STRATHCONA COUNTY

Enclosure 4

Proposed Amendments to the Open Space Related Components of the Design and Construction Standards

The following is a compilation of all open space related components within the Design and Construction Standards.

Impacted Sections:

Volume 1: Design Standards

Section 2	Approval Process: (sub-section 2.2 only)
Section 6	Open Space Standards
Section 7	Standard Drawings (open space only)
Section 8	Forms: (Contractor Monthly Maintenance – Verification & Open Space Construction – Inspection Report)
Section 10	CCC & FAC Process (open space only)

Volume 2: Construction Specifications

Section 601	Landscape Subgrade Preparation
Section 602	Installation of Topsoil
Section 603	Seed and Sod
Section 604	Plant Material
Section 605	Constructed Wetlands
Section 606	Wood Screen and Noise Attenuation Fence
Section 607	Chain Link Fence
Section 608	Paige Wire Fence
Section 609	Straight Wire Fence
Section 610	Gravel Trails
Section 611	Paving Stone
Section 612	Site Furniture
Section 613	Open Space Signage
Section 614	Community Gardens
Section 615	Playground and Outdoor Fitness Equipment
Section 616	Soccer Fields
Section 617	Ball Fields

Updates have been highlighted herein as follows:

Sections Added: highlighted sections contain new information;
Sections Modified: highlighted sections contain notable changes to standards and process; and
Sections Relocated: highlighted sections identify clauses relocated from other sections, noting that clauses moved or amalgamated within in the same section have not been highlighted.

Volume 1 Design Standards

Table of Contents

Volume 2 Construction Specifications

Table of Contents

2.2 ENGINEERING DESIGN BRIEF (IN CONJUNCTION WITH AREA STRUCTURE PLANS)

2.2.1 Three (3) copies of the Engineering Design Brief (EDB) must be submitted as part of an ASP application, and must include at minimum, the following information:

2.2.1.1 Identification of any man made features such as highways, railways, major power lines, high pressure oil/gas pipeline and wellsites which may affect developable areas.

2.2.1.2 Identification of Municipal Reserves (MR), Environmental Reserves (ER), and Conservation Easements (CE) to ensure provision of location, planning and balancing of municipal reserves requirements within the total land dedication requirements.

2.2.1.3 Identification of any programing site such as playgrounds, outdoor fitness equipment, sport facilities, dog parks or community gardens.

2.2.1.4 A staging plan and discussion regarding any interim utility servicing, stormwater management, access or intersection proposals.

2.2.1.5 Overall road layout of local roads, minor and major collector roads, intersections with arterial roads, road ROW widths, and cross-sections.

2.2.1.6 A Transportation Impact Analysis (TIA) for all developments that result in more than 100 peak hour trips. The TIA is required to detail: trip generation rates; morning and afternoon peak turning volumes at all collector/collector intersections, arterial road access points, and any other surrounding intersections/road segments that may be impacted by the development; projected daily volumes; and proposed traffic control strategy and/or traffic control modifications for the aforementioned locations that will be required to accommodate the development traffic.

2.2.1.7 Overall conceptual plans identifying general alignments of the water, sanitary and storm sewer mains, overall surface grading design and major drainage routes together with a discussion.

2.2.1.8 A Hydraulic Network Analysis (HNA) shall be completed in accordance with the design criteria found in VOL. 1 SEC. 4.3, WATER DISTRIBUTION SYSTEM. The HNA must include an analysis of the average day, maximum day, and peak hour demand scenarios, as well as a fire flow scenario. The HNA must address potential staging of the infrastructure and include an analysis of both interim and ultimate servicing conditions

2.2.1.9 A wastewater system evaluation shall be completed in accordance with the design criteria found in VOL. 1 SEC. 4.2, SANITARY SEWER SYSTEMS. The evaluation must address the available capacity in the downstream receiving systems, clearly delineate the proposed drainage basins, address potential staging of the infrastructure and include an analysis of both interim and ultimate servicing conditions.

2.2.1.10 A stormwater management analysis shall be completed in conformance with an approved master drainage plan or watershed study for the total drainage basin(s) in which the ASP is located. The analysis must examine the existing storm basin(s), identify any issues or constraints, examine pre- and post-development conditions, and recommend the location of stormwater management facilities, storage volumes and allowable discharge rates.

The proposed stormwater management scheme must include: an overall plan depicting the storage facility location, its drainage basin, and the downstream receiving stream; supporting detailed hydrology and hydraulic calculations for the facility and including an analysis of the capacity of the downstream receiving channel; preliminary facility cross-section and details of inlets and outfall control structure; description of stormwater quality improvement methods to be incorporated and erosion and sedimentation control works proposed.

If the implementation of the scheme is to be staged, the staging method should be presented. Upon acceptance by Strathcona County, this information will need to be submitted by the Developer's Consultant to Alberta Environment and Parks for Water Act approval.

2.2.1.11 A topographical map with 0.5m contour intervals is to be included.

2.2.1.12 A Noise Impact Assessment (NIA) using a noise prediction model acceptable to Strathcona County. The assessment must address and present and future noise levels, and identify measures required to adequately maintain noise to within Strathcona County's standard.

2.2.1.13 The results of a Geotechnical/Hydrogeological Investigation completed by a qualified geotechnical engineering firm. At this stage, the level of detail of this investigation should be to an extent sufficient to allow the Engineer to generally assess the site's geotechnical/hydrogeological conditions and their effect on the development and whether or not any contamination exists. The report should outline their findings and any general recommendations as well as address the following:

(i) Identify areas of high water tables.
(ii) Identify conditions that will require special design considerations.
(iii) Identify the limits of any potential site contamination and outline the process for site remediation to be completed.
(iv) Soil alkalinity (sulphate levels) and resistively test results and recommendations regarding concrete to be used and corrosion protection.
(v) Identify any previously disturbed soil locations (i.e. abandoned water/sewer trenches, borrow pits, etc.).
(vi) Identify any conditions that will have special operation and/or maintenance implications.
(vii) Top of bank setbacks adjacent to Creeks or ravines to address slope stability requirements.
(viii) Suitability of existing soils for proposed SWMF locations and any associated design constraints and/or special construction requirements (i.e. stability of side slopes, linear requirements, water seepage, etc.).

The Developer may choose to complete the detailed Geotechnical/Hydrogeological Investigation (as outlined under SUBSECTION 2.3.1.3 OF THIS SECTION) at the ASP stage.

2.2.1.14 If a Creek or major water course runs adjacent to or crosses the site, the 1:100 year floodplain must be identified along with confirmation that it is outside of any proposed development areas.

2.2.1.15 In the event that the Design & Construction Standards or Provincial requirements are amended prior to commencement of construction within the ASP, the Developer may be required to update a portion or all of the EDB in order to align with the changes, to the satisfaction of Strathcona County.

2.2.2 The Developer/Owner will arrange and negotiate any and all easements across private lands, private utility crossing agreements and other similar agreements which may be needed with land owners in the area.

Strathcona County will only become involved if a mutually agreeable solution cannot be reached through negotiation between the parties involved and the viability of an approved subdivision is jeopardized. Note: A Development Agreement must be in place before any action can be taken by Strathcona County.

6.1 OPEN SPACE DEVELOPMENT

6.1.1 Open spaces may be developed or left in a natural state in both the urban and rural areas of Strathcona County. Open spaces may be neighbourhood, community and regional parks, PULs, MRs, ERs, naturalized, conserved or reclaimed areas, wetlands and SWMFs, buffers, trails and walkways. These areas should be designed to maximize universal accessibility and apply CPTED principles where appropriate. See VOL. 1 SEC. 1.3, ABBREVIATIONS and VOL. SEC. 1.4, DEFINITIONS.

6.1.2 Development requirements are listed in the following two tables, areas and amenities marked with an "×" will be determined on an individual basis by Strathcona County, depending on existing amenities near the site, surrounding land uses and the park's capacity to accommodate the amenity.

6.1.2.1 Developed open spaces:

Appropriate Activities and Infrastructure	Neighbourhood Parks	Community Parks	Regional Parks	PUL (constructed wetlands)	PUL (other)
Park size	Minimum 0.8 ha	Minimum 4 ha	Minimum 8 ha	Varies	Varies
Grading	Yes	Yes	Yes	Yes	Yes
Seed/Sod	Yes	Yes	Yes	Yes	Yes
Trees and shrubs	Yes	Yes	Yes	Yes	Yes
Fences	Yes	Yes	Yes	Yes	Yes
Bollards	Yes	Yes	Yes	Yes	Yes
Benches	Yes	Yes	Yes	Yes	×
Litter receptacles	Yes	Yes	Yes	Yes	×
Litter receptacle with recycling lid	No	No	Yes	No	No
Bike racks	Yes	Yes	Yes	No	No
Picnic tables	×	×	Yes	No	No
Sport facilities	No	×	×	No	No
Trails	Yes	Yes	Yes	Yes	Yes
Trail signs	×	×	×	×	×
Playground	×	×	×	No	No
Exercise equipment	×	×	×	No	No
Spray park	No	×	×	No	No
Boardwalk	No	×	×	×	×
SWMF safety sign	No	No	No	Yes	×
Park name sign	Yes	Yes	Yes	No	No
Wayfinding signs	×	×	×	×	×
Educational signs	×	×	×	Yes	Yes
Community garden	×	×	×	No	No
Dog off-leash park	No	×	×	No	No
Toboggan hills	No	×	×	No	No
Parking	×	×	×	No	No

6.1.2.2 Undeveloped open spaces:

Appropriate Activities and Infrastructure	MR	ER	PUL (Natural Wetlands/ SWMFs)	PUL (Other)
Grading	No	No	x	x
Seed/Sod/ Plant material	x	x	x	x
Fences	Yes	x	x	x
Marker posts	No	Yes	x	x
Bollards	x	x	x	x
Trails/Walkways	Yes	x	x	x
Trail signs	x	x	x	x
Picnic tables	No	No	No	No
Benches	x	No	x	x
Litter receptacles	x	No	No	No
No motorized vehicle signs	Yes	Yes	Yes	Yes
Playgrounds	No	No	No	No
SWMF safety signs	No	No	Yes	x
Educational signage	x	Yes	Yes	x

6.1.3 See STANDARD DRAWING 61514 for required park name signs.

6.1.4 Appropriate development activities in Conservation Reserves (CR) will be determined on a site by site basis.

6.2 CHILDREN PLAYGROUNDS (USERS 18 MONTHS TO 12 YEARS OLD)

6.2.1 Playgrounds must be constructed in accordance with the *CSA-Z614 Children's Playspaces and Equipment* Standards in its latest edition and VOL. 2 SEC. 615, PLAYGROUND AND OUTDOOR FITNESS EQUIPMENT.

6.2.2 A concept meeting with the Developer Representative to review the proposed equipment prior to submission of drawings may be required.

6.2.3 Manufacturer's designs must be submitted to Strathcona County as part of the detailed landscape drawing submission. Hard copy and digital files that show two and three dimensional designs, to scale and in metric will be required. Manufacturer's designs must include:

(i) Location,
(ii) Extent of playground,
(iii) Grading points,
(iv) Footings design,

(v) Height of decks, protective barrier and guard rails,
(vi) Dimensions of no-encroachment zones, protective surfacing zones; and,
(vii) Maintenance instructions.

6.2.4 All playground components must be metal and may contain plastic components.

6.2.5 Playground equipment to be designed to accommodate separate age groups as determined by most current *CSA-Z614 Children's Playspaces and Equipment* Standards.

6.2.6 All playgrounds must include a swing set; minimum 2 units for users 5 years old to 12 years old and minimum 2 units for users 18 months old to 5 years old.

6.2.7 Playgrounds shall provide diverse types of structures and areas that allow for cognitive, physical, quiet retreat and social play.

6.2.8 Play structures must consider different types of abilities; wheelchair accessible sites shall provide barrier free entrance(s). Fully accessible sites must comply with "Annex H" from CSA-Z614 *Children's playspaces and equipment standards* in its latest edition.

6.2.9 Playgrounds shall be located outside major drainage routes and/or ponding areas.

6.2.10 Playgrounds installed near a waterbody may require additional physical or visual barriers to restrict access to the water's edge.

6.2.11 The playground sub-grade must be graded for positive drainage at a minimum of 1.5% and up to a maximum 2.0% grade.

6.2.12 Playgrounds must include a sub-drainage system designed to provide positive drainage at a minimum of 1.5%. See STANDARD DRAWING 61703.

6.2.13 Sub-drainage systems to be connected to an adjacent catch basin or storm manhole. See STANDARD DRAWING 61703. Sub-drainage systems daylighting to the surface will only be considered if no underground stormwater collection system is available. End of pipe fitting detail to be determined on a case by case basis when daylighting is to be considered.

6.2.14 A concrete retainer that allows a minimum depth of 360 mm of playground sand is required. Weeping holes are required along the lowest elevation of the playground. See STANDARD DRAWING 61702.

6.2.15 In addition to the *CSA-Z614 Children's Playspaces and Equipment* Standards, Strathcona County requires:

(i) All playground no-encroachment zones to be inside the retained play area.
(ii) When the combined height of an elevated play surface and its protective barrier exceeds 2.4 m, protective barriers must extend to the underside of the roof or completely enclose the play element (ex: bridges).

(iii) Roof designs shall have no adjacent components or platforms located in close proximity which may promote access or climbing onto the roof.
(iv) Roofs to be free from ornamental features; such as, flags, chimneys and banners.
(v) Equipment attached to platforms shall have appropriate concrete footings as specified in the manufacturer's instructions. Mechanically inserted elements into the sub-grade are not acceptable.
(vi) All overhead equipment, chains, and gripping components shall be free of plastic or rubber coating.
(vii) Slides to be light in colour and face north or east.
(viii) Roller slides are prohibited.
(ix) Talk tubes and mounting clamps shall be buried below sub-grade.
(x) Swing chain shall be a minimum 30 grade strength with 7.9 mm diameter zinc plated coating. A pivot mechanism may be required.
(xi) Maximum top rail height of swing set to be no greater than 2.4 m

6.2.16 Signage indicating age appropriateness shall be provided in a location outside of the protective surfacing zone in a visible area. Refer to STANDARD DRAWING 61505.

6.2.17 Sign designs supplied by manufacturers that match equipment style may be considered.

6.2.18 Playgrounds located within 30 m of a roadway or parking lot must have a minimum 1.2 m tall fence along the side adjacent roadway or parking lot. Breaks in the fence line or a baffled opening are acceptable for entry into the park. Gates are not permitted.

6.2.19 A minimum 1.8 m maintenance strip is required between the playground retainer and any other permanent feature; such as, signage, planting beds, rest areas, etc.

6.2.20 Playground site design must include a rest stop as specified in SUB-SECTION 6.5.9 OF THIS SECTION that includes a minimum of two benches and one litter receptacle.

6.2.21 A 1.8 m high temporary chain link fence or safety fence is required until the playground has achieved CCC. "Keep Out – Construction Area" sign to be visible at all times, sign to include the developer's name and phone number.

6.3 OUTDOOR FITNESS EQUIPMENT (USERS 13 YEARS OLD AND OLDER)

6.3.1 Equipment shall be constructed in accordance with *ASTM F3101-15 Standard Specification for Unsupervised Public Use Outdoor Fitness Equipment* in its latest edition.

6.3.2 Fully accessible sites must comply with *ASTM F1951-14 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment*, in its latest edition.

6.3.3 Manufacturer's designs, footings, dimensions of no-encroachment zones, protective surfacing zones, and maintenance instructions to be submitted to Strathcona County as part of the detailed design landscape submission. Hard copy and digital files that show two and three dimensional designs, to scale and in metric will be required.

6.3.4 Equipment to be located a minimum of 3.5 m away from all roads and parking lots.

6.3.5 A minimum 1.8 m maintenance strip is required between the retainer and any permanent feature; such as, signage, planting beds, rest areas, etc.

6.3.6 Manufacturer's signage indicating age appropriateness, usage instructions and equipment restrictions shall be provided in a location outside of the protective surfacing zone in a visible area. Where a manufacturer's sign is not available, refer to STANDARD DRAWING 61506.

6.3.7 Each component must be labeled with the intended user age group, as well as any weight and/or user limits.

6.3.8 Equipment shall be located outside major drainage routes and/or ponding areas.

6.3.9 Sub-grade must be graded for positive drainage at a minimum of 1.5% and up to a maximum 2.0% grade.

6.3.10 Outdoor fitness equipment must include a sub-drainage system designed to provide positive drainage at a minimum of 1.5%. See STANDARD DRAWING 61703.

6.3.11 Sub-drainage systems to be connected to an adjacent catch basin or storm manhole. See STANDARD DRAWING 61703. Sub-drainage systems daylighting to the surface will only be considered if no underground stormwater collection system is available. End of pipe fitting detail to be determined on a case by case basis when daylighting is to be considered.

6.3.12 Concrete retainer to be installed as per STANDARD DRAWING 61702.

6.3.13 Engineered wood fiber is the preferred material for the protective surfacing. Alternative surface materials may be considered.

6.3.14 A 1.8 m high temporary chain link fence or safety fence is required until exercise equipment has achieved CCC. "Keep Out – Construction Area" sign to be visible at all times sign to include the developer's name and phone number.

6.4 SPORTS FIELDS

6.4.1 The design and construction of any sports field must follow the current municipal, provincial and/or federal guidelines for each sport, as well as CSA standards.

6.4.2 Preferred orientation for outdoor rinks, soccer fields and ball fields is a north to south direction. Site conditions may dictate an alternative.

6.4.3 Backstop, goal posts and player benches to be installed once turf has fully established and prior to FAC.

6.4.4 Sports field survey reference pins to be installed at time of construction. The sports field reference pins shall be 500 mm length of 15 mm diameter rebar, installed to a depth of 50 mm below final grade.

6.4.5 Soccer field and post sizes to be designed in accordance with the most current *Canadian Soccer Association Long Term Player Development - Wellness to World Cup*, VOL. 2 SEC. 616, SOCCER FIELDS and as included in STANDARD DRAWING 61807, 61808 and 61809.

6.4.6 All ball fields shall be sized according to the current sport association standard, VOL. 2 SEC 617, BALL FIELD and as included in STANDARD DRAWING 61801, 61802, 61803, 61804, 61805 and 61806.

6.4.7 Trees at full maturity are not permitted to overhang sports fields. Root barrier may be required depending on species and proximity to field.

6.5 TRAILS

6.5.1 Trail connections are required to allow pedestrian connectivity to amenities throughout the community; such as a parks, schools, and transit stops.

6.5.2 Estimated location and layout to be determined at ASP and/or conceptual plan stage.

6.5.3 3.0 m asphalt trails are to be designed to a 30 km/h speed and in accordance with the design guidelines under *TAC Geometric Design Guide for Canadian Roads* in its latest version.

6.5.4 Trail design, including but not limited to layout, structure, bollard and trail signage placement, shall be stamped, signed and dated by a licensed Professional Engineer, Professional Licensee in (Engineering) or Professional Technologist (Engineering) accredited by ASET and/or APEGA to practice Civil Engineering in Alberta in accordance with the *Engineering and Geoscience Professions Act*. Trail layout and location of bollards and trail signs to be included in the landscape plans for reference.

6.5.5 Trails in Strathcona County are defined as developed, semi-developed, undeveloped or paved shoulder/bike lane as per the Strathcona County Trails Strategy. Trails may be asphalt, gravel, mulch or natural grass pathways. See STANDARD DRAWING 61401, 61402, 61403, 61404, 61405 and 61406.

6.5.6 All 3.0 m wide asphalt trail require signs as specified in SUB-SECTION 6.6 OF THIS SECTION and line painting. See STANDARD DRAWING 61403.

6.5.7 Trails through remnant tree stands, surrounding wetlands and surrounding SWMFs may be required. CONSTRUCTION DRAWINGS must include optimal layout; however, trails may be field fitted to minimize disturbances to existing landscape while targeting the removal of hazard/dying trees.

6.5.8 Trails within SWMFs shall not be installed below the 1:25 year water level. Access points below the 1:25 year water level may be considered.

6.5.9 Furniture and litter receptacles (rest stops) to be provided by the developer and placed at a minimum of 0.5 km intervals or as site conditions and design intent allows. Rest stops to be provided at a minimum of 0.3 km intervals in areas of high density, seniors housing, hospitals, healthcare facilities and schools. See STANDARD DRAWING 61404.

6.5.10 Where asphalt trails or concrete sidewalks abut a gravel trail, a minimum 1.0 m asphalt/concrete apron is required to prevent granular material from migrating onto the hard surface.

6.5.11 Root barrier installed at a minimum 635 mm depth below final grade is required where the trail is within 1.5 m proximity to planting beds and native tree stands as per STANDARD DRAWING 61405. Consideration to be given pending plant type.

6.6 TRAIL SIGNAGE

6.6.1 Trail signage must be placed where trails intersect roads, vehicular accesses and/or at trail terminations.

6.6.2 Trail signage may be required where trails intersect other trails and where trail design falls outside of the recommended design domain.

6.6.3 Discretion shall be used when selecting the quantity and placement of signs to prevent visual pollution.

6.6.4 Trail signs must be limited in areas along gravel trails in natural areas.

6.6.5 Trail signs shall be placed 1.0 m perpendicular from the edge of trail on the right side.

6.6.6 See STANDARD DRAWING 61501, 61502, 61503, and 61504 for trail signs.

6.6.7 The following trail signs are required as indicated below:

Trail Sign	Requirements
T-1 Stop	• At marked roadway crosswalks and all trail terminations; • At all intersections with a roadway; • When crossing private accesses along arterial roads; and, • When crossing private accesses along collector roads, if/as deemed required by Strathcona County.
T-3 Yield	• When crossing private accesses along collector roads, if/as deemed required by Strathcona County; and, • At merging or intersecting points with low visibility or obstructed sight lines; such as by a fence, steep inclines or declines, sharp corners or dense vegetation.

T-5 No Bicycles	• Paired with T-1 Stop and T-7 Dismount in an area deemed as high conflict between pedestrians and bicyclists.
T-7 Dismount	• Pair with T-1 Stop sign at every marked crosswalk and termination at a roadway without a sidewalk; and, • Pair with T-1 Stop sign when crossing private accesses.

6.6.8 The following trail signs may be required as indicated below:

Trail Sign	Requirements
T-2 Slow	• At merging points with low visibility or areas with obstructed sight lines; such as by a fence, sharp corners, dense vegetation obstructing a corner, steep inclines/declines, or otherwise; and, • With T-14 Playground sign when the trail system is passing a playground.
T-4 Stop Ahead	• To provide warning in areas with low visibility or obstructed sight lines; such as by a fence, steep inclines/declines, sharp corners or dense vegetation.
T-6 Shared Trail	• Where concrete sidewalks merge into multi-use trails.
T-8L & T-8R Turn	• To provide warning of sharp corners in areas with low visibility or obstructed sight lines; such as by a fence, steep inclines or declines, dense vegetation or otherwise.
T-9 T-Intersection	• In advance of intersection to warn pedestrians of merging traffic, or to indicate an important upcoming intersection.
T-10 Dead End (left of right)	• Where a trail dead-ends due to trail closure, construction, or to warn of an immediate upcoming hazard; and, • A T-2 Slow sign to be installed 10 m away from T-10 Dead End if visibility is limited or obstructed.
T-12 Right / Left	• To promote way-finding throughout a site or direct traffic to remain on the permitted trail system. It should be installed directly below the primary sign.
T-13 Up	• To promote way-finding throughout a site or direct traffic to remain on the permitted trail system. It should be installed directly below the primary sign.
T-14 Playground	• May be paired with T-2 Slow sign.
T-15 Constriction	• Where a trail or sidewalk pathway is constricted; and, • May be paired with T-2 Slow sign.
T-16 Caution	• To warn pedestrians and cyclists of an upcoming hazard; such as, construction work, open excavation, uneven terrain, steep slopes, etc.
T-17 Dead End (left)	• Where a trail dead-ends due to trail closure, construction, or to warn of an immediate upcoming hazard and traffic needs to be diverted.
T-18 Hill	• Where a steep incline is approaching on a trail; and, • May be paired with T-2 Slow sign.

6.7 BOLLARDS

6.7.1 Bollards shall be installed on municipal lands to prevent unauthorized vehicular traffic use as approved by the Strathcona County representative.

6.7.2 Bollards to be built in accordance with Strathcona County's shop drawings and installed in accordance with STANDARD DRAWING 61601, and 61602. Bollards to be closed and locked after installation with lock manufactured by Guard model No. 834, size 40 mm and key 302.

6.7.3 Bollard locations will be approved by the Strathcona County representative based on the following:

(i) Bollards shall be used as a form of traffic control on trails to reduce pedestrian and bicycle speed when exiting onto roadways.
(ii) Place bollards on emergency and maintenance accesses that intersect roads or trails.
(iii) Where applicable, setback bollards onto the trails to allow for a safe place for vehicles entering and exiting park without sharp turns or obstacles.
(iv) All other bollard setbacks to be determined based on trail usage and best practises.

6.8 SITE FURNITURE

6.8.1 Furniture to be installed on rest stops as specified in SUB-SECTION 6.5.9 OF THIS SECTION.

6.8.2 Furniture to be built in accordance with Strathcona County's shop drawings, VOL. 2 SEC 612, SITE FURNITURE and installed in accordance with STANDARD DRAWING 61301,61302, 61303, 61304, 61305, 61306 and 61307.

6.8.3 Furniture adjacent to trails shall be setback a minimum distance, measured from the outer face of the amenity as follows:

(i) 1.0 m from front of bench to trail,
(ii) 0.6 m from back of bench to walkway if bench is turned away from trail,
(iii) 0.5 m from litter receptacles to trail,
(iv) 3.0 m from litter receptacles to benches or picnic tables; and,
(v) 1.0 m from picnic tables to trail.

6.8.4 Site furniture to be placed on a concrete or asphalt pad. Pad to extend 300 mm beyond the outside edges of the site furniture. See STANDARD DRAWING 61404.

6.9 ENTRY FEATURES

6.9.1 Entry feature designs and as-built record plans shall be stamped, signed and dated by a licensed Structural Professional Engineer, Professional Licensee in (Engineering) or Professional Technologist (Engineering) accredited by ASET and/or APEGA to practice Civil Engineering in Alberta in accordance with the *Engineering and Geoscience Professions Act*.

6.9.2 Entry feature designs shall be incorporated into the detailed landscape drawing submission for review and acceptance.

6.9.3 As-built record plans shall include manufacturer name and contact information.

6.9.4 Entry feature(s) shall be free standing and placed on public road ROWs.

6.9.5 A dedication of an additional minimum 1.0 m wide ROW strip beyond the standard corner cut is required to accommodate the structural components.

6.9.6 A minimum 1.5 m setback between sidewalks and entry features is required to prevent damage from maintenance equipment. Further, design and proposed location must take into consideration sight line requirements.

6.9.7 Names utilized on entry features shall be in accordance with approved names pursuant to the County's Naming Policy under the Municipal Policy Handbook.

6.9.8 Entry features with flags, glass, power or water requirements are not permitted.

6.9.9 Masonry work must be securely capped to prevent standing water and water damage.

6.9.10 All wood must be pressure treated unless otherwise approved.

6.9.11 No bronze, copper, brass or precious metals are to be utilized for decorative purposes. Metal components and fasteners to be tamper proof.

6.10 FENCING

6.10.1 General

6.10.1.1 Fence, and fence components, including decorative columns, to be located 150 mm inside property line on private property, measured from the most outside edge of fence to the property line.

6.10.1.2 Decorative columns must be installed outside of utility easements. All other fencing installed within an easement will be at the discretion of Strathcona County and may require an encroachment agreement.

6.10.1.3 A terminal post is required to be installed 150 mm within private property at all locations where fence lines transition from privately owned to municipally owned. Fencing must not be continuous across terminal posts transitioning onto municipal lands.

6.10.1.4 Maintenance equipment gates are required at controlled access points to the road system to allow entry into municipal lands, see STANDARD DRAWING 61208.

6.10.1.5 Back of lot gates are not permitted for lots backing onto natural areas, wetlands or SWMFs, unless a trail system is adjacent to the property. Gates onto other public areas shall be reviewed on a site by site basis.

6.10.1.6 Openings in the fence must be provided adjacent to sport fields, playgrounds and schools to provide pedestrian access to adjacent trails.

6.10.1.7 Fences to be located between private and municipal lands unless otherwise approved by the Strathcona County representative. Appropriateness of fence in rural area determined by Planning and Development Services. Fence height to be a minimum of:

(i) 1.2 m fence along roadway or parking lots adjacent to parks, sport fields or playgrounds.
(ii) 1.5 m to 1.8 m fence where private property abuts municipal lands.
(iii) 1.8 m to 3.0 m fence where determined by a noise impact assessment.

6.10.1.8 Alternative styles and materials of fencing to those discussed below, may be considered and shall be reviewed on a site by site basis.

6.10.1.9 Barbed wire fencing is not permitted in urban or rural municipal lands. Barbed wire fence may be used where restoration of existing fences is required by Alberta Transportation. See *Standard Specifications For Highway Construction* by Alberta Transportation.

6.10.2 Wood Screen and Noise Attenuation Fencing

6.10.2.1 Uniform 1.8 m single board wood screen fence shall be installed along all arterial and collector roadways where the private lots are next to a roadway, see STANDARD DRAWING 61201, 61202, 61203, and 61204.

6.10.2.2 Flankage single board wood screen fence is required where side yards are parallel to a collector roadway. Fence to be 1.8 m at back of lot and may stop before the front entrance of the home or may include stepped down sections to the utility easement.

6.10.2.3 1.8 m single board wood screen fence is required on either side of a PUL. Fence to be 1.8 m at back of lot stepped down up to the utility easement, over two sections, 0.4 m per section to a final height of 1.0 m.

6.10.2.4 Where determined by an accepted noise impact assessment, a 1.8 m or higher double board noise attenuation screen fence and/or berm is required, see STANDARD DRAWING 61203.

6.10.2.5 In the rural area, building to be positioned to minimize the need of berm and noise attenuation fence to meet noise attenuation requirements. Noise attenuation fence and berms shall only be considered if all other noise attenuation options, such as, building setbacks and orientation are unavailable.

6.10.3 Chain Link Fencing

6.10.3.1 Chain link fence may be installed where private property abuts municipal lands such as, parks, sports fields, naturalized areas and SWMFs. See STANDARD DRAWING 61206, 61207 and 61208.

6.10.3.2 Sport field fencing to be as required by the most current, provincial and/or federal guidelines for each sport, as well as CSA Standards and as specified in VOL. 2 SEC. 607, CHAIN LINK FENCE, VOL. 2 SEC. 616, SOCCER FIELDS and VOL 2 SEC. 617, BALL FIELDS.

6.10.4 Post and Rail Fencing

6.10.4.1 Post and rail or split cedar fencing may be installed along urban roadways to restrict access into municipal lands. Location to be determined on a site by site basis. See STANDARD DRAWING 61213 and 61204.

6.10.5 Rural Area Fencing

6.10.5.1 Paige wire fencing may be installed where needed to contain livestock within an area and as specified in VOL 2 SEC 608, PAIGE WIRE FENCE.

6.10.5.2 Post and rail fencing may be required between private and municipal lands to prevent access and encroachment onto adjacent properties. In heavily treed areas or environmentally sensitive areas, straight wire fencing or marker posts may be considered as an alternative to delineate boundaries. See STANDARD DRAWING 61214, 61215 and 61216.

6.10.5.3 In rural areas and/or wildlife corridors straight wire fencing may be required where post and rail fencing is not practical but may otherwise be required. Location to be determined on a site by site basis. See STANDARD DRAWING 61215.

6.10.5.4 Marker posts are required to delineate boundaries of CE and ERE. Marker posts may be required to delineate MRs or ERs (both urban and rural areas) where fencing is not practical but may otherwise be required. See STANDARD DRAWING 61216. Marker post locations to be determined on an individual basis.

6.11 DOG OFF-LEASH PARKS

6.11.1 Based on current municipal inventory and user needs, estimated location of dog parks to be determined at ASP and/or conceptual plan stage.

6.11.2 A perimeter fence must be installed around the site. A minimum 1.2 m fence is required for off-leash parks designated for small dogs only (less than 30 pounds) and a minimum 1.5 m fence is to be installed for off-leash parks designated for large dogs or where a combination of large and small dogs will be permitted.

6.11.3 In rural areas, fencing will be approved on a site by site basis depending on the wildlife in the area and their ability to move through or around the park.

6.11.4 Fenced separation between small dogs and larger dogs may be required.

6.11.5 Tight areas, corners and entrapments must be avoided.

6.11.6 A double entry/exit gate is required to allow control of unleashed dogs. See STANDARD DRAWING 61209.

6.11.7 Vehicular maintenance gate is required, preferably adjacent a trail, roadway or parking lot. See STANDARD DRAWING 61208.

6.11.8 Furnishings including litter receptacles and benches are to be provided. Location and quantity to be determined by Strathcona County representative depending on the size of the park.

6.11.9 Special amenities; such as, drinking water, dog cleaning station, notice boards, shelter structures, etc. are recommended and may be accepted in partnership with ambassador groups and/or private partners.

6.11.10 High canopy trees are required to provide shaded areas.

6.11.11 All surfaces to be completed with grass. Alternative surfaces maybe considered upon review by Strathcona County representative.

6.11.12 Planting beds may be designed to follow naturalization guidelines in SUB-SECTION 6.12.6 OF THIS SECTION to minimize the usage of wood mulch.

6.11.13 Signage at the entry point(s) is required. Include the following information using the MULTI-PURPOSE SIGN as per STANDARD DRAWINGS 61509 and 61510:

(i) Site name and address,
(ii) Hours of operation, and
(iii) Advisories:
  a) Use park at your own risk.
  b) Dogs must be accompanied and supervised by an adult guardian.
  c) Dogs must be leashed while entering and exiting the park.
  d) Guardians must pick up waste immediately.
  e) Dogs in heat are not allowed.
  f) Glass containers, food in bowls or chews are not allowed.
  g) Include the CleanPlayGo logo.

6.12 LANDSCAPING

6.12.1 General

6.12.1.1 All deciduous trees along boulevards, trails and sidewalks must have a 1.6 m minimum branching height at time of planting.

6.12.1.2 Deciduous trees to be a minimum caliper of 60 mm at time of planting.

6.12.1.3 Coniferous trees shall have a minimum height of 2.4 m at time of planting.

6.12.1.4 Shrubs shall be mass planted within beds with spacing appropriate to species as per the *Canadian Nursery Stock Standard*. Minimum shrub height or spread (whichever is greater) shall be 450 mm at time of planting, except where additional sightline requirements are specified. See SUB-SECTION 6.12.2.9 OF THIS SECTION and SUB-SECTION 6.12.3.2 OF THIS SECTION.

6.12.1.5 Shrubs (measured at their mature size) shall be setback a minimum of 500 mm from edge of shrub bed.

6.12.1.6 The use of filter fabric and edging within planting beds is not allowed due to long term maintenance.

6.12.1.7 Vines shall have at least 4 runners, each with minimum length of 300 mm.

6.12.1.8 Annual plantings are not allowed in planting beds within municipal lands.

6.12.1.9 Trees shall be set back a minimum distance, measured from centre of the tree trunk as follows:

(i) 2.0 m from arterial road median face of curb
(ii) 1.5 m from collector road median face of curb
(iii) 1.5 m from local road median face of curb
(iv) 2.0 m from arterial road boulevard face of curb
(v) 1.5 m from collector road boulevard face of curb
(vi) 1.5 m from local road boulevard face of curb
(vii) 3.5 m from street light
(viii) 7.5 m from street corners and intersections
(ix) 2.0 m from driveways
(x) 3.5 m from yield and stop signs
(xi) 3.5 m from bus stop signs
(xii) 2.0 m from all other signs
(xiii) 1.0 m from underground power lines
(xiv) 3.5 m from all power hardware
(xv) 1.8 m from water, sanitary and stormwater services
(xvi) 2.0 m from manholes, catch basins and valves
(xvii) 3.5 m from fire hydrants

(xviii) 1.5 m from gas and all other services
(xix) 1.0 m from other underground utilities
(xx) 1.0 m from edge of sidewalks
(xxi) 1.0 m from multi-use trails
(xxii) 1.8 m to 3.0 m from fences
(xxiii) 4.5 m from edge of playgrounds
(xxiv) 3.5 m from emergency access routes

6.12.1.10 Setback from sewer mains and water mains is not required.

6.12.1.11 In the event the minimum utility clearance as specified in SUB-SECTION 6.12.1.9 OF THIS SECTION, measured from centre of the tree trunk to the centre line of the utility, is not maintained, the involved utility company must be contacted for approval and safety procedures, e.g., by hand digging or hydro-vac.

6.12.1.12 All green ash (*fraxinus pennsylvanica*) shall be seedless. In addition, Manchurian ash (*fraxinus mandshurica*) and black ash (*fraxinus nigra*) are not acceptable.

6.12.1.13 Prunus species that are susceptible to black knot (*apiosporina morbosa)*, such as Schubert chokecherry (*prunus virginiana 'Schubert'*), pin cherry (*prunus pensylvanica*), and mayday (*prunus padus*) are to be strategically located on higher areas with well drained soils within naturalized areas to help limit disease spread.

6.12.1.14 Only elms grown in Alberta from a Dutch elm disease free source are acceptable.

6.12.1.15 Areas subject to accessibility requirements; such as for mowing, hazard tree removal, infrastructure maintenance, etc. are to be designed to provide access and a maintenance strip that accommodates maintenance equipment.

6.12.1.16 Maintenance strips must be free of obstructions and completed with topsoil and seed or sod. Widths may vary between 1.0m to 3.0m depending on proposed site conditions, surface slope, land use, maintenance access requirements, and adjacent infrastructure.

6.12.1.17 Sod shall be required in areas of intensive use as follows:

(i) Install sod a minimum of 4.5 m beyond playgrounds, splash parks, and hard surface sports facilities.
(ii) Install sod a minimum of 2.0 m from each side of centre line of grass swales or beyond edge of concrete swales.
(iii) Install sod a minimum of 1.0 m beyond edge of asphalt trails and concrete sidewalks.

6.12.1.18 Landscape design of municipal lands must provide pollinator habitat as outlined in the Strathcona County's Urban Agricultural Strategy.

6.12.1.19 Plant material suitability to be determined on an individual basis. Depending on the site's use, discretion should be used when selecting concentrations of plants that can attract pollinator's and other wildlife.

6.12.1.20 Shredded wood mulch or similar loose materials shall not be used in planting beds within major ponding areas or overland drainage routes.

6.12.1.21 A minimum of 75 trees per hectare are required for MRs and PULs. Shrubs may be substituted for trees at the rate of five shrubs to one tree, as site conditions and design may dictate.

6.12.1.22 Existing or retained tree stands within an MR, PUL and ER will not be accounted for in the site's overall tree requirements.

6.12.1.23 A minimum of one tree per residential lot is required for urban and rural hamlets as follows:

(i) Tree planting equal to one tree per lot located in municipal lands within the neighbourhood. This may be ornamental and/or naturalized planting; or,

(ii) Funds equal to one tree per lot and 24 months of maintenance to be directed to Strathcona County for future tree planting or other amenity. Tree value to be submitted by the Contract Manager/Developer Representative and approved by Strathcona County's representative. Value to be determined based upon current prices for supply and install of a 60 mm caliper deciduous tree. Strathcona County will provide administration.

6.12.1.24 The total number of residential lots and corresponding trees are to be noted on the final set of CONSTRUCTION DRAWINGS and on the as-built set of drawings.

6.12.1.25 A minimum of the 30% of the required plant material must be native to the province of Alberta. Locally adapted native plants that are acclimatized to the province of Alberta are preferred.

6.12.1.26 Plant material shall be selected and designed to prevent monoculture and the spread of disease as part of urban ecosystem and climate change resiliency planning. See chart below for planting requirements:

No. of trees per stage	Max. % of same Genus	Max. % of same Species
>100	35%	50%
50 – 100	45%	50%
25 – 49	75%	75%
1 – 24	100%	75%

6.12.1.27 Bio-swales and rain gardens may be constructed in ideal locations that can support the water requirements; such as, naturalized areas, PULs, SWMFs, etc., to develop sustainable landscapes, increased biodiversity, enhanced ecosystems, and provide educational opportunities. Consideration of bio-swales will require site specific engineering.

6.12.1.28 Landscape design must include additional site specific erosion and sedimentation control measures.

6.12.2 Boulevard Landscaping

6.12.2.1 Urban boulevards with separate walkways must be graded, top soiled and sodded from walkway to curb. Tree planting is required on any roadway with separate sidewalks, where lots have a side yard and/or back onto a road.

6.12.2.2 Rural roadside planting is required in areas outside of urban area where ROW and utilities allow. Rural roadside planting to be reflective of adjacent natural areas.

6.12.2.3 Planting setbacks from utilities and road infrastructure as specified in SUB-SECTION 6.12.1.9 OF THIS SECTION.

6.12.2.4 Planting setback from overhead utilities shall be as per the requirements as established by respective utility authority. Letter of confirmation of all overhead utility restrictions to be submitted to the Strathcona County representative for review.

6.12.2.5 The street lighting design and tree planting design must be coordinated to eliminate conflicts between the lighting pattern and tree canopy.

6.12.2.6 Tree species selection is to be suitable for boulevards and avoid visual and overhead obstructions for vehicles and pedestrians.

6.12.2.7 Physical deterrents such as planting, boulders and signs may be required to be installed along roadways or sidewalks to restrict vehicular access into open spaces. Locations, quantities and sizes are to be reviewed on an individual basis.

6.12.2.8 Artificial turf or synthetic turf products shall not be installed in any roadway ROW, boulevard or median.

6.12.2.9 Boulevards may be designed to include planting beds, shrubs and perennial with approved setbacks. Shrubs and perennials planted in boulevards, islands and roundabouts, should not exceed 450 mm in height at maturity.

6.12.2.10 Poplars *(populus)*, mayday *(prunus padus)*, birch *(betula)*, amur cherry *(prunus maackii)*, mountain ash *(sorbus aucuparia)*, apple *(malus pumila)*, crab-apple *(malus)* and Schubert chokecherry *(prunus virginiana 'Schubert')* are not acceptable for boulevard trees.

6.12.2.11 Thorny plant material is not acceptable within ornamental planting beds; however, as some thorny species can be an important component of resilient urban ecosystems and climate change resiliency planning, strategically located vegetation that does not interfere with sidewalk/trail users may be permitted on a site by site basis.

6.12.2.12 Fruit bearing trees are not permitted along boulevards or other areas that may not meet pedestrian and vehicular sightline requirements.

6.12.2.13 Plant material to have limited horizontal root growth and be non-suckering-type to avoid encroachment into adjoining privately owned lands, sidewalks or trails. In cases where horizontal roots may become an issue, root barrier may require to be installed. See STANDARD DETAIL 61405.

6.12.3 Medians, Roundabouts and Cul-de-Sac Islands

6.12.3.1 Landscape designs for medians, roundabouts and cul-de-sac islands shall include, where appropriate, topsoil, trees, shrubs, perennials, mulch to the satisfaction of the Strathcona County representative.

6.12.3.2 Plant material within medians is to be selected to ensure sightline requirements are met. Shrubs and perennials should not exceed 350 mm in height at maturity. Shrubs or perennials that may exceed 350 mm in height at maturity may be located in the centre of the island to not impede visibility.

6.12.3.3 Turf within medians, roundabouts, and cul-de-sac islands will be allowed only at the discretion of Strathcona County.

6.12.3.4 Concrete edger or other special hard surfaced treatment to permitted on a site by site basis.

6.12.3.5 Thorny plant material is not acceptable within ornamental planting beds; however, as some thorny species can be an important component of resilient urban ecosystems and climate change resiliency planning, strategically located vegetation that does not interfere sightlines may be permitted on a site by site basis.

6.12.4 Public Agriculture

6.12.4.1 Design of open spaces must consider opportunities to cultivate food in urban areas as outlined on the *Strathcona County's Urban Agricultural Strategy*.

6.12.4.2 Fruits, herbs, vegetables and edible flowers may be planted in spaces that are easily accessible and highly visible. Discretion should be used when selecting concentrations of plants that can attract nuisance wildlife.

6.12.4.3 Locate edible landscaping that may drop fruit and berries close to high pedestrian traffic areas and hard surfaces that can be accessed by people with limited mobility to encourage harvesting but far enough away from hard surfacing to minimize maintenance issues.

6.12.4.4 Fruit bearing vegetation that is not suitable for human consumption should be strategically placed and not located adjacent to edible plants to avoid confusion and accidental consumption.

6.12.4.5 Setback edible plant material from peripheral mature trees that may reduce sun exposure and locate community gardens where there is protection from prevailing winds.

6.12.4.6 Educational signs are required to identify fruit bearing vegetation.

6.12.4.7 Community gardens shall be located outside major drainage routes and/or ponding areas.

6.12.4.8 Post and rail, split cedar fencing or approved alternative may be installed to define the community garden space; however, closed board, chain link or comparable structures that impede public access/views are not permitted.

6.12.4.9 Garden plots may be raised or in-ground. In-ground plots must be defined by an edger made of wood, concrete or an alternative material approved by a Strathcona County.

6.12.4.10 Raised plots may be constructed with wood, concrete, corrugated steel or an alternative material approved by a Strathcona County representative.

6.12.4.11 Garden plots (raised or in-ground) must be accessible from at least three sides and be dimensioned to allow users to reach the middle of the plot. In-ground garden plots must be accessible from at least one side.

6.12.4.12 Depth of garden to be a minimum 450 mm as specified in VOL. 2 SEC. 602, INSTALLATION OF TOPSOIL.

6.12.4.13 Garden plots (raised or in-ground) must have a minimum of 1.2 m main pathway that allows access to the perimeter of the site. Internal pathway may be a minimum of 0.9 m and be free of any obstructions. Crushed gravel, grass or shredded wood mulch are acceptable surface treatments for pathways. Topsoil and clay are not acceptable.

6.12.4.14 Fruit bearing trees used for public agriculture may be delivered to site in a container. Trees for this purpose are to be measured by the container size. Trees must be a minimum #10 gallon container at time of planting.

6.12.4.15 Fruit bearing trees delivered in a container may be substituted for caliper trees at a rate of three container trees to one caliper tree.

6.12.4.16 Litter receptacles, benches and/or picnic tables are to be incorporated around or through edible landscapes and community gardens.

6.12.4.17 A source of potable water that is appropriate for irrigation must be installed at each community garden site.

6.12.4.18 A buried water service connection is to include the installation of a metre vault, complete with metre, a self-draining type curb stop and a water tap.

6.12.4.19 Water tap shall include a threaded end for the attachment of a standard ⅝” dia. garden hose.

6.12.4.20 Water main connections to be installed as specified in VOL. 1 SEC. 4.3, WATER DISTRIBUTION SYSTEM.

6.12.4.21 Where structure's roofline allows, rain barrels may be installed and must be clearly labelled as "non-potable water".

6.12.4.22 Refer to VOL. 2 SEC. 614, COMMUNITY GARDENS.

6.12.5 Public Utility Lots (PULs)

6.12.5.1 Where possible, landscape improvements and plant material may have increased setbacks from underground utilities as specified in SUB-SECTION 6.12.1.9 OF THIS SECTION.

6.12.5.2 Contract Manager/Developer Representative shall provide the Strathcona County representative written requirements from the utility authority regarding distance from intermediate and high-pressure pipelines and trees. When tree/shrub planting in a utility corridor is not recommended, alternative locations to be provided.

6.12.5.3 All pipeline-crossing agreements must be in place prior to construction. Records may be requested at time of CCC inspection application.

6.12.5.4 Landscape designs may range from naturalization, pollinator habitat, urban agriculture, to ornamental landscape design, depending on the ASP direction, existing landscape character, and to new design intent.

6.12.5.5 Existing trees within or abutting utility corridors to be conserved wherever possible.

6.12.5.6 Slopes along a PUL shall not exceed 6% without approved permanent erosion control.

6.12.5.7 Where the PUL provides emergency access, in urban and rural hamlets the finished surface must be built to provide adequate structure and space for emergency vehicle widths and loads. Emergency accesses must have a minimum ROW of 6.0 m and a minimum paved carriageway of 4.0 m. See Design and Construction Standards for further information.

6.12.5.8 Urban PULs may be used to provide connections between sections of Strathcona County's trail system and/or provide access to park and recreation facilities through subdivisions. PULs 4.0 m wide to include a 3.0 m asphalt trail or up to 1.8 m concrete walkway.

6.12.5.9 Urban PULs shall be fenced, graded and seeded or sodded. Plantings are required where space and utilities allow.

6.12.5.10 Rural PULs may be fenced allowing wildlife movement. PULs may provide connections between trail systems within a subdivision or other country residential subdivisions. Surface may vary from concrete, asphalt, gravel or grass.

6.12.5.11 Visual screening or aesthetic enhancement of utilities and structures may be provided through landscaping with consideration of utility setbacks and access.

6.12.6 Naturalization

6.12.6.1 Conserved natural areas must be maintained from time of subdivision until soft landscaping FAC has been achieved. This includes but is not limited to tree and root system protection, hazard tree removal, fuel load reduction (FireSmart principles), weed control, debris and waste disposal.

6.12.6.2 Naturalized planting beds within MRs and PULs are preferred by Strathcona County and naturalized planting beds may be considered within ornamental landscape designs.

6.12.6.3 Using on-site and in-situ topsoil and other growing medium is preferred over imported non-native soils. The Developer Representative shall identify areas to be planted with collected material and indicate site where material is being taken from, prior to construction.

6.12.6.4 Areas identified for preservation/conservation, which are disturbed during construction, must be restored with plant material native to the area.

6.12.6.5 Areas identified for naturalization must be planted with the following percentages, calculated at one plant per square metre and with native plant material sourced from plant hardiness zone 3a, 3b or 2b *(Natural Resources Canada)*:

(i) 35% of all plant material to be covered by caliper stock (deciduous minimum of 60 mm or coniferous minimum 1.8 m tall),
(ii) 35% mix of shrubs (minimum 450 mm height or spread), and
(iii) 30% whips, live cuttings and seedlings.

6.12.6.6 Areas identified for restoration must be planted with the following percentages, calculated at one plant per square metre and with native plant material sourced from plant hardiness zone 3a, 3b or 2b *(Natural Resources Canada)*:

(i) 25% of all plant material to be covered by caliper stock (deciduous minimum of 60 mm or coniferous minimum 1.8 m tall),
(ii) 25% mix of shrubs (minimum 450 mm height or spread), and
(iii) 50% whips, live cuttings and seedlings.

6.12.6.7 Whips may be substituted for shrubs at the rate of fifteen whips to one shrub, as site conditions and design may dictate.

6.12.6.8 The design must include an appropriate mix of native trees, shrubs, perennials and wild flowers (wild flower seed mixes must be sourced from a certified supplier and is required to be approved by Strathcona County prior to installation) to rehabilitate disturbed areas. The landscape drawings shall identify all plant communities and all other information necessary to implement the proposed landscape improvements.

6.12.6.9 Site characteristics; such as, slope, soil and orientation, and their appropriateness to the site shall be considered when specifying species and size of plant materials.

6.12.6.10 All plant material to be nursery grown stock except for transplanted trees and live cuttings.

6.12.6.11 Where trees may be approved for removal, if possible, relocate the young trees and associated native material to other areas.

6.12.6.12 Lighting along trails within naturalized areas is not permitted.

6.12.6.13 The following information shall be outlined on a sign where there is a conserved, protected, developed, or restored naturalized area. See STANDARD DRAWING 61502, 61509 and 61510.

(i) Educational information that is specific to the function and benefits of the naturalized area;
(ii) A plan outlining features such as trails, rest areas, adjacent amenities, etc. Identify if trails are wheelchair accessible;
(iii) Include a "you are here" locator;
(iv) Label no mow areas;
(v) As means of prevention of the spread of invasive species, PlayCleanGo components such as signage, incorporation of the logo, or footwear cleaning tools may be requested in areas where unpaved trails travel through areas with identified invasive species; and,
(vi) Indicate with advisory graphics responsible use information:
a) Keep wildlife wild.
b) Do not approach or feed animals, including birds.
c) Stay on designated trails to protect nesting areas.
d) Keep dogs on leash and clean up after your pet.
e) Properly dispose litter.
f) Do not dispose fish and/or fish tanks (when appropriate).

6.12.6.14 No motorized vehicle sign is required in rural areas. See STANDARD DRAWING 61511 and 61512.

6.12.7 Constructed Wetlands

6.12.7.1 Construct SWMF/constructed wetlands in accordance with the most current Design and Construction Standards, this document, Strathcona County's Best Management Practices for Stormwater Management Facilities and provincial and federal policies.

6.12.7.2 Where mitigation or compensation for lost natural wetlands is required, further wetland functions must be addressed as per provincial and federal guidelines, acts and legislation and the directive for permittee-responsible wetland construction in Alberta (AEP, Water Conservation, 2018, No.5).

6.12.7.3 SWMF design standards specified in VOL. 1 SEC. 4.4 STORMWATER MANAGEMENT SYSTEM and VOL. 2 SEC. 605, CONSTRUCTED WETLANDS.

6.12.7.4 Constructed wetlands are not intended to replace all of the functions of natural wetlands but to minimize point source and non-point source pollution prior to entry into streams, natural wetlands and other receiving waters.

6.12.7.5 If conserved natural wetlands are present in the urban watershed, pollutants should not be intentionally diverted into them for primary treatment. Natural wetlands must be part of an integrated landscape approach to water quality control and cannot be expected to compensate for insufficient use of BMP's within constructed wetlands/SWMFs.

6.12.7.6 Erosion and sedimentation control plans are required throughout the construction period and until vegetation is well established as specified in VOL. 1 SEC. 4.4 STORMWATER MANAGEMENT SYSTEM. Industry standard BMP's to be approved by the Strathcona County representative.

6.12.7.7 Unsubmerged/exposed storm sewer inlets and outlets must have grates as per Design and Construction Standards and be landscaped to visually screen the inlets/outlets. Grates must be approved by the Strathcona County representative.

6.12.7.8 As specified in SUB-SECTION 6.12.1.21 OF THIS SECTION, a minimum of 75 trees per hectare are required. For constructed wetlands, this area shall be calculated from the NWL to the property line.

6.12.7.9 Plant material selection to be indicative of natural wetland areas typical of the Strathcona County region. See STANDARD DRAWINGS 61102, 61103 and 61104.

6.12.7.10 Landscape design must include the following zones:

(i) Emergent zone:

Complete with minimum 300 mm depth live soil from removed donor wetlands whenever available or agricultural topsoil salvaged during development. Topsoil amendments will be approved on an individual basis but may include compost, leaf litter, biochar, and coconut coir.

(ii) Wet meadow zone:

Mass plantings and naturalized shorelines must be a minimum of 6 m above the NWL for erosion and sedimentation control and nutrient removal. Plant material shall be selected to respect soil characteristics, water levels, slopes, pre-development vegetation, climate and waterfowl management specifically Canada Geese *(branta canadensis)*.

Constructed wetlands shall be naturalized in accordance with SUB-SECTION 6.12.6 OF THIS SECTION, and STANDARD DRAWING 61102.

Areas between the NWL and the 1:5 year water level to be completed with a minimum of 300 mm depth topsoil and seeded with the wet meadow seed mix as specified in VOL. 2 SEC. 603 SEED AND SOD.

Areas between the 1:5 year water level and the 1:25 year water level to be completed with a minimum of 300 mm depth topsoil and seeded with the naturalization seed mix as specified in VOL. 2 SEC. 603 SEED AND SOD.

A 10 m wide unmown and naturalized buffer is required above the NWL for erosion control and additional sedimentation and nutrient removal.

Planting design should deter direct public access to the shoreline to avoid disturbance of the wetland fauna.

(iii) Upland buffer zone:

Requirements for screening the constructed wetland, between NWL and HWL, from adjacent land uses and for visual aesthetics shall be agreed by the developer and Strathcona County

Area may be designed with a combination of naturalized and ornamental planting beds.

Areas above the 1:25 year water level may be seeded with the naturalization seed mix, general park seed mix or sod as specified in VOL. 2 SEC. 603 SEED AND SOD.

Vegetation shall be selected to reduce sedimentation and erosion, improve water quality and provide habitat connectivity.

6.12.7.11 Shredded wood mulch shall not be installed below the 1:25 year water level, excluding mulched areas within individual tree wells.

6.12.7.12 The developer shall include design features that minimize mosquitoes in constructed wetlands. Features can include system design and vegetation management that would preclude stagnant backwaters and shading of the water surface, in order to provide habitat for purple martin, swallows, baitfish, dragonflies, bats and other mosquito predators.

6.12.7.13 Special features such as viewing platforms, decks and boardwalks must have design drawings and as-built record plans stamped, signed and dated by a licensed Structural Professional Engineer, Professional Licensee in (Engineering) or Professional Technologist (Engineering) accredited by ASET and/or APEGA to practice Civil Engineering in Alberta in accordance with the *Engineering and Geoscience Professions Act*.

6.12.7.14 Fountains and aerators are not permitted within SWMFs.

6.12.7.15 Lighting along trails that surround SWMFs is not permitted.

6.12.7.16 At the discretion of Strathcona County and the developer the design may incorporate features that either encourage or discourage wildlife. Nesting islands are to be reviewed on a site by site basis.

6.12.7.17 Activities that involve direct contact with water or ice are not permitted unless otherwise noted by Strathcona County. SWMF safety signs must be installed between HWL and 1:25 year water level. See STANDARD DRAWING 61513.

6.12.7.18 Interpretative sign(s) must be included to inform the public of the function of SWMFs, habitat, wildlife, safety advisories, etc. Signage can be completed with either a large interpretive sign at the entrance points or multiple smaller signs along the trail system. Multiple smaller signs as part of a circuit may be provided at a ratio of a minimum of 4 smaller to 1 large sign.

6.12.7.19 Signs to be set backed 1.0 m away from the trail. See STANDARD DRAWING 61509, 61510, and 61515.

6.12.7.20 The following information shall be outlined on interpretive signs, located at the main entry points to the SWMF:

(i) A plan outlining features of the SWMF; including trails, view decks, rest areas, litter receptacles, etc.
(ii) Site address
(iii) Include a “you are here” locator
(iv) Educational information that is specific to the function and benefits of the SWMF
(v) Label mow and no mow areas
(vi) A message that reads: “Did you know? All stormwater management facilities are connected to the natural creek systems within Strathcona County, which drain directly into the North Saskatchewan River.”
(vii) Indicate with advisory graphics responsible use information:
  a) Keep wildlife wild.
  b) Stay on designated trails to protect nesting areas.
  c) Do not approach or feed animals, including birds.
  d) Do not dispose fish and/or fish tanks.
  e) Keep dogs on leash and clean up after your pet.
  f) Properly dispose litter.

6.13 OPEN SPACE INSPECTION PROCESS

6.13.1 The developer’s representative shall provide a yearly anticipated landscape construction and inspection schedule to Strathcona County representative, prior to May 31 or prior to any construction commencement, whichever occurs first.

6.13.2 Open space inspection categories:

Soft landscape improvements:		
Inspection type	Warranty and maintenance period:	Construction specifications:
Landscape		
Topsoil; Turf; Trees; Shrubs; perennial; naturalized; and, conserved areas.	Minimum 2 years from CCC.	VOL. 2 SEC. 601, LANDSCAPE SUBGRADE PREPARATION. VOL. 2 SEC. 602, INSTALLATION OF TOPSOIL. VOL. 2 SEC 603, SEED AND SOD. VOL. 2 SEC. 604, PLANT MATERIAL.
Hardscape improvements:		
Inspection type	Warranty and maintenance period:	Construction specifications:
Trails		
Gravel trails; paving stone; asphalt trails, bollards and trails signage	Minimum 2 years from CCC.	VOL. 2 SEC. 610, GRAVEL TRAILS. VOL. 2 SEC. 611, PAVING STONE.
Site Furniture		
Benches; picnic tables; and, litter receptacles.	FAC shall be issued once accepted by Strathcona County. A maintenance period is not required.	VOL. 2 SEC. 613, OPEN SPACE SIGNAGE.
Fences		
Fences gates; and, marker posts.	FAC shall be issued once accepted by Strathcona County. A maintenance period is not required.	VOL. 2 SEC. 606, WOOD SCREEN AND NOISE ATTENUATION FENCE VOL. 2 SEC. 607, CHAIN LINK FENCE VOL. 2 SEC. 608, PAIGE WIRE FENCE VOL. 2 SEC. 609, STRAIGHT WIRE FENCE.

Signage		
Park name signs; educational signage; SWMF safety sign; playground signs; exercise equipment signs; and, no motorized vehicle sign.	FAC shall be issued once accepted by Strathcona County. A maintenance period is not required.	VOL. 2 SEC. 613, OPEN SPACE SIGNAGE.
Structures		
Entry features; retaining walls; bridges; boardwalks; lookouts; and, decks.	FAC shall be issued once accepted by Strathcona County. A maintenance period is not required.	N/A
Playgrounds and outdoor fitness equipment	Minimum 1 year from CCC	VOL. 2 SEC. 615, PLAYGROUND AND OUTDOOR FITNESS EQUIPMENT.
Sports fields	Minimum 2 years from CCC.	VOL. 2 SEC. 616, SOCCER FIELDS. VOL. 2 SEC. 617, BALL FIELDS.
Community gardens	Water main connection system: Minimum 1 year from CCC. Garden plots: FAC shall be issued once accepted by Strathcona County. A maintenance period is not required.	VOL 1 SEC. 4.3, WATER DISTRIBUTION SYSTEM VOL. 2 SEC. 614, COMMUNITY GARDENS.

6.13.2.1 Soft landscaping CCC inspections may occur from June 1 until September 30 weather permitting.

6.13.2.2 Soft landscape re-checks for CCC will be conducted until October 15. Inspections are weather dependent based on snow coverage.

6.13.2.3 All required erosion and sedimentation control measures must be in place at time of soft landscape CCC.

6.13.2.4 Soft landscape inspections and re-checks for FAC will be conducted between June 1 and September 30, based on snow coverage and is weather dependent. Should a hard frost occur in Strathcona County, the inspection season may end unless the plant material remains in a vigorous growing condition or adequate time remains in the inspection season to allow for proper assessment.

6.13.2.5 Hard frost is defined as “four consecutive hours of below negative four degrees Celsius”.

6.13.2.6 Soft landscaping will not be eligible for FAC until aboveground FAC has been issued.

6.13.2.7 If the landscape and the ground cover in adjacent properties is fully established, erosion and sedimentation control measures may be removed at FAC. Removal of the erosion and sedimentation control measures is at the discretion of Planning and Development Services.

6.13.2.8 Soft landscape construction and acceptance criteria as specified in VOL. 2 SEC. 603 SEED AND SOD and VOL. 2 SEC. 604 PLANT MATERIAL.

6.13.2.9 Hardscape inspections may be conducted year-round, based on snow coverage and weather permitting.

6.13.2.10 Playground and outdoor fitness equipment inspections will be staged in the following four phases prior to issuing CCC and FAC:

Phase 1 (CCC)	
Sub-grade and sub-drainage check	• Submit as-built drawings that include survey points for the sub-drainage system; and, • Submit compaction tests.
Phase 2 (CCC)	
Concrete footings, playground equipment and concrete retainer	• The Developer Representative must submit a detailed pre-inspection report completed by a Canadian Playground Safety Institute (CPSI) certified inspector prior to Strathcona County representative booking a formal inspection, (refer to Annex B – Sample maintenance/inspection checklist under the CAN/CSA-Z614 Children's Playspaces and Equipment Standards); • Strathcona County representatives, the Developer Representative and the Canadian CPSI certified inspector to perform an on-site inspection; • The Developer Representative shall provide a detailed inspection report within 3 business days following the inspection; • Deficiencies identified during inspections shall be repaired within 30 days following the formal inspection date. If deficiencies are not corrected by the agreed date, the site will be subject to a full re-inspection. • Once all deficiencies have been rectified, Developer Representative must submit a request for re-check.
Phase 3 (CCC)	
Protective surfacing, signage (and concrete retainer if not inspected before)	• Developer Representative must submit a request for inspection that includes: a) Confirmation that the sand and signs have been installed as per the CONSTRUCTION DRAWINGS. b) As-built plans; c) Infrastructure summary; d) Equipment installation manual; e) Playground maintenance kit; and, f) Letter of compliance from the manufacturer confirming that the playspace and equipment have been installed in accordance with CAN/CSA-Z614 Children's Playspaces and Equipment Standards, or ASTM F3101-15 Standard Specification for Unsupervised Public Use Outdoor Fitness Equipment and, Strathcona County's Design and Construction Standards.

	• Once the site is free of deficiencies, Strathcona County representative to issue CCC, the Contractor shall remove safety fence within 48 hours and the warranty period begins. • Following issuance of CCC, the County shall assume the normal operation and routine maintenance of the playground and/or outdoor fitness equipment. This excludes repairs or matters arising from inadequate or deficient design/construction and damaged or missing components.
Phase 4 (FAC)	
Playground equipment, concrete retainer, protective surfacing and signage	• The Developer Representative must submit a pre-inspection report completed by a Canadian Playground Safety Institute (CPSI) certified inspector and the as-built plans prior to Strathcona County representative booking a formal inspection; • Strathcona County Representatives, the Developer Representative and the Canadian CPSI certified inspector to perform an on-site inspection; • The Developer Representative shall provide a detailed inspection report within 3 business days following the inspection; • Deficiencies identified during inspections shall be repaired within 30 days following the formal inspection date. If deficiencies are not corrected by the agreed date, the site will be subject to a full re-inspection. • Once all deficiencies have been rectified, Developer Representative must submit a request for re-check. • Upon repair of deficiencies and expiration of warranty period, Strathcona County representative to issue FAC.

6.13.2.11 The Developer Representative shall submit the following to Strathcona County representative to request an open space CCC inspection:

(i) Written request sent by email or mail
(ii) Pre-inspection report
(iii) Reduced drawings (11x17 PDF set)
(iv) Infrastructure summary (when a warranty period is required)

6.13.2.12 The Developer Representative shall submit the following to Strathcona county representative to request a FAC inspection:

(i) Written request sent by email or mail
(ii) Pre-inspection report
(iii) As-built drawings (AutoCAD & PDF)
(iv) Infrastructure summary (when a warranty period is not required)
(v) Maintenance logs and Contractor's Biocide Report (link to form)
(vi) Fence tolerances as specified in SUB-SECTION 6.13.2.13 OF THIS SECTION

6.13.2.13 For fence FAC, include a written confirmation from the Developer Representative or fence Contractor, certifying that the fencing improvements have been installed as per an accredited legal survey within the tolerances specified in VOL. 2 SEC. 606 WOOD SCREEN AND NOISE ATTENUATION FENCE, VOL. 2 SEC. 607 CHAIN LINK FENCE, VOL. 2 SEC. 608 PAIGE

WIRE FENCE, VOL. 2 SEC. 609 STRAIGHT WIRE FENCE and VOL. 2 SEC. 613 OPEN SPACE SIGNAGE for marker posts.

6.13.2.14 In order to facilitate all landscape inspections, a complete set of the required paperwork must be received prior to scheduling the inspection.

6.13.2.15 The Contract Manager/Developer Representative shall provide a detailed inspection report within three (3) business days following the inspection and ensure that all deficiencies have been rectified prior to re-inspection.

6.13.2.16 All deficiencies identified during inspections shall be repaired within 30 days following the original inspection date. If deficiencies are not corrected by the agreed date, the stage will be subject to a full re-inspection.

OPEN SPACE

Tree Planting

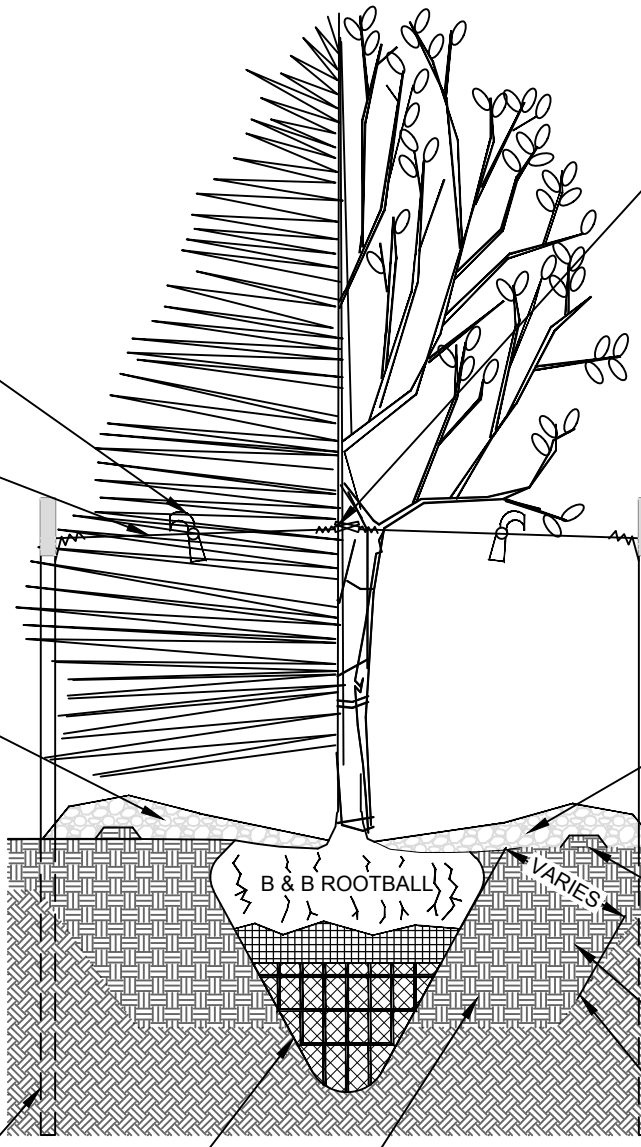
Planting Beds

Fences and Gates

Site Furniture

Trails and Paving Stone

Signage



RUBBER HOSE - 12mm OR APPROVED EQUAL. POSITION AT APPROX. $\frac{3}{5}$ HT. FOR ALL TREES.

2 VERTICAL STAKES PER TREE:
- TREE STAKES MIN. 2.1m LENGTH PLAIN T-POSTS (1.33LB/FT) C/W 7 PUNCHED HOLES ($1\frac{1}{2}$" x $1\frac{3}{8}$" x 7") OR TEETH/NOTCHES
- ALL EXPOSED PORTIONS OF TREE STAKES FREE OF RUST, SCALED, PRIMED, & PAINTED.
- TREE STAKES SET MIN. 600mm INTO UNDISTURBED SOIL.
- TOP 300mm OF ALL TREE STAKES TO BE PAINTED TO MATCH ANNUAL COLOUR CODES.

FLUORESCENT ORANGE FLAGGING ON ALL GUY WIRES

GALVANIZED GUY WIRE No. 12 (MIN. SIZE) WRAP GUY WIRE END BACK ON ITSELF

SAUCER SHALL BE SOAKED WITH WATER IMMEDIATELY AFTER PLANTING

MIN. 100mm SHREDDED MULCH (TAPER AT THE BASE OF TRUNK)

TYP. 254mm WIDE x 51mm HIGH TOPSOIL BUMP TO HOLD IN WATER

400mm BOULEVARD AREAS & 600mm PARK AREAS

SCARIFY WALL OF TREE WELL

BACKFILL WITH TOPSOIL, MODERATELY COMPACTED (ENSURE STABILITY OF ROOT BALL)

UNDISTURBED SOIL

FOLD 1/3 (OR REMOVE) WIRE BASKET & BURLAP FROM TOP OF ROOT FLARE.
- POSITION TOP OF ROOT BALL 40mm ABOVE FINISHED GRADE
- BURLAP TO BE NATURAL FIBRE
- ROOT BALL MIN. SIZE AS PER CANADIAN NURSERY LANDSCAPE ASSOCIATION STANDARDS FOR NURSERY STOCK.

NOTES:
1. INSTALL IN ACCORDANCE WITH SECTION 601, 602, 604 AND OTHER RELATED SECTIONS UNDER VOLUME 2, CONSTRUCTION SPECIFICATIONS.
2. PRUNE DEAD, DAMAGED OR CROSSING BRANCHES.
3. IF MINIMUM UTILITY SETBACKS ALLOW, POSITION TREE STAKES INTO DIRECTION OF PREVAILING WINDS OR IF IN A BOULEVARD, POSITION IN LINE WITH DIRECTION OF THE TRAFFIC.
4. ALL TREE STAKES TO MAINTAIN A MIN. 1.0m SETBACK FROM SHALLOW UTILITY LINES.

REVISIONS

DATE	DETAILS	DRAWN
15-MAY-2019	REVISED NOTES	J. ORR
23-AUG-2018	REVISED ROOT BALL & NOTES	J. ORR
15-JUN-2018	REVISED TEXT, METAL T-BAR & ADDED SOIL BUMP	S. ENGLEDER
02-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

CONIFEROUS / DECIDOUS TREE PLANTING

APPROVED: J. BUCHKO, AALA, CSLA

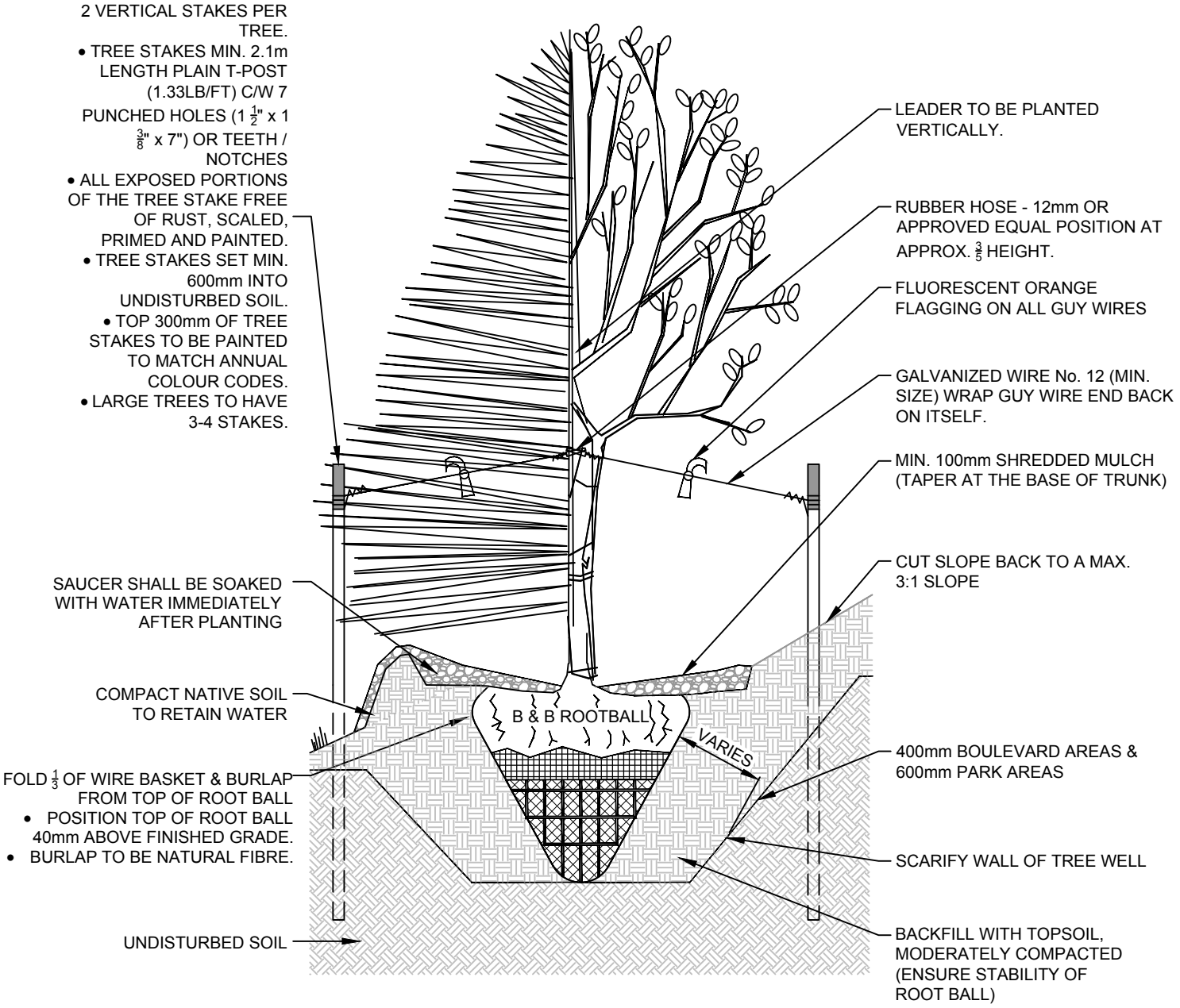
CHECKED: C. HUMBLE, LAT

DATE: 03-AUG-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER

61001

Planning & Development Services Department



NOTES:
1. INSTALL IN ACCORDANCE WITH SECTION 601, 602, 604 AND OTHER RELATED SECTIONS UNDER VOLUME 2, CONSTRUCTION SPECIFICATIONS.
2. PRUNE DEAD, DAMAGED OR CROSSING BRANCHES.
3. IF MINIMUM UTILITY SETBACKS ALLOW, POSITION TREE STAKES INTO DIRECTION OF PREVAILING WINDS OR IF IN A BOULEVARD, POSITION IN LINE WITH DIRECTION OF THE TRAFFIC.
4. ALL TREE STAKES TO MAINTAIN A MIN. 1.0m SETBACK FROM SHALLOW UTILITY LINES.

REVISIONS

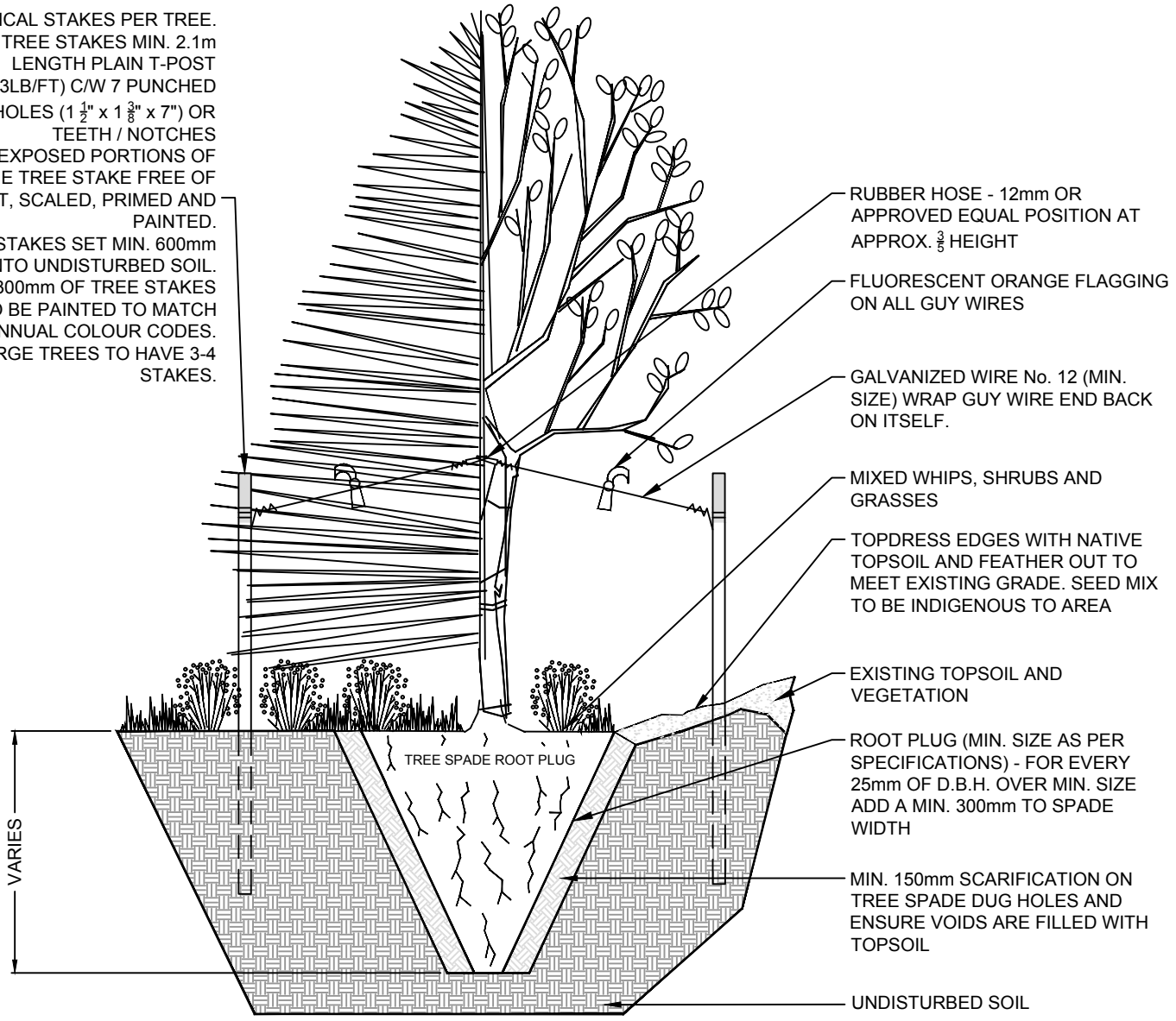
DATE	DETAILS	DRAWN
15-MAY-2019	REVISED NOTES	J. ORR
23-AUG-2018	REVISED ROOT BULB, NOTES	J. ORR
18-JUN-2018	REVISED TEXT, METAL T-BAR	S. ENGLEDER
02-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 Sherwood Drive, Sherwood Park
Alberta, T8A 3W7, CANADA

TREE PLANTING ON SLOPES

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 01-DEC-2011 | SCALE: N.T.S | DRAWN: A. MCLENAGHAN

DRAWING NUMBER
61002
Planning & Development Services Department



NOTES:
1. TRANSPLANT CONIFEROUS TREES THAT ARE LESS THAN 2.5m HT. AND DECIDUOUS THAT ARE LESS THAN 80mm CALIPER.
2. INSTALL IN ACCORDANCE WITH SECTION 601, 602, 604 AND OTHER RELATED SECTIONS UNDER VOLUME 2, CONSTRUCTION SPECIFICATIONS.
3. PRUNE DEAD, DAMAGED OR CROSSING BRANCHES.
4. IF MINIMUM UTILITY SETBACKS ALLOW, POSITION TREE STAKES INTO DIRECTION OF PREVAILING WINDS OR IF IN A BOULEVARD, POSITION IN LINE WITH DIRECTION OF THE TRAFFIC.
5. ALL TREE STAKES TO MAINTAIN A MIN. 1.0m SETBACK FROM SHALLOW UTILITY LINES.

REVISIONS

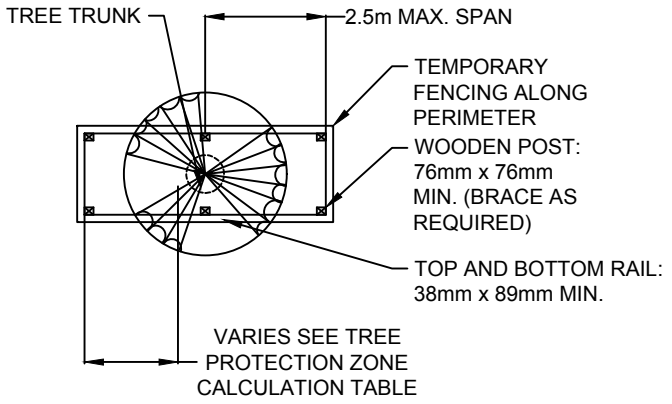
Date	Details	Drawn
15-MAY-2019	REVISED NOTES	J. ORR
23-AUG-2018	REVISED NOTES	J. ORR
19-JUN-2019	REVISED TEXT	S. ENGLEDER
02-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

TREE TRANSPLANTING

Approved: J. BUCHKO, AALA, CSLA
Checked: C. HUMBLE, LAT
Date: 06-MAY-2003 | Scale: N.T.S. | Drawn: A. MCLENAGHAN

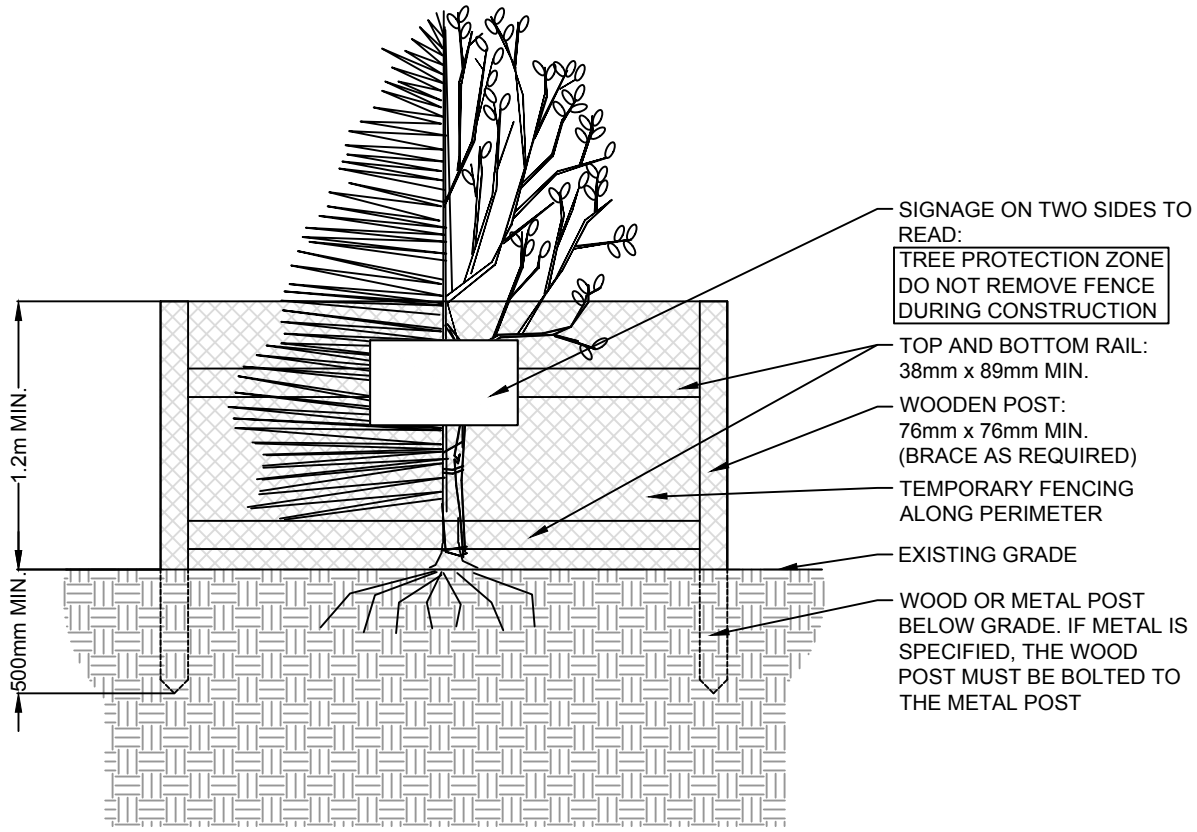
DRAWING NUMBER
61003
Planning & Development Services Department



TREE PROTECTION ZONE CALCULATION TABLE

TRUNK DIAMETER (D.B.H.)	MINIMUM PROTECTION DISTANCE REQUIRED (MEASURE FROM THE OUTSIDE EDGE OF TREE TRUNK)
10 cm & UNDER	1.2 m
11 - 30 cm	1.8 m
31 - 40 cm	2.4 m
41 - 50 cm	3.0 m
51 - 60 cm	3.6 m
61 - 70 cm	4.2 m
71 - 80 cm	4.8 m
> 80 cm	5.0 m

PLAN VIEW



NOTES:
1. TOP AND BOTTOM RAIL: MAX. SPAN 2.5m, CROSS BRACING AS REQUIRED.
2. NO GROUND DISTURBANCE WITHIN 1.2m OF THE TREE TRUNK (I.E. POST INSTALLATION).
3. POSTS SET BACK FROM SIDEWALK AND CURB: 300mm.
4. FENCE MATERIAL: MINIMUM ORANGE BARRIER FENCE OR CHAIN LINK FENCE.

REVISIONS		
DATE	DETAILS	DRAWN
16-JUL-2019	REVISED NOTES	S. ENGLEDER
15-MAY-2019	REVISED NOTES	J. ORR
11-MAR-2019	REVISED TREE BLOCK	J. ORR
27-AUG-2018	NEW DETAIL	S. ENGLEDER

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

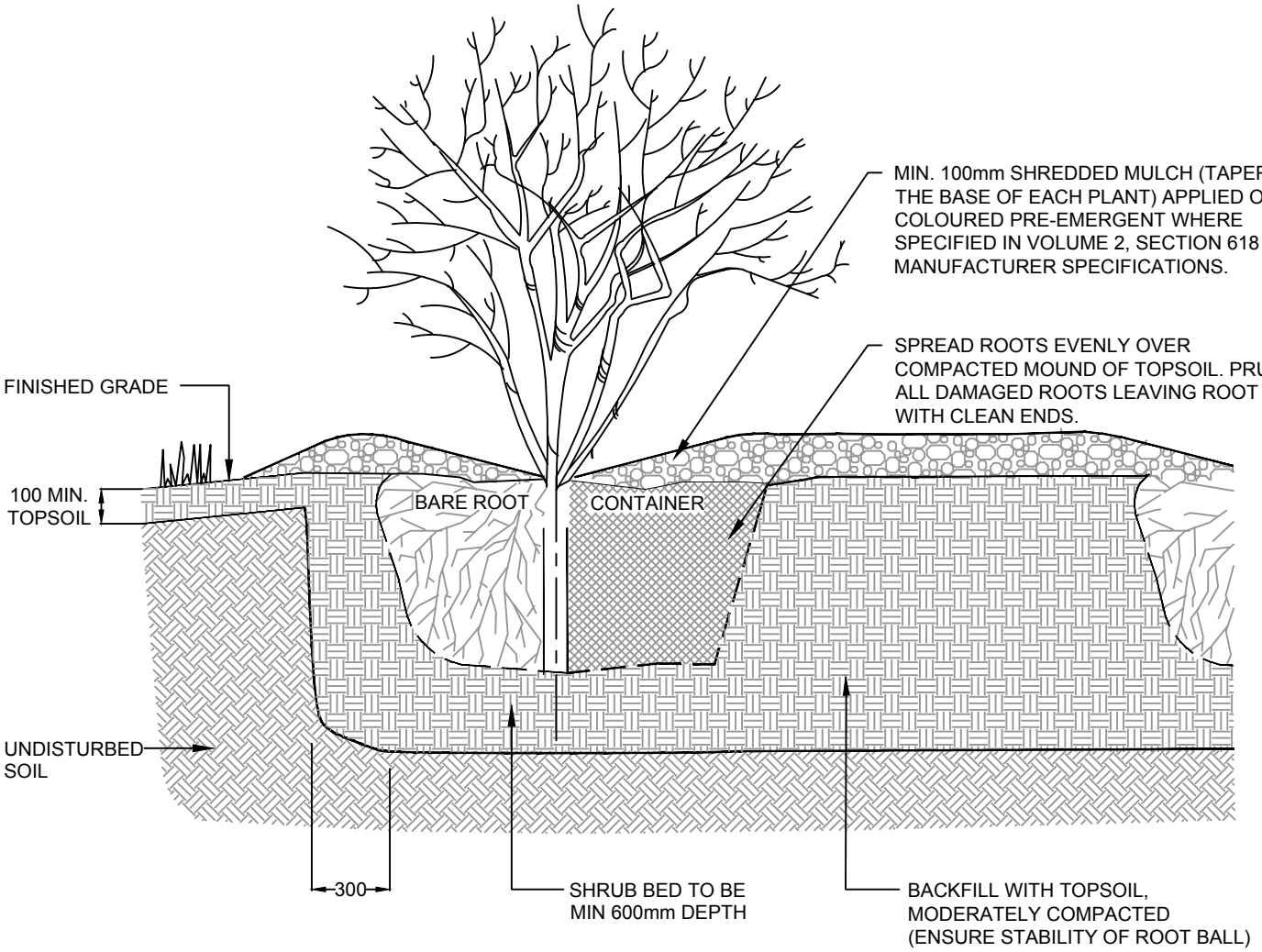
TREE PROTECTION ZONE

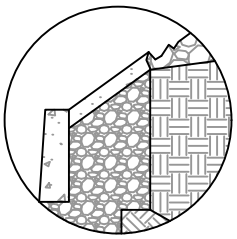
APPROVED: J. BUCHKO, AALA, CSLA

CHECKED: C. HUMBLE, LAT

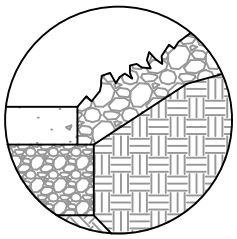
DATE: 27-AUG-2018 | SCALE: N.T.S. | DRAWN: S. ENGLEDER

DRAWING NUMBER
61004
Planning & Development Services Department





OPTION 'A'
CONCRETE CURB DETAIL



OPTION 'B'
CONCRETE WALK DETAIL

NOTES:

1. INSTALL IN ACCORDANCE WITH SECTION 601, 602, 604 AND OTHER RELATED SECTIONS UNDER VOLUME 2, CONSTRUCTION SPECIFICATIONS.
2. PRUNE DEAD AND DAMAGED BRANCHES.
3. SPREAD ROOTS EVENLY THROUGHOUT TOPSOIL.
4. MULCH TO BE 100mm DEEP AT DRIP LINE, TAPERING TO 0mm AT THE BASE OF EACH SHRUB.
5. THE USE OF PLASTIC EDGING OR LANDSCAPE FABRIC IS NOT PERMITTED.
6. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
11-MAR-2019	REVISED NOTES	J. ORR
24-AUG-2018	ADDED TOPSOIL, REVISED NOTES	J. ORR
19-JUN-2018	REVISED TEXT	S. ENGLEDER
02-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

BARE ROOT/ CONTAINER SHRUB PLANTING

APPROVED: J. BUCHKO, AALA, CSLA

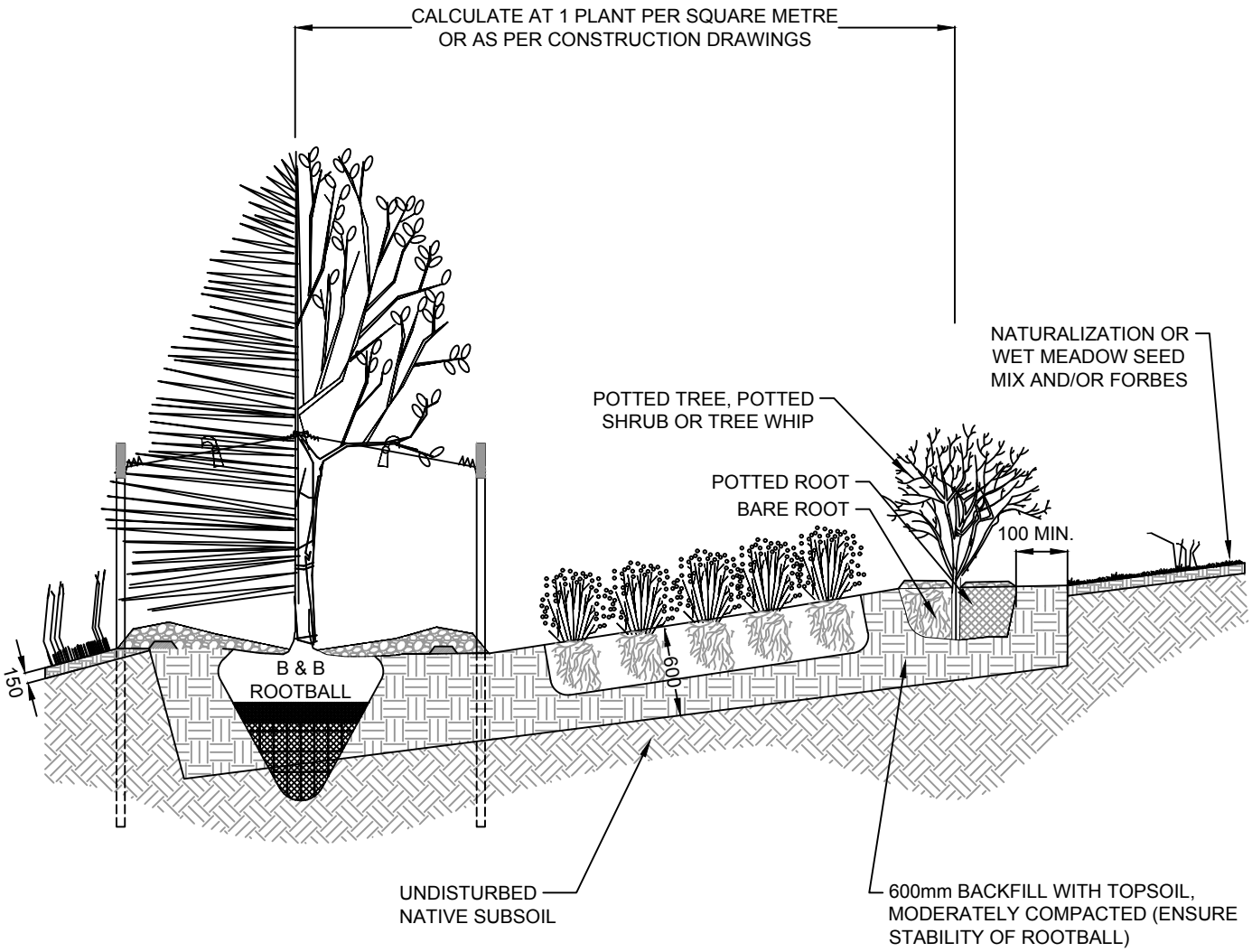
CHECKED: C. HUMBLE, LAT

DATE: 22-NOV-2001 | SCALE: N.T.S | DRAWN: D. LECKIE

DRAWING NUMBER

61101

Planning & Development Services Department



NOTES:

1. PRUNE ONLY DEAD, BROKEN OR DISEASED BRANCHES TO MAINTAIN PROPER SHRUB FORM (DECIDUOUS ONLY).
2. ALL TREE STAKES TO MAINTAIN MINIMUM 1.0m CLEARANCE FROM ALL U/G POWER, TELEPHONE AND GAS ALIGNMENTS.
3. IF MINIMUM SETBACKS PERMIT, POSITION TREE STAKES INTO DIRECTION OF PREVAILING WINDS.
4. STORMWATER MANAGEMENT FACILITIES SEEDING GUIDELINES:
   - NWL TO 5 YWL: WET MEADOW SEED MIX.
   - 5 YWL TO 25 YWL: NATURALIZATION SEED MIX.
   - 25 YWL AND HIGHER ELEVATIONS: NATURALIZATION, GENERAL PARK SEED MIX OR SOD ARE ACCEPTABLE ALTERNATIVES.

*BE ADVISED THAT SEED MIX PLACEMENT MAY VARY DEPENDING ON INDIVIDUAL SITE REQUIREMENTS.

5. ALL DIMENSIONS IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
6. INSTALL IN ACCORDANCE WITH SECTION 601, 602, 604 AND OTHER RELATED SECTIONS UNDER VOLUME 2, CONSTRUCTION SPECIFICATIONS.
7. FOR RESTORATION PURPOSES, SOIL DEPTH AND COMPOSITION TO MATCH EXISTING CONDITIONS.

REVISIONS

DATE	DETAILS	DRAWN
16-JUL-2019	REVISED NOTES, REVISED DETAIL	S. ENGLEDER
11-MAR-2019	REVISED TEXT, REVISED DETAIL	S. ENGLEDER
27-AUG-2018	NEW DETAIL	S. ENGLEDER

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

NATURALIZED PLANTING BED

APPROVED: J. BUCHKO, AALA, CSLA

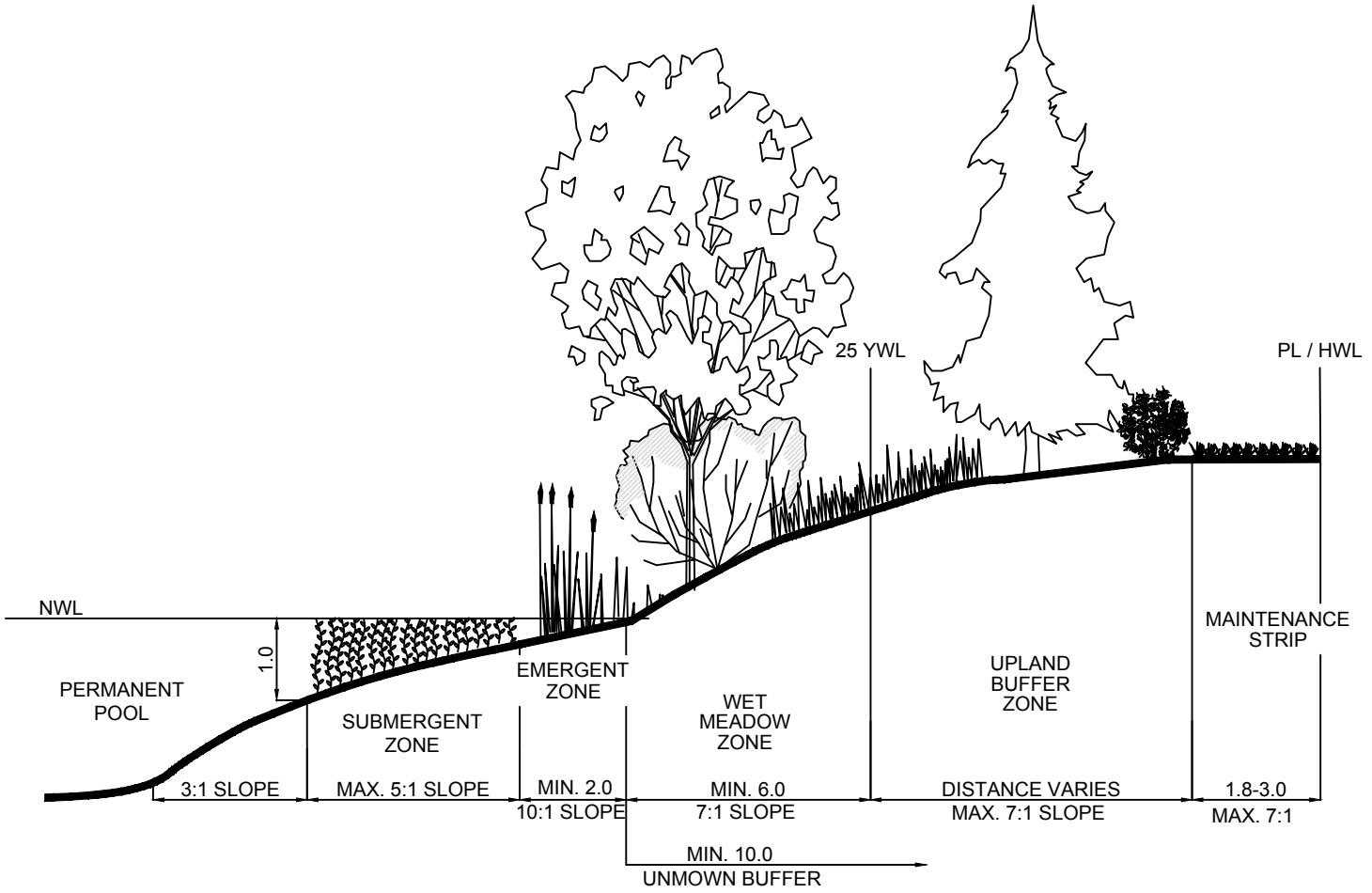
CHECKED: C. HUMBLE, LAT

DATE: 27-AUG-2018 | SCALE: N.T.S. | DRAWN: S. ENGLEDER

DRAWING NUMBER

61102

Planning & Development Services Department



SEEDING GUIDELINES:

- NWL TO 5 YWL: WET MEADOW SEED MIX.
- 5 YWL TO 25 YWL: NATURALIZATION SEED MIX.
- 25 YWL AND HIGHER ELEVATIONS: NATURALIZATION, GENERAL PARK SEED MIX OR SOD ARE ACCEPTABLE ALTERNATIVES.

*BE ADVISED THAT SEED MIX PLACEMENT MAY VARY DEPENDING ON EACH CONSTRUCTED WETLAND DESIGN.

NOTES:

1. TRAILS TO BE INSTALLED ABOVE THE 25 YWL. SEE DRAWING 61401 FOR DETAILS.
2. SHREDDED WOOD MULCH SHALL NOT BE INSTALLED BELOW THE 25 YWL, EXCLUDING MULCHED AREAS WITHIN INDIVIDUAL TREE WELLS.
3. LIVE SOILS AND PLANT MATERIAL REMOVED FROM EXISTING WETLANDS TO BE UTILIZED WHENEVER AVAILABLE.
4. SUBMERGENT ZONE CAN VARY IN WIDTH AND INCLUDE ZERO SLOPE AREAS AND TERRACES.
5. A MINIMUM 1.0m MAINTENANCE STRIP COMPLETED WITH SOD OR GENERAL PARK SEED MIX IS REQUIRED ALONG BOTH SIDES OF ASPHALT TRAILS.
6. A 1.8m - 3.0m MAINTENANCE STRIP COMPLETED WITH SOD OR AN APPROPRIATE SEED MIX IS REQUIRED ALONG FENCE LINES. EXACT WIDTH AND SURFACE TREATMENT AS PER CONSTRUCTION DRAWINGS.
7. ALL DIMENSIONS ARE IN METRES (m), UNLESS OTHERWISE NOTED.

REVISIONS

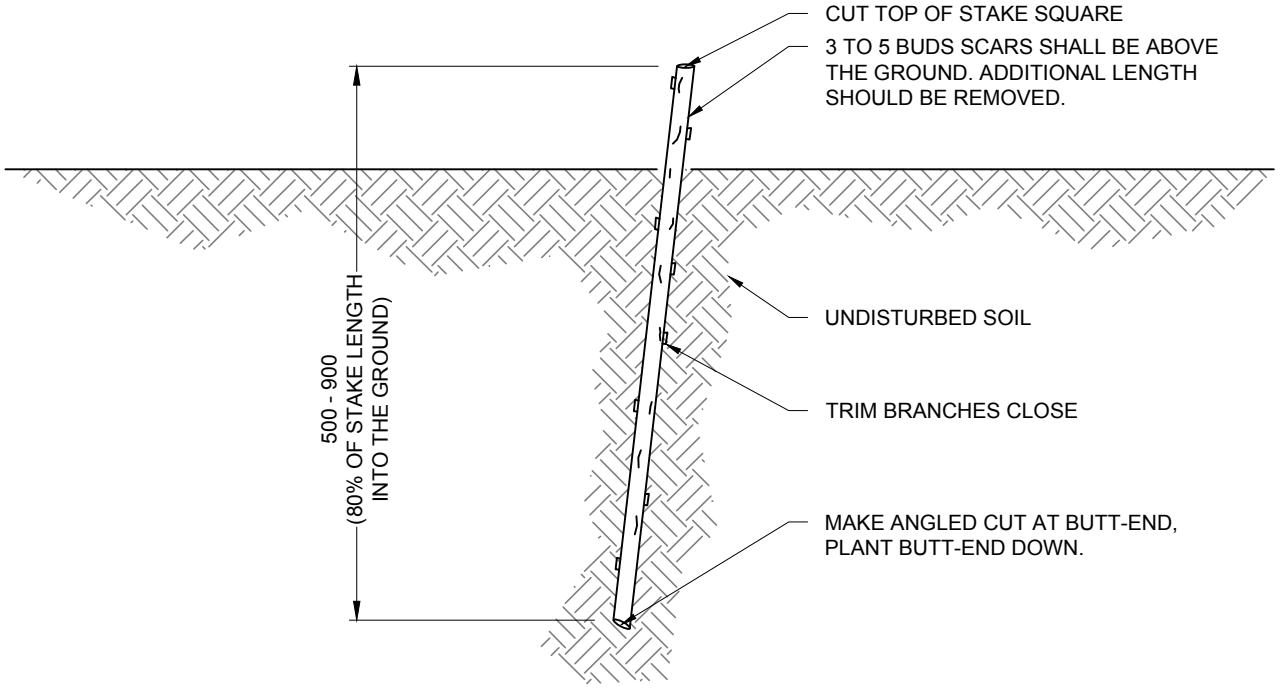
DATE	DETAILS	DRAWN
11-MAR-2019	REVISED TEXT, REVISED DETAIL	S. ENGLEDER
21-AUG-2018	REVISED TEXT AND SLOPES	S. ENGLEDER
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
06-MAY-2008	CHANGED MOWING NOTE	M. FORGUES

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

CONSTRUCTED WETLAND ZONES

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 11-APR-1994 | SCALE: N.T.S. | DRAWN: A. MCLENAGHAN

DRAWING NUMBER
61103
Planning & Development Services Department



NOTES:
1. HARVEST PLANT STAKES DURING THE DORMANT SEASON.
2. USE HEALTHY, STRAIGHT AND LIVE WOOD AT LEAST ONE YEAR OLD.
3. STAKES TO BE INSTALLED ABOVE NORMAL WATER LEVEL (NWL).
4. BUDS ARE REQUIRED TO FACE UPWARD AFTER INSTALLATION (MIN. 3 BUDS)
5. MAKE CLEAN CUTS AND DO NOT DAMAGE STAKES OR SPLIT ENDS DURING INSTALLATION.
6. SOAK CUTTINGS FOR 24 HOURS (MIN.) PRIOR TO INSTALLATION.
7. USE BAR TOOL TO MAKE A PILOT HOLE TO INSERT LIVE STAKE.
8. TAMP SOIL AROUND THE STAKE.
9. ALL DIMENSIONS ARE IN MILIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

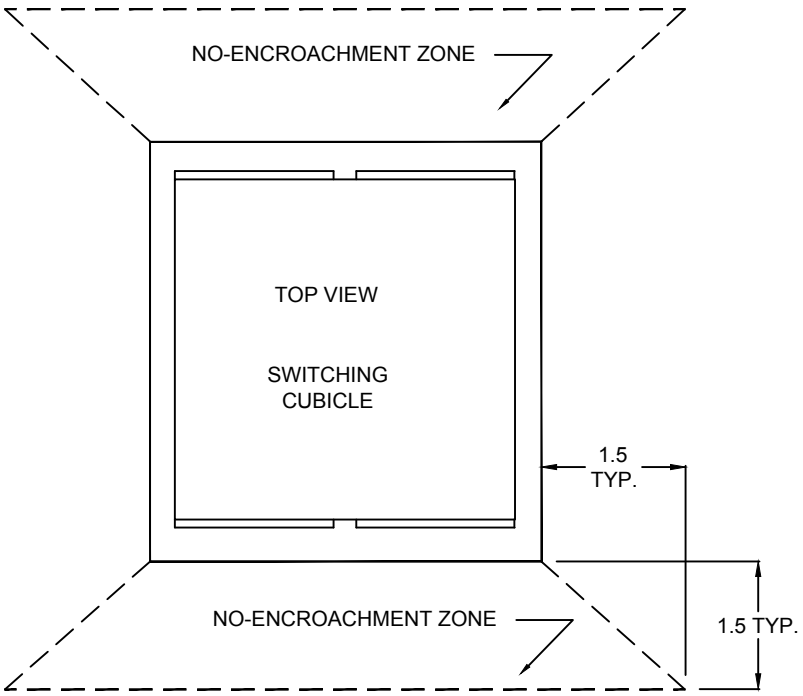
DATE	DETAILS	DRAWN
11-MAR-2019	REVISED LIVE STAKING DETAIL	J. ORR
21-AUG-2018	REVISED LIVE STAKING DETAIL	J. ORR
19-JUN-2018	REVISED TEXT	S. ENGLEDER
02-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

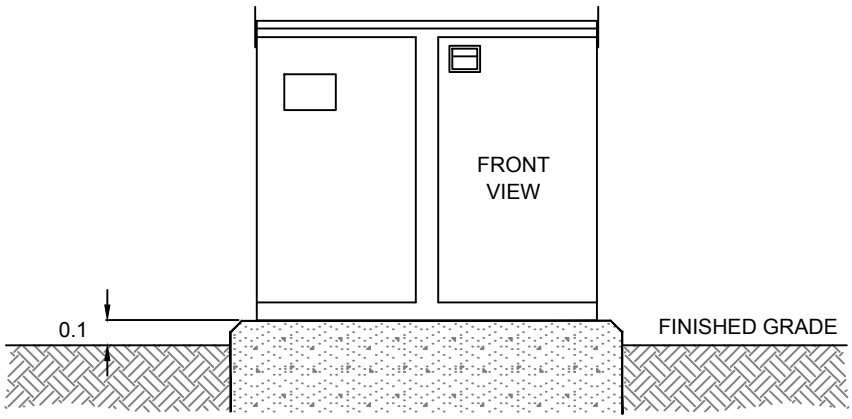
STRATHCONA COUNTY
2001 Sherwood Drive, Sherwood Park
Alberta, T8A 3W7, CANADA

LIVE STAKING

Approved: J. Buchko, AALA, CSLA
Checked: C. HUMBLE, LAT
Date: 11-APR-2003 | Scale: N.T.S. | Drawn: A. McLENAGHAN

DRAWING NUMBER
61104
Planning & Development Services Department





NOTES:
1. TOP OF CONCRETE BASE TO BE A MINIMUM OF 100mm ABOVE FINAL GRADE WITHIN 3.0m OF THE BASE.
2. ALL TREES AND SHRUBS TO BE PLANTED OUTSIDE OF NO-ENCROACHMENT ZONE, INCLUDE MATURE SIZES IN ASSESSMENT.
3. ALL DIMENSIONS ARE IN METRES (m), UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
11-MAR-2019	REVISED NO-ENCROACHMENT ZONE	J. ORR
21-AUG-2018	REVISED TEXT	S. ENGLEDER
02-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
24-JUN-2002	PRINTED	M. FORGUES

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

PLANTING AROUND SWITCHING CUBICLE

APPROVED: J. BUCHKO, AALA, CSLA

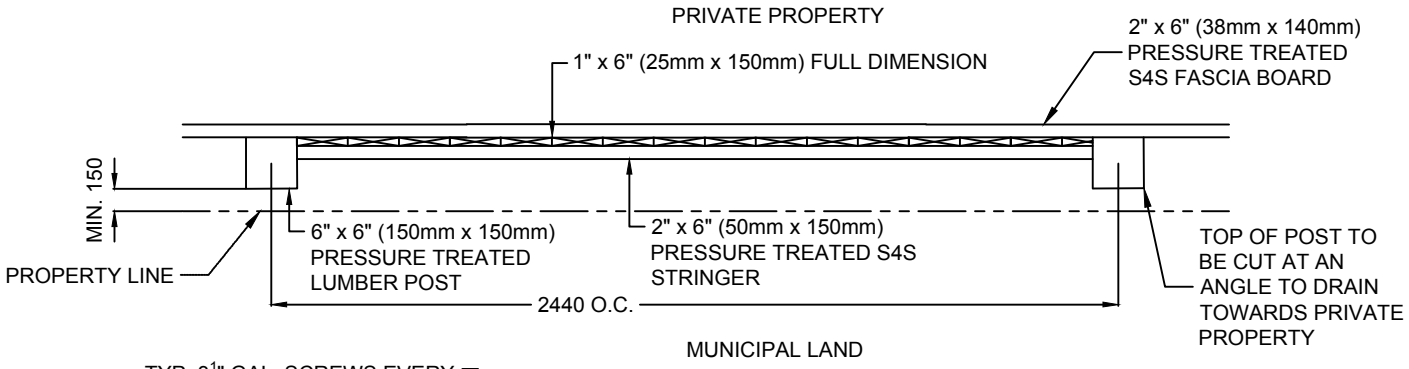
CHECKED: C. HUMBLE, LAT

DATE: 22-FEB-1995 | SCALE: N.T.S. | DRAWN: D. LECKIE

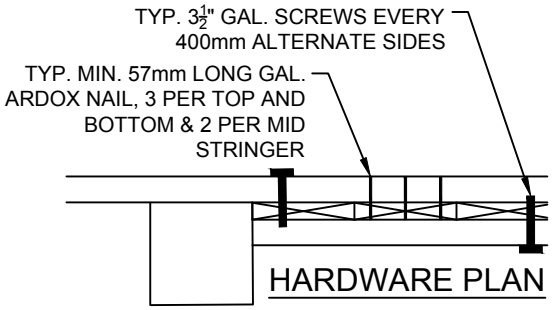
DRAWING NUMBER

61105

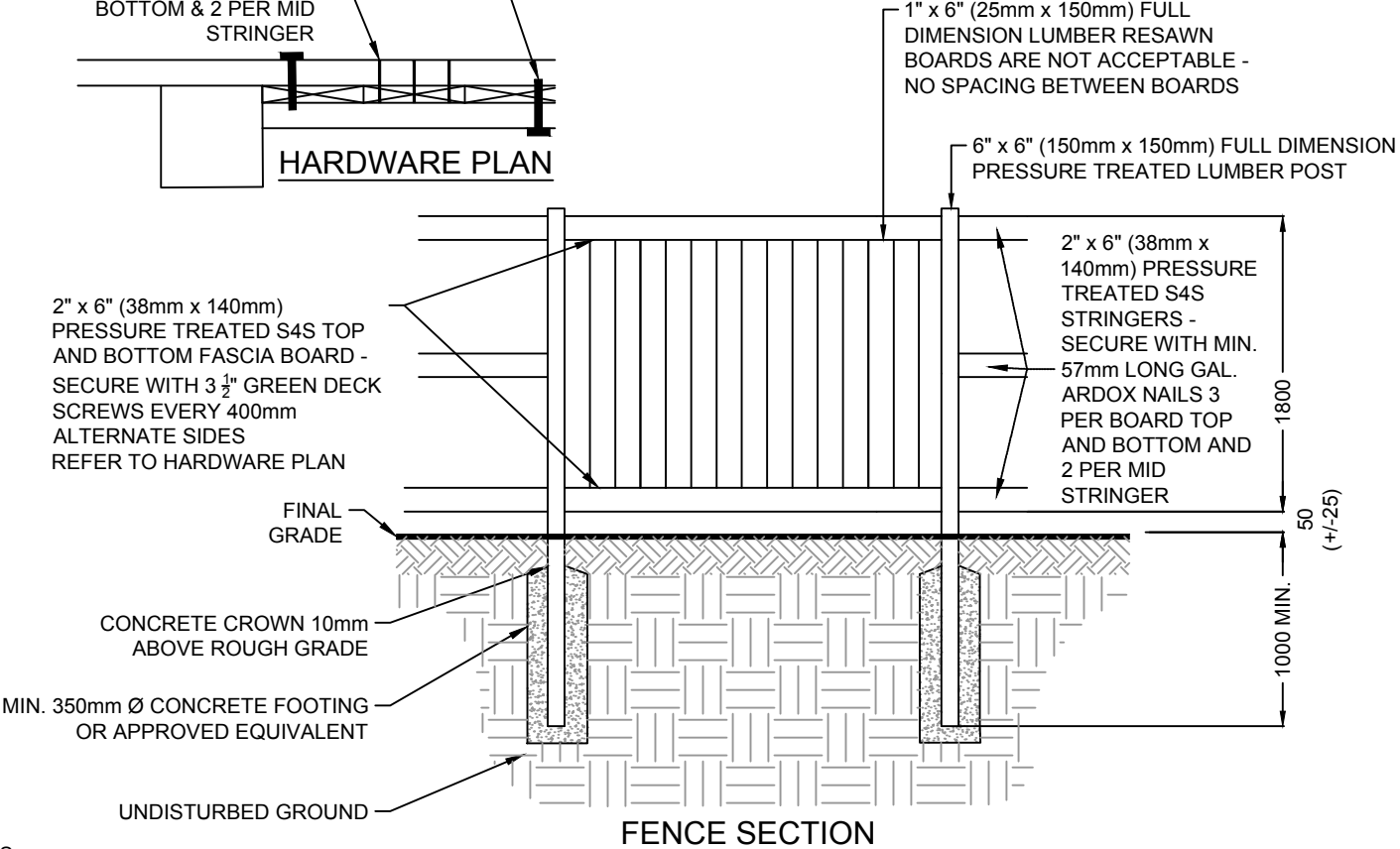
Planning & Development Services Department



FENCE PLAN



HARDWARE PLAN



FENCE SECTION

NOTES:

1. FENCES AND FENCE COMPONENTS, INCLUDING DECORATIVE COLUMNS, TO BE INSTALLED A MINIMUM 150mm INSIDE PRIVATE PROPERTY, MEASURED FROM THE MOST OUTSIDE EDGE OF FENCE TO THE PROPERTY LINE. FOOTINGS ADJACENT TO ANY UTILITY MUST BE SET BACK TO PROVIDE A MINIMUM 1.0m HORIZONTAL SEPARATION. DECORATIVE COLUMNS MUST BE INSTALLED OUTSIDE OF UTILITY EASEMENTS. ALL OTHER FENCING INSTALLED WITHIN AN EASEMENT WILL BE AT THE DISCRETION OF STRATHCONA COUNTY AND MAY REQUIRE AN ENCROACHMENT AGREEMENT.
2. POST HOLES TO BE EXCAVATED TO REACH A DEPTH OF UNDISTURBED SUBGRADE. MINIMUM 1000mm.
3. ALL WOOD TO BE PRESSURE-TREATED, OR CEDAR, FOR MUNICIPALLY OWNED FENCES. ONLY POST AND STRINGER TO BE PRESSURE TREATED, OR CEDAR, FOR PRIVATE FENCES.
4. STAIN SPECIFICATIONS TO BE DETERMINED BY THE LANDSCAPE ARCHITECT. PRE-STAIN TWO COATS PRIOR TO INSTALLATION. TOUCH UP AFTER CONSTRUCTION IF NEEDED.
5. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
6. INSTALL IN ACCORDANCE WITH SECTION 606 AND OTHER RELATED SECTIONS UNDER VOLUME 2, CONSTRUCTION SPECIFICATIONS.

REVISIONS

DATE	DETAILS	DRAWN
17-JUL-2019	REVISED NOTES, HATCH, TEXT	S. ENGLEDER
11-MAR-2019	REVISED NOTES	J. ORR
09-MAY-2018	REVISED DRAWING	M. MOTIUK
22-OCT-2012	REVISED DRAWING	J. EGGEN
02-MAY-2011	REVISED DRAWING NUMBERS	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

1.8m WOOD SCREEN FENCE

APPROVED: J. BUCHKO, AALA, CSLA

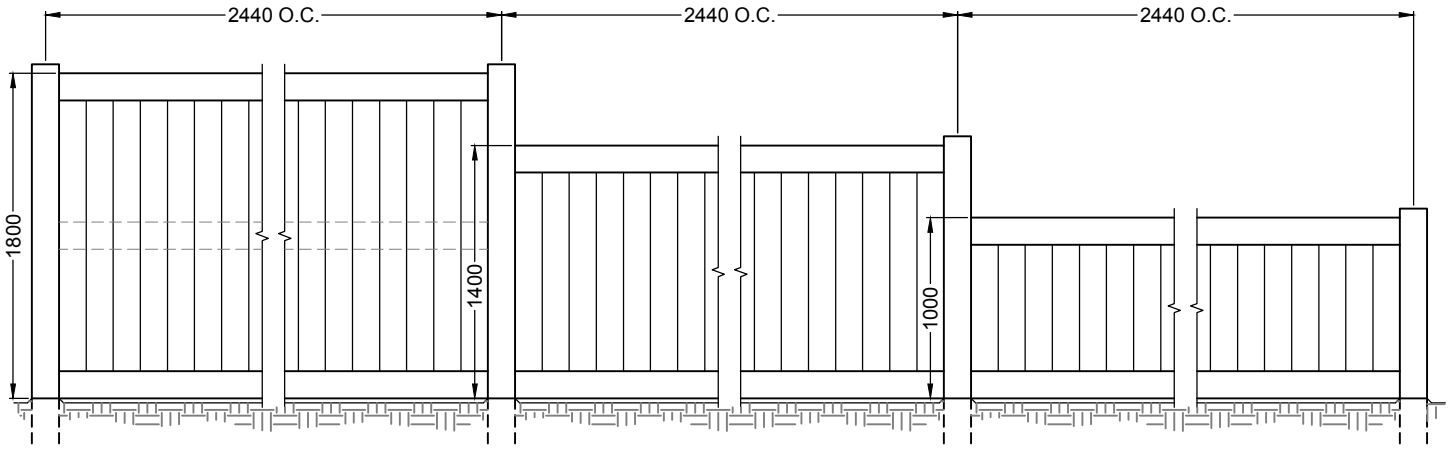
CHECKED: C. HUMBLE, LAT

DATE: 06-DEC-93 | SCALE: N.T.S. | DRAWN: D. BROWN

DRAWING NUMBER

61201

Planning & Development Services Department



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. INSTALL IN ACCORDANCE WITH STANDARD DRAWING 61201 OR 61203.

REVISIONS		
DATE	DETAILS	DRAWN
11-MAR-2019	REVISED FENCE PANEL LENGTHS AND NOTES	J. ORR
29-AUG-2018	NEW DETAIL	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

WOOD SCREEN STEPDOWN FENCE

APPROVED: J. BUCHKO, AALA, CSLA

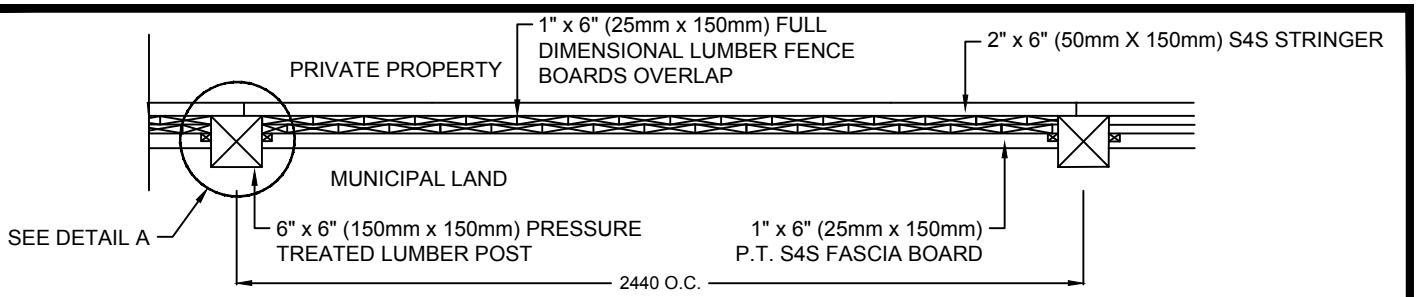
CHECKED: C. HUMBLE, LAT

DATE: 29-AUG-2018 | SCALE: N.T.S. | DRAWN: J. ORR, C.E.T.

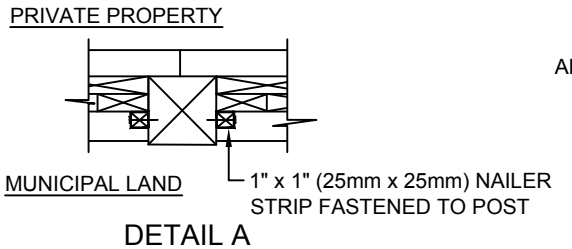
DRAWING NUMBER

61202

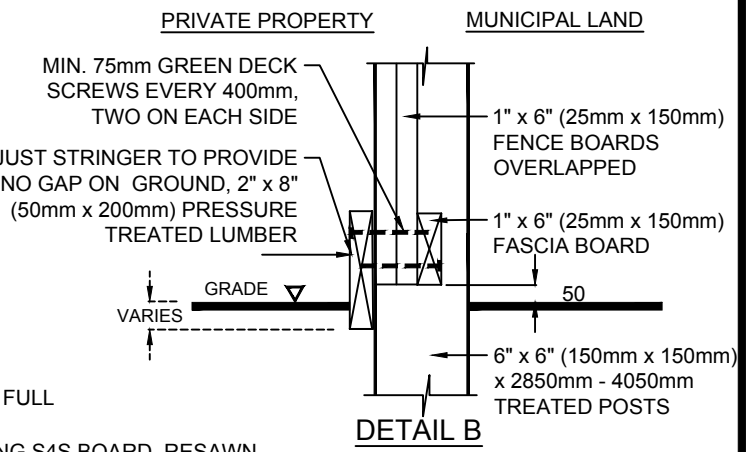
Planning & Development Services Department



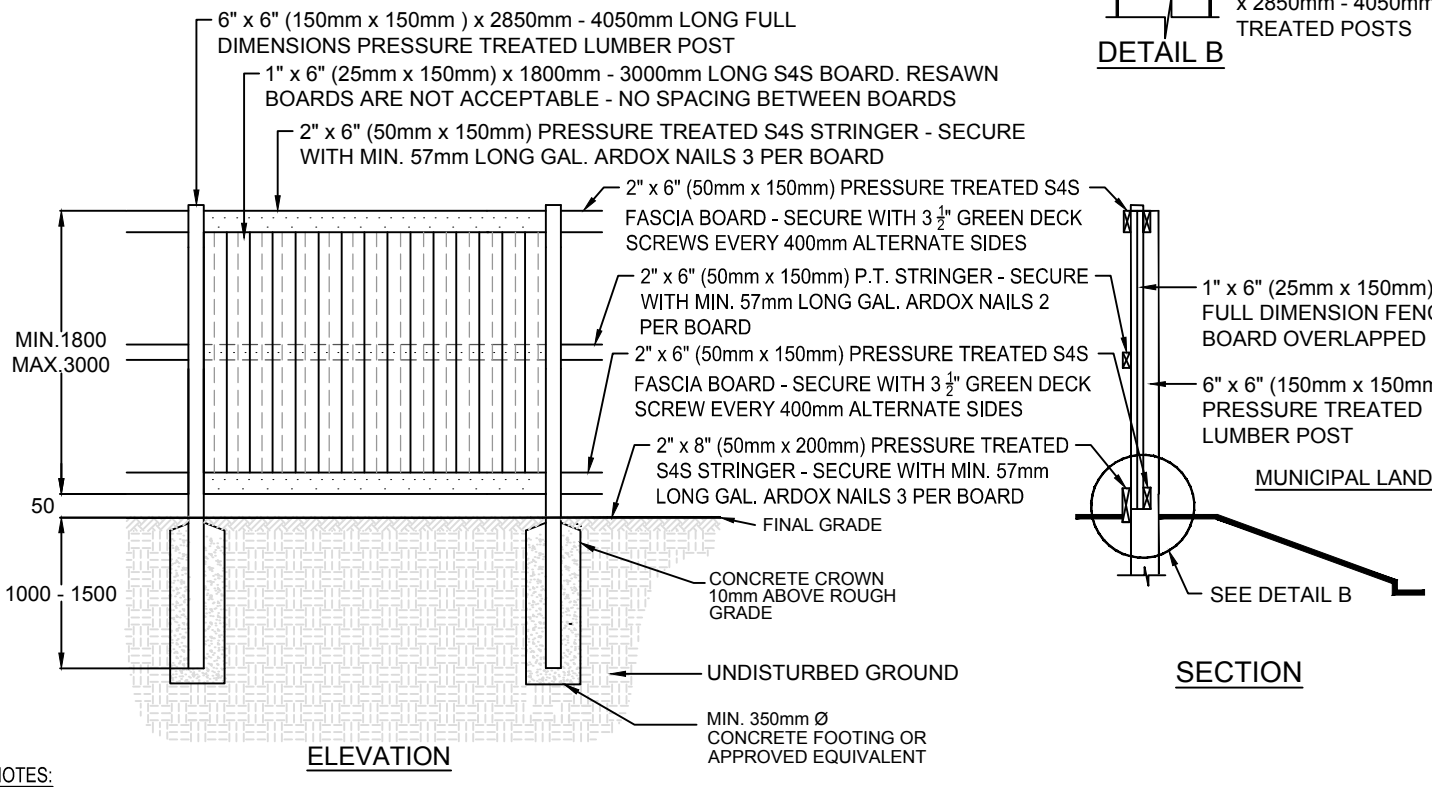
PLAN VIEW



DETAIL A



DETAIL B



ELEVATION

SECTION

NOTES:

1. FENCES AND FENCE COMPONENTS, INCLUDING DECORATIVE COLUMNS TO BE INSTALLED A MINIMUM 150mm INSIDE PRIVATE PROPERTY, MEASURED FROM THE MOST OUTSIDE EDGE OF FENCE TO THE PROPERTY LINE. FOOTINGS ADJACENT TO ANY UNDERGROUND UTILITY MUST BE SET BACK TO PROVIDE A MINIMUM 1.0m HORIZONTAL SEPARATION. DECORATIVE COLUMNS MUST BE INSTALLED OUTSIDE OF UTILITY EASEMENTS. ALL OTHER FENCING INSTALLED WITHIN AN EASEMENT WILL BE AT THE DISCRETION OF STRATHCONA COUNTY, AND MAY REQUIRE AN ENCROACHMENT AGREEMENT.
2. POST HOLES TO BE EXCAVATED TO REACH A DEPTH OF UNDISTURBED SUBGRADE MINIMUM 1000mm.
3. ALL WOOD TO BE PRESSURE TREATED, OR CEDAR, FOR MUNICIPALLY OWNED FENCES. ONLY POST AND STRINGER TO BE PRESSURE TREATED OR CEDAR FOR PRIVATE FENCES.
4. STAIN SPECIFICATIONS TO BE DETERMINED BY THE LANDSCAPE ARCHITECT. PRE-STAIN TWO COATS PRIOR TO INSTALLATION. TOUCH UP AFTER CONSTRUCTION IF NEEDED.
5. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
6. WHERE THE NOISE ATTENUATING FENCE IS PLACED ALONG THE BACK OF A SPLIT DRAINING LOT, A SUITABLE GAP BETWEEN THE FINAL GRADE AND THE BOTTOM OF THE FENCE ON BOTH THE PRIVATE AND THE MUNICIPAL SIDE IS TO BE PROVIDED AS DIRECTED BY THE COUNTY.
7. TOP OF POST TO BE CUT AT AN ANGLE TO DRAIN TOWARDS PRIVATE PROPERTY.
8. 3.0m FENCES ARE REQUIRED TO HAVE 4 STRINGERS.

REVISIONS

Date	Details	Drawn
11-MAR-2019	REVISED DRAWING	J. ORR
09-MAY-2018	REVISED DRAWING	M. MOTIUK
23-OCT-2012	REVISED LUMBER DIMENSIONS	J. Orr
02-MAY-2011	REVISED DRAWING NUMBERS	J. Orr
10-FEB-2010	REVISED DRAWING NUMBERS	O. Butt

STRATHCONA COUNTY
2001 Sherwood Drive, Sherwood Park
Alberta, T8A 3W7, CANADA

NOISE ATTENUATION FENCE

Approved: J. BUCHKO, AA.A, CSLA

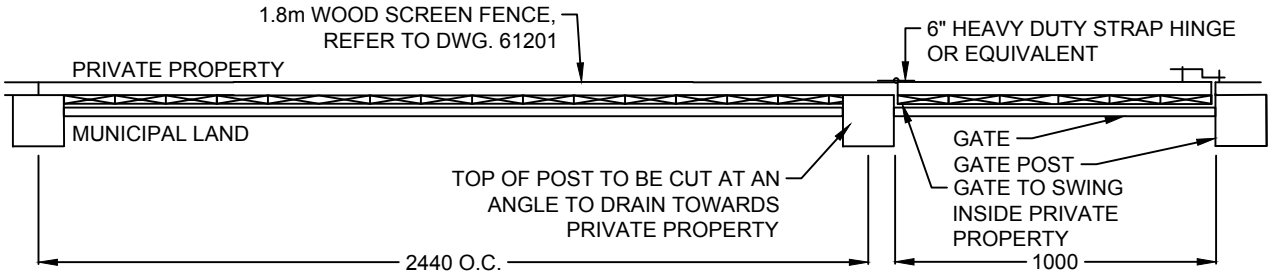
Checked: C. HUMBLE, LAT

Date: 08-APR-1995 | Scale: N.T.S | Drawn: D. Leckie

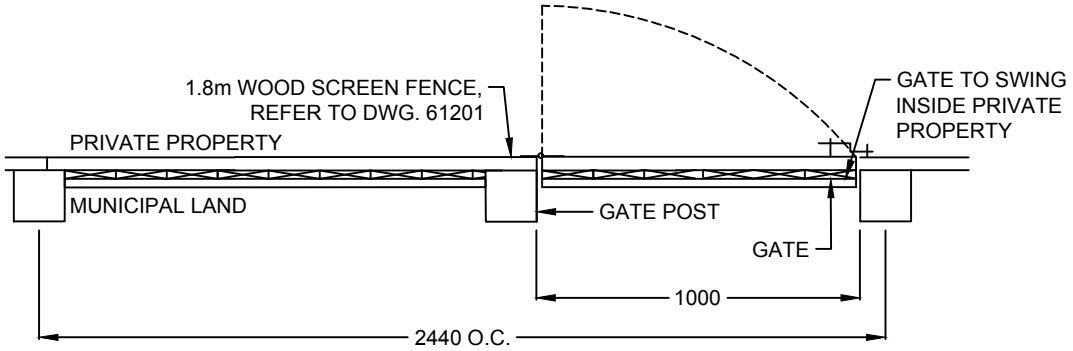
DRAWING NUMBER

61203

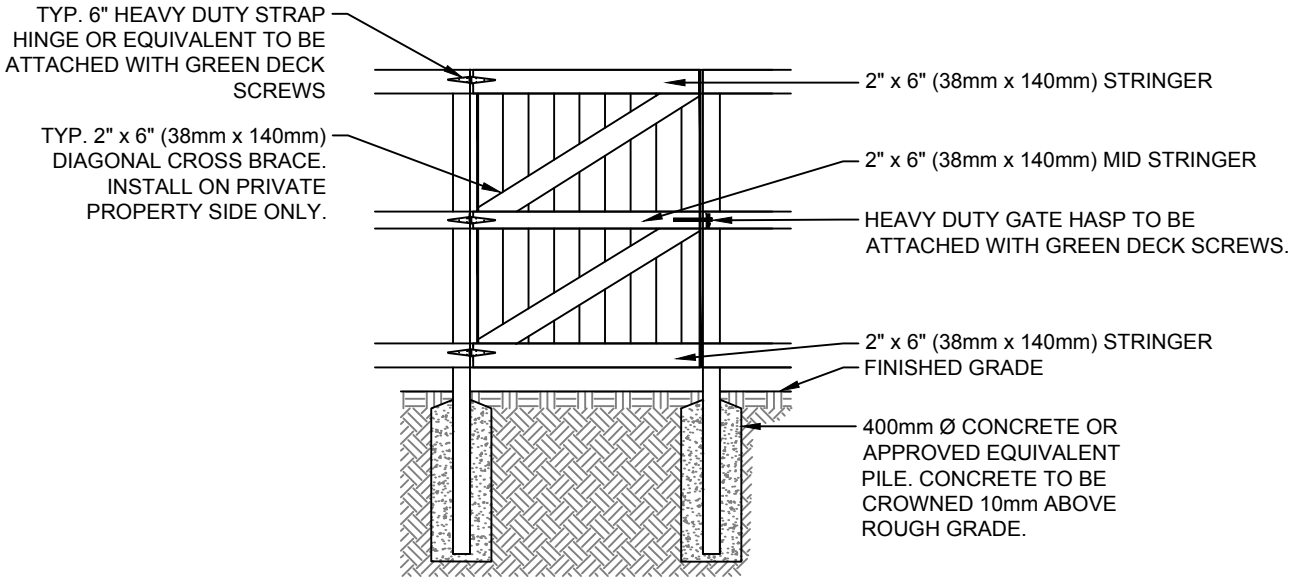
Planning & Development Services Department



FENCE GATE DETAIL



EXISTING FENCE GATE DETAIL (RETRO-FIT)



FENCE GATE SECTION

NOTES:

1. POST HOLES TO BE EXCAVATED TO REACH A DEPTH OF UNDISTURBED SUBGRADE TO MINIMUM DEPTH OF 1000mm.
2. ALL WOOD TO BE PRESSURE-TREATED, OR CEDAR, FOR MUNICIPALLY OWNED FENCES. ONLY POSTS AND STRINGERS TO BE PRESSURE-TREATED, OR CEDAR, FOR PRIVATE FENCES.
3. STAIN SPECIFICATIONS TO BE DETERMINED BY THE LANDSCAPE ARCHITECT. PRE-STAIN TWO COATS PRIOR TO INSTALLATION. TOUCH UP AFTER CONSTRUCTION IF NEEDED.
4. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
11-MAR-2019	REVISED NOTES AND TEXT	J. ORR
22-AUG-2018	REVISED NOTES AND TEXT	S. ENGLEDER
23-OCT-2012	REVISED LUMBER DIMENSIONS	J. ORR
02-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

WOOD SCREEN FENCE GATE

APPROVED: J. BUCHKO, AALA, CSLA

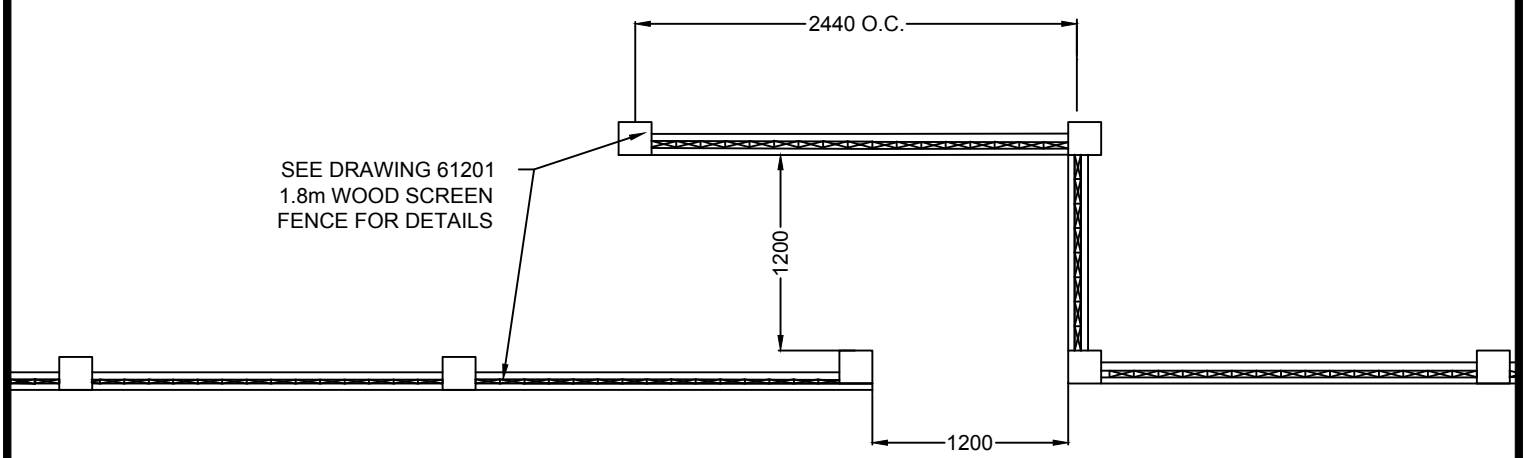
CHECKED: C. HUMBLE, LAT

DATE: 09-MAY-95 SCALE: N.T.S. DRAWN: D. LECKIE

DRAWING NUMBER

61204

Planning & Development Services Department



NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

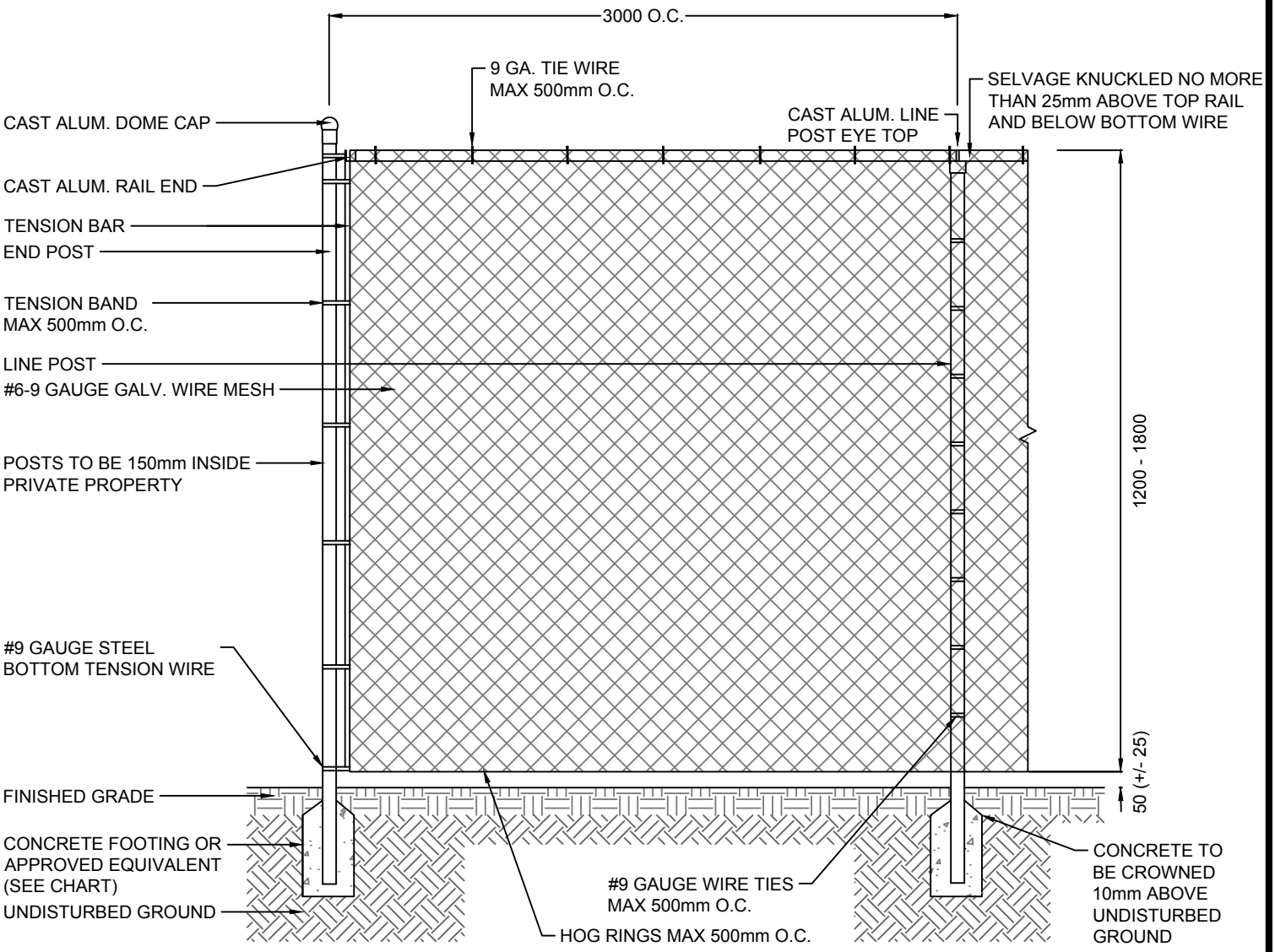
DATE	DETAILS	DRAWN
11-MAR-2019	REVISED DIMENSION AND POST SIZE	S. ENGLEDER
29-AUG-2018	REVISED TEXT	S. ENGLEDER
23-OCT-2012	REVISED LUMBER DIMENSIONS	J. ORR
04-MAY-2011	REVISED DRAWING NUMBER & REVISIONS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

WOOD SCREEN BAFFLE GATE

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 27-JUL-1994 | SCALE: N.T.S | DRAWN: D. Brown

DRAWING NUMBER
61205
Planning & Development Services Department



CONCRETE FOOTING CHART			
FENCE HEIGHT		CONCRETE DEPTH	HOLE DIA.
1.2m, 1.5m & 1.8m	LINE POSTS	800mm	300mm
	GATE AND CORNER POSTS	900mm	300mm

NOTES:

1. CHAIN LINK FENCE TO CONFORM TO SPECIFICATIONS WITHIN VOL. 2, SEC. 607.
2. FENCES AND FENCE COMPONENTS, INCLUDING DECORATIVE COLUMNS TO BE INSTALLED A MINIMUM 150mm INSIDE PRIVATE PROPERTY, MEASURED FROM THE MOST OUTSIDE EDGE OF FENCE TO THE PROPERTY LINE. FOOTINGS ADJACENT TO ANY UNDERGROUND UTILITY MUST BE SET BACK TO PROVIDE A MINIMUM 1.0m HORIZONTAL SEPARATION. DECORATIVE COLUMNS MUST BE INSTALLED OUTSIDE OF UTILITY EASEMENTS. ALL OTHER FENCING INSTALLED WITHIN AN EASEMENT WILL BE AT THE DISCRETION OF STRATHCONA COUNTY, AND MAY REQUIRE AN ENCROACHMENT AGREEMENT.
3. WIRE MESH TO BE #6 GAUGE BEFORE COATING ALONG SPORTS FIELDS, OTHER SITES/APPLICATIONS USE #9 GUAGE BEFORE COATING IS ACCEPTABLE.
4. CONCRETE FOOTING DEPTHS LISTED ARE THE MINIMUM DEPTH TO REACH UNDISTURBED SOILS OR ENGINEERED FILL, WHERE LOOSE IMPORTED MATERIAL ARE PRESENT, CONCRETE DEPTH TO BE AMENDED.
5. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS		
DATE	DETAILS	DRAWN
09-SEP-2019	REVISED NOTES	P. TOMKO
11-MAR-2019	UPDATED TEXT AND DETAIL	S. ENGLEDER
09-MAY-2018	REVISED DRAWING	J. ORR
22-SEP-2016	REVISED VOLUME 2 REFERENCE	S. ENGLEDER
02-MAY-2011	REVISED DRAWING NUMBERS	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

CHAIN LINK FENCE

APPROVED: J. BUCHKO, AALA, CSLA

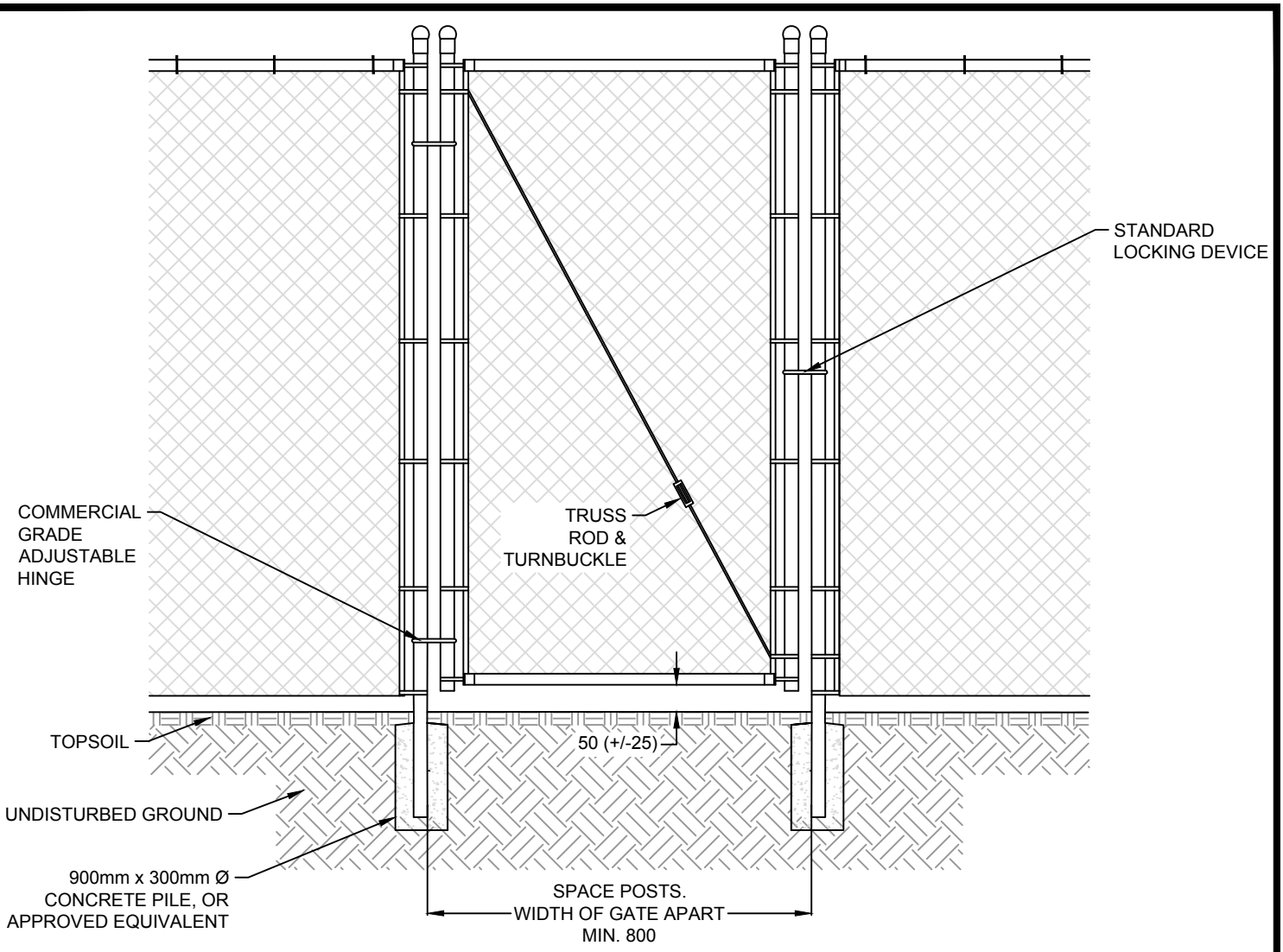
CHECKED: C. HUMBLE, LAT

DATE: 21-DEC-1993 | SCALE: N.T.S | DRAWN: D. BROWN

DRAWING NUMBER

61206

Planning & Development Services Department



INSTALL LINE, CORNER AND TERMINAL POSTS PLUMB, SET IN CONCRETE FOOTINGS AS FOLLOWS:

FENCE HEIGHT		CONCRETE DEPTH	HOLE DIA.
1.2m, 1.5m & 1.8m	LINE POSTS	800mm	300mm
	GATE AND CORNER POSTS	900mm	300mm

NOTES:

1. CHAIN LINK FENCE TO CONFORM TO SPECIFICATIONS WITHIN VOL. 2, SEC. 607.
2. SEE DRAWING 61206 FOR CHAIN LINK FENCE CONSTRUCTION.
3. FENCES AND FENCE COMPONENTS, INCLUDING DECORATIVE COLUMNS TO BE INSTALLED A MINIMUM 150mm INSIDE PRIVATE PROPERTY, MEASURED FROM THE MOST OUTSIDE EDGE OF FENCE TO THE PROPERTY LINE. FOOTINGS ADJACENT TO ANY UNDERGROUND UTILITY MUST BE SET BACK TO PROVIDE A MINIMUM 1.0m HORIZONTAL SEPARATION. DECORATIVE COLUMNS MUST BE INSTALLED OUTSIDE OF UTILITY EASEMENTS. ALL OTHER FENCING INSTALLED WITHIN AN EASEMENT WILL BE AT THE DISCRETION OF STRATHCONA COUNTY, AND MAY REQUIRE AN ENCROACHMENT AGREEMENT.
4. WIRE MESH TO BE #6 GAUGE BEFORE COATING ALONG SPORTS FIELDS, FOR OTHER SITES OR APPLICATIONS USE #9 GAUGE BEFORE COATING.
5. FRAME TO BE WELDED TOGETHER.
6. TRUSS ROD TO BE REMOVED IF GATE EXCEEDS 1200mm WIDTH.
7. CONCRETE FOOTING DEPTHS LISTED ARE MINIMUM DEPTH TO REACH UNDISTURBED SOILS OR ENGINEERED FILL, WHERE LOOSE IMPORTED MATERIAL ARE PRESENT, CONCRETE DEPTH TO BE AMENDED.
8. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
09-SEP-2019	REVISED NOTES	P. TOMKO
11-MAR-2019	REVISED CONCRETE DETAILS	J. ORR
30-AUG-2018	REVISED TEXT	S. ENGLEDER
09-APR-2018	REVISED DRAWING	M. MOTIUK
22-SEP-2016	REVISED REFERENCE	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

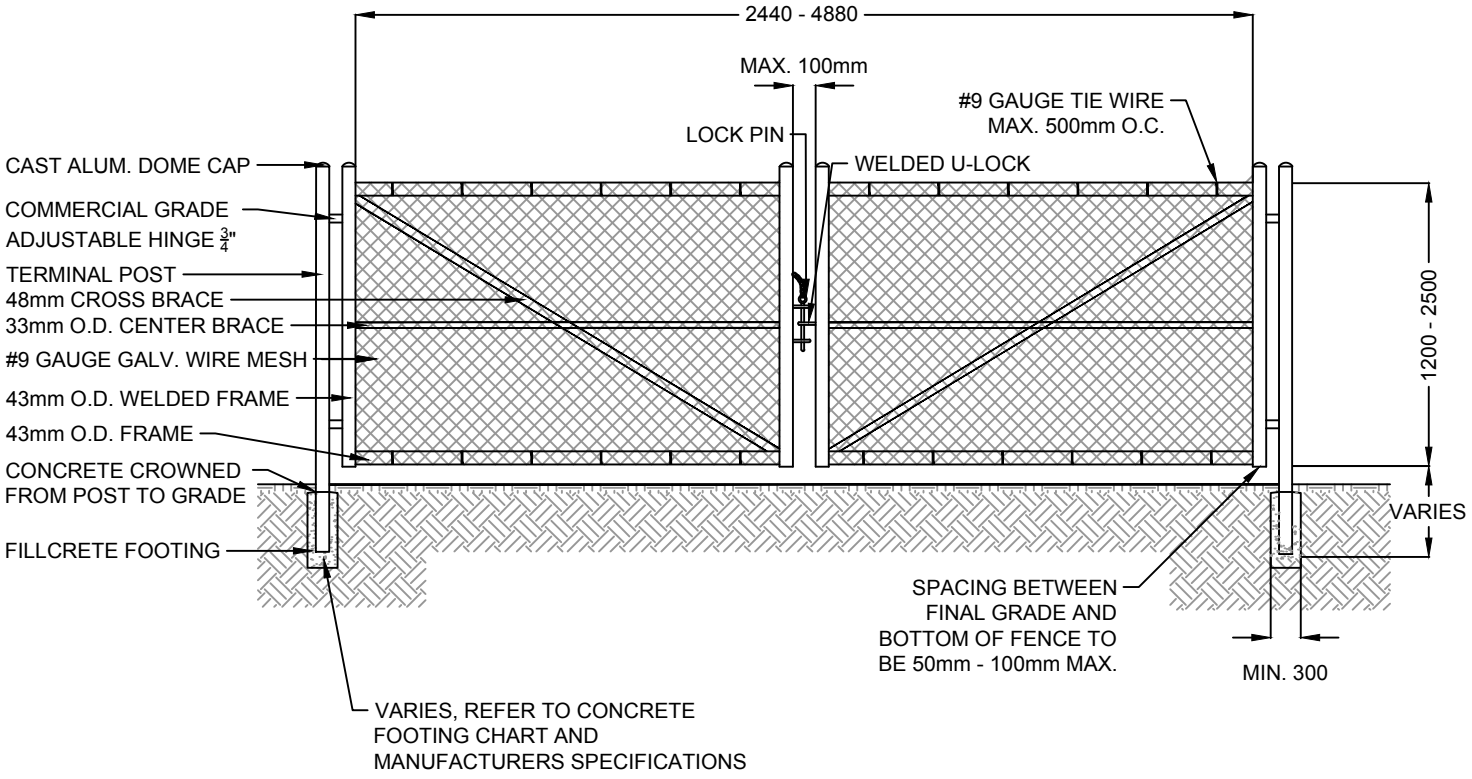
CHAIN LINK FENCE GATE

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 23-OCT-2012 | SCALE: N.T.S. | DRAWN: J. EGGEN

DRAWING NUMBER
61207
Planning & Development Services Department

INSTALL LINE, CORNER AND TERMINAL POSTS PLUMB, SET IN CONCRETE FOOTINGS AS FOLLOWS:

CONCRETE FOOTING CHART			
FENCE HEIGHT		CONCRETE DEPTH	HOLE DIAMETER AT TOP
1.2m, 1.5m & 1.8m	LINE POSTS	800mm	300mm
	GATE AND CORNER POSTS	900mm	300mm



NOTES:

1. CHAIN LINK FENCE TO CONFORM TO SPECIFICATIONS WITHIN VOL. 2, SEC. 607.
2. SEE DRAWING 61206 FOR CHAIN LINK FENCE CONSTRUCTION.
3. FENCES AND FENCE COMPONENTS, INCLUDING DECORATIVE COLUMNS TO BE INSTALLED A MINIMUM 150mm INSIDE PRIVATE PROPERTY, MEASURED FROM THE MOST OUTSIDE EDGE OF FENCE TO THE PROPERTY LINE. FOOTINGS ADJACENT TO ANY UNDERGROUND UTILITY MUST BE SET BACK TO PROVIDE A MINIMUM 1.0m HORIZONTAL SEPARATION. DECORATIVE COLUMNS MUST BE INSTALLED OUTSIDE OF UTILITY EASEMENTS. ALL OTHER FENCING INSTALLED WITHIN AN EASEMENT WILL BE AT THE DISCRETION OF STRATHCONA COUNTY, AND MAY REQUIRE AN ENCROACHMENT AGREEMENT.
4. WIRE MESH TO BE #6 GAUGE BEFORE COATING ALONG SPORTS FIELDS, FOR OTHER SITES OR APPLICATIONS USE #9 GAUGE BEFORE COATING.
5. FRAME TO BE WELDED TOGETHER.
6. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

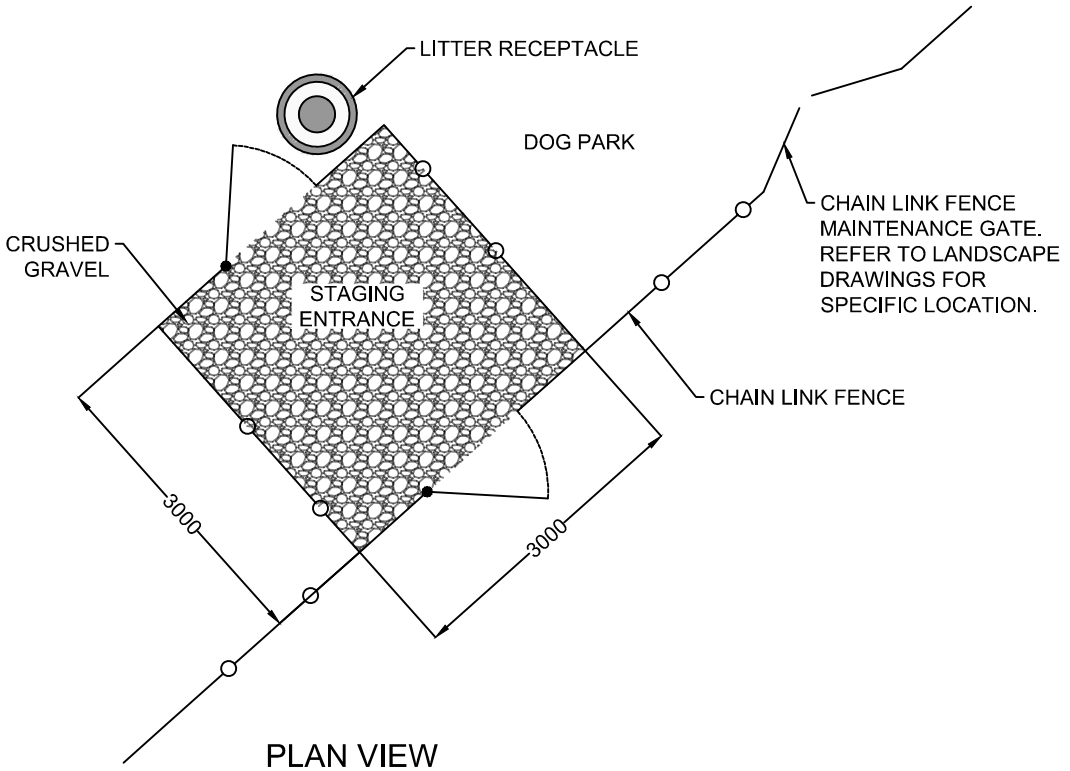
DATE	DETAILS	DRAWN
09-SEP-2019	REVISED NOTES	P. TOMKO
11-MAR-2019	REVISED TEXT, NOTES AND CHART	J. ORR
22-AUG-2018	REVISED TEXT AND NOTES, ADDED CHART	S. ENGLEDER
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

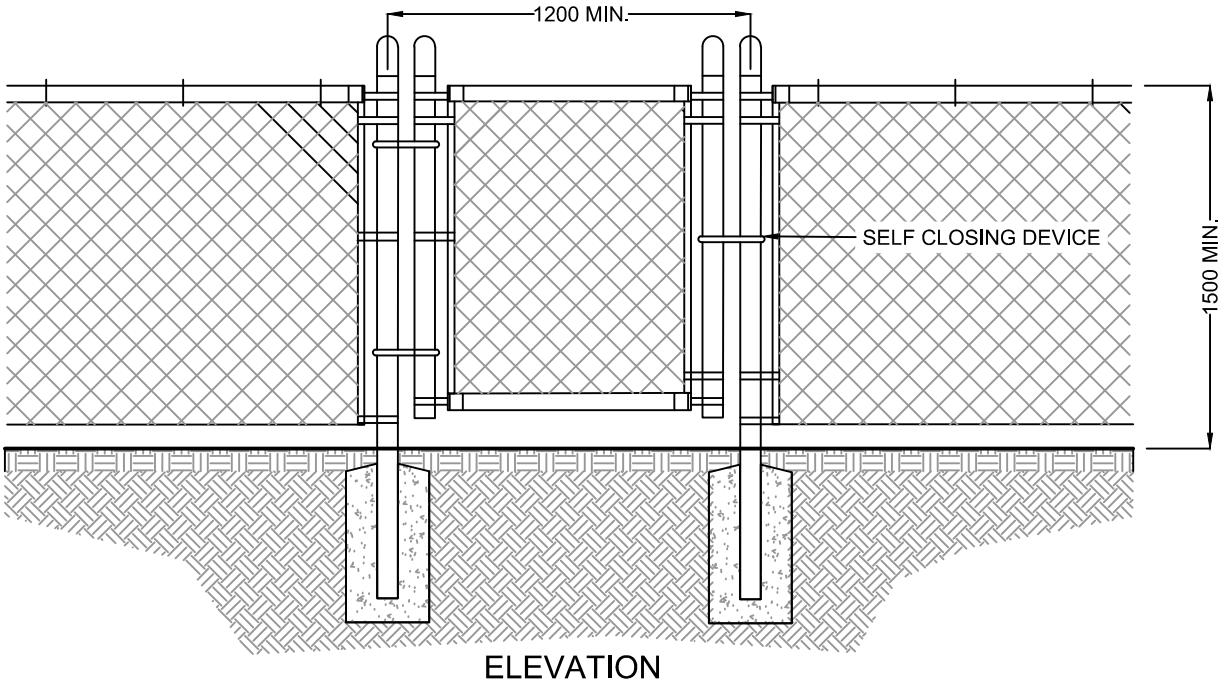
CHAIN LINK FENCE MAINTENANCE GATE

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 28-NOV-2001 | SCALE: N.T.S. | DRAWN: A. MCLENAGHAN

DRAWING NUMBER
61208
Planning & Development Services Department



PLAN VIEW



ELEVATION

NOTES:

1. STAGING AREA TO BE COMPLETED WITH A MIN. 175mm DEPTH OF CRUSHED 20mm Ø GRAVEL. SEE DRAWING 61406 FOR BASE CONSTRUCTION.
2. SEE DRAWINGS 61206, 61207 AND 61208 FOR CHAIN LINK FENCE AND GATE CONSTRUCTION.
3. SEE DRAWING 61303 FOR LITTER RECEPTACLE DETAIL.
4. CHAIN LINK FENCE TO CONFORM TO SPECIFICATIONS WITHIN VOL. 2 SEC. 607.
5. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
09-SEP-2019	REVISED NOTES	P. TOMKO
11-MAR-2019	REVISED NOTES AND DRAWING	J. ORR
18-SEP-2018	NEW DETAIL	J. FINNAMORE

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

DOG PARK DOUBLE GATE

APPROVED: J. BUCHKO, AALA, CSLA

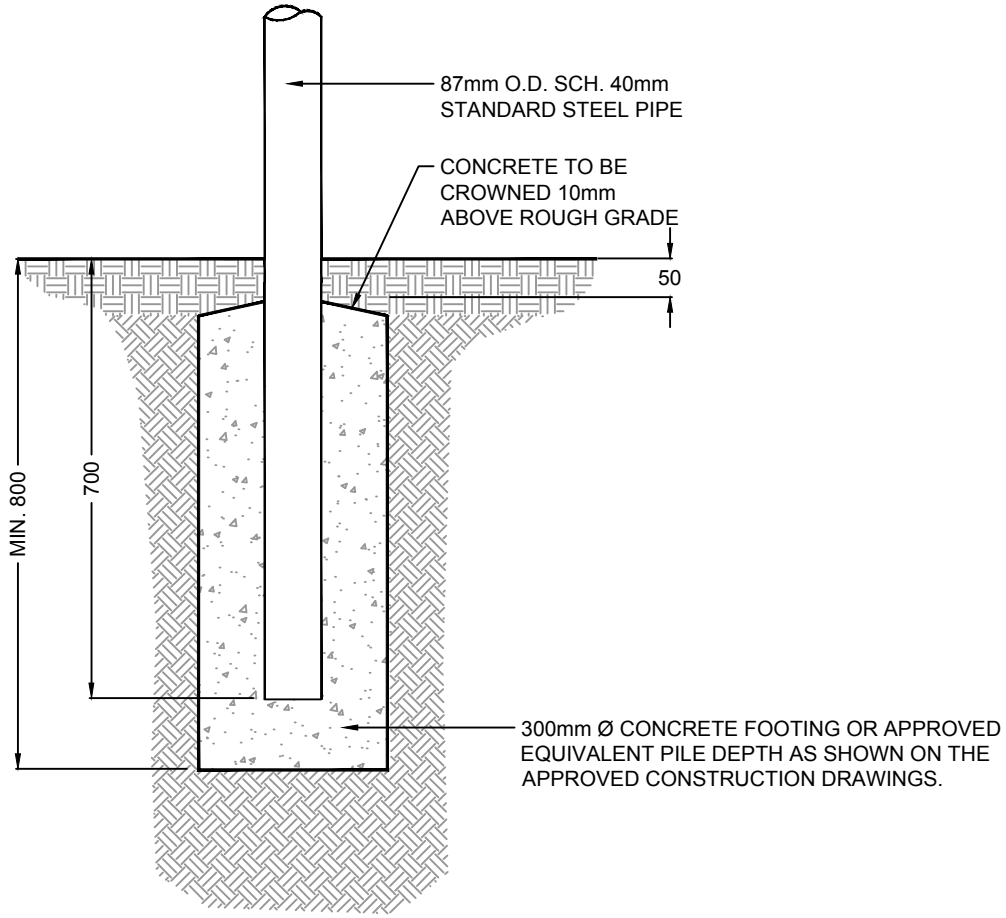
CHECKED: C. HUMBLE, LAT

DATE: 19-SEP-2018 | SCALE: N.T.S. | DRAWN: J. FINNAMORE

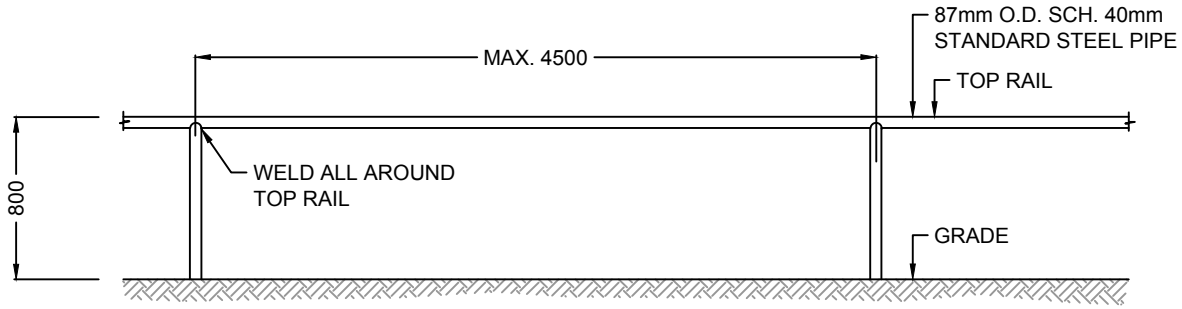
DRAWING NUMBER

61209

Planning & Development Services Department



SECTION



ELEVATION

NOTES:
1. ALL WELDS TO BE GROUND SMOOTH.
2. PAINTING SHALL BE IN ACCORDANCE WITH THE ALBERTA PAINTING CONTRACTORS ASSOCIATION (A.P.C.A.).
3. ALL EXPOSED SURFACES ABOVE GRADE SHALL BE PRIMED BEFORE PAINTING.
4. ALL PAINT COLOURS TO BE APPROVED BY THE COUNTY PRIOR TO APPLICATION.
5. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

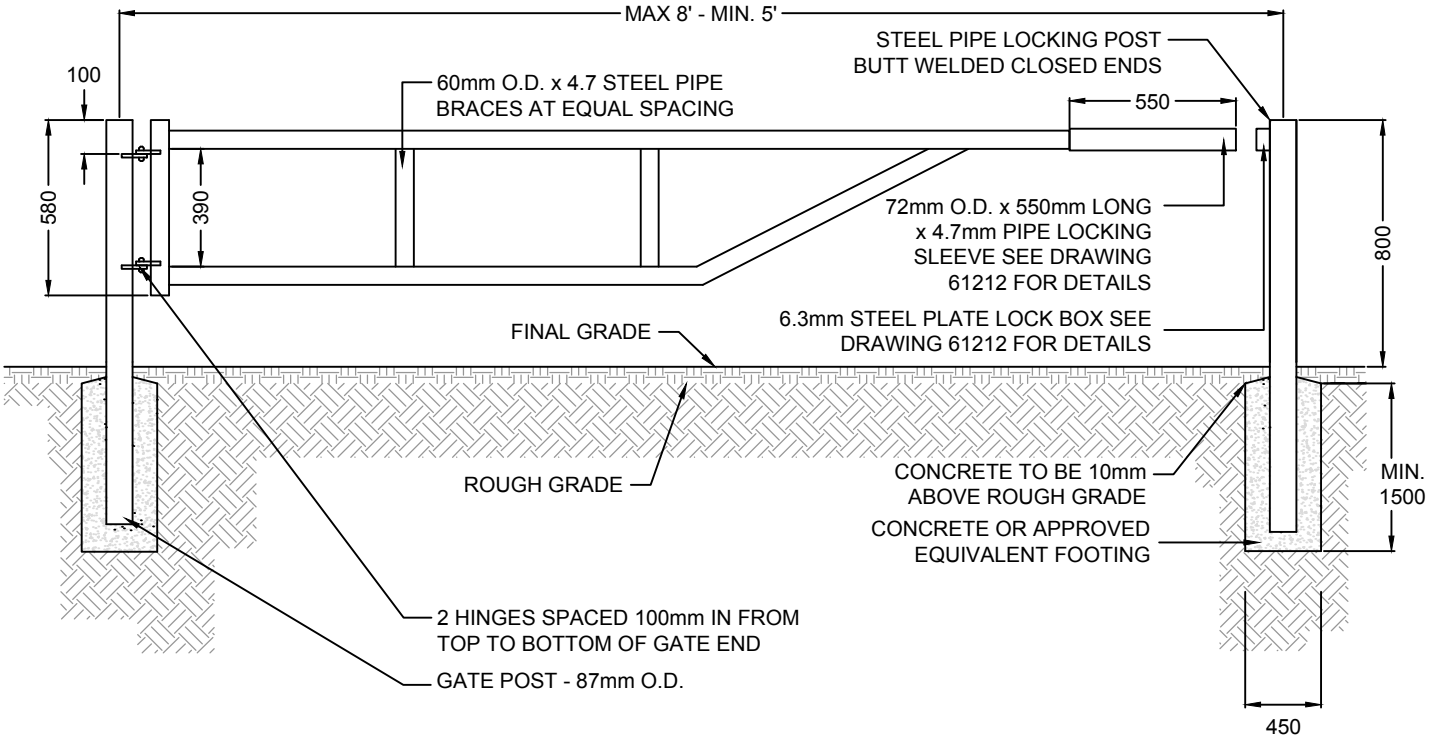
DATE	DETAILS	DRAWN
11-MAR-2019	REVISED TITLE, HATCH	S. ENGLEDER
09-MAY-2018	REVISED DRAWING	M. MOTIUK
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
24-OCT-2005	ADDED CONCRETE CROWN NOTE	M. FORGUES

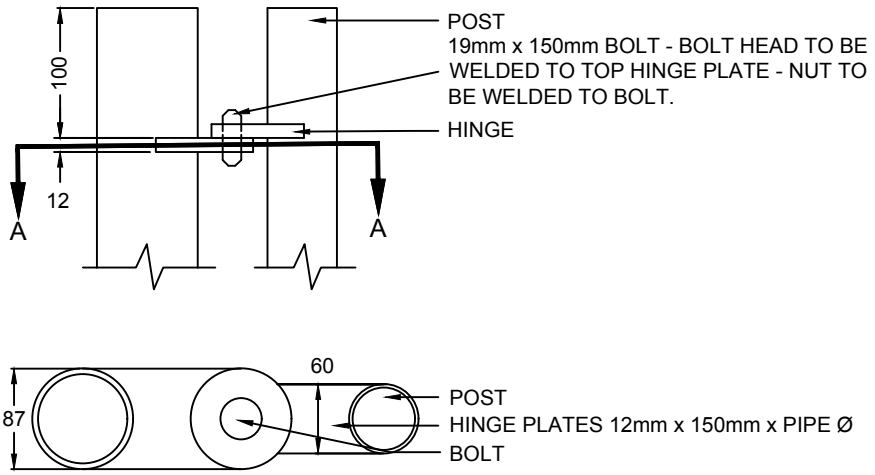
STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

STEEL PIPE RAIL FENCE

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 24-JUL-94 | SCALE: N.T.S | DRAWN: D. Leckie

DRAWING NUMBER
61210
Planning & Development Services Department





HINGE A-A

NOTES:

1. GATE FINISH TO BE RED ALKYD SEMI-GLOSS PAINT.
2. ALL WELDS TO BE GROUND SMOOTH.
3. PAINTING SHALL BE IN ACCORDANCE WITH A.P.C.A. (ALBERTA PAINTING CONTRACTORS ASSOCIATION).
4. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
12-MAR-2019	REVISED DRAWING	J. ORR
09-MAY-2018	REVISED DRAWING	M. MOTIUK
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
14-FEB-2005	CHANGED CONCRETE FOOTINGS	L. LAING

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

STEEL PIPE GATE

APPROVED: J. BUCHKO, AALA, CSLA

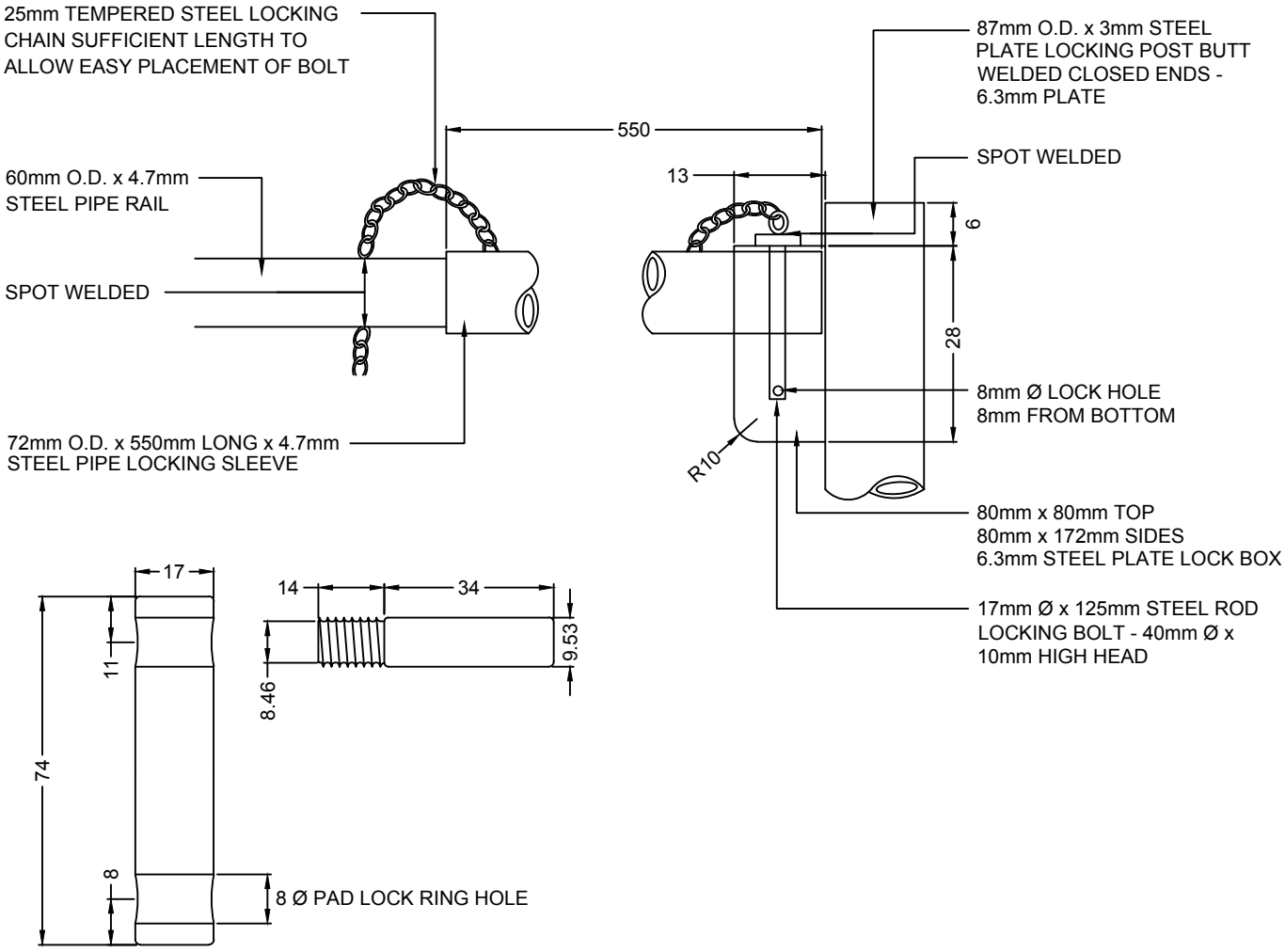
CHECKED: C. HUMBLE, LAT

DATE: 23-NOV-2001 | SCALE: N.T.S | DRAWN: A. MCLENAGHAN

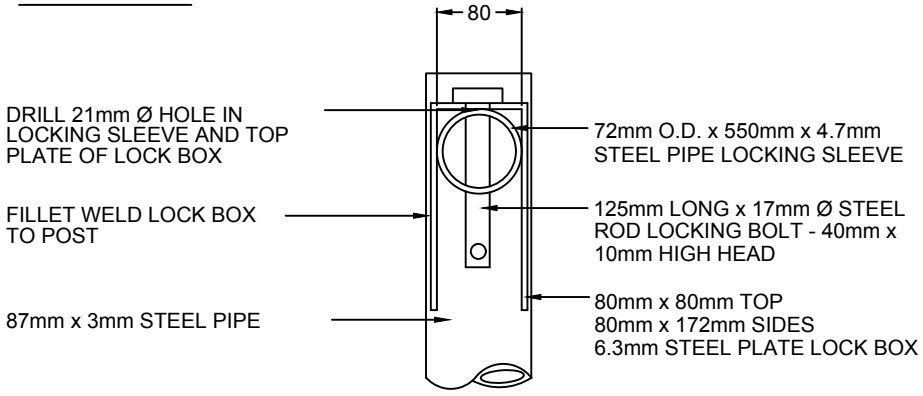
DRAWING NUMBER

61211

Planning & Development Services Department



PIN DETAIL



NOTES:

1. THE FINISH SHALL BE RED ALKYD SEMI-GLOSS PAINT.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
12-MAR-2019	REVISED DRAWING NUMBER	J. ORR
09-MAY-2018	REVISED DRAWING	M. MOTIUK
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
24-JUN-2002	PRINTED	A. MCLENAGHAN

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

STEEL PIPE GATE LOCKING SLEEVE

APPROVED: J. BUCHKO, AALA, CSLA

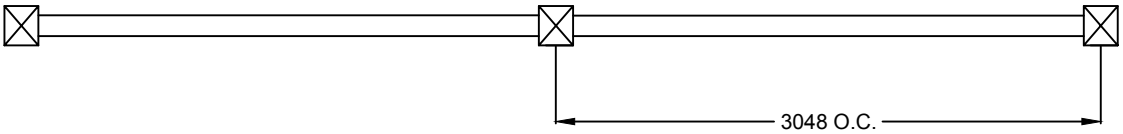
CHECKED: C. HUMBLE, LAT

DATE: 26-NOV-2001 | SCALE: N.T.S. | DRAWN: A. MCLENAGHAN

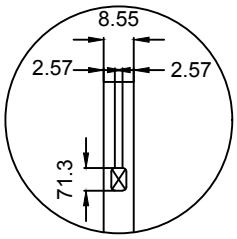
DRAWING NUMBER

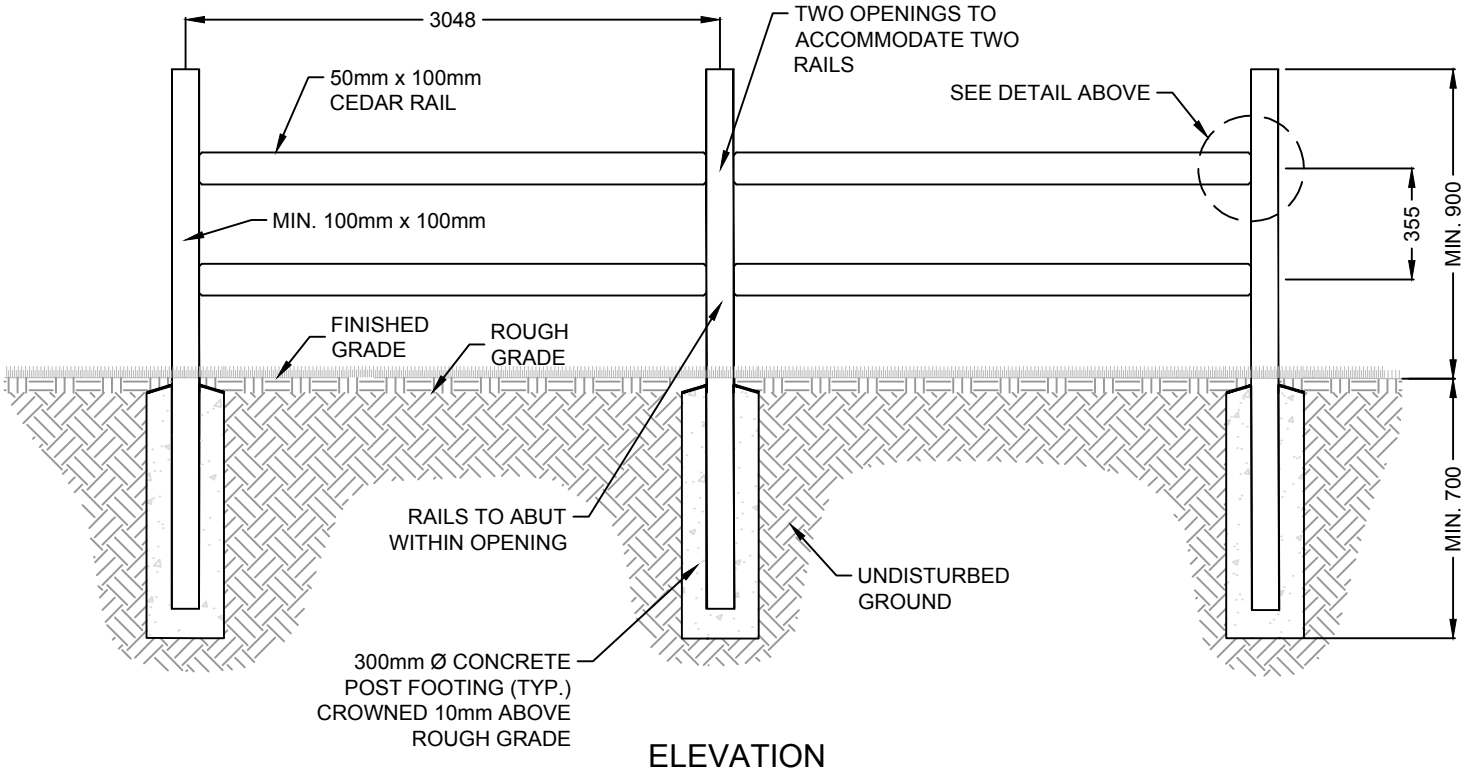
61212

Planning & Development Services Department



PLAN VIEW





ELEVATION

NOTES:

1. CONTRACTOR SHALL INVESTIGATE THE EXCAVATED SUB-SOIL MATERIAL FOR "SOFT SPOTS" (FOR INSTANCE, FILL AREAS OF PREVIOUSLY INSTALLED TRENCHES ETC.) AND NOTIFY THE LANDSCAPE ARCHITECT IF SOFT SPOTS ARE FOUND. SOFT SPOTS SHALL BE RE-COMPACTED TO 100% S.P.D.
2. MAXIMUM MISALIGNMENT OF POSTS SHALL NOT EXCEED 50mm.
3. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
4. FENCE AND FENCE COMPONENTS, INCLUDING FOOTING AND DECORATIVE COLUMNS, TO BE LOCATED 150mm INSIDE PRIVATE PROPERTY.

REVISIONS

DATE	DETAILS	DRAWN
09-SEP-2019	REVISED DRAWING	P. TOMKO
12-MAR-2019	REVISED NOTES	J. ORR
28-AUG-2018	REVISED DRAWING	S. ENGLEDER
05-MAY-2015	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

SPLIT RAIL FENCE

APPROVED: J. BUCHKO, AALA, CSLA

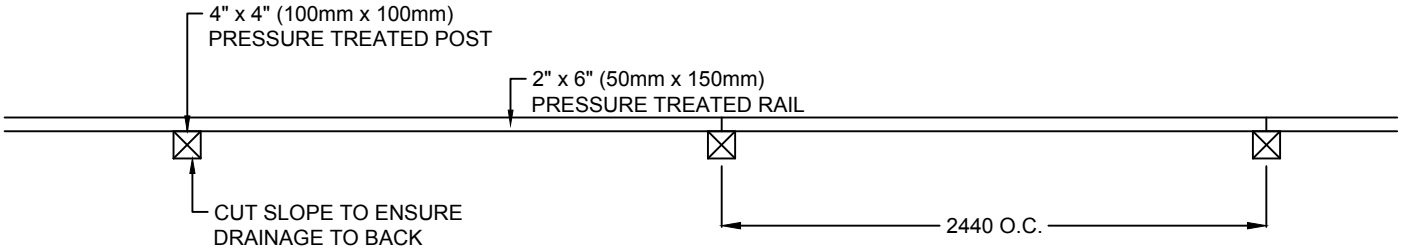
CHECKED: C. HUMBLE, LAT

DATE: 26-FEB-2008 | SCALE: N.T.S. | DRAWN: M. FORGUES

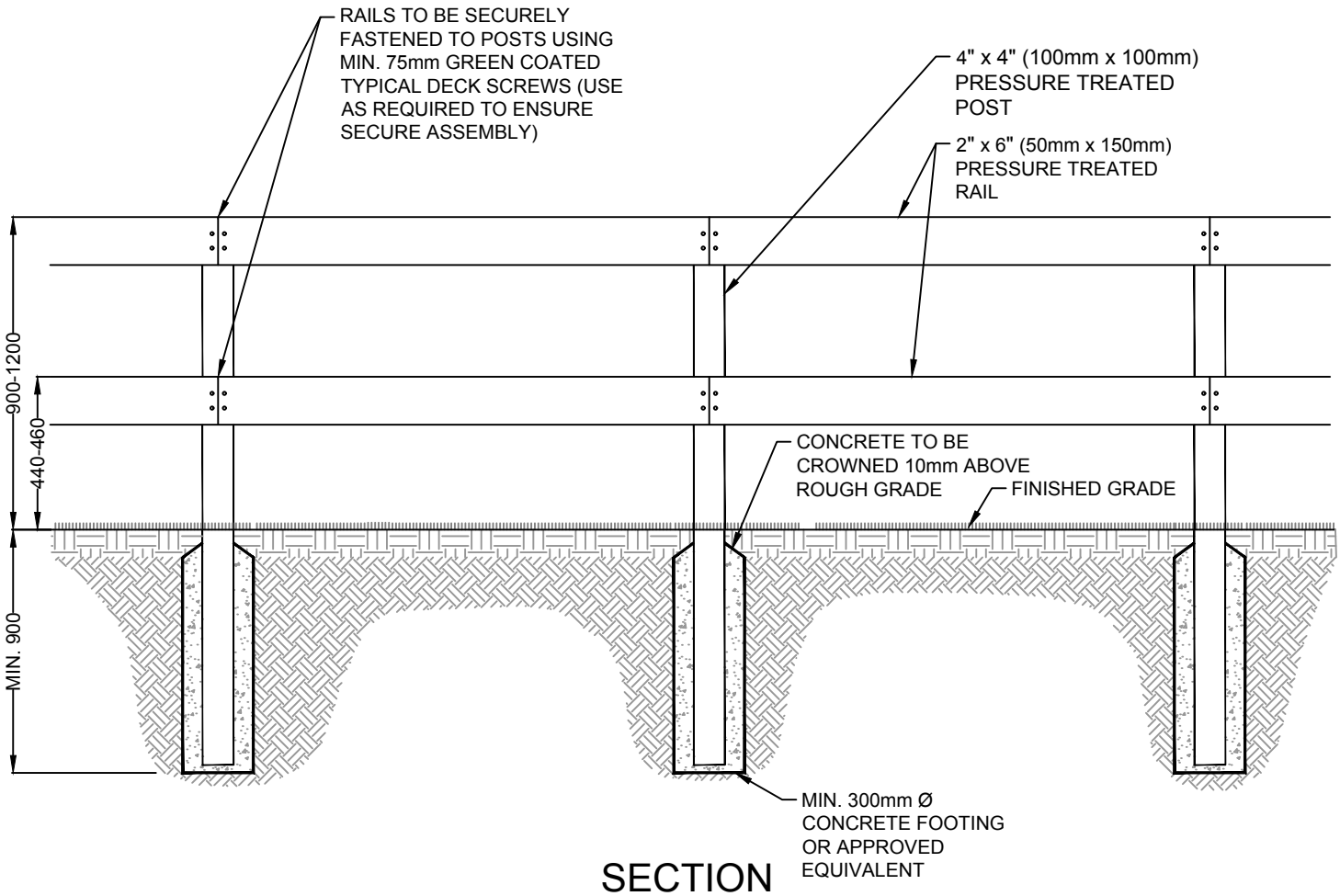
DRAWING NUMBER

61213

Planning & Development Services Department



PLAN



SECTION

NOTES:

1. CONTRACTOR SHALL INVESTIGATE THE EXCAVATED SUB-SOIL MATERIAL FOR "SOFT SPOTS" (FOR INSTANCE, FILL AREAS OF PREVIOUSLY INSTALLED TRENCHES ETC.) AND NOTIFY THE LANDSCAPE ARCHITECT IF SOFT SPOTS ARE FOUND. SOFT SPOTS SHALL BE RE-COMPACTED TO 100% S.P.D.
2. FENCES INSTALLED IN RURAL AREAS TO BE CONSTRUCTED WITH THE BOTTOM RAIL A MINIMUM OF 460mm FROM FINAL GRADE TO ALLOW WILDLIFE MOVEMENT.
3. ALL WOOD TO BE PRESSURE TREATED.
4. ALL WOOD CUTS TO BE COATED WITH TWO COATS OF APPROVED WOOD PRESERVATIVE.
5. POST HOLES SHOULD BE EXCAVATED TO REACH A DEPTH OF UNDISTURBED SUBGRADE.
6. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
7. FENCES AND FENCE COMPONENTS, INCLUDING FOOTING AND DECORATIVE COLUMNS, ARE TO BE LOCATED 150mm INSIDE PRIVATE PROPERTY.

REVISIONS

DATE	DETAILS	DRAWN
09-SEP-2019	REVISED NOTES	P. TOMKO
11-MAR-2019	REVISED DIMENSION, HATCH	S. ENGLEDER
22-AUG-2018	REVISED TEXT AND NOTES	S. ENGLEDER
23-OCT-2010	NEW STANDARD DETAIL	K. HARRIS

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

POST AND RAIL FENCE

APPROVED: J. BUCHKO, AALA, CSLA

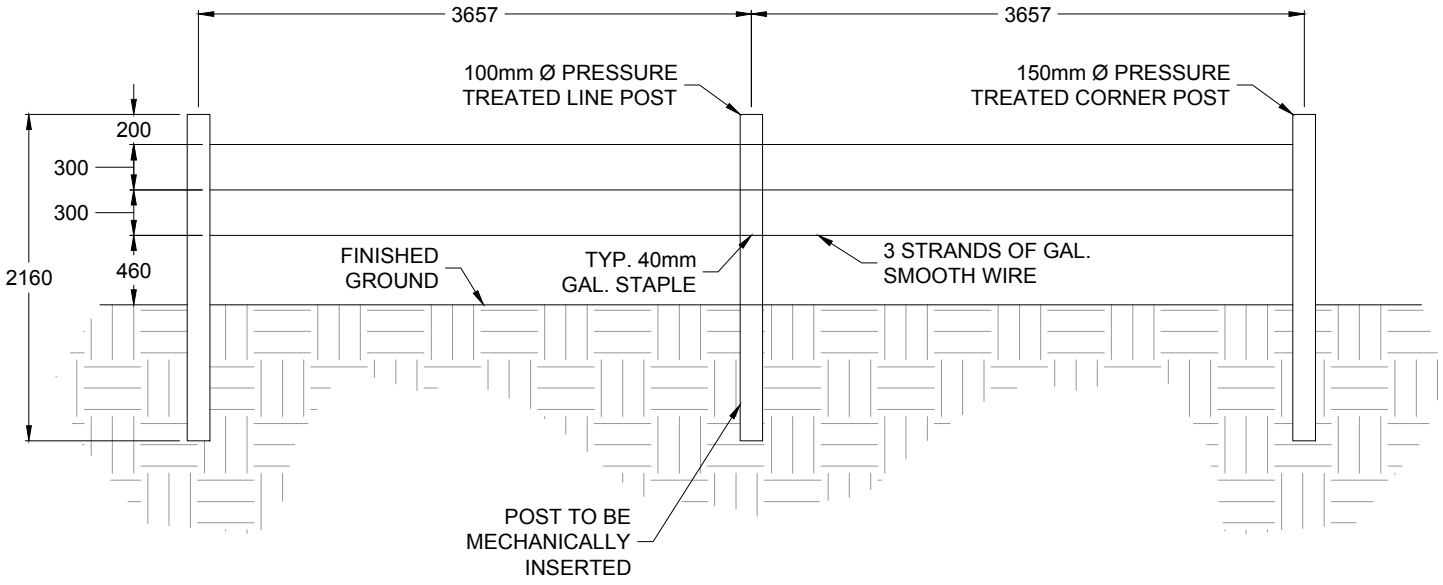
CHECKED: C. HUMBLE, LAT

DATE: 23-OCT-2012 | SCALE: N.T.S | DRAWN: K. HARRIS

DRAWING NUMBER

61214

Planning & Development Services Department



NOTES:
1. FENCE TO BE LOCATED 150mm INSIDE PRIVATE PROPERTY.
2. ALL WOOD TO BE PRESSURE TREATED.
3. ALL WOOD CUTS TO BE COATED WITH TWO COATS OF APPROVED WOOD PRESERVATIVE.
4. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

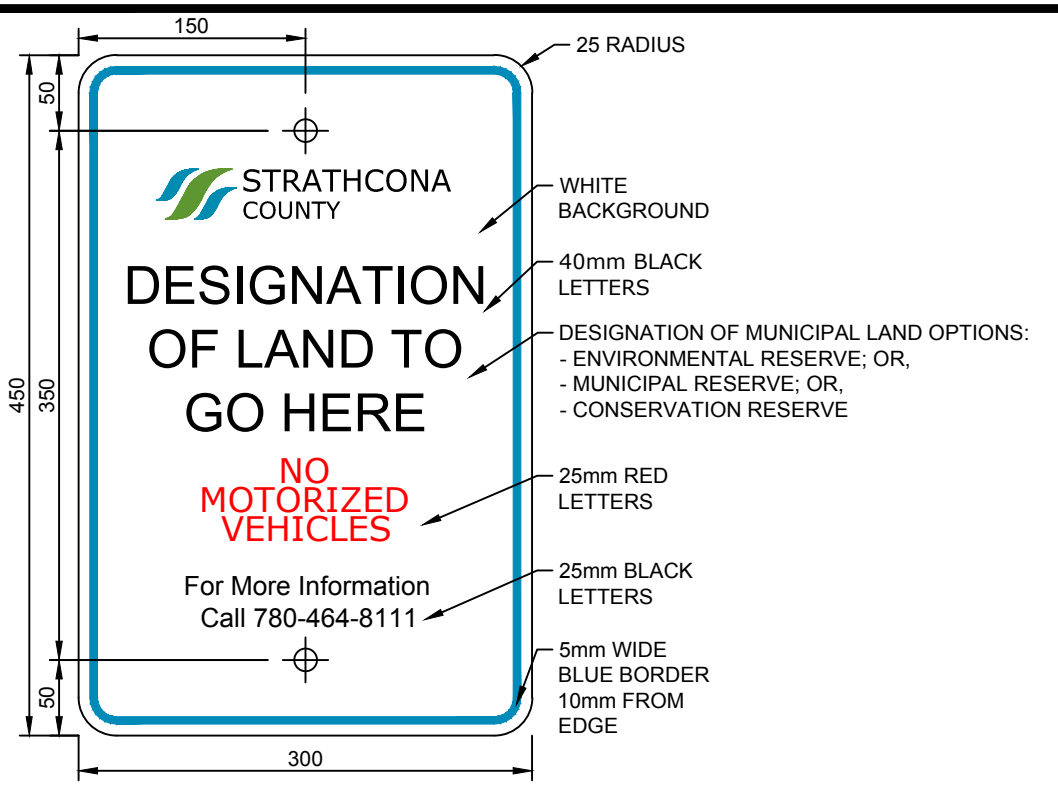
REVISIONS		
DATE	DETAILS	DRAWN
12-MAR-2019	NEW STANDARD DETAIL	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

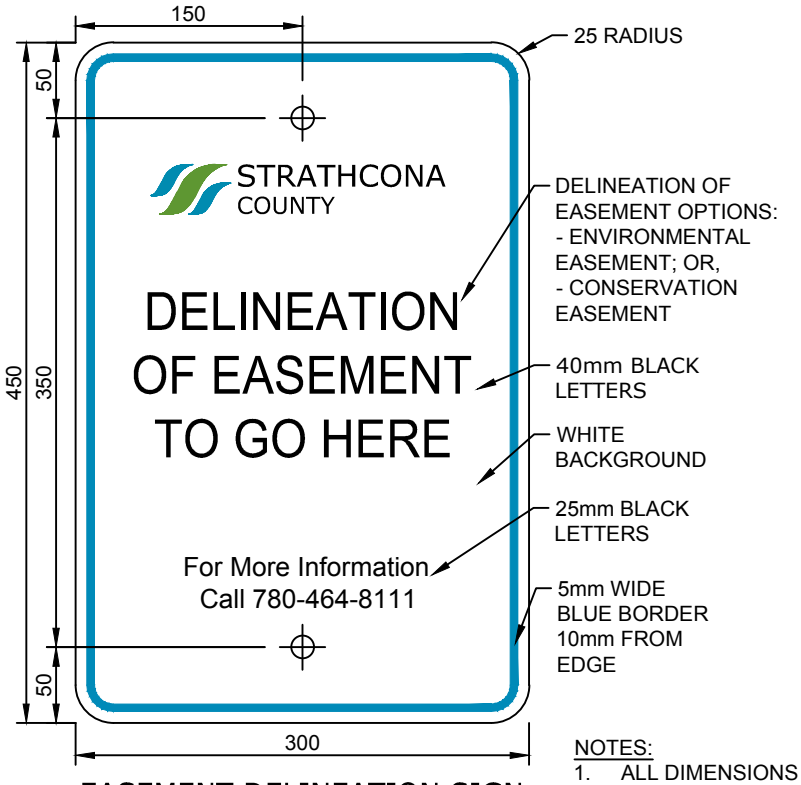
STRAIGHT WIRE FENCE

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 12-MAR-2019 | SCALE: N.T.S | DRAWN: J. ORR, C.E.T.

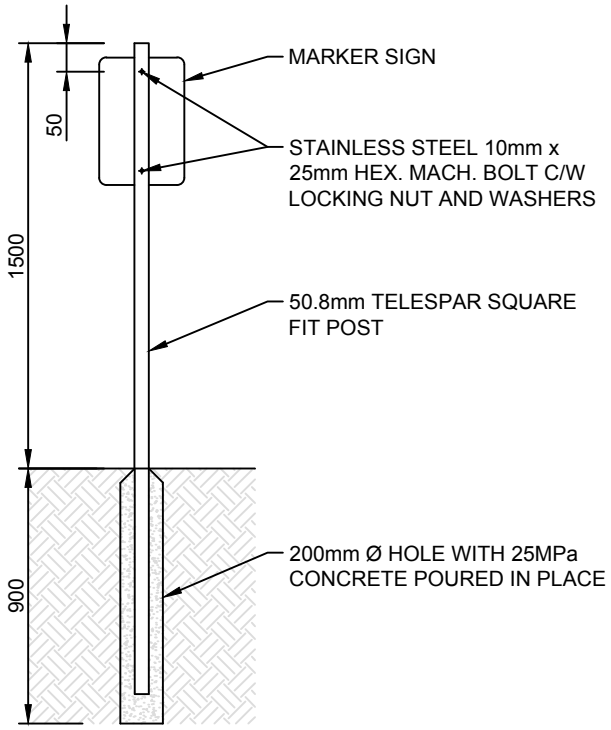
DRAWING NUMBER
61215
Planning & Development Services Department



LAND DESIGNATION SIGN



EASEMENT DELINEATION SIGN



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. SIGNS TO BE FINISHED WITH ANTI-GRAFFITI COATING C/W 3M™ 1160 LAMINATE.
3. FONT TO BE BLACK VERDANA.
4. SIGNS CONTENT TO BE CUSTOMIZED DEPENDING ON THE LAND DESIGNATION OR TYPE OF EASEMENT.

REVISIONS

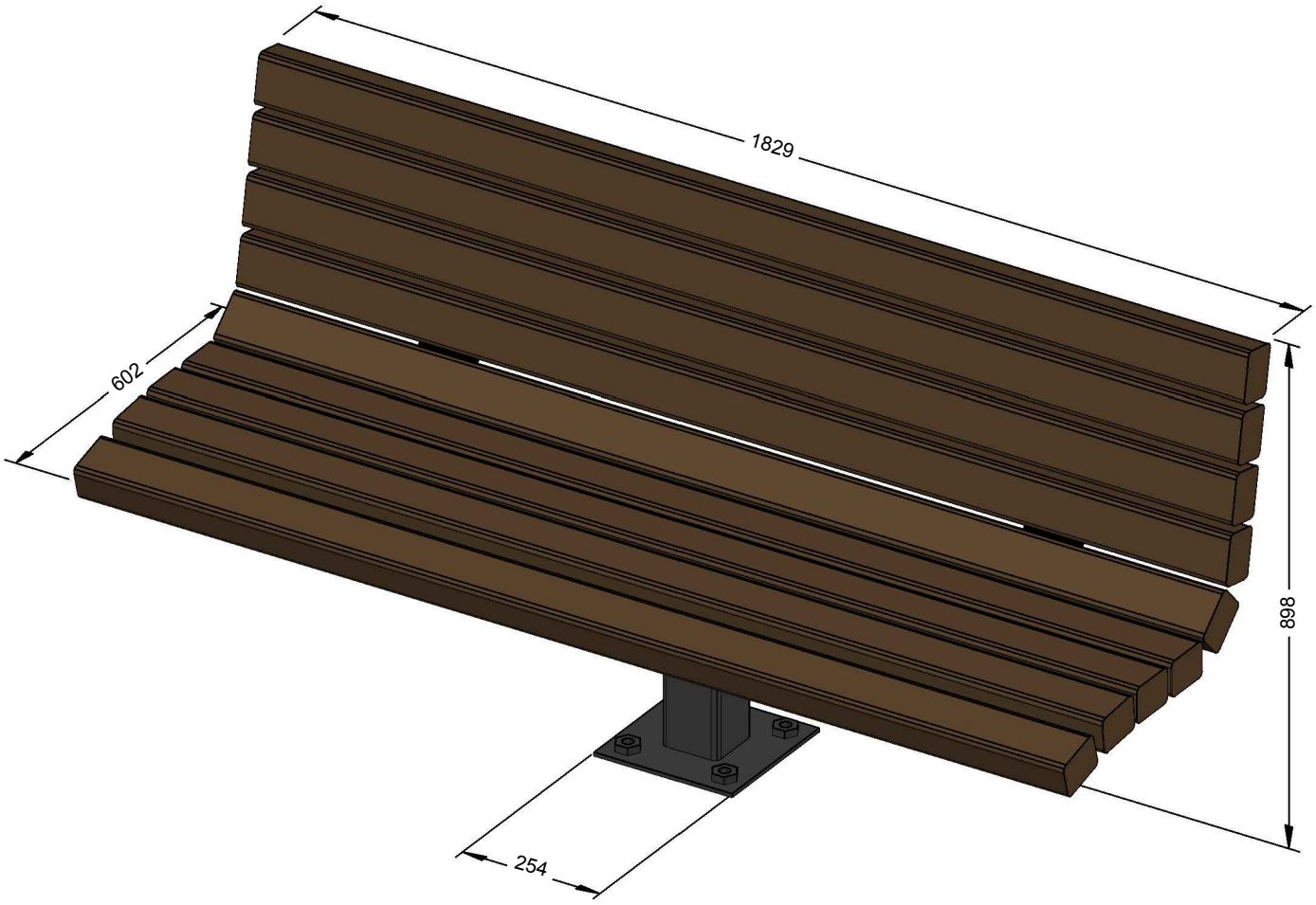
DATE	DETAILS	DRAWN
11-MAR-2019	REVISED HATCH	S. ENGLEDER
23-AUG-2018	REVISED TEXT AND NOTES	S. ENGLEDER
28-APR-2014	U-CHANNEL TO TELESPAR	R. WILSON
28-APR-2014	CONCRETE ADDED TO POST	T. HANSON

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

ER/MR/CE/ERE MARKER POST

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 14-MAR-2005 SCALE: N.T.S. DRAWN: L. LAING

DRAWING NUMBER
61216
Planning & Development Services Department



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. ASSEMBLY DRAWINGS ARE AVAILABLE UPON REQUEST TO A CONTACT STRATHCONA COUNTY REPRESENTATIVE.
3. SEE DRAWING 61307 FOR MOUNTING OPTIONS.
4. FRAME TO BE FINISHED WITH TEXTURED BLACK POWDER COAT.
5. WOOD TO BE DFL, S4S GRADE 2 OR BETTER.
6. MINIMUM 2 COATS OF SEMI-TRANSPARENT NATURAL WOOD STAIN.

REVISIONS		
DATE	DETAILS	DRAWN
11-MAR-2019	NEW DETAIL	M. MOTIUK

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

BENCH

APPROVED: J. BUCHKO, AALA, CSLA

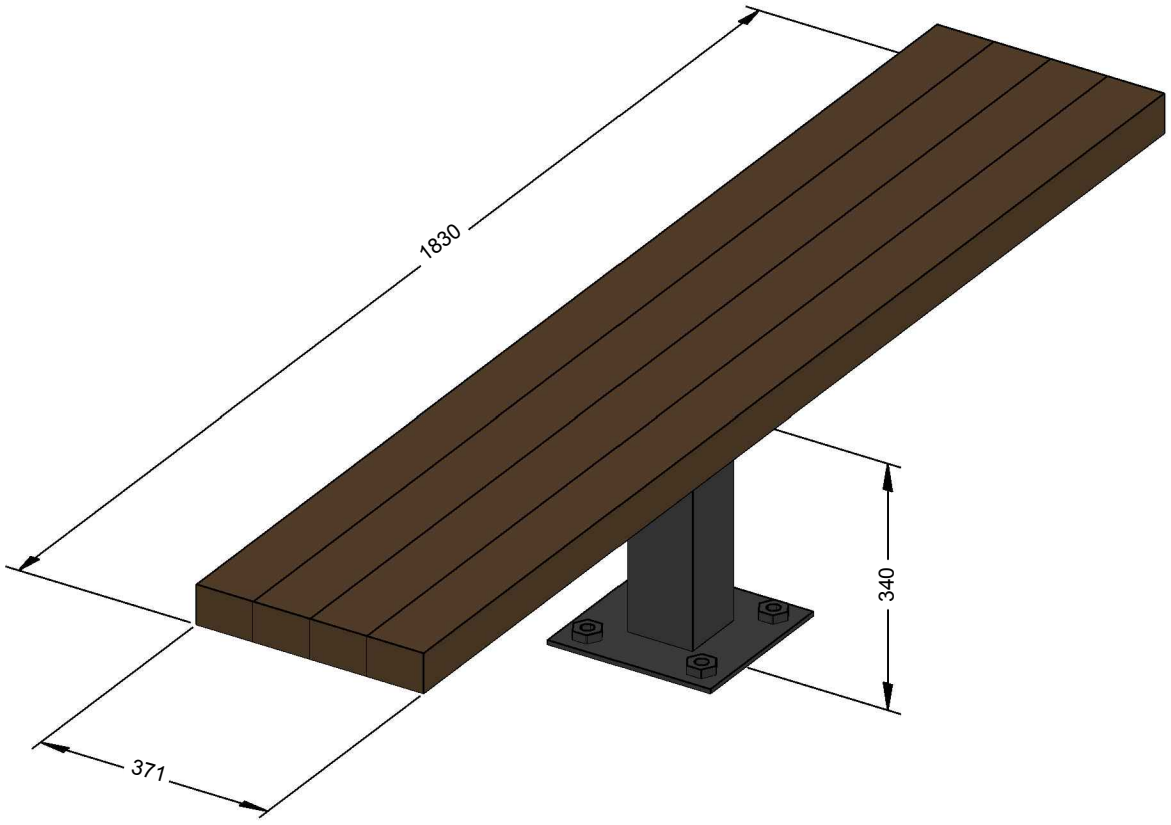
CHECKED: C. HUMBLE, LAT

DATE:11-MAR-2019 | SCALE: N.T.S. | DRAWN: M. MOTIUK

DRAWING NUMBER

61301

Planning & Development Services Department



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS (mm), UNLESS OTHERWISE NOTED.
2. ASSEMBLY DRAWINGS ARE AVAILABLE UPON REQUEST TO A CONTACT STRATHCONA COUNTY REPRESENTATIVE.
4. SEE DRAWING 61307 FOR MOUNTING OPTIONS.
5. FRAME TO BE FINISHED WITH TEXTURED BLACK POWDER COAT.
6. WOOD TO BE DFL, S4S GRADE 2 OR BETTER.
7. MINIMUM 2 COATS OF SEMI-TRANSPARENT NATURAL WOOD STAIN.

REVISIONS

DATE	DETAILS	DRAWN
11-MAR-2019	NEW DETAIL	M. MOTIUK

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

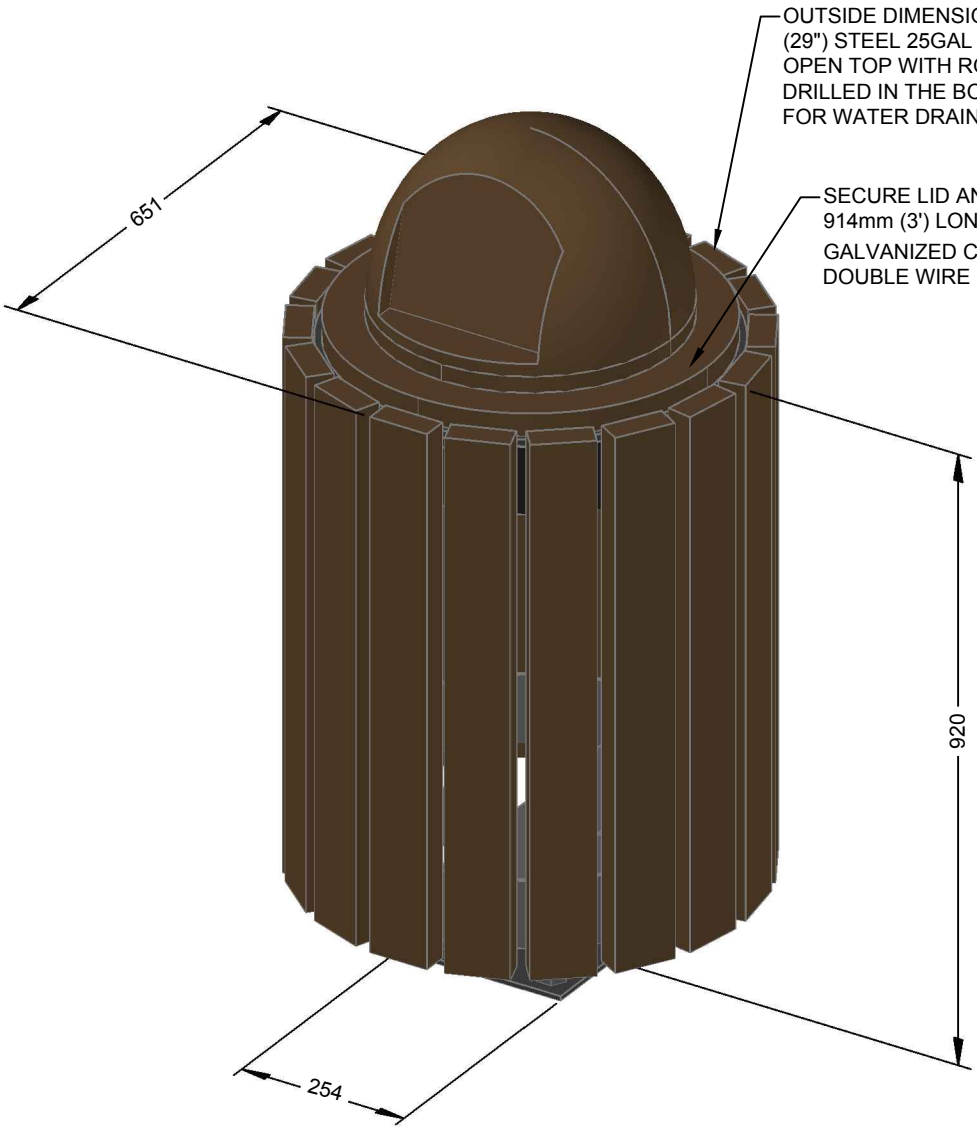
BACKLESS BENCH

APPROVED: J. BUCHKO, AALA, CSLA

CHECKED: C. HUMBLE, LAT

DATE: 11-MAR-19 | SCALE: N.T.S. | DRAWN: M. MOTIUK

DRAWING NUMBER
61302
Planning & Development Services Department



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. ASSEMBLY DRAWINGS ARE AVAILABLE UPON REQUEST TO A CONTACT STRATHCONA COUNTY REPRESENTATIVE.
4. SEE DRAWING 61307 FOR MOUNTING OPTIONS.
5. FRAME TO BE FINISHED WITH TEXTURED BLACK POWDER COAT.
6. WOOD TO BE DFL, S4S GRADE 2 OR BETTER.
7. MINIMUM 2 COATS OF SEMI-TRANSPARENT NATURAL WOOD STAIN.

REVISIONS		
DATE	DETAILS	DRAWN
11-MAR-2019	NEW DETAIL	M. MOTIUK

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

LITTER RECEPTACLE

APPROVED: J. BUCHKO, AALA, CSLA

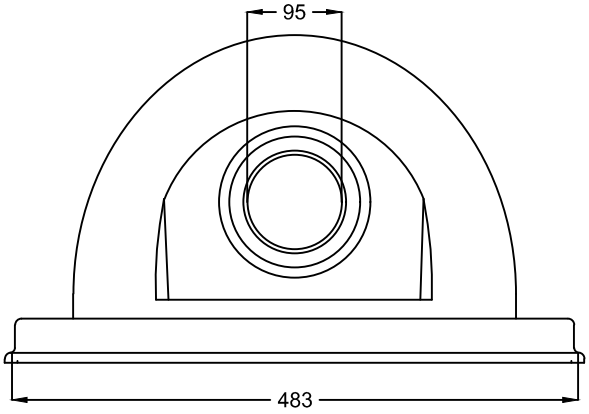
CHECKED: C. HUMBLE, LAT

DATE: 11-MAR-2019 | SCALE: N.T.S. | DRAWN: M. MOTIUK

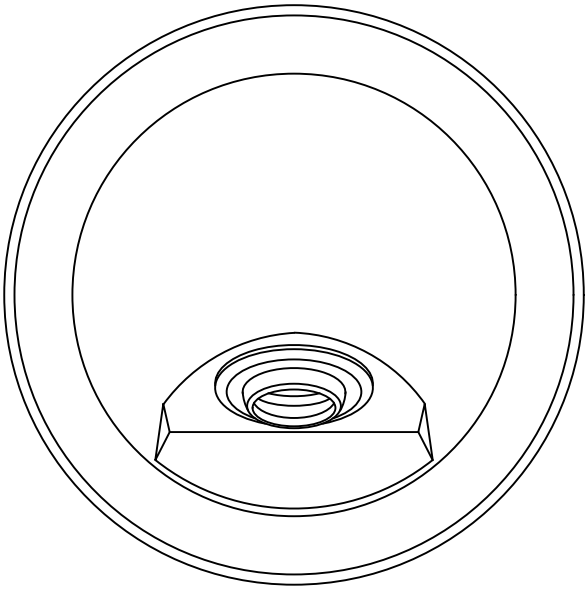
DRAWING NUMBER

61303

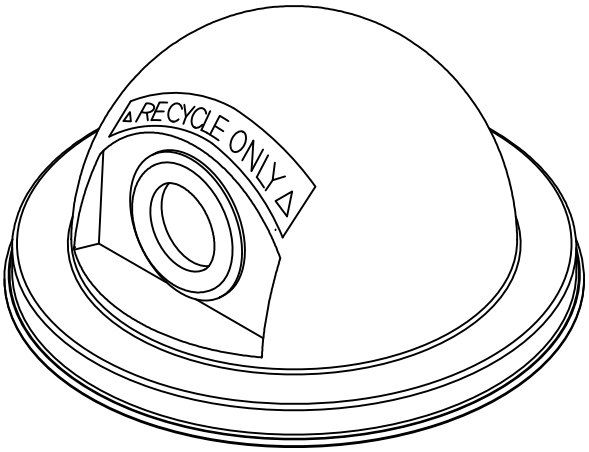
Planning & Development Services Department



DOME TOP LID - RECEPTACLE



DOME TOP LID - PLAN VIEW



DOME TOP LID - ISOMETRIC

NOTES:
1. APPLY 2 COATS OF GLOSS BLUE PAINT ON EXTERIOR AND INTERIOR SURFACES.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS		
DATE	DETAILS	DRAWN
15-MAR-2019	REVISED NOTES	S. ENGLEDER
19-SEP-2018	NEW DETAIL	J.FINNAMORE

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

LITTER RECEPTACLE RECYCLING LID

APPROVED: J. BUCHKO, AALA, CSLA

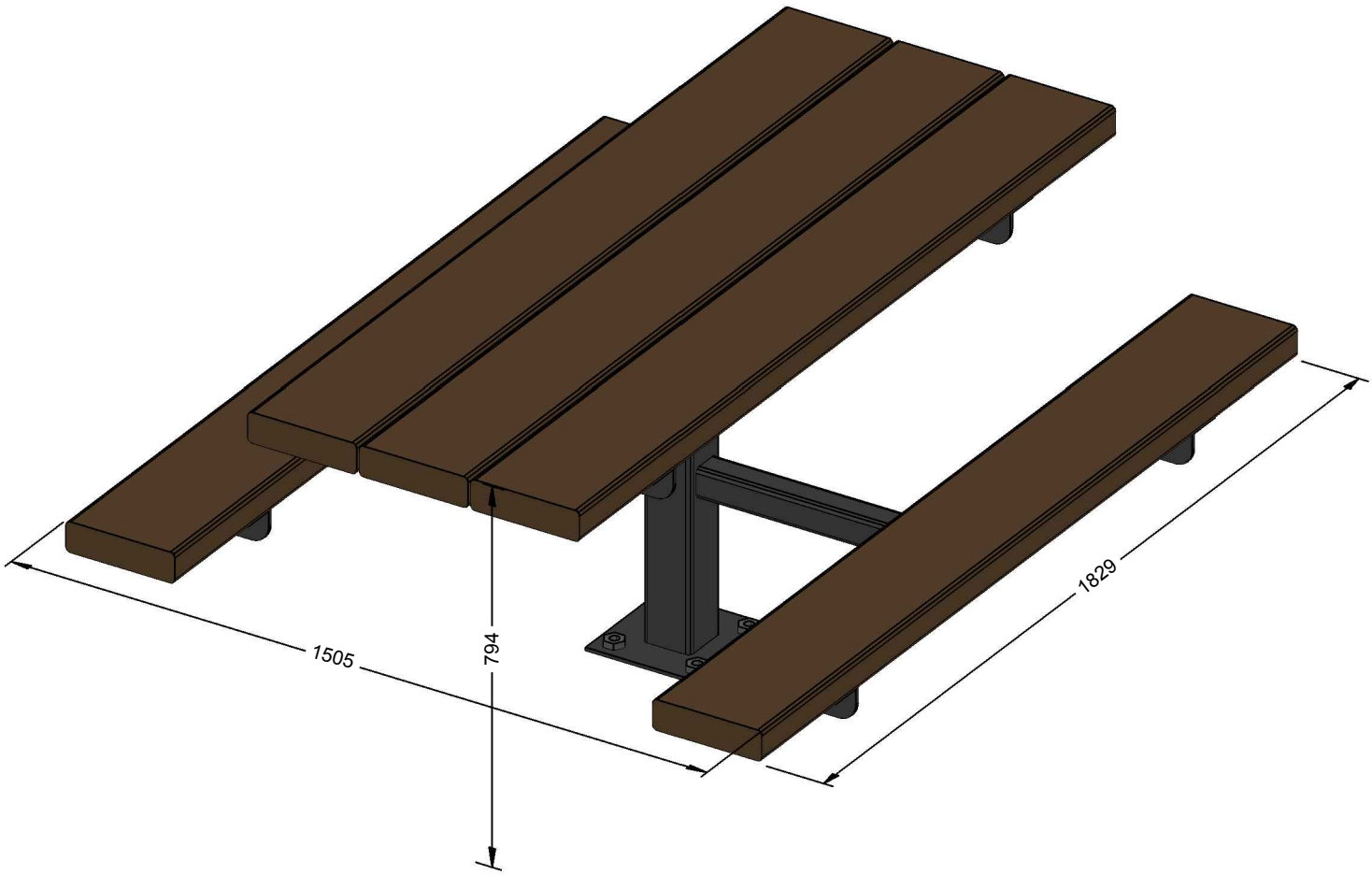
CHECKED: C. HUMBLE, LAT

DATE: 19-SEP-2018 | SCALE: N.T.S. | DRAWN: J.FINNAMORE

DRAWING NUMBER

61304

Planning & Development Services Department



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. ASSEMBLY DRAWINGS ARE AVAILABLE UPON REQUEST TO A CONTACT STRATHCONA COUNTY REPRESENTATIVE.
3. SEE DRAWING 61307 FOR MOUNTING OPTIONS.
4. PICNIC TABLES ARE TO BE INSTALLED ON RELATIVELY EVEN TERRAIN.
5. FRAME TO BE FINISHED WITH TEXTURED BLACK POWDER COAT.
6. WOOD TO BE NON-PRESSURE TREATED DFL GRADE 2 OR BETTER.
7. FURNITURE MAY INCORPORATE RECYCLED OR GRAFFITI-RESISTANT MATERIALS.
8. MINIMUM 2 COATS OF SEMI-TRANSPARENT NATURAL WOOD STAIN.

REVISIONS		
DATE	DETAILS	DRAWN
11-MAR-2019	NEW DETAIL	M. MOTIUK

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

PICNIC TABLE

APPROVED: J. BUCHKO, AALA, CSLA

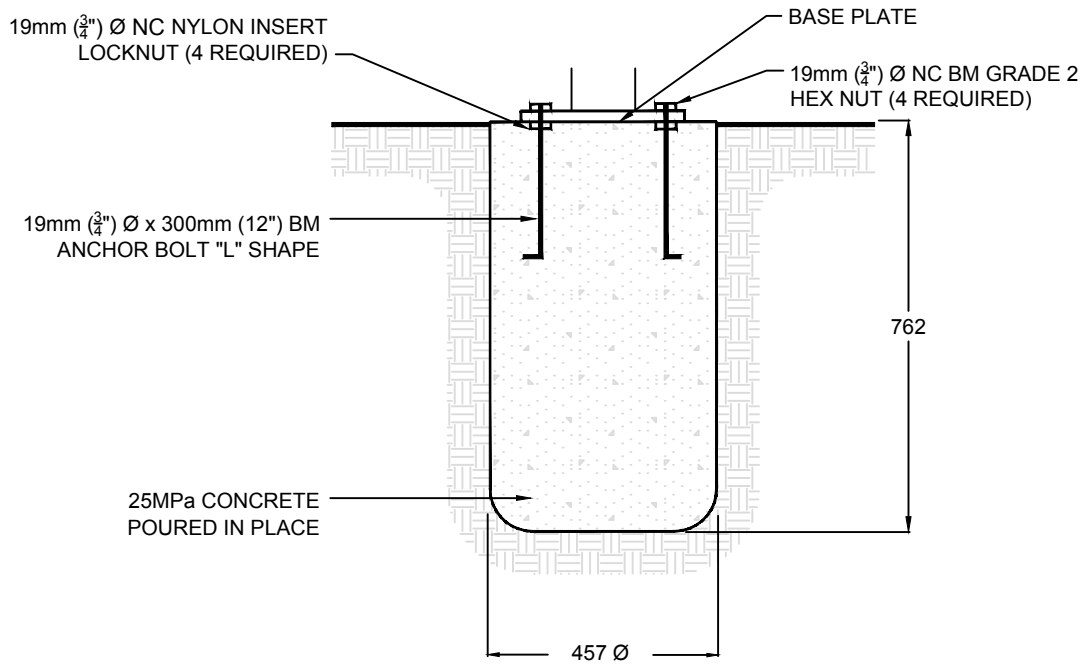
CHECKED: C. HUMBLE, LAT

DATE:11-MAR-2019 | SCALE: N.T.S. | DRAWN: M. MOTIUK

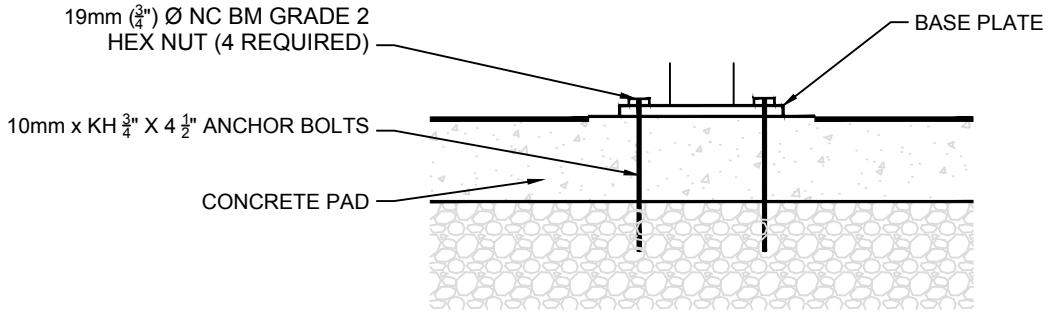
DRAWING NUMBER

61306

Planning & Development Services Department



OPTION "A" CONCRETE PILE MOUNT



OPTION "B" CONCRETE PAD MOUNT

NOTES:
1. SEE DRAWINGS 61301 AND 61302 FOR BENCH DETAILS.
2. SEE DRAWING 61303 FOR LITTER RECEPTACLE DETAILS.
3. SEE DRAWING 61306 FOR PICNIC TABLE DETAILS.
4. SEE DRAWING 61404 FOR TRAIL SIDE REST AREA DETAIL.
5. SEE DRAWING 61513 FOR S.W.M.F. INTERPRETIVE SIGN.
6. SEE DRAWING 61601 FOR CHICANE BOLLARD.
7. CUT EXCESS THREADED BOLTS AT NUT. BOLT MUST NOT EXCEED TWO THREADS.
8. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

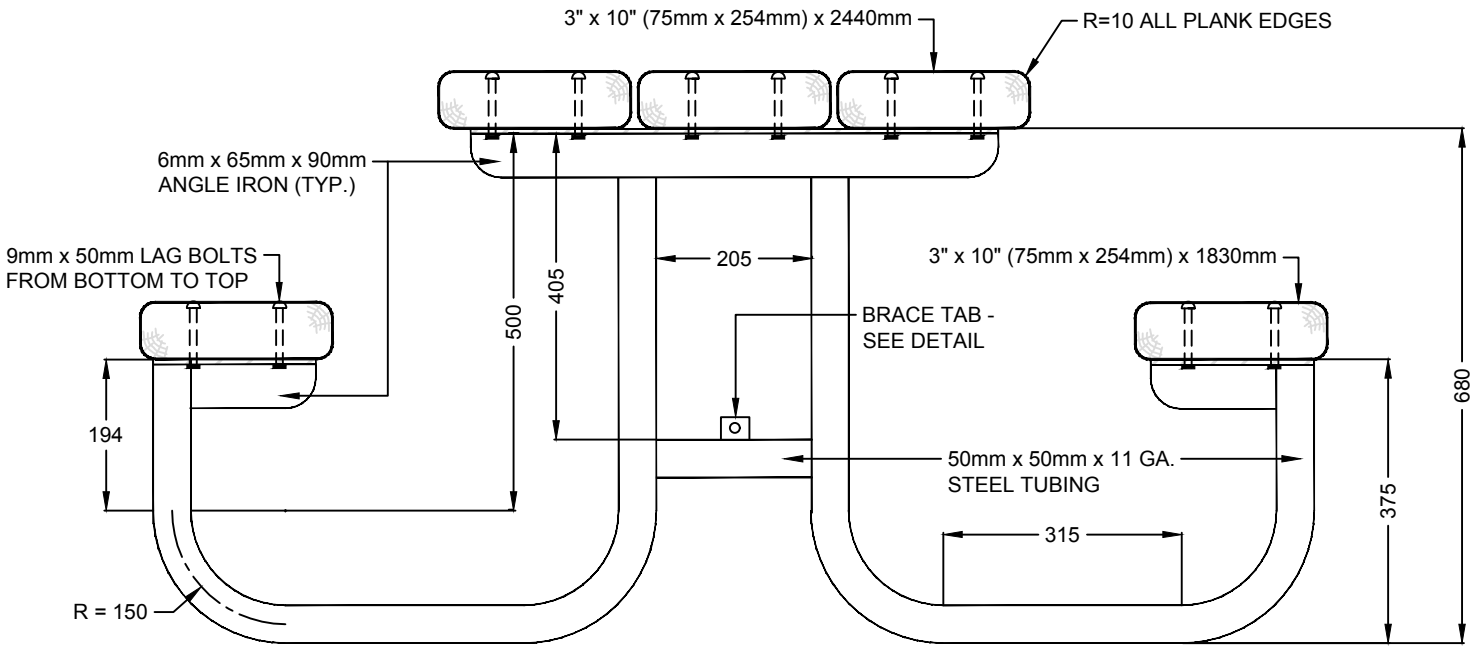
REVISIONS		
DATE	DETAILS	DRAWN
11-MAR-2019	NEW DETAIL CREATED	M. MOTIUK

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

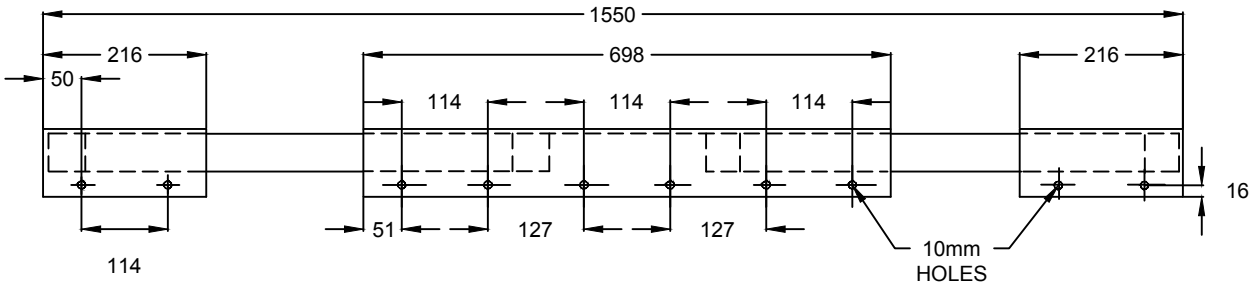
FURNITURE MOUNTING OPTIONS

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 11-MAR-2019 | SCALE: N.T.S. | DRAWN: M. MOTIUK

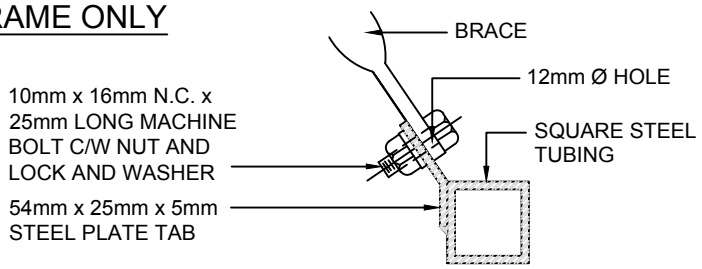
DRAWING NUMBER
61307
Planning & Development Services Department



ELEVATION



PLAN VIEW - FRAME ONLY



BRACE TAB DETAIL

NOTES:

1. ALL METAL PARTS FINISHED WITH TEXTURED BLACK POWDER COAT.
2. ALL MECHANICAL FASTENERS SHALL BE ZINC PLATED.
3. ALL LUMBER TO BE DFL, S4S, GRADE 2 OR BETTER.
4. WOOD TO BE NON-PRESSURE TREATED DFL GRADE 2 OR BETTER.
5. APPLY 2 COATS OF SEMI-TRANSPARENT NATURAL WOOD STAIN WITH SPF RATING.
6. INSTALL IN ACCORDANCE WITH SPECIFICATIONS LISTED UNDER VOLUME 2, SECTION 611.
7. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
09-SEP-2019	REVISED NOTES	P. TOMKO
11-MAR-2019	REVISED DRAWING	M. MOTIUK
09-APR-2018	REVISED DRAWING	M. MOTIUK
23-OCT-2012	REVISED LUMBER DIMENSIONS	J. ORR
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

PORTABLE PICNIC TABLE OPTION 1 OF 2

APPROVED: J. BUCHKO, AALA, CSLA

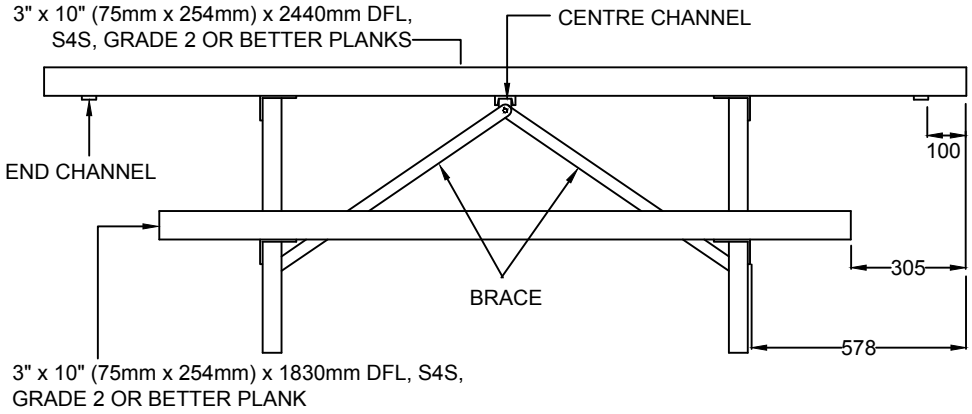
CHECKED: C. HUMBLE, LAT

DATE: 04-NOV-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

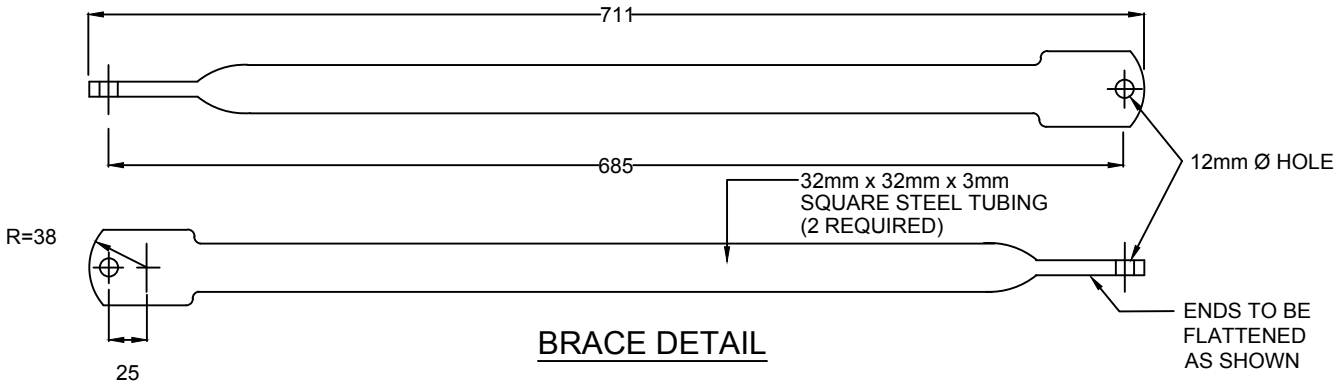
DRAWING NUMBER

61308

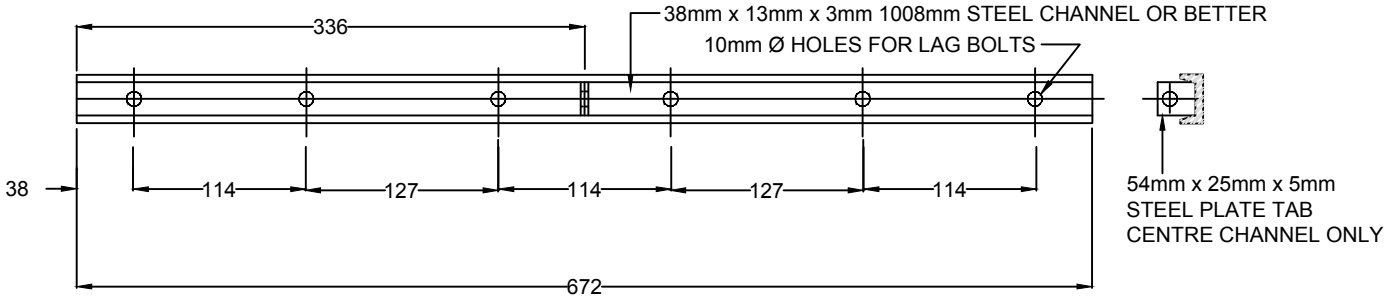
Planning & Development Services Department



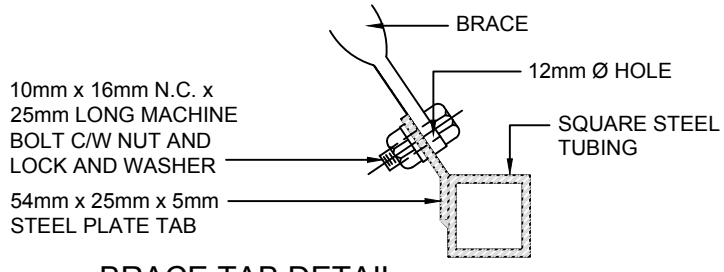
ELEVATION



BRACE DETAIL



CHANNEL DETAIL



BRACE TAB DETAIL

NOTES:

1. WOOD TO BE NON-PRESSURE TREATED DFL GRADE 2 OR BETTER.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
3. APPLY 2 COATS OF SEMI-TRANSPARENT NATURAL WOOD STAIN WITH SPF RATING.
4. ALL METAL PARTS FINISHED WITH TEXTURED BLACK POWDER COAT.

REVISIONS

DATE	DETAILS	DRAWN
11-MAR-2019	REVISED DRAWING	M. MOTIUK
23-OCT-2012	REVISED DRAWING DIMENSIONS	J. ORR
05-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
11-FEB-2005	REMOVED PRESSURE TREATED WOOD	L. LAING

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

PORTABLE PICNIC TABLE OPTION 2 OF 2

APPROVED: J. BUCHKO, AALA, CSLA

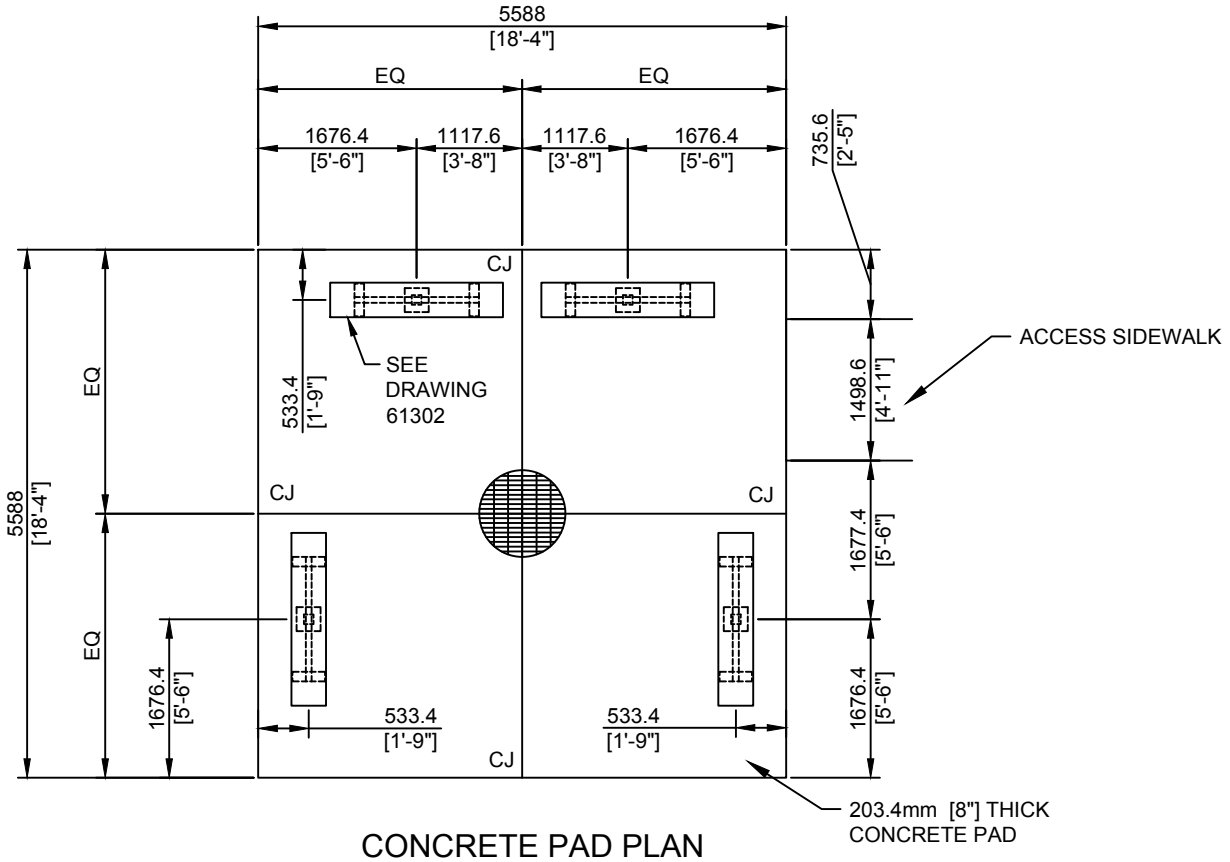
CHECKED: C. HUMBLE, LAT

DATE: 12-APR-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

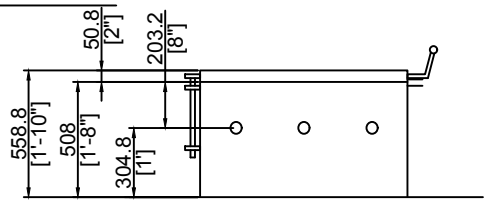
DRAWING NUMBER

61309

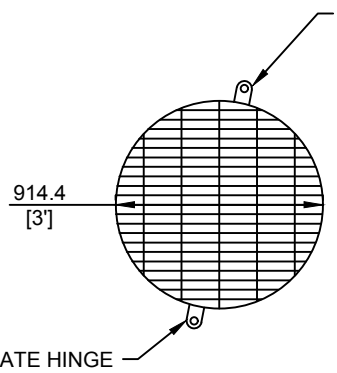
Planning & Development Services Department



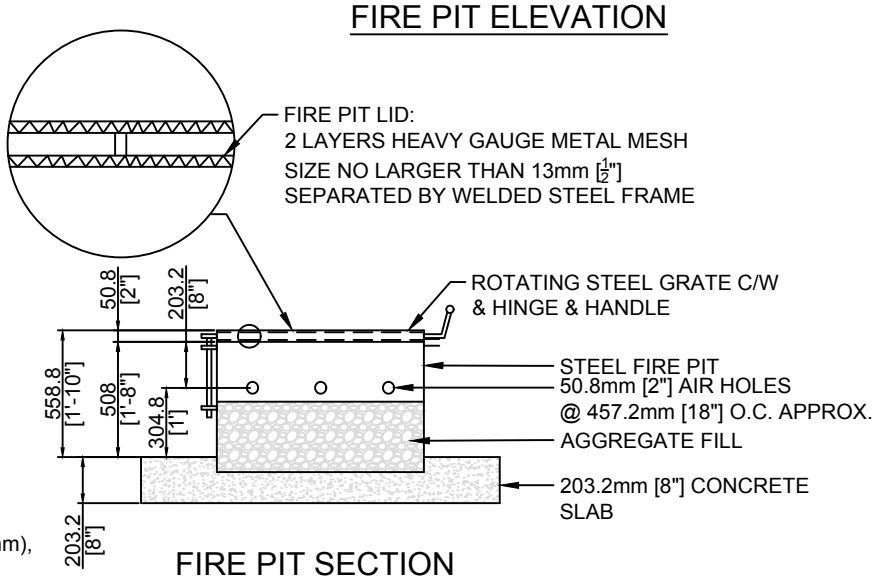
CONCRETE PAD PLAN



FIRE PIT ELEVATION



FIRE PIT PLAN



FIRE PIT SECTION

NOTES:
1. GRIND SMOOTH ALL WELDS PRIOR TO PAINTING.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

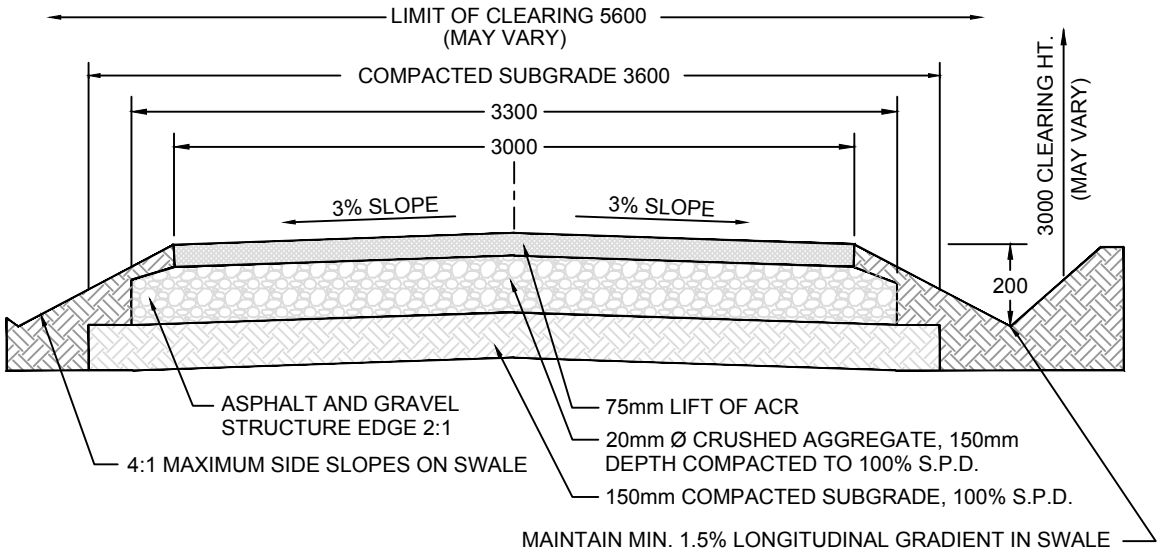
REVISIONS		
DATE	DETAILS	DRAWN
11-MAR-2019	REVISED DETAIL	M. MOTIUK
30-AUG-2018	NEW DETAIL	S. ENGLEDER

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

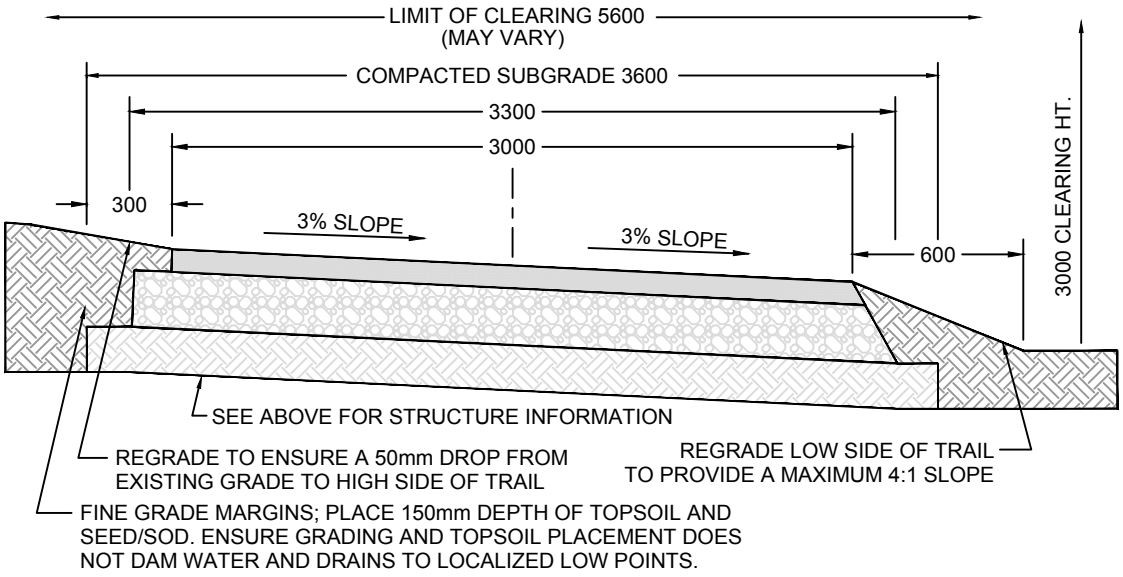
ACCESSIBLE FIRE PIT

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 07-MAY-2018 SCALE: N.T.S. DRAWN: S. ENGLEDER

DRAWING NUMBER
61310
Planning & Development Services Department



LEVEL GROUND



MINIMUM SIDESLOPE

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. ENSURE ALL JOINTS WITH EXISTING VEGETATION SMOOTH AND CONTINUOUS; WHERE NECESSARY TRIM BACK ROOTS AND CLEAR DEBRIS.

REVISIONS

DATE	DETAILS	DRAWN
05-MAR-2018	REVISED SLOPES	S. ENGLEDER
15-SEP-2016	100% S.P.D. FOR SUBGRADE	D. LEGROW
04-JAN-2016	SUBGRADE WIDTH	S. ENGLEDER
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

ASPHALT TRAIL (3.0m WIDTH)

APPROVED: K. COLE, P.(ENG.)

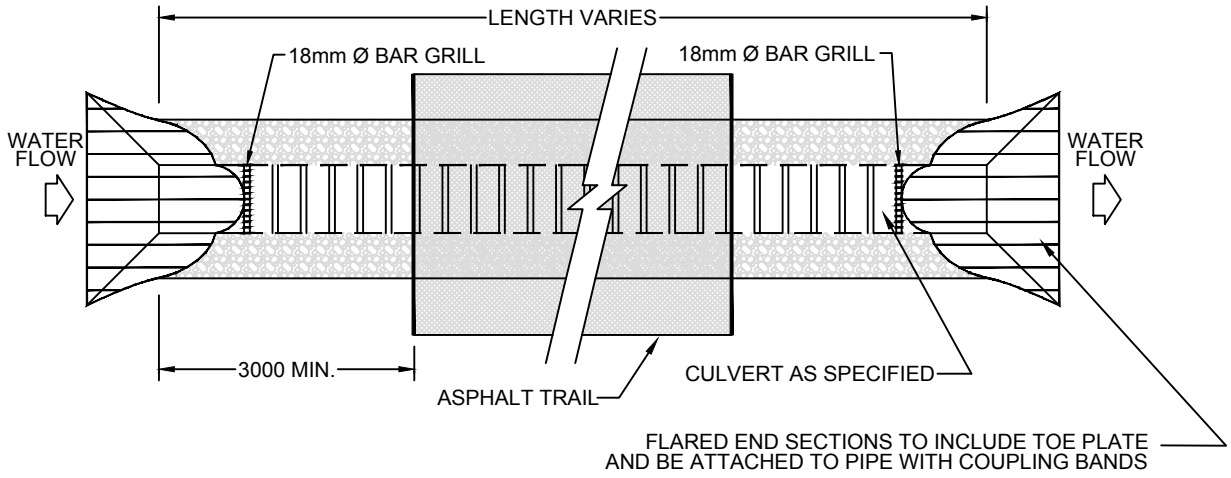
CHECKED: S. JOHNSON, P.TECH (ENG.)

DATE: 27-APR-1994 | SCALE: N.T.S. | DRAWN: B. ANDRE

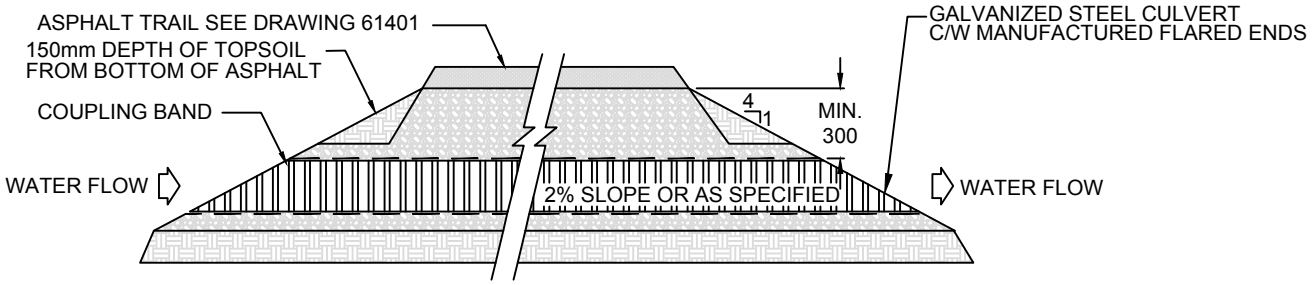
DRAWING NUMBER

61401

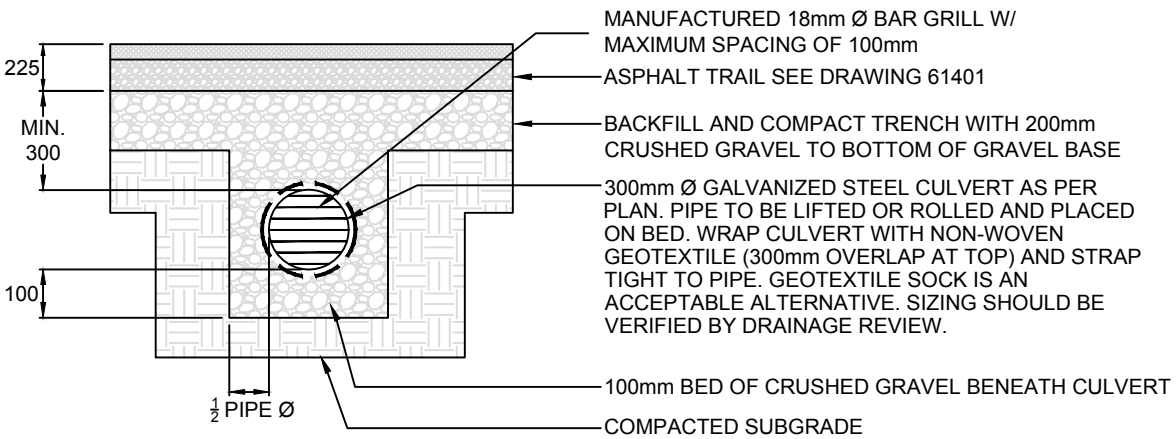
TRANSPORTATION PLANNING & ENGINEERING



PLAN VIEW



SECTION



DETAIL

NOTES:
1. REFER TO DRAWING 51109 - HAND PLACED RIPRAP FOR FURTHER DETAILS.
2. REFER TO DRAWING 51110 - CULVERTS FOR FURTHER DETAILS.
3. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

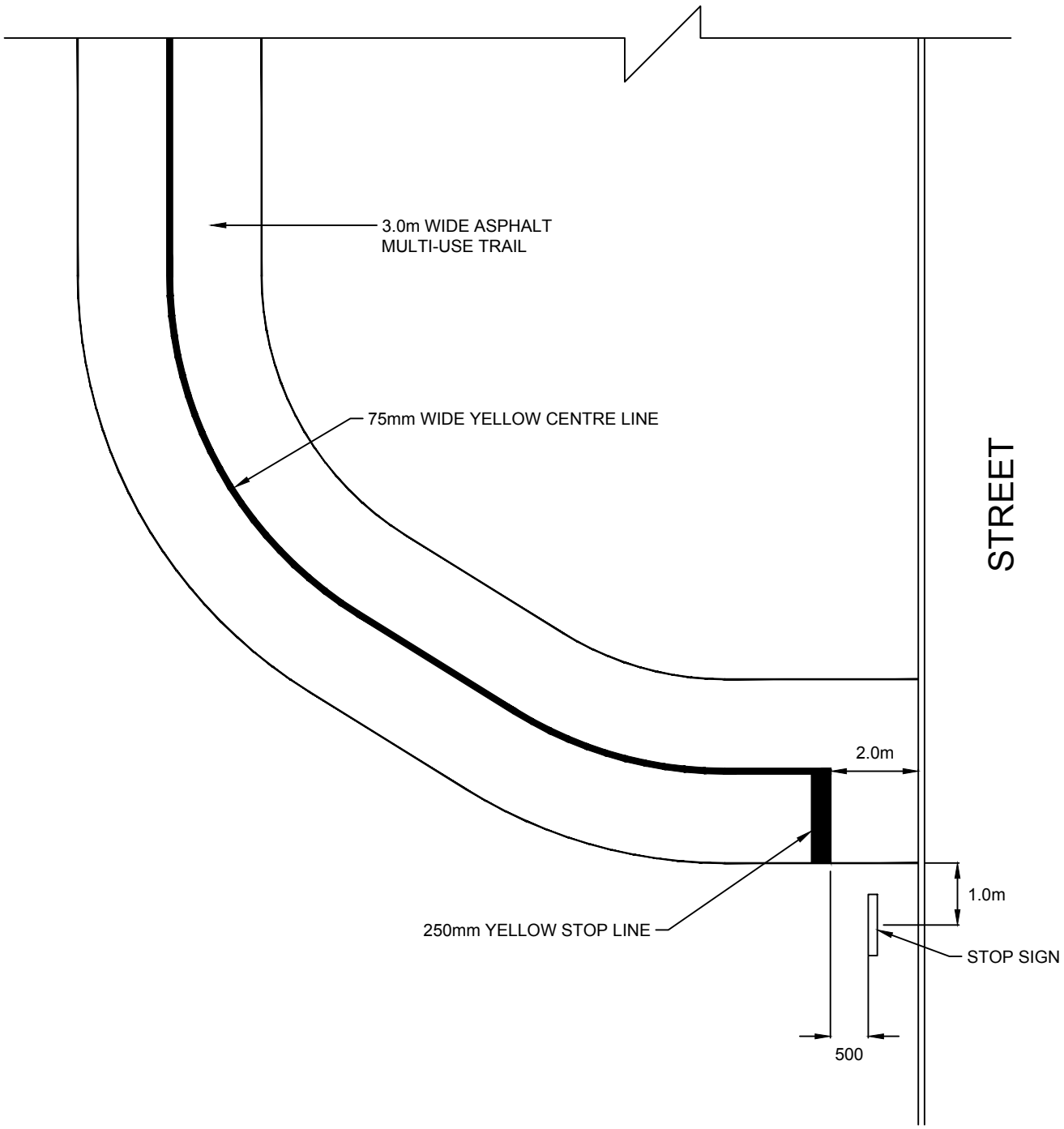
DATE	DETAILS	DRAWN
12-MAR-2019	REVISED DRAWING NOTES AND NUMBER	J. ORR
07-MAR-2016	ADDED COVER DIMENSION, UPDATED MIN CULVERT LENGTH	S. ENGLEDER
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
02-APR-2008	REVISED DEPTH OF CULVERT	M. FORGUES

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

CORRUGATED STEEL CULVERT WITH GEOTEXTILE

APPROVED: K. COLE, P.ENG.
CHECKED: S. JOHNSON, P.TECH.(ENG.)
DATE: 24-JUN-1994 | SCALE: N.T.S. | DRAWN: B. ANDRE

DRAWING NUMBER
61402
TRANSPORTATION PLANING & ENGINEERING



NOTES:
1. PAINT TO CONFORM TO CGSB 1-GP-74M ALKYD PAINT.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

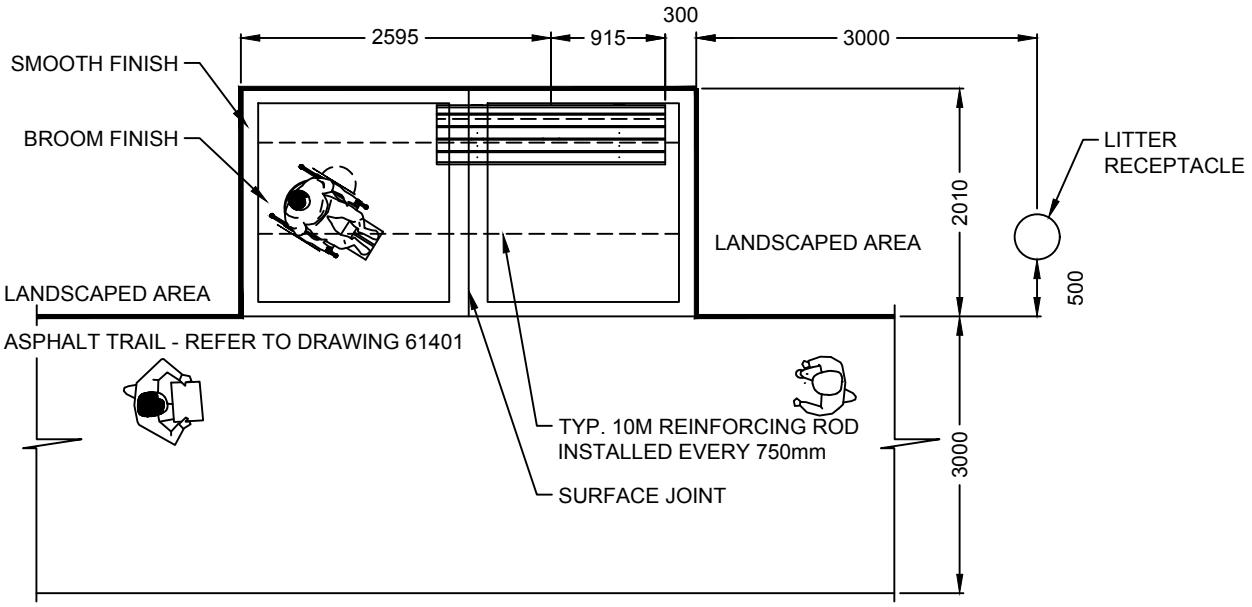
DATE	DETAILS	DRAWN
12-MAR-2019	REVISED NOTES	J. ORR
07-MAY-2018	ADDED DIMENSIONS	S. ENGLEDER
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
24-JUN-2002	PRINTED	A. MCLENAGHAN

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

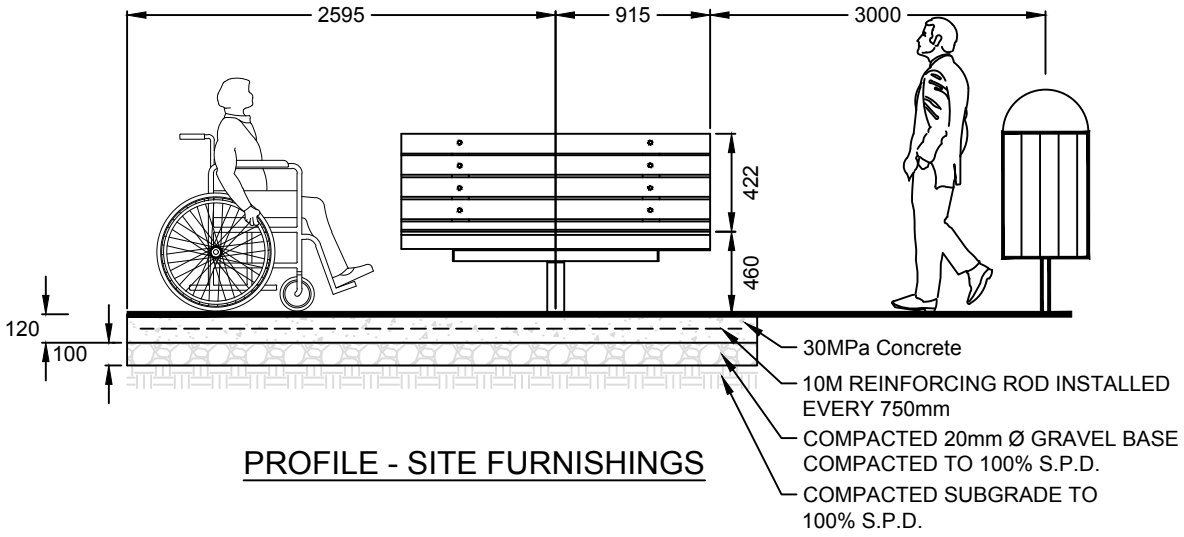
ASPHALT TRAIL LINE PAINTING (3m)

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 27-APR-1994 | SCALE: N.T.S. | DRAWN: B. ANDRE

DRAWING NUMBER
61403
Planning & Development Services Department



PLAN VIEW - REST AREA



PROFILE - SITE FURNISHINGS

NOTES:
1. REST STOPS TO BE COMPLETED WITH CONCRETE OR ASPHALT. REFERENCE DRAWING 61401 FOR ASPHALT CONSTRUCTION DETAIL. BE ADVISED THAT FURNITURE INSTALLED ON ASPHALT PADS MUST BE MOUNTED ON CONCRETE PILES. REFERENCE DRAWING 61307 FOR MOUNTING OPTIONS.
2. REST AREA SLOPE TO MATCH TRAIL SLOPE.
3. SEE DRAWINGS 61301 AND 61302 FOR BENCH LAYOUT/DETAILS.
4. SEE DRAWING 61303 FOR LITTER RECEPTACLE DETAILS.
5. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
6. BENCH MAY BE TURNED 180 DEGREES TO FACE OPPOSITE SIDE OF TRAIL. A 600mm SETBACK FROM ASPHALT TRAIL IS TO BE PROVIDED.

REVISIONS

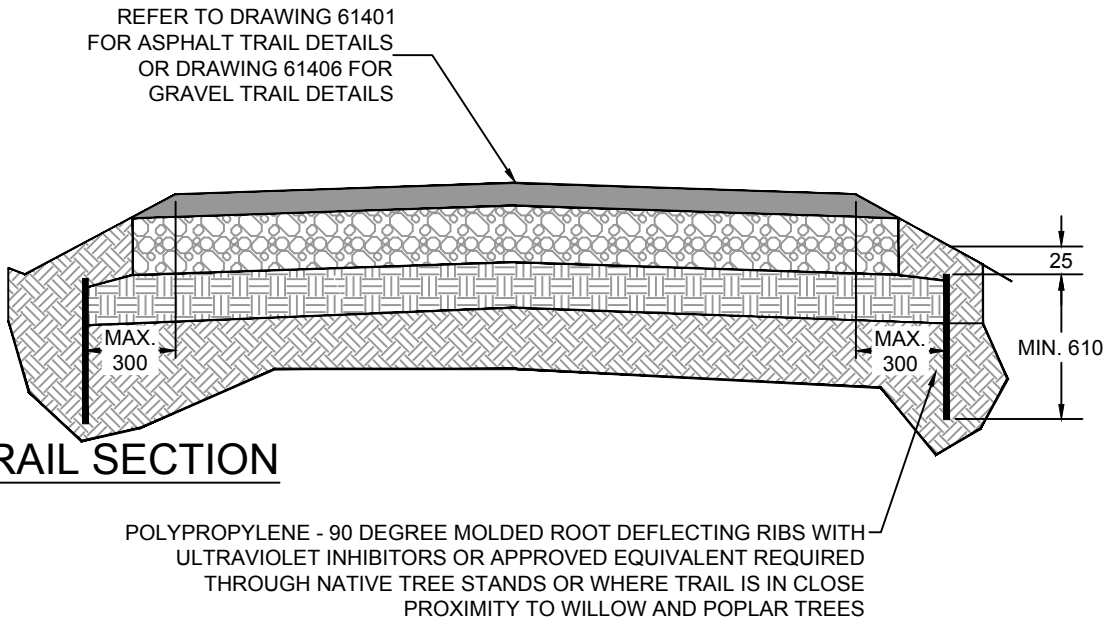
DATE	DETAILS	DRAWN
11-MAR-2019	REVISED DRAWING NUMBER, REVISED DETAIL	S. ENGLEDER
07-MAY-2018	UPDATED DIMENSIONS, TEXT, TITLE, LAYOUT	S. ENGLEDER
30-SEP-2016	UPDATED DIMENSIONS AND DWG REFERENCES	D. LEGROW
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

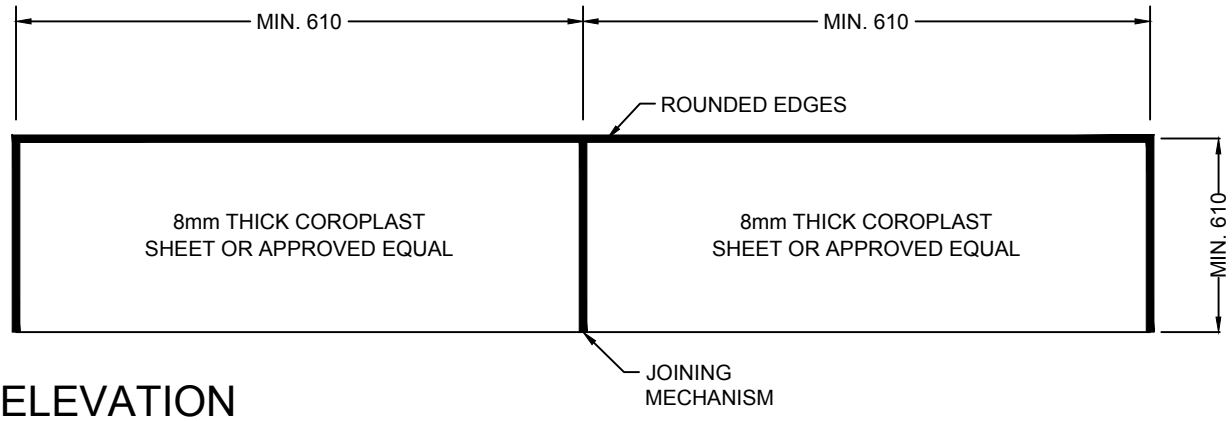
TRAIL SIDE REST AREA

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 27-APR-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER
61404
Transportation Planning & Engineering Department



TRAIL SECTION



ELEVATION

NOTES:
1. ROOT BARRIER MAY BE INSTALLED ALONG BOTH GRAVEL OR ASPHALT TRAILS AS SITE CONDITIONS AND DESIGN DICTATE.
2. DEPTH OF ROOT BARRIER VARIES ACCORDING TO PLANT VARIETIES AND MANUFACTURER'S RECOMMENDATIONS.
3. TRENCH AREAS WHERE THE ROOT BARRIER IS TO BE INSTALLED.
4. ROOT BARRIER SHOULD BE BURIED 25mm BELOW FINAL GRADE.
5. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

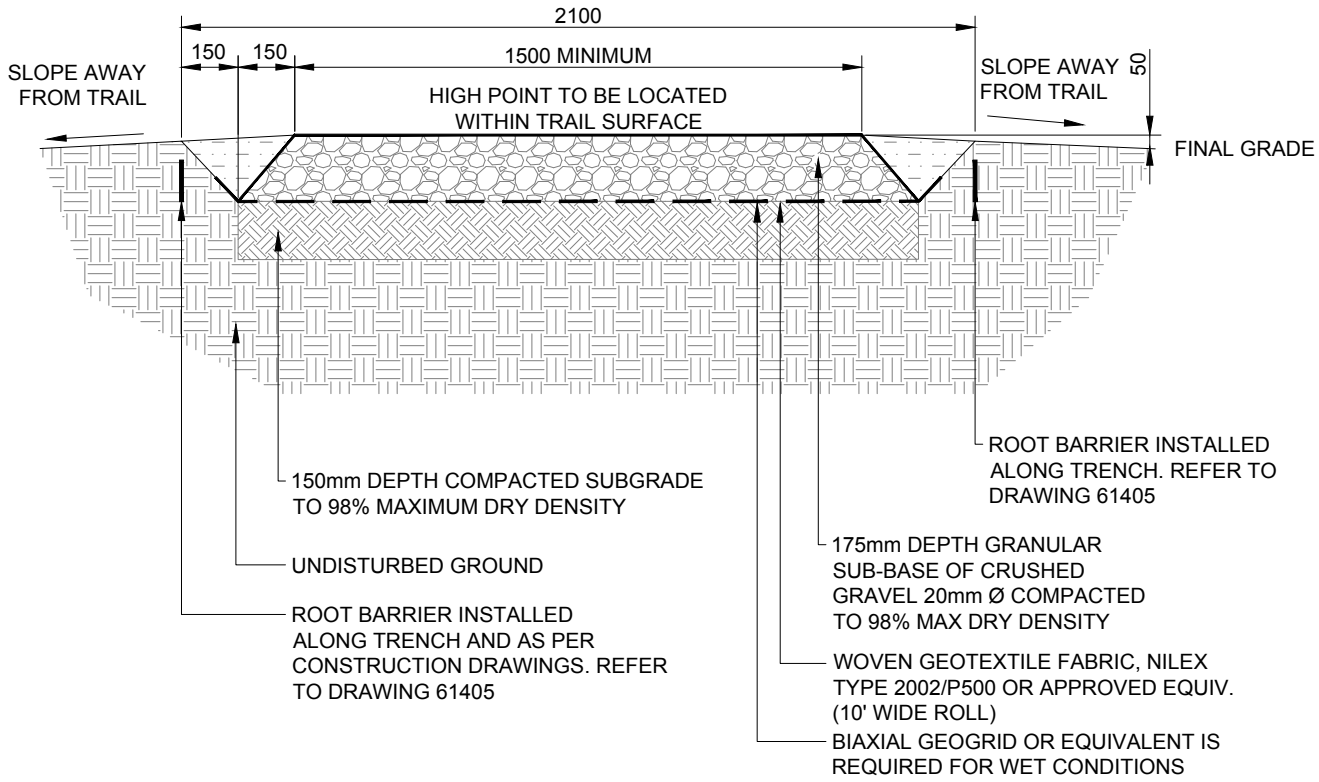
DATE	DETAILS	DRAWN
12-MAR-2019	REVISED DIMENSIONS AND NOTES	J. ORR
14-JUN-2018	REVISED TEXT AND DIMENSIONS	S. ENGLEDER
04-JAN-2016	ASPHALT THICKNESS FROM 65 TO 75mm	S. ENGLEDER
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

ROOT BARRIER

APPROVED: K. COLE, P.(ENG.)
CHECKED: S. JOHNSON, P.TECH. (ENG)
DATE: 27-APR-1994 | SCALE: N.T.S. | DRAWN: B. ANDRE

DRAWING NUMBER
61405
TRANSPORTATION PLANNING & ENGINEERING



NOTES:
1. EXCAVATION OF TOP MATERIAL TO BE DONE TO A WIDTH OF 2100mm, OR MORE AS REQUIRED.
2. ALL DISTURBANCE ALONG TRAIL EDGE TO BE REHABILITATED WITH TOPSOIL AND APPROVED SEED MIX.
3. COMPACTION REQUIREMENTS MAY BE MODIFIED ACCORDING TO SITE CONDITIONS.
4. ENSURE SLOPE ON TRAIL TIES IN WITH EXISTING GRADES (TRAIL CROSS FALL MAX 3% / MIN 1%).
5. TRAIL TO BE 50mm ABOVE ADJACENT GRADE (FOR DRAINAGE).
6. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

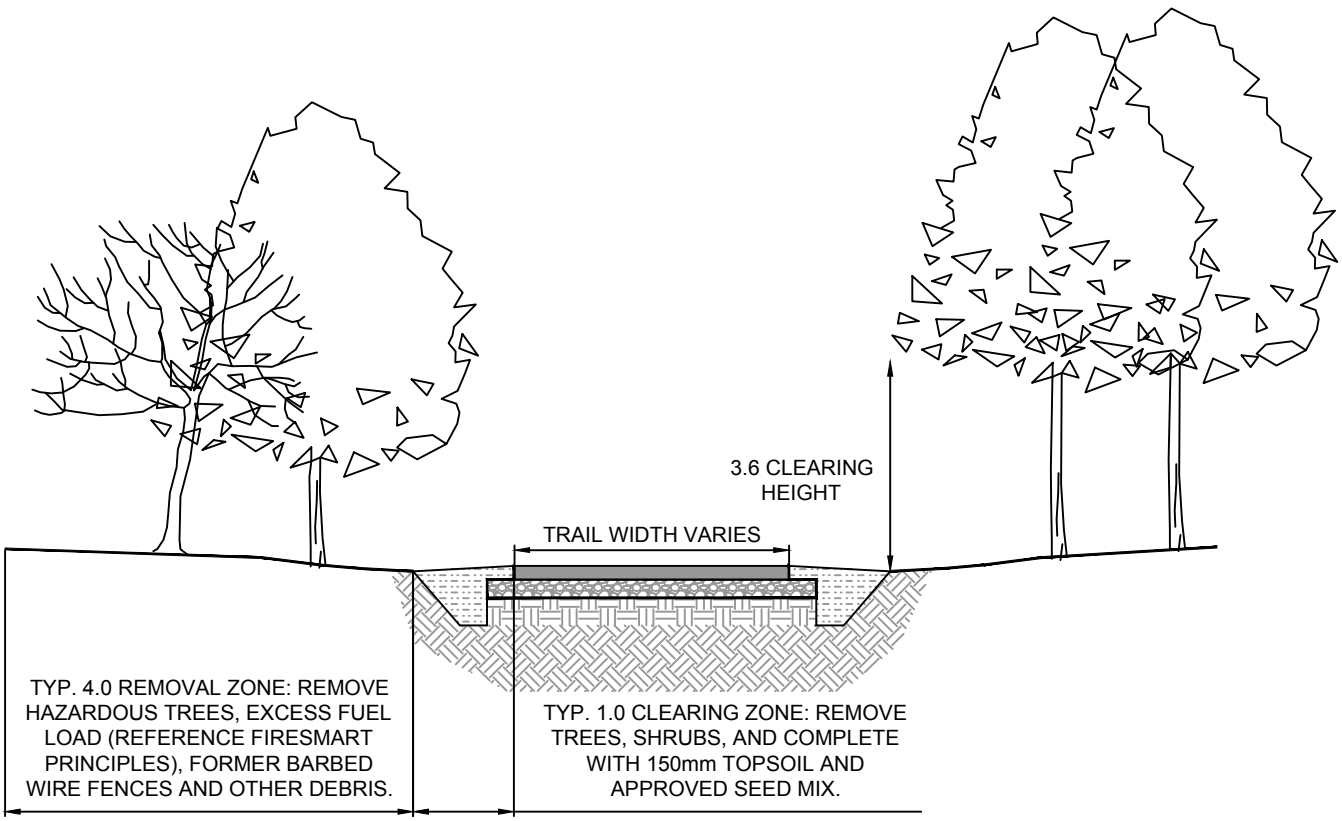
DATE	DETAILS	DRAWN
09-SEP-2019	REVISED DRAWING AND NOTES	P. TOMKO
11-MAR-2019	REVISED DRAWING NUMBER, REVISED TEXT	S. ENGLEDER
14-JUN-2018	REVISED TEXT	S. ENGLEDER
04-APR-2016	GRAVEL SIDESLOPE & DIMENSIONS	D. LEGROW
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

GRAVEL TRAIL

APPROVED: K. COLE, P.(ENG.)
CHECKED: S. JOHNSON, P.L.(ENG.)
DATE: 15-JUL-2002 | SCALE: N.T.S. | DRAWN: A. MCLENAGHAN

DRAWING NUMBER
61406
Transportation Planning & Engineering Department



NOTES:
1. CLEARING AND REMOVAL ZONES TO BE APPLIED TO BOTH SIDES OF TRAIL.
2. REFER TO DRAWING 61401 FOR ASPHALT TRAIL CONSTRUCTION, DRAWING 61406 FOR GRAVEL TRAIL CONSTRUCTION, AND DRAWING 61405 FOR ROOT BARRIER INSTALLATION.
3. TRAIL WIDTH TO BE INCREASED AT BLIND INTERSECTIONS AND CORNERS.
4. ALL DIMENSIONS ARE IN METRES (m), UNLESS OTHERWISE NOTED.

REVISIONS

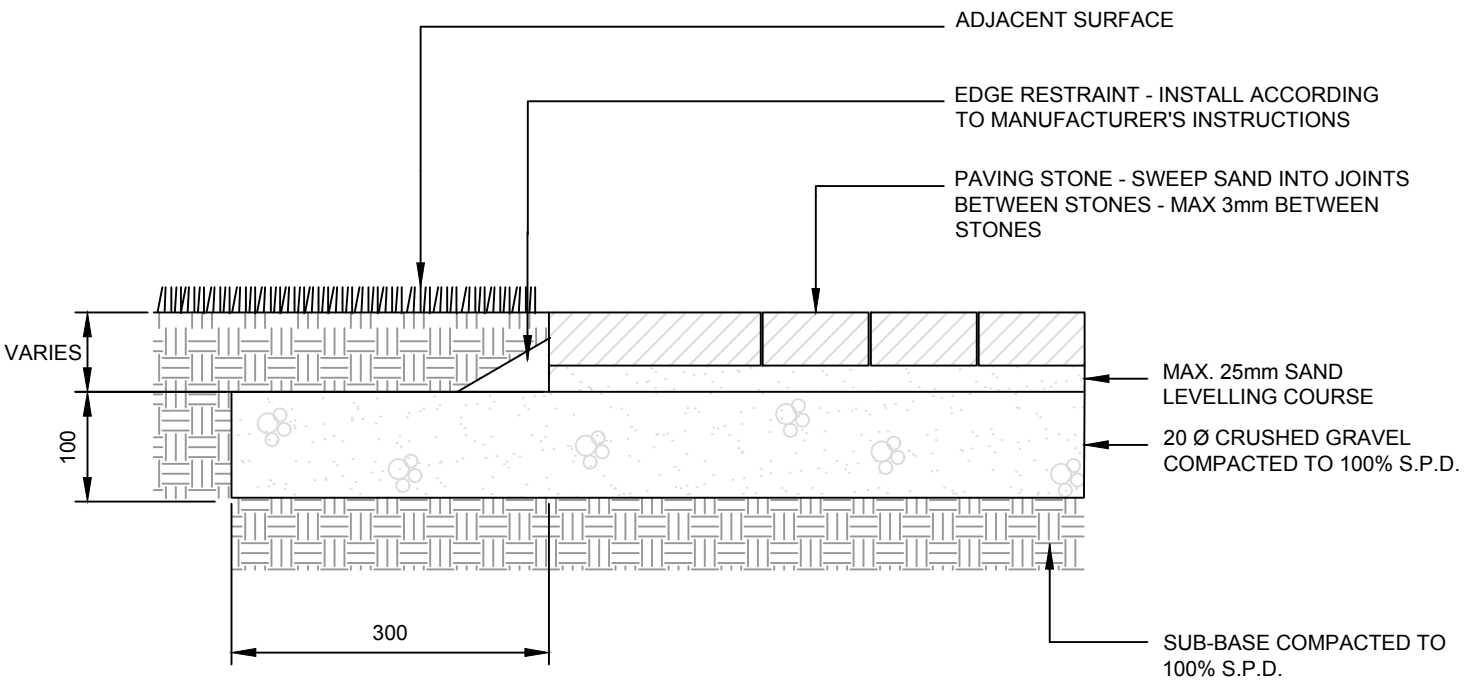
DATE	DETAILS	DRAWN
12-MAR-2019	REVISED TEXT AND NOTES	J. ORR
07-MAY-2018	DIMENSION REVISIONS	S. ENGLEDER
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
09-MAR-2005	DETAIL ADDED TO OSDS	L. LAING

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

MATURE TREE STAND CLEARING AND REMOVAL ZONE

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 15-JUL-2002 | SCALE: N.T.S. | DRAWN: A. MCLENAGHAN

DRAWING NUMBER
61407
Planning & Development Services Department



NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
12-MAR-2019	REVISED DRAWING NUMBER, REVISED DIMENSIONS	S. ENGLEDER
07-MAY-2018	REVISED DIMENSIONS, 100% COMPACTION	S. ENGLEDER
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
10-MAR-2006	CHANGED CRUSHED GRAVEL DIMENSION	X

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

PAVING STONE

APPROVED: K. COLE, P.(ENG).

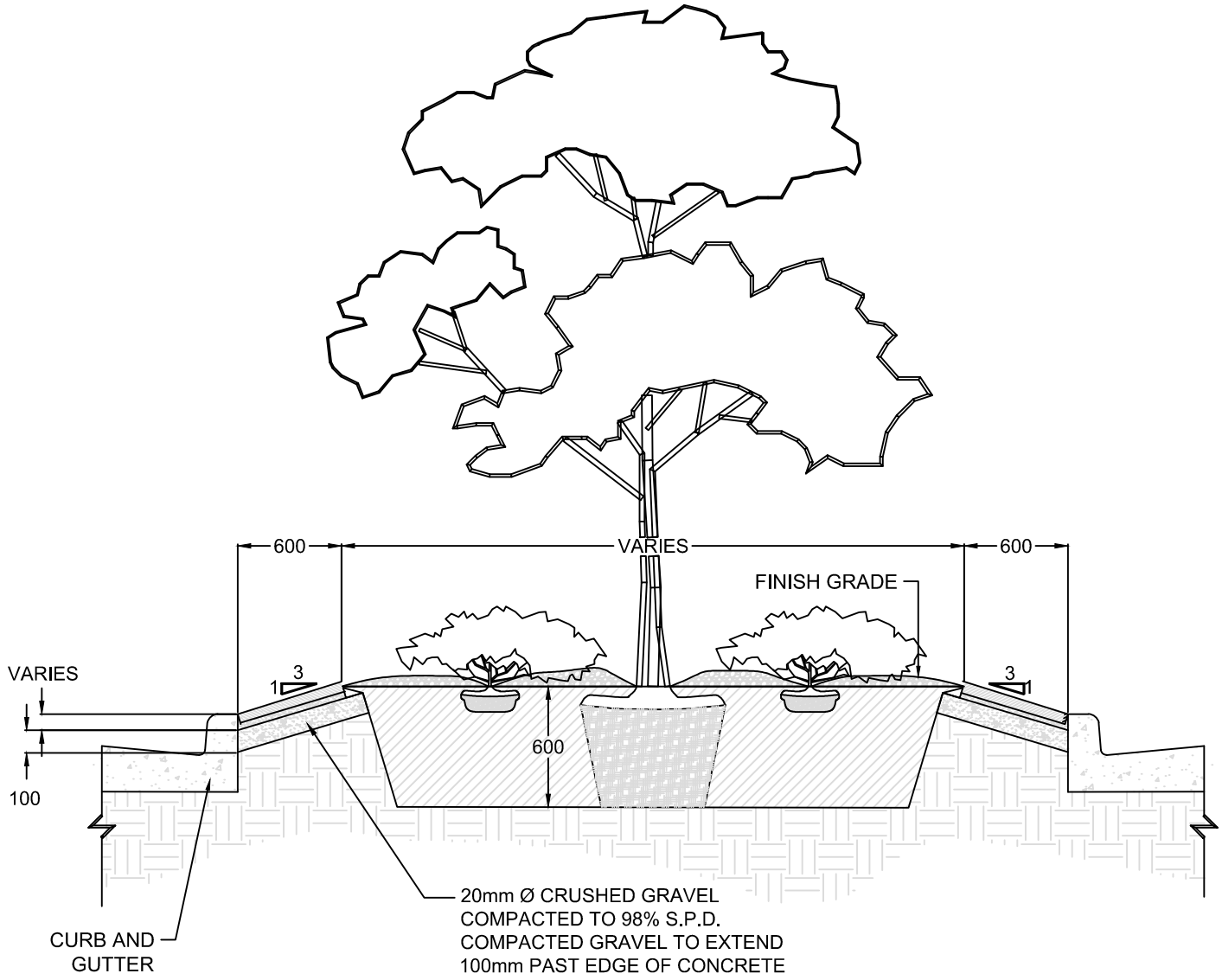
CHECKED: S. JOHNSON P.L.(ENG.)

DATE: 23-JUL-2002 | SCALE: N.T.S. | DRAWN: A. MCLENAGHAN

DRAWING NUMBER

61408

Transportation Planning & Engineering Department



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. REFER TO DRAWINGS 61001 AND 61101 FOR PLANTING DETAILS.

REVISIONS

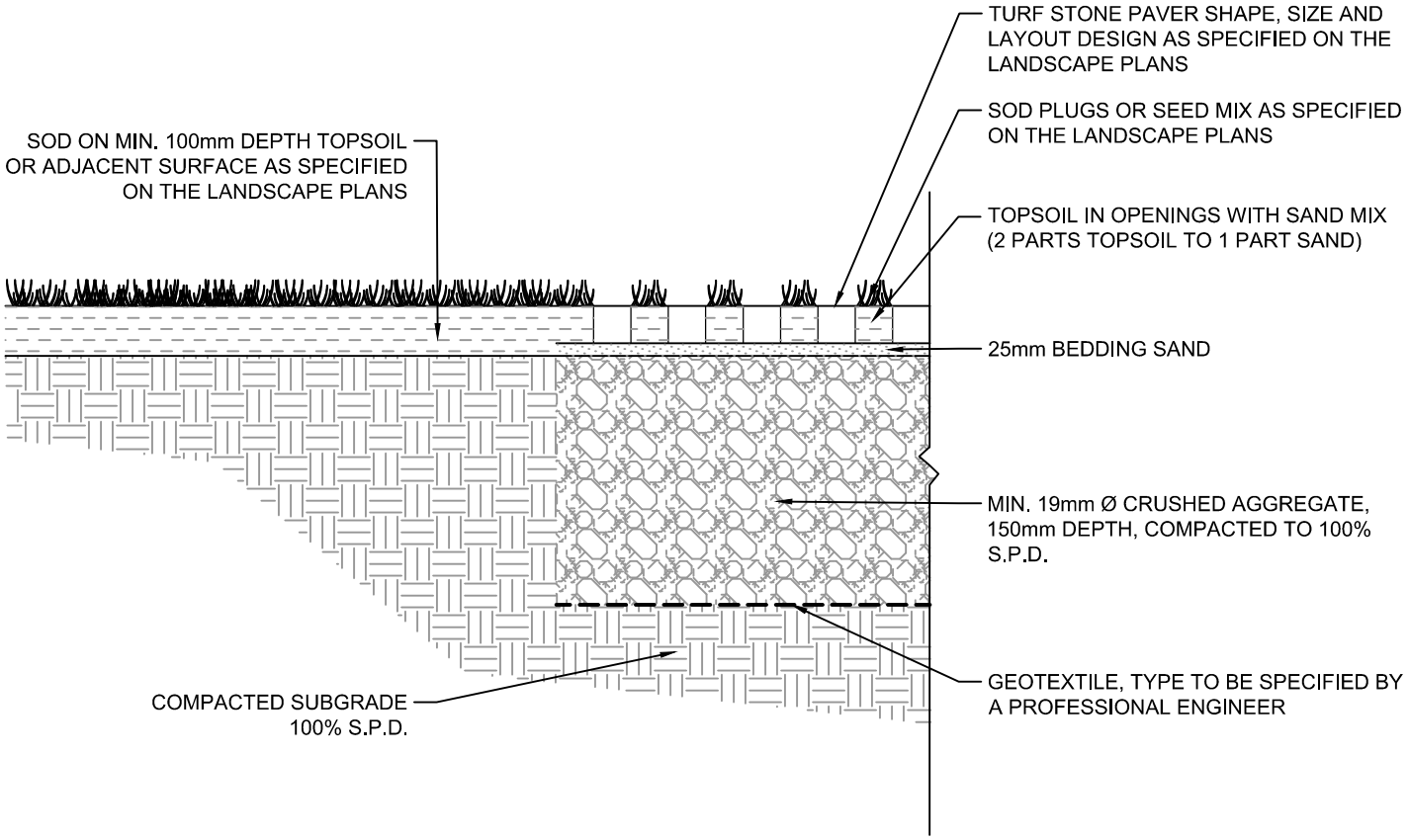
DATE	DETAILS	DRAWN
12-MAR-2019	REVISED TEXT AND NOTES	J. ORR
29-AUG-2018	REVISED TEXT	S. ENGLEDER
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
30-JAN-2008	DETAIL ADDED TO THE OSDS	D. BUSHORE

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

LANDSCAPED MEDIAN

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 24-MAY-2007 SCALE: N.T.S. DRAWN: D. BUSHORE

DRAWING NUMBER
61409
Planning & Development Services Department



NOTES:
1. WHERE VEHICULAR ACCESS IS EXPECTED, AGGREGATE DEPTH TO BE SPECIFIED BY A PROFESSIONAL ENGINEER.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS		
DATE	DETAILS	DRAWN
12-MAR-2019	REVISED DRAWING NUMBER	J. ORR
19-SEP-2018	NEW DETAIL	J.FINNAMORE

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

TURF STONE

APPROVED: J. BUCHKO, AALA, CSLA

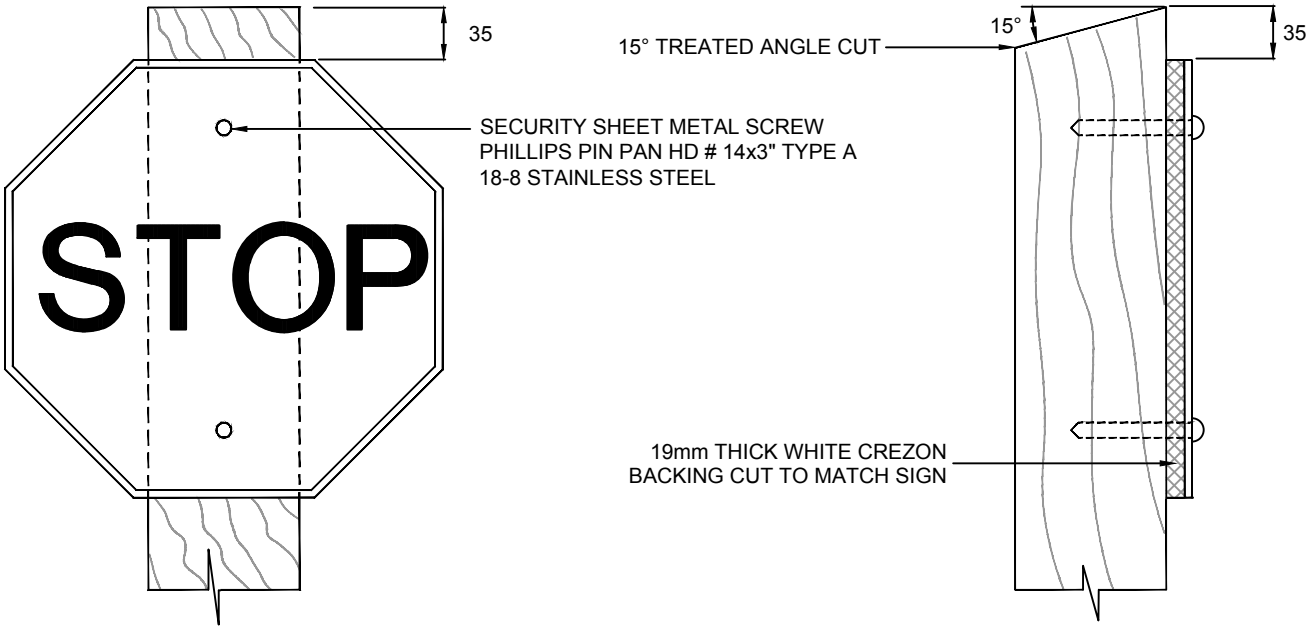
CHECKED: C. HUMBLE, LAT

DATE: 19-SEP-2018 | SCALE: N.T.S. | DRAWN: J.FINNAMORE

DRAWING NUMBER

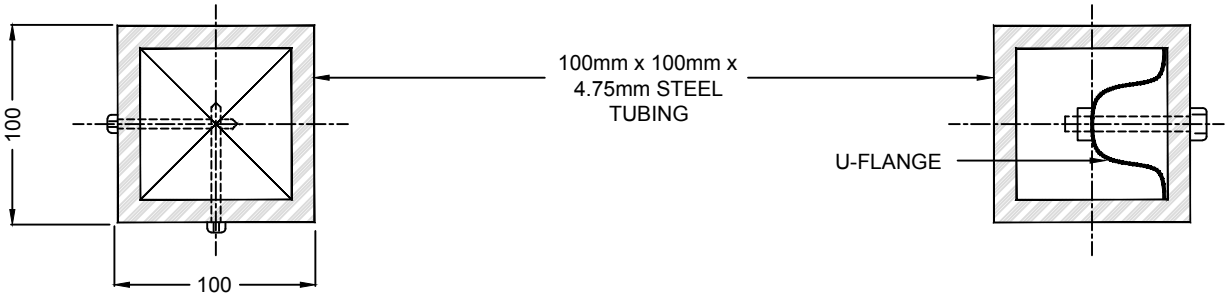
61410

Planning & Development Services Department



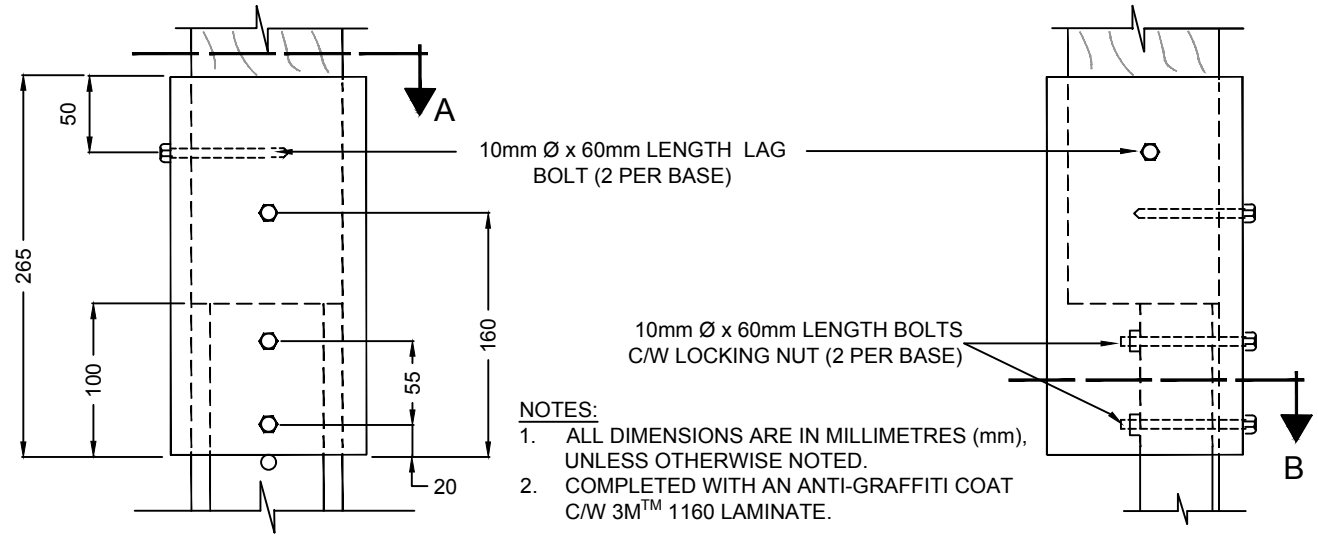
SIGN FACE

SIDE VIEW



SECTION A

SECTION B



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. COMPLETED WITH AN ANTI-GRAFFITI COAT C/W 3M™ 1160 LAMINATE.

SIGN BASE FRONT VIEW

SIGN BASE SIDE VIEW

REVISIONS

DATE	DETAILS	DRAWN
14-MAR-2019	REVISED NOTES	J. ORR
09-APR-2018	REVISED DRAWING	M. MOTIUK
23-OCT-2012	REVISED DRAWING TITLE	J. EGGEN
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

TYPICAL SIGNBOARD AND HARDWARE

APPROVED: J. BUCHKO, AALA, CSLA

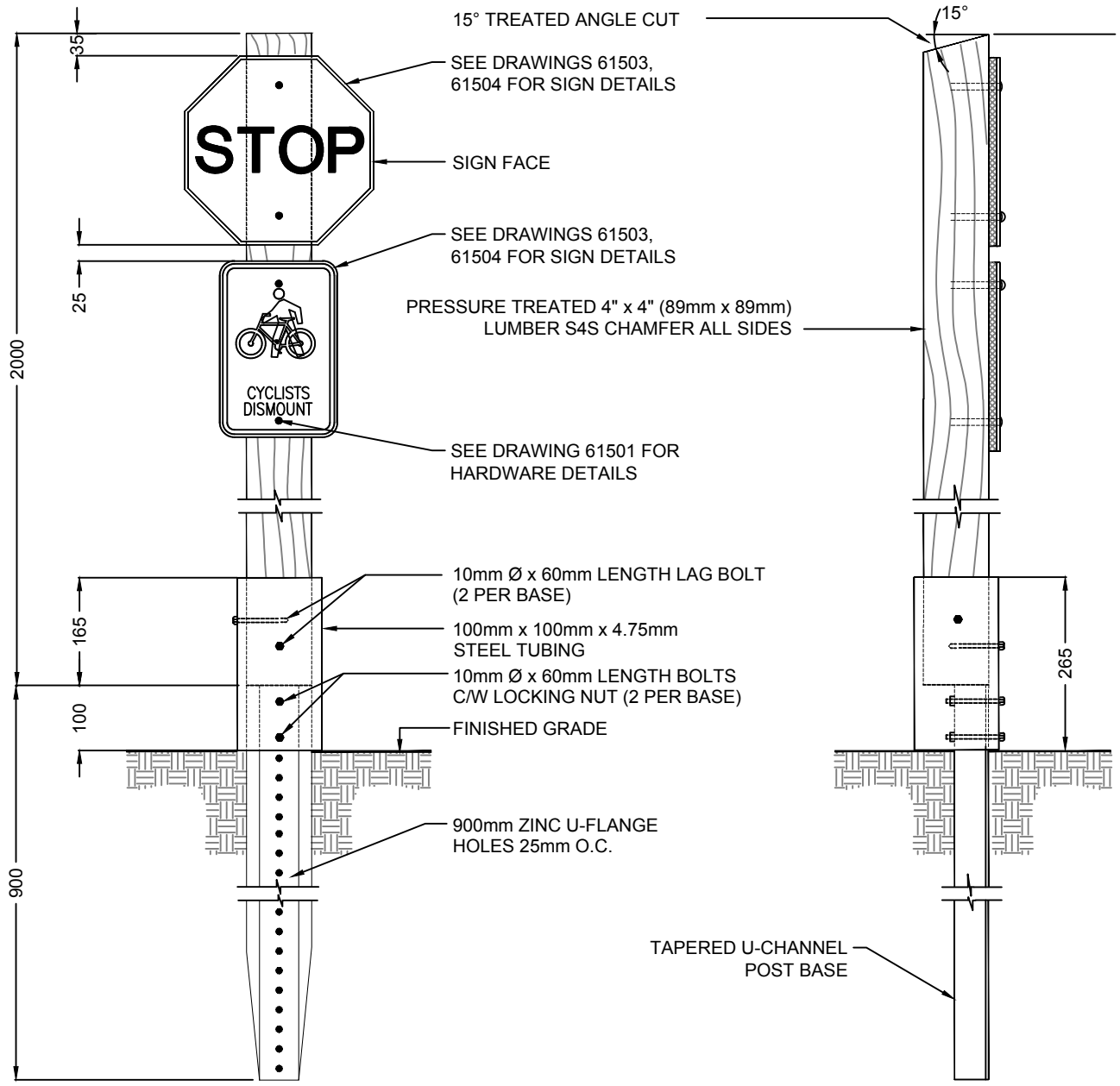
CHECKED: C. HUMBLE, LAT

DATE: 13-APR-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER

61501

Planning & Development Services Department



FRONT VIEW

SIDE VIEW

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. INSTALL SIGN BETWEEN 1.0m AND 1.5m FROM EDGE OF TRAIL OR SIDEWALK.
3. ALL HARDWARE TO BE ZINC PLATED. BASE COLOUR TO BE TREMCLAD BROWN.
4. COMPLETED WITH AN ANTI-GRAFFITI COAT C/W 3M™ 1160 LAMINATE.

REVISIONS		
DATE	DETAILS	DRAWN
14-MAR-2019	REVISED NOTES	J. ORR
09-APR-2018	REVISED DRAWING	M. MOTIUK
23-OCT-2012	REVISED DRAWING TITLE	J. EGGEN
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

SIGN INSTALLATION ON WOODEN POST

APPROVED: S. CSASZAR, P.ENG.

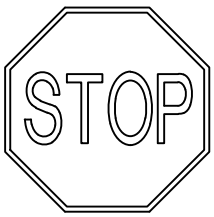
CHECKED: C. HUMBLE, LAT

DATE: 14-APR-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER

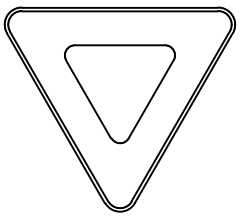
61502

Planning & Development Services Department

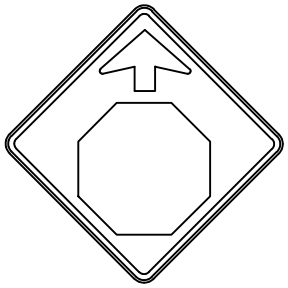


T-1
300mm x 300mm
W/R - DIAMOND GRADE REFLECTIVE SHEET ALUMINIUM - 2mm/.081 9.5mm HOLES. LARGE CROPPED CORNERS

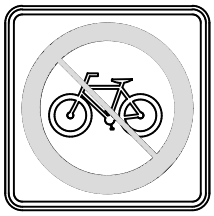
T-2
300mm x 300mm
B/Y - DIAMOND GRADE REFLECTIVE SHEET ALUMINIUM - 2mm/.081 9.5mm HOLES. CENTERED, CROPPED CORNERS



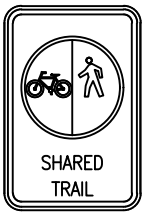
T-3
300mm x 300mm x 300mm
W/R - DIAMOND GRADE REFLECTIVE SHEET ALUMINIUM - 2mm/.081 TRIANGLE - 9.5mm HOLES. CENTERED - LARGE CROPPED CORNERS



T-4
300mm x 300mm
R/B/Y - DIAMOND GRADE SHEET REFLECTIVE ALUMINIUM - 2mm/.081 Ø 9.5mm HOLES. CENTERED - CROPPED

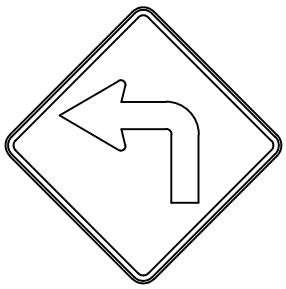


T-5
300mm x 300mm
R/B/Y - DIAMOND GRADE REFLECTIVE SHEET ALUMINIUM - 2mm/.081 RECT - 9.5mm CENTERED CROPPED CORNER

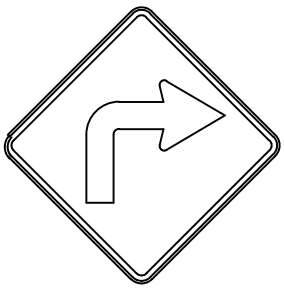


T-6
200mm x 300mm
G/B/W - DIAMOND GRADE REFLECTIVE SHEET ALUMINIUM - 2mm/.081 RECT - 9.5mm CENTERED CROPPED CORNER

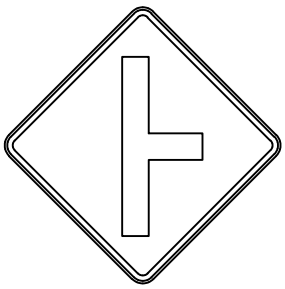
T-7
200mm x 300mm
W/BR - DIAMOND GRADE REFLECTIVE SHEET ALUMINIUM - 2mm/.081 RECT - 9.5mm CENTERED CROPPED CORNER



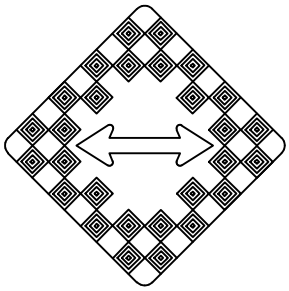
T-8L
450mm x 450mm
B/Y - DIAMOND GRADE REFLECTIVE SHEET ALUMINIUM - 2mm/.081 Ø 9.5mm ON CENTER, LARGE CROP



T-8R
450mm x 450mm
B/Y - DIAMOND GRADE REFLECTIVE SHEET ALUMINIUM - 2mm/.081 Ø 9.5mm ON CENTER, LARGE CROP



T-9
450mm x 450mm
B/Y - DIAMOND GRADE REFLECTIVE SHEET ALUMINIUM - 2mm/.081 Ø 9.5mm CENTERED, LARGE CROP



T-10
450mm x 450mm
B/Y - DIAMOND GRADE REFLECTIVE SHEET ALUMINIUM - 2mm/.081 Ø - 9.5mm CENTERED, LARGE CROP

NOTES:
1. REFERENCE DRAWINGS 61501 AND 61502 FOR SIGN INSTALLATION.
2. 7.5mm TO MATCH SIGN SIZE.
3. HOLES TO MATCH.
4. WHITE / PRIMER - SIDES AND EDGES.
5. ALL SIGNS TO BE COATED WITH AN ANTI-GRAFFITI C/W 3M™ 1160 LAMINATE FINISH.
6. FONT TO BE WHITE HELVETICA.

REVISIONS

DATE	DETAILS	DRAWN
19/03/12	REVISED TEXT AND NOTES	J. ORR
12/10/22	REVISED DRAWING TITLE & TRAIL SIGN NUMBERS	J. EGGEN
11/05/03	REVISED DRAWING NUMBERS	J. ORR
11/02/10	REVISED DRAWING NUMBERS	O. BUTT
05/10/26	ADDED NOTES	M. FORGUES

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

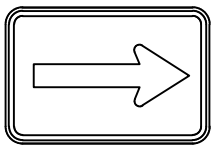
TRAIL SIGNS OPTION 1 OF 2

APPROVED: J. BUCHKO, AALA, CSLA

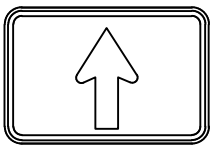
CHECKED: C. HUMBLE, LAT

DATE: 95/05/31 SCALE: N.T.S. DRAWN: D. LECKIE

DRAWING NUMBER
61503
Planning & Development Services Department

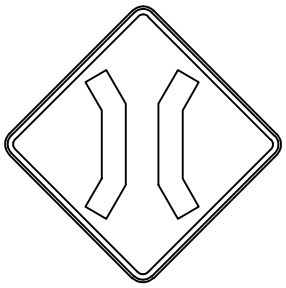


T-12
450mm x 350mm
W/BR - DIAMOND GRADE
REFLECTIVE SHEET
ALUMINIUM - 2mm/.081
RECT - 9.5mm CENTERED
LARGE CROP



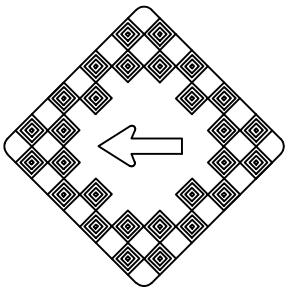
T-13
450mm x 350mm
W/BR - DIAMOND GRADE
REFLECTIVE SHEET
ALUMINIUM - 2mm/.081
RECT - 9.5mm CENTERED
LARGE CROP

T-14
450mm x450mm
B/Y DIAMOND GRADE
REFLECTIVE SHEET.
ALUMINUM - 200/0.081 Ø
9.5 ON CENTRE, LARGE
CROP.



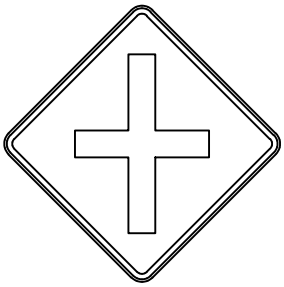
T-15
450mm x 450mm
B/Y DIAMOND GRADE
REFLECTIVE SHEET.
ALUMINUM - 200/0.081 Ø 9.5
ON CENTRE, LARGE CROP.

T-16
450mm x 350mm
B/Y DIAMOND GRADE
REFLECTIVE SHEET.
ALUMINUM - 200/0.081
Ø 9.5 ON CENTRE,
LARGE CROP.

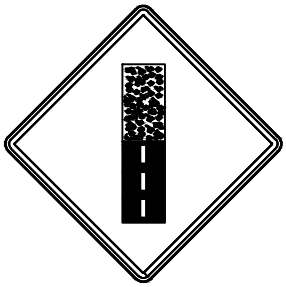


T-17
450mm x 450mm
B/Y DIAMOND GRADE
REFLECTIVE SHEET.
ALUMINUM - 200/0.081 Ø 9.5
ON CENTRE, LARGE CROP.

T-18
450mm x 450mm
B/Y DIAMOND GRADE
REFLECTIVE SHEET.
ALUMINUM - 200/0.081 Ø 9.5
ON CENTRE, LARGE CROP.



T-19
450mm x 450mm
B/Y DIAMOND GRADE
REFLECTIVE SHEET.
ALUMINUM - 200/0.081 Ø 9.5
ON CENTRE, LARGE CROP.



T-20
450mm x 450mm
B/Y DIAMOND GRADE
REFLECTIVE SHEET.
ALUMINUM - 200/0.081 Ø 9.5
ON CENTRE, LARGE CROP.

NOTES:
1. REFER TO DRAWINGS 61501 AND 61502 FOR SIGN INSTALLATION.
2. 7.5mm TO MATCH SIGN SIZE.
3. HOLES TO MATCH.
4. WHITE / PRIMER - SIDES AND EDGES.
5. ALL SIGNS TO BE COATED WITH AN ANTI-GRAFFITI 3M^{TM} 1160 LAMINATE FINISH.
6. FONT TO BE WHITE HELVETICA.

REVISIONS

DATE	DETAILS	DRAWN
19/03/12	REVISED NOTES AND TEXT	J. ORR
18/04/09	REVISED DRAWING	M. MOTIUK
12/10/22	REVISED DRAWING TITLE & TRAIL SIGN NUMBERS	J. EGGEN
11/05/03	REVISED DRAWING NUMBERS	J. ORR
11/02/10	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

TRAIL SIGNS OPTION 2 OF 2

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 95/05/31 SCALE: N.T.S. DRAWN: D. LECKIE

DRAWING NUMBER
61504
Planning & Development Services Department

300mm x 350mm
3M™ DIAMOND GRADE™ DG³ REFLECTIVE SHEETING SERIES 4000

300mm x 350mm
3M™ DIAMOND GRADE™ DG³ REFLECTIVE SHEETING SERIES 4000

300mm x 350mm
3M™ DIAMOND GRADE™ DG³ REFLECTIVE SHEETING SERIES 4000

NOTES:
1. WHITE/PRIMER - SIDES AND EDGES.
2. ALL SIGNS TO BE COATED WITH AN ANTI-GRAFFITI 3M™ 1160 LAMINATE FINISH.
3. REFERENCE DRAWINGS 61501 AND 61502 FOR SIGN INSTALLATION.

REVISIONS

DATE	DETAILS	DRAWN
12-MAR-2019	REVISED DRAWING NUMBERS, SIGNS	S. ENGLEDER
28-AUG-2018	REVISED TEXT AND ADDED NEW AGE SIGN	S. ENGLEDER
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
30-JAN-2008	ADJUSTED AGES ON SIGNS	M. FORGUES

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

CHILDREN'S PLAYGROUND SIGNS

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 20-DEC-2001 | SCALE: N.T.S. | DRAWN: A. MCLENAGHAN

DRAWING NUMBER
61505
Planning & Development Services Department

300mm x 350mm
3M™ DIAMOND GRADE™ DG³ REFLECTIVE
SHEETING SERIES 4000

NOTES:
1. SIGNS TO INCLUDE DATE OF INSTALLATION.
2. ALL SIGNS TO BE COATED WITH ANTI-GRAFFITI 3M™ 1160 LAMINATE FINISH.
3. REFERENCE DRAWINGS 61501 AND 61502 FOR SIGN INSTALLATION.
4. ADVISORY INFORMATION TO BE MODIFIED DEPENDING ON SPECIFIC STRUCTURE RESTRICTIONS.

REVISIONS

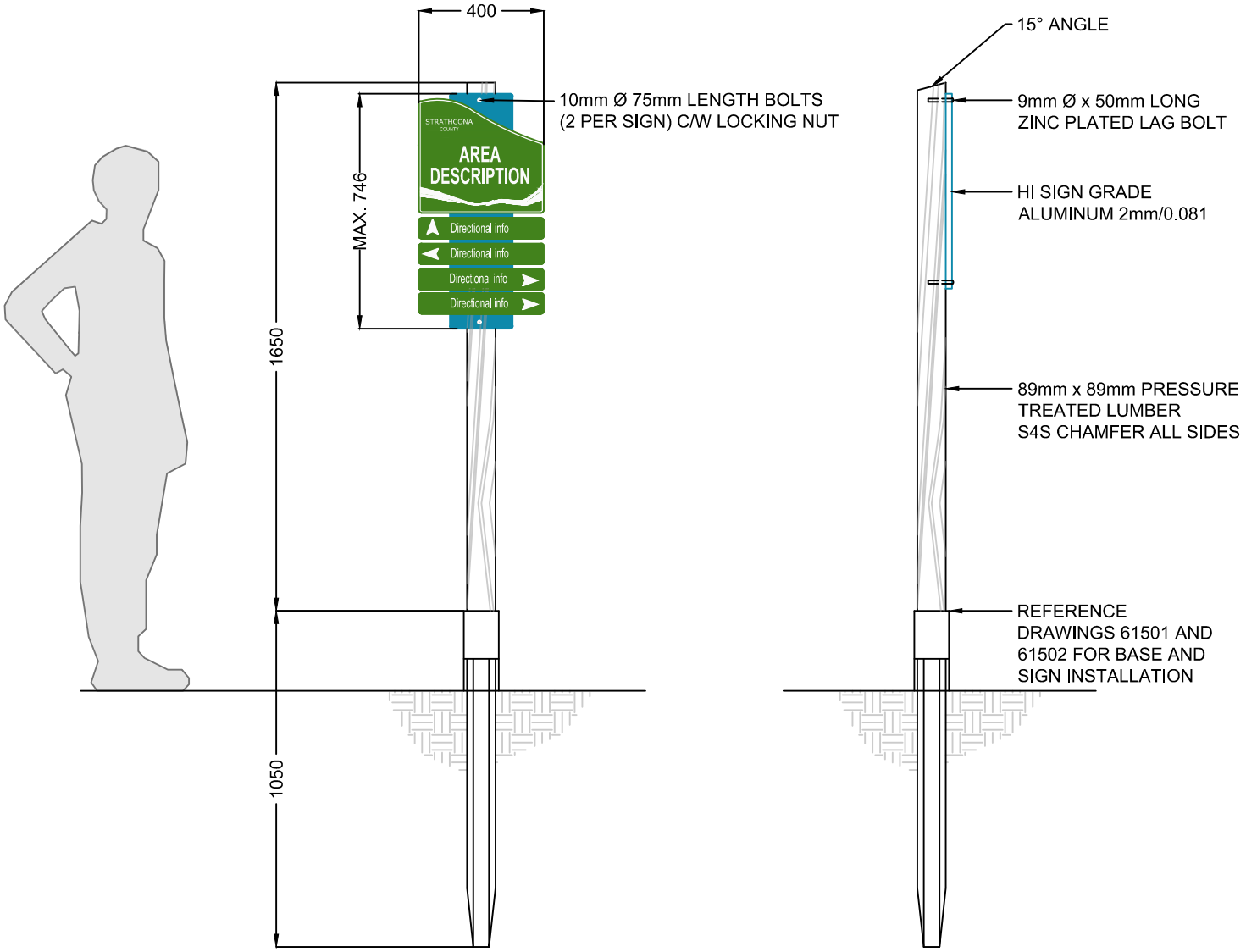
DATE	DETAILS	DRAWN
17-JUL-2019	UPDATED DRAWING AS REQUESTED BY PDS	P. TOMKO
12-MAR-2019	REVISED DRAWING NUMBER, SIGN	S. ENGLEDER
31-AUG-2018	NEW DETAIL	S. ENGLEDER

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

FITNESS EQUIPMENT SIGN

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 31-AUG-2018 | SCALE: N.T.S. | DRAWN: S. ENGLEDER

DRAWING NUMBER
61506
Planning & Development Services Department



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. REFERENCE 61508 FOR LAYOUT AND DIMENSIONS.

REVISIONS		
DATE	DETAILS	DRAWN
09-SEP-2019	REVISED DRAWING TITLE AND NOTES	P. TOMKO
11-MAR-2019	REVISED DETAIL	M. MOTIUK
19-SEP-2018	NEW DETAIL	J.FINNAMORE

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

WAYFINDING SIGN

APPROVED: J. BUCHKO, AALA, CSLA

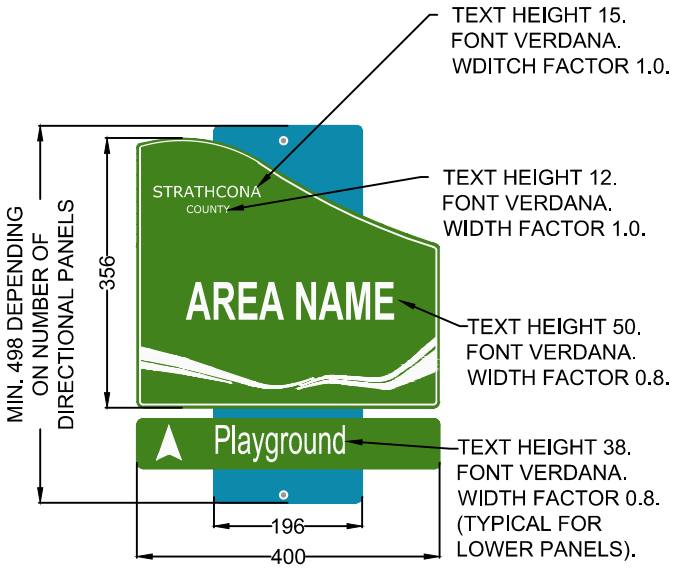
CHECKED: C. HUMBLE, LAT

DATE: 19-SEP-2018 | SCALE: N.T.S. | DRAWN: J.FINNAMORE

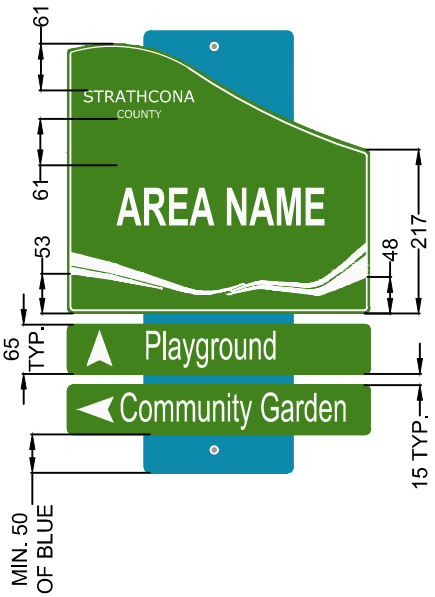
DRAWING NUMBER

61507

Planning & Development Services Department

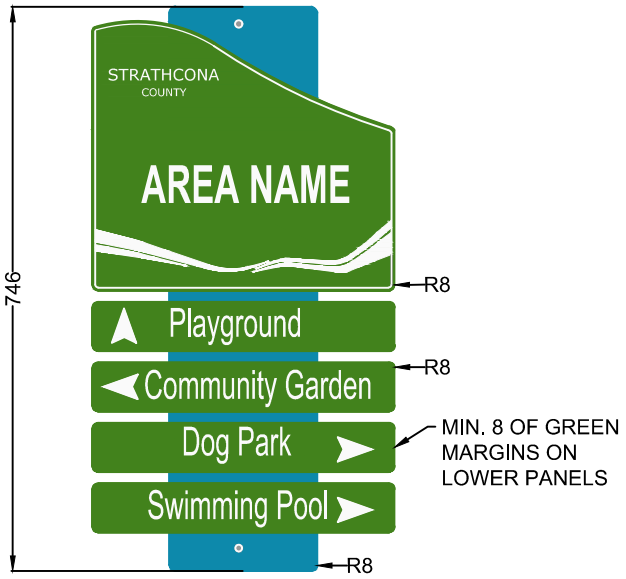


ONE LOWER PANEL



TWO LOWER PANELS

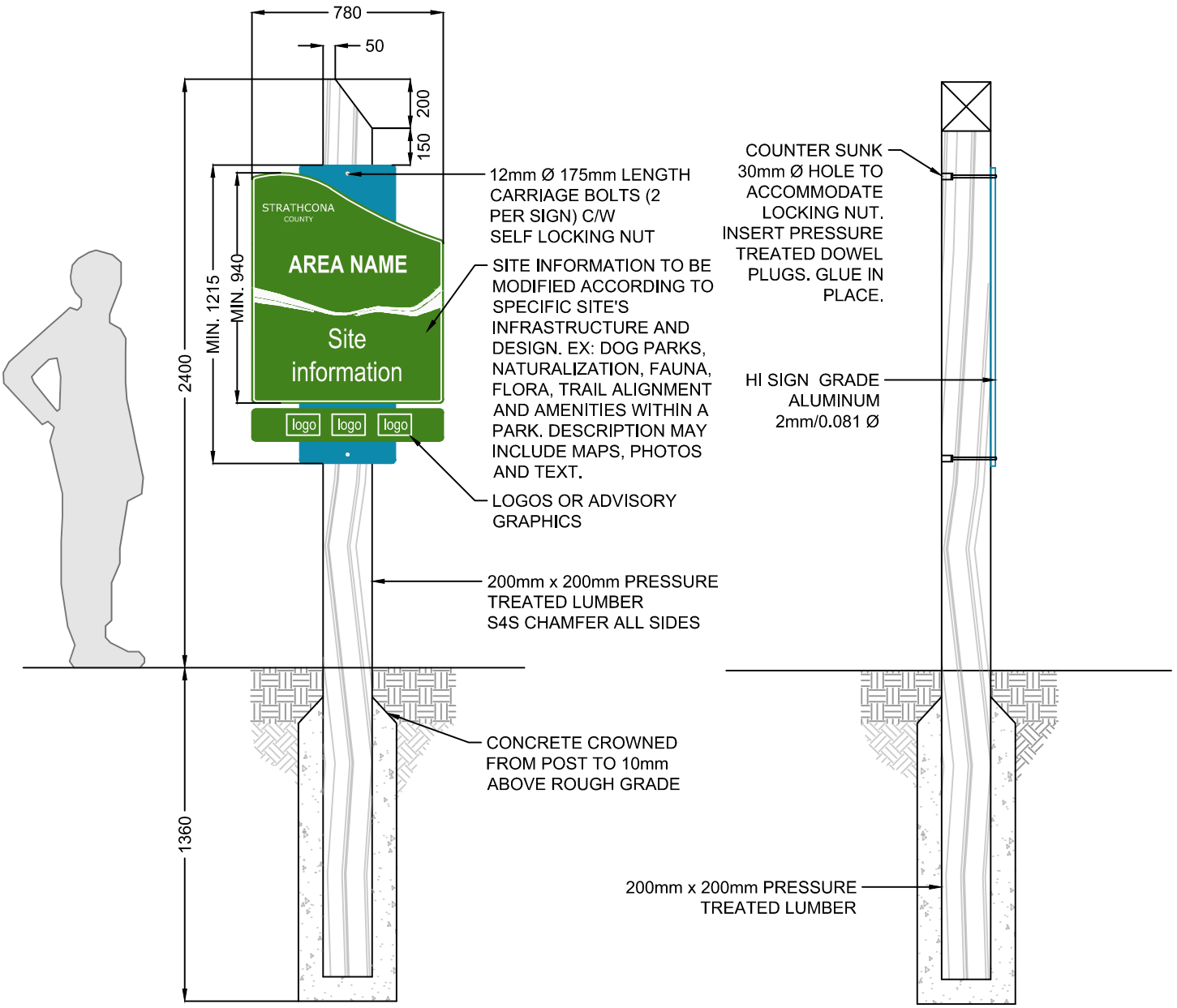
THREE LOWER PANELS



FOUR LOWER PANELS

NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS			STRATHCONA COUNTY	2001 SHERWOOD DRIVE, SHERWOOD PARK ALBERTA, T8A 3W7, CANADA © 2019	
DATE	DETAILS	DRAWN	WAYFINDING SIGN - LAYOUT AND DIMENSIONS		
			APPROVED: J. BUCHKO, AALA, CSLA		DRAWING NUMBER
			CHECKED: C. HUMBLE, LAT		61508
10-SEP-2019	NEW DETAIL	P. TOMKO	DATE: 10-SEP-2019	SCALE: N.T.S. DRAWN: P. TOMKO	Planning & Development Services Department



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. REFERENCE 61510 FOR CONCEPTUAL LAYOUT.

REVISIONS		
DATE	DETAILS	DRAWN
09-SEP-2019	REVISED DRAWING TITLE, NOTES AND DETAIL	P. TOMKO
11-MAR-2019	UPDATED DETAIL	M. MOTIUK
19-SEP-2018	NEW DETAIL	J.FINNAMORE

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

MULTI-PURPOSE SIGN

APPROVED: J. BUCHKO, AALA, CSLA

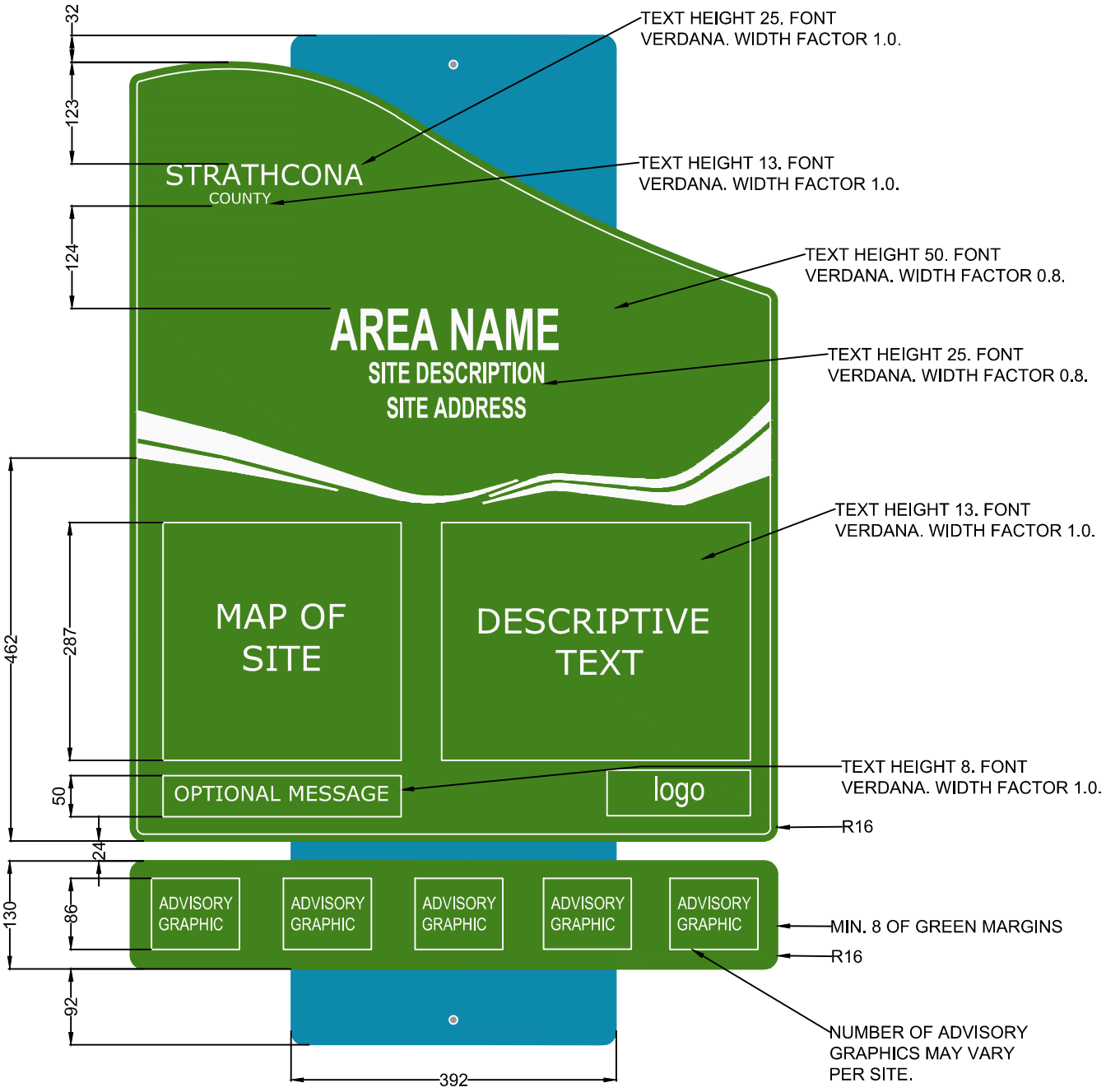
CHECKED: C. HUMBLE, LAT

DATE: 19-SEP-2018 | SCALE: N.T.S. | DRAWN: J.FINNAMORE

DRAWING NUMBER

61509

Planning & Development Services Department



NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. OPTIONAL MESSAGE MAY INCLUDE INFORMATION ABOUT EXPECTED MOWING IN THE AREAS, EX: "THIS AREA IS INTENDED TO BE A NATURALIZED AREA, AND NOT TO BE MOWED. FOR MORE INFORMATION OR TO REPORT A CONCERN, CONTACT US THROUGH STRATHCONA.CA/COUNTYCONNECT"

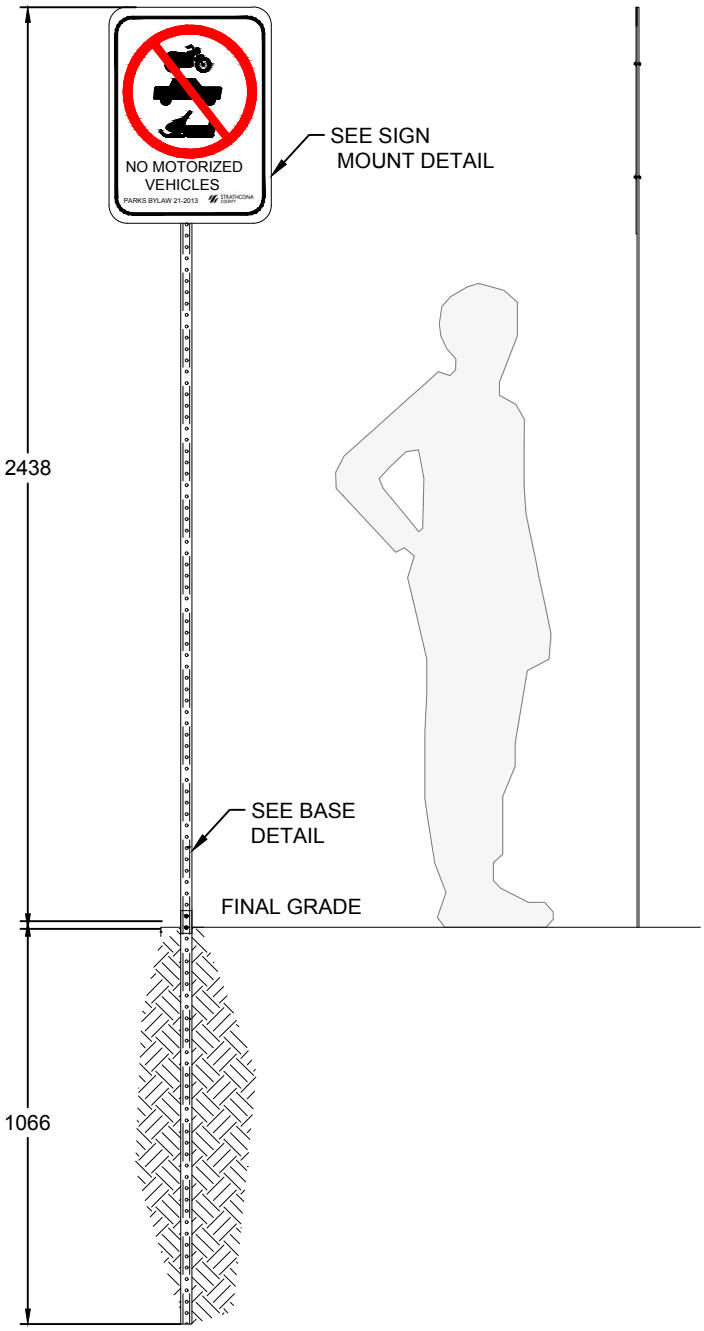
REVISIONS		
DATE	DETAILS	DRAWN
10-SEP-2019	NEW DETAIL	P. TOMKO

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

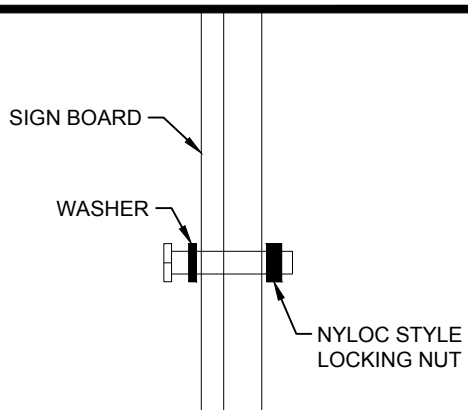
MULTI-PURPOSE SIGN - CONCEPTUAL LAYOUT

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 10-SEP-2019 | SCALE: N.T.S. | DRAWN: P. TOMKO

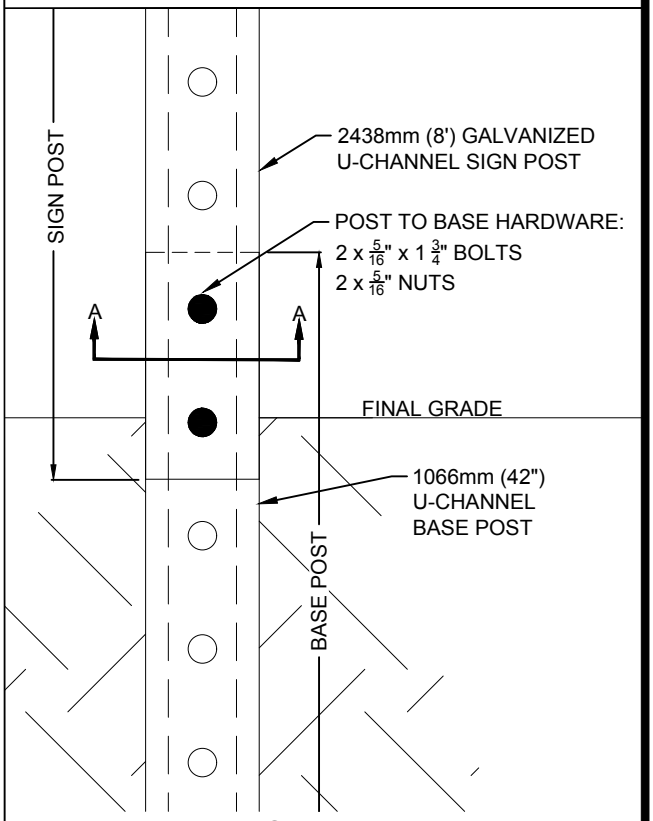
DRAWING NUMBER
61510
Planning & Development Services Department



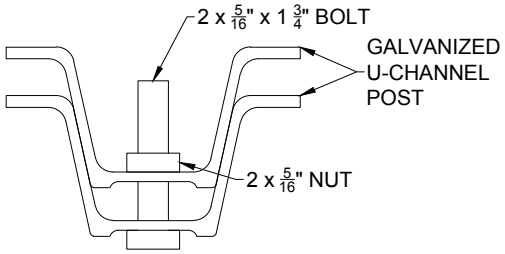
SIGN ELEVATION



SIGN MOUNT DETAIL



BASE DETAIL



SECTION A-A

NOTES:
1. ALL FASTENING HARDWARE MUST HAVE NON-CORROSIVE COATING.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
09-SEP-2019	MODIFIED DRAWING TITLE	P. TOMKO
12-MAR-2019	MODIFIED DETAIL LAYOUT	J. ORR
31-AUG-2018	NEW DETAIL	S. ENGLEDER

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

SIGN INSTALLATION ON U-CHANNEL POST

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 31-AUG-2018 | SCALE: N.T.S. | DRAWN: S. ENGLEDER

DRAWING NUMBER
61511
Planning & Development Services Department

NOTE:
1. SEE DRAWING 61511 FOR U-CHANNEL POST INSTALLATION.

REVISIONS

DATE	DETAILS	DRAWN
13-SEP-2019	REVISED NOTE	P. TOMKO
12-MAR-2019	REVISED DRAWING NUMBER, TEXT	S. ENGLEDER
07-MAY-2018	CHANGED COLOR, ADDED LABEL	S. ENGLEDER
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

NO MOTORIZED VEHICLES SIGN

APPROVED: J. BUCHKO, AALA, CSLA

CHECKED: C. HUMBLE, LAT

DATE: 07-NOV-2005 | SCALE: N.T.S. | DRAWN: M. FORGUES

DRAWING NUMBER

61512

Planning & Development Services Department

FOR YOUR SAFETY

WINTER

KEEP OFF ICE

DANGER UNKNOWN
ICE CONDITIONS

SUMMER

NO WADING, SWIMMING OR MOTORIZED BOATING

THIS IS A STORMWATER MANAGEMENT FACILITY DESIGNED TO HELP CONTROL FLOODING DURING RAINSTORMS. WATER QUALITY CANNOT BE GUARANTEED BECAUSE THE POND COLLECTS STREET RUNOFF. WATER LEVELS CAN SUDDENLY CHANGE WITHOUT NOTICE.

FOR YOUR SAFETY, DIRECT CONTACT WITH THIS WATER IS PROHIBITED.

PARKS BYLAW 21-2013

strathcona.ca

STRATHCONA COUNTY

NOTES:
1. SIGN TO BE 600mm x 900mm - 3M™ DIAMOND GRADE™ OR APPROVED EQUIVALENT.
2. REFER TO DRAWING 61509 FOR INSTALLATION ON U-CHANNEL POST.
3. SIGN TO BE COATED WITH ANTI-GRAFFITI C/W DIAMOND GRADE™ REFLECTIVE SHEETING.

REVISIONS

DATE	DETAILS	DRAWN
12-MAR-2019	REVISED DRAWING NUMBER, TITLE, TEXT	S. ENGLEDER
07-MAY-2018	CHANGED GRAPHICS, TITLE, ADDED NOTES	S. ENGLEDER
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
25-JAN-2010	CHANGED THIN ICE SIGN SIZE	M. FORGUES

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

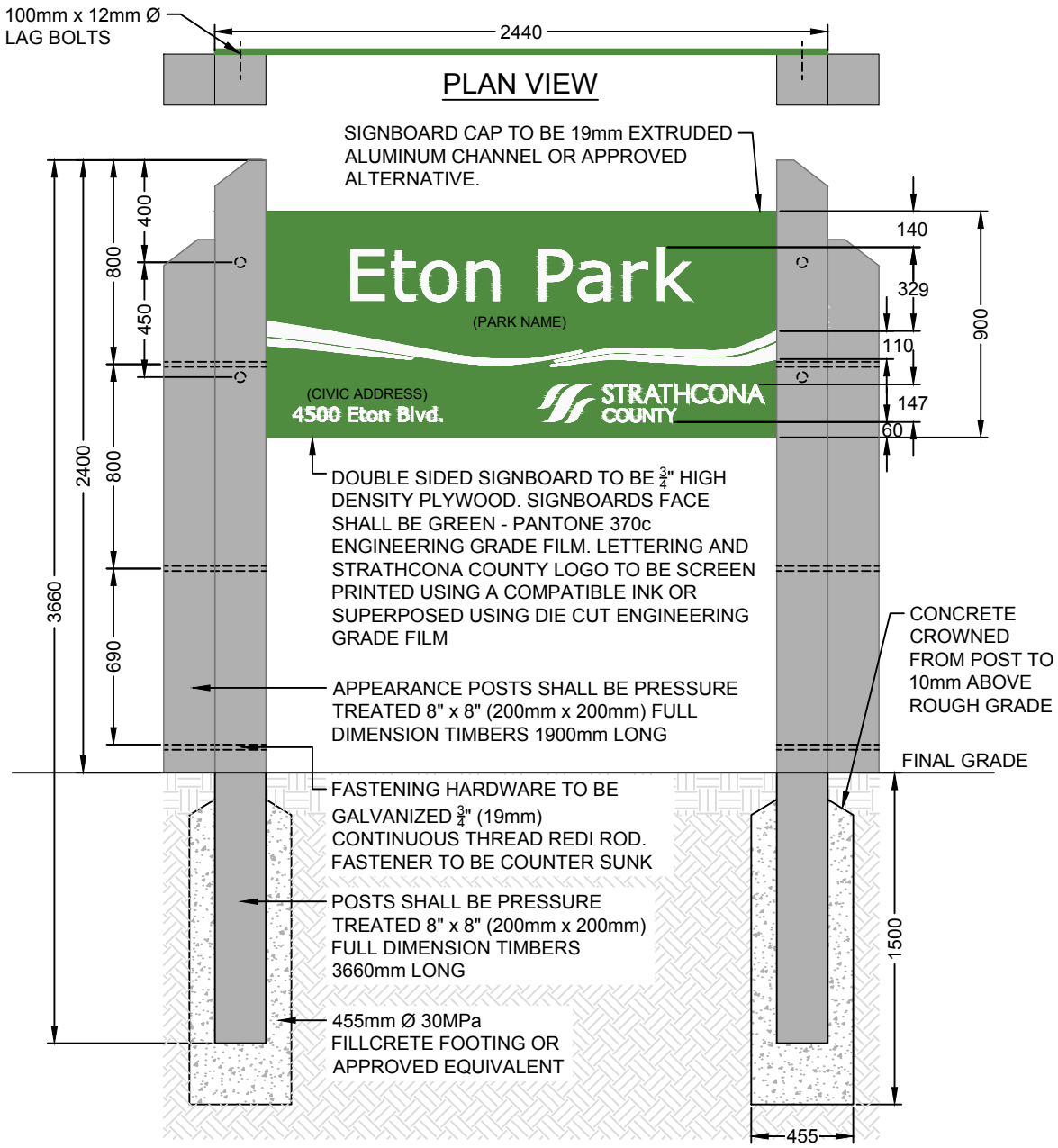
SWMF SAFETY SIGN

APPROVED: J. BUCHKO, AALA, CSLA

CHECKED: C. HUMBLE, LAT

DATE: 20-DEC-2001 SCALE: N.T.S. DRAWN: A. McLENAGHAN

DRAWING NUMBER
61513
Planning & Development Services Department



ELEVATION VIEW

NOTES:

1. FONT: VERANDA - WHITE COLOUR
   FONT SIZE: PARK NAME - 200mm
   CIVIC ADDRESS - 75mm
2. STRATHCONA LOGO - SIGN MUST TO BE COMPLETED WITH AN ANTI-GRAFFITI COAT C/W 3M™ 1160 LAMINATE.
3. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
4. ALL END CUTS AND DRILLED AREAS TO BE FINISHED WITH A WOOD PRESERVATIVE SEALER.

REVISIONS

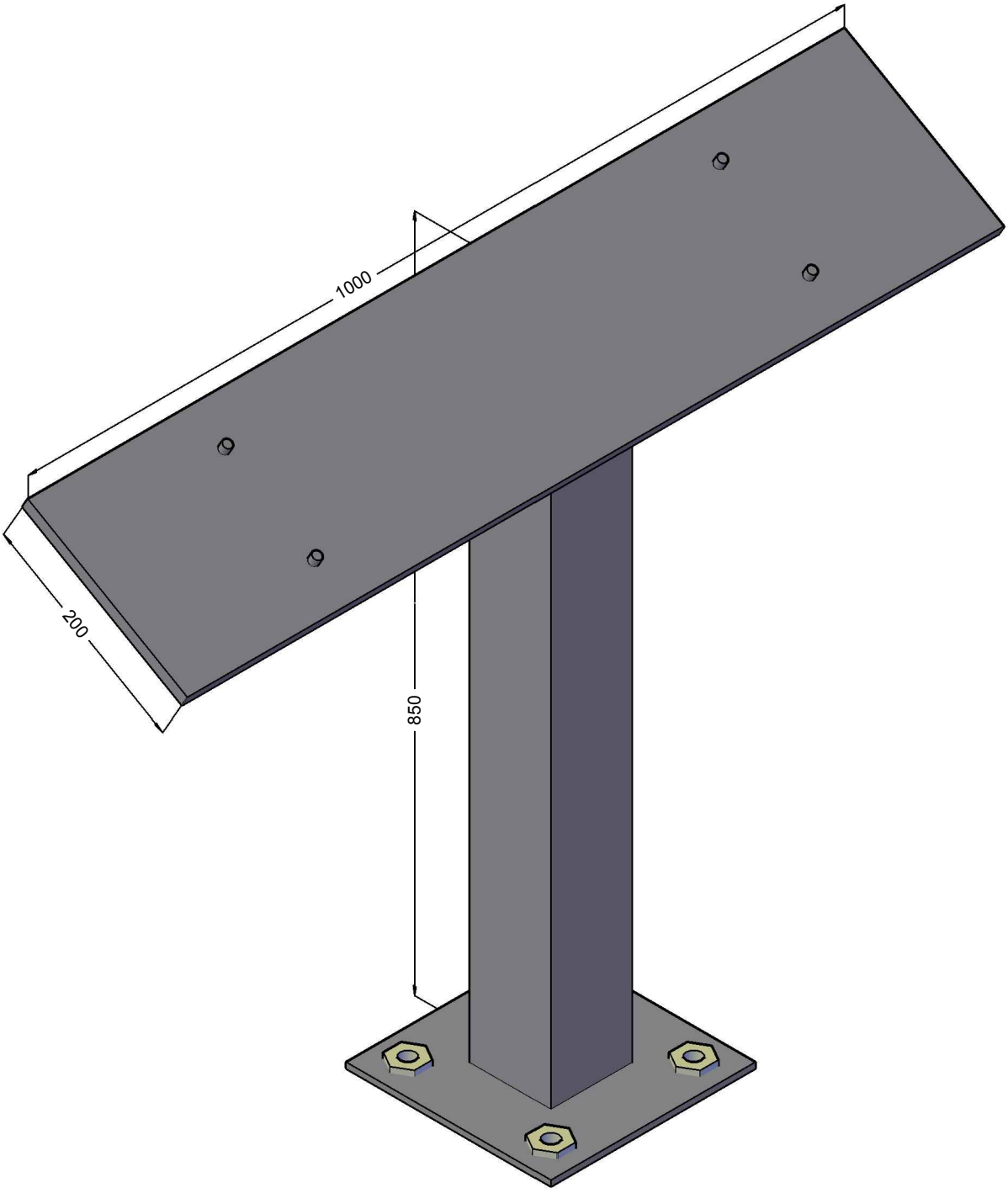
DATE	DETAILS	DRAWN
12-MAR-2019	REVISED DRAWING NUMBER, TEXT	S. ENGLEDER
23-AUG-2018	REVISED NOTES AND TEXT	S. ENGLEDER
22-SEP-2016	UPDATED NOTES	J. ORR
27-JUN-2016	UPDATED SIGN FOR NEW COUNTY BRAND	J. ORR
23-OCT-2012	ADDED CIVIC ADDRESS TO SIGN	J. EGGEN

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

PARK NAME SIGN

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 15-SEP-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER
61514
Planning & Development Services Department



NOTES:

1. POST CAP AND BASE ARE TO BE ALUMINUM POWDER COATED BLACK.
2. SIGN TO BE COATED WITH ANTI-GRAFFITI COATING C/W 3M™ 1160 LAMINATE.
3. SIGN TO BE INSTALLED IN BETWEEN 0.9m AND 1.5m AWAY FROM THE TRAIL OR SIDEWALK.
4. SIGN SHOULD NOT BE INSTALLED WITHIN DRAINAGE SWALES.
5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
6. ASSEMBLY DRAWINGS ARE AVAILABLE UPON REQUEST TO A CONTACT STRATHCONA COUNTY REPRESENTATIVE.
7. SEE DRAWING 61307 FOR MOUNTING OPTIONS.
8. INTERPRETIVE SIGN TO BE 40" x 9" $\frac{1}{2}$" HIGH PRESSURE LAMINATE.

REVISIONS

DATE	DETAILS	DRAWN
11-MAR-2019	REVISED DETAIL	S. ENGLEDER
24-AUG-2018	NEW DETAIL	S. ENGLEDER

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

S.W.M.F. INTERPRETIVE SIGN

APPROVED: J. BUCHKO, AALA, CSLA

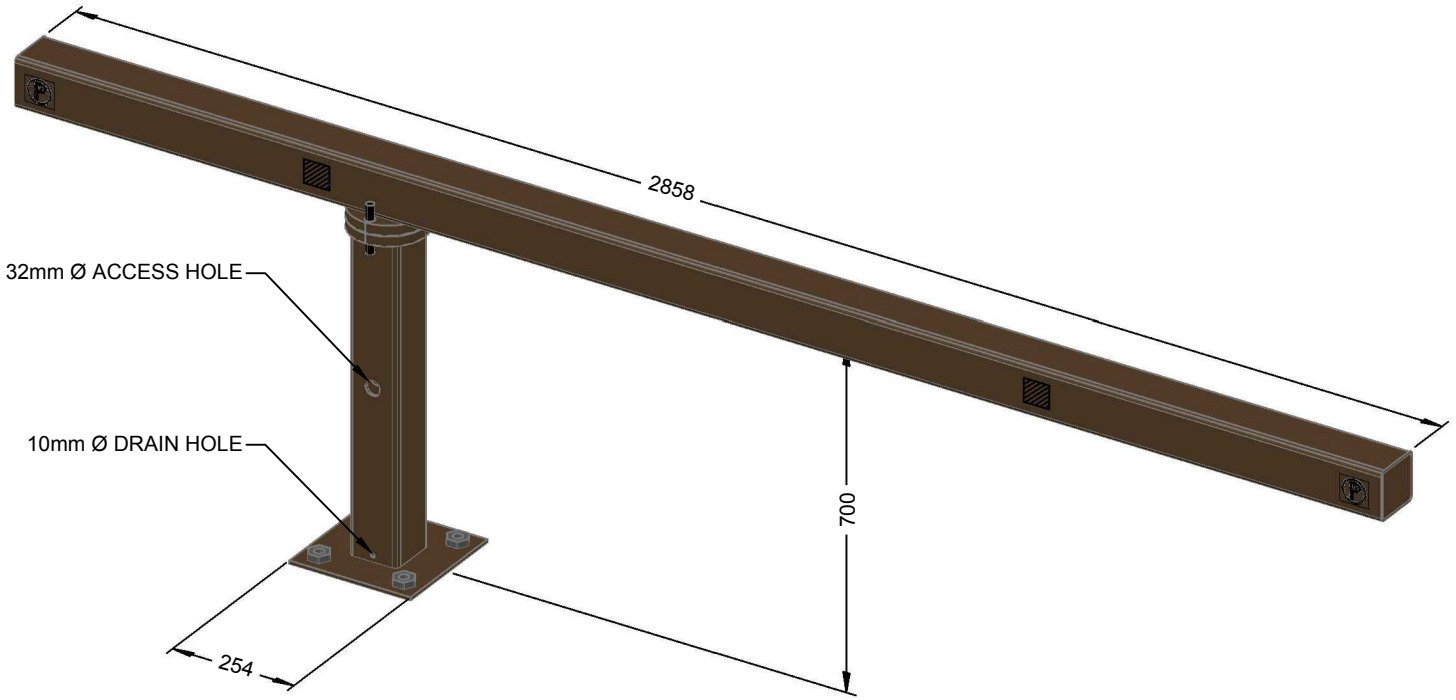
CHECKED: C. HUMBLE, LAT

DATE: 24-AUG-2018 | SCALE: N.T.S | DRAWN: S. ENGLEDER

DRAWING NUMBER:

61515

Planning & Development Services Department



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. 3M™ MANUFACTURING HIGH INTENSITY WHITE REFLECTIVE TAPE (3870) 78mm x 78mm LOCATED ON BOTH SIDES. VERTICAL POSTS AND ENDS.
3. 2 - 78mm x 78mm SQUARE "NO PARKING" STICKER ON EACH SIDE OF THE BOLLARD ARM.
4. ASSEMBLY DRAWINGS ARE AVAILABLE UPON REQUEST TO A CONTACT STRATHCONA COUNTY REPRESENTATIVE.
5. SEE DRAWING 61307 FOR MOUNTING OPTIONS.
6. TO BE POWDER COATED CHOCOLATE BROWN.

REVISIONS		
DATE	DETAILS	DRAWN
11-MAR-2019	NEW DETAIL	M. MOTIUK

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

CHICANE BOLLARD

APPROVED: J. BUCHKO, AALA, CSLA

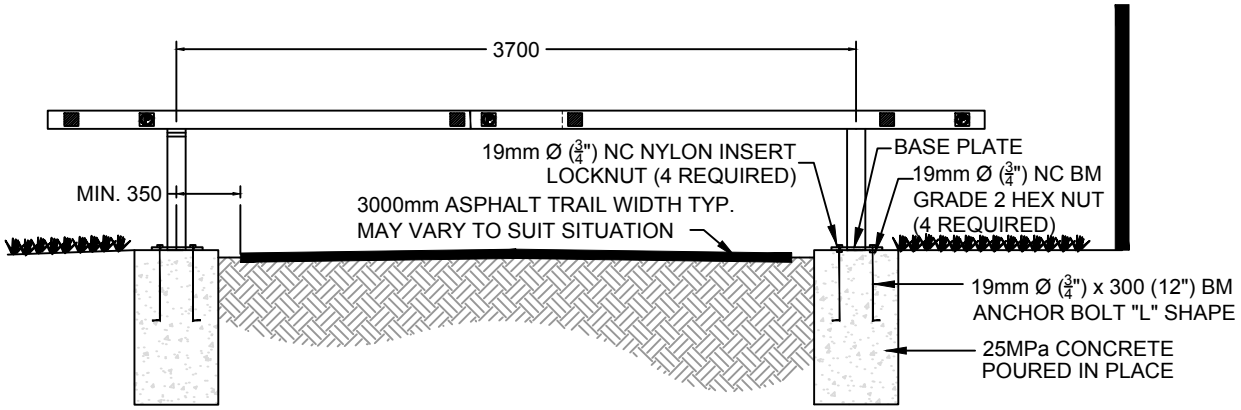
CHECKED: C. HUMBLE, LAT

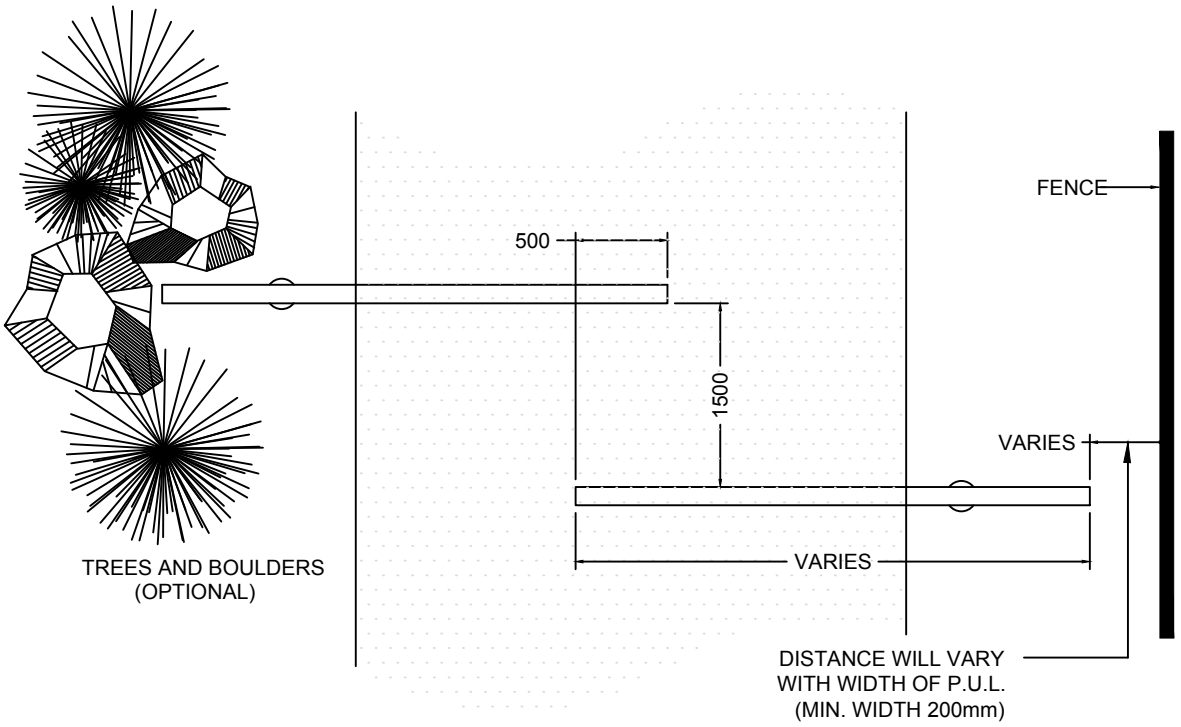
DATE: 11-MAR-2019 | SCALE: N.T.S. | DRAWN: M. MOTIUK

DRAWING NUMBER

61601

Planning & Development Services Department





NOTES:
1. ENSURE THAT BOLLARD ARMS ARE SQUARE WITH EXISTING FENCE STRUCTURES.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
3. FOOTING LOCATIONS MAY VARY BASED ON TRAIL WIDTH.
4. SHORTER BOLLARD ARM SHOULD BE COUNTER WEIGHTED FROM THE INSIDE OF THE 100mm x 100mm STEEL TUBING.
5. ASSEMBLY DRAWINGS ARE AVAILABLE UPON REQUEST TO A CONTACT STRATHCONA COUNTY REPRESENTATIVE.

REVISIONS

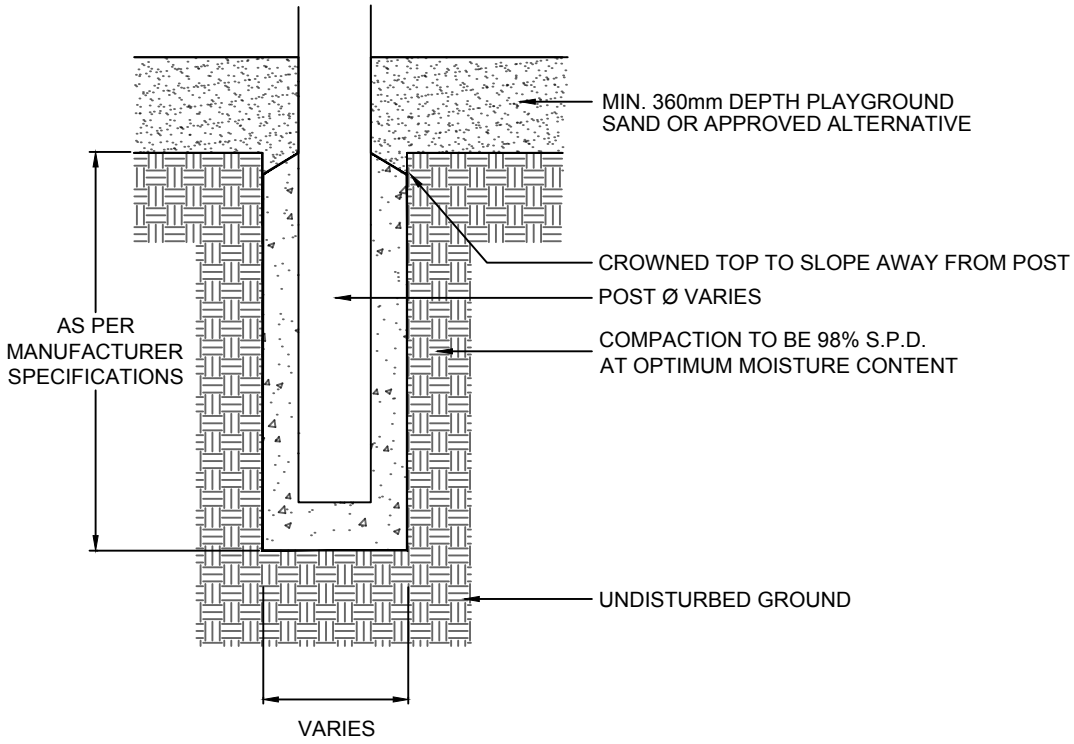
DATE	DETAILS	DRAWN
11-MAR-2019	REVISED DRAWING	M. MOTIUK
09-APR-2018	REVISED DRAWING	M. MOTIUK
22-SEP-2016	REVISED ANCHOR PLATE DETAILS	J. ORR
03-MAY-2011	REVISED DRAWING NUMBER & REVISIONS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

CHICANE BOLLARD LAYOUT

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 26-NOV-2001 | SCALE: N.T.S. | DRAWN: A. MCLENAGHAN

DRAWING NUMBER
61602
Planning & Development Services Department



NOTES:

1. FOOTING DIMENSIONS AND MATERIAL TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS DESIGN AND TO BE PROVIDED ON THE APPROVED CONSTRUCTION DRAWINGS FOR REFERENCE.
2. FOOTING TO BE DESIGNED TAKING INTO ACCOUNT LOCAL FROST LINE DEPTH.
3. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
12-MAR-2019	REVISED DRAWING	P. TOMKO
12-MAR-2019	REVISED NOTES	J. ORR
09-APR-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

PLAYGROUND EQUIPMENT FOOTING

APPROVED: J. BUCHKO, AALA, CSLA

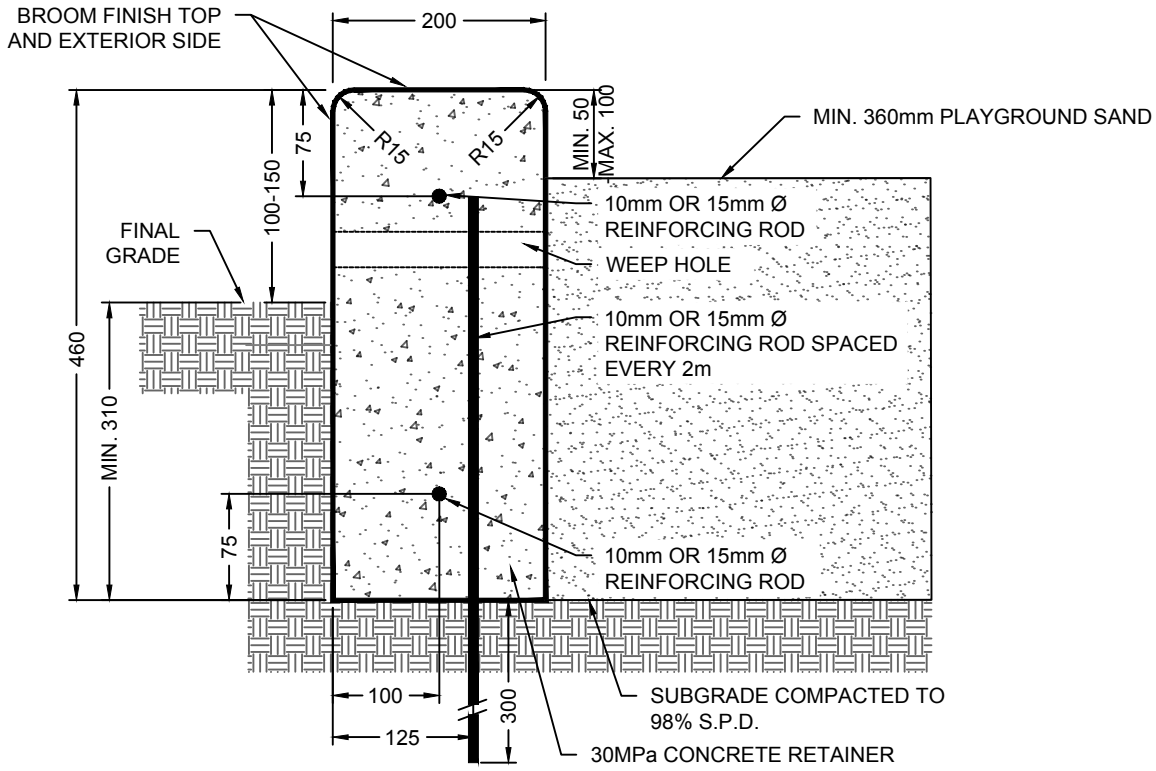
CHECKED: C. HUMBLE, LAT

DATE: 25-JAN-1995 | SCALE: N.T.S. | DRAWN: D. LECKIE

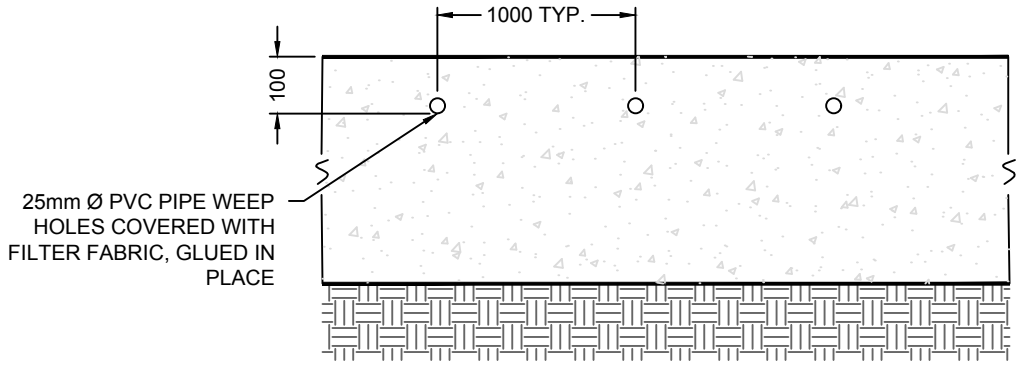
DRAWING NUMBER

61701

Planning & Development Services Department



SECTION



ELEVATION

NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS		
DATE	DETAILS	DRAWN
13-MAR-2019	REVISED DRAWING	J. ORR
09-APR-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
22-OCT-2012	REVISED DRAWING TITLE	J. EGGEN
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

CONCRETE RETAINER

APPROVED: J. BUCHKO, AALA, CSLA

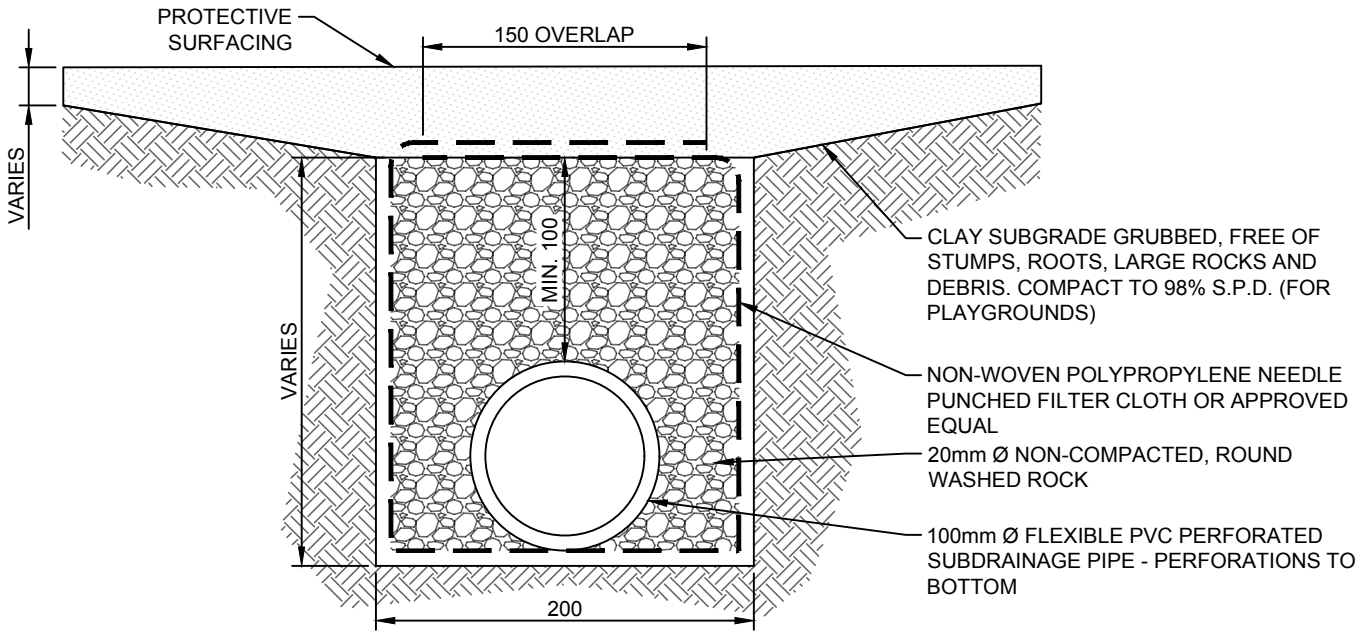
CHECKED: C. HUMBLE, LAT

DATE: 25-JAN-1995 | SCALE: N.T.S. | DRAWN: D. LECKIE

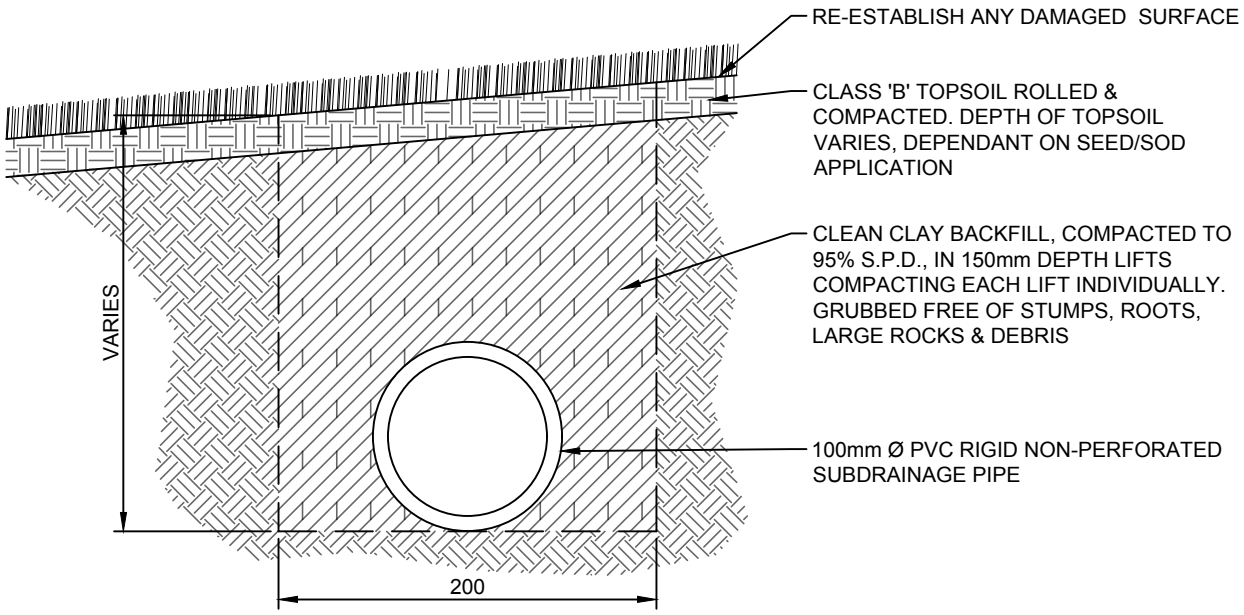
DRAWING NUMBER

61702

Planning & Development Services Department



PERFORATED PVC SUBDRAINAGE PIPE



NON-PERFORATED PVC SUBDRAINAGE PIPE

NOTES:
1. DRAINAGE MUST BE CONNECTED TO MUNICIPAL INFRASTRUCTURE SUCH AS A MANHOLE OR A CATCH BASIN.
2. REFER TO DRAWING 44001 FOR INFORMATION ON CONNECTIONS TO CATCH BASINS AND MANHOLES.
3. SUB-DRAINAGE TO BE SLOPED A MIN. OF 2.0%.
4. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
5. REFER TO VOLUME 2, SECTION 616 FOR FURTHER INFORMATION.

REVISIONS

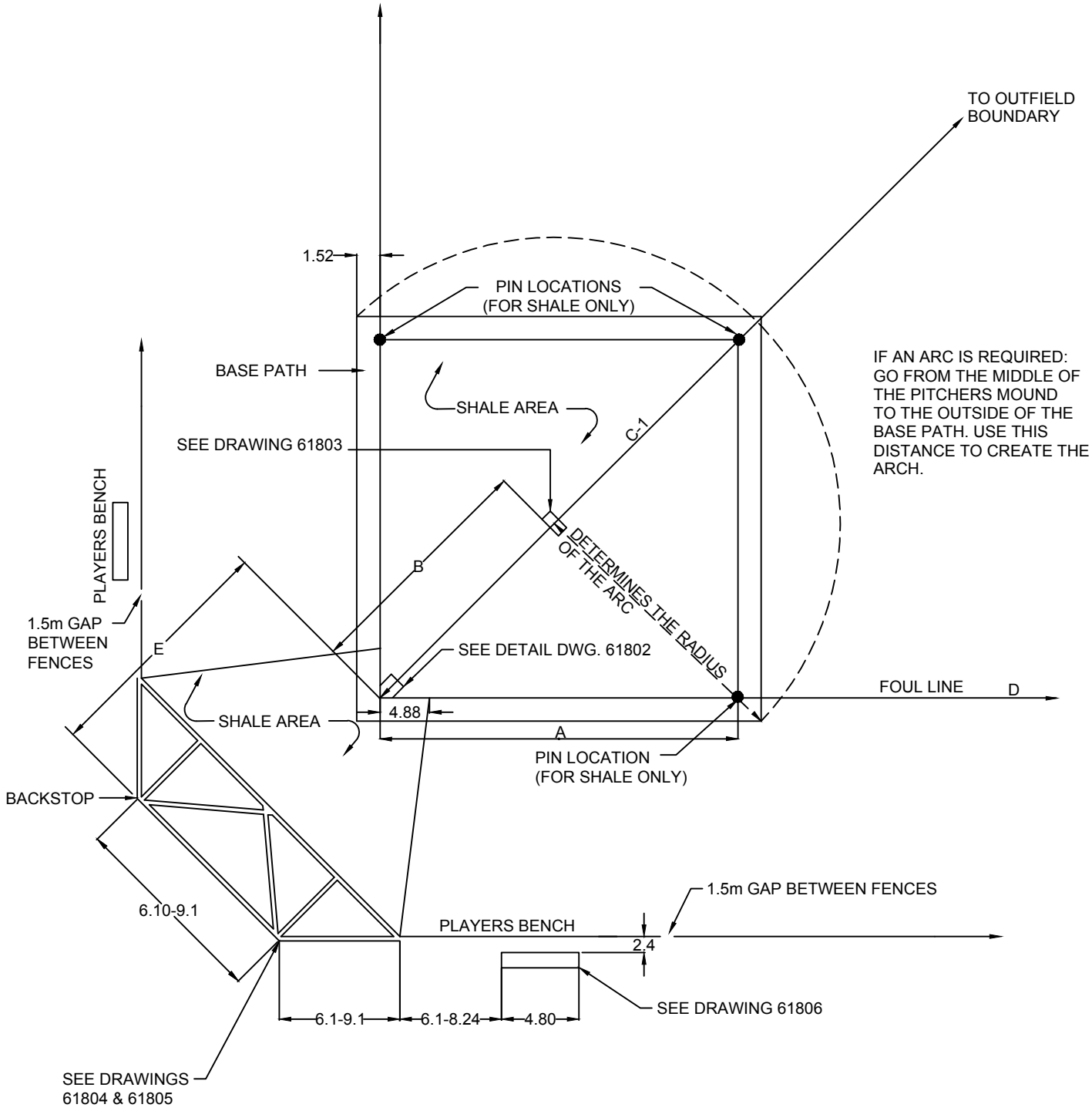
DATE	DETAILS	DRAWN
09-SEP-2019	REVISED NOTES	P. TOMKO
13-MAR-2019	REVISED NOTES AND TEXT	J. ORR
30-OCT-2018	NEW DETAIL	S. ENGLEDER

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

PLAYGROUND SUBDRAINAGE PIPE

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 30-AUG-2018 | SCALE: N.T.S. | DRAWN: S. ENGLEDER

DRAWING NUMBER
61703
Planning & Development Services Department



NOTES:

1. ALL DIMENSIONS ARE IN METRES (m), UNLESS OTHERWISE STATED.
2. SEE DETAIL DRAWING 61802 FOR MINIMUM AND MAXIMUM BALL DIAMOND DIMENSIONS.
3. FIELDS MAY BE REQUIRED TO BE ENCLOSED BY A MIN. 1.2m CHAIN LINK FENCE WITH YELLOW PROTECTIVE CAPPING ATOP.
4. IF A FENCE IS PROVIDED, ONE MAN GATE TO BE PROVIDED ALONG THE OUTFIELD FENCING ALONG WITH ONE VEHICLE MAINTENANCE GATE. SEE DRAWINGS 61206, 61207 AND 61208.

REVISIONS

DATE	DETAILS	DRAWN
13-MAR-2019	REVISED NOTES, DIMENSIONS	S. ENGLEDER
09-MAY-2018	REVISED DRAWING	M. MOTIUK
30-APR-2013	ADDED DETAILS AND NOTES	A. DAM
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

BALL INFIELD DETAIL

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 21-APR-1994 | SCALE: N.T.S. | DRAWN: D. Leckie

DRAWING NUMBER
61801
Planning & Development Services Department

BALL DIAMOND DIMENSIONS

Dimension	Rally Cap, Rookie, Mosquito	Pee Wee	Bantam		Midget, Junior, Senior, Twilite	
Base Lines	18.29m 60ft.	19.81m 70ft.	22.86m 80ft.		27.43m 90ft.	
Pitching Distance	13.41m 44ft.	14.63m 48ft.	16.46m 54ft.		18.44m 60ft. 6in.	
Center Field Boundary	*Minimum* 60.96m 200ft.	*Preferred* 68.58m 225ft.	*Min.* 76.2m 250ft.	*Pref.* 79.26m 280ft.	*Min.* 76.2m 250ft.	*Pref.* 122m 400ft.
Foul Line Boundary	*Minimum* 54.86m 180ft.	*Preferred* 60.96m 200ft.	*Min.* 64m 225ft.	*Pref.* 68.58m 240ft.	*Min.* 76.2m 250ft.	*Pref.* 97.54m 320ft.
Backstop Setback	7.62-12.19m 25-40ft.	10.67-13.72m 35-45ft.	12.18-15.24m 40-50ft.		18.3m 60ft.	
Fence Setback	7.62m 25ft.		15.24m 50ft.		18.3m 60ft.	
Coach's Box	2.44m x 3.66m 8ft. x 12ft.		2.44m x 4.88m 8ft. x 16ft.		3.05m x 6.1m 10ft. x 20ft.	
Coach's Box Setback	3.05m 10ft.				4.57m 15ft.	
Batter's Box	0.91m x 1.82m 3ft. x 6ft.	1.22m x 1.83m 4ft. x 6ft.				
Batter's Box Home Plate	4in.				6in.	
Pitcher's Plate	0.10m x 0.46m 4in. x 18in.		0.15m x 0.61m 6in. x 24in.			
Max Height of Pitchers	0.15m 6in.		0.25m 10in.			
Bases	0.38in. (square) - 16in. (square)					
Home Plate	0.43m. (wide) - 17in. (wide)					

REVISIONS

DATE	DETAILS	DRAWN
09-MAY-2018	REVISED DRAWING	M. MOTIUK
30-APR-2013	CHANGED COPYRIGHT YEAR	A. DAM
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
02-APR-2008	CHART CHANGED	M. FORGUES

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

BALL DIAMOND DIMENSIONS

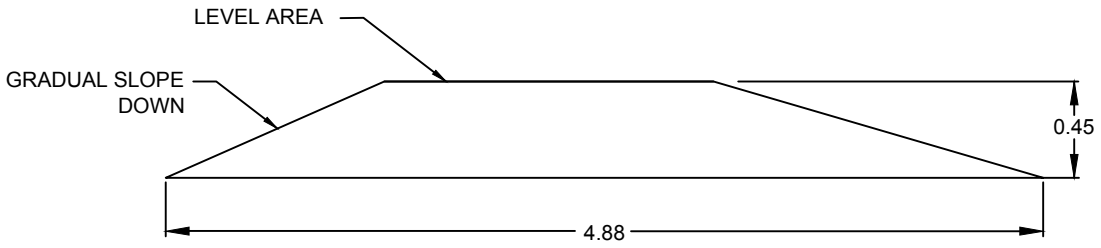
APPROVED: J. BUCHKO, AALA, CSLA

CHECKED: C. HUMBLE, LAT

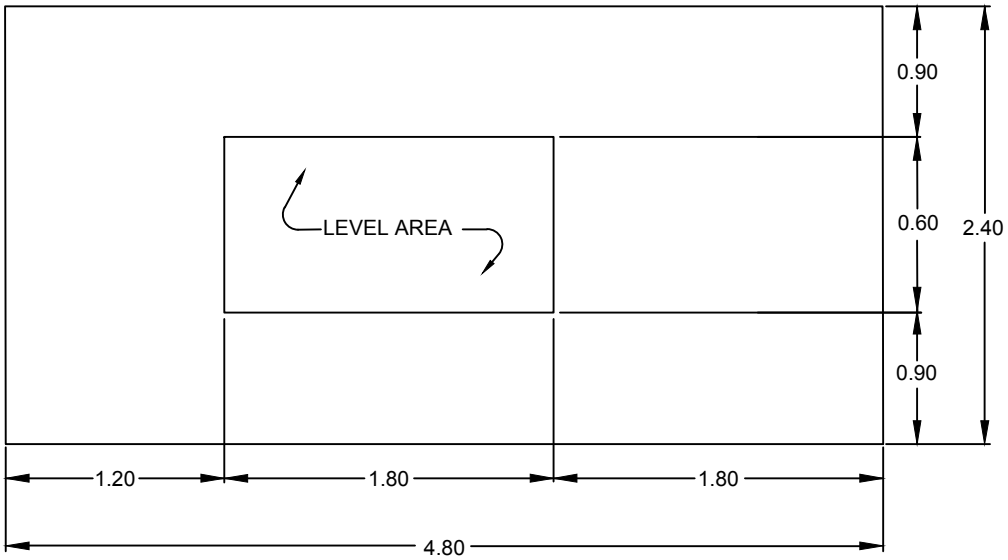
DATE: 26-APR-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER: 61802

Planning & Development Services Department



ELEVATION



PLAN VIEW

NOTE:
1. ALL DIMENSIONS ARE IN METRES (m), UNLESS OTHERWISE NOTED.

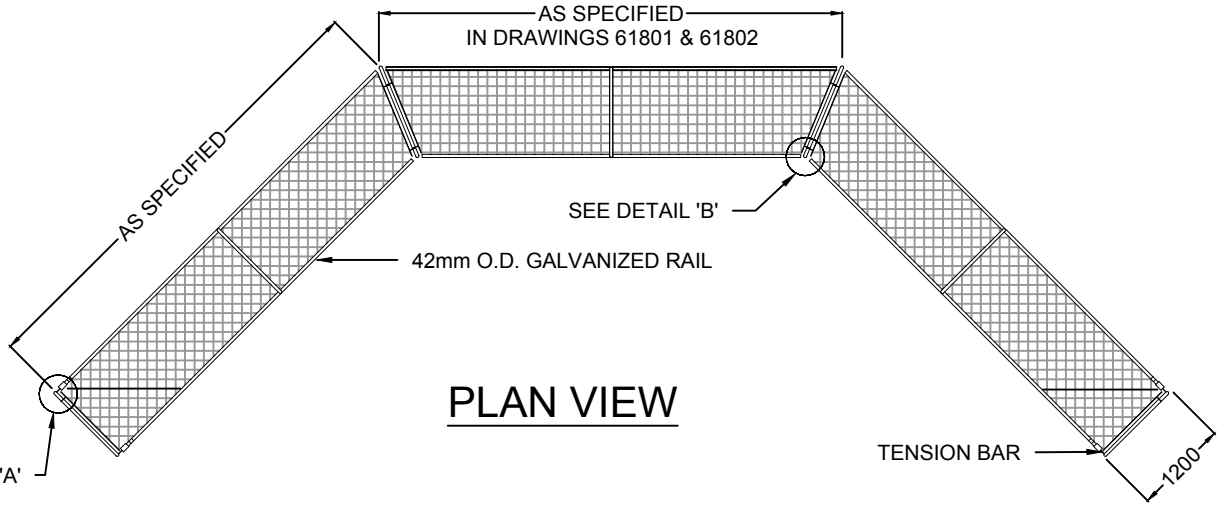
REVISIONS		
DATE	DETAILS	DRAWN
09-MAY-2018	REVISED DRAWING	M. MOTIUK
30-APR-2013	REVISED DRAWING NUMBERS	A. DAM
06-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2010	REVISED DRAWING NUMBERS	O. BUTT
10-MAR-2006	CHANGED DIMENSIONS	M. FORGUES

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

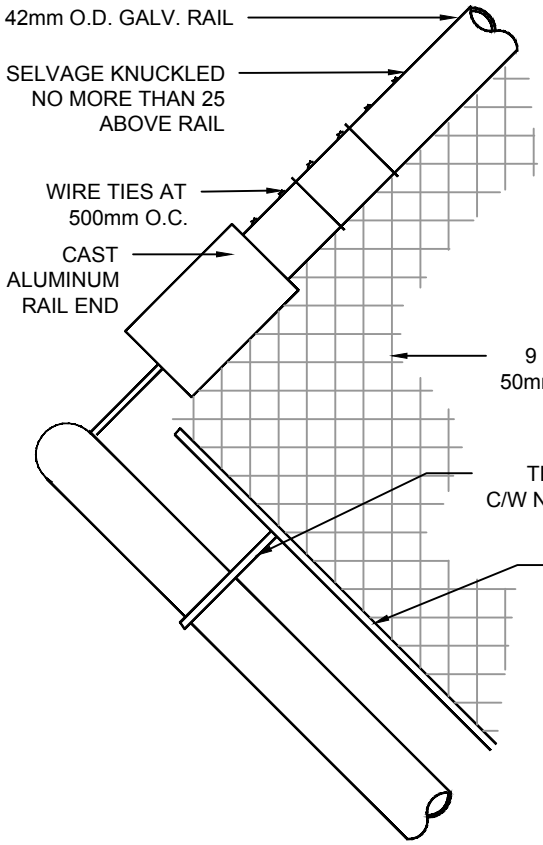
PITCHER'S MOUND DETAIL

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 02-NOV-2005 | SCALE: N.T.S. | DRAWN: M. FORGUES

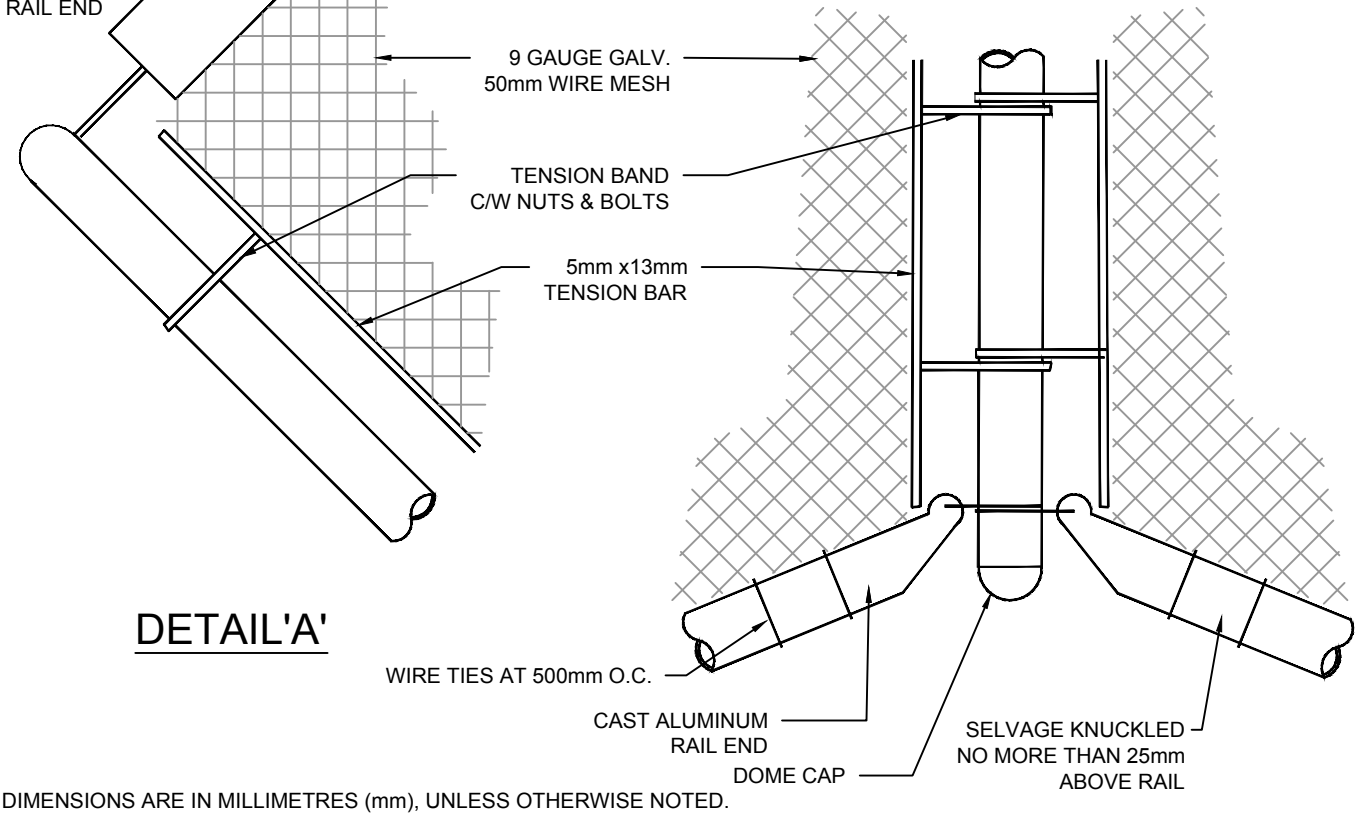
DRAWING NUMBER
61803
Planning & Development Services Department



PLAN VIEW



DETAIL'A'



DETAIL'B'

NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

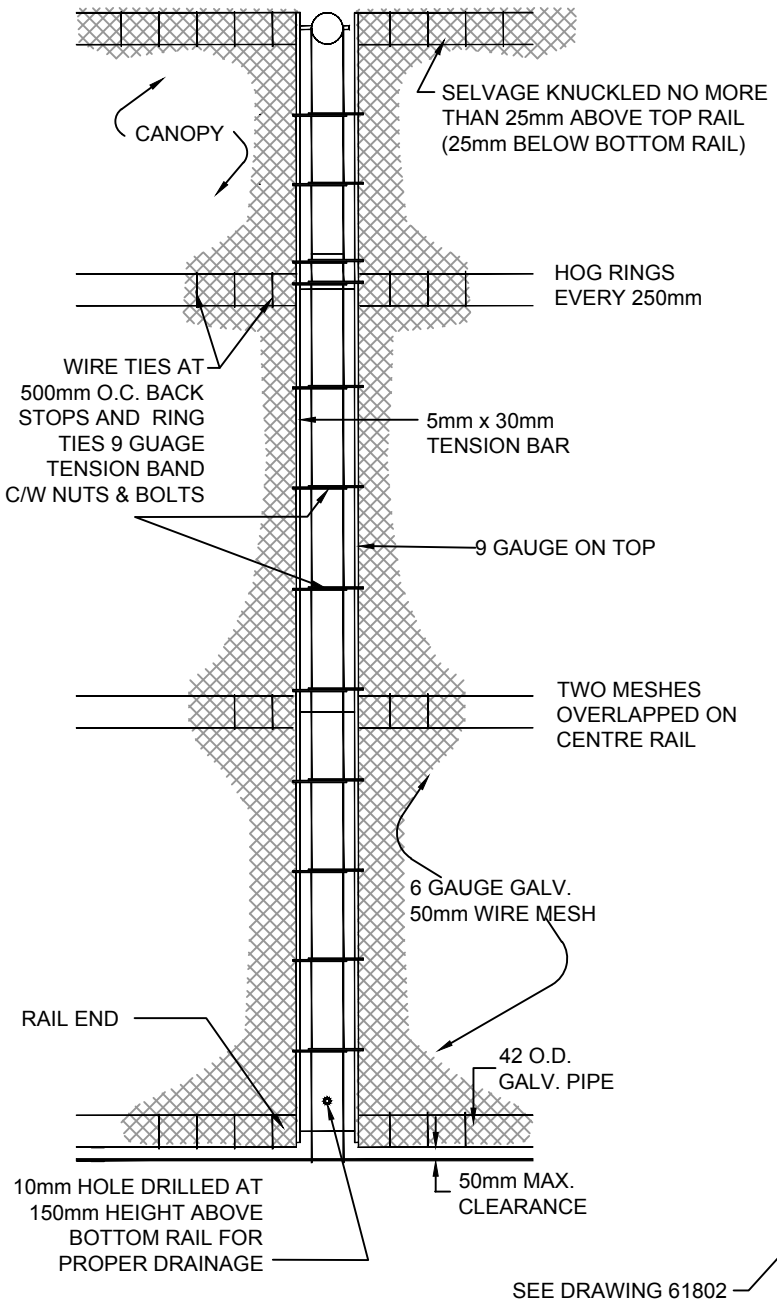
REVISIONS		
DATE	DETAILS	DRAWN
09-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
02-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
24-JUN-2002	PRINTED	A. MCLENAGHAN

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

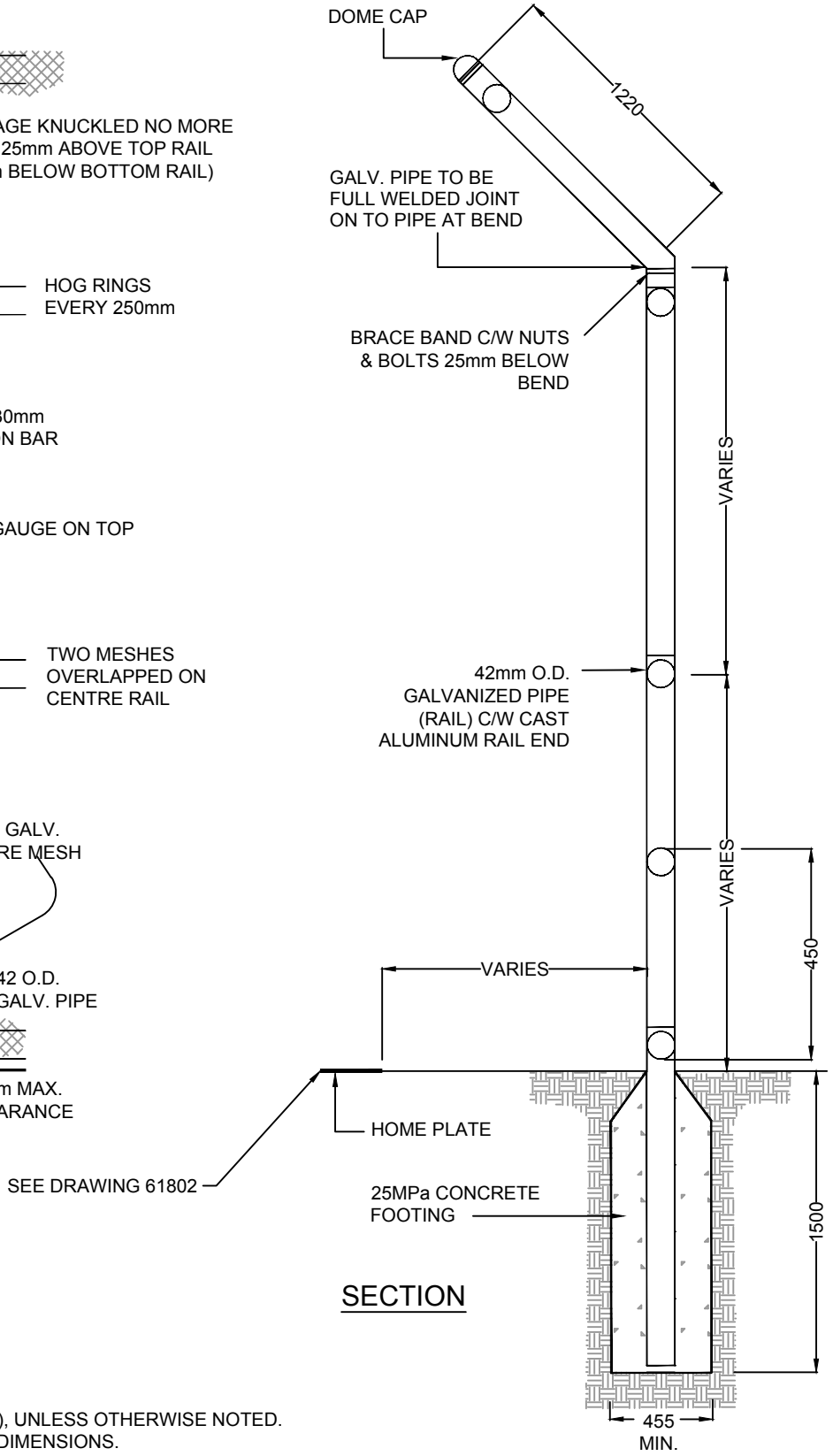
CANOPY BACKSTOP PLAN VIEW

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 25-APR-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER
61804
Planning & Development Services Department



ELEVATION



SECTION

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. REFER TO SPECIFICATIONS FOR SPECIFIC DIMENSIONS.
3. VINYL COATED CHAIN LINK MESH IS NOT ACCEPTABLE.

REVISIONS

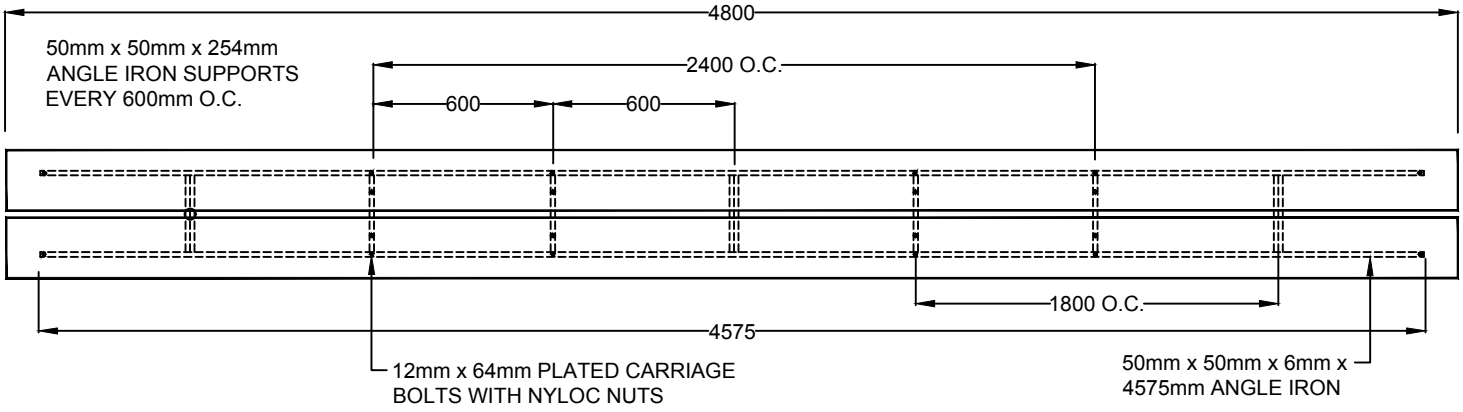
DATE	DETAILS	DRAWN
13-MAR-2019	REVISED DRAWING AND NOTES	J. ORR
09-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
22-OCT-2012	REVISED DRAWING	J. EGGEN
06-MAY-2011	REVISED DRAWING NUMBERS	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

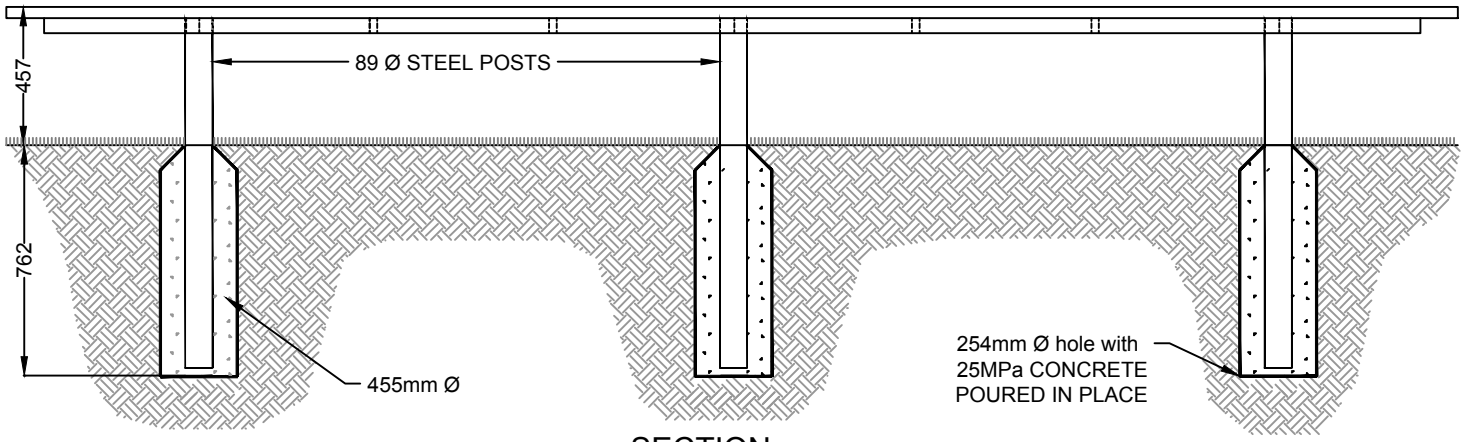
CANOPY BACKSTOP SECTION AND ELEVATION

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 25-APR-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

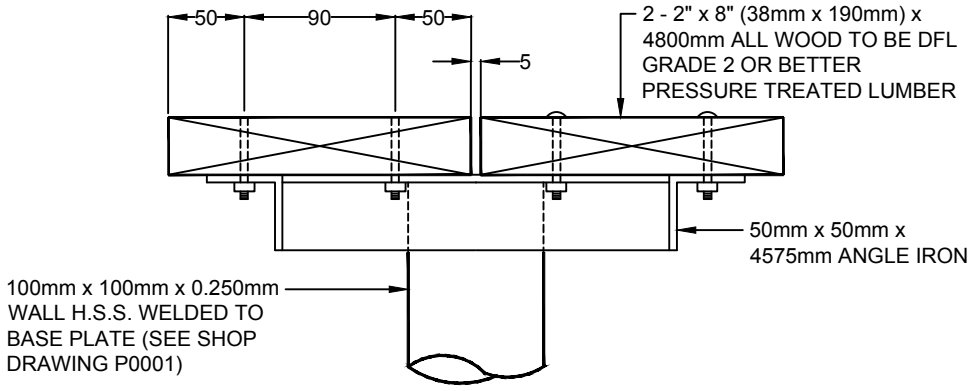
DRAWING NUMBER
61805
Planning & Development Services Department



PLAN VIEW



SECTION



END VIEW DETAIL

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. ALL METAL COMPONENTS TO BE FINISHED WITH POWDER COAT - TEXTURED BLACK.

REVISIONS

DATE	DETAILS	DRAWN
11-MAR-2019	REVISED DRAWING	M. MOTIUK
09-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
22-OCT-2012	REVISED DRAWING	J. EGGEN
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR

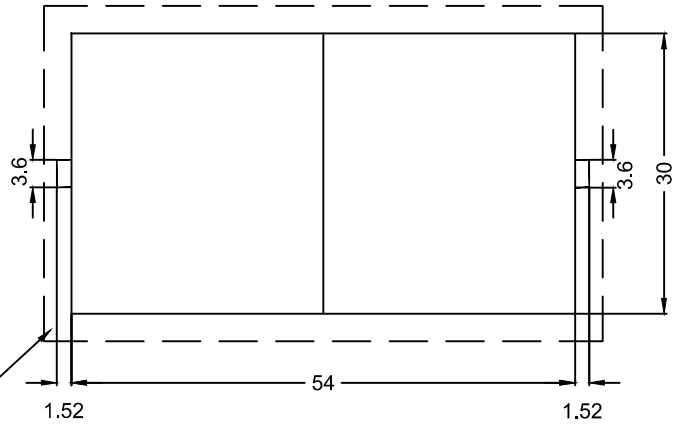
STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

PLAYER'S BENCH

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 30-JUL-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

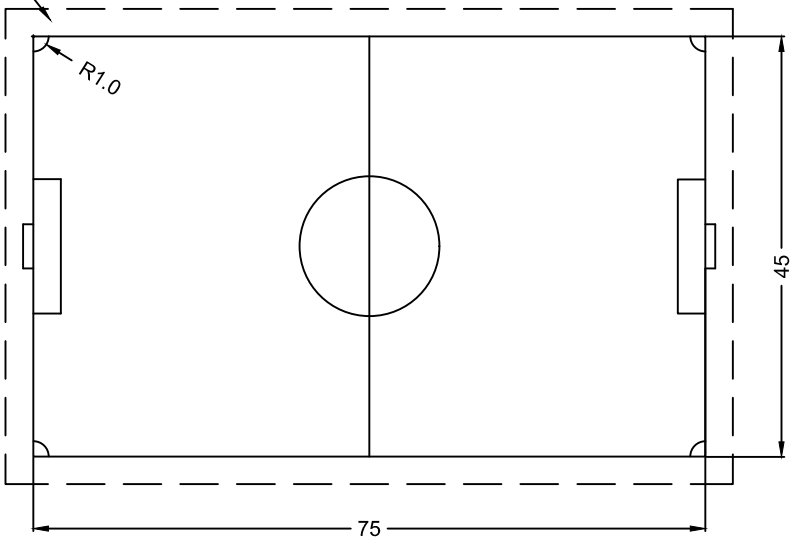
DRAWING NUMBER
61806
Planning & Development Services Department

SMALL SOCCER FIELD



5.0m NO ENCROACHMENT ZONE TO BE LEVELED WITH PLAYING AREA

MEDIUM SOCCER FIELD



NOTES:

1. PLANT MATERIAL TO BE INSTALLED OUTSIDE THE NO ENCROACHMENT ZONES AND SET BACK A MINIMUM OF 5.0m FROM THE TREE TRUNK TO THE NO ENCROACHMENT ZONE.
2. CORNER PINS TO BE SURVEYED AND INSTALLED ACCORDING TO SPECIFICATIONS.
3. ALL DIMENSIONS ARE IN METRES (m), UNLESS OTHERWISE NOTED.
4. SEE DRAWING 61809 FOR GOAL DIMENSIONS.

REVISIONS

DATE	DETAILS	DRAWN
11-MAR-2019	REVISED DRAWING	M. MOTIUK
09-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS & NOTES	A. DAM
23-OCT-2012	REVISED SOCCER FIELD DIMENSIONS	J. ORR
03-MAY-2011	REVISED DRAWING NUMBER & REVISIONS	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

SOCCER FIELD DIMENSIONS 1 OF 2

APPROVED: J. BUCHKO, AALA, CSLA

CHECKED: C. HUMBLE, LAT

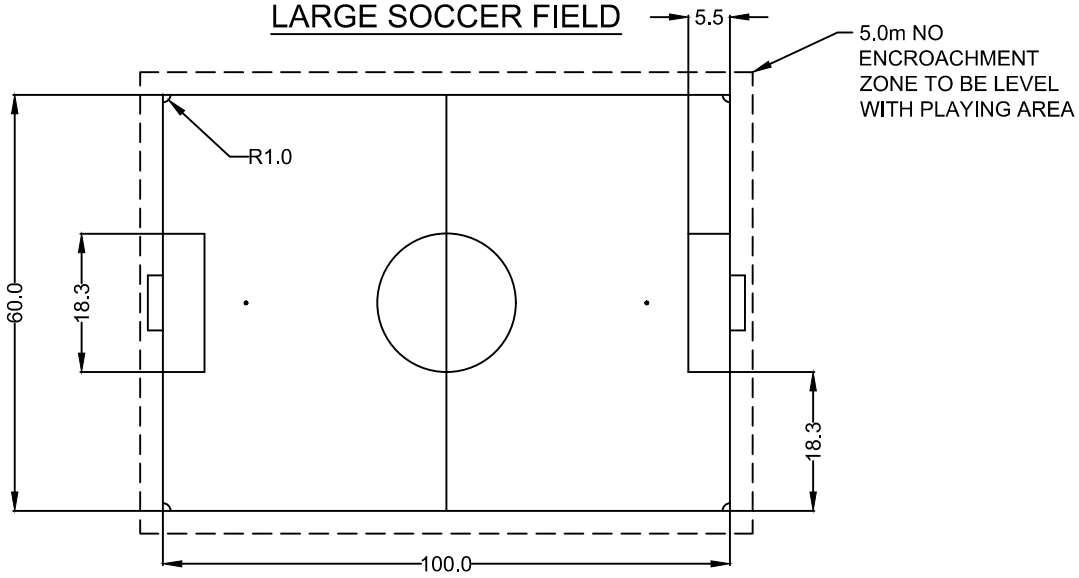
DATE: 24-JAN-1995 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER

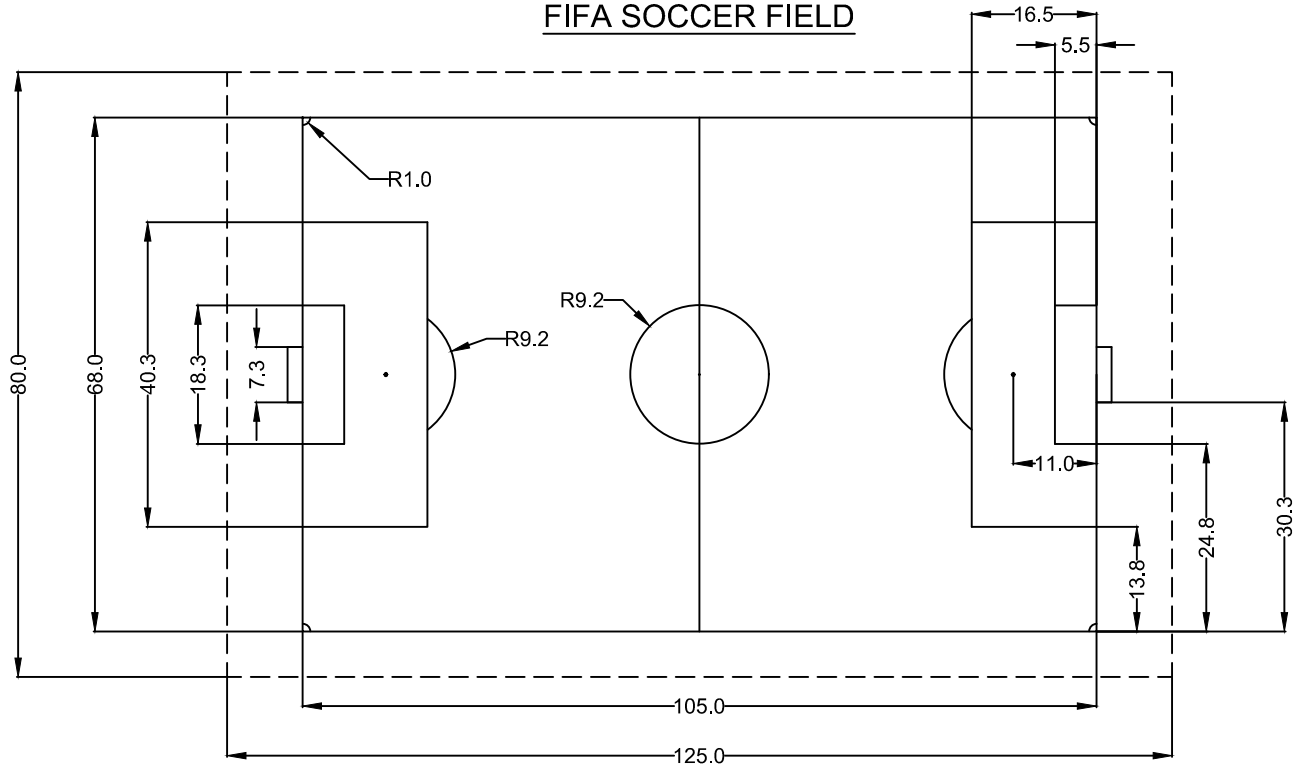
61807

Planning & Development Services Department

LARGE SOCCER FIELD



FIFA SOCCER FIELD



NOTES:

1. PLANT MATERIAL TO BE INSTALLED OUTSIDE THE NO ENCROACHMENT ZONES AND SET BACK A MINIMUM OF 5.0m FROM THE TREE TRUNK TO THE NO ENCROACHMENT ZONE.
2. CORNER PINS TO BE SURVEYED AND INSTALLED ACCORDING TO SPECIFICATIONS.
3. ALL DIMENSIONS ARE IN METRES (m), UNLESS OTHERWISE NOTED.
4. SEE DRAWING 61809 FOR GOAL DIMENSIONS.

REVISIONS		
DATE	DETAILS	DRAWN
11-MAR-2019	REVISED DRAWING	M. MOTIUK
09-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBER	A. DAM
23-OCT-2012	ADDED LARGE & FIFA FIELDS	J. ORR
03-MAY-2011	REVISED DRAWING NUMBERS & REVISIONS	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

SOCCER FIELD DIMENSIONS 2 OF 2

APPROVED: J. BUCHKO, AALA, CSLA

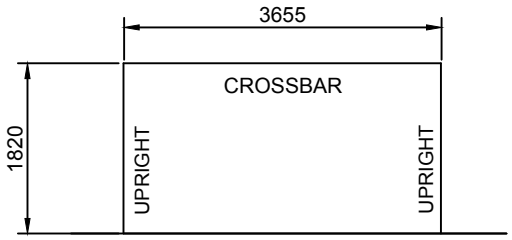
CHECKED: C. HUMBLE, LAT

DATE: 24-JAN-1995 | SCALE: N.T.S. | DRAWN: D. LECKIE

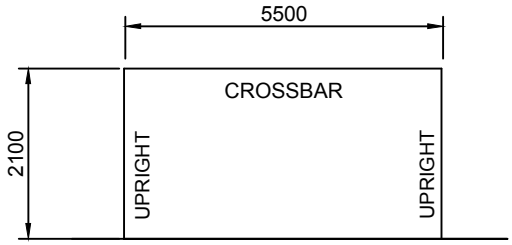
DRAWING NUMBER

61808

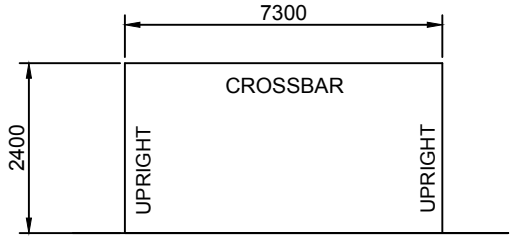
Planning & Development Services Department



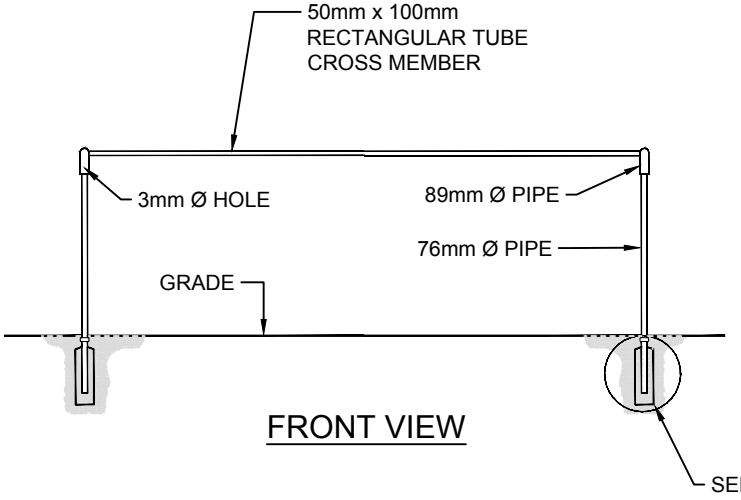
SMALL



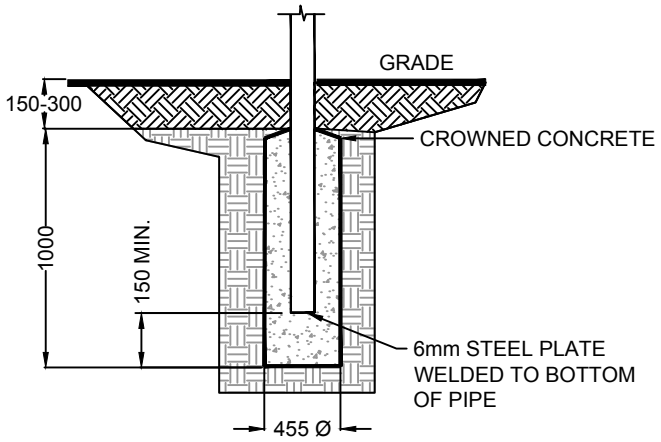
MEDIUM



LARGE



FRONT VIEW



DETAIL 'A'

NOTES:
1. PERMANENT SOCCER GOALS TO BE PROTECTED WITH POLYESTER WHITE POWDER COATING.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

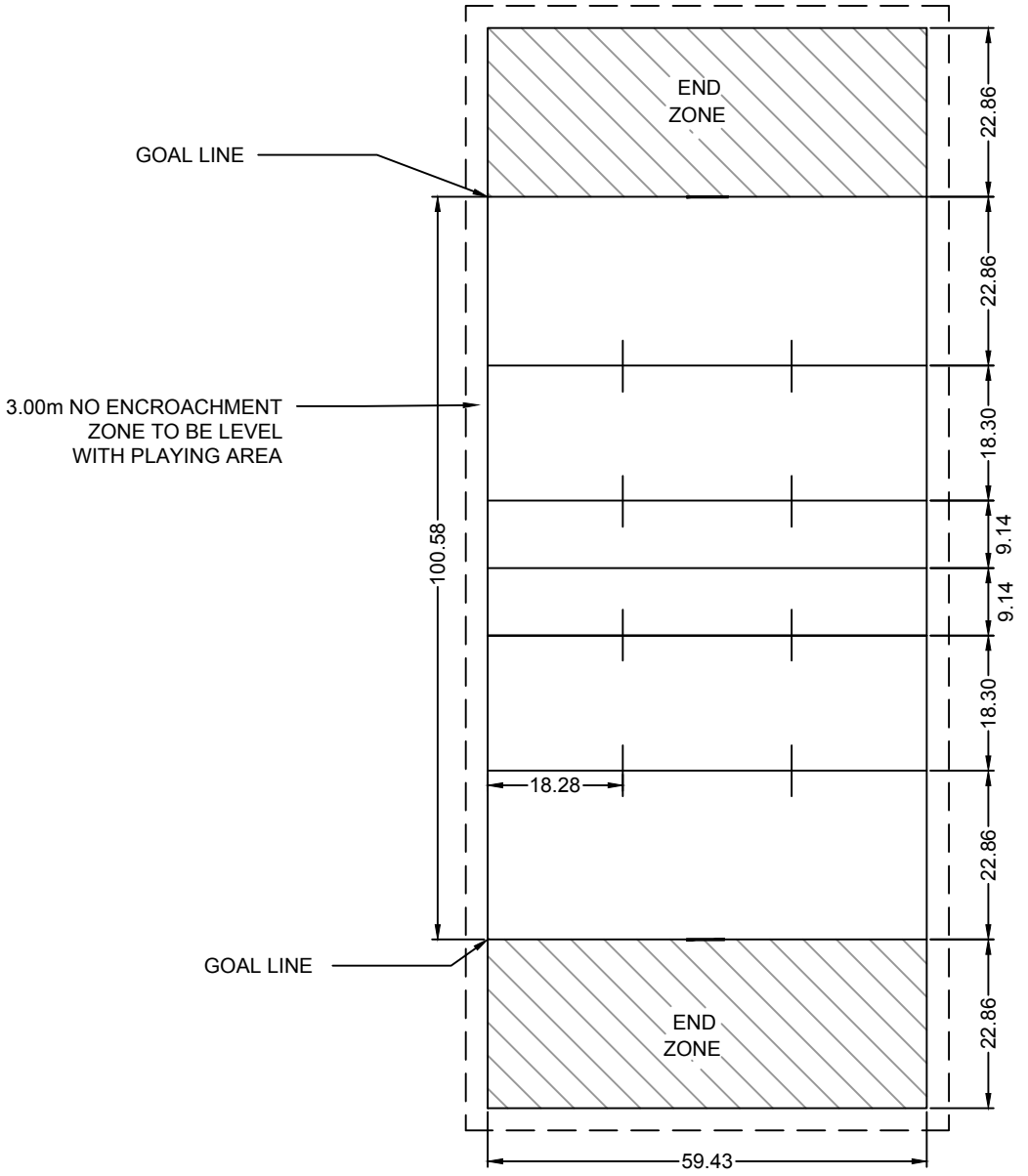
DATE	DETAILS	DRAWN
11-MAR-2019	REVISED DRAWING	M. MOTIUK
09-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
06-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

PERMANENT SOCCER GOAL

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 22-JAN-2001 | SCALE: N.T.S. | DRAWN: B. WISPINSKI

DRAWING NUMBER
61809
Planning & Development Services Department



NOTES:
1. PLANT MATERIAL TO BE INSTALLED OUTSIDE THE NO ENCROACHMENT ZONES AND SET BACK A MINIMUM OF 5.0 m FROM THE TREE TRUNK TO THE NO ENCROACHMENT ZONE.
2. ALL DIMENSIONS ARE IN METRES (m), UNLESS OTHERWISE NOTED.

REVISIONS

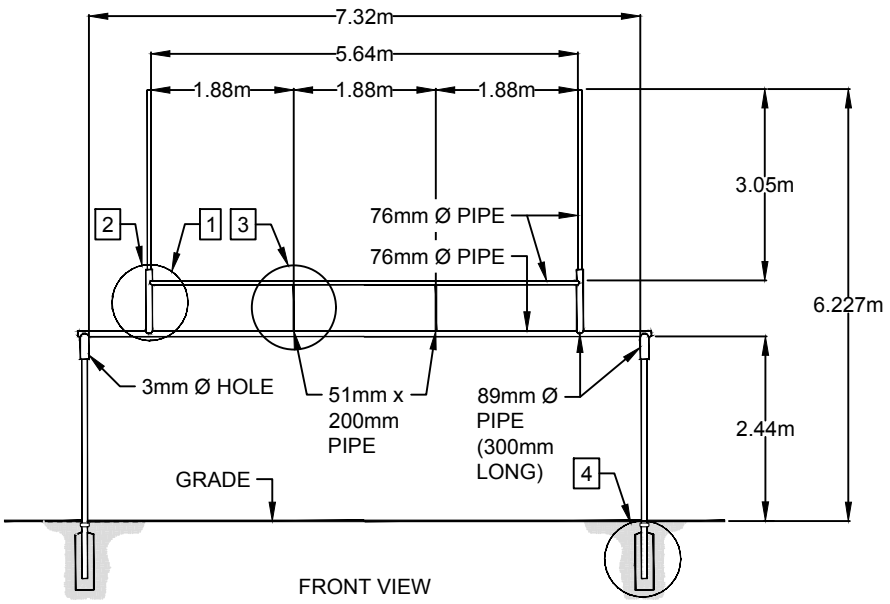
DATE	DETAILS	DRAWN
12-MAR-2019	REVISED NOTES	S. ENGLEDER
09-MAY-2018	REVISED DRAWING	M. MOTIUK
03-MAY-2013	REMOVED GOAL DIMENSIONS	A. DAM
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR

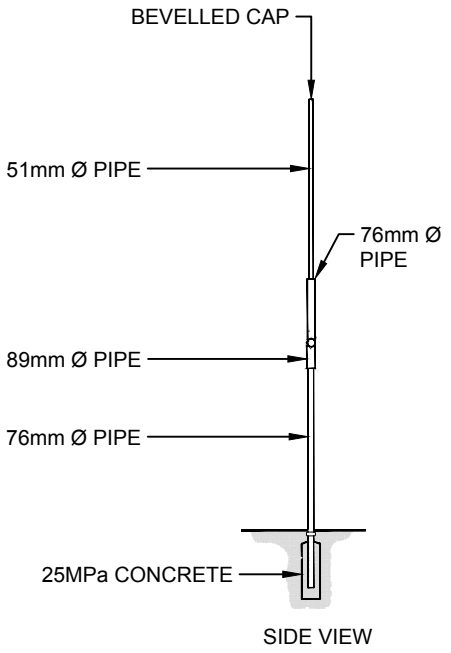
STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

FOOTBALL FIELD LAYOUT

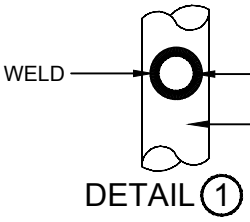
APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 01-JUN-2001 SCALE: N.T.S. DRAWN: A. MCLENAGHAN

DRAWING NUMBER:
61810
Planning & Development Services Department

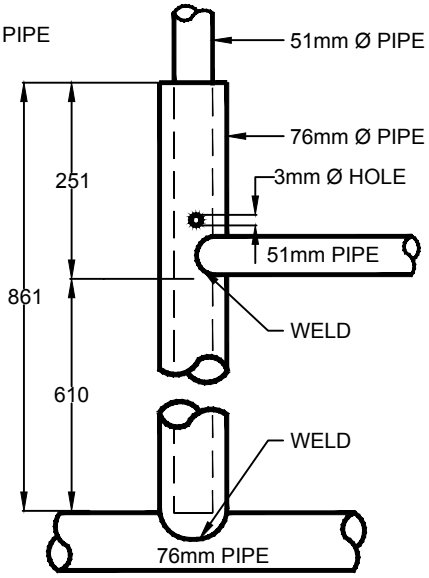




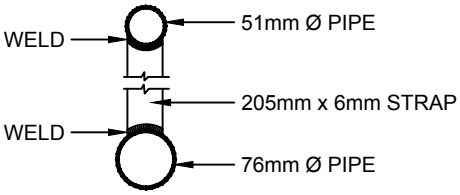
COMBINATION GOAL POSTS



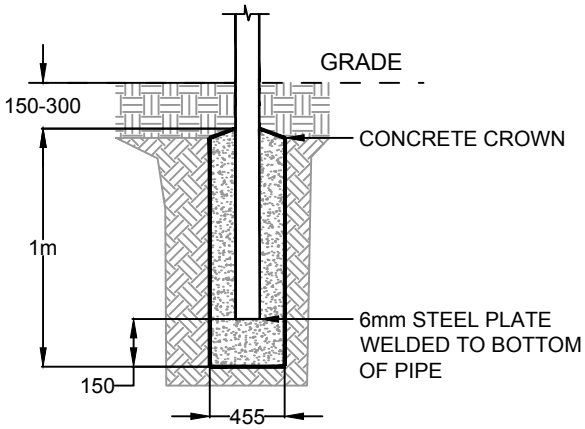
DETAIL (1)



DETAIL (2)



SECTION (3)



DETAIL (4)

NOTES:
1. MATERIAL - STANDARD BLACK PIPE, SCHEDULE 40.
2. DRILL SLEEVES AND PIPES PER 130mm Ø.
3. BOLT DURING FABRICATION.
4. SLEEVES TO BE CONTOURED FOR WELDING.
5. POSTS TO BE SET IN CONCRETE.
6. ALL EXPOSED METAL TO BE POWDER COATED WHITE.
7. TO BE USED ONLY WITH SOCCER/FOOTBALL FIELDS WITH END ZONES.
8. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

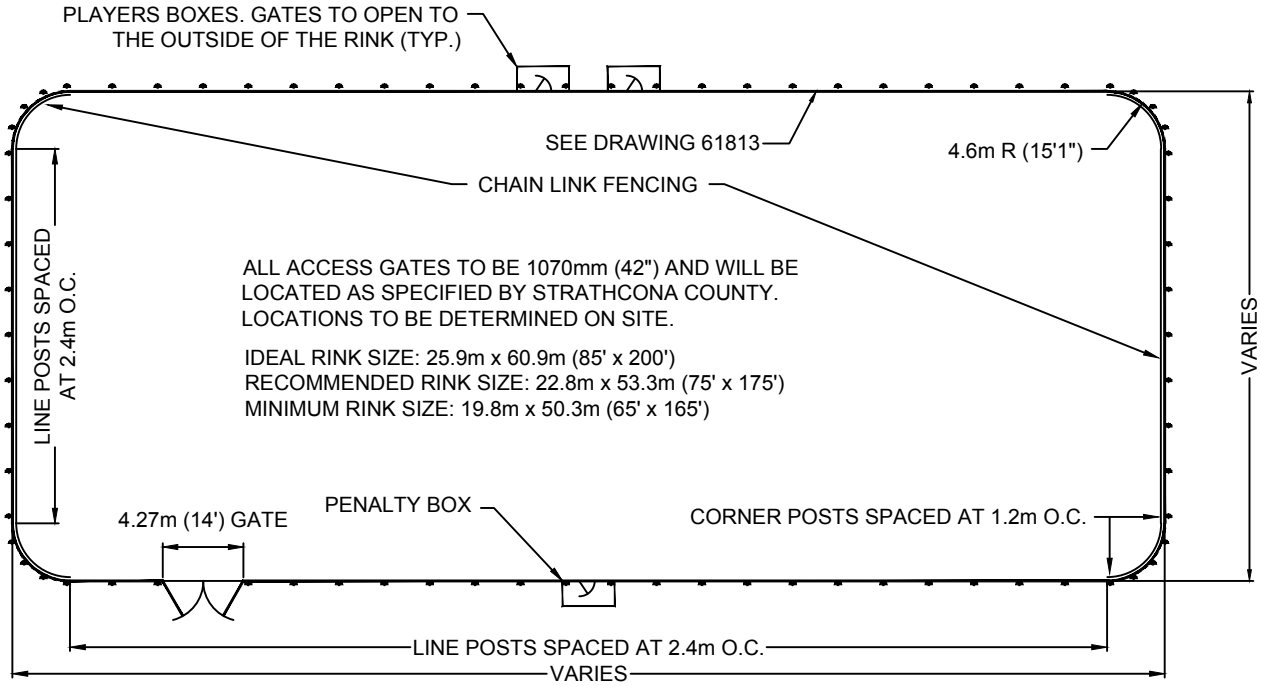
DATE	DETAILS	DRAWN
13-MAR-2019	REVISED HATCH	S. ENGLEDER
09-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
29-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

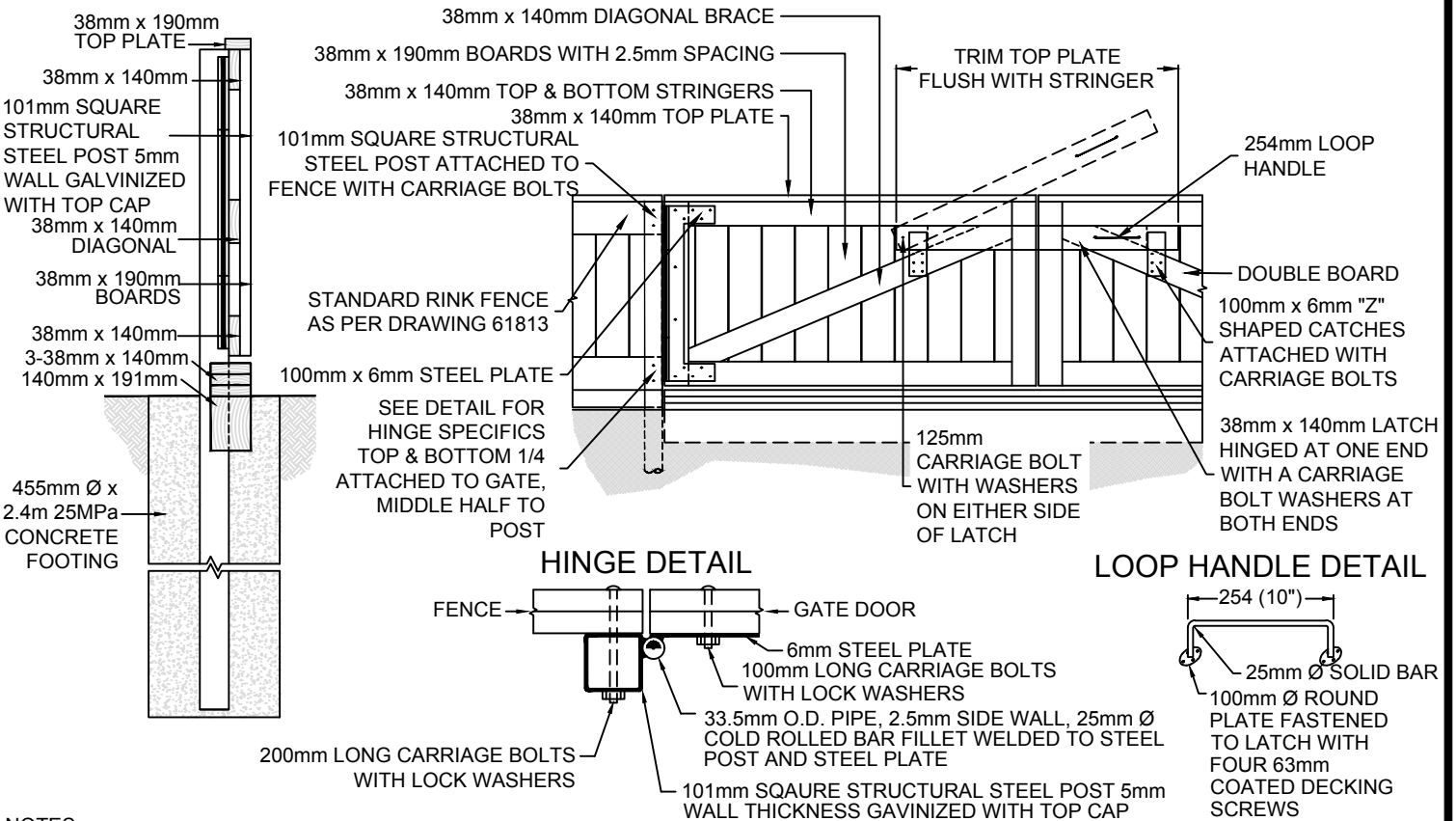
STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

COMBINATION GOAL POST DETAIL

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE:30-MAR-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER
61811
Planning & Development Services Department





HINGE DETAIL

LOOP HANDLE DETAIL

NOTES:
1. PAINTING OF ALL BOARDS AND METAL SURFACES AS PER DRAWING 61813.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
3. ALL WOOD TO BE PRESSURE TREATED.
4. ALL DECK SCREWS TO BE COATED.

REVISIONS

DATE	DETAILS	DRAWN
09-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
24-JUN-2002	PRINTED	A. MCLENAGHAN

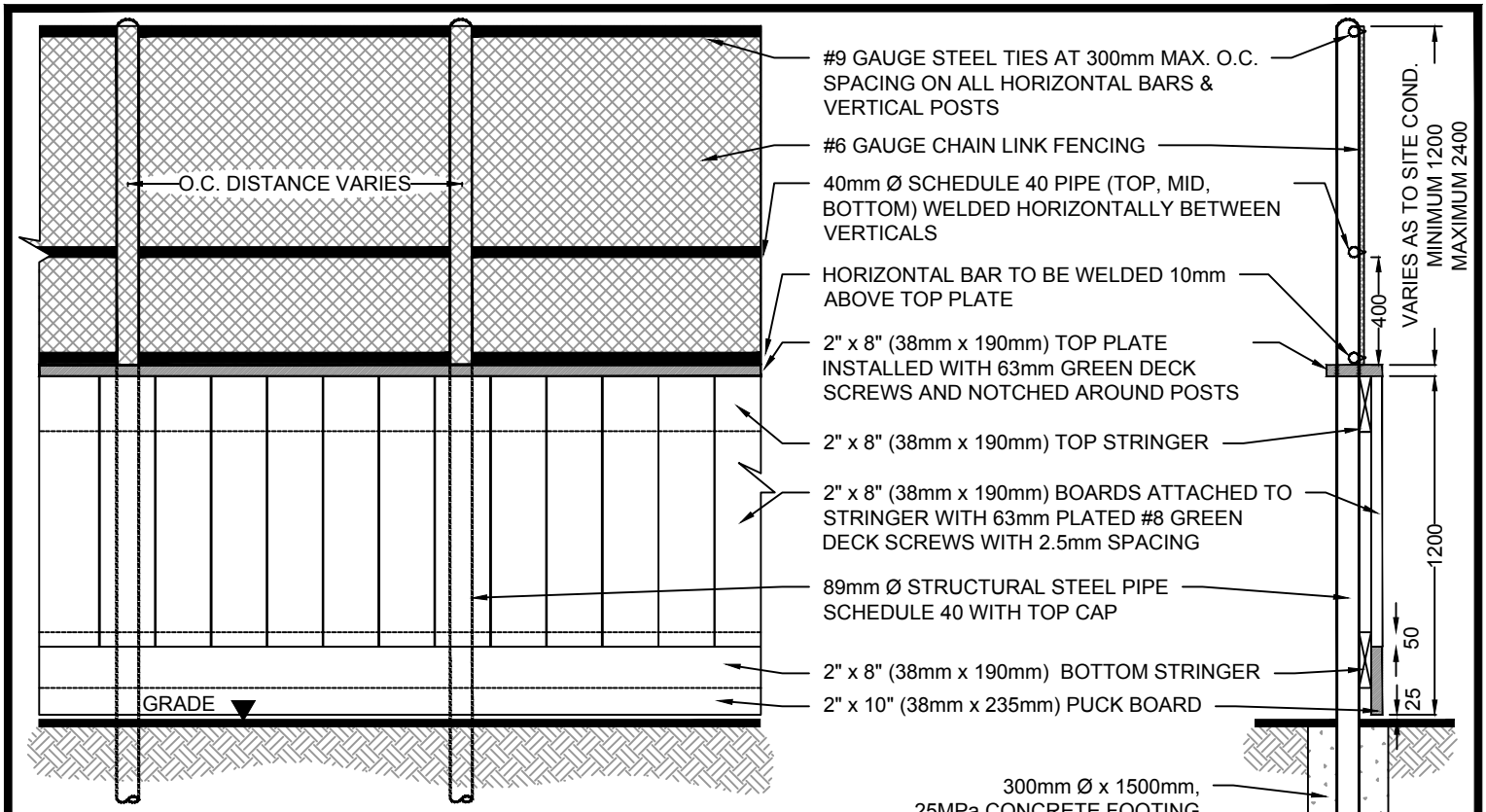
STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

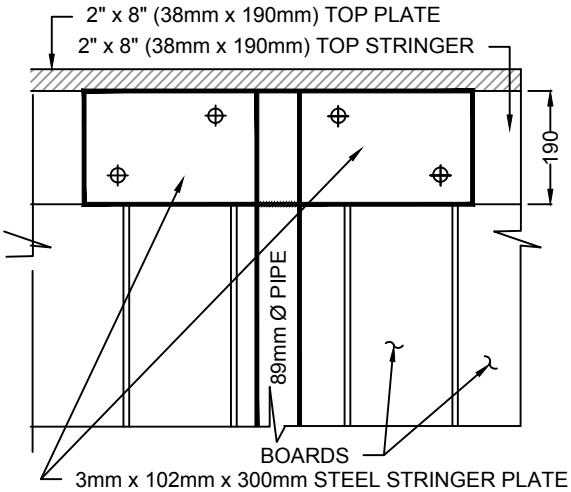
OUTDOOR RINK LAYOUT

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 31-MAR-1994 SCALE: N.T.S. DRAWN: D. LECKIE

DRAWING NUMBER: 61812

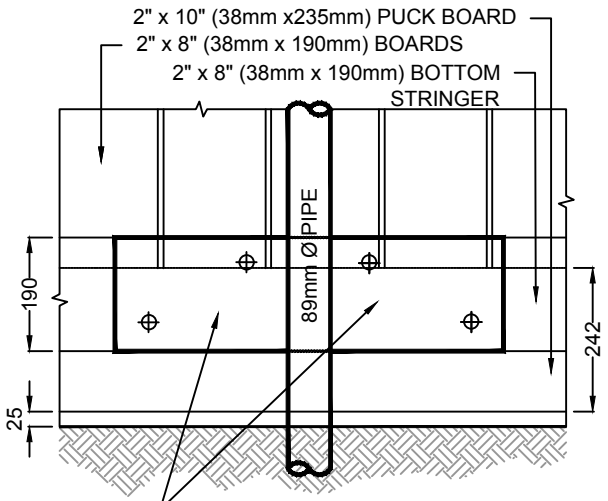
Planning & Development Services Department





3mm x 102mm x 300mm STEEL STRINGER PLATE WITH FOUR PRE-DRILLED 13mm HOLES WELDED TO POST & ATTACHED TO STRINGER WITH FOUR CARRIAGE BOLTS

TOP STRINGER PLATE



3mm x 102mm x 300mm STEEL STRINGER PLATE WITH FOUR PRE-DRILLED 13mm HOES WELDED TO POST & ATTACHED TO STRINGER WITH FOUR CARRIAGE BOLTS

BOTTOM STRINGER PLATE

NOTES:

1. ALL WOOD TO BE PRESSURE TREATED. ALLOW A MINIMUM OF 3 MONTHS OF DRYING PRIOR TO APPLYING PAINT.
2. ALL BOARDS TO RECEIVE TWO COATS OF PAINT.
3. ALL WELDS TO BE PAINTED WITH ZINC OXIDE. ALL METAL SURFACES TO BE PAINTED WITH TWO COATS OF TREMCLAD FLAT WHITE FOR METAL OR EQUIVALENT.
4. TENSION BANDS TO BE INSTALLED ON END POSTS AT 500mm O.C. SPACING.
5. STEEL WIRE TIES ARE TO BE USED, NOT ALUMINUM.
6. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
7. ALL WOOD TO BE PRESSURE TREATED. ALLOW A MINIMUM OF 3 MONTHS OF DRYING PRIOR TO APPLYING PAINT.

REVISIONS

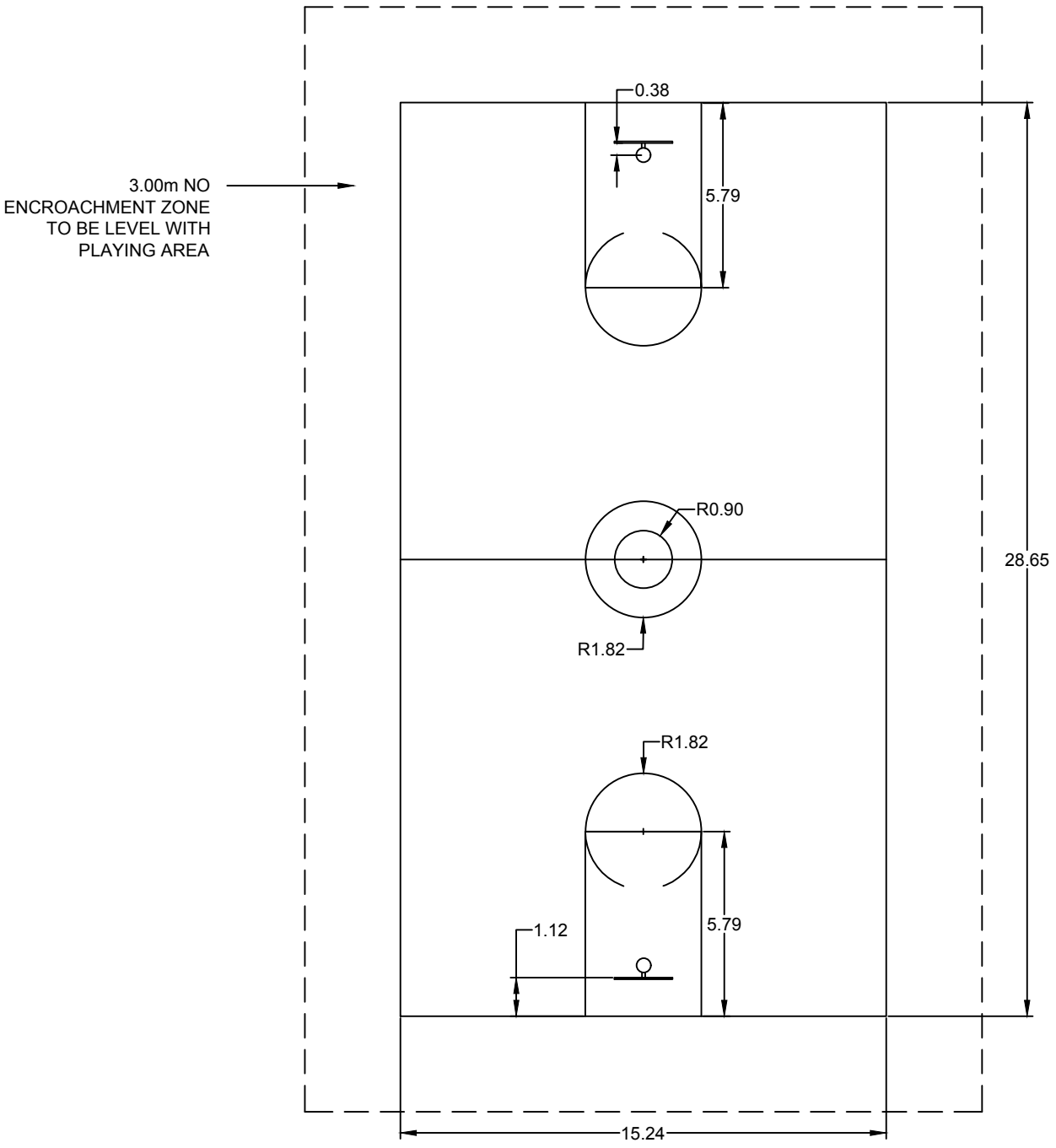
DATE	DETAILS	DRAWN
09-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBER	A. DAM
22-OCT-2012	REVISED DRAWING NUMBER	J. EGGEN
06-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

OUTDOOR RINK FENCE DETAIL

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 31-MAR-1994 SCALE: N.T.S. DRAWN: D. LECKIE

DRAWING NUMBER:
61813
Planning & Development Services Department



NOTES:

1. PLANT MATERIAL TO BE INSTALLED OUTSIDE THE NO ENCROACHMENT ZONES AND SET BACK A MINIMUM OF 5.0 m FROM THE TREE TRUNK TO THE NO ENCROACHMENT ZONE.
2. ALL DIMENSIONS ARE IN METRES (m), UNLESS OTHERWISE NOTED.
3. MEASURE TO INSIDE EDGE OF BOUNDARY LINES.
4. SEE DRAWING 61815 FOR OUTDOOR BASKETBALL BACKBOARD/POST.

REVISIONS

DATE	DETAILS	DRAWN
13-MAR-2019	REVISED NOTES	J. ORR
09-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBER & NOTE	A. DAM
22-OCT-2012	REVISED DRAWING NUMBER	J. EGGEN
03-MAY-2011	REVISED DRAWING NUMBER & REVISIONS	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

BASKETBALL COURT LAYOUT

APPROVED: J. BUCHKO, AALA, CSLA

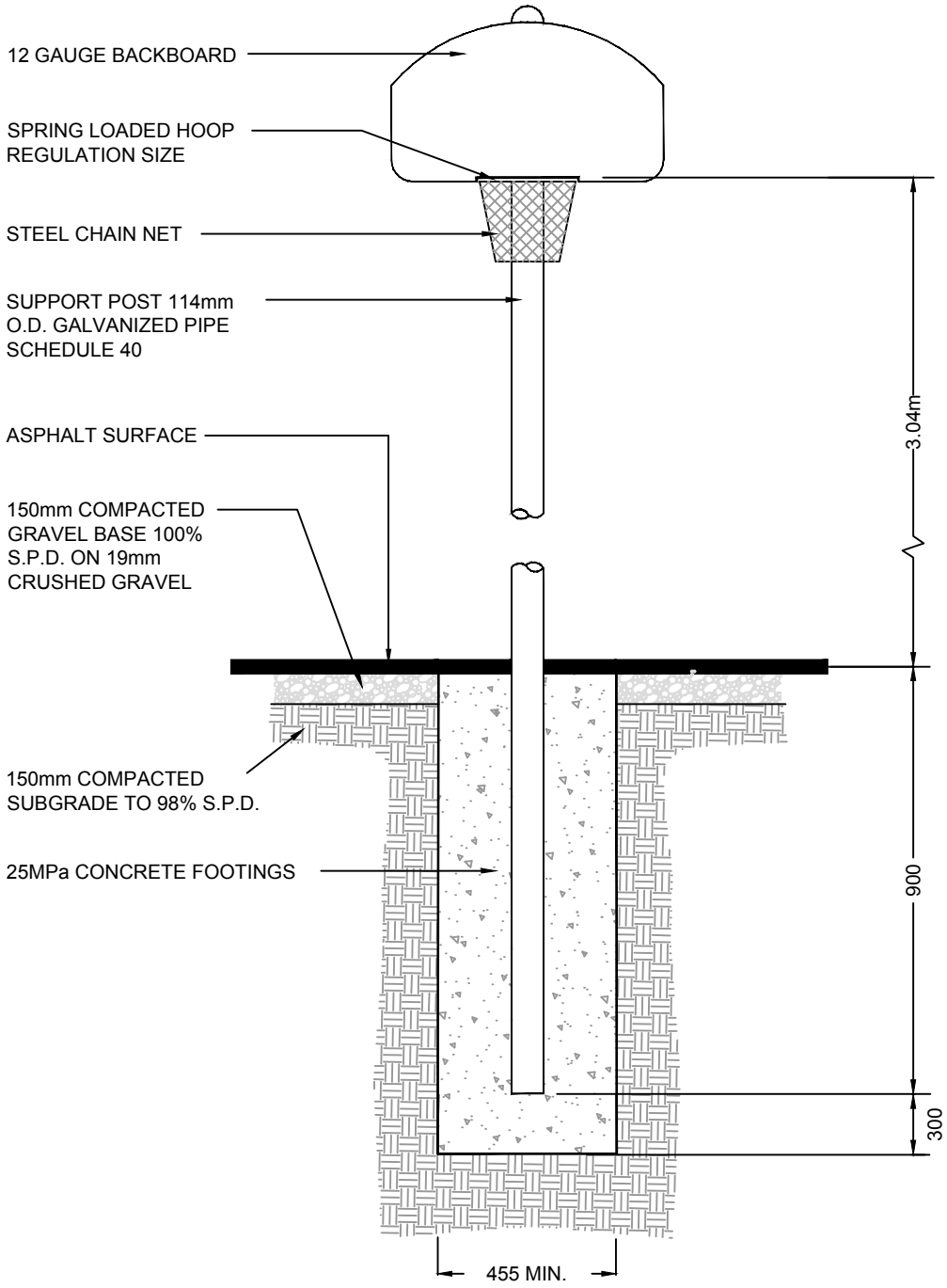
CHECKED: C. HUMBLE, LAT

DATE: 01-JUN-2001 | SCALE: N.T.S. | DRAWN: A. MCLENAGHAN

DRAWING NUMBER

61814

Planning & Development Services Department



NOTES:
1. SLOPES TO BE BETWEEN 1.5% AND 2%.
2. TO BE GRADED TO FIT WITH SURROUNDING LANDSCAPING.
3. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

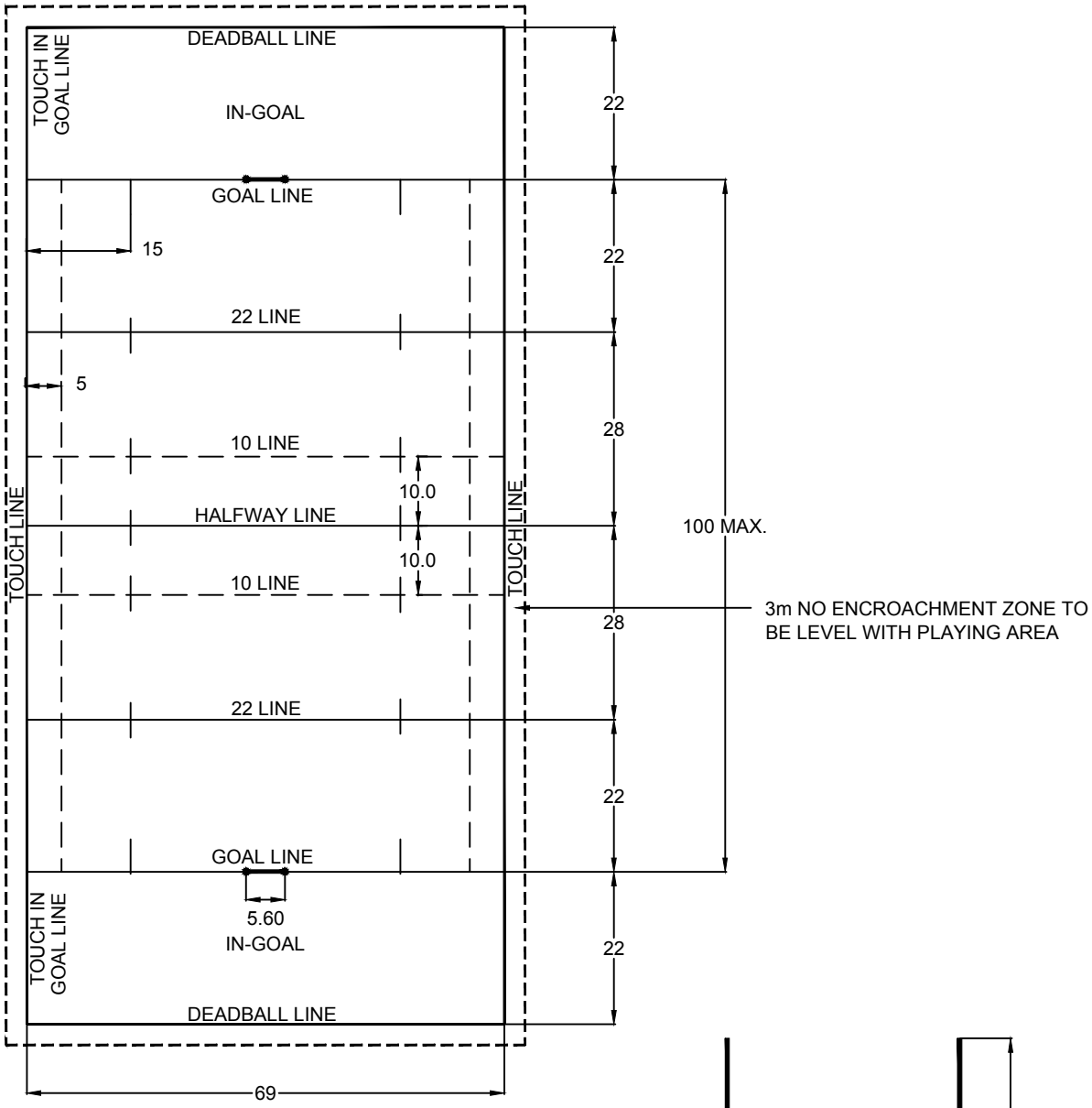
DATE	DETAILS	DRAWN
09-JUL-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
06-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
17-FEB-2005	ADDED CONCRETE TO FOOTING	L. LAING

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

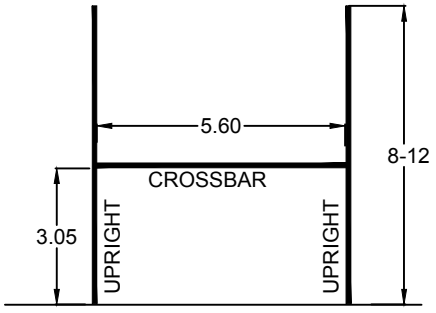
OUTDOOR BASKETBALL - BACKBOARD/POST

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 29-MAR-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER
61815
Planning & Development Services Department



PLAN VIEW



GOAL

NOTES:

1. PLAYERS BENCHES TO BE LOCATED OUTSIDE NO ENCROACHMENT ZONE.
2. VEGETATION SHALL BE SET BACK A MINIMUM OF 5m MEASURED FROM CENTRE OF TREE TRUNK AND THE WOOD RETAINER.
3. ALL DIMENSIONS ARE IN METRES (m), UNLESS OTHERWISE NOTED.

REVISIONS

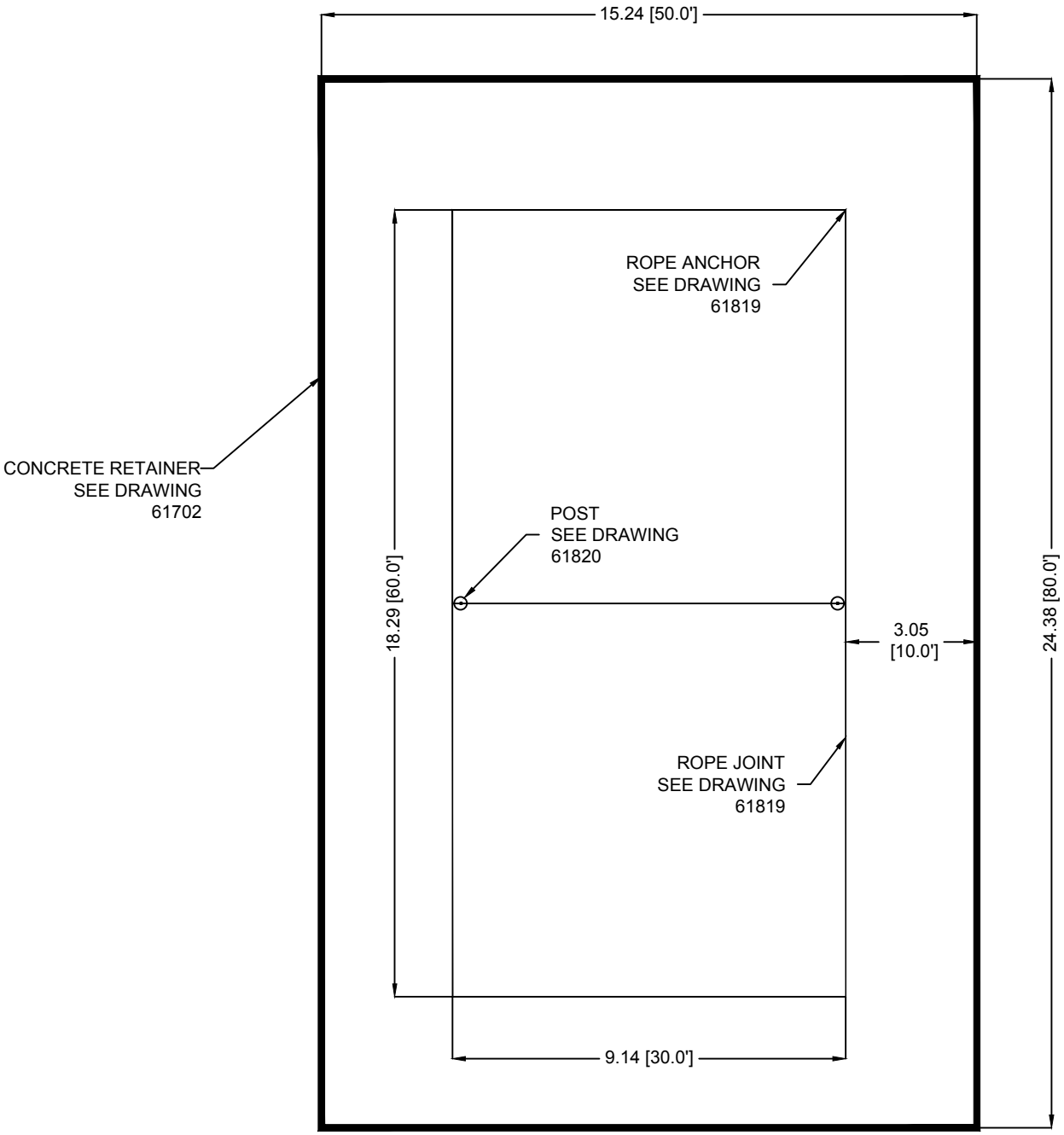
DATE	DETAILS	DRAWN
09-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY- 2013	REVISED DRAWING NUMBERS	A. DAM
06-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
24-JUN-2002	PRINTED	A. MCLENAGHAN

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

STANDARD RUGBY SPORTS FIELD

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 05-OCT-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER
61816
Planning & Development Services Department



NOTES:
1. VEGETATION SHALL BE SET BACK A MINIMUM OF 5m MEASURED FROM THE CENTRE OF THE TREE TRUNK AND THE CONCRETE RETAINER.
2. SLOPE TO ENSURE POSITIVE DRAINAGE.
3. ALL DIMENSIONS ARE IN METRES (m), UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
09-MAY-2019	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBER	A. DAM
06-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
20-JUN-2002	PRINTED	A. MCLENAGHAN

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

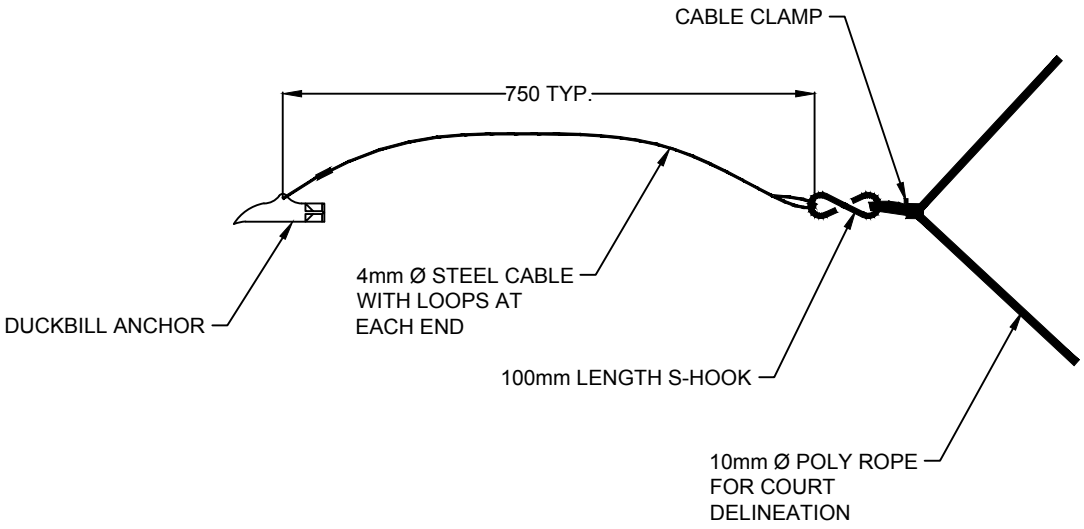
SAND VOLLEYBALL COURT LAYOUT

APPROVED: J. BUCHKO, AALA, CSLA

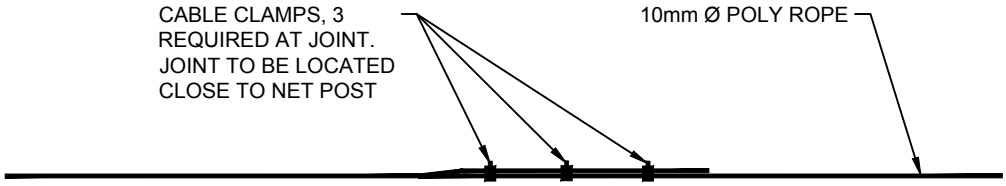
CHECKED: C. HUMBLE, LAT

DATE: 27-OCT-1997 | SCALE: N.T.S. | DRAWN: J. EDGINGTON, T.T.

DRAWING NUMBER
61817
Planning & Development Services Department



CORNER ANCHOR DETAIL



ROPE JOINT DETAIL

NOTES:
1. #68 DUCKBILL ANCHOR, DRIVEN INTO GROUND TO DEPTH OF LOOP.
2. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
11-MAR-2019	REVISED DRAWING	M. MOTIUK
09-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
06-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

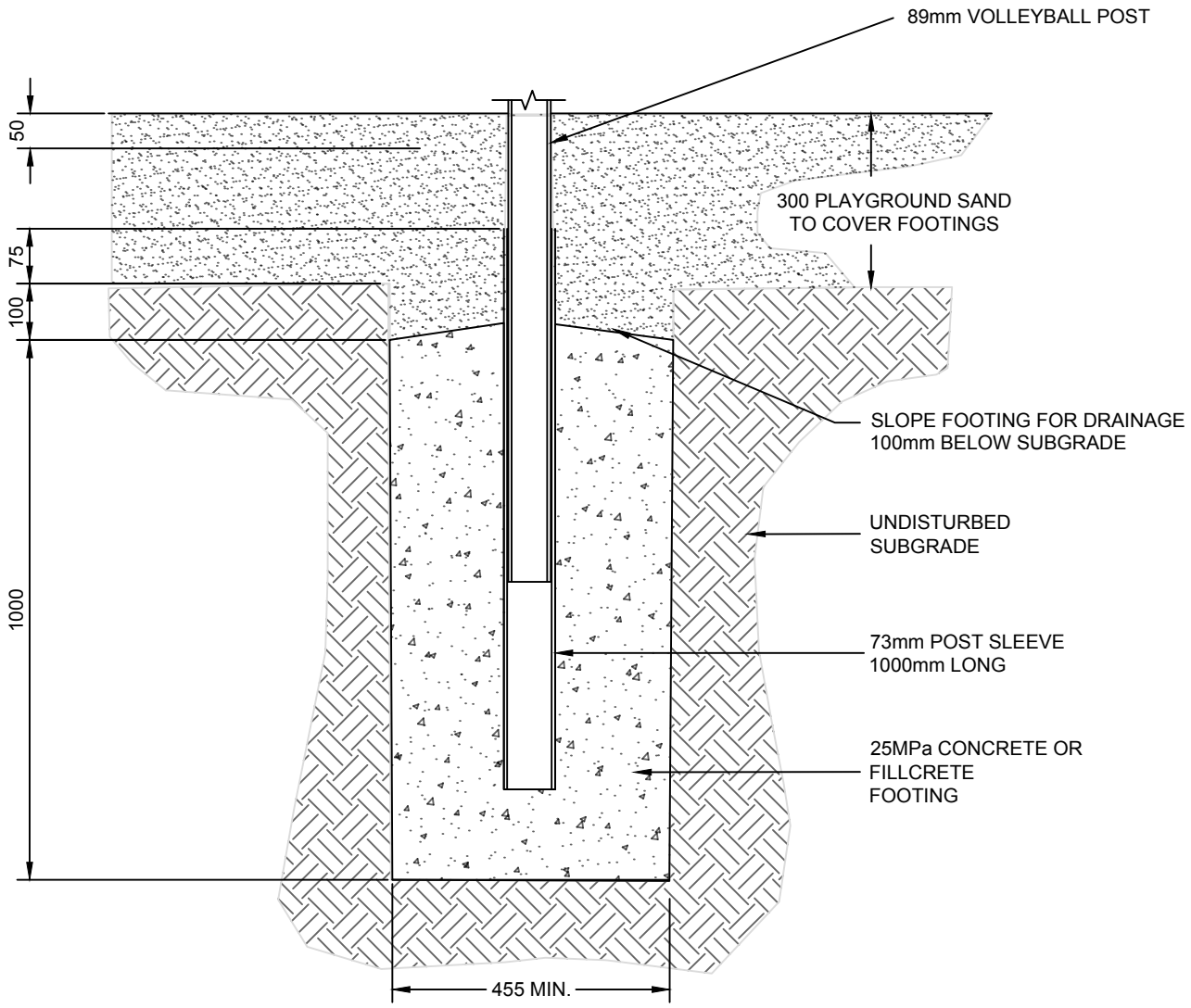
VOLLEYBALL COURT ROPE DETAILS

APPROVED: J. BUCHKO, AALA, CSLA

CHECKED: C. HUMBLE, LAT

DATE: 27-OCT-1998 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER
61818
Planning & Development Services Department



NOTES:
1. POSTS TO BE SUPPLIED AND INSTALLED WITH A GROUND SLEEVE.
2. VOLLEYBALL POST TO BE BLUE IMP. RC392 OR APPROVED EQUAL.
3. VOLLEYBALL NET TO BE BLUE IMP. RC389 OR APPROVED EQUAL.
4. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
5. AN ADJUSTABLE CRANK FOR NET IS REQUIRED.

REVISIONS

DATE	DETAILS	DRAWN
13-MAR-2019	REVISED DRAWING NUMBER, NOTES	S. ENGLEDER
09-MAY-2017	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

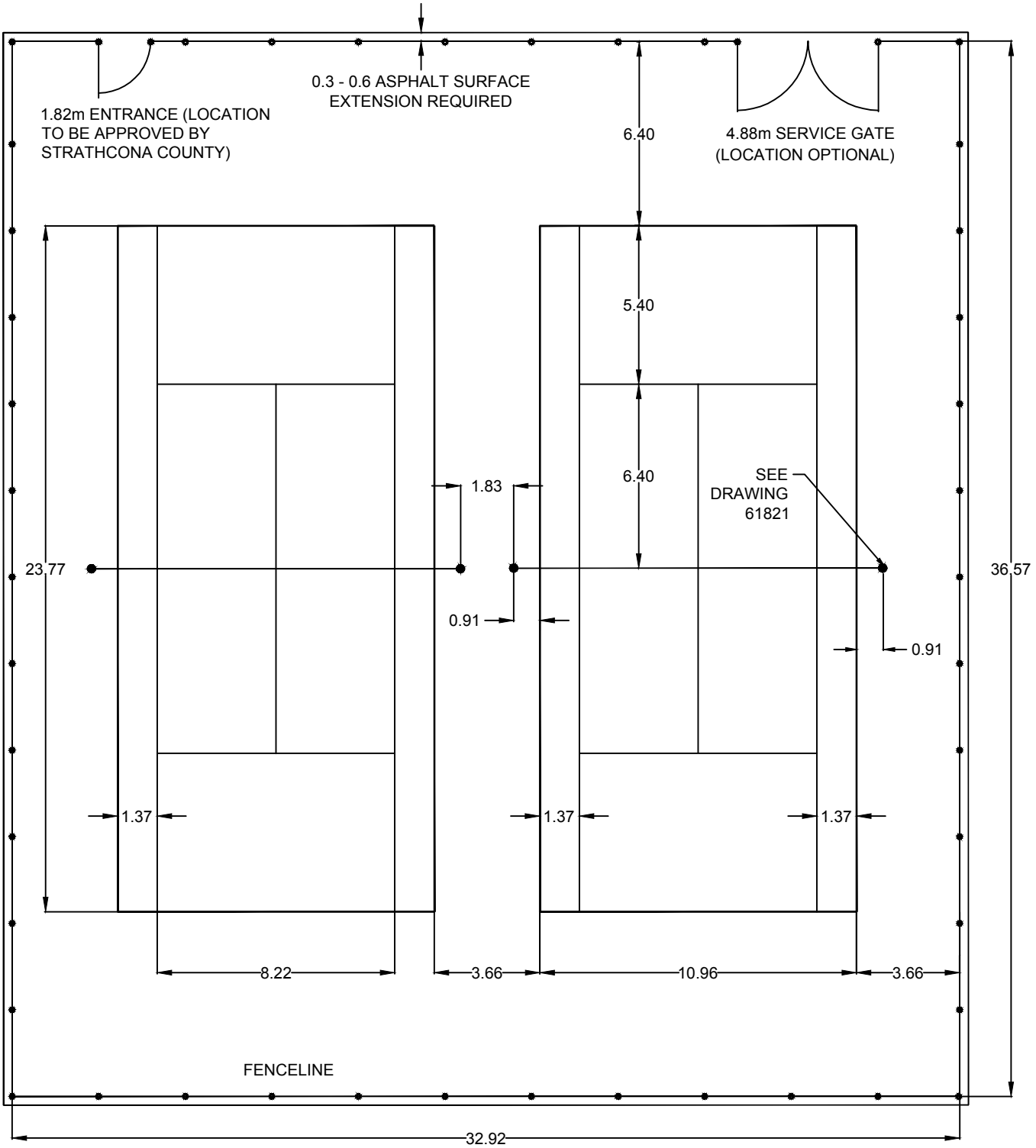
VOLLEYBALL COURT POST FOOTINGS

APPROVED: J. BUCHKO, AALA, CSLA

CHECKED: C. HUMBLE, LAT

DATE: 27-OCT-1998 | SCALE: N.T.S. | DRAWN: J. EDGINGTON, T.T.

DRAWING NUMBER
61819
Planning & Development Services Department



NOTES:

1. SEE DRAWING 61822 FOR TENNIS COURT SLOPE DRAINAGE.
2. ANY LIGHTS BUILT IN CONJUNCTION WITH A TENNIS COURT MUST HAVE THEIR BASES OUTSIDE THE FENCE SURROUNDING THE COURT.
3. ALL DIMENSIONS ARE IN METRES (m), UNLESS OTHERWISE NOTED.

COURT DIMENSIONS

RECOMMENDED	MINIMUM
3.66m BETWEEN SIDE OF COURT AND FENCE	2.74m
3.66m BETWEEN COURTS	2.74m
6.40m AT END OF COURT	4.87m

REVISIONS

DATE	DETAILS	DRAWN
13-MAR-2019	REVISED DRAWING NUMBER	S. ENGLEDER
07-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
06-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

TENNIS COURT LAYOUT

APPROVED: J. BUCHKO, AALA, CSLA

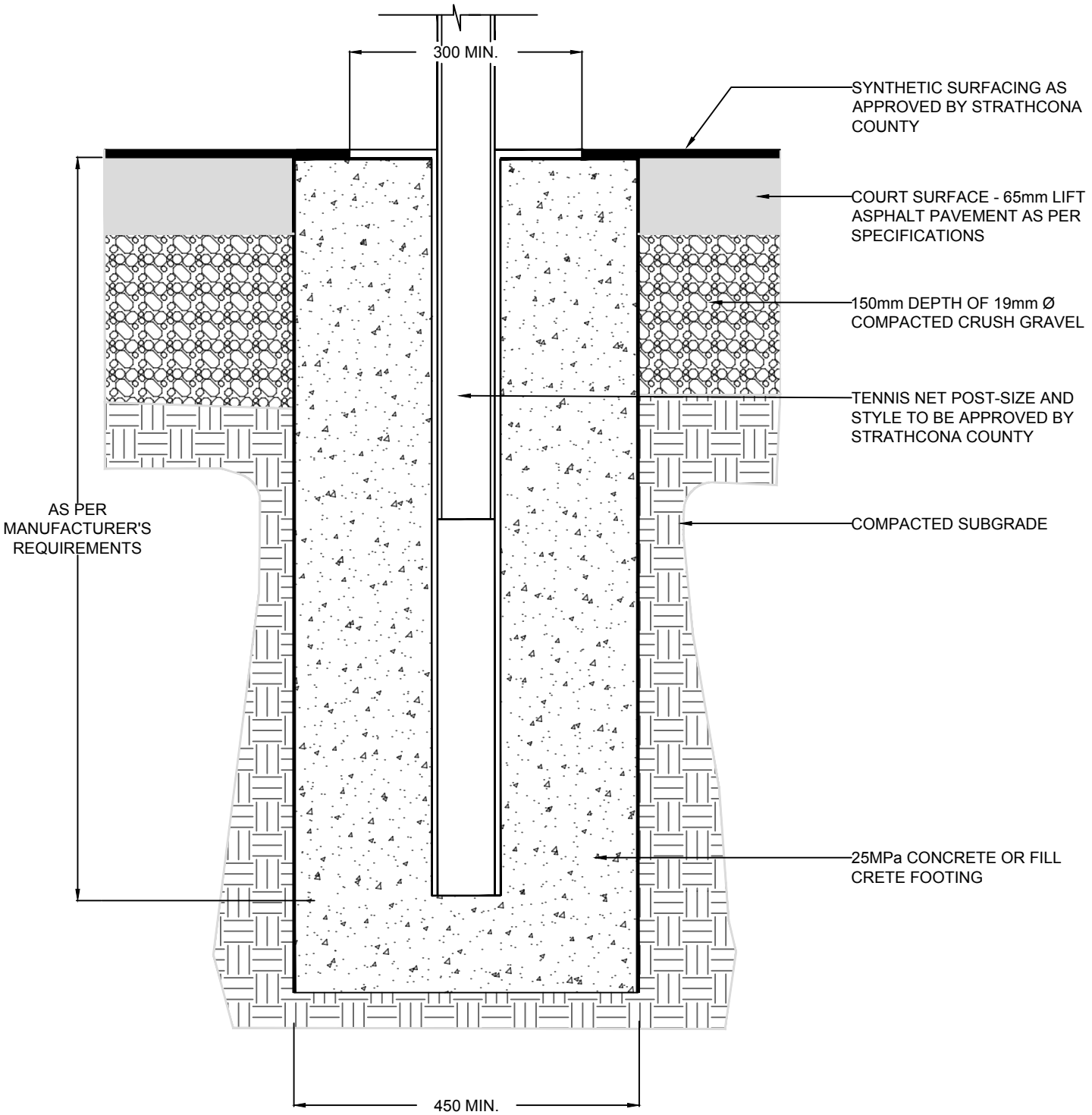
CHECKED: C. HUMBLE, LAT

DATE: 11-APR-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER

61820

Planning & Development Services Department



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.
2. POSTS TO BE SUPPLIED AND INSTALLED WITH A GROUND SLEEVE WITH FLANGE FLUSH WITH ASPHALT SURFACE.

REVISIONS

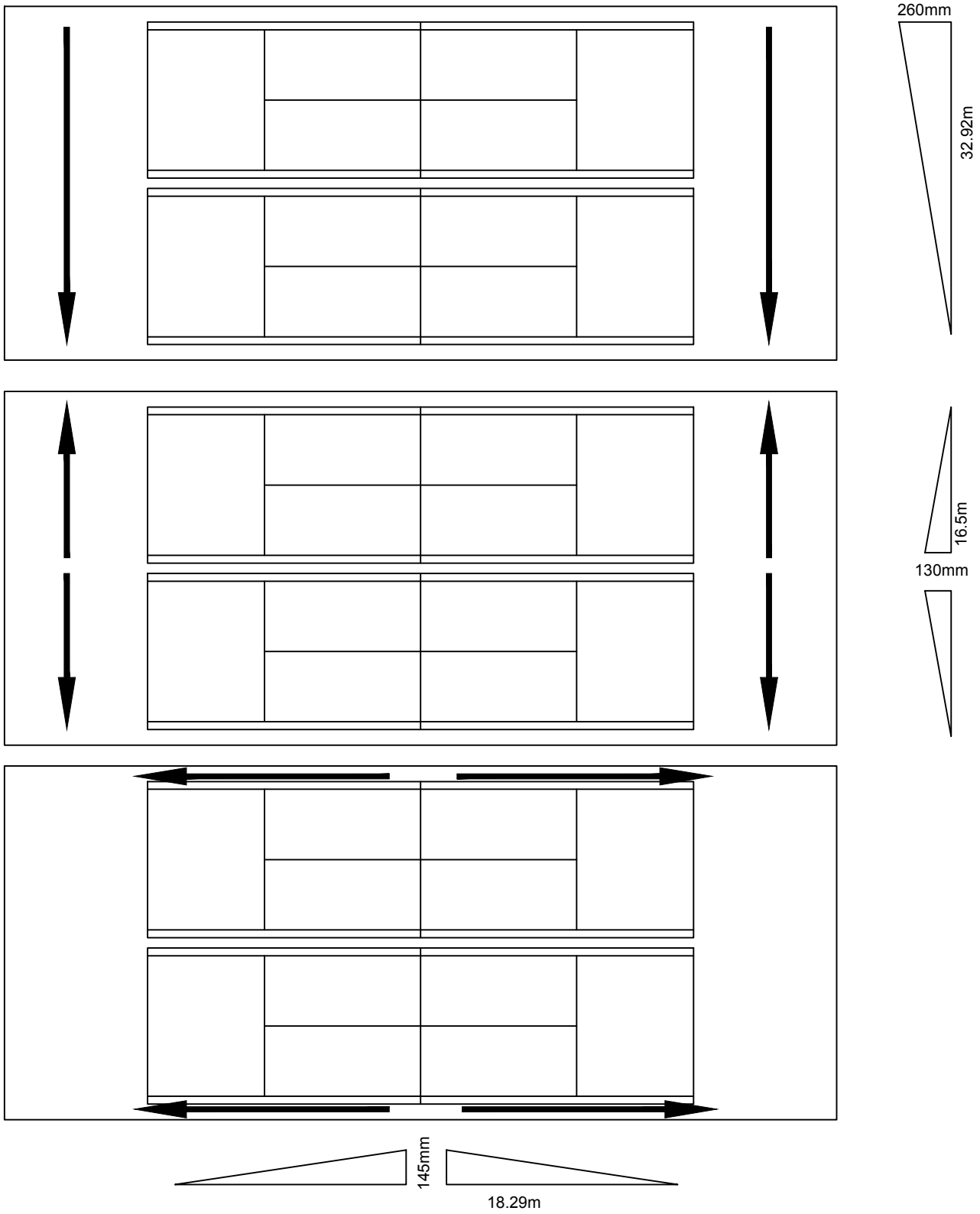
DATE	DETAILS	DRAWN
13-MAR-2019	REVISED DRAWING NUMBER	S. ENGLEDER
07-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBER	A. DAM
06-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

TENNIS COURT POST FOOTINGS

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 12-APR-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER
61821
Planning & Development Services Department



NOTE:
1. THE SLOPE FOR AN ASPHALT COURT SHOULD BE 0.8% OR 25.4mm DROP FOR EVERY 3m IN LENGTH.

REVISIONS

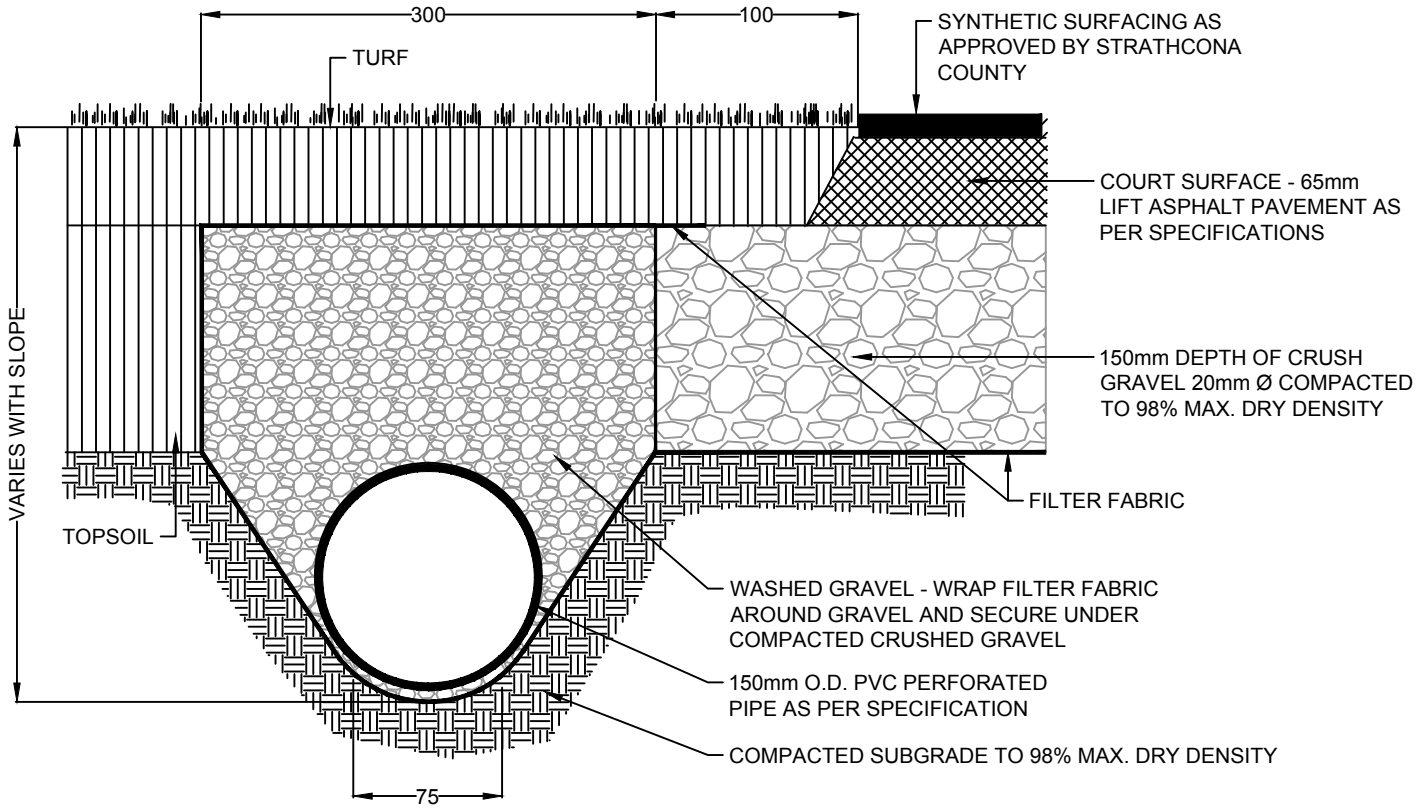
DATE	DETAILS	DRAWN
13-MAR-2019	REVISED DRAWING NUMBER	S. ENGLEDER
09-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

TENNIS COURT SLOPE DRAINAGE

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 12-APR-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER
61822
Planning & Development Services Department



NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS

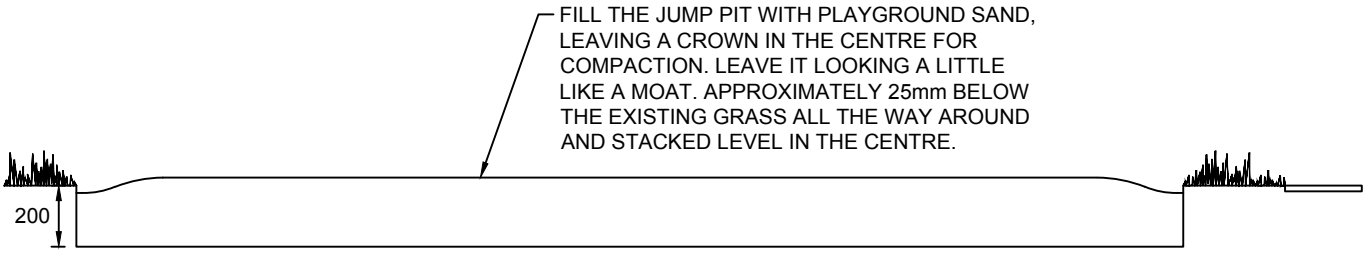
DATE	DETAILS	DRAWN
13-MAR-2019	REVISED DRAWING NUMBER, TEXT	S. ENGLEDER
07-MAY-2018	REVISED DRAWING	M. MOTIUK
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT

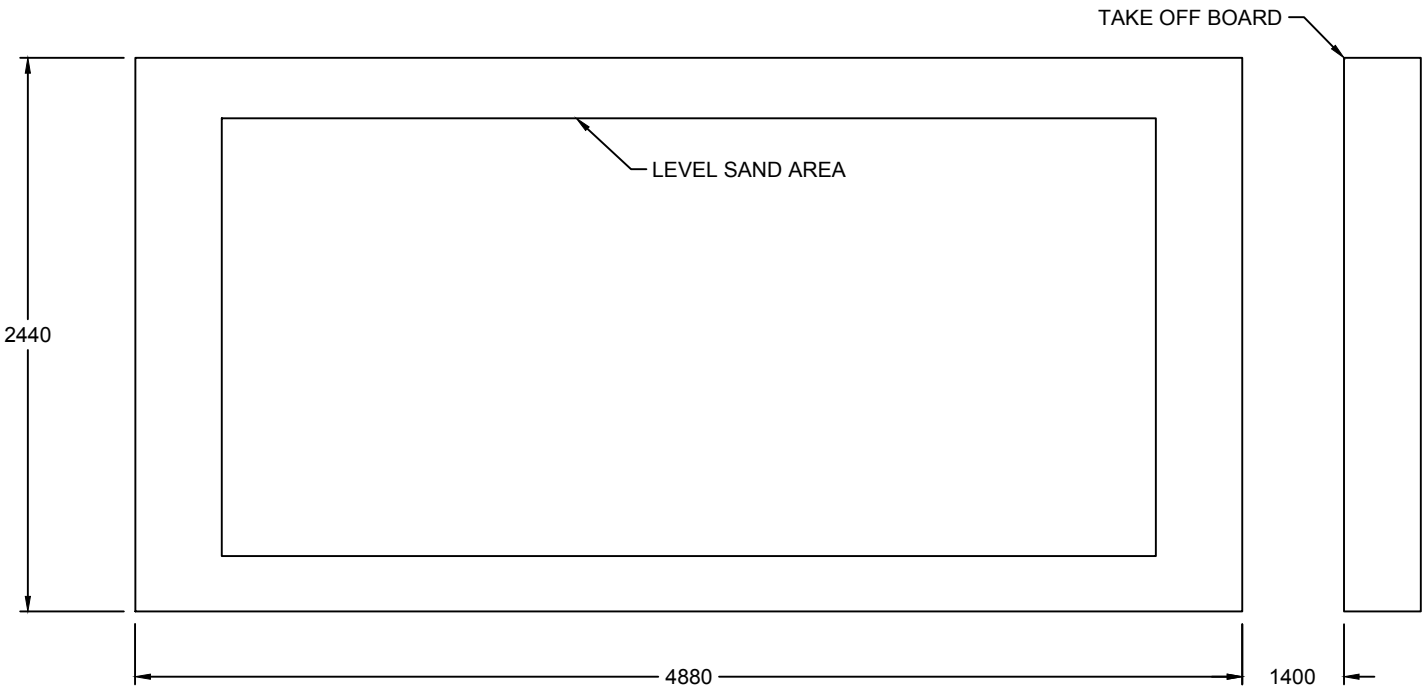
STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

TENNIS COURT SUBDRAINAGE SYSTEM

APPROVED: J. BUCHKO, AALA, CSLA
CHECKED: C. HUMBLE, LAT
DATE: 12-APR-1994 | SCALE: N.T.S. | DRAWN: D. LECKIE

DRAWING NUMBER
61823
Planning & Development Services Department





NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm), UNLESS OTHERWISE NOTED.

REVISIONS		
DATE	DETAILS	DRAWN
13-MAR-2019	REVISED DRAWING NUMBER, TEXT	S. ENGLEDER
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
03-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
10-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
10-MAR-2006	CHANGED JUMP PIT DEPTH	M. FORGUES

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

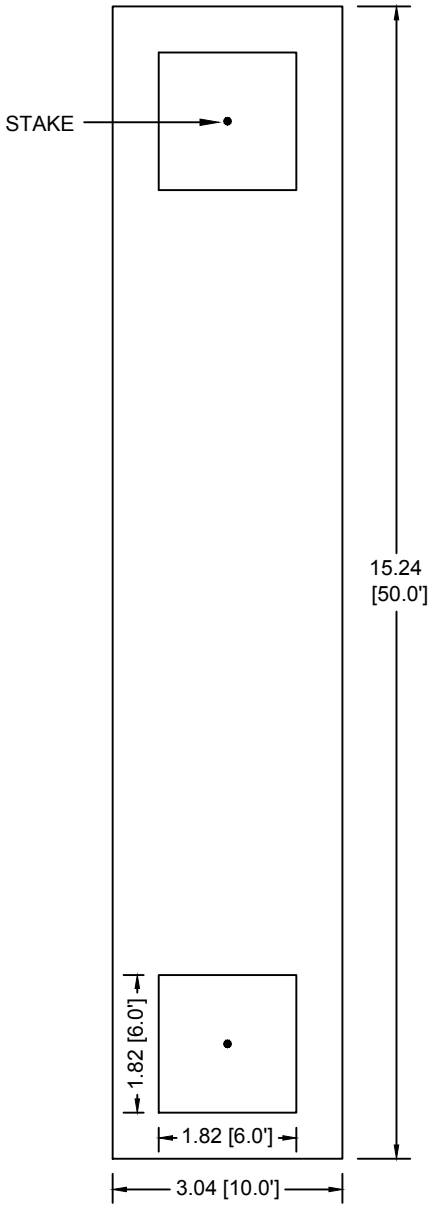
JUMP PIT DETAIL

APPROVED: J. BUCHKO, AALA, CSLA

CHECKED: C. HUMBLE, LAT

DATE: 03-NOV-2005 | SCALE: N.T.S. | DRAWN: M. FORGUES

DRAWING NUMBER
61824
Planning & Development Services Department



NOTES:

1. BASE OF STAKES SHALL BE 12.2m APART. FOR A LADIES' COURT, BASE OF STAKES SHALL BE 9.15m APART.
2. STAKES TO BE STEEL, 25mm IN DIAMETER, AND EXTEND 350mm ABOVE GROUND.
3. ALL DIMENSIONS ARE IN METRES (m), UNLESS OTHERWISE NOTED.

REVISIONS

DATE	DETAILS	DRAWN
13-MAR-2019	REVISED DRAWING NUMBER, NOTES	S. ENGLEDER
01-MAY-2013	REVISED DRAWING NUMBERS	A. DAM
13-MAY-2011	REVISED DRAWING NUMBERS	J. ORR
09-FEB-2011	REVISED DRAWING NUMBERS	O. BUTT
24-JUN-2002	PRINTED	A. MCLENAGHAN

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

HORSE SHOE PIT LAYOUT

APPROVED: J. BUCHKO, AALA, CSLA

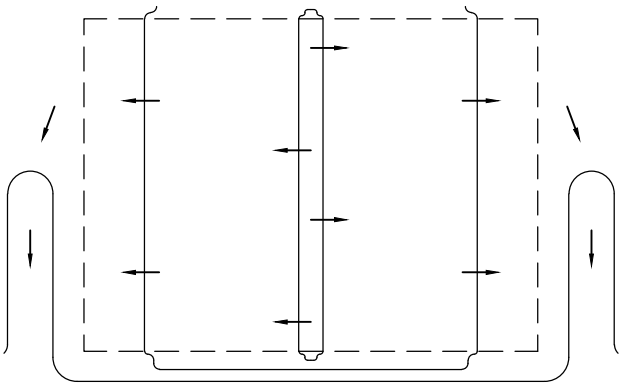
CHECKED: C. HUMBLE, LAT

DATE: 01-JUN-2001 | SCALE: N.T.S. | DRAWN: A. MCLENAGHAN

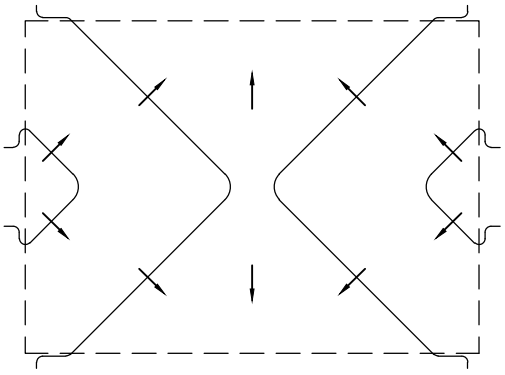
DRAWING NUMBER

61825

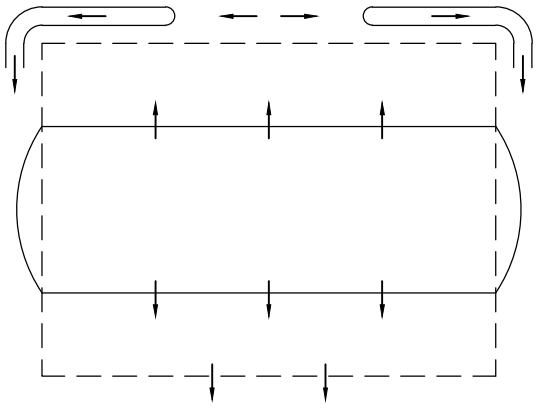
Planning & Development Services Department



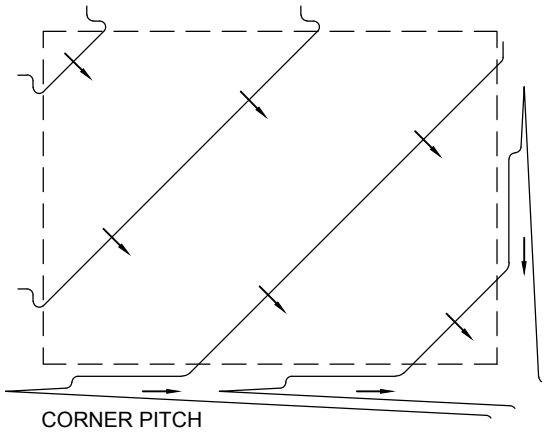
END



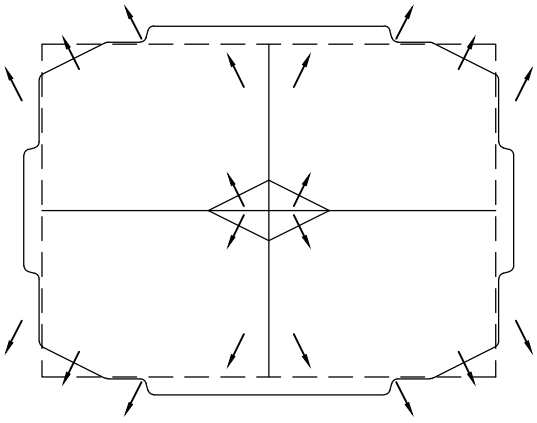
RIDGE



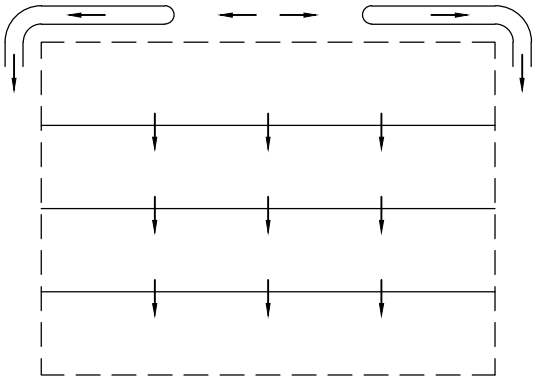
RIDGE



CORNER PITCH



HIGH POINT



LONGITUDINAL

NOTE:

1. THIS DETAIL IS INTENDED AS A REFERENCE ONLY. FIELD DRAINAGE SHOULD BE CONSIDERED AND DESIGNED ACCORDING TO SITE-SPECIFIC CONDITIONS, AND REFLECT MUNICIPAL, PROVINCIAL AND/OR FEDERAL GUIDELINES, INCLUDING MAXIMUM AND MINIMUM SLOPES, FOR THE INTEDED SPORT AND DESIRED LEVEL OF PLAY.

REVISIONS		
DATE	DETAILS	DRAWN
13-MAR-2019	REVISED DRAWING NUMBER	S. ENGLEDER
09-JUN-2018	NEW DETAIL	J. ORR

STRATHCONA COUNTY
2001 SHERWOOD DRIVE, SHERWOOD PARK
ALBERTA, T8A 3W7, CANADA

MULTI-PURPOSE FIELD DRAINAGE PATTERNS

APPROVED: J. BUCHKO, AALA, CSLA

CHECKED: C. HUMBLE, LAT

DATE: 09-JUN-2018 | SCALE: N.T.S. | DRAWN: J. ORR, C.E.T.

DRAWING NUMBER

61826

Planning & Development Services Department

STRATHCONA COUNTY

Contractors' Monthly Maintenance – Record

Planning and Development Services, 2001 Sherwood Drive, Sherwood Park, AB T8A 3W7 **Phone** 780-464-8010

Subdivision Name _____ Development Stage _____

Developer Name _____ Consultant Name _____

Contractor Name _____

Type of Maintenance	Week:	1	2	3	4
	Date:				
Turf					
Mow		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
Fertilizer		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
Water		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
Weed control*		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
Over-seed		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
Aeration		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
Trees					
Water		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
Fertilizer		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
Prune		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
Pest control*		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
Shrubs					
Water		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
Fertilizer		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
Prune		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
Pest control*		Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐

*(Include copy of biocide report with specific chemical application, rate and location)

Plant material replacement and species substitution (if applicable):

STRATHCONA COUNTY

Open Space Construction – Inspection Report

Planning and Development Services, 2001 Sherwood Drive, Sherwood Park, AB T8A 3W7 **Phone** 780-464-8080

Subdivision Name _____ Development Stage _____

Developer Name _____ Consultant Name _____

Contractor Name _____ Municipal Improvement _____

Inspection Date _____
(YYYY-MM-DD)

Construction Completion Certificate ☐ Final Acceptance Certificate ☐

Attendees (Name and Company)

Deficiencies

☐ Approved Report Due Date _____
(YYYY-MM-DD)

☐ Not Approved Follow-Up Inspection Date _____
(YYYY-MM-DD)

Collection and use of personal information
Personal information is being collected under the authority of s. 33(c) of the *Freedom of Information and Protection of Privacy Act* and will be used in the management and administration of programs related to Strathcona County's Design and Construction Standards and may be made public as allowed or required by law. If you have any questions about the collection, use or disclosure of your personal information, contact the Coordinator of Development Engineering and Construction at 780-464-8080.

Follow-Up Inspection Date _____
(YYYY-MM-DD)

Attendees (Name and Company)

Follow-Up Inspection Comments and/or Conditions of acceptance

☐ Approved ☐ Not Approved

Follow-Up Inspection Date _____
(YYYY-MM-DD)

Attendees (Name and Company)

Follow-Up Inspection Comments and/or Conditions of acceptance

☐ Approved ☐ Not Approved

1.0 GENERAL

1.1. INSPECTION PROCESS REQUIREMENTS

1.1.1. Future Addition

2.0 CCC – REQUIREMENTS

2.1. GENERAL

2.1.1. The Developer's Representative or Contract Manager shall submit the following to Planning and Development Services to request a CCC inspection:

2.1.1.1. Written request sent by email or mail.

2.1.1.2. Pre-inspection reports.
(i) Construction Completion – Infrastructure Summary
(ii) Landscape Inspection – Report
(iii) Closed Circuit Television (CCTV) Inspection – Request

2.1.1.3. Reduced drawings (11x17 set).

2.2. UTILITIES

2.2.1. Sanitary

2.2.1.1. Refer to VOL. 1 SEC. 4.2, WASTEWATER COLLECTION SYSTEM, SUB-SECTION 4.2.3.8.

2.2.1.2. Refer to VOL. 2 SEC. 501, INSTALLATION OF SEWERS, SUB-SECTION 3.21.

2.2.2. Water

2.2.2.1. Refer to VOL. 1 SEC. 4.3, WATER DISTRIBUTION SYSTEM, SUB-SECTION 4.3.3.10.

2.2.2.2. Refer to VOL. 2 SEC. 501, INSTALLATION OF SEWERS, SUB-SECTION 3.21.

2.2.3. Storm

2.2.3.1. Refer to VOL. 1 SEC. 4.4, STORM WATER MANAGEMENT SYSTEM SUB-SECTION 4.4.3.8.

2.2.3.2. Refer to VOL. 2 SEC. 501, INSTALLATION OF SEWERS, SUB-SECTION 3.21.

2.2.3.3. Refer to VOL. 2 SEC. 605, CONSTRUCTED WETLANDS, SUB-SECTION 2.0.

2.3. ROADS

2.3.1. Roads

2.3.1.1. Refer to VOL. 1 SEC. 4.1, ROADS, SUB-SECTION 4.1.13.10.

2.3.1.2. Refer to VOL. 1 SEC 5.1, RURAL TRANSPORTATION, SUB-SECTION 5.1.17.

2.3.2. Pavement Markings

2.3.2.1. Refer to VOL. 2 SEC. 701, PAVEMENT MARKING – GENERAL, SUB-SECTION 3.10.

2.3.3. Traffic Signals

2.3.3.1. Future addition

2.4. OPEN SPACE

2.4.1. Inspection Categories

2.4.1.1. Refer to VOL. 1 SEC. 6.0, OPEN SPACE, SUB-SECTION 6.13.2.

2.4.2. Soft Landscape

2.4.2.1. Refer to VOL. 2 SEC. 601, LANDSCAPE SUBGRADE PREPARATION, SUB-SECTION 3.0.

2.4.2.2. Refer to VOL. 2 SEC. 602, INSTALLATION OF TOPSOIL, SUB-SECTION 4.0.

2.4.3. Seed and Sod

2.4.3.1. Refer to VOL. 2 SEC. 603, SEED AND SOD, SUB-SECTION 4.0.

2.4.4. Plant Material

2.4.4.1. Refer to VOL. 2 SEC. 604, PLANT MATERIAL, SUB-SECTION 4.0.

2.4.5. Sports Fields

2.4.5.1. Refer to VOL. 2 SEC. 616, SOCCER FIELDS, SUB-SECTION 4.0.

2.4.5.2. Refer to VOL. 2 SEC. 617, BALL FIELDS, SUB-SECTION 4.0.

2.4.6. Gravel Trails

2.4.6.1. Refer to VOL. 2 SEC. 610, GRAVEL PEDESTRIAN TRAILS, SUB-SECTION 4.0.

2.4.7. Paving Stone

2.4.7.1. Refer to VOL. 2 SEC. 611, PAVING STONE, SUB-SECTION 4.0.

2.4.8. Playground and Outdoor Fitness Equipment

2.4.8.1. Refer to VOL. 2 SEC. 615, PLAYGROUND AND OUTDOOR FITNESS EQUIPMENT, SUB-SECTION 5.0.

3.0 FAC – REQUIREMENTS

3.1. GENERAL

3.1.1. The Developer's Representative or Contract Manager shall submit the following to Planning and Development Services to request a FAC inspection:

3.1.1.1. Written request sent by email or mail.

3.1.1.2. Pre-inspection reports.
(i) Construction Completion – Infrastructure Summary
(ii) Landscape Inspection – Report
(iii) Closed Circuit Television (CCTV) Inspection – Request
(iv) Contractors Monthly Maintenance – Verification

3.1.1.3. Reduced drawings (11x17 set).

3.1.1.4. As-built drawings (AutoCAD & full size, to scale PDF).

3.2. UTILITIES

3.2.1. Sanitary

3.2.1.1. Refer to VOL. 1 SEC. 4.2, WASTEWATER COLLECTION SYSTEM, SUB-SECTION 4.2.3.8.

3.2.1.2. Refer to VOL. 2 SEC. 501, INSTALLATION OF SEWERS, SUB-SECTION 3.21.

3.2.2. Water

3.2.2.1. Refer to VOL. 1 SEC. 4.3, WATER DISTRIBUTION SYSTEM, SUB-SECTION 4.3.3.10.

3.2.2.2. Refer to VOL. 2 SEC. 501, INSTALLATION OF SEWERS, SUB-SECTION 3.21.

3.2.3. Storm

3.2.3.1. Refer to VOL. 1 SEC. 4.4, STORM WATER MANAGEMENT SYSTEM SUB-SECTION 4.4.3.8.

3.2.3.2. Refer to VOL. 2 SEC. 501, INSTALLATION OF SEWERS, SUB-SECTION 3.21.

3.2.3.3. Refer to VOL. 2 SEC. 605, CONSTRUCTED WETLANDS, SUB-SECTION 3.0

3.3. ROADS

3.3.1. Roads

3.3.1.1. Refer to VOL. 1 SEC. 4.1, ROADS, SUB-SECTION 4.1.13.10.

3.3.1.2. Refer to VOL. 1 SEC 5.1, RURAL TRANSPORTATION, SUB-SECTION 5.1.17.

3.3.2. Pavement Markings

3.3.2.1. Refer to VOL. 2 SEC. 701, PAVEMENT MARKING – GENERAL, SUB-SECTION 3.10.

3.3.3. Traffic Signals

3.3.3.1. Future Addition

3.4. OPEN SPACE

3.4.1. Inspection Categories

3.4.1.1. Refer to VOL. 1 SEC. 6.0, OPEN SPACE, SUB-SECTION 6.13.2.

3.4.2. Seed and Sod

3.4.2.1. Refer to VOL. 2 SEC. 603, SEED AND SOD, SUB-SECTION 5.0.

3.4.3. Plant Material

3.4.3.1. Refer to VOL. 2 SEC. 604, PLANT MATERIAL, SUB-SECTION 5.0.

3.4.4. Sports Fields

3.4.4.1. Refer to VOL. 2 SEC. 616, SOCCER FIELDS, SUB-SECTION 5.0.

3.4.4.2. Refer to VOL. 2 SEC. 617, BALL FIELDS, SUB-SECTION 5.0.

3.4.5. Fencing

3.4.5.1. Refer to VOL. 2 SEC. 606, WOOD SCREEN AND NOISE ATTENUATION FENCE, SUB-SECTION 4.0.

3.4.5.2. Refer to VOL. 2 SEC. 607, CHAINLINK FENCE, SUB-SECTION 4.0.

3.4.5.3. Refer to VOL. 2 SEC. 608, PAIGE WIRE FNECE, SUB-SECTION 4.0.

3.4.5.4. Refer to VOL. 2 SEC. 609, STRAIGHT WIRE FNECE, SUB-SECTION 4.0.

3.4.6. Gravel Trails

3.4.6.1. Refer to VOL. 2 SEC. 610, GRAVEL PEDESTRIAN TRAILS, SUB-SECTION 5.0.

3.4.7. Paving Stone

3.4.7.1. Refer to VOL. 2 SEC. 611, PAVING STONE, SUB-SECTION 5.0.

3.4.8. Site Furniture

3.4.8.1. Refer to VOL. 2 SEC. 612, SITE FURNITURE, SUB-SECTION 4.0.

3.4.9. Open Space Signage

3.4.9.1. Refer to VOL. 2 SEC. 613, OPEN SPACE SIGNAGE, SUB-SECTION 4.0.

3.4.10. Community Gardens

3.4.10.1. Refer to VOL. 2 SEC. 614, COMMUNITY GARDENS, SUB-SECTION 5.0.

3.4.11. Playground and Outdoor Fitness Equipment

3.4.11.1. Refer to VOL. 2 SEC. 615, PLAYGROUND AND OUTDOOR FITNESS EQUIPMENT, SUB-SECTION 6.0.

3.4.12. Sports Fields

3.4.12.1. Refer to VOL. 2 SEC. 616, SOCCER FIELDS, SUB-SECTION 5.0.

3.4.12.2. Refer to VOL. 2 SEC. 617, BALL FIELDS, SUB-SECTION 5.0.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies requirements for working and compacting the subgrade soil for landscape areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative.

1.2 DEFINITIONS

1.2.1 Prepared Subgrade: soil immediately below the topsoil or other landscape treatment compacted to a depth of 150 mm, 300 mm, or as specified. It is the uppermost soil placed on an embankment or fill, or remaining in the bottom of a cut where no replacement fill is needed.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1 Use only subgrade soils with no deleterious material approved by the Contract Manager/Developer Representative.

2.2 EQUIPMENT

2.2.1 Various pieces of equipment designed for and capable of disking, scarifying, spreading, spraying water, compacting, and trimming soil to specified depth.

3.0 EXECUTION

3.1 GENERAL

3.1.1 Loosen soil to designated depth and break down lumps into uniform pieces to avoid compaction planes.

3.1.2 Moisture shall be added or removed as necessary to achieve optimum moisture content.

3.1.3 Spread soil in lifts not exceeding 150 mm when compacted. Compact each lift to the required density in SUB-SECTION 3.3 OF THIS SECTION.

3.1.4 Leave surface of compacted subgrade slightly higher than required elevation. Then trim to designated crown and grade, leaving finished surface free of depressions, humps and loose material.

3.1.5 Exclude stones larger than 100 mm from top 500 mm of design subgrade elevation.

3.1.6 Scarify subgrade over entire area to receive topsoil. Repeat cultivation in areas where equipment used for hauling and spreading has compacted subgrade.

3.1.7 Slope all grades away from buildings, trails, playgrounds, parking lots and sidewalks or as shown on the CONSTRUCTION DRAWINGS.

3.1.8 Prepare subgrade surface below the final grade to following grades unless otherwise shown on the CONSTRUCTION DRAWINGS:

(i) 125 mm (min.) for sodded areas below final design grade;
(ii) 150 mm (min) for seeded areas (except for naturalization seeded areas);
(iii) 175 mm for gravel trails;
(iv) 200 mm for soccer, football and turf ball fields;
(v) 220 mm for concrete pads;
(vi) 250 mm for shale ball fields;
(vii) 300 mm for naturalization seeded area;
(viii) 450 mm for community gardens; and,
(ix) 600 mm for shrub beds.

3.2 TOLERANCES

3.2.1 Quality Control: check finished surface of subgrade to ensure it meets the following tolerances:

(i) 6 mm maximum variation above designed elevation.
(ii) 25 mm maximum variation below designed elevation.

3.2.2 When Tolerance Exceeded:

(i) Trim high spots and refinish surface to within tolerance.
(ii) Add approved material to low areas, scarify and blend to full subgrade depth, re-compact to required density, and refinish surface. Alternatively, compensate low areas with extra thickness of subsequent base course.

3.3 DENSITY REQUIREMENTS

3.3.1 Maximum Density: as used in this article, is the dry unit mass of sample at optimum moisture content as determined in the laboratory according to ASTM D698 Method A.

3.3.2 Required Density:

(i) Minimum 98% of maximum density for the subgrade for playgrounds, outdoor fitness equipment and gravel trails.
(ii) Minimum 100% of maximum density for the subgrade for concrete pads, turf stone and paving stone.
(iii) There will be no specified density for seeded/sodded areas, shrub beds and sport fields.

3.3.3 Testing Frequency: the quality assurance laboratory will take a minimum of one field density test for each 1000 m^2 of compacted subgrade lift according to ASTM D1556, ASTM D2167, or ASTM D2922 for comparison with a maximum density determined according to ASTM D698 Method A.

3.3.4 Non-compliance: if a tested density is below the required density, rework the area represented by the failed test to full depth of lift, alter the soil moisture as necessary, and re-compact to required density.

3.3.5 The Contractor shall assume the risk of uncovering and reworking the subgrade if it is covered before the Contract Manager/Developer Representative has accepted test results thereof.

3.4 PROTECTION OF FINISHED WORK

3.4.1 Do not permit vehicle traffic over the prepared subgrade.

3.4.2 If subgrade floods, drain immediately. Drainage discharge location must be approved by Strathcona County by contacting Utilities Operations at scutilities@strathcona.ca prior to preceding operation.

3.4.3 Maintain protection of prepared subgrade until subsequent sub-base or base course is placed. Repair if damaged.

4.0 MEASUREMENT AND PAYMENT

4.1 The unit of measurement for the preparation of subgrade shall be the square metre. Unless otherwise stated, the quantity paid for shall be the number of square metres acceptably prepared as shown on the CONSTRUCTION DRAWINGS.

4.2 Payment at the respective Contract unit rate bid per square metre shall be full compensation for windrowing, scarifying, pulverizing, and compacting the subgrade, drying, or adding water, all temporary surface drainage which may be necessary during construction and repairing subgrade damaged by the weather or Contractor and for all labour and use of all equipment and incidentals necessary to complete the Work in accordance with the CONSTRUCTION SPECIFICATIONS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for topsoil installation in the areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative.

1.2 DEFINITIONS

1.2.1 Topsoil: as identified by the Canadian System of Soil Classification, topsoil, identified as the A, L, F, H and O layers, is the uppermost horizon of soil that is capable of growing and supporting vegetation. Topsoil contains the essential nutrients, microorganisms, organic matter and other physical characteristics needed to grow and sustain permanent vegetation.

1.2.2 On-site Native Topsoil: existing topsoil that is capable of growing and supporting vegetation as specified in SUB-SECTION 1.2.1 OF THIS SECTION.

1.2.3 Imported Topsoil: topsoil imported from an approved source that is capable of growing and supporting vegetation as specified in SUB-SECTION 1.2.1 OF THIS SECTION.

1.2.4 Live Soil: topsoil, peat and all materials within the soil, that could lead to vegetative establishment of a replacement wetland including seeds, spores, mycorrihizae, tubers and other propagules taken from an existing designated wetland (donor) site.

1.2.5 Weeds: includes but is not limited to jimsonweed (*Datura stramonium*) in addition to all noxious and prohibited weeds as identified under the Alberta Weed Control Act, Fisheries (Alberta) Act, and municipal bylaws.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1 On-Site Native or Imported Topsoil:

2.1.1.1 Topsoil may be used provided it meets the requirements below or is modified with approved soil amendments:

Sand (% of dry mass)	Maximum 65% (+/- 3%)
Clay (%of dry mass)	Maximum 35% (+/- 3%)
Silt (%of dry mass)	Not specified
Organic Matter	5 – 10% by dry mass
Electrical Conductivity	Maximum 1.5 mhos/cm2
Nitrate Nitrogen	10 – 20 ppm
Phosphorus	10 – 60 ppm
Potassium	80 – 250 ppm

2.1.1.2 Topsoil shall be free of subsoil, slag, stones over 25 mm, foreign matter, plant roots, debris, vegetation, and weeds.

2.1.1.3 Amendments to components shall be determined based on testing results and on recommendations from a Qualified Professional and approval of the Contract Manager/Developer Representative and Strathcona County representative. Native topsoil that varies from SUB-SECTION 2.1.1.1 OF THIS SECTION may be considered for native areas and restoration work and are to be approved on a site by site basis.

2.1.1.4 Topsoil amendments shall be screened not shredded through 5 mm screen. Topsoil to be free of subsoil, sawdust, commercial wood products, stones over 25 mm, plant roots, sticks, invasive and noxious plant parts and seeds as per the *Weed Control Act and Regulations*, high seed content, chemical contaminants and other organic or inorganic materials harmful to plant life.

2.1.1.5 Peat moss is not an approved topsoil amendment

2.1.2 Topsoil Mixes:

2.1.2.1 Soil mix for planting beds and community gardens must meet the topsoil specifications and be a 3-1-1 mix of topsoil, sand and compost.

2.1.2.2 Soil mix for top dressing for re-seeding of sport fields and turfed areas to meet the requirements below. Scarify bare areas prior to soil mix and seed application.

Sand (% of dry mass)	Maximum 80% (+/- 3%)
Clay (%of dry mass)	Maximum 7% (+/- 3%)
Silt (%of dry mass)	Maximum 12% (+/- 3%)
Organic Matter	6 – 10% by dry mass

2.1.2.3 Other composted soil mixes, pittmoss, coconut coir, composted agricultural by-products may be accepted by a Strathcona County representative.

2.1.2.4 Soil mix for community garden boxes, in ground plots or other edible landscaping for the purpose of growing vegetables and herbs will have organic matter content of 6% or greater. Soil mix will meet the top soil specifications. Amendments will be approved on case by case basis by the Strathcona County representative.

2.1.3 Live Soils:

2.1.3.1 Live soils may be used from recently displaced wetlands to build the wetland submergent, emergent and wet meadow zones within constructed wetlands.

2.1.4 Fertilizer:

2.1.4.1 Ratio of fertilizers as required from soil analysis results to bring fertility within the ranges specified in SUB-SECTION 2.1.1.1 OF THIS SECTION. Apply in accordance with the manufacturer's directions.

2.1.5 Horticulture Sand:

2.1.5.1 Sharp sand free of deleterious soluble salts and other contaminants likely to cause efflorescence and reduced skid resistance, and graded within the following limits:

Sieve Size (mm)	% Passing by Weight
2.5	100
1.25	85 – 100
0.8	80 – 90
.315	30 – 60
.16	2 – 10
.063	1% Maximum

2.1.6 Compost:

2.1.6.1 Compost shall satisfy the requirements for Class A compost as per the *CCME Guidelines for Compost Quality* in its latest edition

2.1.6.2 Commercially prepared compost shall be free from weed seeds, physical contaminants such as glass, metal, plastic, pathogen and heavy metal levels that may be detrimental to plant, animal or human health.

2.1.6.3 pH shall range between 5.5 and 7.5 and rocks shall be less than 0.5%.

2.1.6.4 The carbon to nitrogen ratio shall be 40:1 or less. Organic matter content should exceed 45%.

2.1.6.5 Contract Manager/Developer Representative shall approve the source of the compost. Laboratory records shall be submitted to the Strathcona County representative upon request to assure that the appropriate compost associated to the designated topsoil type and end use was used.

2.1.7 Lime:

2.1.7.1 Ground agricultural limestone containing minimum 85% of total carbonates.

2.1.8 Sulphur:

2.1.8.1 Finely crushed agricultural elemental sulphur, free of impurities.

2.2 EQUIPMENT:

2.2.1 Cultivators: capable of scarifying, discing or harrowing.

2.2.2 Rollers: of suitable size and mass for the work.

3.0 TEST PROCEDURES

3.1 Soils analysis shall be performed by an approved commercial laboratory (CSA/ASTM/CALA/The Canadian Association for Laboratory Accreditation) that is ISO 17025 accredited.

3.2 Such analysis shall be performed on samples from each topsoil source, and shall determine available nitrogen, phosphorus, potassium, electrical conductivity and soil texture (sand, silt, clay and organic matter) conforming to SUB-SECTION 2.1.1.1 OF THIS SECTION.

3.3 Recommendations for amendments to be requested from qualified professional. The information to be submitted to Contract Manager/Developer Representative for approval.

3.4 Strathcona County representative may request the analysis report at any time for review.

3.5 Topsoil must be tested for the presence of clubroot. Topsoil that is confirmed positive with clubroot shall not be imported for use in the County. Pre-existing clubroot-positive soil must be addressed in the site-specific Clubroot Management Plan. Refer to CONSTRUCTION SPECIFICATION 7.000, MATERIAL TESTING FOR TESTING REQUIREMENTS.

3.6 The site-specific Clubroot Management Plan suitable for the development must be submitted to Strathcona County for approval prior to construction or development. Special considerations for working with clubroot-positive topsoil stockpiles near rivers, creeks and other waterbodies may be necessary.

4.0 EXECUTION

4.1 EXCAVATION, TOPSOIL STRIPPING, PROTECTION AND DISPOSAL

4.1.1 Processing and mixing of topsoil components shall be done thoroughly by a mechanized screening process. Topsoil shall be a homogeneous mixture.

4.1.2 Excavation, topsoil stripping, stockpiling, protection and disposal shall be executed in accordance with the requirements specified in VOL. 2 SEC. 201, EXCAVATION AND EMBANKMENT.

4.1.3 Collection of the live topsoil should take place when the material is dormant, when mortal damage as a result of excavation will be minimized. The donor site may require de-watering depending upon the preceding weather conditions. The boundaries of the desirable live topsoil area to be excavated will be determined in the field by the Contract Manager/Developer Representative.

4.1.4 The removal of the live topsoil shall be carried out with a track-mounted backhoe or equivalent low pad pressure vehicle. Live topsoil shall be removed to the full depth to which the limit of the dark organic material and useful plant parts extend. The Contractor shall carefully control their operations to ensure maximum salvage of the material without contaminating it with clay and other unsuitable materials.

4.1.5 Direct surface water away from stockpile site to prevent erosion or deterioration of materials.

4.1.6 Weeds must be mechanically or chemically controlled in accordance with the Alberta Weed Control Act, Fisheries (Alberta) Act, and municipal bylaws.

4.2 INSTALLATION

4.2.1 Scarify subgrade prior to installing topsoil.

4.2.2 Broadcast soil additives on subsoil base prior to topsoil installation if required from soil test results.

4.2.3 Do not mix topsoil and subsoil during loading and hauling.

4.2.4 Install dry topsoil during dry weather over approved dry, unfrozen subgrade.

4.2.5 Apply topsoil up to the following minimum depths after settlement (where available, apply excess agricultural soils to increase soil depths to avoid soils being relocated or disposed off-site):

(i) Minimum 100 mm for sodded areas;
(ii) Minimum 150 mm for seeded areas;
(iii) Minimum 200 mm for sport fields
(iv) Minimum 300 mm for naturalization seeded area; and,
(v) Minimum 450 mm for community garden plots;
(vi) Minimum 600 mm for shrub beds.

4.2.6 For topsoil depths greater than 300 mm, place topsoil at no greater than 150 mm lifts and compact with appropriate weighted landscape roller where applicable.

4.2.7 Placed topsoil shall be allowed to settle or shall be lightly compacted such that it is firm against deep footprints prior to planting, seeding or sodding. Compaction shall not be more than necessary to meet this requirement.

4.2.8 Manually spread topsoil around the drip line of trees and other plants to prevent damage by grading equipment.

4.2.9 Fine grade by floating prior to seeding or sodding to eliminate rough, low and soft areas to ensure positive drainage.

4.2.10 Leave surface smooth, uniform and sufficiently firm to prevent sink pockets when irrigated. Hand rake all areas not accessible by equipment.

4.2.11 Ensure interface edges between walkways, trails, sport fields, playgrounds, site furnishings, natural tree stands and all surrounding property receive required amount of topsoil for the landscape application and form a smooth even transition with positive drainage.

4.2.12 Landscape areas must provide smooth positive drainage towards catch basins and finish flush with the manhole or catch basin rim.

4.2.13 Do not bury refuse or foreign material of any kind on site.

4.2.14 Excavate and remove immediately from site all soil contaminated by oil, gasoline or any other substances harmful to healthy, vigorous plant growth.

4.2.15 Sites to receive the live soil shall be scarified to the depth specified on CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative, by ripping or discing prior to placement of the live topsoil.

4.2.16 The live soil shall be conveyed to the site and placed in the areas indicated on the drawings or as directed by the Contract Manager/Developer Representative. Material removed from the donor site locations shall be replaced by material approved by Contract Manager/Developer Representative.

4.2.17 In constructed wetlands, low-load tracked equipment will be required to place the live soil, at depths specified on CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative.

4.2.18 Any soil or debris spilled onto roads, walkways, and other finished surfaces must be cleaned up as soon as reasonable and prior to leaving the site for breaks or at the end of day.

4.2.19 On completion of the work, clean up and leave site free of debris, waste matter and unused materials.

4.3 TOLERANCES

4.3.1 Quality Control: Check finished surface of final grade to ensure it meets the following tolerances:

(i) 25 mm maximum variation above or below designed elevation.

4.3.2 When Tolerance Exceeded:

(i) Trim high spots and refinish surface to within tolerance.
(ii) Add approved material to low areas.

5.0 MEASUREMENT AND PAYMENT

5.1 Topsoil will be measured in cubic metre to the specified depth.

5.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for supply, installation, maintenance and inspection of seeding and sodding in the areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative.

1.2 DEFINITIONS

1.1.2 Weeds: includes but is not limited to jimsonweed (*Datura stramonium*) in addition to all noxious and prohibited weeds as identified under the Alberta Weed Control Act, Fisheries (Alberta) Act, and municipal bylaws.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1 Seed Mixes:

2.1.1.1 Use only Certified Canada No. 1 varieties in accordance with the Canadian Seeds Act and Regulations and having minimum purity of 97% and germination of 75%, and be mixed to the following by weight:

(i) General park mix (225kg per hectare – mowing required):
20% creeping red fescue (*festuca rubra)* - minimum 2 varieties;
20% tall fescue (*festuca arundinacea*) - minimum 2 varieties;
20% Kentucky bluegrass (*poa pratensis*), drought resistant variety - single variety;
20% chewings fescue (*festuca rubra commutata*) - single variety; and,
20% perennial ryegrass (*lolium perenne*) - single variety.

(ii) Boulevard mix (225kg per hectare - mowing required):
20% hard fescue (festuca trachphylla) - single variety;
20% sheep fescue (festuca ovina) - single variety;
20% creeping red fescue (festuca rubra) - minimum 2 varieties;
20% Canada bluegrass (poa compressa) - single variety;
20% perennial ryegrass (lolium perenne) - single variety; and,

(iii) Rural road mix (250kg per hectare – limited mowing required):
25% creeping red fescue (*festuca rubra)* - minimum 2 varieties;
25% tall fescue (*festuca arundinacea*) - minimum 2 varieties;
20% northern wheatgrass (*elymus lanceolatus*) - minimum 2 varieties;
20% tickle grass (*agrostis scabra*) - single variety; and,
10% slender wheatgrass (*elymus trachycalus*) - single variety.

(iv) Naturalization mix (250kg per hectare – no mowing required):
20% sheep fescue (*festuca ovina*) - single variety;
20% foothills rough fescue (*festuca campestris)* - minimum 2 varieties;
20% creeping red fescue (*festuca rubra)* - single variety;
20% slender wheatgrass (*elymus trachycalus*) - single variety.
10% purple prairie clover (*dalea purpureum*) - single variety;
10% tickle grass (*agrostis scabra*) - single variety.

(v) Wet meadow mix (200kg per hectare – no mowing required):
25% fowl bluegrass (*poa palustris*) - minimum two (2) varieties;
20% awned wheatgrass (*elymus tyrachcaulus ssp. subsecundus*) - single variety;
20% slender wheatgrass (*elymus trachycalus*) - single variety;
20% hard fescue (*festuca trachphylla*) - single variety;
10% sloughgrass (*beckmannia syzigachne*) - single variety; and,
5% American vetch (*vicia americano*) - single variety.

(vi) Salt affected wet meadow mix (60kg per hectare – no mowing required):
20% alkali grass (*puccinellia distans or nuttalliana*) - single variety;
20% slender wheatgrass (*elymus trachycalus*) - single variety;
30% Bebb's sedge (*carex bebbii*) - single variety; and,
30% sloughgrass (*beckmannia syzigachne*) - single variety.

(vii) Hay land mix (35-50kg per hectare, depending on conditions):
40% tall fescue (*festuca arundinacea*) - single variety;
20% sainfoin (*onobrychis viciifolia*) or low bloat alfalfa (*medicago sativa*) - single variety;
20% orchard grass (*dactylis glomerata*) - single variety; and,
10% Russian wildrye (*elymus junceus*) - single variety.

(viii) Pasture and idle land mix (30-50kg per hectare, depending on conditions):
20% tall fescue (*festuca arundinacea*) - single variety;
20% sainfoin (*onobrychis viciifolia*); or low bloat alfalfa (*medicago sativa*) - single variety;
15% Russian wildrye (*elymus junceus*); or
perennial ryegrass (*lolium perenne*) - single variety;
15% brome grass (*bromus anomalus*) - single variety;
15% creeping red fescue (*festuca rubra)* - single variety; and,
15% slender wheatgrass (*elymus trachycalus*) - single variety.

2.1.1.2 Provisions that vary from SUB-SECTION 2.1.1.1 OF THIS SECTION may be considered and must approved by Strathcona County, including:

(i) Seed mixes may be modified for particular conditions i.e., constructed wetlands, erosion, naturalization, and restoration.
(ii) Seed mixes may be modified due to the lack of commercial availability.

2.1.2 Sod:

2.1.2.1 Nursery grown, minimum 25% hard fescue, 25% chewings fescue, 25% creeping red fescue, and 25% rocky mountain fescue blended equally, of certified Canada no. 1 seed if available locally. Other local nursery sod mixes may be approved by a Strathcona County representative.

2.1.2.2 Sod to be healthy and vigorous with a strong, fibrous root system, free of stones, burned or bare spots, disease, insect infestation, netting, and contain no more than 1% weeds and other grasses.

2.1.2.3 Cut in accordance with recommendations of Nursery Sod Growers Association of Alberta, approximately 0.5 m^2 in area and have 13-25 mm soil thickness.

2.1.3 Fertilizer:

2.1.3.1 Formula ratio of fertilizers used at time of seeding, sodding and as supplementary during maintenance period to be determined from topsoil analysis results and approved by Contract Manager/Developer Representative prior to application.

2.1.3.2 Fertilizer shall be packaged in waterproof bags labelled clearly, indicating net mass, analysis and manufacturer. Apply in accordance with the manufacturer's directions.

2.1.4 Turf Establishment Blanket:

2.1.4.1 As specified on the CONSTRUCTION DRAWINGS, matting or approved equal to be used on banks of SWMFs, culverts, slopes and any other areas where excessive erosion may occur.

2.1.5 Staples:

2.1.5.1 Steel wire, 25 mm wide by 200 mm deep by 3 mm diameter.

2.1.6 Mulch:

2.1.6.1 Material shall be wood cellulose fibre containing no contaminant.

2.1.6.2 Fibre shall be supplied by a recognized supplier and shall have a certified weight and composition.

2.1.6.3 Minimum application rate is 16.0 kg of air dry fibre per 100 m^2

2.1.6.4 Fibre shall be measured as it is fed into the seeder.

2.1.7 Water:

2.1.7.1 Potable, free of minerals and chemicals that may be detrimental to plant growth. Water shall be hauled from a local standpipe or by contacting Utilities Operations at scutilities@strathcona.ca for arrangements for use of fire hydrants or SWMFs.

2.2 EQUIPMENT

2.2.1 Dry seeders: "brillion" type or similar mechanical seeder, capable of rolling and covering the seed with 3 mm to 6 mm of soil.

2.2.2 Hydro-seeder: capable of thoroughly mixing water, seed, fertilizer, and pulverized wood fibre and of uniformly spraying the mix at designated rate.

2.2.3 Roller: of suitable size and mass for the work.

2.2.4 Ensure equipment is cleaned, free of soil and seed to prevent site contamination.

3.0 EXECUTION

3.1 MATERIAL DELIVERY, HANDLING AND STORAGE

3.1.1 Use all means necessary to protect material before, during and after installation. Provide adequate protection to materials which may deteriorate if exposed to weather.

3.1.2 Store fertilizer on pallets and protect from weather. Forward all labels to Contract Manager/Developer Representative at time of construction completion.

3.1.3 Deliver and store grass seed in original packages with label indicating:

(i) Analysis of seed mixture;
(ii) Percentage of pure seed by weight;
(iii) Year of production;
(iv) Net mass; and,
(v) Date tagged and location.

3.1.4 Store all seed in dry, weatherproof place and protect from damage by heat, rodents and other causes.

3.1.5 Deliver sod to site within 24 hours of being lifted and lay sod within 36 hours of being lifted.

3.1.6 Do not deliver or install small, irregular or broken pieces of sod. Do not install two or more small pieces where one large piece could be installed.

3.1.7 During wet weather allow sod to dry sufficiently to prevent tearing during lifting and handling.

3.1.8 During dry weather protect sod from drying and water sod as necessary to ensure its vitality and prevent dropping of soil in handling. Dry sod will be rejected.

3.2 SITE PREPARATION

3.2.1 Verify the sub-grades with the Contract Manager/Developer Representative and ensure that the topsoil has been placed as per the CONSTRUCTION DRAWINGS. Loosen fine grade surface to be free of humps, hollows and deleterious materials.

3.2.2 Remove weeds and debris from topsoil surface already in place. If required, spray site allowing weeds to die off prior to completion of grading.

3.2.3 Apply fertilizer as required from topsoil analysis results and in accordance with the manufacturer's direction.

3.2.4 Spread fertilizer evenly and mix thoroughly into top 50 mm of topsoil not more than 48 hours before seeding.

3.3 SEED INSTALLATION

3.3.1 Apply the specified seed mixture as per SUB-SECTION 2.1.1.1 IN THIS SECTION.

3.3.2 Seed when weather conditions, soil temperatures and moisture conditions are suitable. Do not seed when seedbed is covered with frost, snow or standing water.

3.3.3 Seed half the amount of prescribed seed mix in one direction and seed the other half of seed mix in a perpendicular direction.

3.3.4 Seed using Brillion or similar mechanical seeder or hydro-seed as directed by the Contract Manager/Developer Representative.

3.3.5 In small areas where use of a mechanical seeder is impractical, seed by hand.

3.3.6 After seeding, ensure seed has contact with soil. Compact topsoil with light rolling to ensure design grades are maintained and surface is smooth and uniform.

3.4 HYDRO-SEED INSTALLATION

3.4.1 Apply the specified seed mixture as per SUB-SECTION 2.1.1.1 IN THIS SECTION.

3.4.2 Seed when weather conditions, soil temperatures and moisture conditions are suitable. Do not seed when seedbed is covered with frost, snow or standing water.

3.4.3 Hydro-seeding should not be carried out in wind velocities which cause seed mix to be blown.

3.4.4 Use a hydro-seeder to seed slopes 3:1 or steeper.

3.4.5 Mix seed with water, mulch and fertilizer in the following suggested quantities to cover 4,000 m^2:

(i) 80 kg of seed mix;
(ii) 6,400 litres of water;

(iii) 640 kg of wood fibre mulch; and,
(iv) 140 kg of fertilizer.

3.4.6 Do not spray seed and mulch mixture onto trees, bike paths, roads, parking lots, interlocking paving stone, bridges, houses, fences or other surfaces not meant for seeding. Remove over-spray.

3.4.7 Thoroughly mix seed, fertilizer, mulch, binder (if specified) and water and uniformly apply in one operation then cover with mulch.

3.5 SOD INSTALLATION

3.5.1 Place sod during the growing season when weather conditions, soil temperatures and moisture conditions are suitable. Do not sod when topsoil is covered with frost, snow or standing water.

3.5.2 Lay sod in staggered rows, smooth, even and flush with adjoining surfaces. Butt sections closely without overlapping or leaving gaps. Top-dress and seed between sod seams where necessary.

3.5.3 Roll sod to remove depressions and irregularities.

3.5.4 Saturate sod with water as necessary to ensure vitality. Ensure watering does not cause erosion of the top-dressing or in downstream areas.

3.5.5 To prevent grass and soil from drying out, continue adequate watering for a minimum of 8 days after laying or until roots are well established.

3.6 PROTECTION AND CLEANUP

3.6.1 Erect barricades and warning signs to protect sodded areas from traffic until grass is established.

3.6.2 Protect surrounding areas and structures from disfiguration and damage. Repair any damage as directed by the Contract Manager/Developer Representative.

3.6.3 Upon completion of the work, clean up and leave site free of debris, waste matter and unused materials.

4.0 WARRANTY AND MAINTENACE

4.1 GENERAL

4.1.1 All grass, either seeded or sodded, shall have a two (2) year warranty period from issuance of the soft landscape CCC and until the soft landscape FAC is issued.

4.1.2 Ensure turf is mown 48 hours prior to soft landscape CCC if needed.

4.1.3 CCC inspection process as described in VOL. 1 SEC. 6, OPEN SPACE STANDARDS, SUB-SECTION 6.13, OPEN SPACE INSPECTION PROCESS.

4.1.4 Strathcona County representative may request a copy of the seed mixture labels as specified in SUB-SECTION 3.1.3 OF THIS SECTION.

4.1.5 Weeds must be mechanically or chemically controlled in accordance with the Alberta Weed Control Act, Fisheries (Alberta) Act, and municipal bylaws.

4.1.6 All pesticides and herbicides must be applied by a licensed applicator or under the supervision of a licensed applicator, in accordance with the manufacturer instructions, and in compliance with the Environmental Protection and Enhancement Act (EPEA).

4.1.7 Following weed inspections by Transportation and Agriculture Services, weed notices will be issued when weeds are not controlled. Upon notification, the Contract Manager/Developer Representative to coordinate for the weeds to be mechanically or chemically controlled within 96 hours of notification, weather permitting.

4.1.8 Signs must be posted immediately and must remain in place during the 48 hours following a pesticide and/or herbicide treatment. Signs must include the date of the application and chemical name.

4.1.9 The Contractor shall keep written logs of all maintenance trips and submit a copy of the log once per month to the Contract Manager/Developer Representative. Maintenance log shall contain:

(i) Work performed and materials used;
(ii) Written confirmation of the dates for watering; and,
(iii) Written confirmation of the dates and types of fertilizer.

4.1.10 The Contractor shall keep written Biocide reports of all pesticide/herbicide applications and submit a copy of the reports once per month to the Contract Manager/Developer Representative. Records shall contain:

(iv) Legal land description or street location of the treatment;
(v) Date and time of the application;
(vi) Temperature, relative humidity, precipitation, wind speed and direction;
(vii) Purpose of the application (i.e., what weed/pest is being controlled);
(viii) Trade name of the pesticide and the PCP registration number;
(ix) Total quantity of application and rate;
(x) Method of application; and,
(xi) Location and distance of any application within 30 horizontal metres of an open body of water.

4.1.11 Areas showing deterioration, bare spots or thin areas shall be re-seeded or re-sodded.

4.1.12 Pick up and dispose of debris accumulated on landscaped areas prior to mowing and/or trimming.

4.1.13 During mowing and trimming operations protect all trees, shrubs and site features from damage. Repair all damages resulting from erosion, washouts or any other cause.

4.1.14 Trim turf edges neatly and remove all clipping from planting beds, tree saucers and pavement.

4.2 SEED

4.2.1 Water when necessary to prevent seed and underlying soil from drying out.

4.2.2 If seed fails to germinate within 4 growing months, cultivate and re-seed until germination takes place. Re-seed on a regular basis all areas which show deterioration, are bare, burned out, are thin or washed out throughout maintenance period. Use top-dressing in accordance with VOL. 2 SEC. 602, INSTALLATION OF TOPSOIL, SUB-SECTION 2.1.2.

4.2.3 Scarify surfaces prior to topsoil and seed application when top-dressing.

4.2.4 Seeded areas that require mowing to be cut when grass covers 75% of the area and is less than 100 mm in height. Grass to be maintained at 65 mm in second year.

4.2.5 Seeded areas that do not require mowing, may mowed only for weed control or to assist with turf establishment.

4.3 SOD

4.3.1 Mow grass regularly to maintain height at 65 mm. Do not cut more than 1/3 of blade height at any one mowing. Remove heavy clippings immediately.

4.3.2 Roll sod to remove depressions and irregularities. Correct any areas that settle.

4.3.3 Water when necessary to saturate sod.

4.3.4 Re-sod or top-dress and seed as directed in areas which show deterioration or which are thin, bare or burned out.

4.3.5 Dependent on sod condition, additional supplementary fertilizer may be required based on topsoil analysis.

5.0 ACCEPTANCE

5.1 GENERAL

5.1.1 All grass, either seeded or sodded, may receive FAC after the two (2) year warranty period from issuance of the soft landscape CCC.

5.1.2 FAC inspection process as described in VOL. 1 SEC. 6, OPEN SPACE STANDARDS, SUB-SECTION 6.13, OPEN SPACE INSPECTION PROCESS.

5.1.3 At the time of inspection turf areas shall be established and in a healthy satisfactory growing condition.

5.1.4 Weeds must be mechanically or chemically controlled in accordance with the Alberta Weed Control Act, Fisheries (Alberta) Act, and municipal bylaws.

5.2 SEED

5.2.1 Seeded areas that require mowing will be accepted when permanent grass cover has established on a minimum of 90% of the total area at a height of 65 mm. Areas must be mown within 48 hours after inspection.

5.2.2 Seeded areas that do not require mowing will be accepted when permanent grass cover that is characteristic to the seed mix has established on a minimum of 90% of the total area at a minimum of 100 mm in height. Do not mow areas prior to the inspection.

5.3 SOD

5.3.1 Sodded areas shall be accepted when all areas have established a minimum of 95% of the total area to a height of 65 mm. Sod to be healthy, even, vigorously growing and free of disease, weeds and voids.

5.3.2 Turf to be mown 48 hours prior to inspections.

6.0 MEASUREMENT AND PAYMENT

6.1 Seed or sod installation will be measured in square metres of surface area.

6.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for supply, installation, maintenance and inspection of plant material in the areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative.

1.2 DEFINITIONS

1.2.1 Weeds: includes but is not limited to jimsonweed (*Datura stramonium*) in addition to all noxious and prohibited weeds as identified under the Alberta Weed Control Act, Fisheries (Alberta) Act, and municipal bylaws.

1.2.2 Naturalization planting: A type of landscaping that mimics undeveloped natural area functions such as flood and drought mitigation, water and air quality regulation, wildlife habitat and pollination. Naturalized areas shall be designed with diverse species that are native to a given area or are well adapted to the climate circumstance to ensure resilience.

1.2.3 Whips: immature trees that are traditionally used for growing either in open fields or containers. The term whip refers to the fact that there is little or no lateral branching. Whips are normally one year old when grown from hardwood cuttings, two years old when grown from softwood cuttings or seedlings. In the case of budded selections they normally have a one year top and a two year root system.

1.2.4 Hazard tree: standing trees, either alive or dead, having defects in roots, trunk or limb, which predispose it to mechanical failure in whole or in part and which is located that such failure has a probability of injury and damage to persons or property. Or a tree that has defects in its roots, stems, or branches and is situated in an area frequented by people, or is located adjacent to valuable facilities and may cause a failure resulting in property damage, personal injury, or death.

1.3 QUALITY ASSURANCE

1.3.1 All plant material shall meet Horticultural Standards of Canadian Nursery Landscape Association (CNLA) regarding grading, quality, and nomenclature or accept other standards where stated otherwise and approved by Contract Manager/Developer Representative.

1.3.2 Execution and maintenance work described in this specification shall be completed or directly supervised by a certified professional (ISA Certified Arborist, Landscape Industry Certified Technician, Landscape Horticulturist or equivalent designation).

1.3.3 Approval of nursery grown plant material at source of supply does not preclude right of the Contract Manager/Developer Representative to inspect plants upon arrival on site, during planting or after planting and reject damaged plants or those not conforming to this CONSTRUCTION SPECIFICATIONS.

1.3.4 Only elms grown in Alberta from a Dutch elm disease free source are acceptable. Forward proof of origin to Contract Manager/Developer Representative at time of installation.

2.0 PRODUCTS

2.1 GENERAL PLANT MATERIAL CHARACTERISTICS

2.1.1 Supply nursery grown plants true to species and specified variety, structurally sound, well balanced, healthy, vigorous, of normal growth habits, densely foliated when in leaf, with healthy, well-developed root systems. Plants to be free of disease, insect infestations, insect eggs, rodent damage, sunscald, frost cracks and mechanical wounds or other conditions that would prevent thriving growth.

2.1.2 Trees shall have straight trunks with a well-developed single (or central) leader. Minor adjustments of structural integrity may be completed.

2.1.3 Clump or multi-stem trees shall have 3 or more main stems originating from common base at ground line.

2.1.4 Shrubs shall have a natural form typical of genus, species and variety with a minimum of 4 canes.

2.1.5 Perennials shall have healthy tops, size proportionate to root requirements, typical of species and variety and not less than 2 years old.

2.1.6 Root bound plants will not be accepted.

2.2 PLANT MATERIAL

2.2.1 Bare root plants:

2.2.1.1 Bare root liners shall have a well branched, healthy root system free of deformities and be capable of sustaining vigorous growth. Tops shall be characteristic of the species, healthy and free from diseases and pests.

2.2.2 Container grown plants:

2.2.2.1 All plants to be grown in containers for minimum of 3 months.

2.2.2.2 Plants to have an established root system which will “hold” soil when removed from the container is required. Any plants having root system soil that breaks away when removed from its container must not be planted if any roots become exposed or damaged.

2.2.2.3 Container size must be in proportion to plant size.

2.2.2.4 Deciduous trees used for edible landscapes and human consumption may be delivered to site in a container. Trees for this purpose are to be measured by the container size. Trees must be a minimum #10 gallon container at time of planting. Container/fruit bearing trees may be substituted for caliper trees at a rate of three container trees to one caliper tree.

2.2.3 Balled and burlapped (B&B) plants:

2.2.3.1 Trees or shrubs delivered to site shall contain rootballs not exceeding sizes as outlined in the Canadian Nursery Stock Standard in its latest edition.

2.2.3.2 Larger rootballs are recommended when plants have not been transplanted or root pruned for 4 or more years or when plants are dug out of season.

2.2.3.3 Soil balls shall be secured with burlap, heavy twine and rope; or burlap, wire baskets and rope.

2.2.3.4 The minimum rootball size for multi-stemmed trees shall be one size larger than the sizes specified for single-stemmed trees of equivalent caliper.

2.2.4 Whips:

2.2.5 Tree whips shall have sturdy trunks and a well-developed root system free of physical deformities and be capable of sustaining vigorous growth.

2.3 OTHER MATERIALS

2.3.1 Fertilizer:

2.3.1.1 Ratio of fertilizers approved by the Contract Manager/Developer Representative to be determined from topsoil analysis results and general plant health.

2.3.1.2 Fertilizer shall be packaged in waterproof bags labelled clearly, indicating net mass, analysis and manufacturer. Apply in accordance with the manufacturer's directions.

2.3.2 Topsoil mix:

2.3.2.1 As specified in VOL. 2 SEC. 602, INSTALLATION OF TOPSOIL.

2.3.3 Pre-emergent (weed germination control):

2.3.3.1 For tree wells and shrub beds, apply coloured granular pre-emergent at time of planting to weed free surface in accordance with manufacturer's instructions.

2.3.3.2 Pre-emergent is not permitted to be used in constructed wetlands, naturalized areas or beds where naturalized seed mix is installed.

2.3.4 Mulch:

2.3.4.1 Shredded Wood Mulch: free from inorganic material, soil, rocks, wood preservatives, diseased wood, weeds and weed seeds, mold, fungi and insect infestation.

2.3.4.2 For use on pathways, picnic sites, community gardens and on planting beds. Mulch shall be applied to a 100 mm depth, weed free surface, after application of pre-emergent is applied where permitted.

2.3.4.3 Shredded wood mulch shall be a premium blend of spruce, hemlock and fir. The minimum length of individual components shall be 40 mm to 60 mm and shall be mat-forming, not susceptible to spreading by wind or rain.

2.3.4.4 Decorative: type and locations to be installed as shown on the CONSTRUCTION DRAWINGS.

2.3.4.5 Prohibited mulches: wood chips, sawdust and shavings, peatmoss, manure or raw compost, paper products, plastic, rubbers, aluminum foil, gelatinous sprays, gravel, plywood and other lumbers containing chemical adhesives or wood preservatives.

2.3.5 Water:

2.3.5.1 Potable, free of minerals and chemicals that may be detrimental to plant growth. Water shall be hauled from a local standpipe or by contacting Utilities Operations at scutilities@strathcona.ca for arrangements for use of fire hydrants or stormwater management facilities.

2.3.6 Tree ties:

2.3.6.1 Material used for tree ties should have a flat, smooth surface and be elastic to allow for slight movement for the tree. Suitable materials include rubber strips or webbing and belting.

2.3.7 Steel stakes:

2.3.7.1 T-bar studded steel stakes, 40 mm x 40 mm x 5 mm thick x 2.1 m long, primed with one coat of black zinc rich paint to CGSB1 – GP - 1816. Top 300 mm of the tree stake to be colour coded according to year planted as specified in SUB-SECTION 3.4.6 OF THIS SECTION.

2.4 PLANT MATERIAL SUBSTITUTIONS

2.4.1 Substitutions shall be of nearest similar species and size specified.

2.4.2 Requests for substitutions to be approved by the Contract Manager/Developer Representative and Strathcona County representative.

2.4.3 Substitutions or use of larger plants may be approved by the Contract Manager/developer's representative and Strathcona County representative. Rootballs are to be increased in proportion to size of plants as per *Canadian Nursery Stock Standard* in its latest edition.

3.0 EXECUTION

3.1 MATERIAL DELIVERY, HANDLING AND STORAGE

3.1.1 Branches shall be tied with rope or twine only, in such a manner that no damage will occur to the bark or branches.

3.1.2 During transportation and handling of plant material, the Contractor shall exercise care to prevent injury and drying out of all plant material. Should the roots be dried out, large branches broken, ball of earth broken/loosened, or areas of bark torn, the Contract Manager/Developer Representative may reject the injured tree(s) and order replacements at no additional cost to the Developer. All plants shall be covered at all times during transportation with tarpaulin or canvas.

3.1.3 Plants must be protected at all times from sun or drying winds. If not planted immediately, rootballs shall be kept in the shade, well protected with soil, wet mulch or other acceptable material and kept well-watered.

3.1.4 Move trees with soil balls only when wrapped tightly in burlap.

3.1.5 Protect root zone of bare root plants with mulch, wet straw, moss or other suitable material.

3.2 SITE PREPARATION

3.2.1 All utility locates are the responsibility of the Contractor.

3.2.2 The Contract Manager/Developer Representative to approve staking location of trees and planting beds prior to excavation and planting.

3.2.3 Excavate the tree root holes/pits and planting beds. Remove excess soil as directed by the Contract Manager/Developer Representative.

3.2.4 The Contract Manager/Developer Representative to verify depth of shrub bed excavation to be in accordance with VOL. 2 SEC. 602, INSTALLATION OF TOPSOIL prior to topsoil mix installation and planting.

3.2.5 Remove debris and weeds. Where permitted, apply pre-emergent around tree pits and planting beds in accordance with manufacturer's instructions and SUB-SECTION 2.3.3 OF THIS SECTION. Allow weeds to die off prior to landscape planting.

3.3 INSTALLATION

3.3.1 Install plant material when ground is frost-free.

3.3.2 Centre trees and shrubs at location of stakes and face to give best appearance in relation to adjacent walkways and amenities.

3.3.3 Place trees on undisturbed soil. Do not bury foreign material beneath planting area. Form soil in concave manner in centre of excavation for container grown and B&B trees.

3.3.4 Excavate the depth of tree planting hole(s) to be 40 mm higher than the height of the root ball. Adjust hole depth (as needed) to correct the depth of the tree, the top of the root ball should be 40 mm above grade.

3.3.5 Place shrubs on a minimum bed of 150 mm firmly tamped topsoil mix. Do not bury foreign material beneath planting area. Form soil in concave manner in centre of excavation for container grown and balled or burlapped shrubs.

3.3.6 Form soil in convex manner in centre of excavation for bare root plants. Spread roots of bare root plants to their approximated natural position, prune broken or damaged roots.

3.3.7 Remove all plant material from containers and install topsoil mix up to root flare.

3.3.8 When planting B&B plant material, install topsoil up to about one half of the root ball height, ties shall be cut and the top portion of the burlap, do not disturb the root ball, remove excessive topsoil to expose the original root flare and remove all girdling roots.

3.3.9 Fill with water, allowing soil to settle around roots or soil ball. After water has been absorbed, fill to grade with topsoil mix tamping firmly to remove all air pockets.

3.3.10 For individual tree planting, construct an earth saucer around the base of each tree to drip line of tree as conditions will allow.

3.3.11 Install 100 mm depth of mulch on individual tree plantings and planting beds.

3.3.12 Mulch installation shall be kept at least 50 mm to 75 mm away from tree trunks and the base of shrubs and perennials.

3.3.13 Remove and dispose of off-site excess excavated soil and turf stripped from planting beds and plant pits or as directed by the Contract Manager/Developer Representative.

3.3.14 Trees that settle out of plumb due to inadequate soil compaction either under or adjacent to the rootball shall be excavated and reset.

3.3.15 Plants shall not be heavily pruned at time of planting. Pruning is only required at planting time to correct defects in the tree structure, including removal of injured branches, double leaders, water-sprouts, suckers and interfering branches.

3.3.16 All injured tree and shrub roots shall be pruned to make clean ends without damaging the branch collar.

3.3.17 Slope grades in planting beds to ensure positive drainage from building foundations before and after planting.

3.4 STAKING AND GUYING

3.4.1 Brace all trees in vertical position immediately after planting by guying or staking as follows:

Deciduous (Caliper)	Coniferous (Height)	Tree Support Method
Up to 30 mm	Up to 1.5 m	1 stake, 1 tie
30 mm – 100 mm	1.5 m – 3.0 m	2 stakes, 2 ties
100 mm – 150 mm	3.0 m – 3.5 m	3 guys, with 2 anchors
150 mm and over	3.5 m and over	4 guys, with 4 anchors

3.4.2 Space stakes around tree outside the root ball. Drive posts 600 mm into the ground.

3.4.3 Prevailing winds and wind tunneling to be taken into consideration for optimal placement of tree stakes to maintain an upright position during root establishment.

3.4.4 Wire for trees requiring guy wiring shall be looped around the tree and anchored in such a manner that looped wire will not interfere with normal growth. Guy wires shall be placed around the trunk at a point to ensure adequate support of the tree and in such a manner that the tree trunk or branches will not be subjected to undue strain or injury.

3.4.5 Guy wires shall be flagged with fluorescent orange coloured tape. All guy wires are to be folded or bent in such a fashion so as not to be exposed outwardly.

3.4.6 Top 300 mm of the tree stake to be colour coded according to year planted and will be on a 4 year rotational basis as follows:

(i) 2020 - blue;
(ii) 2021 - white;
(iii) 2022 - yellow;
(iv) 2023 – green; and,
(v) 2024 – blue. The colour codes will then be applied in the same rotation starting in 2024.

3.5 TREE TRANSPLANTION

3.5.1 Excavate plant with mechanical tree spade 12 times the tree caliper measured at 300 mm above grade and deep enough to enclose 75% of the existing root depth. All stock greater than 100 mm in diameter will be measured 1500 mm above ground level.

3.5.2 Basket, double burlap and drum lace, or wire basket root ball before moving, or dig and transport by tree spade.

3.5.3 Excavate tree pit to size not less than excavated tree's soil ball.

3.5.4 Provide warning markers and barricades around excavated pits.

3.5.5 Plant trees, immediately upon delivery and follow specifications from SUB-SECTION 3.1, 3.2, 3.3 AND 3.4 OF THIS SECTION.

3.5.6 Place excavated plugs in former tree locations when possible and remove excess plugs from site.

3.6 CONSERVED AREAS

3.6.1 Prior to commencement of any proposed work, such as fence construction or installation of gravel trails, coordinate a natural stand and hazard tree assessments with the Strathcona County representative in accordance with the Tree Protection Plan.

3.6.2 Tree removal to be completed in accordance with VOL. 2 SEC. 102, CLEARING AND GRUBBING.

3.7 PROTECTION AND CLEANUP

3.7.1 Implement and maintain ESC measures to protect naturalized areas, with a focus along its edges adjacent to development areas, wetlands, stream courses and/or waterbodies. ESC measures require routine inspection and maintenance to ensure their integrity during the entire maintenance period. ESC measures may require removal or addition prior to or at time of FAC at the discretion of the Developer Representative and approval of Strathcona County.

3.7.2 Protect surrounding areas and structures from disfiguration and damage. Repair any damage as directed by the Contract Manager/Developer Representative.

3.7.3 Install rodent wire protection to be used around trunk of tree when necessary.

3.7.4 Upon completion of the work, clean up, and leave site free of debris, waste matter and unused materials.

4.0 WARRANTY AND MAINTENANCE

4.1 GENERAL

4.1.1 All plant material shall have a two (2) year warranty period from issuance of the soft landscape CCC or until the soft landscape FAC is issued, whichever occurs last.

4.1.2 CCC inspection process as described in VOL. 1 SEC. 6, OPEN SPACE STANDARDS, SUB-SECTION 6.13, OPEN SPACE INSPECTION PROCESS.

4.1.3 Maintenance shall include all measures necessary to establish and maintain all plant material in an acceptable, vigorous and healthy growing condition until the soft landscape FAC is issued.

4.1.4 Program timing of maintenance operations to growth, weather conditions and use of site.

4.1.5 The Contractor shall keep written logs of all maintenance trips and submit a copy of the log once per month to the Contract Manager/Developer Representative. Maintenance logs shall contain:

(i) Work performed, and materials used;
(ii) Written confirmation of the dates for watering;
(iii) Written confirmation of the dates and types of fertilizer;
(iv) Inventory with the year of tree and shrub replacements; and,
(v) Inventory of species substitution.

4.1.6 The Contractor shall keep written Biocide reports of all pesticide/herbicide applications and submit a copy of the reports once per month to the Contract Manager/Developer Representative. Records shall contain:

(vi) Legal land description or street location of the treatment;
(vii) Date and time of the application;
(viii) Temperature, relative humidity, precipitation, wind speed and direction;
(ix) Purpose of the application (i.e., what weed/pest is being controlled);
(x) Trade name of the pesticide and the PCP registration number;
(xi) Total quantity of application and rate;
(xii) Method of application; and,
(xiii) Location and distance of any application within 30 horizontal metres of an open body of water.

4.2 FERTILIZING

4.2.1 Do not fertilize plant material in first year after planting. Fertilizer for trees to be a slow release formula of 3-1-1 in the spring of the second year of planting.

4.2.2 Fertilize shrubs with 20-20-20 in accordance with manufacturer's directions in the spring of the second year.

4.2.3 Fertilizer placed in holes and drilled or punched in the soil or injected into the soil in a solution under pressure.

4.2.4 Apply water after fertilizing to ensure penetration of fertilizers.

4.3 WATERING

4.3.1 Test moisture levels of individual plant species and provide adequate water to ensure survival.

4.3.2 Water at least every week for first six weeks after planting, adjust depending to the weather.

4.3.3 Water at least twice per month after planting until mid-August.

4.3.4 Water 3 times prior to ground freezing to freeze trees and underlying soil to prevent from drying out.

4.4 PEST, DISEASE AND WEED CONTROL

4.4.1 Weeds must be mechanically or chemically controlled in accordance with the Alberta Weed Control Act, Fisheries (Alberta) Act, and municipal bylaws.

4.4.2 All pesticides and herbicides must be applied by a licensed applicator or under the supervision of a licensed applicator; in accordance with the manufacturer instructions; and in compliance with the Environmental Protection and Enhancement Act (EPEA).

4.4.3 Following weed inspections by Transportation and Agriculture Services, weed notices will be issued when weeds are not controlled. Upon notification, the Contract Manager/Developer Representative to coordinate for the weeds to be mechanically or chemically controlled within 96 hours of notification, weather permitting.

4.4.4 Signs must be posted immediately and must remain in place for 48 hours following a pesticide and/or herbicide treatment. Signs must include the date of the application and chemical name.

4.5 PLANT ACCESSORIES

4.5.1 Maintain accessories in proper condition; adjust turnbuckles to keep tree guys taut and replace ties, flagging and stakes when required.

4.5.2 All tree staking to be removed at the end of one year maintenance where growing conditions allow. All tree stakes to be removed prior to issuing FAC.

4.6 PLANT MATERIAL CARE

4.6.1 Straighten plants that lean or sag.

4.6.2 Adjust plants that settle or are planted too low. In no case shall trees that have settled out of plumb be pulled upright using guy wires.

4.6.3 Prune all trees and shrubs in accordance with the most current ISA standards to preserve the natural character of the plant.

4.6.4 Prune to remove dead, diseased, injured, broken, rubbing, and crowded limbs.

4.6.5 Prune all suckers from the base, trunk and inside crown of tree.

4.6.6 Pruning cuts should be located to leave a wound of the smallest diameter.

4.6.7 Prune to ensure that there is a central leader on coniferous trees. When the central leader is damaged a new leader must be established.

4.6.8 Prune at the proper times according the plant requirements as follows:

(i) Shade trees from October 15 to April 15 except birch and maple;
(ii) Birch and maple from June 15 to July 15;
(iii) Fruit trees from March 15 to April 15;
(iv) Evergreens from April 15 to May 15; and,
(v) Elm from October 1 to March 31. Haul off site and dispose properly.

4.6.9 Inspect ER areas to ensure any disturbances have not occurred as a result of development. Where problems occur, restoration plans to be developed by the Contract Manager/ Developer Representative and approved by Strathcona County prior to implementation.

4.6.10 Remove hazard trees, debris and weeds from tree stands.

4.7 PLANT REPLACEMENTS

4.7.1 All trees that have been replaced within 1 year of FAC inspection must be identified through colour code on tree stakes as per SUB-SECTION 3.4.6 IN THIS SECTION.

5.0 ACCEPTANCE

5.1 GENERAL

5.1.1 Any disturbances are required to be repaired. Soft landscaping will not be eligible for FAC until aboveground FAC has been issued.

5.1.2 FAC inspection process as described in VOL. 1 SEC. 6, OPEN SPACE STANDARDS, SUB-SECTION 6.13, OPEN SPACE INSPECTION PROCESS.

5.1.3 At the time of inspection all plant material shall be in full leaf to assess vigor and health. Tree wells and planting beds shall be neat and free of weeds and debris.

5.1.4 Plant material may be accepted providing plant material has been installed in accordance with this Design and Construction Standards.

5.1.5 Mulch to be topped up to ensure consistent 100 mm depth, excluding in naturalized planting beds or below the 1:25 year water line in constructed wetlands.

5.1.6 Where 25% or more of the trees have been or are required to be replaced within the year of FAC eligibility, the warranty period for the entire stage will be extended until June 1 of the following year. At which time a new FAC application will be required.

5.1.7 Where 40% or more of the shrubs have been or are required to be replaced within the year of FAC eligibility, the warranty period for the entire stage will be extended until June 1 of the following year. At which time a new FAC application will be required.

5.1.8 When the design criteria and plant material densities meet the specifications within VOL. 1 SEC. 6, OPEN SPACE STANDARDS, SUB-SECTION 6.12.6 NATURALIZATION; the guide for acceptable levels survival at FAC shall be 80%.

6.0 MEASUREMENT AND PAYMENT

6.1.1 Plants material to be measured in units of caliper, height, or spread and as per the *Canadian Nursery Stock Standard* in its latest edition.

6.1.2 Caliper, measured on deciduous trees, shall mean trunk diameter measured no less than 150 mm above soil line for trees with a caliper up to 100 mm. Trees 100 mm and larger caliper are to be measured 300 mm above the soil line. Soil line measurements shall be taken at or close to the root flare.

6.1.3 Height, measured on coniferous trees, coniferous shrubs or deciduous shrubs, shall mean the tree height from final grade to the top of main body of plant, not to the top of long leader.

6.1.4 Spread, measured on coniferous shrubs, shall mean the lateral diameter of the main body of plant at its widest natural dimension, not from branch tip to branch tip.

6.1.5 Perennials shall be measured by pot size, measured in gallons. All perennials to be minimum 1 gallon pot size at time of planting.

6.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 The work covered by this specification is applicable for the construction of wetlands for the purpose of stormwater management, as required within the limits of construction or as designated by the Contract Manager/Developer Representative in accordance with these CONSTRUCTION SPECIFICATIONS and conforming to the approved CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative.

1.1.2 SWMFs/constructed wetlands are to be constructed in accordance with this document, Strathcona County's Best Management Practices for Stormwater Management Facilities and provincial and federal policies and Alberta Guide to wetland construction in Stormwater Management Facilities (AEP, Water Conservation, 2018, No 5).

1.1.3 Constructed wetlands are not intended to replace all of the functions of natural wetlands but to minimize point source and non point source pollution prior to entry into streams, natural wetlands and other receiving waters.

1.1.4 If natural wetlands are present in the urban watershed, pollutants should not be intentionally diverted into them for primary treatment. Natural wetlands must be part of an integrated landscape approach to water quality control, and cannot be expected to compensate for insufficient use of BMPs within the watershed including construction of SWMFs/constructed wetlands.

1.1.4.1 ESC is required throughout the construction period until vegetation is well established and as agreed to by Strathcona County. For ESC requirements refer to Strathcona County's Best Management Practices.

1.1.5 Unless otherwise indicated on the CONSTRUCTION DRAWINGS, the Contractor shall, at their own expense make arrangements for the provision of sites for the stockpiling of material (including live soil), borrowing of material and the disposal of unsuitable and surplus material.

1.1.6 Where mitigation or compensation for lost natural wetlands is required, further functions must be addressed as per provincial and federal guidelines, acts and legislation and the directive for perimitee-responsible wetland construction in Alberta (AEP, Water Conservation, 2018, No.5).

1.2 LAND DESIGNATION REQUIREMENTS

1.2.1 The land required for the constructed wetland will be dedicated as PUL to Strathcona County and will not be granted as MR.

1.2.2 Generally, the area of land which would be covered by water when the water level is at the critical design elevation, HWL, will be designated as a PUL.

1.2.3 This designation will also apply to all ROWs for access to and protection of inlets, outlets and flow control facilities, for maintenance access routes and overland flow routes associated with constructed wetlands.

1.2.4 Lots abutting the constructed wetland are allowed provided that there are areas around the wetland that are open for maintenance access routes to the wetland and secondary uses to the public. All lots to be located entirely above the HWL of the wetland.

1.2.5 A restrictive covenant will be placed upon lots abutting the constructed wetland to control lot development so as not to compromise the design requirements of the SWMF and ensure that an adequate freeboard is maintained. Where overland overflow is available, all area within a minimum vertical height of 0.3m freeboard above HWL is acceptable; otherwise, a minimum vertical height of 0.5 m is required.

1.3 CONSTRUCTED WETLAND/SWMF DRAINAGE AREAS LAND DESIGNATION

1.3.1 A minimum drainage area of 5 ha is required to generate constant or periodic flow to the constructed wetland.

1.3.2 The smallest practical drainage area is considered to be 20 ha. For drainage areas between 5 ha and 20 ha in size, Strathcona County may approve the use of constructed wetlands on a site-specific basis.

1.3.3 To determine that a permanent pool can be maintained in a constructed wetland, hydrological studies are to be conducted using the size and characteristic of the drainage area.

1.3.4 The surface area of the constructed wetland shall be a minimum 1.0 hectares at the NWL.

1.3.5 Strathcona County prefers that fewer, larger wetlands be constructed rather than a series of smaller constructed wetlands

1.4 GRADING

1.4.1 Excavation of Constructed Wetlands shall be to the elevations and grades identified on the CONSTRUCTION DRAWINGS.

1.4.2 Slopes shall be 5H:1V or flatter to support larger areas of wetland vegetation. The 5H:1V slope shall extend below the NWL to a minimum water depth of 1.0 metres.

1.4.3 For water depths below 1.0 m, side slopes can be up to 3H:1V if proven to be stable by a geotechnical engineer.

1.4.4 A 2.0 m wide shallow marsh bench is required around the wetlands at NWL, with a 10H:1V slope.

1.4.5 Side slopes surrounding all accessible deep areas of a constructed wetland, i.e.: sediment forebay and permanent pool areas, shall be a maximum of 7H:1V. The 7H:1V slope shall extend from HWL to the NWL. Below the shallow marsh bench a 5H:1V slope shall extend to a minimum water depth of 1.0 metres.

1.4.6 At the discretion of Strathcona County, the side slope may be 5H:1V in areas of high density vegetation to limit access to the open water.

1.4.7 The use of terraced grading may be considered to accommodate areas where flatter slopes may be desirable, in addition to the requirements of this section.

1.4.8 No over excavation within the PUL of SWMFs is permitted, except as required to accommodate the installation of a clay liner.

1.5 INLET AND OUTLET REQUIREMENTS

1.5.1 A sediment forebay is required at all constructed wetland/SWMF inlets.

1.5.2 Inlets and outlets should be located to avoid short-circuiting and maximize the flow path.

1.5.3 The maximum depth at the inlet and outlet forebay areas is restricted to 3.0 m.

1.5.4 Inlets and outlets are to be fully submerged, with the crown of the pipe at least 1.0 m below NWL. Inlet and outlet pipe inverts are to be a minimum of 100 mm above the bottom of wetland at that location.

1.5.5 Inlet and outlet pipes within the SWMF shall be constructed using Class A bedding.

1.5.6 Low flow bypass provisions are to be provided within the wetland to allow flow through the facility under winter ice cover conditions.

1.6 OUTFLOW CONTROL REQUIREMENTS

1.6.1 The quickest drawdown time shall be 24 hours for a 1 in 2 year storm to facilitate settling of suspended solids. For the most critical storm event, 90% of the total active storage volume shall have a drawdown time of 96 hours.

Time After Commencing Drawdown from Full Level at HWL	Available Volume Between HWL and NWL
≥24 hours	Volume equivalent to runoff from 1 in 2 year storm
48 hours	Volume equivalent to runoff from 1 in 5 year storm
≤96 hours	90% of total storage volume above NWL

1.7 WATER DEPTH AND QUALITY REQUIREMENTS

1.7.1 The minimum design requirement for total suspended solids removal is 85% of particle size 75µm or greater, as recommended by Alberta Environment, April 2001.

1.7.2 The Developer is required to implement appropriate ESC controls during development in the drainage area to minimize sediment loading to the forebay and wetland during the construction phase of the project and during the staged construction of the constructed wetland/SWMF.

1.7.3 Use a variety of water depths, 0.1 m to 0.6 m with an average permanent water depth of 0.3 m, to encourage emergent vegetation.

1.7.4 Deep water areas, greater than 2.0 m, are to be limited to less than 25% of wetland surface area.

1.7.5 Water level fluctuation in excess of 1.0 m above NWL should be infrequent to prevent killing of the vegetation.

1.7.6 The permanent pool at the outlet requires a depth of 2.4 m to 3.0 m. Size can be variable depending on the wetland's configuration.

1.7.7 To trap floatable materials, oil and grease, inlets and outlets are to be below normal water level.

1.8 ACCESS REQUIREMENTS

1.8.1 Vehicle access to and within SWMFs is required for maintenance, operation of water control structures, removal of debris and litter, and vegetation management. Access may be in conjunction with the potential trail system and should be of sufficient width and composition to support County maintenance vehicles. While hard surface access to the water's edge is not specifically required, rapid access to the water's edge at all inlet and outlets should not be impeded by fences, landscaping or other obstacles.

1.9 SOIL REQUIREMENTS

1.9.1 For wetland deep water areas, low soil permeability of 10-7 m/s is recommended to maintain a permanent pool of water and minimize exfiltration. Compacted sandy clays and silty clay loams may be suitable provided that documented geotechnical testing demonstrates low soil permeability.

2.0 MAINTENACE

2.1 The Contract Manager/Developer Representative is required to provide an operations manual (or management plan) for the maintenance of the constructed wetland.

2.2 Maintenance and warranty period shall be two (2) years from CCC issuance or until FAC is issued, whichever occurs later.

2.3 Removal of accumulated sediment during construction from forebays will be required prior to issuance of the FAC.

2.4 Sediment traps are to be cleaned during the maintenance period.

2.5 Sediment removal is required when forebay and permanent pool volumes are reduced by greater than 25%.

2.6 During the maintenance period, the facility shall be inspected at least twice each year to determine vegetation distribution and the preservation of design depth. These inspection reports shall be submitted when applying for the FAC.

3.0 MONITORING REQUIREMENTS

3.1 The Developer shall monitor stormwater quality. Effluent from the permanent outlet pool shall be sampled and tested in the spring and fall each year after issuance of underground CCC until underground FAC is issued for the following parameters: pH, electrical conductivity, total suspended solids, total phosphorus, total dissolved phosphorus, nitrates, total kjeldahl nitrogen, ammonia nitrogen, chloride, E. coli, total metals (including mercury), chlorophyll-A, total biochemical oxygen demand and dissolved oxygen. Data to be provided to Strathcona County.

3.2 Inlets, outlets and control structures are to be monitored and kept free of debris.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for wood screen fencing installation on the areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative and in accordance with CSA in its latest edition.

2.0 PRODUCTS

2.1 Wood:

2.1.1 Lumber shall be full dimension surfaced on four sides (S4S) #2 construction grade spruce, western pine or Douglas fir (SPF) dressed and conforming to CAN/CSA-O141-91 in its latest edition.

2.1.2 All boards to be free of loose knots, bark, cracks and have straight edges.

2.1.3 Fences located on private land must consist of pressure treated posts, stringers, fascia boards and any lumber in contact with the ground.

2.1.4 Fences located in public land must consist of all pressure treated lumber or approved equal.

2.1.5 Cedar lumber shall be #2 construction grade.

2.2 Concrete:

2.2.1 Concrete for piles to conform to VOL. 2 SEC. 402, CONCRETE CURB, CURB & GUTTER, SIDEWALK, SLABS, AND ROAD BASE. Concrete mix design to follow requirements listed under "All Other Structures" with the following modified criteria:

(i) Minimum compressive strength: 17.5 MPa at 28 days; and
(ii) Maximum aggregate size: 25 mm.

2.3 Fasteners:

2.3.1 Nails, spikes, bolts and screws to be hot dipped galvanized in accordance with CSA G164 – M1981 in its latest edition.

2.4 Stain:

2.4.1 As specified on the CONSTRUCTION DRAWINGS.

3.0 EXECUTION

3.1 SITE PREPARATION

3.1.1 Horizontal and vertical alignments to be staked out by a licensed Alberta Land Surveyor.

3.1.2 Wood to be pre-stained with 2 coats of stain.

3.2 FENCE CONSTRUCTION

3.2.1 Set line posts, corner posts, and gate posts to alignment shown on the CONSTRUCTION DRAWINGS.

3.2.2 Align top of posts to ensure that top and bottom rails vary gradually with changes in ground elevations.

3.2.3 Corner posts shall be installed where the alignment change exceeds 20°.

3.2.4 Place concrete in post hole and extend concrete 10 mm above rough grade level and crown to drain away from post. Brace post in plumb position and true to alignment and elevation until the concrete has set. Let concrete footing cure before proceeding with further work.

3.2.5 As a minimum, footings and posts depth to be sufficient to reach undisturbed ground.

3.2.6 Install stringers:

(i) Bottom stringers to be 50 mm above finished grade (+/- 25 mm).
(ii) For noise attenuation fences (double board), ensure the private property side does not allow gaps between final grade and the bottom of the fence, unless drainage requirements are specified on the CONSTRUCTION DRAWINGS.
(iii) For noise attenuation fences (double board), ensure the municipal land side to be 50 mm above ground (+/- 25 mm).

3.2.7 Fasten fence boards to stringers. Re-sawn lumber for fence boards only when deemed necessary by the Contract Manager/Developer Representative. Re-sawn boards are to be a minimum 50 mm with a recommended maximum of 1 re-sawn board per section and an allowable limit of 2 re-sawn boards per section of fence.

3.2.8 Install nailer strips on noise attenuation fences. Ensure nailer is fastened to post.

3.2.9 Install fascia boards. Ensure fascia boards are fasten to the boards alternating the screws every 400 mm on each side.

3.2.10 Apply touch up stain where stain has been removed, i.e., nail holes, faded, see through, etc.

4.0 ACCEPTANCE

4.1 GENERAL

4.1.1 Fences may be inspected and accepted immediately upon completion of construction providing that all components are free from deficiencies and have been installed in accordance with these CONSTRUCTION SPECIFICATIONS and the CONSTRUCTION DRAWINGS. A maintenance period is not required.

4.1.2 FAC inspection process as described in VOL. 1 SEC. 6.0, OPEN SPACE STANDARDS, SUB-SECTION 6.13, OPEN SPACE LANDSCAPE INSPECTION PROCESS.

4.1.3 Posts will be rejected when the following applies or structural integrity is compromised:

(i) Cracks are 50% of the depth of the post on the face it occurs;
(ii) Cracks exceeds 25% the width of the post on the face it occurs or are wider than 12 mm; or if,
(iii) Mechanical damage is evident.

4.1.4 Cracks 6 to 12 mm are to be re-stained with fence stain ensuring stain penetrates core wood.

4.1.5 Board spacing to be tight ensuring spacing between boards does not exceed 12 mm when boards are dry.

4.2 TOLERANCES

4.2.1 Vertical: differences in elevation at any given point from that given on the survey stakes shall not exceed 25 mm.

4.2.2 Horizontal: deviations in alignment at any given point from that given on the survey stakes shall not exceed 25 mm.

5.0 MEASUREMENT AND PAYMENT

5.1 Fence installation will be measured on a lineal metre basis.

5.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for chain link fence installation on the areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative and in accordance with CSA in its latest edition.

1.2 RELATED STANDARDS:

1.2.1 Steel pipe to ASTM A120 (schedule 40)

1.2.2 Fabric for chain link fence to CAN2-138.3-96

1.2.3 Specifications for fence fittings ASTM F626

2.0 PRODUCTS

2.1 Post and rails:

2.1.1 Hot-dip galvanized welded steel pipe, standard weight (ASTM A120, schedule 40), zinc-coated at minimum 550 g/m² with the following outside diameter (O.D) dimensions:

2.1.2 Line posts:

(i) Fences 1.2 m to 1.5 m tall: 48 mm O.D
(ii) Fences 1.8 m to 2.4 m tall: 60 mm O.D

2.1.3 Corner, terminal, straining and gate posts:

(i) Fences 1.2 m to 1.5 m tall: 73 mm O.D
(ii) Fences 1.8 m to 2.4 m tall: 89 mm O.D
(iii) Gates over 2.4 m tall: 144 mm O.D

2.1.4 Top and brace rail:

(i) 42 mm O.D plain end and sleeve coupled.

2.1.5 Ball fields only: yellow protective plastic capping on along top of fences.

2.2 Chain link fabric:

2.2.1 Fabric height: 1.2 m, 1.5 m, 1.8 m, as specified.

2.2.2 Interwoven 50 mm diamond mesh top and bottom selvage knuckle end closed, bottom selvage knuckle end closed:

(i) General vinyl: 9 gauge before coating
(ii) Galvanized: 9 gauge
(iii) Sports fields vinyl: 6 gauge before coating
(iv) Sports fields galvanized: 6 gauge

2.3 Bottom tension wire:

2.3.1 6 gauge steel wire, zinc-coated at minimum 490 g/m².

2.4 Gates frame and hardware:

2.4.1 As specified in SUB-SECTION 2.1.1 OF THIS SECTION with minimum 42 mm O.D; to be electrically welded at all joints and hot-dip galvanized after welding. If braces are required, use truss rod and turnbuckle adequate for gate size.

2.4.2 Double gate hardware to have centre rest with drop bolt for closed position and chain hook to hold gates open. Provide foot bolt stopper on both panels, a lockable drop bolt welded to gate with length of chain. Pins shall not be removable.

2.4.3 Single gate hardware to be malleable iron hinges, latch and latch catch. Latch catch to have provision for a padlock that can be attached and operated from either side of gate. Gate hinge shall permit gate to open 180°.

2.5 Crawl hole:

2.5.1 610 mm square opening. Two part, 50 mm galvanized flat bar sandwich frame, bolted in the corners.

2.6 Post caps, line post eye tops, and rail ends:

2.6.1 Cast aluminum, sized to post diameter.

2.7 Fittings:

2.7.1 Sleeves, bands, clips, tension bards, fasteners and fittings to conform to ASTM F626.

2.8 Concrete:

2.8.1 Concrete for piles to conform to VOL. 2 SEC. 402, CONCRETE CURB, CURB & GUTTER, SIDEWALK, SLABS, AND ROAD BASE. Concrete mix design to follow requirements listed under “All Other Structures” with the following modified criteria:

(i) Minimum compressive strength: 17.5 MPa at 28 days; and,

(ii) Maximum aggregate size: 25 mm.

3.0 EXECUTION

3.1 SITE PREPARATION

3.1.1 Horizontal and vertical alignments to be staked out by a licensed Alberta Land Surveyor.

3.2 FENCE CONSTRUCTION

3.2.1 Set line posts, corner posts, and gate posts to the alignment shown on the CONSTRUCTION DRAWINGS.

3.2.2 Align top of posts to ensure that top rail varies gradually with changes in ground elevations.

3.2.3 Corner posts shall be installed where the alignment change exceeds 20°.

3.2.4 Where fences continue from private to municipal land, terminal posts must be installed 150 mm inside private property.

3.2.5 Place concrete in post hole and extend concrete 10 mm above rough grade level and crown to drain away from post. Brace post in plumb position and true to alignment and elevation until the concrete has set. Let concrete footing cure before proceeding with further work.

3.2.6 Install posts plumb, set in concrete footings as follows:

Fence Height		Concrete Depth	Hole Diameter at Top
1.2 m, 1.5 m & 1.8 m	Line Posts	800 mm	200 mm
	Gate and Corner Posts	900 mm	300 mm
2.4 m, 3.0 m & 3.6 m	Line Posts	1000 mm	350 mm
	Gate and Corner Posts	1060 mm	400 mm

3.2.7 Footings and posts depth to be sufficient to reach undisturbed ground.

3.2.8 Pass top rail through line post tops to form continuous bracing. Install 150 mm long couplings mid-span at pipe ends.

3.2.9 Position bottom of fabric 50 mm above finished grade (+/- 25 mm) with bottom tension wire between posts.

3.2.10 Fasten fabric to top rail, line posts, brace rails and bottom tension wire with 9 gauge wire ties at maximum 500 mm centre.

3.2.11 Attach fabric to corner, terminal and gate posts with tension bars and tension bar clips. Stretch fabric between posts at intervals of 3 m maximum.

3.2.12 Install straining posts every 90 m.

3.2.13 Install gates. Install two hinges per leaf and hardware as specified.

3.2.14 For fences 1.8 m and over, brace each gate and corner post back to adjacent line post with horizontal centre brace rail. Install brace rail, one bay from corner and gate posts.

3.2.15 Set centre rests in concrete and cane bolts at centre of double gate openings.

3.2.16 Welded gate frame joints to be painted with one coat of zinc paint.

3.2.17 Cut fabric for crawl holes, selvage knuckle end closed top and bottom. Place 2 part frames around opening in fabric and bolt together with 3 bolts per side. Bolts to be cut as to not extend more than two threads past the nut. No sharp edges.

4.0 ACCEPTANCE

4.1 GENERAL

4.1.1 Fences may be inspected and accepted immediately upon completion of construction providing that all components are free from deficiencies and have been installed in accordance with these CONSTRUCTION SPECIFICATIONS and the CONSTRUCTION DRAWINGS. A maintenance period is not required.

4.1.2 FAC inspection process as described in VOL. 1 SEC. 6.0, OPEN SPACE STANDARDS, SUB-SECTION 6.13, OPEN SPACE LANDSCAPE INSPECTION PROCESS.

4.2 TOLERANCES

4.2.1 Vertical: differences in elevation at any given point from that given on the survey stakes shall not exceed 25 mm.

4.2.2 Horizontal: deviations in alignment at any given point from that given on the survey stakes shall not exceed 25 mm.

5.0 MEASUREMENT AND PAYMENT

5.1 Fence installation will be measured on a lineal metre basis.

5.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for paige wire fencing installation on the areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative and in accordance with CSA in its latest edition.

2.0 PRODUCTS

2.1 Wood:

2.1.1 Lumber shall be full dimension pressure treated #2 construction grade spruce, western pine or Douglas fir (SPF) dressed and conforming to CAN/CSA-O141-91 in its latest edition.

2.1.2 The preservative agent shall conform to the requirements of CSA Standard 080 in its latest edition.

2.1.3 Untreated cedar lumber shall be #2 construction grade.

2.1.4 Posts shall be of sound quality, free from all decay, splits, multiple crooks or any other defects structurally unsuitable for the purpose intended.

2.2 Concrete:

2.2.1 Concrete for piles to conform to VOL. 2 SEC. 402, CONCRETE CURB, CURB & GUTTER, SIDEWALK, SLABS, AND ROAD BASE. Concrete mix design to follow requirements listed under "All Other Structures" with the following modified criteria:

(i) Minimum compressive strength: 17.5 MPa at 28 days; and,
(ii) Maximum aggregate size: 25 mm.

2.3 Wire:

2.3.1 Woven wire shall conform to ASTM A116 – 11 in its latest edition.

2.3.2 Woven wire mesh to 12 gauge twitch wire with 150 x 150 mm spacing.

2.4 Fasteners:

2.4.1 40 mm galvanized staples.

2.4.2 Nails, spikes, bolts and screws to be hot dipped galvanized in accordance with CSA G164 – M1981 in its latest edition.

3.0 EXECUTION

3.1 SITE PREPARATION

3.1.1 Horizontal and vertical alignments to be staked out by a licensed Alberta Land Surveyor.

3.1.2 All trees, brush and other obstacles which interfere with the construction shall be removed prior to commencing fence construction as specified in CONSTRUCTION SPECIFICATION 7.102, CLEARING AND GRUBBING.

3.2 INSTALLATION

3.2.1 Set line posts, corner posts, and gate posts to the alignment shown on the CONSTRUCTION DRAWINGS.

3.2.2 Mechanically insert post with the large end down spaced a maximum of 3660 mm on centre.

3.2.3 Allowable taper from end to end of posts shall not exceed 38 mm in diameter.

3.2.4 Sharpening of posts is not permitted.

3.2.5 Corner posts shall be installed where the alignment change exceeds 20°.

3.2.6 Footings and posts depth to be sufficient to reach undisturbed ground.

3.2.7 Use concrete footings if fence is installed in proximity to a water body or high water table.

3.2.8 Position bottom of fabric 50 mm above finished grade (+/- 25 mm) above finished grade with bottom tension wire between posts.

3.2.9 Attach fabric to corner and gate posts with tension bars and tension bar clips. Stretch fabric between posts.

3.2.10 Attach brace rail and brace wires.

3.2.11 A tension wire shall be installed within the bottom 150 mm of fabric. The wire shall be stretched taut and free of sag and fastened securely to the end, corner, gate and straining posts with tension bands and turnbuckles.

4.0 ACCEPTANCE

4.1 GENERAL

4.1.1 Fences may be inspected and accepted immediately upon completion of construction providing that all components are free from deficiencies and have been installed in accordance with these CONSTRUCTION SPECIFICATIONS and the CONSTRUCTION DRAWINGS. A maintenance period is not required.

4.1.2 FAC inspection process as described in VOL. 1 SEC. 6.0, OPEN SPACE STANDARDS, SUB-SECTION 6.13, OPEN SPACE LANDSCAPE INSPECTION PROCESS.

4.1.3 Posts will be rejected when the following applies or structural integrity is compromised:

(i) Cracks are 50% of the depth of the post on the face it occurs;
(ii) Cracks exceeds 25% the width of the post on the face it occurs or are wider than 12 mm.; or if,
(iii) Mechanical damage is evident.

4.2 TOLERANCES

4.2.1 Vertical: differences in elevation at any given point from that given on the survey stakes shall not exceed 25 mm.

4.2.2 Horizontal: deviations in alignment at any given point from that given on the survey stakes shall not exceed 25 mm.

5.0 MEASUREMENT AND PAYMENT

5.1.1 Fence installation will be measured on a lineal metre basis.

5.1.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for straight wire fencing installation on the areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative and in accordance with CSA in its latest edition.

2.0 PRODUCTS

2.1 Wood:

2.1.1 Timber shall be full dimension #2 construction grade spruce, western pine or Douglas fir (SPF) dressed and conforming to CAN/CSA-O141-91 in its latest edition.

2.1.2 Posts shall be of sound quality, free from all decay, splits, multiple crooks or any other defects structurally unsuitable for the purpose intended.

2.1.3 Cedar shall be #2 construction grade.

2.2 Concrete:

2.2.1 Concrete for piles to conform to VOL. 2 SEC. 402, CONCRETE CURB, CURB & GUTTER, SIDEWALK, SLABS, AND ROAD BASE. Concrete mix design to follow requirements listed under "All Other Structures" with the following modified criteria:

(i) Minimum compressive strength: 17.5 MPa at 28 days; and,
(ii) Maximum aggregate size: 25 mm.

2.3 Wire:

2.3.1 12 gauge galvanized straight wire.

2.4 Fasteners:

2.4.1 40 mm galvanized staples.

3.0 EXECUTION

3.1 SITE PREPARATION

3.1.1 Horizontal alignments to be staked out by a licensed Alberta Land Surveyor.

3.2 Where necessary, all trees, brush and other obstacles which interfere with the construction shall be removed prior to commencing fence construction as specified in VOL. 2 SEC. 402, CONCRETE CURB, CURB & GUTTER, SIDEWALK, SLABS, AND ROAD BASE.

3.2.1 Set line posts, corner posts, and gate posts to the alignment shown on the CONSTRUCTION DRAWINGS.

3.2.2 Mechanically insert post with the large end down spaced a maximum of 3657 mm on centre.

3.2.3 Allowable taper from end to end of posts shall not exceed 38 mm in diameter.

3.2.4 Sharpening of posts is not permitted.

3.2.5 Corner posts shall be installed where the alignment change exceeds 20°.

3.2.6 Where end or corner posts are more than 150 m apart over reasonably smooth grade, set straining wire at equal intervals not exceeding 150 m on a straight continuous stretch of fence.

3.2.7 Set additional straining wire at sharp changes in grade or as directed by the Contract Manager/Developer Representative.

3.2.8 Footings and posts depth to be sufficient to reach undisturbed ground.

3.2.9 Use concrete footings if fence is installed in proximity to a water body or high water table.

3.2.10 All fence wire shall be pulled tight with hand stretchers or a tensioning apparatus capable of adjustment. The use of tractors or trucks for tightening fence wire will not be permitted, unless the pull is controlled by adjustable tensioning apparatus.

3.2.11 Attach brace wires.

4.0 ACCEPTANCE

4.1 GENERAL

4.1.1 Fences may be inspected and accepted immediately upon completion of construction providing that all components are free from deficiencies and have been installed in accordance with these CONSTRUCTION SPECIFICATIONS and the CONSTRUCTION DRAWINGS. A maintenance period is not required.

4.1.2 FAC inspection process as described in VOL. 1 SEC. 6.0, OPEN SPACE STANDARDS, SUB-SECTION 6.13, OPEN SPACE LANDSCAPE INSPECTION PROCESS.

4.1.3 Posts will be rejected when the following applies or structural integrity is compromised:

(i) Cracks are 50% of the depth of the post on the face it occurs;
(ii) Cracks exceeds 25% the width of the post on the face it occurs or are wider than 12 mm.; or if,
(iii) Mechanical damage is evident.

5.0 MEASUREMENT AND PAYMENT

5.1 Fence installation will be measured on a lineal metre basis.

5.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 `GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for supply, installation, maintenance and inspection of gravel pedestrian trails in the landscape areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative.

1.2 QUALITY ASSURANCE

1.2.1 Testing frequency as specified in VOL. 2 SEC. 303, GRANULAR SUB-BASE AND BASE COURSE.

1.3 RESTRICTION OF EQUIPMENT

1.3.1 The equipment used for construction of the gravel trail shall be restricted by the Contract Manager/Developer Representative if considered to be oversized for the work. Replace with suitable equipment as directed by the Contract Manager/Developer Representative.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1 Aggregate:

2.1.1.1 Aggregate for gravel base course shall be crushed gravel and shall consist of sound, hard, durable particles and shall not contain organic, soft or other deleterious materials nor materials that break up when alternately frozen and thawed or wetted and dried. It shall be uniformly graded to comply completely with the gradations indicated in VOL. 2 SEC. 302, GRANULAR MATERIALS (designation 3, class 20, granular base) and shall not be subject to extreme variations from maximum to minimum of the gradation specified.

2.1.2 Geotextile fabric:

2.1.2.1 Woven polypropylene geotextile fabric or equivalent.

2.1.3 Root barrier:

2.1.3.1 Polypropylene - 90 degree molded root deflecting ribs with ultraviolet inhibitors or approved equivalent.

3.0 EXECUTION

3.1 SITE PREPARATION

3.1.1 Contractor to stake out trail centre line and trail alignment as shown in the CONSTRUCTION DRAWINGS.

3.1.2 Contractor to stake out tree protection zones and ensure that the stakes are protected during the construction process.

3.1.3 Trail alignment and tree protection zones must be approved by the Contract Manager/Developer Representative.

3.1.4 All trees, brush and other obstacles which interfere with the construction shall be removed as specified in CONSTRUCTION SPECIFICATION 7.102, CLEARING AND GRUBBING.

3.1.5 Do not pull or rip out roots of trees that are to remain. If excavation through roots is required, excavate by hand and cut roots with sharp handsaw. Protect existing vegetation as outlined in VOL. 2 SEC. 102, CLEARING AND GRUBBING.

3.1.6 Remove hazard trees as specified in CONSTRUCTION SPECIFICATION 7.604, PLANT MATERIAL.

3.2 SUBGRADE PREPARATION

3.2.1 The subgrade shall be prepared according to the requirements of VOL. 2 SEC. 601, LANDSCAPE SUBGRADE PREPARATION unless modification is required to accommodate site conditions, i.e., constructed wetlands, tree stands, etc. The Contractor shall maintain the subgrade to the specified section, free from ruts, waves and undulations until the base material is placed. The subgrade shall be in a firm, dry condition and must be approved by the Contract Manager/Developer Representative before granular material is placed. Placement of granular material on a soft, muddy, or rutted subgrade will not be permitted.

3.2.2 Excavation for trail widths includes removing topsoil and/or common material to a minimum depth of 175 mm or as shown on the CONSTRUCTION DRAWINGS.

3.2.3 Excavation is to follow existing contours and is to ensure positive drainage as shown on the CONSTRUCTION DRAWINGS.

3.2.4 Approved excavated materials may be used for trail construction on steep side slopes or low areas to provide proper grades and proper drainage. This is preferred over cutting into the slope which may initiate erosion problems.

3.2.5 Dispose of all excavated material from the site as directed by the Contract Manager/Developer Representative.

3.2.6 When transporting excavated material off-site, use trail alignment where possible to avoid further disturbance.

3.2.7 Fill may be required in low areas to raise trail base, and for embankment construction. Fill will be obtained from approved excavated material, for embankment material as per VOL. 2 SEC. 201, EXCAVATION AND EMBANKMENT.

3.2.8 All fill material is subject to the approval of the Contract Manager/Developer Representative, prior to placing.

3.2.9 Place fill in layers not exceeding 150 mm. Maintain optimum moisture in the fill and compact to 98% maximum dry density.

3.2.10 Hauling over the subgrade, or sub-base course, will not be permitted when, in the opinion of the Contract Manager/Developer Representative, damage to the subgrade or sub-base course may result.

3.3 INSTALLATION

3.3.1 Install geotextile fabric or biaxial geogrid in accordance with the manufacturer's specifications. Geotextile material or tensor fabric may be required to assist with load bearing capacity of trail.

3.3.2 Place and compact 175 mm depth of 20 mm diameter crushed gravel course on leveled subgrade and compact to 98% of maximum dry density as per VOL. 2 SEC. 302, GRANULAR MATERIALS.

3.3.3 Ensure that coarse aggregate and fine aggregates are well mixed.

3.3.4 Install root barrier along trails beside treed areas or planting beds as shown on the CONSTRUCTION DRAWINGS.

3.3.5 Pathway finish grade shall blend into existing topography. Crown or crossfall shall be incorporated in the finished pathway surface to ensure positive drainage.

3.4 TRAIL EDGE RESTORATION

3.4.1 Restore areas damaged during construction to the same condition as existed previous to construction as shown on the CONSTRUCTION DRAWINGS.

3.4.2 Topsoil will be required for landscape rehabilitation work along the trail edge as per VOL. 2 SEC. 602, INSTALLATION OF TOPSOIL.

3.4.3 Seed damaged and/or disturbed trail edge areas with seed mixture as approved by the Contract Manager/Developer Representative and in accordance with VOL. 2 SEC. 603, SEED AND SOD.

3.5 CLEAN-UP

3.5.1 On a daily basis and upon completion, clean up and leave site free of debris, waste matter and unused materials.

4.0 WARRANTY AND MAINTENANCE

4.1 GENERAL

4.1.1 Gravel trails shall have a two (2) year warranty period from issuance of the soft landscape CCC and until the soft landscape FAC is issued.

4.1.2 CCC inspection process as described in OPEN SPACE STANDARDS 6.13, LANDSCAPE INSPECTION PROCESS.

4.1.3 Maintenance shall include all measures necessary prevent settlement, erosion and contamination of organic material.

4.2 TOLERANCES

4.2.1 Quality Control: Check finished surface of final grade to ensure it meets the following tolerances:

(i) 25 mm maximum variation above or below designed elevation.

4.2.2 When Tolerance Exceeded:

(i) Trim high spots and refinish surface to be within tolerance.
(ii) Add approved aggregate to low areas, scarify, blend, re-spread and re-compact to required density and refinish surface. Alternatively, compensate low areas with extra thickness of subsequent granular base course.

5.0 ACCEPTANCE

5.1 Trails will be accepted providing trails have been installed in accordance with the Design and Construction Standards, maintained for a minimum of 2 years and deficiencies have been rectified.

5.2 FAC inspection process as described in VOL. 2 SEC. 6.0 OPEN SPACE STANDARDS, SUB-SECTION 6.13, LANDSCAPE INSPECTION PROCESS.

6.0 MEASUREMENT AND PAYMENT

6.1 Gravel trails will be measured in square metres.

6.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for supply, installation, maintenance and inspection of paving stone in the landscape areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative.

2.0 PRODUCTS

2.1 Paving stone:

2.1.1 The paving stone shall be manufactured in conformance with ASTM C902 with a compressive strength of 55 MPa with no unit less than 50 MPa. Moisture absorption to be a maximum of 8% with no individual unit greater than 11% at time of delivery. Colour shall be as specified on approved CONSTRUCTION DRAWINGS.

2.2 Sand leveling course

2.2.1 Sand leveling course as specified in in VOL. 2 SEC. 302, GRANULAR MATERIALS.

2.3 Granular sub-base:

2.3.1 Granular sub-base to be 20 mm dia. of crushed gravel compacted to 98% SPD as specified in in VOL. 2 SEC. 302, GRANULAR MATERIALS (designation 3, class 20, granular base).

2.4 Edge restraint:

2.4.1 Pressure treated lumber, concrete strip, preformed PVC edging or other material or structure as indicated on approved CONSTRUCTION DRAWINGS.

3.0 EXECUTION

3.1 SITE PREPARATION

3.1.1 As specified in in VOL. 2 SEC. 101, SITE PROTECTION, PREPARATION AND RESTORATION.

3.2 SUBGRADE PREPARATION

3.2.1 The subgrade shall be prepared according to the requirements of in VOL. 2 SEC. 601, LANDSCAPE SUBGRADE PREPARATION.

3.2.2 The contractor shall maintain the subgrade to the specified section, free from ruts, waves and undulations until granular sub-base is placed. The subgrade shall be in a firm, dry condition and must be approved by the Contract Manager/Developer Representative before granular material is placed. Placement of granular material on a soft, muddy, or rutted subgrade will not be permitted.

3.2.3 The subgrade is to be approved by Contract Manager/Developer Representative before granular sub-base is placed.

3.3 GRANULAR SUB-BASE

3.3.1 Place a 100 mm depth of 20 mm diameter crushed gravel on the compacted subgrade as specified in VOL. 2 SEC. 302, GRANULAR MATERIALS and VOL. 2 SEC. 303, GRANULAR SUB-BASE AND BASE COURSE. Do not use sand for corrective leveling.

3.3.2 Granular base is to be approved by Contract Manager/Developer Representative before sand leveling course is placed.

3.4 SAND LEVELING COURSE

3.4.1 Evenly place and screed 25 mm of compacted sand leveling course over area to be paved.

3.4.2 Once screed, the sand shall not be disturbed. If screed sand is disturbed or exposed to rain, it shall be removed or loosed, re-spread and re-screeded.

3.4.3 Place no more sand than what can be covered with paving stone on the same day.

3.5 EDGE RESTRAINT

3.5.1 Install according to the CONSTRUCTION DRAWINGS.

3.6 PAVING STONE

3.6.1 Place paving on sand levelling course in pattern in accordance with the CONSTRUCTION DRAWINGS.

3.6.2 Joint spaces to be no wider than 3 mm.

3.6.3 Gaps around the edge of the paved surface shall be filled with standard edge pieces or with stones cut to fit. Stones shall be cut to a straight even surface without chips or cracks.

3.6.4 Avoid disturbance to paving stones prior to tamping.

3.6.5 Paving stones shall be vibrated to their final level with a vibrating plate compactor.

3.6.6 Joint sand to contain a minimum of 30% of 3 mm particles, or as per manufacturer's specifications.

3.6.7 Brush and vibrate joint sand to completely fill joints between stones.

3.6.8 After final vibrating, the surface shall be true to grade.

3.6.9 Additional joint sand is to be swept from surface.

3.6.10 Soil cement may be required in conditions where surface run off is prevalent.

3.7 CLEAN-UP

3.7.1 On a daily basis and upon completion, clean up and leave site free of debris, waste matter and unused materials.

3.7.2 Do not open newly installed paving stone to pedestrian or vehicle traffic until directed by the Contract Manager/Developer Representative.

4.0 WARRANTY AND MAINTENANCE

4.1 GENERAL

4.1.1 Paving stone shall have a two (2) year warranty period from issuance of the soft landscape or paving stone CCC (whichever is applicable) and until the soft landscape or paving stone FAC is issued.

4.1.2 CCC inspection process as described in VOL. 2 SEC. 6.0 OPEN SPACE STANDARDS, SUB-SECTION 6.13, LANDSCAPE INSPECTION PROCESS.

4.1.3 Maintenance shall include all measures necessary to prevent settlement, erosion and vegetation growth.

4.2 TOLERANCES

4.2.1 Quality Control: Check finished surface of final grade to ensure it meets the following tolerances:

(i) Surface Tolerance: 5 mm maximum variation under 3 m straightedge.
(ii) Grade Tolerance: 6 mm maximum variation above designated elevation and 15 mm

4.2.2 When Tolerance Exceeded:

(i) Trim high spots and refinish surface to within tolerance.

(ii) Remove paving stone and sand and add approved aggregate to low areas, scarify, blend, re-spread and re-compact to required density and refinish surface. Alternatively, compensate low areas with extra thickness of subsequent granular base course.

5.0 ACCEPTANCE

5.1 Paving stone will be accepted providing that it has been installed in accordance with the Design and Construction Standards, maintained for a minimum of 2 years and deficiencies have been rectified.

5.2 FAC inspection process as described in VOL. 2 SEC. 6.0 OPEN SPACE STANDARDS, SUB-SECTION 6.13, LANDSCAPE INSPECTION PROCESS.

6.0 MEASUREMENT AND PAYMENT

6.1 Paving stone will be measured in square metres.

6.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for supply, installation, maintenance and inspection of site furniture in the areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative and in accordance with CSA in its latest edition.

2.0 PRODUCTS

2.1 Wood:

2.1.1 Pressure treated lumber shall be full dimension surfaced on four sides (S4S) radius edge #1 construction grade Douglas fir dressed and conforming to CAN/CSA-O141-91 in its latest edition.

2.1.2 All boards to be free of loose knots, bark, cracks and have straight edges.

2.1.3 All wood furniture elements to be sanded smooth and all edges sanded round with no sharp corners.

2.2 Fasteners:

2.2.1 Fasteners and anchor bolts to be zinc coated, hot dipped galvanized or stainless steel type 304 (Grade 18-8).

2.2.2 All metal components to be pre-drilled.

2.2.3 Lag Bolts:

(i) Hex HD lag bolt STD ⅜”- 7 x 2” for benches and picnic tables; and,
(ii) Hex HD lag Bolt STD ⅜”- 7 x 1 ½” for litter receptacles.

2.2.4 Hardware for installation on concrete pad:

(i) 10” x KH ¾” x 4 ½” anchor bolts.

2.2.5 Hardware for installation on concrete piles:

(i) ¾” x 12” BM anchor bolt “L” shape;
(ii) ¾” NC nylon insert locknut; and,
(iii) ¾” NC BM grade 2 hex nut.

2.3 Locking Device:

2.3.1 No. 834 KA302 40 mm guard lock.

2.4 Stain:

2.4.1 Two coats of semi-transparent, water-based and UV resistant stain.

2.5 Concrete:

2.5.1 Concrete for concrete pad to conform to VOL. 2 SEC. 402 – CONCRETE CURB, CURB & GUTTER, SIDEWALK, SLABS, AND ROAD BASE. Concrete mix design to follow requirements listed under "All Other Structures".

2.5.2 Concrete for piles to conform to VOL. 2 SEC. 402 – CONCRETE CURB, CURB & GUTTER, SIDEWALK, SLABS, AND ROAD BASE. Concrete mix design to follow requirements listed under "All Other Structures" with the following modified criteria:

(i) Minimum compressive strength: 17.5 MPa at 28 days; and,
(ii) Maximum aggregate size: 25 mm.

2.5.3 Fillcrete is not acceptable for this application.

2.6 Litter receptacle:

2.6.1 Dome lid to be powder coated black 25 gallon (imperial) dome lid with spring loaded trap door (9.½" x 19").

2.6.2 Metal receptacle insert to be 29" x 19".

2.6.3 Secure dome lid to litter receptacle using a ⅛" vinyl coated cable (3' in length).

3.0 EXECUTION

3.1 DELIVERY, STORAGE AND HANDLING

3.1.1 Contractor to be responsible for inspection of the components for damage prior to installation. Should any damaged components be found, report it immediately to the Contract Manager/Developer Representative.

3.1.2 Handle components so as to avoid shock stress and damage to painted finish.

3.1.3 Upon acceptance of components by the Contract Manager/Developer Representative, place material in safe storage if needed.

3.1.3.1 Assemble furniture as per Strathcona County's shop drawings or manufacturer's instructions.

3.2 FURNITURE INSTALLATION ON A CONCRETE PAD

3.2.1 Mark anchor holes on concrete through base plate to park furnishing and ensure frame is straight, leveled and aligned as shown on the CONSTRUCTION DRAWINGS.

3.2.2 Drill ¾" hole ⅜" deeper than the length of the anchor bolt or as per manufacture recommendation. Remove any dust or debris from holes.

3.2.3 Place furnishing frame above predrilled holes.

3.2.4 Install concrete anchor bolts. Do not over tighten.

3.3 FURNITURE INSTALLATION ON A CONCRETE PILE:

3.3.1 Excavate footings to a depth of 762 mm and 457 mm diameter.

3.3.2 Place furnishing on wooden blocks and/or wooden shims and adjust proper to height, level and alignment before concrete is added. The remove furnishing from blocks.

3.3.3 Remove water or debris from excavated area prior to pouring concrete.

3.3.4 Install concrete to the required depth, troweled smooth to the height of the bottom of the base plate. If needed, a Sonotube®, or equivalent may be used to maintain the pile shape.

3.3.5 Furniture frame is then placed back onto the wooden blocks with minor adjustments needed to obtain proper height, centre of pile and levelness of the furnishing. Base plate is to be installed on top of concrete crown.

3.3.6 Ensure that furniture is level, plumb, straight and centered.

3.3.7 Upon completion of the work, clean up, and leave site free of debris, waste matter and unused materials.

4.0 ACCEPTANCE

4.1 Site furniture may be inspected and accepted immediately upon completion of construction providing that all components are free from deficiencies and have been installed in accordance with these CONSTRUCTION SPECIFICATIONS and the CONSTRUCTION DRAWINGS. A maintenance period is not required.

4.2 FAC inspection process as described in VOL. 1 SEC. 6 OPEN SPACE STANDARDS, SUB-SECTION 6.13, LANDSCAPE INSPECTION PROCESS.

4.3 No more than 2 threads can be exposed above the ¾" NC Nylon Locknut on the base plate.

5.0 MEASUREMENT AND PAYMENT

5.1 Furniture will be measured in specified units.

5.2 All work performed and measured as prescribed above shall be full compensation to supply, installation and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for supply, installation and inspection of open space signs in the areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative and in accordance with CSA in its latest edition.

2.0 PRODUCTS

2.1 Posts:

2.1.1 Lumber full dimension surfaced on four sides (S4S) chamfer all sides, #1 construction grade spruce, western pine or Douglas fir (SPF) dressed and conforming to CAN/CSA-O141-91 in its latest edition.

2.1.2 Galvanized steel U-channel post.

2.2 Signboards:

2.2.1 ¾" thick high-density plywood substrate. Back and edges shall be primed with exterior primer and painted using white exterior alkyd paint.

2.2.2 Sheet aluminum, sign grade aluminum alloy 5052-H38, conforming to the requirements of ASTM B209M.

2.2.3 Signs must be completed with an anti-graffiti coating C/W 3M 1160 laminate.

2.3 Fasteners:

2.3.1 Nails, spikes, bolts and screws to be hot dipped galvanized steel in accordance with CSA G164 – M1981 in its latest edition.

2.4 Fillcrete:

2.4.1 As specified in VOL. 2 SEC. 505, FILLCRETE.

3.0 EXECUTION

3.1 TRAIL, PLAYGROUND AND EXERCISE EQUIPMENT SIGNS

3.1.1 Cut wooden posts to the dimension specified on the CONSTRUCTION DRAWINGS.

3.1.2 Mechanically insert post to the alignment shown on the CONSTRUCTION DRAWINGS.

3.1.3 Fasten plywood signboard to post.

3.2 PARK NAME, COMMUNITY EVENT AND MULTI-PURPOSE SIGNS

3.2.1 Graphic design for the signboard to be approved by Strathcona County representative prior to manufacture.

3.2.2 Excavate footing, set wooden posts to alignment shown on the CONSTRUCTION DRAWINGS and place concrete. Extend concrete 10 mm above rough grade level and crown to drain away from post.

3.2.3 Fasten signboard to post. Signboard to be as follows:

(i) Park name: double sided plywood signboards completed with a 19 mm extruded aluminum channel or approved alternate board cap, painted white to match signboard. Signboards face shall be Green – Pantone 370c engineering grade film. Lettering and Strathcona County logo to be screen printed using a compatible ink or superposed using die cut engineering grade film. Alternative films will be considered provided the product has written guarantee for a minimum life expectancy of 15 years.
(ii) Community event signs: plywood signboards.
(iii) Wayfinding and Multi-purpose signs: use sheet aluminum signboards.

3.3 NO MOTORIZED VEHICLE AND SWMF SAFETY SIGNS

3.3.1 Mechanically insert U-channel post to the alignment shown on the CONSTRUCTION DRAWINGS.

3.3.2 Fasten sheet aluminum signboards to post.

4.0 ACCEPTANCE

4.1 GENERAL

4.1.1 Signage may be inspected and accepted immediately upon completion of construction providing that all components are free from deficiencies and have been installed in accordance with these CONSTRUCTION SPECIFICATIONS and the CONSTRUCTION DRAWINGS. A maintenance period is not required.

4.1.2 FAC inspection process as described in VOL. 1 SEC. 6 OPEN SPACE STANDARDS, SUB-SECTION 6.13, LANDSCAPE INSPECTION PROCESS.

5.0 MEASUREMENT AND PAYMENT

5.1 Signage installation will be measured in specified units.

5.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for supply, installation, maintenance and inspection of urban community gardens in new subdivisions in the areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative.

1.2 DEFINITIONS

1.2.1 Urban agriculture: the practice of cultivating food in an urban area.

1.2.2 Community gardening: the practice of growing and raising food in a shared garden space for direct consumption.

1.2.3 Public agriculture: food grown in the public spaces of a municipality or city, which is generally meant as a public or shared amenity.

1.2.4 Weeds: includes but is not limited to jimsonweed (*Datura stramonium*) in addition to all noxious and prohibited weeds as identified under the Alberta Weed Control Act, Fisheries (Alberta) Act, and municipal bylaws.

2.0 PRODUCTS

2.1 Wood:

2.1.1 Lumber/timber shall be full dimension surfaced on four sides (S4S) #2 construction grade spruce, western pine or Douglas fir (SPF) dressed and conforming to CAN/CSA-O141-91 in its latest edition.

2.2 Fasteners:

2.2.1 Nails, spikes, bolts and screws to be hot dipped galvanized in accordance with CSA G164 – M1981 in its latest edition.

2.3 Topsoil mix:

2.3.1 As specified in VOL. 2 SEC. 602, INSTALLATION OF TOPSOIL.

2.4 Mulch:

2.4.1 Shredded wood mulch free from inorganic material, soil, rocks, wood preservatives, diseased wood, weeds and weed seeds, mold, fungi and insect infestation.

2.5 Aggregate:

2.5.1 Aggregate for gravel base course shall be crushed gravel and shall consist of sound, hard, durable particles and shall not contain organic, soft or other deleterious materials nor materials that break up when alternately frozen and thawed or wetted and dried. It shall be uniformly graded to comply completely with the gradations indicated in CONSTRUCTION SPECIFICATION 7.302, GRANULAR MATERIALS (designation 3, class 20, granular base) and shall not be subject to extreme variations from maximum to minimum of the gradation specified.

2.6 Geotextile fabric:

2.6.1 Non-woven polypropylene geotextile fabric or equivalent.

2.7 Water main connections and appurtenances:

2.7.1 As specified in VOL. 1 SEC. 4.3, WATER DISTRIBUTION SYSTEM.

3.0 EXECUTION

3.1 SITE PREPARATION

3.1.1 All utility locates are the responsibility of the contractor.

3.1.2 Remove debris and weeds. Pre-emergent agents and any other chemical fertilizer, fungicide or herbicide may not be used for any topsoil placed inside garden plots.

3.1.3 Install a 1.8 m temporary chain link with “Keep out – construction area” signs attached to fence. Area to remain secured from public access until deficiencies identified by Strathcona County representative are rectified and CCC is issued.

3.1.4 The Contract Manager/Developer Representative to approve location of planting beds and water main connections prior to excavation and planting.

3.2 INSTALLATION

3.2.1 Excavate planting beds and remove excess soil as specified in VOL. 2 SEC. 601, LANDSCAPE SUBGRADE PREPARATION.

3.2.2 Install water main connections and appurtenances as shown on the CONSTRUCTION DRAWINGS and in accordance with VOL. 1 SEC. 4.3, WATER DISTRIBUTION SYSTEM.

3.2.3 Complete garden plots (raised or in-ground) as shown in the CONSTRUCTION DRAWINGS.

3.2.4 Ensure that structural components are snug fit and well secured to prevent topsoil from passing through the wood or other components.

3.2.5 Depending on the structure, the installation of geo-textile fabric may be required to line the sides of the planter to contain the soil. The bottoms of the planters are to remain fabric free.

3.2.6 Any excess threads from bolts, protruding fasteners or other metal protrusions from the interior or exterior of planter boxes shall be cut flush to avoid any injury.

3.2.7 Install topsoil as specified in VOL. 2 SEC. 602, INSTALLATION OF TOPSOIL.

3.2.8 Install surfacing material as shown on the CONSTRUCTION DRAWINGS.

4.0 WARRANTY AND MAINTENANCE

4.1 GENERAL

4.1.1 Community gardens plots may be accepted immediately upon completion of construction providing that all components are free from deficiencies and have been installed in accordance with these CONSTRUCTION SPECIFICATIONS and the CONSTRUCTION DRAWINGS. A maintenance period is not required.

4.1.2 Water main connection shall have a one (1) year warranty period from issuance of the underground CCC or until the underground FAC is issued, whichever occurs first.

4.1.3 Water main connection CCC inspection process as described in VOL. 1 SEC. 4.3, WATER DISTRIBUTION SYSTEM.

4.1.4 Upon issuance of underground CCC, Strathcona County to install a box and lock to secure the water tap and prevent unwanted use.

5.0 ACCEPTANCE

5.1 GENERAL

5.1.1 Water main connection may receive FAC after the one (1) year warranty period from issuance of the underground CCC.

5.1.2 FAC inspection process as described in VOL. 1 SEC. 4.3, WATER DISTRIBUTION SYSTEM.

6.0 MEASUREMENT AND PAYMENT

6.1 Community gardens to be measured on a unit price basis per project.

6.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for supply, installation, maintenance and inspection of playgrounds and/or outdoor fitness equipment in the areas shown within the CONSTRUCTION DRAWINGS.

1.1.2 Children's playgrounds must conform to the CONSTRUCTION DRAWINGS, the most recent *CAN/CSA-Z614 Children's Playspaces and Equipment Standards* and the manufacturer's instructions.

1.1.3 Accessible sites must conform with Annex H from the most recent *CAN/CSA-Z614 Children's Playspaces and Equipment Standards* and the manufacturer's instructions.

1.1.4 Outdoor fitness equipment must conform to the CONSTRUCTION DRAWINGS, the most recent *ASTM F3101-15 Standard Specification for Unsupervised Public Use Outdoor Fitness Equipment* and the manufacturer's instructions.

2.0 PRODUCTS

2.1 Playground sand:

2.1.1 Tested by means of laboratory sieves, the sand shall meet with the following grading requirements:

2.1.1.1 Sieve Size (mm):

(i) 2.5 mm (No.8)
(ii) 1.25 mm (No.16)
(iii) 0.8 mm (No20)
(iv) 0.315 mm (No.50)
(v) 0.16 mm (No.100)
(vi) 0.063 mm (No.200)

2.1.1.2 Passing % by Mass:

(vii) 100-100
(viii) 85-100
(ix) 48-70
(x) 2-30
(xi) 0-6
(xii) 0-1

2.1.2 Sand must not contain fine particles and gravel.

2.1.3 Sand must be free from clay, shale, organic matter, toxic materials, heavy metals, sharps and other debris.

2.2 Engineered wood fibre (EWF):

2.2.1 Engineered wood fibre shall be uniform and free from vegetation, disease, manure, compost, mold, fungi, insect infestation, metal, glass, rocks, clay, sharps and other debris.

2.3 Hardware:

2.3.1 Fasteners to be hot dipped galvanized in accordance with *CSA G164 – M1981* in its latest edition. Fasteners as specified in the manufacturer's instructions.

2.3.2 10 mm or 15 mm diameter re-enforcing rod (re-bar).

2.4 Geo-textile filter fabric:

2.4.1 Geo-technical products non-woven geotextile, heavy duty or approved equivalent.

2.5 Concrete:

2.5.1 Concrete for piles to conform to VOL. 2 SEC. 402, CONCRETE CURB, CURB & GUTTER, SIDEWALK, SLABS, AND ROAD BASE. Concrete mix design to follow requirements listed under "Straight Face Curb".

2.5.2 Fillcrete is not acceptable for this application.

2.6 Weepholes:

2.6.1 25 mm diameter PVC pipes covered with filter, glued in place.

2.7 Sub-drainage system (within playground retainer):

2.7.1 100 mm diameter flexible PVC perforated pipe or approved equivalent.

2.7.2 20 mm diameter non-compacted, round washed rock. Angular washed rock is not recommended as to minimize the likelihood of puncturing the pipe upon backfill.

2.7.3 Non-woven geotextile polypropylene needle punched filter fabric or approved equivalent.

2.8 Sub-drainage system (outside playground retainer):

2.8.1 100 mm diameter rigid, non-perforated PVC pipe or approved equivalent.

2.8.2 Flexible water tight connection.

2.8.3 End of PVC pipe to be covered with mesh to prevent rodents or debris from entering the pipe.

3.0 TEST PROCEDURES

3.1 Structures to be tested as specified in *CAN/CSA-Z614 Children's Playspaces and Equipment Standards* or *ASTM F3101-15 Standard Specification for Unsupervised Public Use Outdoor Fitness Equipment*.

3.2 Sand analysis shall be performed by an approved commercial laboratory (CSA/ASTM/CALA/The Canadian Association for Laboratory Accreditation) that is ISO 17025 accredited.

3.3 Such analysis shall be performed on samples from the sand source and shall determine that it conforms to the limits specified in VOL. 2 SEC. 302, GRANULAR MATERIALS.

3.4 Contractor to forward test results to contract manager/Developer Representative prior to sand installation.

3.5 Contract manager/Developer Representative to forward test results to Strathcona County representative at time of CCC inspection application.

4.0 EXECUTION

4.1 SITE PREPARATION

4.1.1 Area designated for playground construction to remain fenced with a 1.8 m high temporary chain link fence or safety fence are required until the playground has achieved CCC. "Keep Out – Construction Area" sign to be visible at all times sign to include the developer's name and phone number.

4.1.2 Prepare and compact the subgrade as specified under VOL. 2 SEC. 601, LANDSCAPE SUBGRADE PREPARATION.

4.2 INSTALLATION

4.2.1 Install sub-drainage system as shown on the CONSTRUCTION DRAWINGS.

4.2.2 Equipment to be installed by a Canadian Playground Safety Institute (CPSI) certified installer in accordance with the manufacturer's instructions.

4.2.3 Ensure footings do not protrude above subgrade and crowns are smooth and draining away from posts.

4.2.4 All miss-drilled holes on structure shall be filled with appropriate material and have a smooth finish.

4.2.5 All threaded fasteners to be secured with thread locking compound.

4.2.6 Install concrete playground retainer or alternative as shown on the CONSTRUCTION DRAWINGS.

4.2.7 Weep holes to be installed on the lower end of the slope and as shown on the CONSTRUCTION DRAWINGS.

4.2.8 Top of retainer to be installed at a leveled elevation to contain the protective surfacing material and to accommodate the sub-grade slope requirements.

4.2.9 Entire top and exterior surface of retainer to be broom finished, free of splinters and sharp edges.

4.2.10 Remove debris, waste and unused materials prior to installing sand or other protective surfacing material.

4.2.11 Install safety signage identifying intended age groups as shown on the CONSTRUCTION DRAWINGS.

4.2.12 Sand or other protective surfacing material to be installed immediately upon approval of retainer and play equipment installation.

5.0 WARRANTY AND MAINTENANCE

5.1 GENERAL

5.1.1 Playgrounds or outdoor fitness equipment shall have a one (1) year warranty period from issuance of the CCC or until the FAC is issued.

5.1.2 CCC inspection process as described in VOL. 1 SEC. 6 OPEN SPACE STANDARDS, SUB-SECTION 6.13, LANDSCAPE INSPECTION PROCESS.

5.1.3 Contract Manager/Developer Representative must coordinate the structure inspection with a Canadian Playground Safety Institute (CPSI) certified inspector to ensure equipment meets the specification from *CAN/CSA-Z614 Children's Playspaces and Equipment Standards* or *ASTM F3101-15 Standard Specification for Unsupervised Public Use Outdoor Fitness Equipment*.

5.1.4 Following issuance of CCC, the County shall assume the normal operation and routine maintenance of the playground and/or outdoor fitness equipment. This excludes repairs or matters arising from inadequate or deficient design/construction and damaged or missing components.

5.1.5 In the event that the County considers that any repairs outside of routine maintenance are required, the Developer shall, within 48 hours of receiving notice from the County, take all necessary actions as determined by the County, failing which, the County may take action and charge back all costs and expenses to the developer.

5.1.6 Repairs outside of routine maintenance shall be immediately reported to the Contract Manager and/Developer Representative. The County shall restrict public access until repairs are rectified.

6.0 ACCEPTANCE

6.1 Playgrounds or outdoor fitness equipment may be accepted providing that all components are free from deficiencies and have been installed in accordance with these CONSTRUCTION SPECIFICATIONS, the CONSTRUCTION DRAWINGS, the manufacturer's instructions, the latest edition of *CAN/CSA-Z614 Children's Playspaces and Equipment Standards*, or *ASTM F3101-15Standard Specification for Unsupervised Public Use Outdoor Fitness Equipment.*

6.2 Contract Manager/Developer Representative to coordinate with the contractor the installation of additional sand if needed to ensure a minimum of 360 mm depth at time of FAC.

6.3 FAC inspection process as described in VOL. 1 SEC. 6 OPEN SPACE, SUB-SECTION 6.13, LANDSCAPE INSPECTION PROCESS.

7.0 MEASUREMENT AND PAYMENT

7.1 Playgrounds or outdoor fitness equipment to be measured will on a lump sum basis per project.

7.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for supply, installation, maintenance and inspection of soccer fields in the areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative.

1.1.2 The design and construction of soccer fields must follow the current CSA standards, municipal, provincial and/or federal guidelines for soccer fields.

1.2 DEFINITIONS

1.2.1 Weeds: includes but is not limited to jimsonweed (*Datura stramonium*) in addition to all noxious and prohibited weeds as identified under the Alberta Weed Control Act, Fisheries (Alberta) Act, and municipal bylaws.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1 Subgrade:

2.1.1.1 Subgrade as specified in VOL. 2 SEC. 601, LANDSCAPE SUBGRADE PREPARATION.

2.1.1.2 Clay fill to be inorganic fine grained sand clay soil free from weeds, roots, rocks larger than 25 mm and building debris. Excavated material is suitable if it conforms to the above and is approved by the contract manager/Developer Representative.

2.1.2 Topsoil:

2.1.2.1 Topsoil supply and installation as specified in VOL. 2 SEC. 602, INSTALLATION OF TOPSOIL.

2.1.3 Sod:

2.1.3.1 Sod as specified in VOL. 2 SEC. 603, SEED AND SOD.

2.1.3.2 Only sod is permitted for this application. Seed mixes will not be accepted as an alternative due to its lengthy establishment and scheduled programming requirements.

3.0 EXECUTION

3.1 GENERAL

3.1.1 Prepare the subgrade as specified in VOL. 2 SEC. 601, LANDSCAPE SUBGRADE PREPARATION and to cross sections shown on the CONSTRUCTION DRAWINGS. The Contractor shall maintain the subgrade to the specified section, free from ruts, waves and undulations. The subgrade shall be in a firm, dry condition and must be approved by the Contract Manager/Developer Representative before topsoil is placed.

3.1.2 Hauling over the subgrade will not be permitted when, in the opinion of the Contract Manager/Developer Representative, damage to the subgrade may result.

3.1.3 Ideal field construction to have a longitudinal slope of 0.5% to 2.0% from one end to the other depending on site drainage conditions.

3.1.4 If required, install underground irrigation as shown on the CONSTRUCTION DRAWINGS.

3.1.5 Topsoil depth to be a minimum of 200 mm after compaction.

3.1.6 Contractor/Developer Representative to provide topographical survey to Strathcona County after topsoil installation and prior to or sodding.

3.1.7 Sports field survey reference pins to be installed at time of construction. The sports field reference pins shall be 500 mm length of 15 mm diameter rebar, installed to a depth of 50 mm below final grade.

3.1.8 Sod area as specified in VOL. 2 SEC. 603, SEED AND SOD.

4.0 WARRANTY AND MAINTENACE

4.1 GENERAL

4.1.1 All sodded areas shall have a two (2) year warranty period from issuance of the soft landscape CCC and until the soft landscape FAC is issued.

4.1.2 Sodded areas to be maintained as specified in VOL. 2 SEC. 603, SEED AND SOD.

4.1.3 CCC inspection process as described in VOL. 1 SEC. 6 OPEN SPACE STANDARDS, SUB-SECTION 6.13, LANDSCAPE INSPECTION PROCESS.

5.0 ACCEPTANCE

5.1 GENERAL

5.1.1 Sod may receive FAC after the two (2) year warranty period from issuance of the soft landscape CCC.

5.1.2 FAC inspection process as described in VOL. 1 SEC. 6 OPEN SPACE STANDARDS, SUB-SECTION 6.13, LANDSCAPE INSPECTION PROCESS.

5.1.3 Sodded areas shall be accepted when all areas have established a minimum of 95% of the total area to a height of 65 mm. Sod to be healthy, even, vigorously growing and free of disease, weeds and voids.

5.1.4 Weeds must be mechanically or chemically controlled in accordance with the Alberta Weed Control Act, Fisheries (Alberta) Act, and municipal bylaws.

5.1.5 Goal posts to be installed prior to issuance of FAC.

6.0 MEASUREMENT AND PAYMENT

6.1 Topsoil will be measured in cubic metres to the specified depth and sod installation will be measured in square metres of surface area.

6.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.

1.0 GENERAL

1.1 DESCRIPTION

1.1.1 This section specifies the general requirements for supply, installation, maintenance and inspection of turf and shale ball fields in the areas shown within the CONSTRUCTION DRAWINGS or as directed by the Contract Manager/Developer Representative.

1.1.2 The design and construction of baseball fields must follow the current CSA standards, municipal, provincial and/or federal guidelines for baseball fields.

1.2 DEFINITIONS

1.2.1 Weeds: includes but is not limited to jimsonweed (*Datura stramonium*) in addition to all noxious and prohibited weeds as identified under the Alberta Weed Control Act, Fisheries (Alberta) Act, and municipal bylaws.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1 Subgrade:

2.1.1.1 Subgrade as specified in VOL. 2 SEC. 601, LANDSCAPE SUBGRADE PREPARATION.

2.1.1.2 Clay fill to be inorganic fine grained sand clay soil free from weeds, roots, rocks larger than 25 mm and building debris. Excavated material is suitable if it conforms to the above and is approved by the Contract Manager/Developer Representative.

2.1.2 Topsoil:

2.1.2.1 Topsoil supply and installation as specified in VOL. 2 SEC. 602, INSTALLATION OF TOPSOIL.

2.1.3 Sod:

2.1.3.1 Sod as specified in VOL. 2 SEC. 603, SEED AND SOD.

2.1.3.2 Only sod is permitted for this application. Seed mixes will not be accepted as an alternative due to its lengthy establishment and scheduled programming requirements.

2.1.4 Shale:

2.1.4.1 Shale as specified in VOL. 2 SEC. 302, GRANULAR MATERIALS.

2.1.5 Fences:

2.1.5.1 Fences as specified in VOL. 2 SEC. 607, CHAIN LINK FENCE.

2.1.5.2 Yellow protective plastic capping along top of fences.

3.0 EXECUTION

3.1 GENERAL

3.1.1 Ideal field construction to have a longitudinal slope of no greater than 1.5% from one end to the other depending on site drainage conditions.

3.1.2 Hauling over the subgrade will not be permitted when, in the opinion of the Contract Manager/Developer Representative, damage to the subgrade may result.

3.1.3 Ball fields subgrade and surface must be graded to eliminate ponding areas and have an optimum gradient of 0.5% to 2% in all directions with a variance of ±0.5 % with high point being in the middle of the field.

3.1.4 Use topsoil mix as specified in VOL. 2 SEC. 602, INSTALLATION OF TOPSOIL for Sports Fields. Topsoil depth to be a minimum of 200 mm after compaction.

3.1.5 If required, install underground irrigation as shown on the CONSTRUCTION DRAWINGS.

3.1.6 Topographic survey of ball field after shale or topsoil installation to be provided to Contract Manager/Developer Representative prior to sodding.

3.1.7 Sports field survey reference pins to be installed at time of construction. The sports field reference pins shall be 500 mm length of 15 mm diameter rebar, installed to a depth of 50 mm below final grade.

3.1.8 Install yellow protective plastic capping along top of fences.

3.1.9 Establish turf ball field in accordance with VOL. 2 SEC. 603, SEED AND SOD.

3.2 SHALE INFIELD

3.2.1 Excavate infield to provide a 150 mm clay subgrade and 100 mm shale depth prepared as specified in VOL. 2 SEC. 601, LANDSCAPE SUBGRADE PREPARATION and VOL. 2 SEC. 302, GRANULAR MATERIALS

3.2.2 Compact subgrade in accordance with VOL. 2 SEC. 202, COMPACTED SUBGRADE PREPARATION.

3.2.3 Compact shale in continuous horizontal lifts not exceeding 50 mm.

3.2.4 Ensure that shale field is free of contamination of subsoil or grass during construction.

3.2.5 Extend shale field 200 mm past backstop for maintenance purposes.

4.0 WARRANTY AND MAINTENACE

4.1 GENERAL

4.1.1 All sodded areas shall have a two (2) year warranty period from issuance of the soft landscape CCC and until the soft landscape FAC is issued.

4.1.2 Sodded areas to be maintained as specified in VOL. 2 SEC. 603, SEED AND SOD.

4.1.3 CCC inspection process as described in VOL. 1 SEC. 6 OPEN SPACE STANDARDS, SUB-SECTION 6.13, LANDSCAPE INSPECTION PROCESS.

4.1.4 Shale fields may be accepted immediately upon completion and installation of the backstop. No maintenance period is required.

5.0 ACCEPTANCE

5.1 GENERAL

5.1.1 Sod may receive FAC after the two (2) year warranty period from issuance of the soft landscape CCC.

5.1.2 FAC inspection process as described in VOL. 1 SEC. 6 OPEN SPACE STANDARDS, SUB-SECTION 6.13, LANDSCAPE INSPECTION PROCESS.

5.1.3 Sodded areas shall be accepted when all areas have established a minimum of 95% of the total area to a height of 65 mm. Sod to be healthy, even, vigorously growing and free of disease, weeds and voids. Backstop to be installed prior to issuance of FAC.

6.0 MEASUREMENT AND PAYMENT

6.1 Topsoil and shale will be measured in cubic metre to the specified depth and sod installation will be measured in square metres of surface area.

6.2 All work performed and measured as prescribed above shall be full compensation to perform all labour and use of equipment necessary to complete the work in accordance with this CONSTRUCTION SPECIFICATIONS and CONSTRUCTION DRAWINGS.