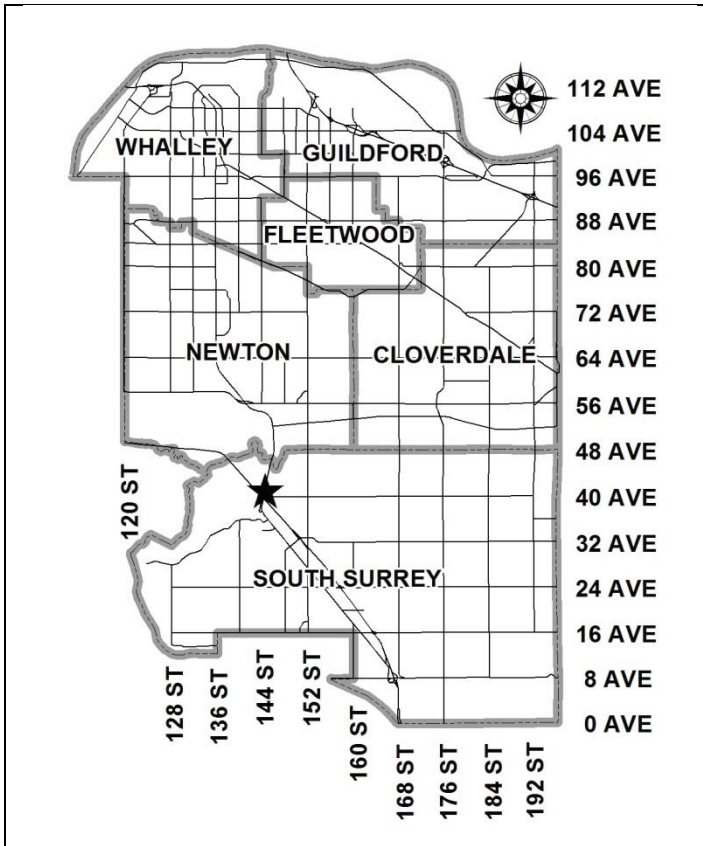


City of Surrey
PLANNING & DEVELOPMENT REPORT

File: 7911-0141-00

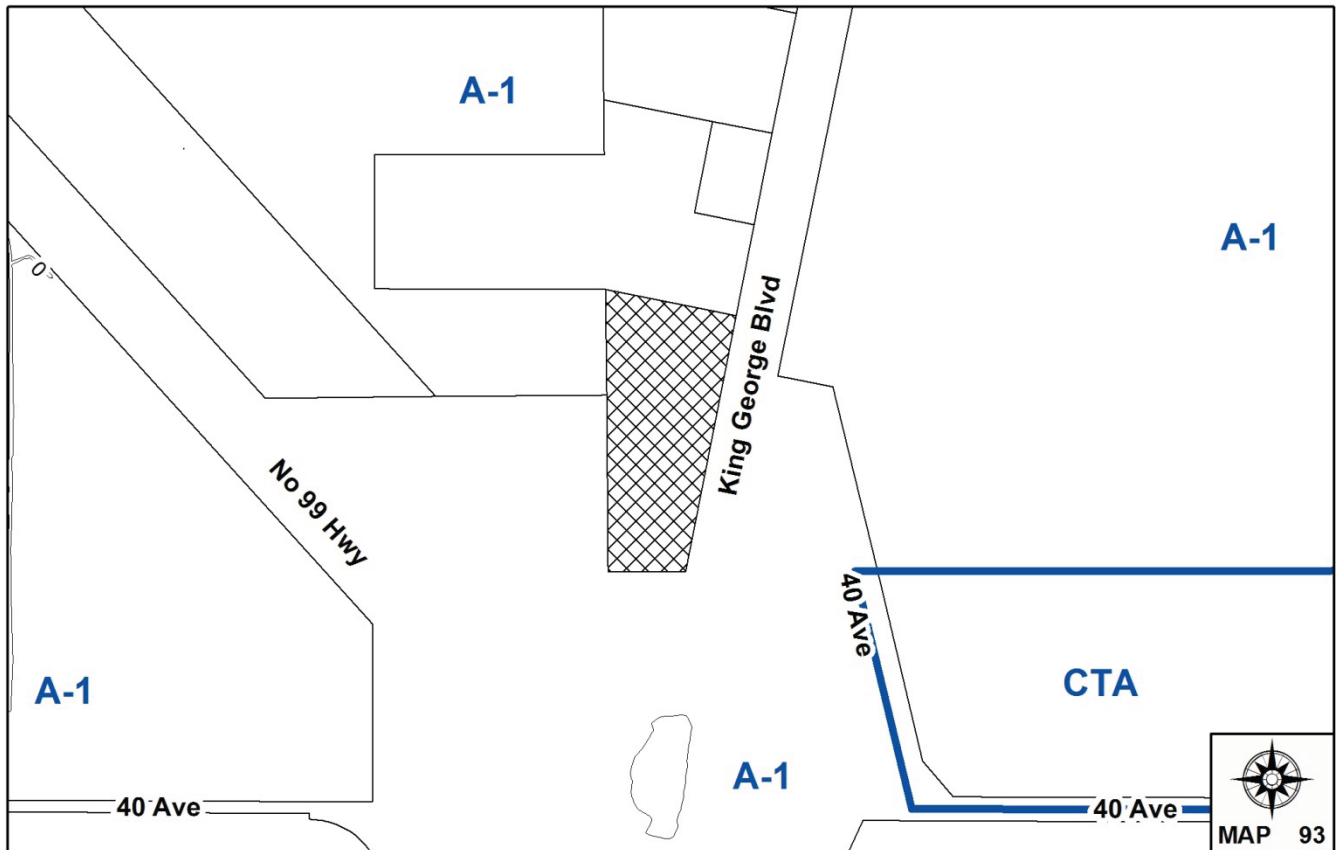
Planning Report Date: March 12, 2012



PROPOSAL:

- **Development Variance Permit**
 in order to permit the construction of a 44.2 metre (145 ft.) free-standing telecommunication tower.

LOCATION: 4121 King George Boulevard
OWNER: Surrey Topsoil Ltd., Inc. No. 403047
ZONING: A-1
OCP DESIGNATION: Agricultural
LAP DESIGNATION: Agricultural



RECOMMENDATION SUMMARY

- Denial of the Development Variance Permit.
- Should Council determine that there is merit in allowing the proposal to proceed, the application should be referred back to staff for additional design review and Public Information Meeting.

DEVIATION FROM PLANS, POLICIES OR REGULATIONS

The applicant is requesting a variance to increase the height of a free-standing telecommunications tower from 12 metres (40 ft.) to 44.2 metres (145 ft.).

RATIONALE OF RECOMMENDATION

- The proposed monopole is located within 100 metres of a significant BC Hydro transmission tower. The applicant has not been receptive to locating telecommunication equipment on the existing BC Hydro transmission towers located near the proposed tower site.
- Although the proposal is sited in an agricultural area, it is located in close proximity to the Peace Arch RV Park to the east (across King George Boulevard).
- The proposed variance has triggered significant public opposition.
- The capacity issues that have been shown to exist for two carriers in the area may be resolved through installations on existing structures in the area, such as the BC Hydro transmission towers.
- The proposed tower is located in an open area and is highly visible.

RECOMMENDATION

The Planning & Development Department recommends that this application be denied.

Should Council determine that there is merit in allowing the proposal to proceed, the application should be referred back to staff for additional design review and Public Information Meeting.

REFERRALS

Engineering:	The Engineering Department has no objection to the proposed Development Variance Permit (DVP) and there are no additional engineering requirements relative to the issuance of the DVP.
Ministry of Transportation & Infrastructure (MOTI):	The Ministry of Transportation and Infrastructure has no objections to the project.
Agricultural Advisory Committee (AAC):	The proposed DVP proceeded to the AAC for information only on February 9, 2012. There were no comments related to this proposal. Telecommunications equipment is a permitted use in ALR land, as long as the site is confined to an area no greater than 100 square metres (1,076 sq.ft.).

SITE CHARACTERISTICS

Existing Land Use: Existing temporary Cell on Wheels (COW) telecommunication structure, otherwise vacant. Fill has been placed on-site without permit.

Adjacent Area:

Direction	Existing Use	OCP Designation	Existing Zone
North:	Existing blueberry farm, with associated farm buildings.	Agricultural	A-1
East (Across King George Boulevard):	Small parking lot on the King George Boulevard and 40 th Avenue right-of-way.	Agricultural	A-1
South:	Highway No. 99 interchange.	Agricultural	A-1
West:	BC Hydro Utility Corridor.	Agricultural	A-1

APPLICANT'S JUSTIFICATION FOR THE PROPOSED LOCATION

- There is a demonstrated need for increased capacity for two carriers (Mobilicity and Wind) in this area.
- The subject site is located in a non-residential area and is surrounded by agricultural lands, some of which are being actively farmed and others which are being used to accommodate transportation and Hydro infrastructure.
- The proposed monopole will be situated near the south west property line, near the adjacent BC Hydro transmission corridor.
- The proposed monopole is located within 100 metres of a BC Hydro Transmission tower. The City's *Telecommunication Towers Policy* states that, whenever possible, locate proposed telecommunication equipment on existing structures within a radius of 500 metres (1,640 ft.) of the proposed monopole location.
- The site is proposed to be developed as a co-location site to accommodate two new service providers, thereby minimizing the number of installations required to service the area.

DEVELOPMENT CONSIDERATIONS

Background/Proposal

- The subject site, at 4121 King George Boulevard, is zoned General Agricultural Zone (A-1), designated Agricultural in the Official Community Plan (OCP), and within the Agricultural Land Reserve (ALR). The subject property is approximately 2.03 hectares (5.01 acres) in size.
- The property owner has granted authorization to SBA Canada, ULC., to apply for a Development Variance Permit (DVP) application to increase the maximum height of a free-standing telecommunication tower from 12 metres (40 ft.) to 44.2 metres (145 ft.).
- SBA Canada, ULC. is a Third Party provider of wireless communications facilities. The company develops, owns and manages the facilities and leases space on its towers to various wireless carriers.
- The proposal is for a galvanized steel monopole installation with ancillary equipment cabinets at the base of the mast. The installation is to be located within a 10-metre (33 ft.) by 10-metre (33 ft.) fenced compound at the south west corner of the subject property.
- The applicant has provided written confirmation that two carriers are willing to co-locate on this structure: Mobilicity and Wind. The proposed structure can accommodate up to 4 carriers.
- The applicant has indicated that Mobilicity and Wind require a site in this area due to the considerable vehicular traffic and a growing base of residents and businesses in the area.

- The current proposal is to provide improved coverage and capacity for an area generally bounded by the Serpentine river to the north, the Nicomekl River to the south, the Pacific Ocean to the west, and 160 Street to the east (see Appendix III).

City's Telecommunication Tower Policy

- A City policy on telecommunication towers was developed in conjunction with wireless providers and approved by Council on June 18, 2001 (Policy O-49 Telecommunication Towers). The policy provides parameters on how the towers should be sited and designed.
- The following is an evaluation of the current tower proposal in relation to Policy O-49:

Location and Siting

- When considering the siting of telecommunication tower facilities, every effort should be made to locate new equipment on existing structures such as Hydro transmission line towers, utility poles, roof tops, etc.

The proposed monopole is located within 75 metres of a significant BC Hydro transmission tower corridor.

The applicant has indicated that wireless carriers are not able to locate on the existing BC Hydro transmission tower due to safety concerns. There are many examples in Surrey, however, where telecommunication antennae are mounted atop BC Hydro transmission towers with no negative safety impacts.

Another carrier has installed telecommunication equipment atop the BC Hydro tower located closest (± 75 metres) to the proposed monopole location. Approximately 100 metres from the proposed monopole location is a second BC Hydro transmission tower which could accommodate an additional carrier (Wind or Mobicity). The BC Hydro transmission tower corridor contains many transmission towers and therefore presents many opportunities for structures upon which telecommunication providers can locate their equipment. The range of coverage provided by the proposed 45.7 metre monopole is larger than the range that can be achieved on the shorter (± 25 metre) BC Hydro transmission towers, thereby requiring the carriers to install multiple antennae on multiple towers. This is not the preferred option of the carriers for economic reasons.

- It is preferable that the new free-standing telecommunication towers be sited in non-residential locations and preferably in industrial areas.

Although the proposal is sited in an agricultural area, it is located in close proximity (± 250 metres) to the Peace Arch RV Park to the east (across King George Boulevard).

- Towers on prominent natural and cultural features, environmentally sensitive areas or areas with historically significant buildings are discouraged.

The proposed location is located out in the open and not near any significant cultural, environmental or historic areas. However, the proposed tower is located in an open area and is highly visible.

- New free-standing telecommunication towers should be located at a distance from the edge of an existing or future road allowance no less than the height of the tower.

The telecommunications facility is proposed to be located approximately 45 metres (147.6 ft.) from King George Boulevard, which is slightly more than the proposed 44.2 metre (145 ft.) tower height. The proposed location utilizes an existing driveway and the applicant has received approval for access from the Ministry of Transportation and Infrastructure.

- Location of telecommunication towers on sites with mature trees is encouraged.

The proposed tower is not located near any significant tree stands.

- All applicants for free-standing telecommunications structures will be requested to identify any other structure (i.e. Hydro transmission line towers, existing telecommunication towers, etc.) within a radius of 500 metres (1,640 ft.) from the proposed location and to provide reasons why other existing structures within that radius are not acceptable for use (i.e. structural capabilities, safety, available space or failing to meet service coverage needs).

As noted above, the applicant has indicated that the BC Hydro transmission tower located approximately 100 metres from the proposed monopole is not acceptable due to safety concerns. Staff reiterates that there are many examples in Surrey where telecommunication antennae are mounted atop BC Hydro transmission towers with no negative safety impacts.

Another carrier has installed telecommunication equipment atop the BC Hydro tower located closest (± 75 metres) to the proposed monopole location. Approximately 100 metres from the proposed monopole location is a second BC Hydro transmission tower which could accommodate an additional carrier (Wind or Mobicity). The BC Hydro transmission tower corridor contains many transmission towers and therefore presents many opportunities for structures upon which telecommunication providers can locate their equipment. The range of coverage provided by the proposed 44.2 metre (145 ft.) monopole is larger than the range that can be achieved on the shorter (± 25 metre) BC Hydro transmission towers, thereby requiring the carriers to install multiple antennae on multiple towers. This is not the preferred option of the carriers for economic reasons.

Co-location

- The carriers and other telecommunication tower owners are encouraged to work co-operatively in reaching agreements which allow for sharing of tower structures so as to minimize the total number of towers in the City. This practice is typically referred to as "co-location".

The applicant has provided written confirmation from Mobicity and Wind of their interest to co-locate on the monopole. Based on the proposed 44.2 metre (145 ft.) height, the proposed monopole could accommodate up to four carriers.

Tower Design

- Towers and ancillary equipment shelters will be designed to fit their surroundings and to minimize their visual impact on surrounding properties.
- The use of monopoles is encouraged. Where a tower is being constructed to accommodate a single user, a monopole design is required.
- Landscaping shall be appropriately placed around a telecommunication tower and ancillary facilities, such as equipment shelters, to minimize their visual impact on the neighbourhood.

The applicant is proposing a monopole design with ancillary equipment shelters at the base, which will be screened by a chainlink fence complete with green slats and surrounded with shrubs.

PRE-NOTIFICATION

Pre-notification letters were sent by the applicant on or about December 9, 2011. The applicant mailed letters to an area encompassing 6 times the height of proposed tower (274 metres/899 feet).

As a result of the applicant's mail out, staff received 5 e-mail responses and 2 phone calls, along with a petition, all in opposition to the proposed telecommunications tower. The petition represented 59 residents (from the Peace Arch RV Park at 14601 40 Avenue).

The concerns raised by area residents are as follows:

- Health effects related to the radiofrequency of the proposed tower.
- The impact of the radiofrequency of the proposed tower on pollinator species.
- The impact of the proposed tower and ancillary equipment on farming.
- The impact of the proposed tower on the adjacent farms (casting shadow on light-sensitive crops).
- The impact of the proposal on property values.
- Increasing the magnitude of non-farm uses on the subject site.
- The visual impact of the proposed tower on the area which is viewed as the "gateway to South Surrey".
- Concerns about the public process and ability to provide comments.
- Concerns that the subject site is already being prepared for the proposed tower (a significant amount of fill has been brought onto the site without a permit).

The applicant has not held a Public Information Meeting (PIM) to date.

The applicant has provided the following responses to the concerns:

- Concern about the health effects.

The site will operate within Industry Canada and Health Canada regulations. Industry Canada prohibits health concerns as a reason for denying a tower location.

- Concern about the visual impact.

The compound, equipment and structures will be enclosed within a chainlink fence with green slats and will be surrounded with shrubs.

- Concern about the loss of farm land.

The leased area of the site is 10 x 10 metres and occupies an area of the site that is not currently used for agricultural production.

- Concern about the impact on property values.

Evidence suggests that property values are not impacted by the proximity of a telecommunications facility.

- Concern about the public process.

SBA Canada ULC. has followed the City of Surrey's Policy (0-49): Telecommunication Towers. In addition, Industry Canada requirements related to public notification have been followed.

BY-LAW VARIANCE AND JUSTIFICATION

(a) Requested Variance:

- To vary the Zoning By-law to increase the maximum height of a free-standing telecommunications tower from 12 metres (40 ft.) to 44.2 metres (145 ft.).

Applicant's Reasons:

- The applicant has submitted some information to demonstrate that there are capacity issues in the area, which a proposed telecommunication structure would assist in resolving.
- The proposed tower will provide co-location opportunities for at least two wireless carriers and could provide an opportunity for two more.

Staff Comments:

- The proposed variance has triggered significant public opposition.
- The capacity issues that have been shown to exist for two carriers in the area may be resolved through installations on the nearby BC Hydro transmission towers.

- The applicant has not been receptive to locating telecommunication equipment on the existing BC Hydro transmission towers located near the proposed tower site.

PROJECT EVALUATION

The following is a summary of the benefits and concerns of supporting the proposed telecommunication tower application:

Pros

- The proposed site addresses wireless coverage and capacity issues in this area of Surrey and responds to the increasing consumer demand for wireless services and in particular, the ever-growing demand for data transmission. This site is particularly critical for the new carriers (Mobilicity and Wind Mobile) who are building their networks.
- The site is being developed as a co-location site to accommodate up to four carriers, therefore minimizing the number of towers required to service the area.
- The proposed site is located in a non-residential location.
- The applicant is proposing a monopole design.

Cons

- Although the site is located in an agricultural area, it is located in close proximity to a large RV Park (Peace Arch RV Park).
- There is no reasonable rationale for why telecommunication equipment cannot be located on the BC Hydro transmission towers located near the proposed tower site.
- The neighbouring residents have been very vocal in their opposition to the proposed telecommunications tower citing a number of concerns including detrimental health effects, loss of productive farm land, and impact on adjacent farms.

RECOMMENDATION SUMMARY

The Planning & Development Department recommends that this application be denied.

Should Council determine that there is merit in allowing the proposal to proceed, the application should be referred back to staff for additional design review and Public Information Meeting.

INFORMATION ATTACHED TO THIS REPORT

The following information is attached to this Report:

- Appendix I. Lot Owners, Action Summary
- Appendix II. Proposed Site Plan and Building Plans
- Appendix III. Coverage Map
- Appendix IV. Development Variance Permit No. 7911-0141-00

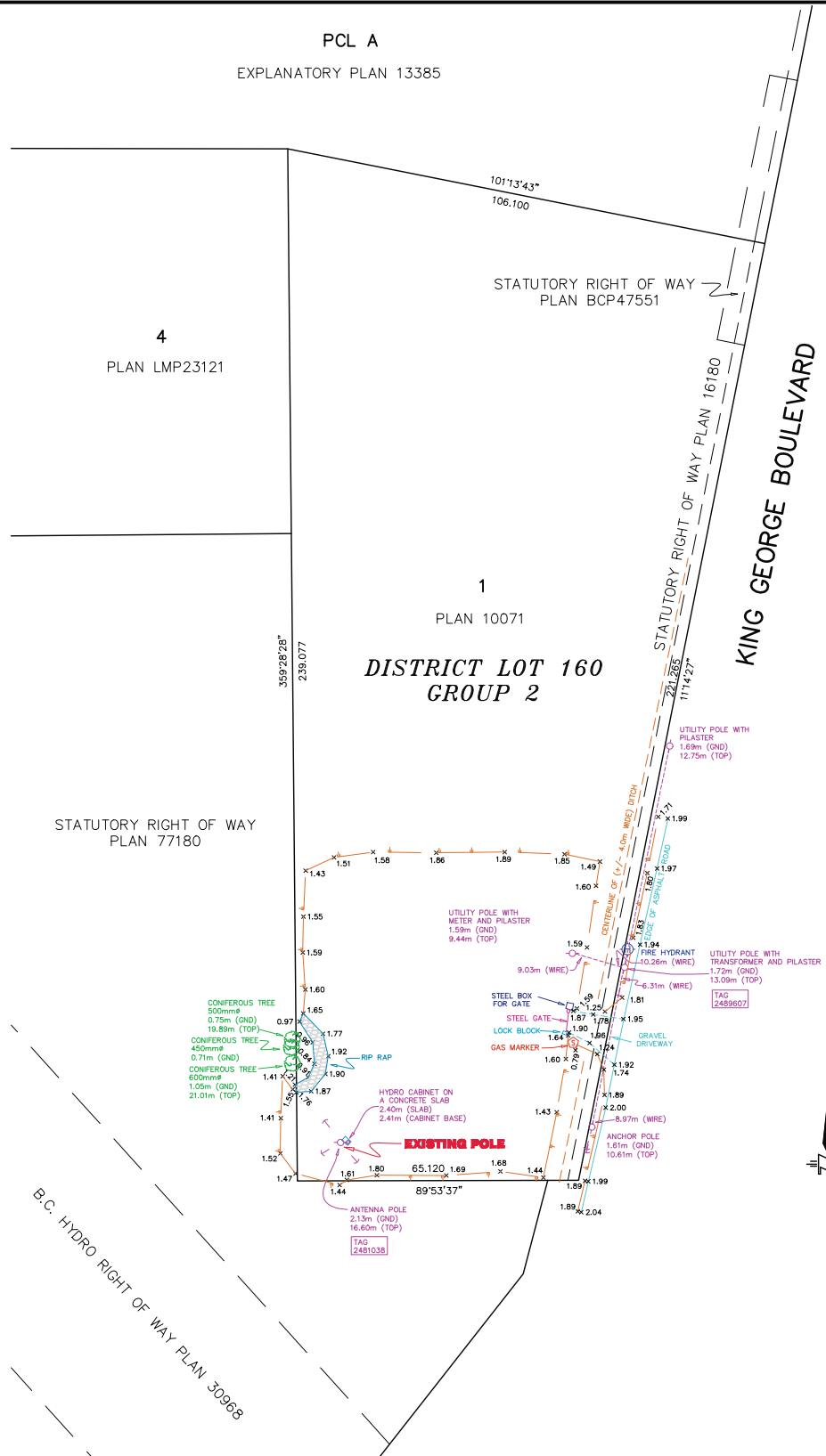
original signed by Nicholas Lai

Jean Lamontagne
General Manager
Planning and Development

TH/kms

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PCL A
EXPLANATORY PLAN 13385



NOTES:

- ELEVATIONS ARE GEODETIC, IN METRES DERIVED FROM CITY OF SURREY INTEGRATED MONUMENT NO. 5630 ELEVATION = 8.450m
- GEOGRAPHIC CO-ORDINATES ARE NAD 83, DERIVED FROM INTEGRATED MONUMENT NO. 5630
- BEARINGS ARE FROM PLAN BCP47551
- LOT DIMENSIONS ARE IN METRES FROM PLAN BCP47551

LEGAL DESCRIPTION:

OWNER: SURREY TOPSOIL LTD., INC. NO. 403047
PID NO. 009-236-520
LOT 1
DISTRICT LOT 161 GROUP 2
NEW WESTMINSTER DISTRICT
PLAN 10071

SCALE 1 : 750



ALL DISTANCES ARE IN METRES AND DECIMALS THEREOF

DESCRIPTION	GEOGRAPHIC LOCATION	ELEVATION
EXISTING POLE	49° 04' 35.7" N.LATITUDE 122° 49' 23.2" W.LONGITUDE (NAD83)	2.13m (GROUND)

McElhanney Associates
LAND SURVEYING LTD.
13160 88 AVENUE, SURREY, B.C., CANADA
V3W 3K3 TELEPHONE (604) 596 0391



Surveyed 20 APRIL 2011
Drawn JM
Checked PB/IS

SBA CANADA



Job No. 2112 08102

Drawing No.

SITE PLAN
BC70477

Scale 1 : 750

Date 06 MAY 2011

Revision 0

4121 KING GEORGE HIGHWAY, CITY OF SURREY

1

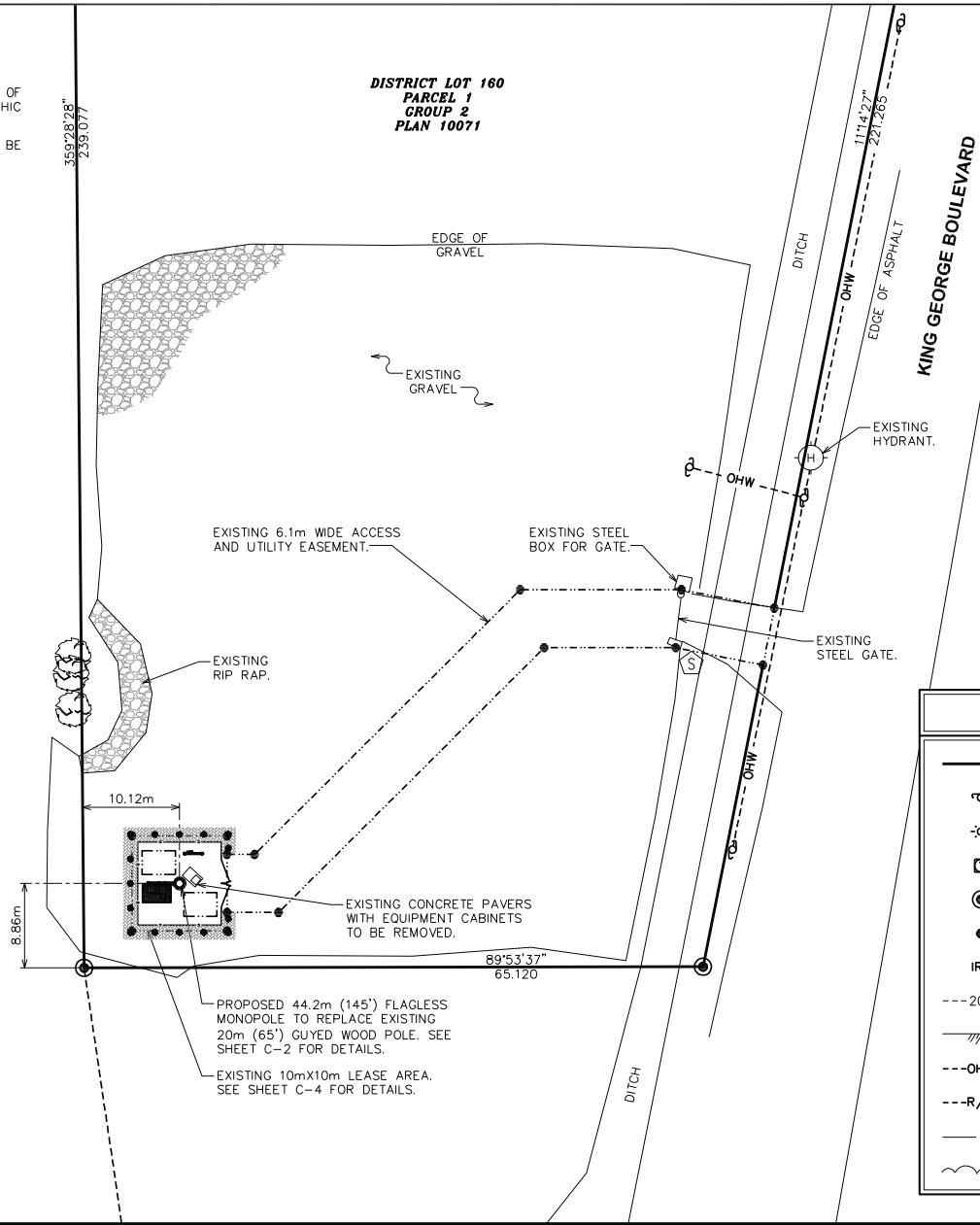
No.	Date	Revision	Dr.	Ch.

NOTES:

1. BEARINGS ARE FROM PLAN BCP47551.
2. ELEVATIONS ARE GEODETIC AND DERIVED FROM THE CITY OF SURREY INTEGRATED MONUMENT NO. 5630. GEOGRAPHIC COORDINATES ARE NAD 83.
3. DISTANCES SHOWN HEREON ARE IN METERS AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

**DISTRICT LOT 160
PARCEL 1
GROUP 2
PLAN 10071**

**STATUTORY
R/W PLAN 77180**



LEGEND

- EXIST. PROPERTY LINE
- ⊕ EXIST. UTILITY POLE
- ☀ EXIST. LIGHT POLE
- ⊞ EXIST. TELCO PEDESTAL
- ⊙ PROPERTY CORNER
- CORNER
- IRF IRON ROD FOUND
- 200--- EXIST. CONTOUR LINE
- /// EDGE OF PAVEMENT
- OHW--- OVERHEAD WIRE
- R/W--- RIGHT-OF-WAY
- X — CHAIN LINK FENCE
- ~ EXISTING TREE LINE



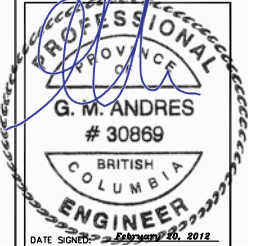
SBA CANADA
468 SAINT-JEAN, BUREAU 400
MONTREAL, QUEBEC H2Y 2S1
TEL: (514) 656-5233

**TOWER ENGINEERING
PROFESSIONALS**

3703 JUNCTION BOULEVARD
RALEIGH, NC 24467
TEL: (919) 661-6351
FAX: (919) 661-6350

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APPROVED BY:	GMA	
REV:	DATE:	ISSUED FOR:
0	5-16-11	ZONING
1	2-20-12	REVISED ZONING



SITE NAME
**SURREY
TOP SOIL**

SBA SITE I.D.
BC-70477-B

SITE ADDRESS
4121 KING GEORGE HIGHWAY
SURREY, BC V3S 0L2
(CANADA)

SHEET NAME
SITE PLAN

SHEET NUMBER
C-1

- T/LIGHTNING ROD
ELEV.: +45.4m
- T/TOWER STEALTH
ELEV.: +44.2m
- T/TOWER STEALTH
ELEV.: +42.6m
- T/TOWER STEALTH
ELEV.: +39.6m
- T/TOWER STEALTH
ELEV.: +36.6m
- T/TOWER STEALTH
ELEV.: +33.6m
- T/FLAGLESS MONOPOLE
ELEV.: +32.0m

- PROPOSED LIGHTNING ROD BY OTHERS.
- PROPOSED RED BEACON LIGHT AT TOP OF TOWER.
- WIDTH OF TOWER IS 914mm (36").
- PROPOSED ANTENNAS AND RRU'S STEALTH MOUNTED BY WIND (TYP OF 3 ANTENNAS).
- FUTURE PANEL ANTENNAS BY WIND.
- FUTURE PANEL ANTENNAS BY MOBILITY.
- FUTURE PANEL ANTENNAS BY MOBILITY.

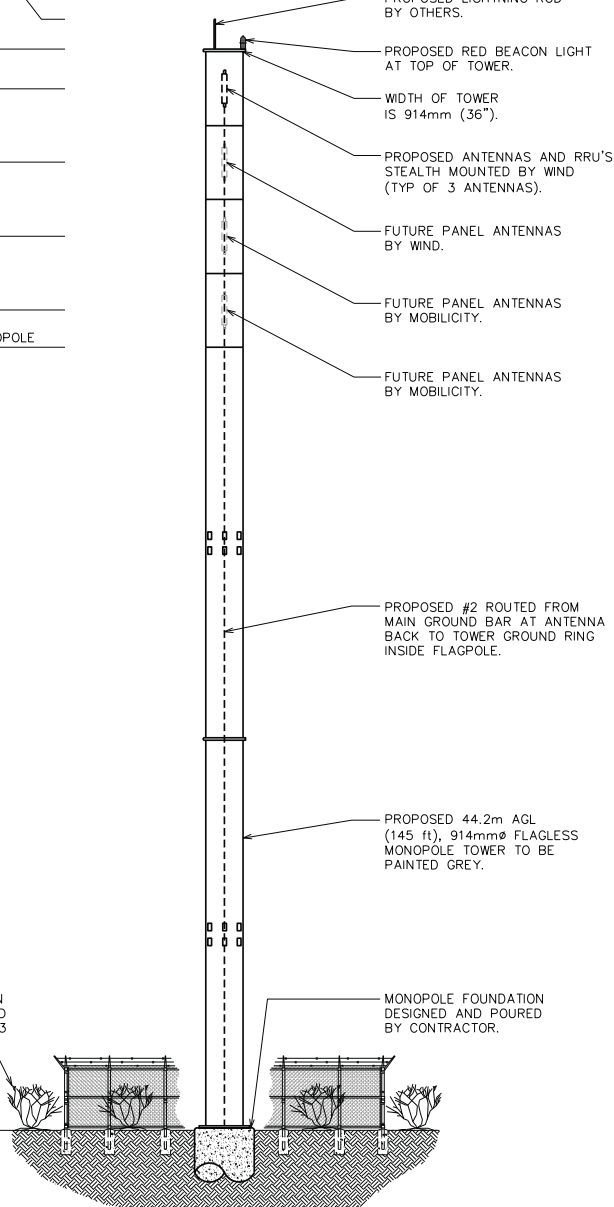
PROPOSED #2 ROUTED FROM MAIN GROUND BAR AT ANTENNA BACK TO TOWER GROUND RING INSIDE FLAGPOLE.

PROPOSED 44.2m AGL (145 ft), 914mmØ FLAGLESS MONOPOLE TOWER TO BE PAINTED GREY.

MONOPOLE FOUNDATION DESIGNED AND POURED BY CONTRACTOR.

APPROXIMATE LOCATION AND SIZE OF PROPOSED SHRUB. SEE SHEET C-3 FOR DETAILS.

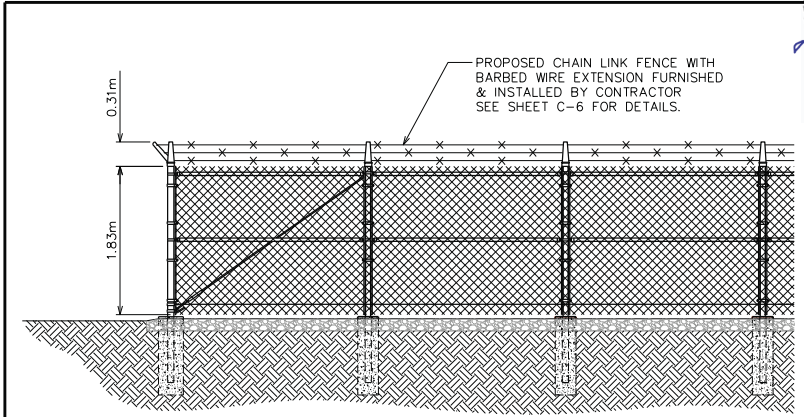
EXISTING GRADE
ELEV.: +00.0m



ANTENNA SCHEDULE			
QUANTITY	ELEVATION	ANTENNA DESCRIPTION	CARRIER
3	42.6m (140')	PANEL ANTENNAS	WIND
3	39.6m (130')	PANEL ANTENNAS (FUTURE)	WIND
3	36.6m (120')	PANEL ANTENNAS (FUTURE)	MOBILITY
3	33.6m (110')	PANEL ANTENNAS (FUTURE)	MOBILITY

TOWER NOTES:

- ANTENNA REQUIREMENTS ARE SUBJECT TO CHANGE AS PER CARRIER REQUIREMENTS.
- NO ANTENNAS WILL BE INSTALLED ON THE EXTERIOR OF THE STRUCTURE.
- STRUCTURAL CALCULATIONS PREPARED BY OTHERS.
- TOWER SHOULD BE PAINTED GREY.
- CONTRACTOR TO REFER TO TOWER STRUCTURAL CALCULATIONS FOR ADDITIONAL LOADS. NO ERECTION OR MODIFICATION OF TOWER SHALL BE MADE WITHOUT APPROVAL OF STRUCTURAL ENGINEER.



1 TOWER ELEVATION

SCALE: 1:200

2 ELEVATION VIEW @ FENCE CORNER

SCALE: N.T.S.



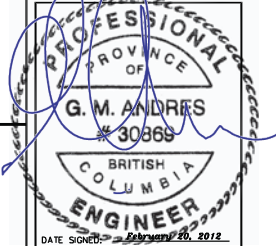
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MONTREAL, QUEBEC H2Y 2S1
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SITE NAME
SURREY TOP SOIL

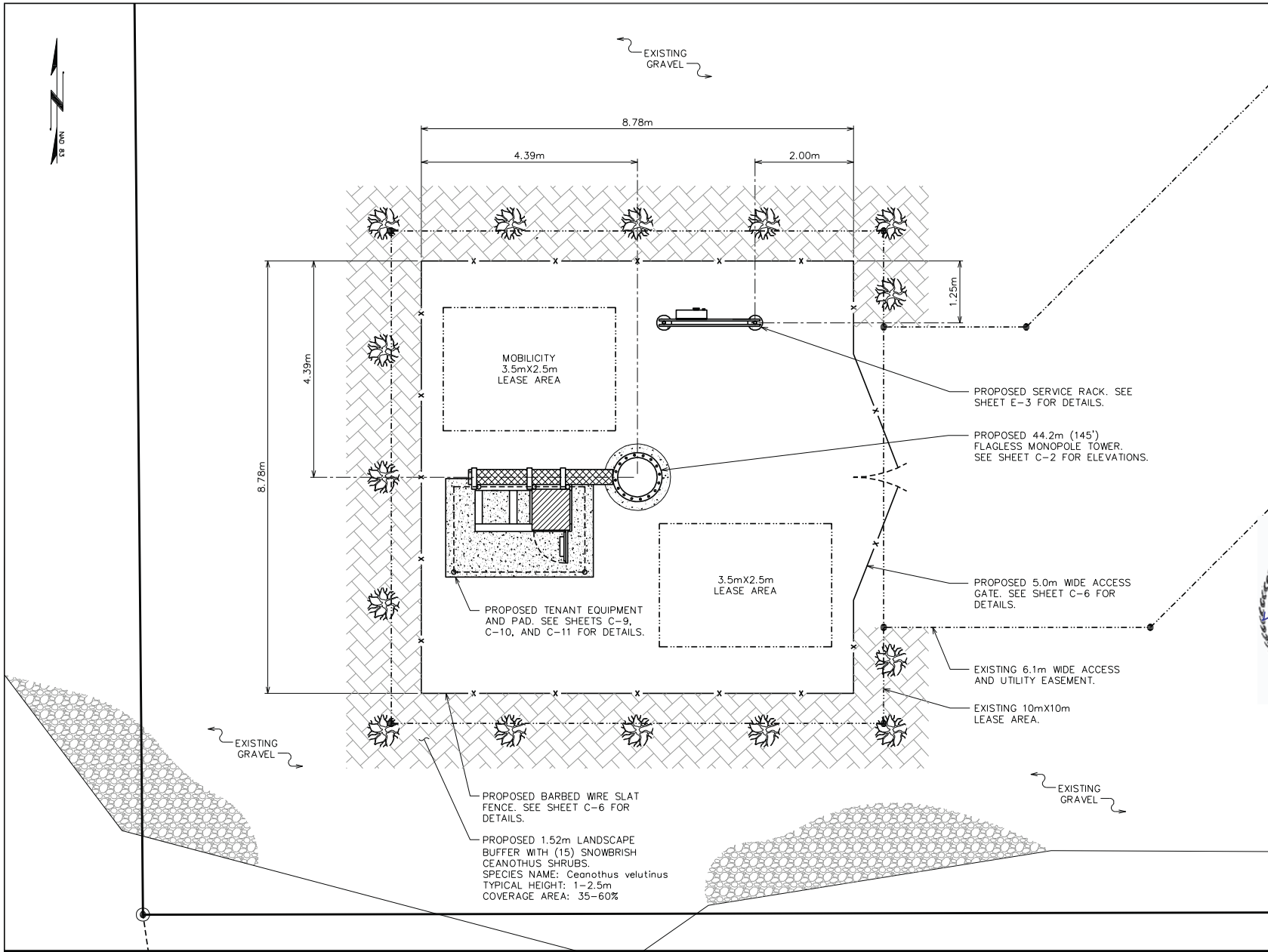
SBA SITE I.D.
BC-70477-B

SITE ADDRESS
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SURREY, BC V3S 0L2
(CANADA)

SHEET NAME
TOWER ELEVATION

SHEET NUMBER
C-2

TEP #: 111462



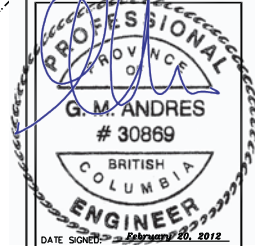
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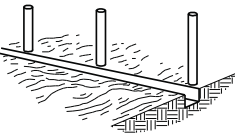
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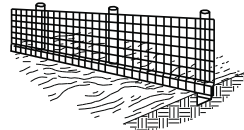
SITE ADDRESS
4121 KING GEORGE HIGHWAY
SURREY, BC V3S 0L2
(CANADA)

SHEET NAME
**COMPOUND
LAYOUT**

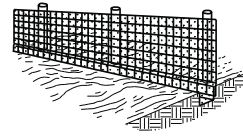
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C-3



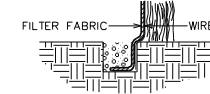
1. SET POSTS AND EXCAVATE A 0.102m x 0.102m TRENCH UPSLOPE ALONG POSTS.



2. STAPLE WIRE FENCING TO THE LINE OF POSTS.



3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.



4. EXTENSION OF FABRIC AND WIRE INTO THE TRENCH.

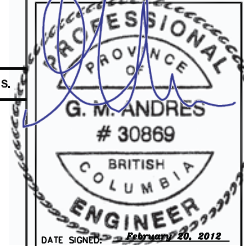


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1	2-20-12	REVISED ZONING



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SURREY, BC V3S 0L2
(CANADA)

SHEET NAME
EROSION CONTROL PLAN

SHEET NUMBER
C-4

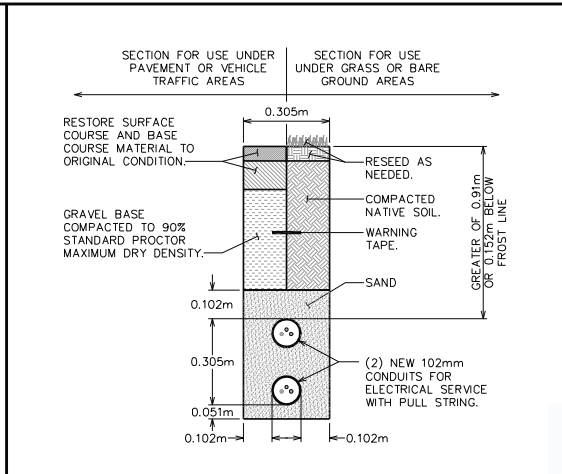
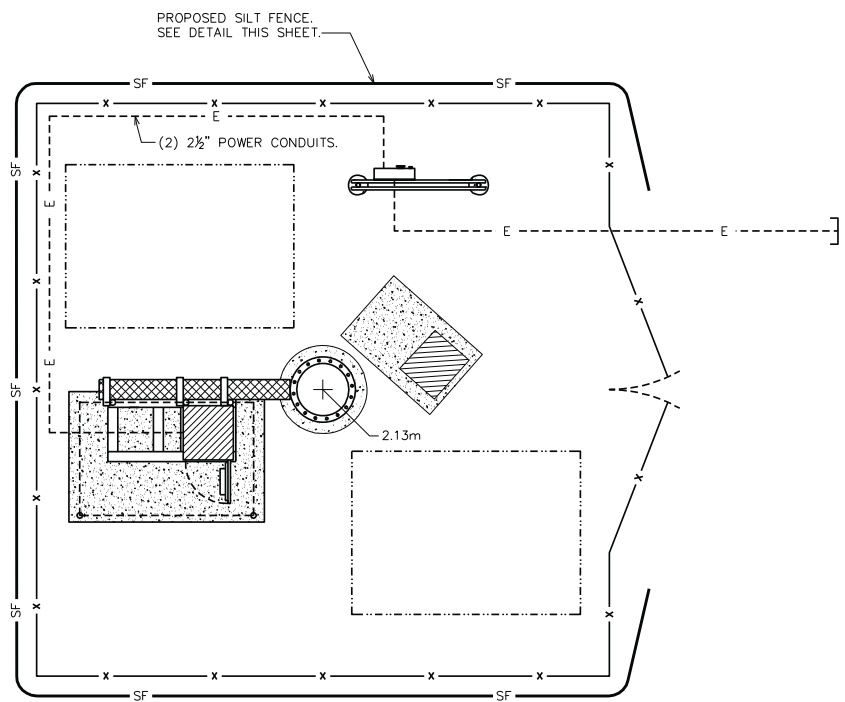
TEP #: 111462

1 SILT FENCE DETAILS

SCALE: N.T.S.

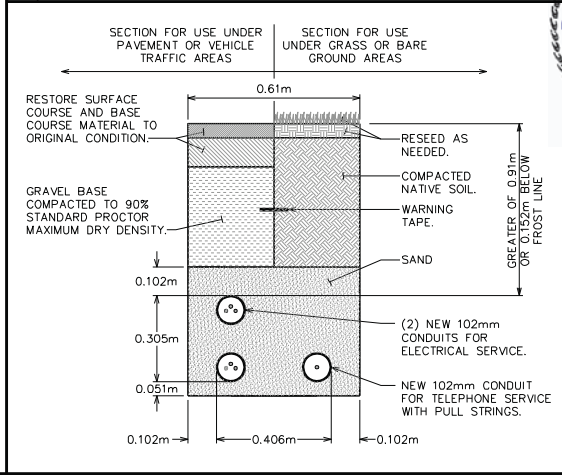
NOTES:

1. ELEVATIONS SHOWN ARE IN METERS.



3 ELECTRICAL TRENCH DETAIL

SCALE: N.T.S.

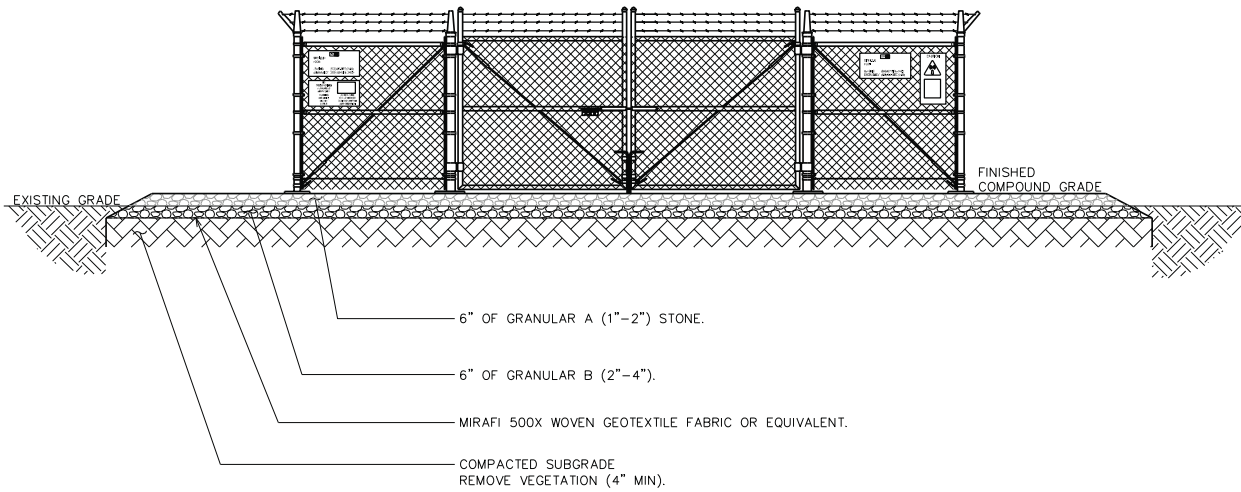


4 TELCO & ELECTRICAL TRENCH DETAIL

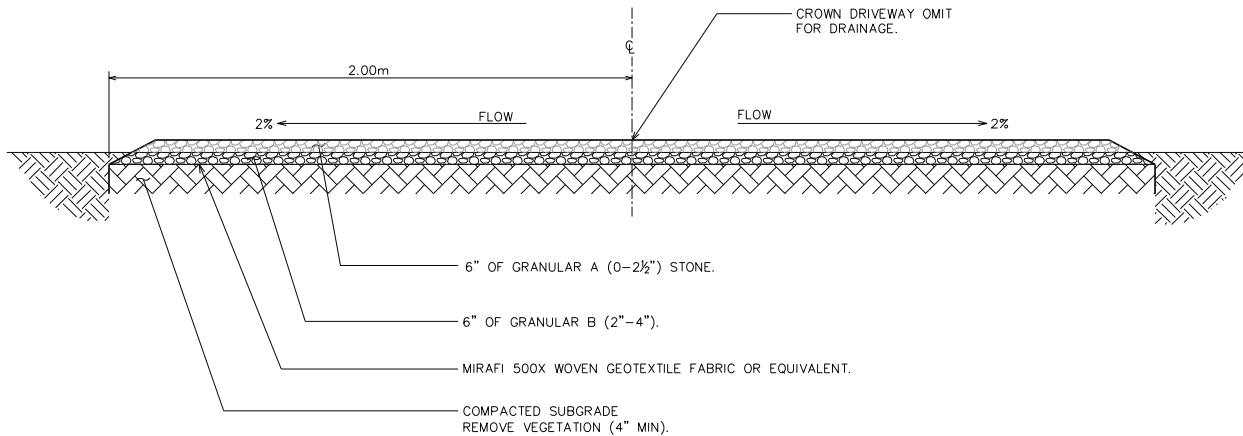
SCALE: N.T.S.

2 EROSION CONTROL PLAN

SCALE: 1:75



1 COMPOUND SECTION



2 DRIVEWAY DETAILS (ROAD SECTION)



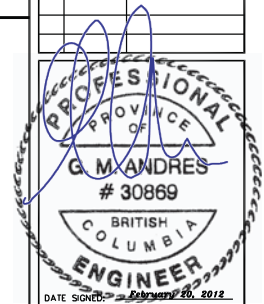
SBA CANADA
468 SAINT-JEAN, BUREAU 400
MONTREAL, QUEBEC H2Y 2S1
TEL: (514) 656-5233

**TOWER ENGINEERING
PROFESSIONALS**

3703 JUNCTION BOULEVARD
RALEIGH, NC 24467
TEL: (919) 661-6351
FAX: (919) 661-6350

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APPROVED BY:	GMA	
REV:	DATE:	ISSUED FOR:
0	5-16-11	ZONING
1	2-20-12	REVISED ZONING



SITE NAME
**SURREY
TOP SOIL**

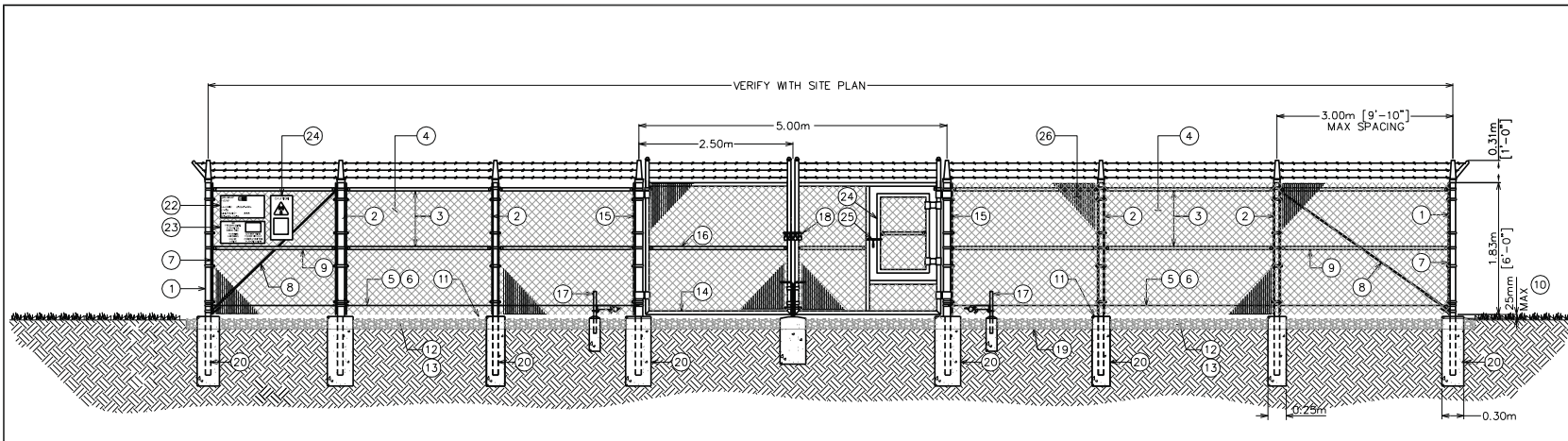
SBA SITE I.D.
BC-70477-B

SITE ADDRESS
4121 KING GEORGE HIGHWAY
SURREY, BC V3S 0L2
(CANADA)

SHEET NAME
**DRIVEWAY
DETAILS**

SHEET NUMBER
C-5

TEP #: 111462



1 TYPICAL FENCE DETAIL

SCALE: N.T.S.

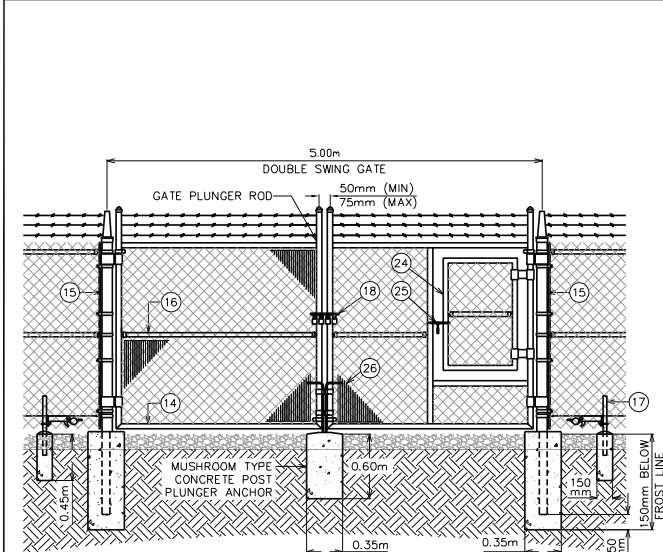


SBA CANADA
468 SAINT-JEAN, BUREAU 400
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2 DOUBLE SWING SPLIT GATE DETAIL

SCALE: N.T.S.

BALLOON REFERENCE NOTES:

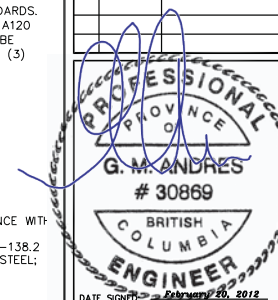
- 1 CORNER, END OR PULL POST: 3/2" O.D. SCHEDULE 40 PIPE.
- 2 LINE POST: 2 3/8" NOMINAL SCHEDULE 40 PIPE, PER ASTM-F1083. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 10'-0" O.C.
- 3 TOP RAIL & BRACE RAIL: 1 1/8" O.D. STANDARD ROUND PIPE, PER ASTM-F1083.
- 4 FABRIC: 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
- 5 TIE WIRE: 9 GA ALUMINUM. A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED 12" O.C. POSTS/GATES AND 24" RAILS/WIRE.
- 6 TENSION WIRE: 9 GA ALUMINUM
- 7 3/8" x 3/2" (MIN) FULL HEIGHT STRETCHER BAR.
- 8 3/8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.
- 9 FENCE CORNER POST BRACE: 1 1/2" NOMINAL PIPE.
- 10 1" MAXIMUM CLEARANCE FROM FINISH GRADE.
- 11 FENCE POST FOUNDATION TO BE 1" FINISH ABOVE FINISHED GRADE
- 12 6" COMPACTED BASE MATERIAL
- 13 FINISH GRADE SHALL BE UNIFORM AND LEVEL.
- 14 WELDED GATE FRAME: 1 1/8" O.D., SCHEDULE 40 PIPE, PER ASTM-F1083.
- 15 GATE POST 4 1/2" O.D., SCHEDULE 40 PIPE, PER ASTM-F1083.
- 16 GATE FRAME BRACE RAIL: 1 1/2" NOMINAL PIPE, PER ASTM-F1083.
- 17 DUCK BILL OPEN GATE HOLDER. 6"-8" FROM FENCE PRIOR TO INSTALLATION.
- 18 STYMIE LOCK MULTI-TENANT LOCKING DEVICE WITH ONE COMBO LOCK SUPPLIED BY CONTRACTOR TO SBA.
- 19 GEOTEXTILE FABRIC
- 20 CONCRETE FOUNDATION (MIN 3000 PSI). MINIMUM DEPTH: 6" BELOW FROST LINE
- 21 12" x 24" SBA SITE INFORMATION SIGN.
- 22 12" x 24" NO TRESPASSING SIGN.
- 23 12" x 24" RF CAUTION SIGN.
- 24 SNOW GATE
- 25 FORK LATCH WITH SBA COMBO LOCK SUPPLIED BY CONTRACTOR
- 26 GREEN SLAT FENCING

3 FENCE NOTES

GENERAL NOTES:

1. INSTALL FENCING PER ASTM F-567
2. INSTALL SWING GATES PER ASTM F-900
3. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.
4. POST & GATE PIPE SIZES ARE INDUSTRY STANDARDS. ALL PIPE TO BE GALVANIZED (HOT DIP, ASTM A120 GRADE "A" STEEL). ALL GATE FRAMES SHALL BE WELDED. ALL WELDING SHALL BE COATED WITH (3) COATS OF COLD GALV. (OR EQUAL).
5. ALL OPEN POSTS SHALL HAVE END-CAPS.
6. USE GALVANIZED HOG-RING WIRE TO MOUNT ALL SIGNS.
7. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC.
8. MUSHROOM ANCHOR & PLUNGER REQUIRED FOR GATE.
9. ALL FENCING SHALL BE DESIGNED IN ACCORDANCE WITH THE CANADIAN GENERAL STANDARDS BOARDS CAN2-138.1 FENCE, CHAIN LINK, FABRIC; CAN2-138.2 FENCE, CHAIN LINK, FRAMEWORK ZINC COATED STEEL; CAN2-138.4 FENCE, CHAIN LINK, GATES.

CHECKED BY:	JHU	
APPROVED BY:	CMA	
REV:	DATE:	ISSUED FOR:
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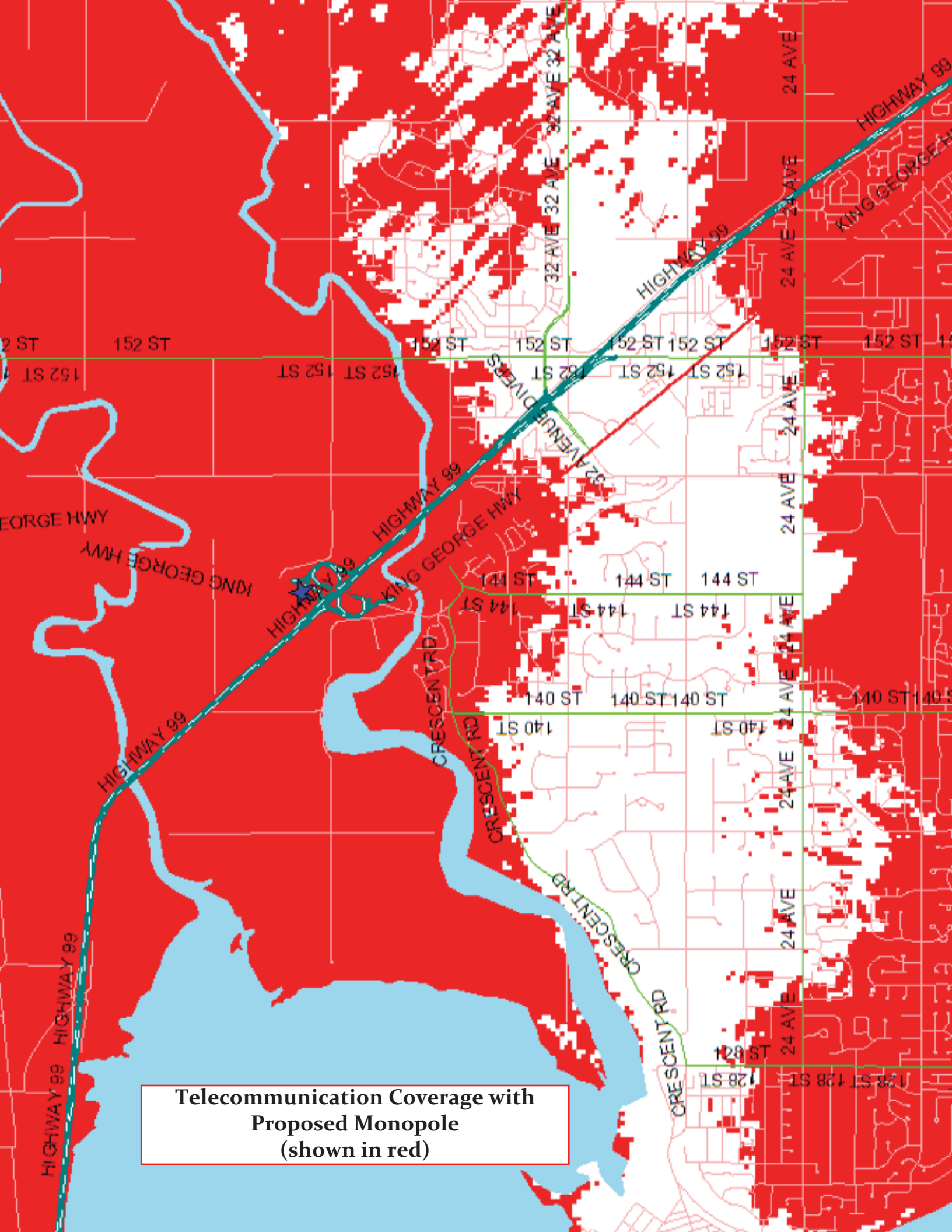


SITE NAME
SURREY
TOP SOIL
SBA SITE I.D.
BC-70477-B
SITE ADDRESS
4121 KING GEORGE HIGHWAY
SURREY, BC V3S 0L2
(CANADA)

SHEET NAME
FENCE
DETAILS

SHEET NUMBER
C-6

TEP #: 111462



**Telecommunication Coverage with
Proposed Monopole
(shown in red)**

CITY OF SURREY

(the "City")

DEVELOPMENT VARIANCE PERMIT

NO.: 7911-0141-00

Issued To: SURREY TOPSOIL LTD., INC. NO. 403047
("the Owner")

Address of Owner: 3588 - 164A Street
Surrey BC
V3S 0M1

1. This development variance permit is issued subject to compliance by the Owner with all statutes, by-laws, orders, regulations or agreements, except as specifically varied by this development variance permit.
2. This development variance permit applies to that real property including land with or without improvements located within the City of Surrey, with the legal description and civic address as follows:

Parcel Identifier: 009-236-520
Lot 1 District Lot 161 Group 2 New Westminster District Plan 10071

4121 King George Boulevard

(the "Land")

3. Surrey Zoning By-law, 1993, No. 12000, as amended is varied as follows:
4. The landscaping and the siting of buildings and structures shall be in accordance with the drawings numbered C1 through to C6 (the "Drawings") which are attached hereto and form part of this development variance permit.
5. The Land shall be developed strictly in accordance with the terms and conditions and provisions of this development variance permit.
6. This development variance permit shall lapse if the Owner does not substantially start any construction with respect to which this development variance permit is issued, within two (2) years after the date this development variance permit is issued.

7. The terms of this development variance permit or any amendment to it, are binding on all persons who acquire an interest in the Land.

8. This development variance permit is not a building permit.

AUTHORIZING RESOLUTION PASSED BY THE COUNCIL, THE DAY OF , 20 .
ISSUED THIS DAY OF , 20 .

Mayor – Dianne L. Watts

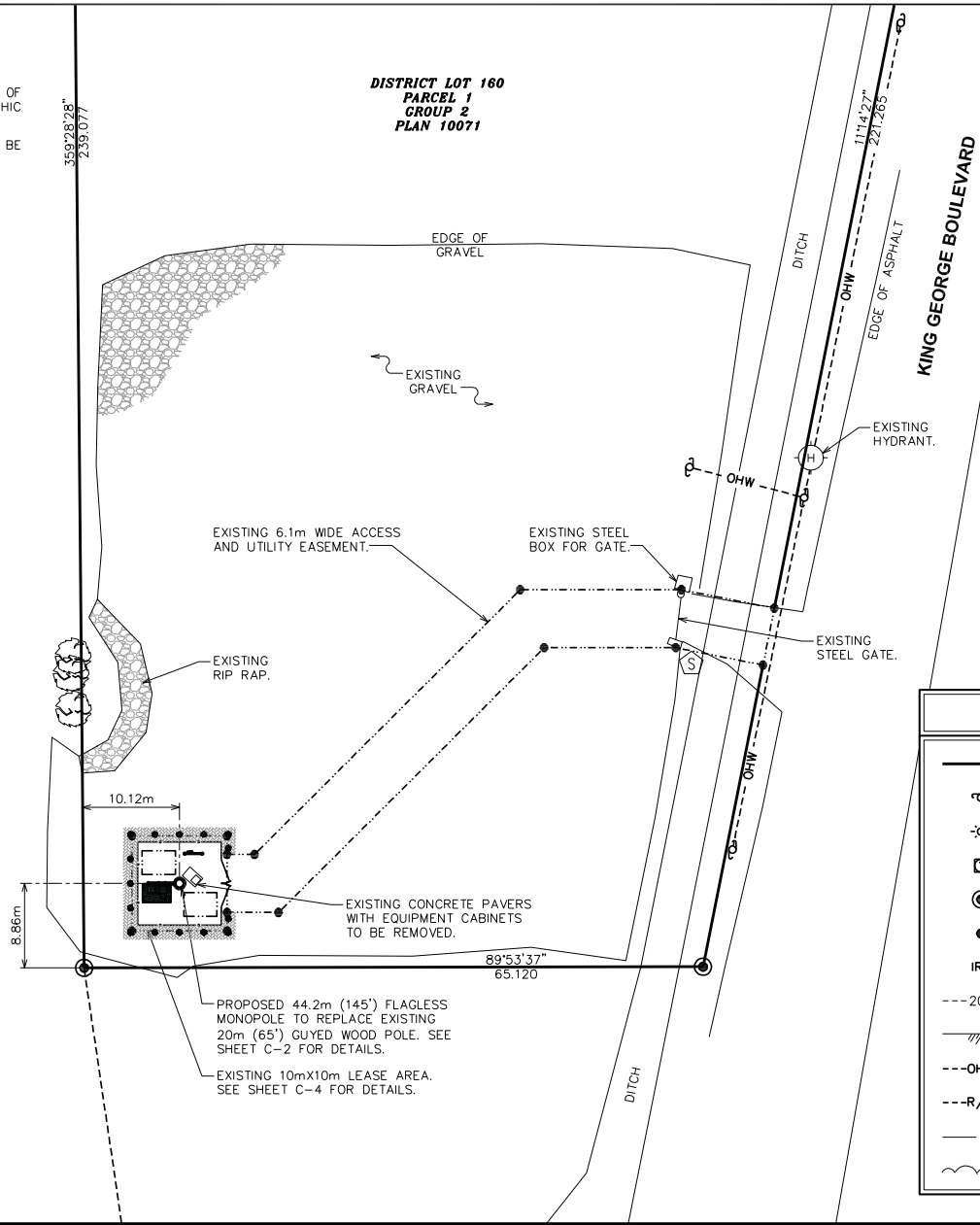
City Clerk – Jane Sullivan

NOTES:

1. BEARINGS ARE FROM PLAN BCP47551.
2. ELEVATIONS ARE GEODETIC AND DERIVED FROM THE CITY OF SURREY INTEGRATED MONUMENT NO. 5630. GEOGRAPHIC COORDINATES ARE NAD 83.
3. DISTANCES SHOWN HEREON ARE IN METERS AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

**DISTRICT LOT 160
PARCEL 1
GROUP 2
PLAN 10071**

**STATUTORY
R/W PLAN 77180**



LEGEND

- EXIST. PROPERTY LINE
- ⊕ EXIST. UTILITY POLE
- ☼ EXIST. LIGHT POLE
- ⊞ EXIST. TELCO PEDESTAL
- ⊙ PROPERTY CORNER
- CORNER
- IRF IRON ROD FOUND
- 200--- EXIST. CONTOUR LINE
- /// EDGE OF PAVEMENT
- OHW--- OVERHEAD WIRE
- R/W--- RIGHT-OF-WAY
- X — CHAIN LINK FENCE
- ~ EXISTING TREE LINE



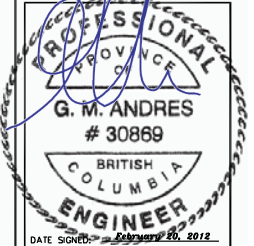
SBA CANADA
468 SAINT-JEAN, BUREAU 400
MONTREAL, QUEBEC H2Y 2S1
TEL: (514) 656-5233

**TOWER ENGINEERING
PROFESSIONALS**

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RALEIGH, NC 24467
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FAX: (919) 661-6350

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CHECKED BY:	JHU	
APPROVED BY:	GMA	
REV:	DATE:	ISSUED FOR:
0	5-16-11	ZONING
1	2-20-12	REVISED ZONING



SITE NAME
**SURREY
TOP SOIL**

SBA SITE I.D.
BC-70477-B

SITE ADDRESS
4121 KING GEORGE HIGHWAY
SURREY, BC V3S 0L2
(CANADA)

SHEET NAME
SITE PLAN

SHEET NUMBER
C-1

- T/LIGHTNING ROD
ELEV.: +45.4m
- T/TOWER STEALTH
ELEV.: +44.2m
- T/TOWER STEALTH
ELEV.: +42.6m
- T/TOWER STEALTH
ELEV.: +39.6m
- T/TOWER STEALTH
ELEV.: +36.6m
- T/TOWER STEALTH
ELEV.: +33.6m
- T/FLAGLESS MONOPOLE
ELEV.: +32.0m

- PROPOSED LIGHTNING ROD BY OTHERS.
- PROPOSED RED BEACON LIGHT AT TOP OF TOWER.
- WIDTH OF TOWER IS 914mm (36").
- PROPOSED ANTENNAS AND RRU'S STEALTH MOUNTED BY WIND (TYP OF 3 ANTENNAS).
- FUTURE PANEL ANTENNAS BY WIND.
- FUTURE PANEL ANTENNAS BY MOBILITY.
- FUTURE PANEL ANTENNAS BY MOBILITY.

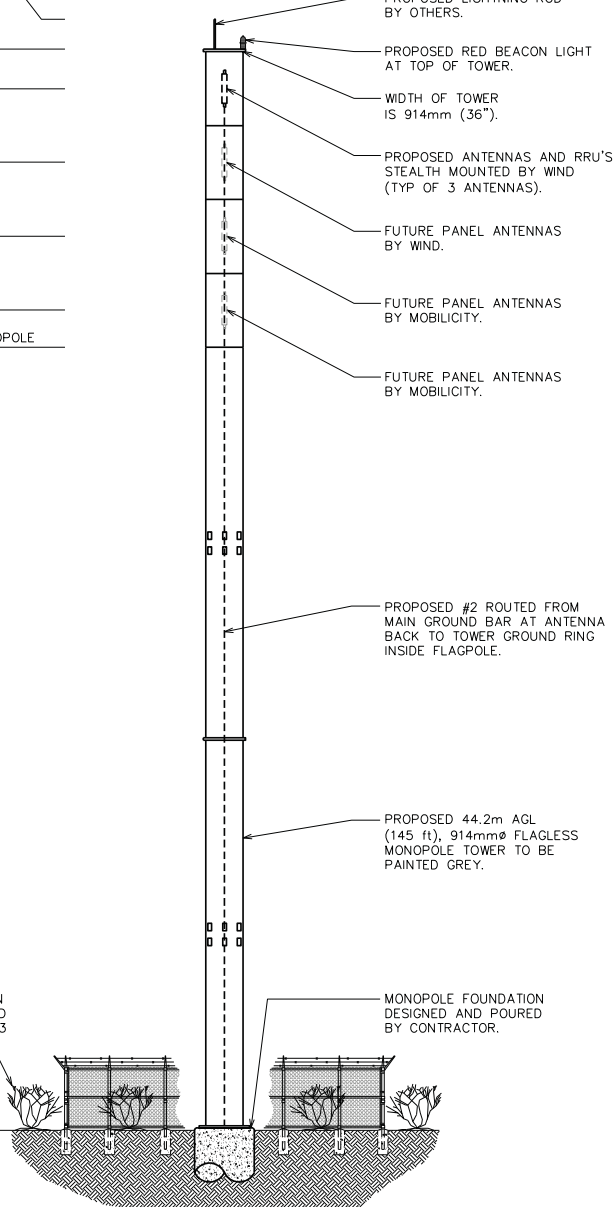
PROPOSED #2 ROUTED FROM MAIN GROUND BAR AT ANTENNA BACK TO TOWER GROUND RING INSIDE FLAGPOLE.

PROPOSED 44.2m AGL (145 ft), 914mmØ FLAGLESS MONOPOLE TOWER TO BE PAINTED GREY.

MONOPOLE FOUNDATION DESIGNED AND POURED BY CONTRACTOR.

APPROXIMATE LOCATION AND SIZE OF PROPOSED SHRUB. SEE SHEET C-3 FOR DETAILS.

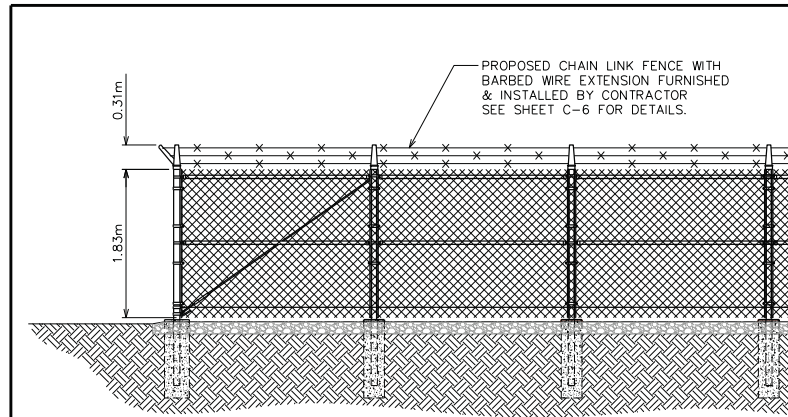
EXISTING GRADE
ELEV.: +00.0m



ANTENNA SCHEDULE			
QUANTITY	ELEVATION	ANTENNA DESCRIPTION	CARRIER
3	42.6m (140')	PANEL ANTENNAS	WIND
3	39.6m (130')	PANEL ANTENNAS (FUTURE)	WIND
3	36.6m (120')	PANEL ANTENNAS (FUTURE)	MOBILITY
3	33.6m (110')	PANEL ANTENNAS (FUTURE)	MOBILITY

TOWER NOTES:

- ANTENNA REQUIREMENTS ARE SUBJECT TO CHANGE AS PER CARRIER REQUIREMENTS.
- NO ANTENNAS WILL BE INSTALLED ON THE EXTERIOR OF THE STRUCTURE.
- STRUCTURAL CALCULATIONS PREPARED BY OTHERS.
- TOWER SHOULD BE PAINTED GREY.
- CONTRACTOR TO REFER TO TOWER STRUCTURAL CALCULATIONS FOR ADDITIONAL LOADS. NO ERECTION OR MODIFICATION OF TOWER SHALL BE MADE WITHOUT APPROVAL OF STRUCTURAL ENGINEER.



1 TOWER ELEVATION

SCALE: 1:200

2 ELEVATION VIEW @ FENCE CORNER

SCALE: N.T.S.



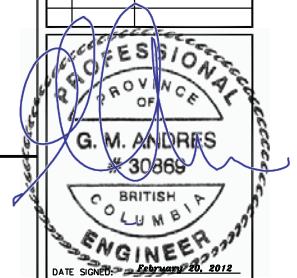
SBA CANADA
468 SAINT-JEAN, BUREAU 400
MONTREAL, QUEBEC H2Y 2S1
TEL: (514) 656-5233



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RALEIGH, NC 24467
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APPROVED BY:	GMA	
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SITE NAME
**SURREY
TOP SOIL**

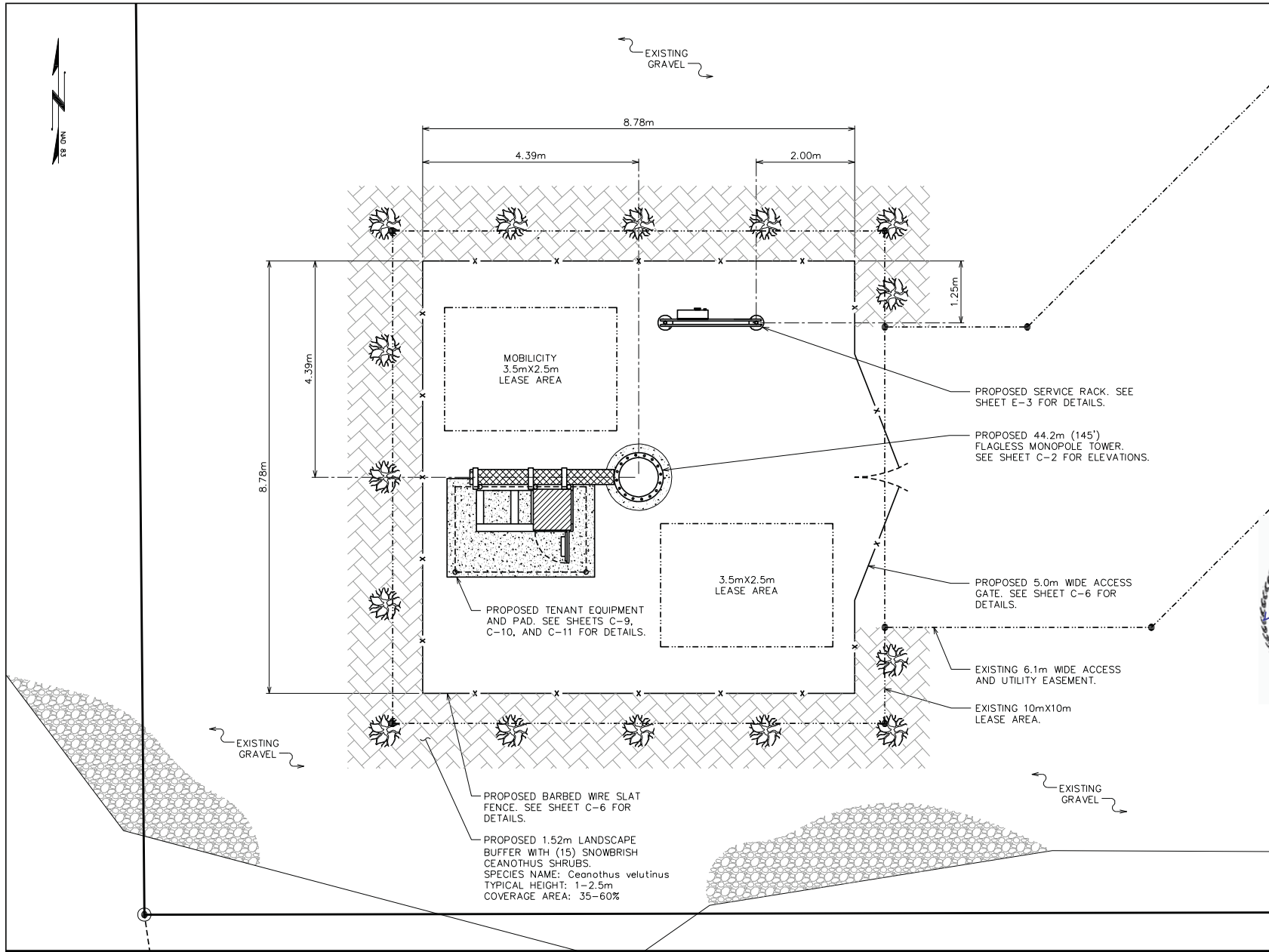
SBA SITE I.D.
BC-70477-B

SITE ADDRESS
4121 KING GEORGE HIGHWAY
SURREY, BC V3S 0L2
(CANADA)

SHEET NAME
**TOWER
ELEVATION**

SHEET NUMBER
C-2

TEP #: 111462



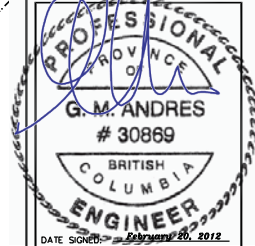
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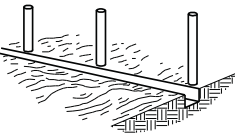
SITE NAME
**SURREY
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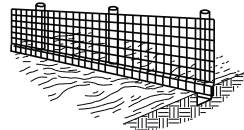
SITE ADDRESS
4121 KING GEORGE HIGHWAY
SURREY, BC V3S 0L2
(CANADA)

SHEET NAME
**COMPOUND
LAYOUT**

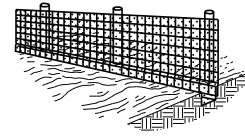
SHEET NUMBER
C-3



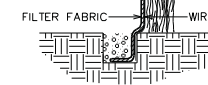
1. SET POSTS AND EXCAVATE A 0.102m x 0.102m TRENCH UPSLOPE ALONG POSTS.



2. STAPLE WIRE FENCING TO THE LINE OF POSTS.



3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.



4. EXTENSION OF FABRIC AND WIRE INTO THE TRENCH.

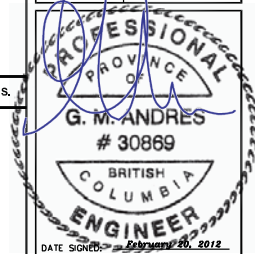


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APPROVED BY:	CMA	
REV:	DATE:	ISSUED FOR:
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DATE SIGNED: February 20, 2012
SITE NAME
SURREY TOP SOIL
SBA SITE I.D.
BC-70477-B
SITE ADDRESS
4121 KING GEORGE HIGHWAY
SURREY, BC V3S 0L2
(CANADA)

SHEET NAME
EROSION CONTROL PLAN

SHEET NUMBER
C-4

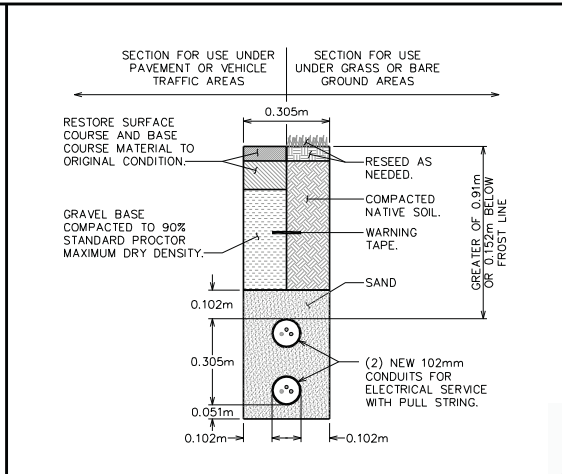
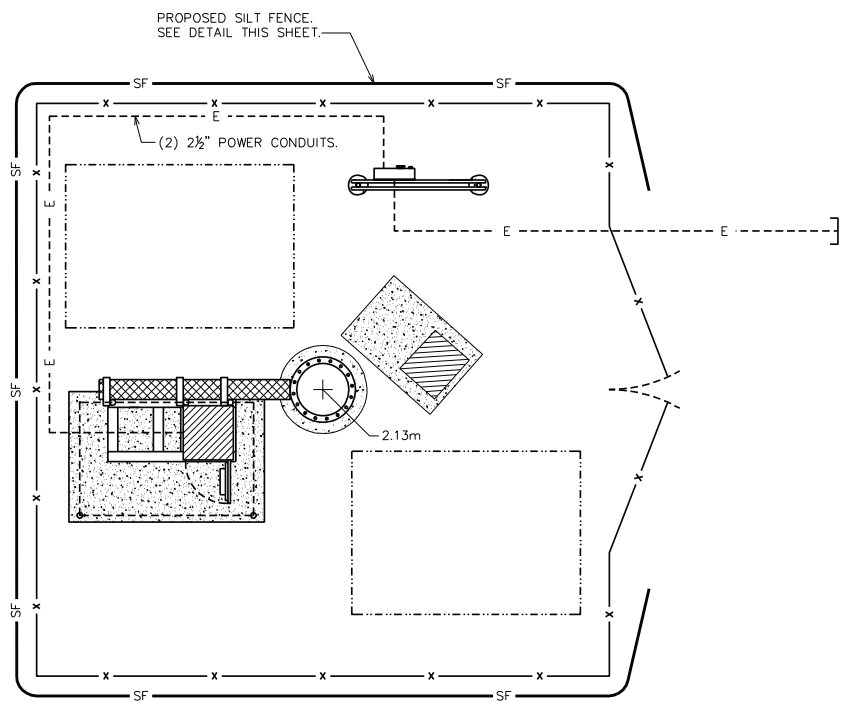
TEP #: 111462

1 SILT FENCE DETAILS

SCALE: N.T.S.

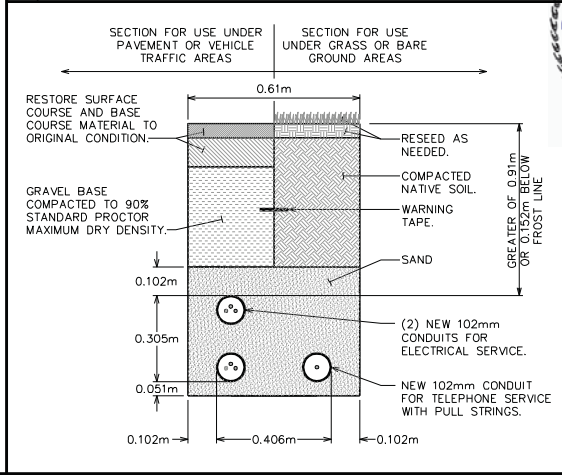
NOTES:

1. ELEVATIONS SHOWN ARE IN METERS.



3 ELECTRICAL TRENCH DETAIL

SCALE: N.T.S.



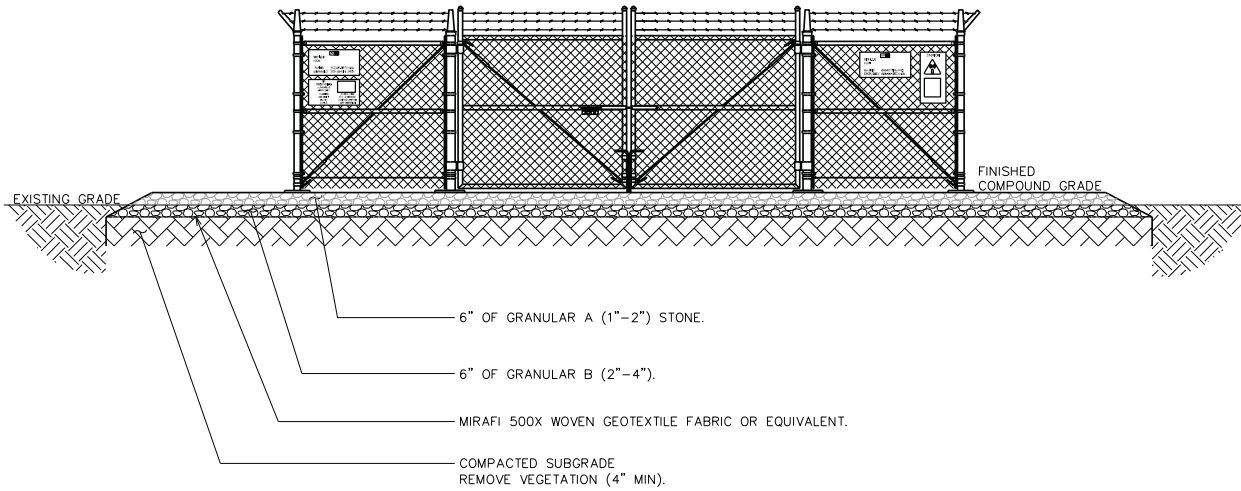
4 TELCO & ELECTRICAL TRENCH DETAIL

SCALE: N.T.S.

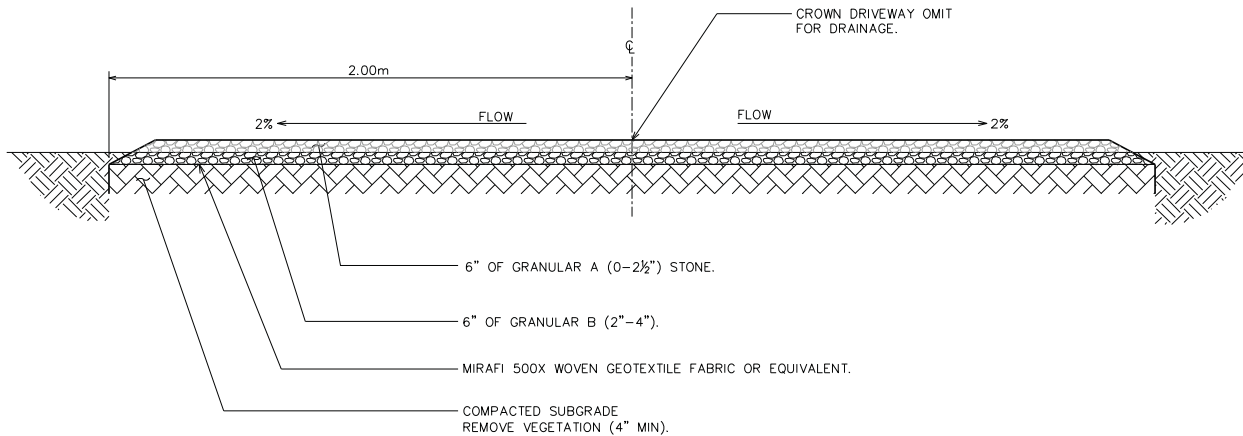
2 EROSION CONTROL PLAN

SCALE: 1:75

4



1 COMPOUND SECTION



2 DRIVEWAY DETAILS (ROAD SECTION)



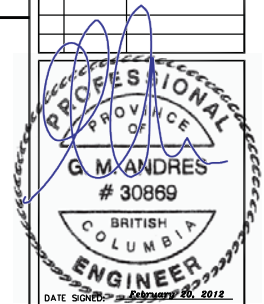
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APPROVED BY:	GMA	
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SITE NAME
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TOP SOIL**

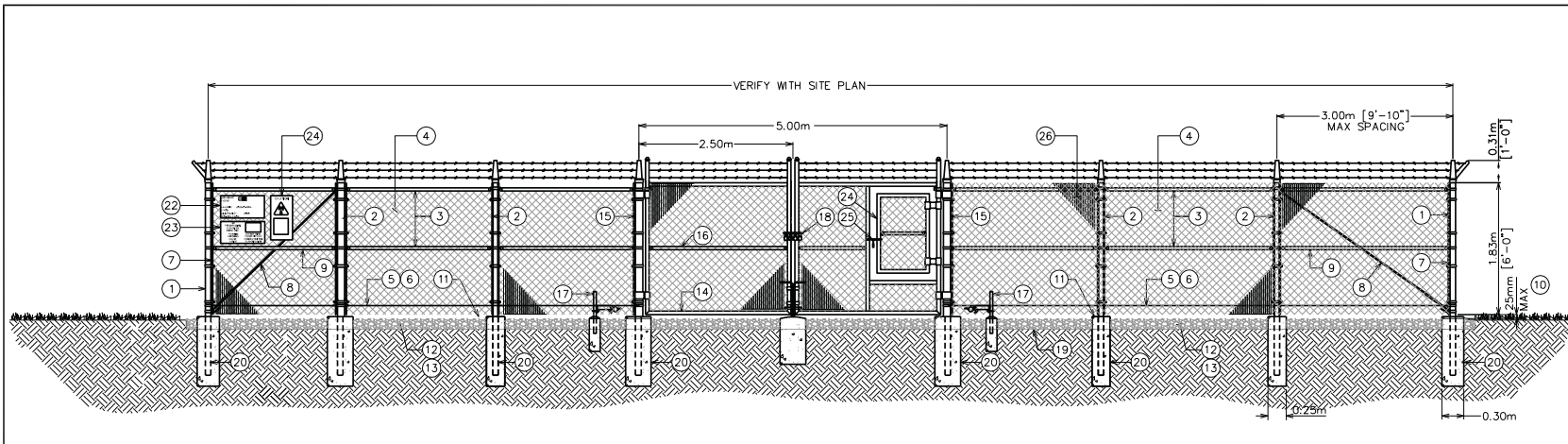
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SURREY, BC V3S 0L2
(CANADA)

SHEET NAME
**DRIVEWAY
DETAILS**

SHEET NUMBER
C-5

TEP #: 111462



1 TYPICAL FENCE DETAIL

SCALE: N.T.S.



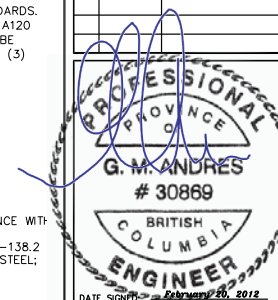
SBA CANADA
468 SAINT-JEAN, BUREAU 400
MONTREAL, QUEBEC H2Y 2S1
TEL: (514) 656-5233



3703 JUNCTION BOULEVARD
RALEIGH, NC 24467
TEL: (919) 661-6351
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CHECKED BY:	JHU	
APPROVED BY:	CMA	
REV:	DATE:	ISSUED FOR:
0	5-16-11	ZONING
1	2-20-12	REVISED ZONING

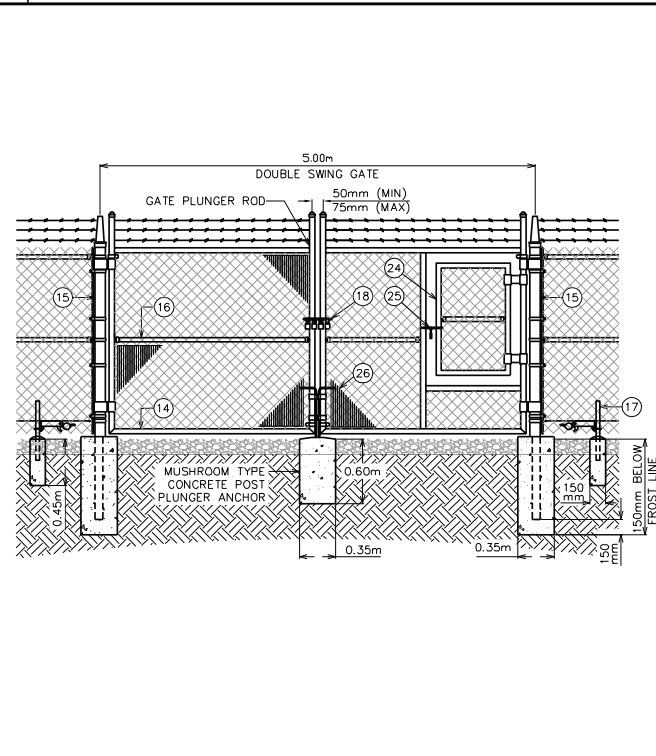


SITE NAME
**SURREY
TOP SOIL**
SBA SITE I.D.
BC-70477-B
SITE ADDRESS
4121 KING GEORGE HIGHWAY
SURREY, BC V3S 0L2
(CANADA)

SHEET NAME
**FENCE
DETAILS**

SHEET NUMBER
C-6

TEP #: 111462



2 DOUBLE SWING SPLIT GATE DETAIL

SCALE: N.T.S.

BALLOON REFERENCE NOTES:

- 1 CORNER, END OR PULL POST: 3/2" O.D. SCHEDULE 40 PIPE.
- 2 LINE POST: 2 3/8" NOMINAL SCHEDULE 40 PIPE, PER ASTM-F1083. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 10'-0" O.C.
- 3 TOP RAIL & BRACE RAIL: 1 1/8" O.D. STANDARD ROUND PIPE, PER ASTM-F1083.
- 4 FABRIC: 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
- 5 TIE WIRE: 9 GA ALUMINUM, A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED 12" O.C. POSTS/GATES AND 24" RAILS/WIRE.
- 6 TENSION WIRE: 9 GA ALUMINUM
- 7 3/8" x 3/2" (MIN) FULL HEIGHT STRETCHER BAR.
- 8 3/8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.
- 9 FENCE CORNER POST BRACE: 1 1/2" NOMINAL PIPE.
- 10 1" MAXIMUM CLEARANCE FROM FINISH GRADE.
- 11 FENCE POST FOUNDATION TO BE 1" FINISH ABOVE FINISHED GRADE
- 12 6" COMPACTED BASE MATERIAL
- 13 FINISH GRADE SHALL BE UNIFORM AND LEVEL.
- 14 WELDED GATE FRAME: 1 1/8" O.D., SCHEDULE 40 PIPE, PER ASTM-F1083.
- 15 GATE POST 4 1/2" O.D., SCHEDULE 40 PIPE, PER ASTM-F1083.
- 16 GATE FRAME BRACE RAIL: 1 1/2" NOMINAL PIPE, PER ASTM-F1083.
- 17 DUCK BILL OPEN GATE HOLDER, 6"-8" FROM FENCE PRIOR TO INSTALLATION.
- 18 STYMIE LOCK MULTI-TENANT LOCKING DEVICE WITH ONE COMBO LOCK SUPPLIED BY CONTRACTOR TO SBA.
- 19 GEOTEXTILE FABRIC
- 20 CONCRETE FOUNDATION (MIN 3000 PSI). MINIMUM DEPTH: 6" BELOW FROST LINE
- 21 12" x 24" SBA SITE INFORMATION SIGN.
- 22 12" x 24" NO TRESPASSING SIGN.
- 23 12" x 24" RF CAUTION SIGN.
- 24 SNOW GATE
- 25 FORK LATCH WITH SBA COMBO LOCK SUPPLIED BY CONTRACTOR
- 26 GREEN SLAT FENCING

3 FENCE NOTES

GENERAL NOTES:

1. INSTALL FENCING PER ASTM F-567
2. INSTALL SWING GATES PER ASTM F-900
3. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.
4. POST & GATE PIPE SIZES ARE INDUSTRY STANDARDS. ALL PIPE TO BE GALVANIZED (HOT DIP, ASTM A120 GRADE "A" STEEL). ALL GATE FRAMES SHALL BE WELDED. ALL WELDING SHALL BE COATED WITH (3) COATS OF COLD GALV. (OR EQUAL).
5. ALL OPEN POSTS SHALL HAVE END-CAPS.
6. USE GALVANIZED HOG-RING WIRE TO MOUNT ALL SIGNS.
7. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC.
8. MUSHROOM ANCHOR & PLUNGER REQUIRED FOR GATE.
9. ALL FENCING SHALL BE DESIGNED IN ACCORDANCE WITH THE CANADIAN GENERAL STANDARDS BOARDS CAN2-138.1 FENCE, CHAIN LINK, FABRIC; CAN2-138.2 FENCE, CHAIN LINK, FRAMEWORK ZINC COATED STEEL; CAN2-138.4 FENCE, CHAIN LINK, GATES.

SCALE: N.T.S.