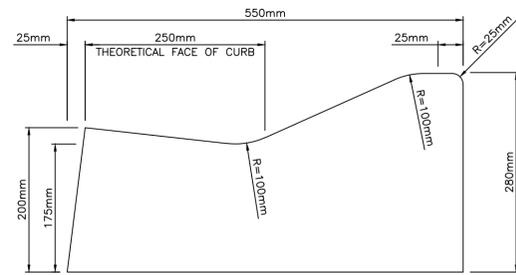


SCALE NOTATIONS INDICATED ARE BASED ON AN ANSI D DRAWING FORMAT, & COLOUR PRINTED.

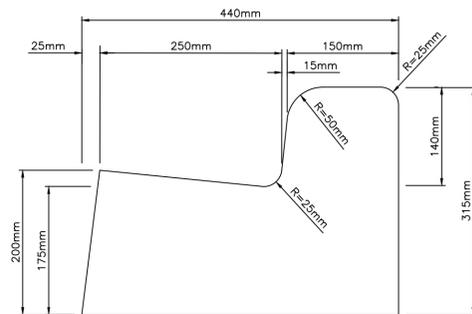
THIS DRAWING IS PREPARED FOR THE SOLE USE OF THE TOWN OF DRUMHELLER. NO REPRESENTATIONS OF ANY KIND ARE MADE BY SWEETECH ENGINEERING CONSULTANTS OR ITS EMPLOYEES TO ANY PARTY WITH WHOM SWEETECH ENGINEERING CONSULTANTS DOES NOT HAVE A CONTRACT.

			Rev	Date	Des	Dwn	Chk	Description	Rev	Date	Des	Dwn	Chk	Description	TOWN OF DRUMHELLER SPRAY PARK DRAINAGE LINE IMPROVEMENT PROJECT CONSTRUCTION NOTES, AND LEGEND		
			A	2023-03-08	AO	KS	ES	ISSUED FOR TENDER									
														Group	GENERAL	G-002	A

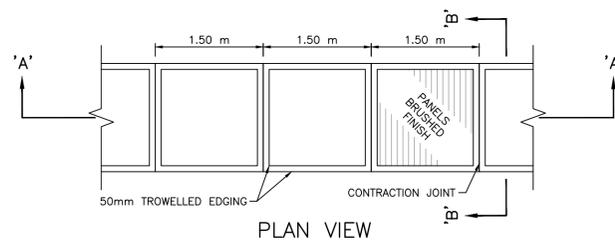
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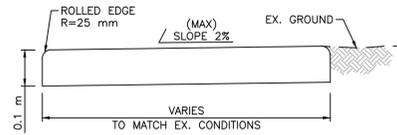
1 LOW PROFILE ROLLED CURB WITH 250 mm GUTTER
SCALE N.T.S.



2 STANDARD CURB WITH 250 mm GUTTER
SCALE N.T.S.



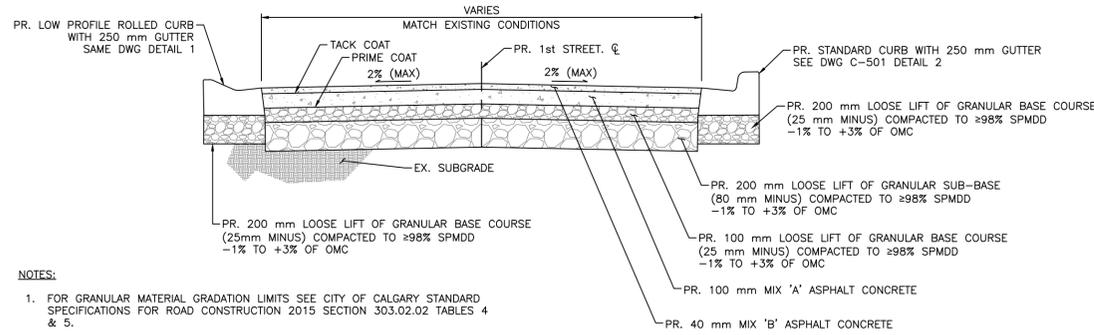
SECTION A-A



SECTION B-B

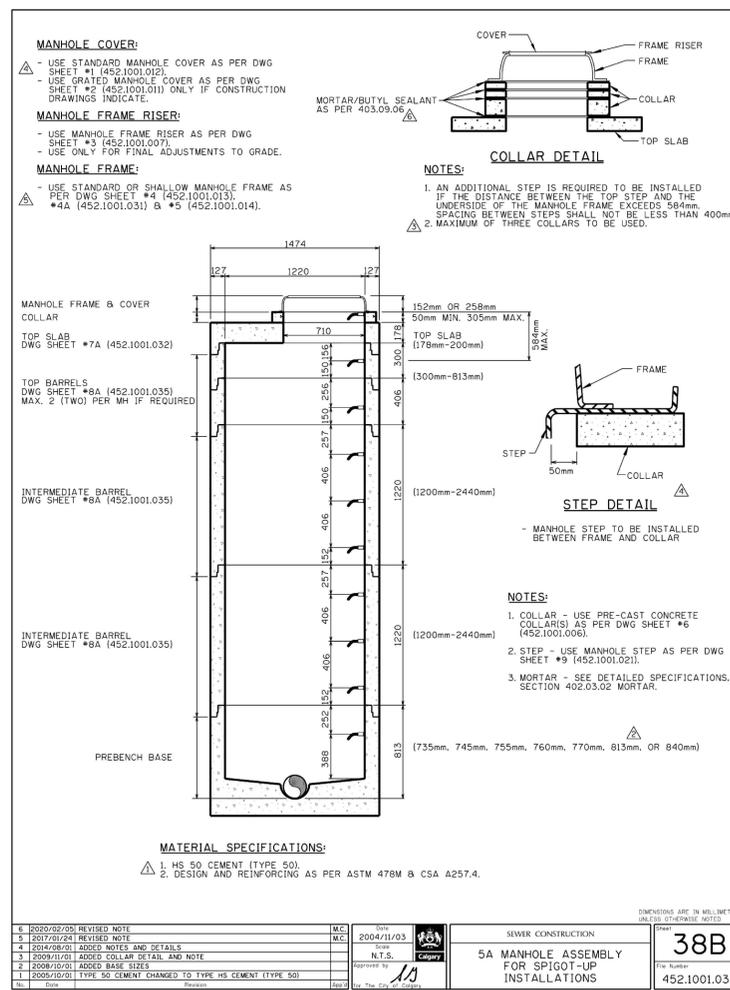
- NOTES:
- WHERE CONCRETE SIDEWALK IS TO BE REPLACED MATCH EXISTING CONDITIONS.
 - SLOPE SIDEWALK AT 2% (MAX) TO DISCOURAGE STANDING WATER ON THE CONCRETE SIDEWALK.
 - SPECIFICATIONS ARE TO MINIMUM STANDARDS. CONSIDERATION MUST BE GIVEN TO ADDRESS ACTUAL SOIL CONDITIONS AND ASSESS THE NEED FOR GRAVEL BASE, THICKER SLAB, REINFORCEMENT OR SUB-DRAINAGE SYSTEM.

3 CONCRETE SIDEWALK
SCALE N.T.S.

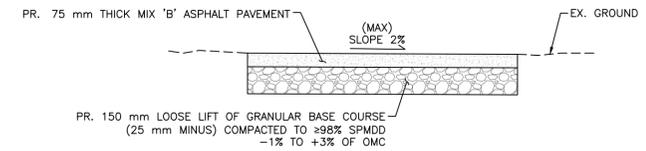


- NOTES:
- FOR GRANULAR MATERIAL GRADATION LIMITS SEE CITY OF CALGARY STANDARD SPECIFICATIONS FOR ROAD CONSTRUCTION 2015 SECTION 303.02.02 TABLES 4 & 5.

4 PR. 1 ST ROAD STRUCTURE
SCALE N.T.S.

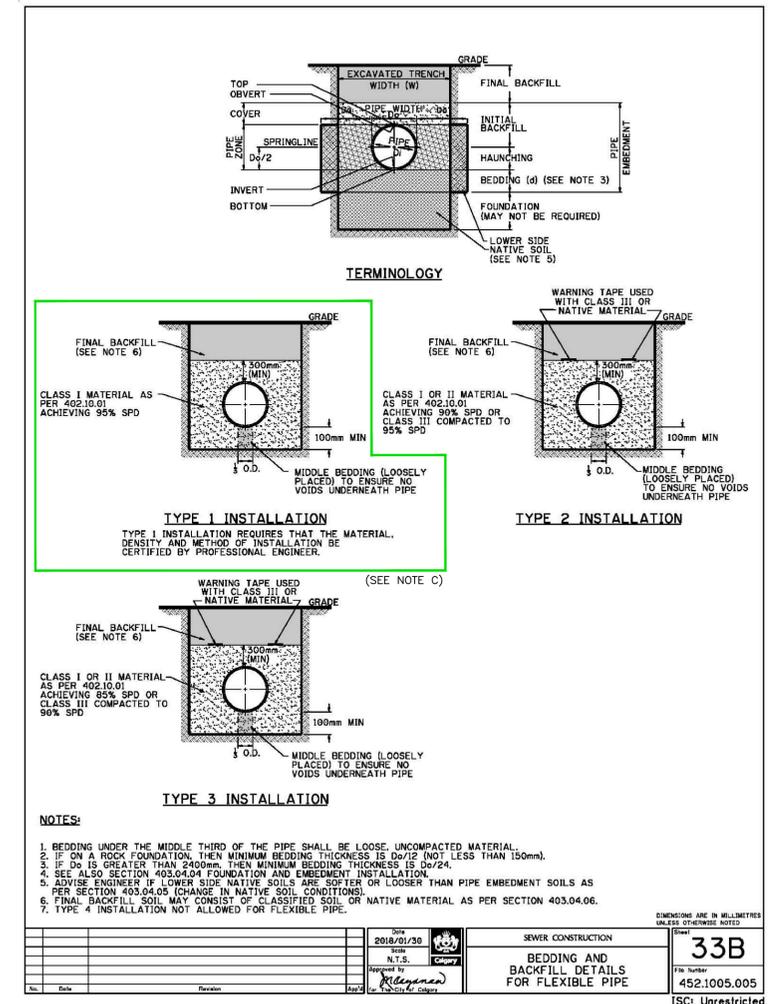


5 5A MANHOLE ASSEMBLY FOR SPIGOT-UP INSTALLATIONS
SCALE N.T.S.



- GENERAL NOTES:
- WHERE ASPHALT PATHWAY IS TO BE REPLACED MATCH EXISTING CONDITIONS.
 - SLOPE PATH AT 2% TO DISCOURAGE STANDING WATER ON THE ASPHALT PATH.

6 ASPHALT PATHWAY
SCALE N.T.S.

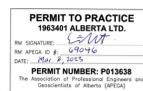


7 BEDDING AND BACKFILL DETAILS FOR FLEXIBLE PIPE
SCALE N.T.S.

- NOTES:
- TYPE 1 INSTALLATION TO BE USED FOR INSTALLATION OF PR. SANITARY PIPES.
 - IF NOT EXPLICITLY STATED WITHIN AN APPROVED CROSSING AGREEMENT OR DIRECTED BY UTILITY OWNER AT EX. UTILITY CROSSINGS, WHERE PR. SANITARY PIPE CROSSES EXISTING BURIED UTILITIES, EXISTING BURIED UTILITIES ARE TO BE BACKFILLED WITH CLEAN, GRADED, WASHED BEDDING SAND. BEDDING SAND TO BE INSTALLED TO A WIDTH OF 3x EXISTING UTILITY PIPE DIAMETERS OR 300 mm, WHICHEVER IS GREATER. BEDDING SAND TO BE PLACED IN LIFTS OF 150 mm AND COMPACTED BY TAMP TO 90% SPMD WITH CARE TAKEN NOT TO DAMAGE THE EXISTING UTILITY. THE TOP 300 mm UNDER STRUCTURES AND PAVEMENT SHALL BE COMPACTED TO 98% SPMD (MIN).
 - FINAL BACKFILL TO BE PLACED AS PER CITY OF CALGARY ROAD CONSTRUCTION STANDARDS SPECIFICATIONS USING A CRUSHED GRAVEL MATERIAL TO UNDERSIDE OF ROAD STRUCTURE (SEC 304.00.00) WHEN UNDER PATHWAYS AND ROADWAYS. IN LANDSCAPED/GRASSED AREAS, NATIVE MATERIAL CAN BE UTILIZED AS THE FINAL BACKFILL MATERIAL AND IS TO BE PLACED IN ACCORDANCE WITH 403.08.02 (2022 STANDARD SPECIFICATIONS FOR SEWER CONSTRUCTION). LIFT THICKNESS MAY VARY BETWEEN 150-300 mm DEPENDING ON COMPACTION EQUIPMENT TYPE.

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Rev	Date	Des	Dwn	Chk	Description
A	2023-03-08	AO	KS	ES	ISSUED FOR TENDER

Rev	Date	Des	Dwn	Chk	Description

TOWN OF DRUMHELLER			
SPRAY PARK DRAINAGE LINE IMPROVEMENT PROJECT			
DETAILS			
Project No.	23.2311.001	Drawing No.	C-501
Group	CIVIL	Rev.	A