

Date:	May 9, 2023	File:	2021-3981
To:	Achyut Adhikari	Page:	Page 1 of 8
From:	Deanna Joly, P.Ag.		
Project:	Terwillegar Drive Stage 2 Upgrades		
Subject:	Bylaw 7188 Amendment - Rainbow Valley Road Parking Lot - Revision 002		

Associated Engineering Alberta Ltd. (Associated) has prepared this memo as an amendment to the Terwillegar Drive Stage 2 Environmental Impact Assessment (EIA) previously submitted to the City of Edmonton in January 2022. An assessment of potential environmental impacts regarding the permanent expansion of the existing south gravel parking lot is provided for review by the City of Edmonton as an addition to this project.

1 ADDITIONAL FOOTPRINT

The proposed area of parking expansion is located along Rainbow Valley Road, southeast of the Rainbow Valley Road bridges within 15-12-52-25-W4M. The existing parking lot is approximately 22 meters by 51 meters and consists of 28 parking stalls (including 4 barrier-free). Increases to the area will be required to accommodate an additional 36 stalls (including 4 barrier-free), as shown in [Appendix A](#). The expansion will be located to the south of the existing gravel lot. Most of the surface will remain as gravel; however, installation of concrete pads will be required at the barrier free parking stalls.

Please refer to attached drawings for more details on scope of work and construction methods.

2 ENVIRONMENTAL SENSITIVITIES

Environmental sensitivities examined as part of the EIA did not include the additional area of parking; this is an additional scope item. The project area has been reviewed from a desktop level using existing government databases and aerial imagery. Environmental sensitivities that have the potential to be impacted by parking are listed below. For additional details of these sensitivities, please refer to Sections 3 and 6 of the project-wide EIA.

- Surface Water and Soils
 - Presence of native and/or anthropogenic topsoil and subsoil.
- Vegetation
 - Primarily landscaped vegetation (City-maintained turf) with the occurrence of patches of trees to the east.
- Wildlife
 - Presence of habitat with the potential to support wildlife features such as bird nests.
- Contamination
 - Existing use by vehicles and possible contamination by road debris and fluids.

3 IMPACTS AND MITIGATION MEASURES

Potential environmental impacts identified in the EIA report are applicable to the planned parking lot expansion. In addition, the mitigation measures developed to address these potential environmental impacts also remain applicable.

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Details of potential environmental impacts resulting from the permanent parking lot expansion are outlined in [Table 1](#). Specific mitigation measures to address these impacts are included in [Table 2](#).

Table 1. Potential Environmental Impacts of Permanent Southeast Parking Lot Expansion

Ecosystem Component	Direction and Description of Impact	Characteristic of Impact Before Mitigation Measures
Soils – Areas of native soil or fill	Negative – Contamination of soils from spills from construction materials equipment.	Nature: Direct Magnitude: Moderate Spatial Extent: Local Duration: Long Term Likelihood: Moderate
Soils – Exposed soils during construction phase, specifically during unfrozen conditions.	Negative – Erosion of exposed soil resulting in loss of materials.	Nature: Direct Magnitude: Low Spatial Extent: Local Duration: Long-term Likelihood: High
Soils – Areas of contaminated soils exposed during construction	Negative – Exposure and disturbance of contaminated soils located within the existing parking lot area.	Nature: Direct Magnitude: Low Spatial Extent: Local Duration: Short-term Likelihood: Moderate
Surface Water and Soils – Stormwater Runoff	Negative – Changes to local hydrology patterns with increases in impervious surfaces (concrete - barrier free parking stalls).	Nature: Indirect Magnitude: Moderate Spatial Extent: Local Duration: Long-term Likelihood: High
Vegetation – Landscaped vegetation within project area	Negative – Removal and damage of landscaped vegetation, including trees, shrubs and maintained grass from construction activities.	Nature: Direct Magnitude: Low Spatial Extent: Local Duration: Long-term Likelihood: High
Vegetation – Existing populations of weeds and non-native plants	Negative – Introduction and/or spread of weed populations and non-native plants through construction.	Nature: Indirect Magnitude: Low Spatial Extent: Local Duration: Long-term Likelihood: Moderate

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Ecosystem Component	Direction and Description of Impact	Characteristic of Impact Before Mitigation Measures
Wildlife – Actively nesting birds adjacent to construction limits	Negative – Disturbance of active bird nests adjacent to construction activities.	Nature: Direct Magnitude: High Spatial Extent: Local Duration: Short-term Likelihood: Moderate
Wildlife – Sensory perceptions of individuals using habitats near construction	Negative – Interference of hearing or sight from construction noise or use of artificial light during construction.	Nature: Direct Magnitude: Low Spatial Extent: Local Duration: Long-term Likelihood: Moderate
Contamination – Salinity impacted soils	Negative – Deposition of salts and other road contaminants from vehicles to soils at site.	Nature: Direct Magnitude: Low Spatial Extent: Local Duration: Long-term Likelihood: High

MEMO

Table 2. Mitigation Measures to Address Environmental Impacts of the Permanent Parking Lot Expansion

Ecosystem Component	Environmental Impact	Mitigation Measures for Planning and Design Phase	Mandatory Mitigation Measures for Construction Phase
Soils – Areas of native soil or fill	Contamination of soils from spills from construction materials equipment.	N/A	<ul style="list-style-type: none"> • Install drip trays beneath stationary equipment. • Include material storage and handling practices in the project-specific ECO Plan with awareness that groundwater in open excavation may be an important environmental sensitivity. • Use double-containment for hazardous material storage.
Soils – Exposed soils during construction phase, specifically during unfrozen conditions.	Erosion of exposed soil resulting in loss of materials.	N/A	<ul style="list-style-type: none"> • Minimize the extent and duration of soil exposure, especially during periods when the ground is not frozen. • Include an ESC Plan in the project-specific ECO Plan. • Install and maintain appropriate ESC measures throughout construction with attention to areas of exposed soil as well as stockpiled materials.
Soils – Areas of contaminated soils exposed during construction	Exposure and disturbance of contaminated soils located within the existing parking lot area.	N/A	<ul style="list-style-type: none"> • Remove all debris from the site prior to any excavation work. • Assess any soils encountered during ground disturbance with indications of potential contamination (e.g., odours, staining, or sheen) for PCOCs. These soils may need to be managed.
Surface Water and Soils – Stormwater Runoff	Changes to local hydrology patterns with increases in impervious surfaces (concrete - barrier free parking stalls).	Consider the volume and rate of stormwater runoff that will be directed into the surrounding areas from the development of the project and incorporate grading and permanent erosion and sediment control (ESC) measures into design of the project.	<ul style="list-style-type: none"> • Include temporary ESC measures in the project specific ECO Plan to control the volume and/or rate of water runoff from the construction area.



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Ecosystem Component	Environmental Impact	Mitigation Measures for Planning and Design Phase	Mandatory Mitigation Measures for Construction Phase
Vegetation – Landscaped vegetation in the study area	Removal and damage of landscaped vegetation, including trees, shrubs and maintained grass from construction activities	<ul style="list-style-type: none"> • Include landscaped trees in detailed design and avoid conflicts with these trees. • Require contractor to include tree protection for landscaped trees as part of the Tree Preservation Plan. • Develop a restoration plan in detailed design that includes revegetation with native species to restore vegetated areas that are disturbed through construction. The plan is intended to replace the total asset value of trees removed during construction. • Coordinate with the City’s Urban Forestry and Parks and Landscape groups regarding removal of landscaped vegetation needed to support construction and operation of the project. 	<ul style="list-style-type: none"> • Include landscaped trees in the project-specific Tree Preservation Plan. • On City lands, ensure vegetation removal is only completed by contractors under the direction of members from Urban Forestry and/or Parks and Landscape. • Implement the restoration plan as soon as possible following construction to encourage the establishment of vegetation as soon as possible.
Vegetation – Existing populations of weeds and non-native plants	Introduction and/or spread of weed populations and non-native plants through construction.	Use native species in restoration plan.	<ul style="list-style-type: none"> • Clean equipment prior to arrival on site and after completion of work before equipment is moved to new location. • Delineate areas of weed infestation and avoid the use of machinery in these areas if possible.



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Ecosystem Component	Environmental Impact	Mitigation Measures for Planning and Design Phase	Mandatory Mitigation Measures for Construction Phase
Wildlife – Actively nesting birds adjacent to construction limits	Disturbance of active bird nests adjacent to construction activities.	Plan for removal of vegetation outside of the general bird nesting period of mid February to late August.	<ul style="list-style-type: none"> Control noxious weeds in construction area through mechanical means such as hand pulling. <p>Coordinate with Project Management Team to ensure that the removal of vegetation is completed prior to construction activities.</p> <ul style="list-style-type: none"> For vegetation removal within the general bird nesting period of mid February to late August, complete a pre-construction nest sweep.
Wildlife – Sensory perceptions of individuals using habitats near construction	Interference of hearing or sight from construction noise or use of artificial light during construction.	<ul style="list-style-type: none"> Include lights with low lumen output and dim the luminaire output, as needed. Note that current lights are to be 34 W luminaires dimmed to 31% of their output. Design lights with a type IV light distribution to minimize potential light spilling into the surrounding area. 	<ul style="list-style-type: none"> Limit construction activity to a timeframe between 7 a.m. and 9 p.m. Direct any construction lighting towards construction area and avoid the project of light out into the surrounding area. Keep construction area clean of garbage and waste and avoid feeding or harassment of wildlife.
Contamination – Salinity impacted soils	Deposition of salts and other road contaminants from vehicles to soils at site.	Check contaminated site reports for recommendations.	Follow all mitigation measures provided in the project Contaminated Soils Management Strategy (Appendix B).

4 CLOSURE

This memo was prepared to provide supplemental information on the proposed expansion of the existing Whitemud Park parking lot as part of the Terwillegar Drive Stage 2 Upgrades. Information on the proposed parking lot expansion was made available following the submission of the EIA report to the City of Edmonton.

If you have any questions or comments, please contact the undersigned at 587-772-0662 or zieglera@ae.ca.

Prepared by:



Deanna Joly, P.Ag.
Environmental Scientist
dj

Reviewed by:



April Ziegler, P.Biol.
Specialist, Regulatory Advisor

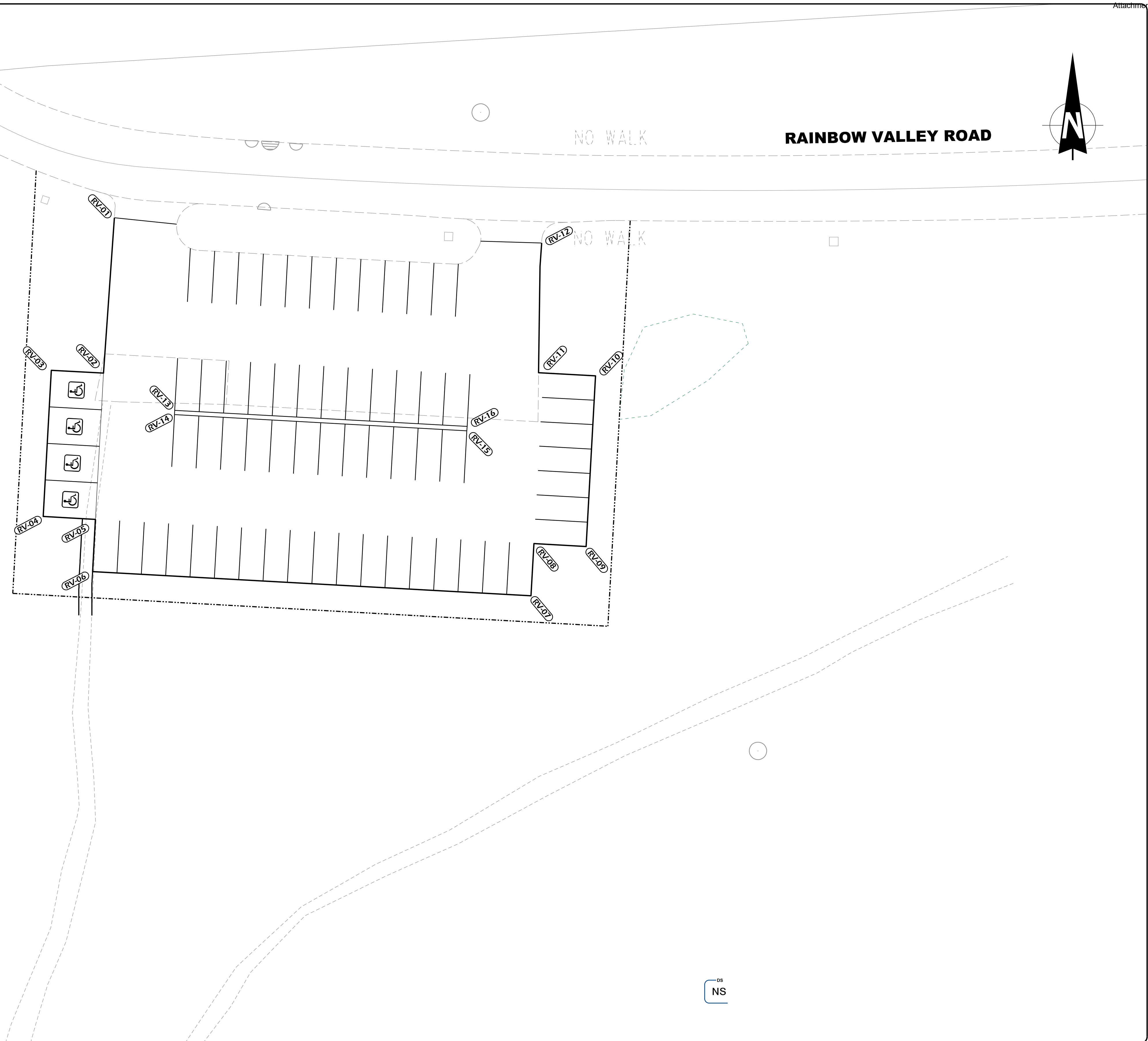
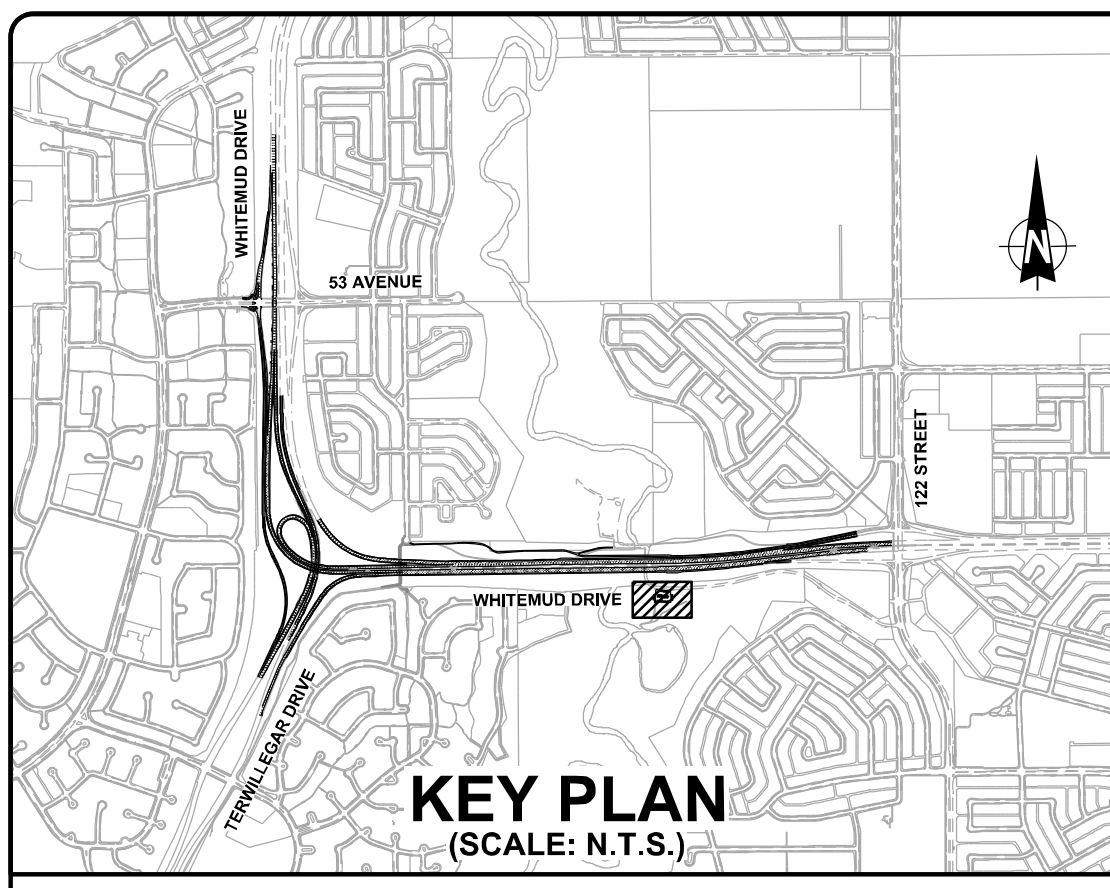


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May 09, 2023

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APPENDIX A: DESIGN DRAWINGS



STAKE OUT POINTS		
POINT	NORTHING	EASTING
RV-01	5927742.727	29654.147
RV-02	5927724.892	29652.889
RV-03	5927725.222	29646.898
RV-04	5927708.448	29645.973
RV-05	5927708.117	29651.964
RV-06	5927702.126	29651.633
RV-07	5927699.347	29701.957
RV-08	5927705.338	29702.287
RV-09	5927705.007	29708.278
RV-10	5927724.578	29709.358
RV-11	5927724.939	29702.821
RV-12	5927739.823	29703.172
RV-13	5927720.634	29661.067
RV-14	5927720.135	29661.040
RV-15	5927718.282	29694.588
RV-16	5927718.782	29694.616

NO.	REVISIONS	BY	DATE	APP'D

PROGRAM NO. 19-22-9006			
CONTRACT NO. 2343			
3	TO G.B.I.S.		
2	AS BUILT		
1	TENDER AWARD	JN	09/27/22
NO.	ISSUE	BY	DATE

CONTRACTOR	
SURVEYOR	
DATE	
FILE NUMBER	
CONSTRUCTION ENGINEER	DATE
GENERAL SUPERVISOR	DATE

PERMIT TO PRACTICE
CIMA CANADA INC.
RM SIGNATURE: *Kate Gill*
RM APEGA ID #: 47605
Date: 2022-Sep-29
PERMIT NUMBER: P8204
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

APPROVED FOR CONSTRUCTION

TRANS. PLANNING AND DESIGN			
SUPERVISOR			
DEPARTMENT / BRANCH			

DESIGNED BY: *Patrick M. Dwyer* DATE: October 23, 2022

SCALE: 1:250

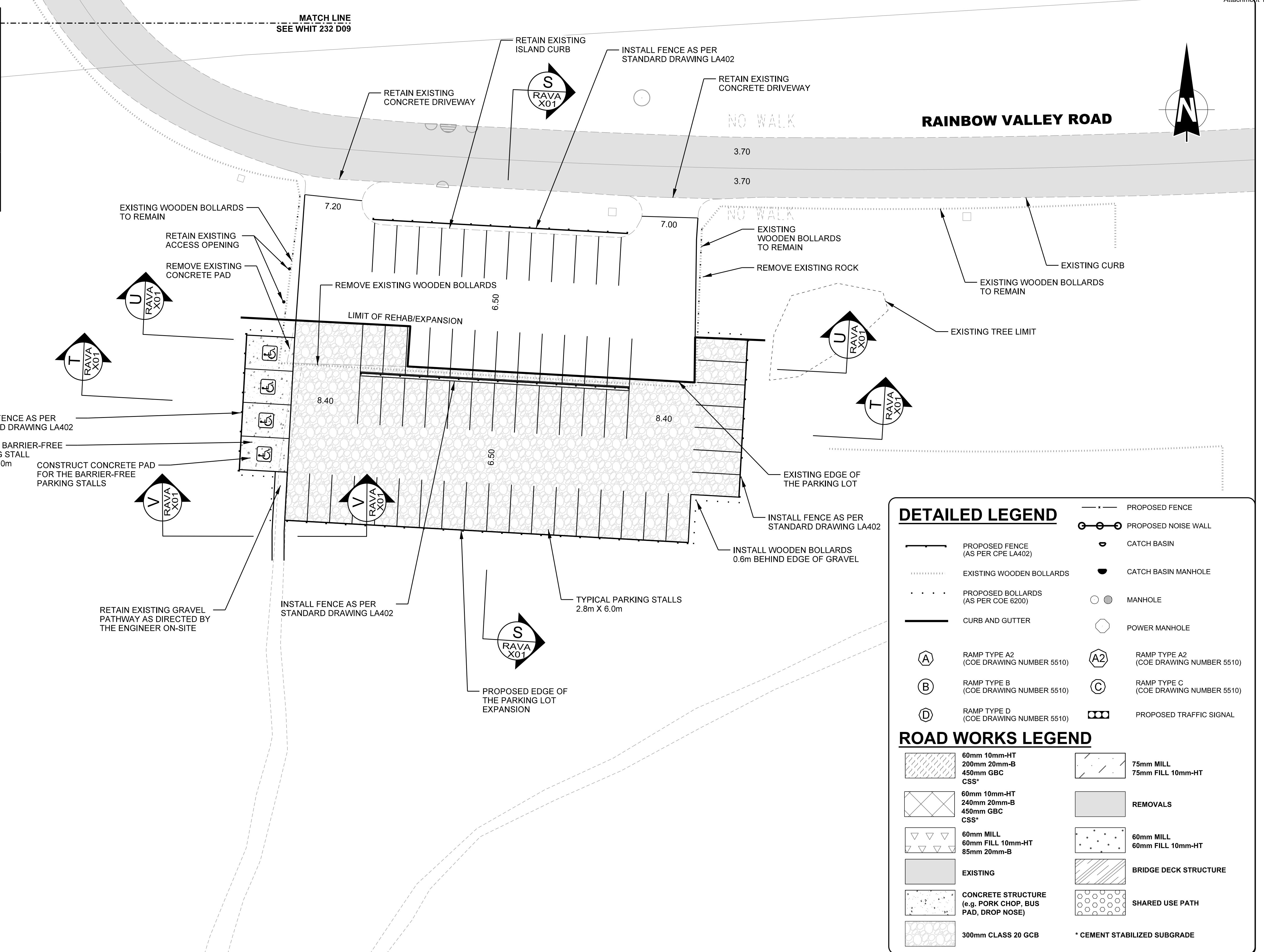
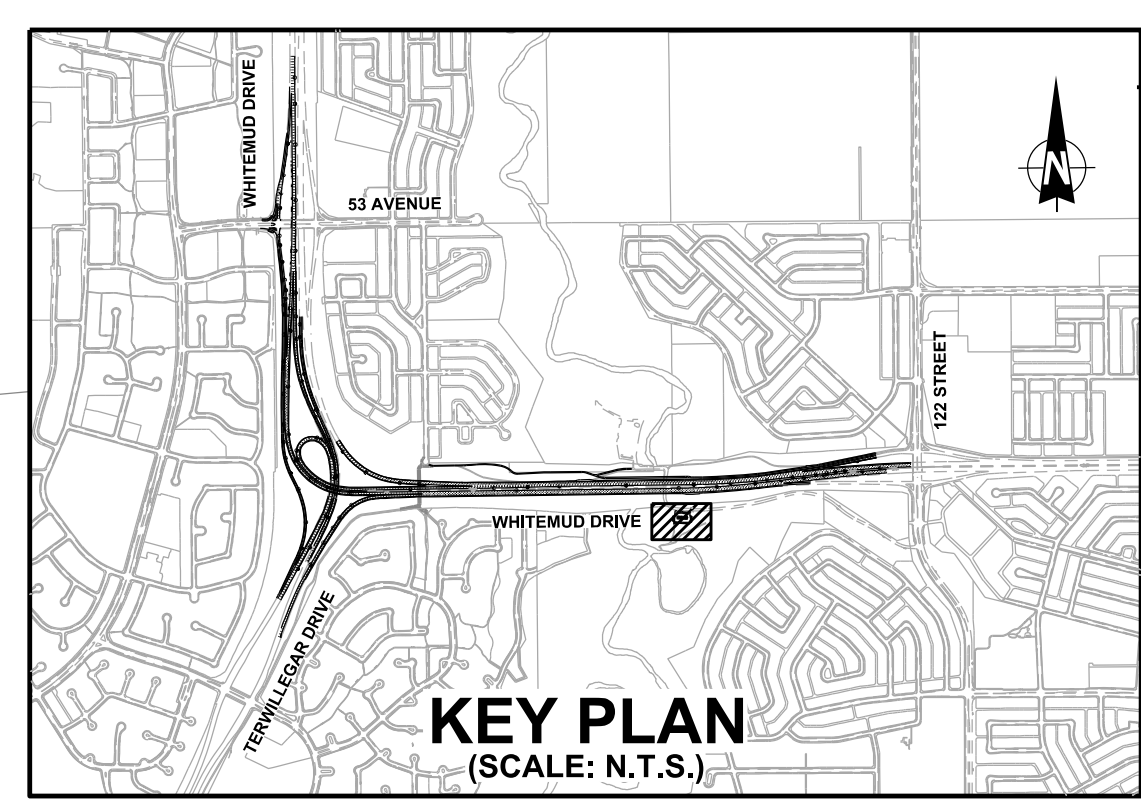
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Edmonton INTEGRATED INFRASTRUCTURE SERVICES
INFRASTRUCTURE DELIVERY BRANCH

PROJECT: **TERWILLEGAR DRIVE EXPANSION - STAGE 2**
RAINBOW VALLEY ROAD PARKING LOT EXPANSION
ALIGNMENT PLAN

DRAWING: **RAVA 232 A01**

DRAWN	DATE
PY	08/11/22
DESIGNED	DATE
SS	08/11/22
CHECKED	DATE
TW	08/11/22



DETAILED LEGEND

	PROPOSED FENCE (AS PER CPE LA402)		PROPOSED NOISE WALL
	EXISTING WOODEN BOLLARDS (AS PER COE 6200)		CATCH BASIN
	PROPOSED BOLLARDS (AS PER COE 6200)		CATCH BASIN MANHOLE
	CURB AND GUTTER		MANHOLE
	RAMP TYPE A2 (COE DRAWING NUMBER 5510)		POWER MANHOLE
	RAMP TYPE B (COE DRAWING NUMBER 5510)		RAMP TYPE A2 (COE DRAWING NUMBER 5510)
	RAMP TYPE C (COE DRAWING NUMBER 5510)		RAMP TYPE C (COE DRAWING NUMBER 5510)
	RAMP TYPE D (COE DRAWING NUMBER 5510)		PROPOSED TRAFFIC SIGNAL

ROAD WORKS LEGEND

	60mm 10mm-HT 200mm 20mm-B 450mm GBC CSS*		75mm MILL 75mm FILL 10mm-HT
	60mm 10mm-HT 240mm 20mm-B 450mm GBC CSS*		REMOVALS
	60mm MILL 60mm FILL 10mm-HT 85mm 20mm-B		60mm MILL 60mm FILL 10mm-HT
	EXISTING		BRIDGE DECK STRUCTURE
	CONCRETE STRUCTURE (e.g. PORK CHOP, BUS PAD, DROP NOSE)		SHARED USE PATH
	300mm CLASS 20 GCB		* CEMENT STABILIZED SUBGRADE

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NO.	REVISIONS	BY	DATE	APP'D	

PROGRAM NO. 19-22-9006			
CONTRACT NO. 2343			
3	TO C.B.I.S.		
2	AS BUILT		
1	TENDER AWARD		
NO.	ISSUE	BY	DATE

CONTRACTOR	
SURVEYOR	
DATE	
FILE NUMBER	
CONSTRUCTION ENGINEER	DATE
GENERAL SUPERVISOR	DATE

APPROVED FOR CONSTRUCTION	
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CIMA CANADA INC.
RM SIGNATURE: *Kate Gill*
RM APEGA ID #: 47605
Date: 2022-Sep-29
PERMIT NUMBER: P8204
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TRANS. PLANNING AND DESIGN	
SUPERVISOR	DATE
DEPARTMENT / BRANCH	APPROVAL
	DATE

TRANSPORTATION INFRASTRUCTURE DELIVERY
DATE: October 31, 2022

SURVEY: *[Signature]*

JOB NO. E00760B

SCALE: 1:250

DESIGNED: PY 09/27/22

SS 09/27/22

CHECKED: TW 09/27/22

Edmonton INTEGRATED INFRASTRUCTURE SERVICES
INFRASTRUCTURE DELIVERY BRANCH

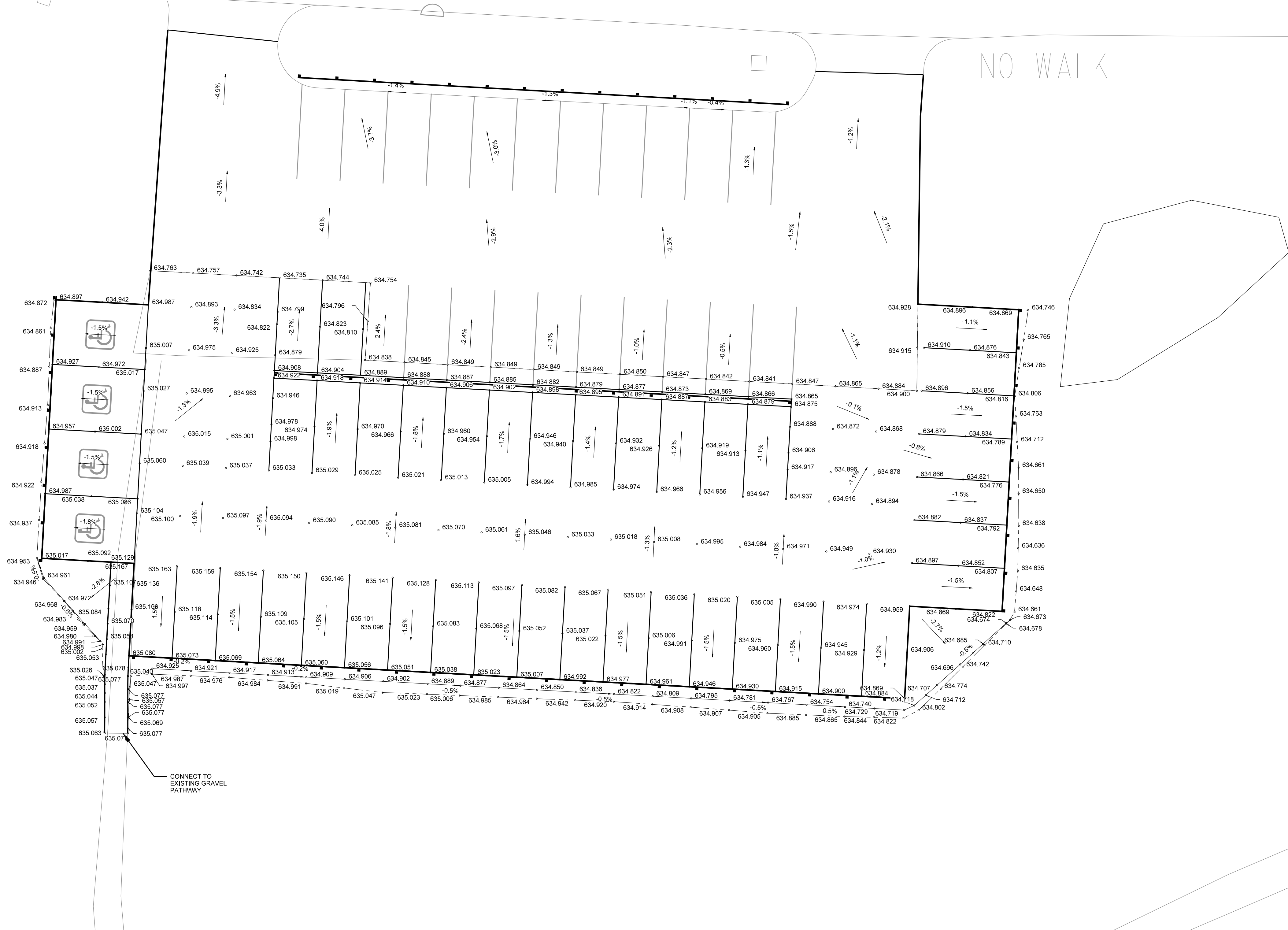
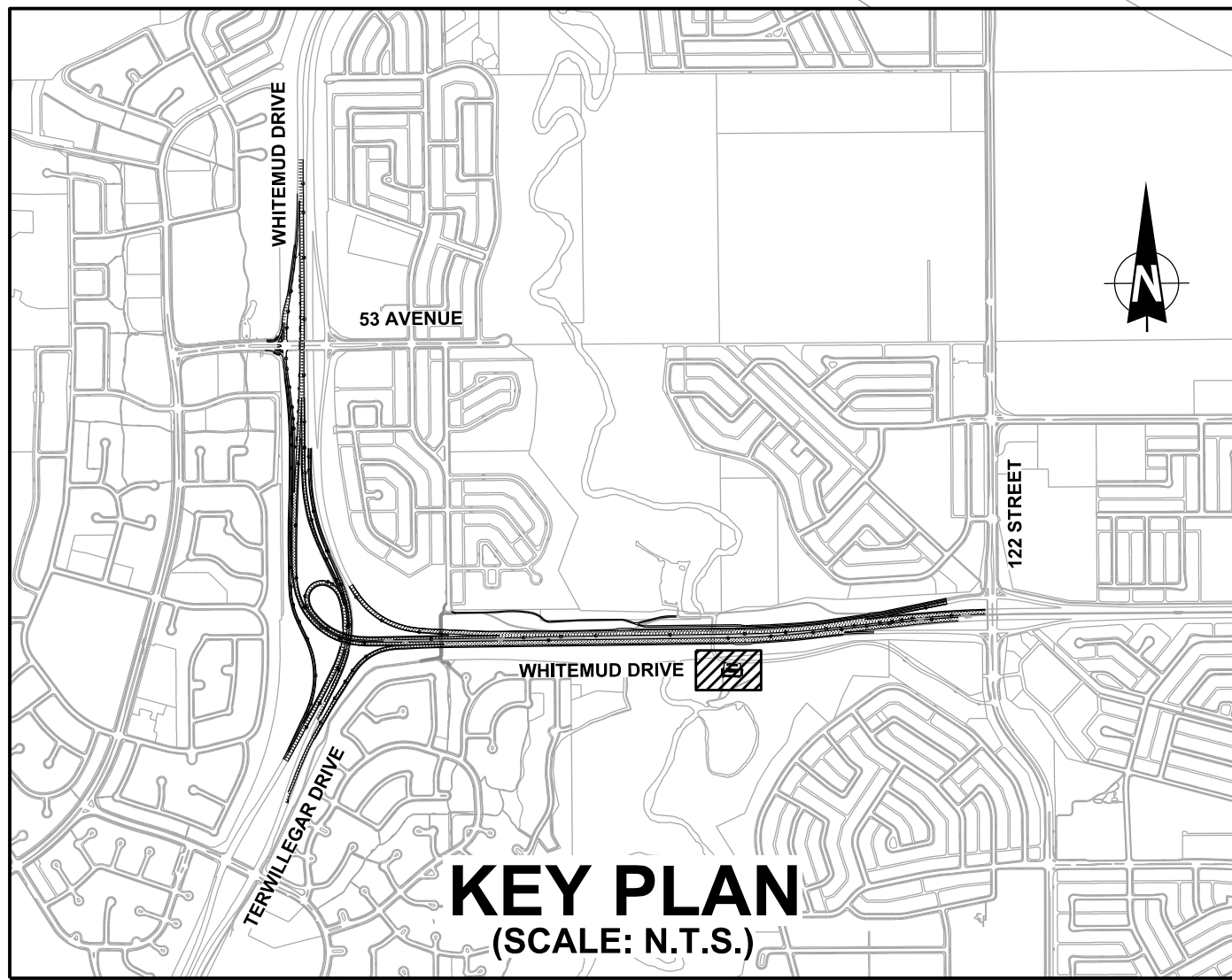
PROJECT: **TERWILLEGAR DRIVE EXPANSION - STAGE 2**
RAINBOW VALLEY ROAD PARKING LOT EXPANSION
DETAIL PLAN

DRAWING: **RAVA 231 D01**

MATCH LINE
SEE WHIT 232 G09

NO WALK

NO WALK



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PROGRAM NO. CM-99-9600				
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2	AS BUILT			
1	TENDER AWARD			
NO.	ISSUE	BY	DATE	

CONSTRUCTION RETURN			
CONTRACTOR			
SURVEYOR			
DATE			
FILE NUMBER			
CONSTRUCTION ENGINEER	DATE		
GENERAL SUPERVISOR	DATE		

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RM SIGNATURE: *Kate Gill*
RM APEGA ID #: 47605
Date: 2022-Sep-29
PERMIT NUMBER: P8204
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

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PROFESSIONAL ENGINEER
ALEX NIEPSU
29 Sep. 2022
ID # 85601

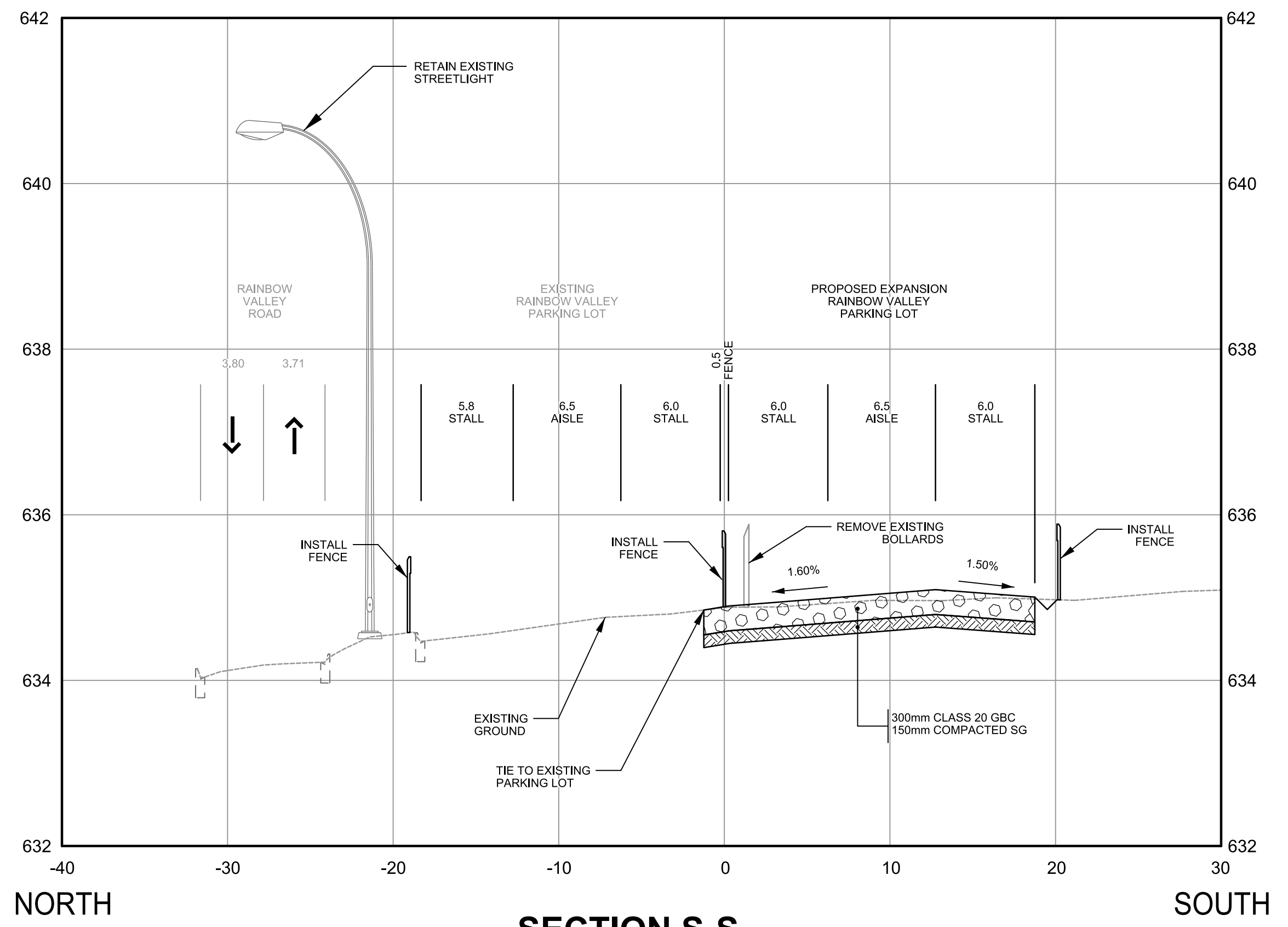
DEPARTMENT / BRANCH	APPROVAL	DATE
	<i>Patricia M. Singh</i>	October 23, 2022

YELLOWHEAD TRAIL PORTFOLIO - SUPERVISOR DELIVERY		DATE
		October 31, 2022
SURVEY	DATE	
JOB NO.	DATE	
SCALE	DATE	
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Edmonton INTEGRATED INFRASTRUCTURE SERVICES
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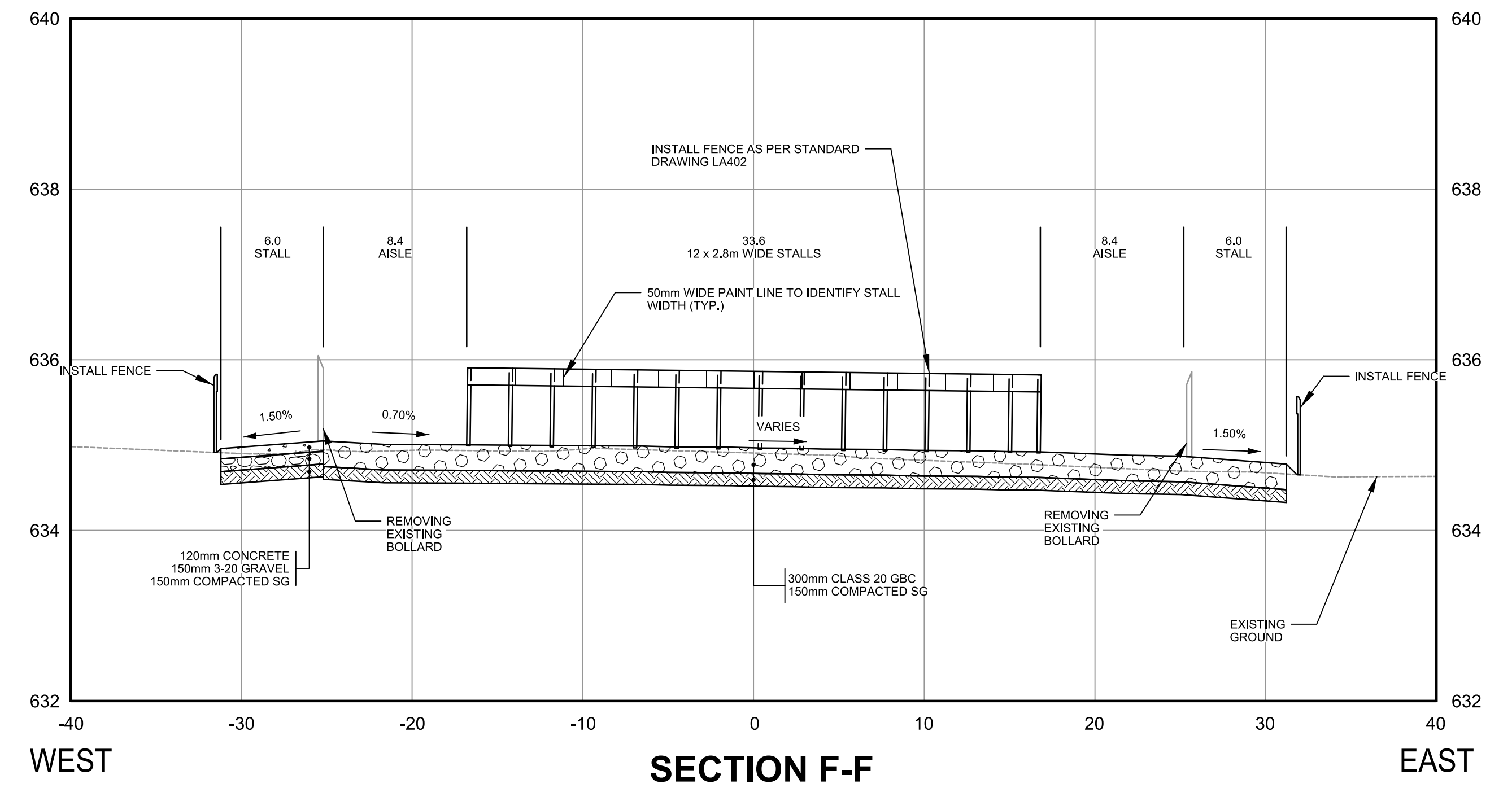
TERWILLEGAR DRIVE EXPANSION - STAGE 2
RAINBOW VALLEY ROAD PARKING LOT EXPANSION
GRADING PLAN

RAVA 231 G01



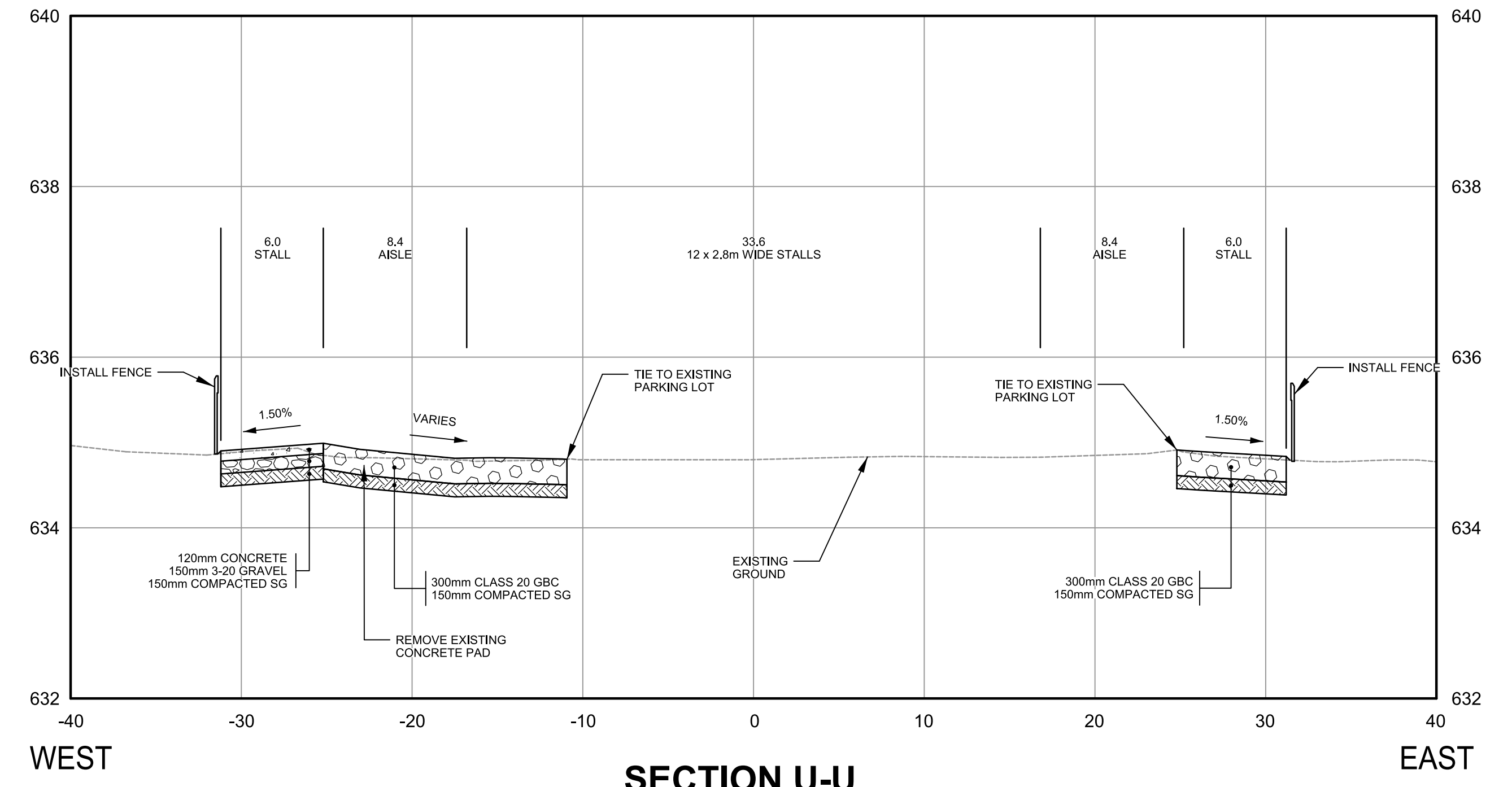
SECTION S-S

STA 0+050
LOOKING EAST
(SEE DRAWING: RAVA 231 D01)



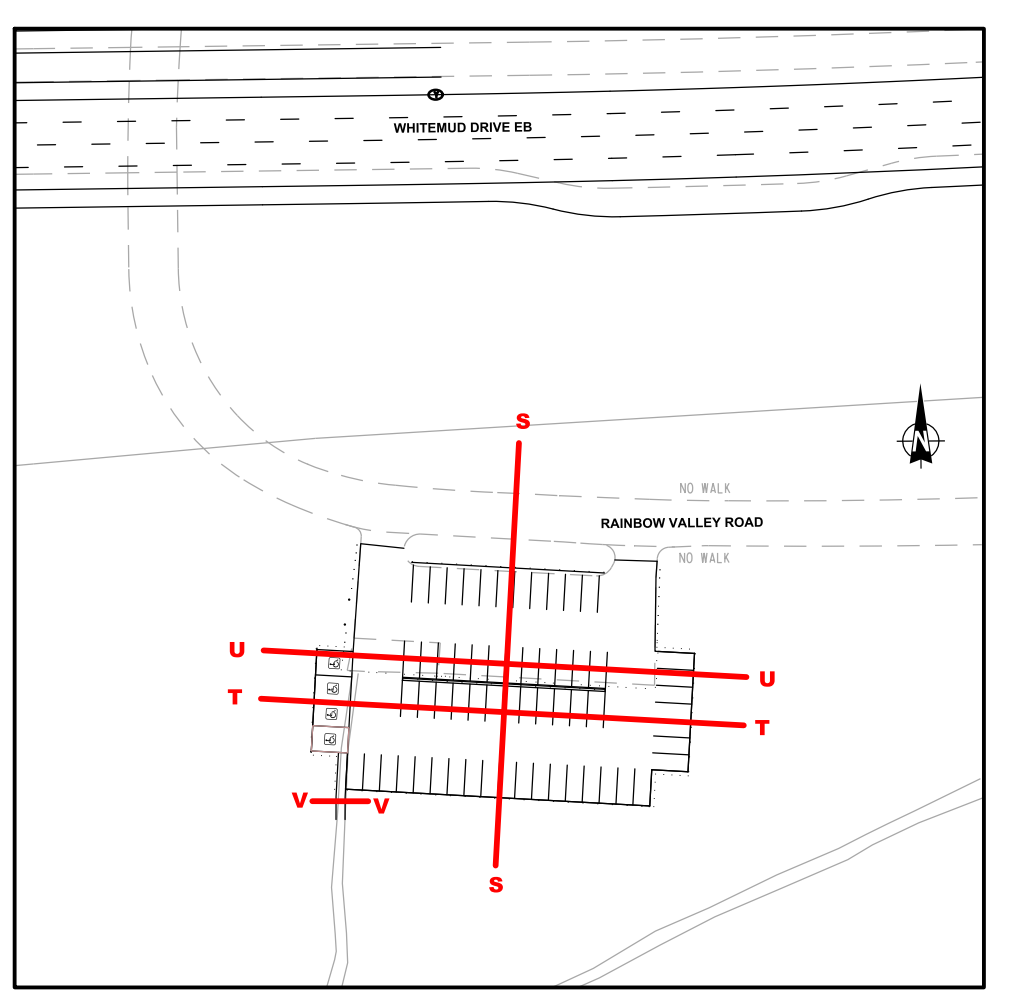
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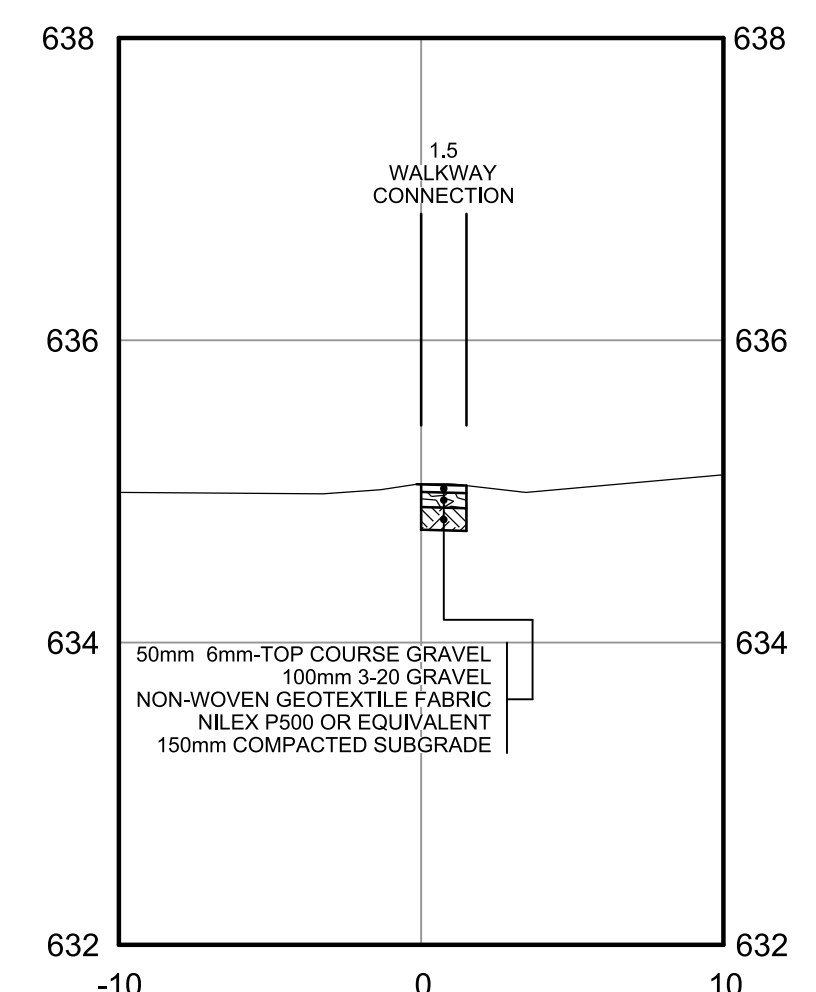


SECTION U-U

STA 0+028
LOOKING NORTH
(SEE DRAWING: RAVA 231 D01)



KEY PLAN
(SCALE: N.T.S.)



SECTION V-V

STA 0+008
LOOKING NORTH
(SEE DRAWING: RAVA 231 D01)

NOTE:
1. INSTALL FENCE AS PER STANDARD DRAWING LA402

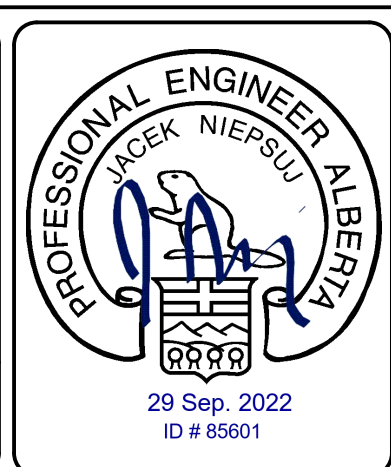
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PROGRAM NO. 19-22-9006			
CONTRACT NO. 2343			
3	TO G.B.I.S.		
2	AS BUILT		
1	TENDER AWARD		
NO.	ISSUE	BY	DATE

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SURVEYOR	
DATE	
FILE NUMBER	
CONSTRUCTION ENGINEER	DATE
GENERAL SUPERVISOR	DATE



PERMIT TO PRACTICE
CIMA CANADA INC.
RM SIGNATURE: *Rob Gill*
RM APEGA ID #: 47605
Date: 2022-Sep-29
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The Association of Professional Engineers and Geoscientists of Alberta (APEGA)
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TRANS. PLANNING AND DESIGN SUPERVISOR			
DEPARTMENT / BRANCH		APPROVAL	DATE

DESIGNED BY	DATE
October 23, 2022	
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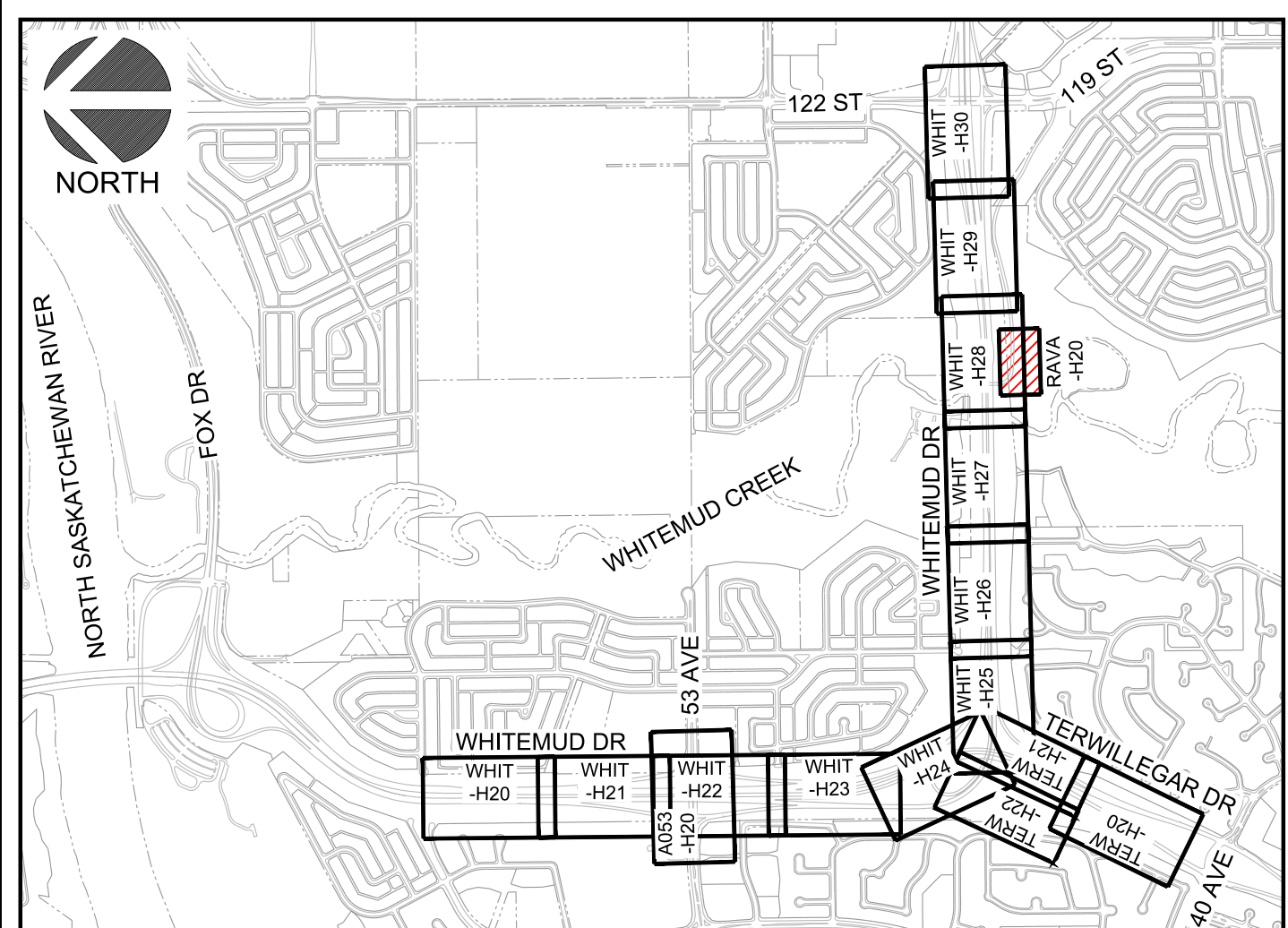
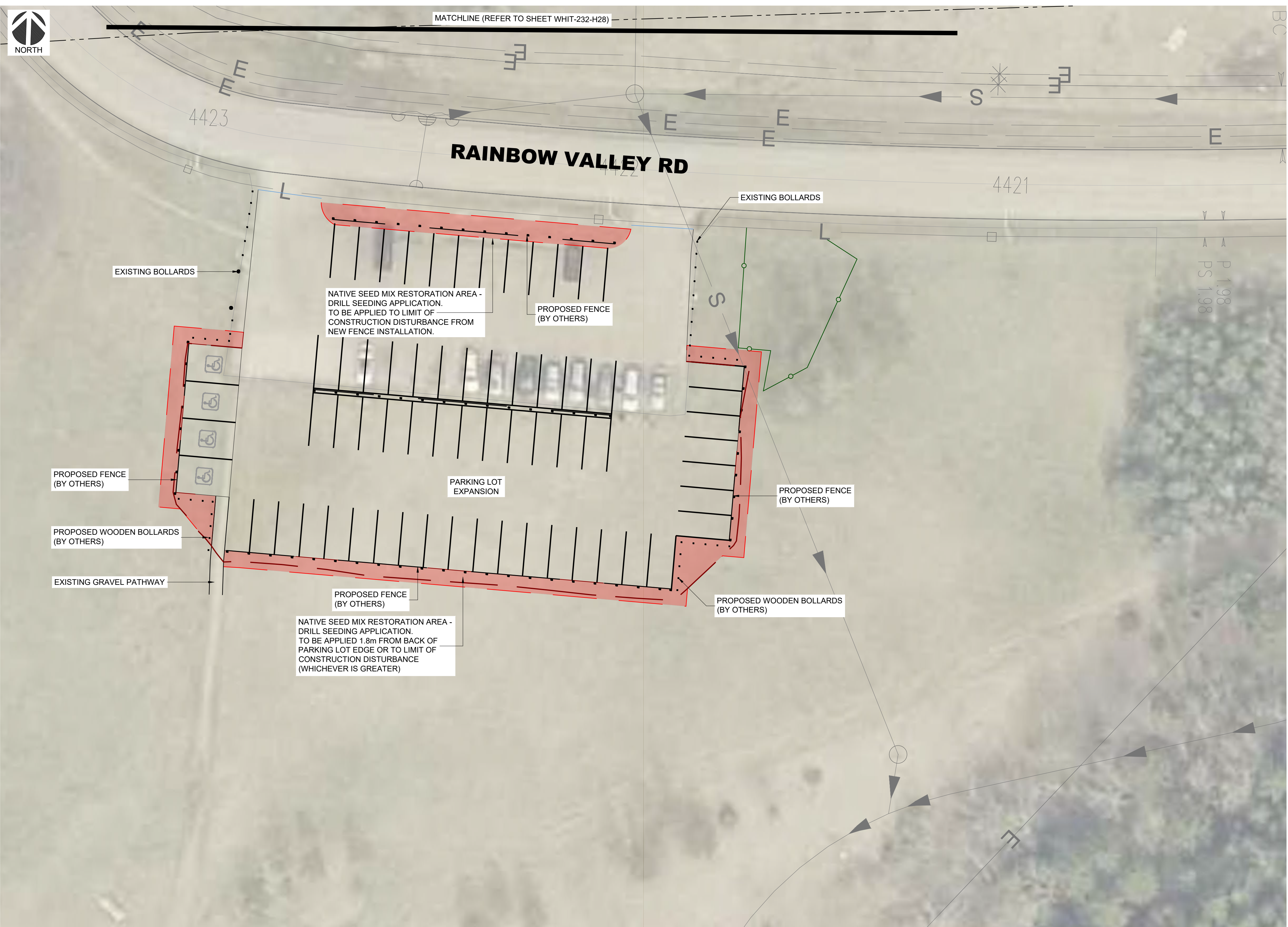
Edmonton INTEGRATED INFRASTRUCTURE SERVICES
INFRASTRUCTURE DELIVERY BRANCH

PROJECT **TERWILLEGAR DRIVE EXPANSION - STAGE 2**
RAINBOW VALLEY ROAD PARKING LOT EXPANSION
SECTIONS S, T, U

DRAWING **RAVA 231 X01**

LEGEND

- PROPOSED RETAINING WALL (BY OTHERS)
- EXISTING INFORMAL TRAIL
- RETAINED MAINTENANCE ACCESS ROUTE
- PROPOSED CUT & FILL LIMITS (BY OTHERS)
- PROPOSED FENCING (BY OTHERS)
- PROPOSED TREE PROTECTION FENCING
- 33.57% PROPOSED SLOPE (BY OTHERS)
- NATIVE SEED MIX RESTORATION AREA - HYDROSEEDING APPLICATION C/W TACKIFIER AND 300mm DEPTH NATIVE/IMPORTED TOPSOIL
- NATIVE SEED MIX RESTORATION AREA - DRILL SEEDING APPLICATION C/W 300mm DEPTH NATIVE/IMPORTED TOPSOIL (1.8m WIDTH STRIP ALONG PROPOSED SUP)



- GENERAL NOTES:**
1. REFER TO SHEET TERW-231-H00 FOR GENERAL NOTES REGARDING RESTORATION WORK.
 2. REFER TO SHEET TERW-231-H00 FOR NATURALIZATION ZONE TYPES AND COMPOSITIONS (BY OTHERS).
 3. DIMENSIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

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NO.	REVISIONS	BY	DATE	APP'D
1	ISSUED FOR CONSTRUCTION - REVIEW	JLH	2023FEB24	DB
2	ISSUED FOR TENDER	JLH	2022NOV24	DB

PROGRAM NO. 19-22-9006

CONTRACT NO. 2343

CONSTRUCTION RETURN

CONTRACTOR _____

SURVEYOR _____

DATE _____

FILE NUMBER _____

CONSTRUCTION ENGINEER DATE _____

GENERAL SUPERVISOR DATE _____



APPROVED FOR CONSTRUCTION

DATE _____

DEPARTMENT / BRANCH _____

APPROVAL _____

DATE _____

TRANSPORTATION INFRASTRUCTURE DELIVERY DATE _____

TRANSP. PLANNING AND DESIGN SUPERVISOR

DEPARTMENT / BRANCH _____

APPROVAL _____

DATE _____

SURVEY

JOB NO. E00780A

SCALE 1:250

0 1:250 10

DESIGNED JLH 02/24/23

CHECKED DB 02/24/23

Edmonton INTEGRATED INFRASTRUCTURE SERVICES
INFRASTRUCTURE DELIVERY BRANCH

PROJECT TERWILLEGAR DRIVE EXPANSION - STAGE 2
RAINBOW VALLEY ROAD PARKING LOT EXPANSION
LANDSCAPE RESTORATION

DRAWING RAVA-231-H20



April 25, 2023

Reference No. 468053049-001

To: Christopher Wintle ,Transportation Planning and Design, IIS

From: Achyut Adhikari, Planning and Environment Services, UPE

Subject: AA23-10 EIA Amendment for Rainbow Valley Road Parking Lot Expansion Project-Sign off

We have completed our review of the Rainbow Valley Road Parking Lot Expansion Project EIA Amendment report. This letter confirms that the Administration has no further concerns with the proposed development under the North Saskatchewan River Valley Area Redevelopment Plan (NSRV ARP). Please adhere to the following conditions and advice provided by reviewers.

Please note the proposed development meets the definition of a major facility, and as such, City Council must approve the EIA and SLS, and must deem the proposed location in the River Valley as essential, to ensure the policy requirements of the NSRV ARP are satisfied. In addition, the following advisements and conditions apply to the project:

Comments from Urban Growth and Open Space Strategy (Planning and Environmental Services):

It was understood that the purpose of an EIA amendment is to create additional permanent public parking for Whitemud Park users. The parking lot expansion scope was not identified within the original EIA issued for the work on Terwillegar Drive Stage 2. Currently, the existing lot often operates at or exceeds capacity during various times of the year due to the popularity of the walking trails in the area.

It appears that the EIA Amendment in general has appropriately outlined detailed environmental assessment methodology, potential effects of the proposed Project and identified mitigation measures to minimize or address potential adverse environmental effects of the Project.

The expansion will be within the existing manicured open space in general and there are no impacts expected to the natural environment. If there are impacts that require tree removal, the project should ensure proper City requirements including appropriate restoration work as outlined in the EIA reporting.

We recommend the project team to ensure the additional parking surface generated stormwater will be managed using the applicable LID approach if possible. The project should ensure the pre-development runoff natural drainage pattern will be maintained and the project will not result in any kind of point sources that could result in erosion and sedimentation along the open space and river valley environment.

The project should implement best construction practices to avoid invasive spread during construction and ensure sound engineering practices to avoid heavy equipment and vehicles along the river bank.

Engineering Services (IIS) Comments:

Please see the memo attached separately.

River Valley Parks and Facilities Comments:

- no concerns on expansion. Will further support Whitemud Park trail users
- would like to speak with PM regarding signage opportunities at the parking lot and incorporation into parking expansion

Parks and Roads Services (Natural Area Operation)

NAO is in support of the parking expansion with the following conditions:

1. No trees are removed or impacted.
2. No work is within 10 m of natural stand edges (where grass gets tall). This includes laydown/ stockpiling/access.
3. Consult Forestry at treepreservation@edmonton.ca for the nearby 'stand alone' trees.
4. A Public Tree Permit is required, please submit a Tree Preservation Plan with the application.
5. Please ensure all mitigation measures are followed and every alternative is considered that can lead to minimal disturbance.
6. Please consider planting native trees in the green space to offset the loss of green space in the immediate area.
7. A pre-and post-construction inspection will need to be conducted. Please contact parkslandscapeinventory@edmonton.ca to schedule the inspection.
8. Please be advised that all prohibited noxious and noxious weeds are to be controlled by the proponent within the project limits for the duration of the project (Weed Control Act 2008).
9. Any damages that occur to the tree(s) canopy, trunk or roots/boulevard (from your team or any subcontractors on site) fall under the Corporate Tree Management Policy (C456C).

Open Space Inspection Comments

1. A pre-construction inspection prior to accessing the site and a post-construction inspection once parkland restoration has occurred will be conducted by Open Space Inspection Services. Email: parkslandscapeinventory@edmonton.ca to request inspections.
2. This project may require a Parkland Access Permit. Please contact Parkland Management to obtain a permit prior to scheduling a pre site inspection. Email: prsparklandmanagement@edmonton.ca
3. There is no unapproved parking on Parkland.
4. Vehicle and equipment travel in all areas must not traverse open space and must be limited to specified and planned minimally impactful haul routes. Travel must also be away from low areas where water retention may occur. Travel must also be away from low areas where water retention may occur. Travel must also not occur during inclement weather or within a minimum of 48 hours after major inclement weather events.
5. In the case where there is significant damage to the site, a repair and restoration plan will have to be tailored to the scope and complexity of the damage and approved by PARS. The cost and implementation of this will be borne by the program, not PARS Open Space Operations. These steps will be the responsibility of the proponent prior to the inspection and acceptance by PARS.
6. All damages to natural areas must be restored to pre-existing conditions with approved (by NAO) natural grasses/vegetation as required and the maintenance (watering, weed

- control and public access control measures) of restored natural areas will be the responsibility of the proponent until the natural area planting material is established, inspected and accepted by PARS.
7. Any damaged ornamental turf areas shall be repaired with sod (topdress and seed is not acceptable) and all maintenance (erosion control, watering, mowing, public access control and weed control) of the restored areas will be the responsibility of the proponent until established, inspected and accepted by PARS. All sod must be butt joined to the existing turf surfaces. Blending of these areas is not acceptable. A 50mm depth cut for sod application is not adequate. A minimum of 100mm depth and vertical cut is required, followed by adding and rolling topsoil prior to sod placement. Soil compaction mitigation must occur on subsoil areas prior to topsoil placement.
 8. Any lay down, staging or haul route area on Parkland must be approved and fenced, with no vehicular or project activity outside of the fenced area. There should be no access to the lay down, staging or haul route area to ensure public safety. The restoration of the entire area must be repaired to the existing conditions as per ornamental turf repair above. Soil compaction protection, aeration and re-sodding; including the maintenance (eg watering, mowing, weed control and public access control measures) of restored turf areas will be the responsibility of the proponent until the sod is established and accepted by PARS. Email: parkslandscapeinventory@edmonton.ca to request a laydown area pre inspection.
 9. Public access control measures should be in place and maintained post construction to prevent the public from accessing areas that have been newly landscaped. In order to ensure the success of the restoration areas, the project should also consider the installation of fencing and informational signage around areas to discourage disturbance of the area by the public. Please be aware that native species can take longer to establish than many ornamental landscaping species or traditional turf grasses. It is for this reason that considerations for protection of restoration areas are strongly recommended.
 10. Soil compaction protection (rig matting or other approved) on the site is required prior to any activity (normally where there is a large number of existing trees in close proximity).
 11. All other damages to parkland inventory (curbs, roads, trails, paths, furniture, fixtures, signs, trees, shrub beds, etc) must be restored to pre-existing conditions and CoE Construction Standards and PARS inspection and acceptance.
 12. Erosion Control Measures must be in place and maintained post construction to prevent overland drainage washout on areas that have been newly landscaped (especially slopes). The project should also consider the installation of fencing and informational signage around areas to discourage disturbance of the area by the public.
 13. Site drainage must not be affected by this project. Any overland drainage issue or concern that is a result of this project will be corrected and repaired by the project/developer/contractor, not the City of Edmonton.
 14. Please note that the disturbance areas will need to be weed free to pass the FAC inspection. Therefore, the contractor should ensure they have an adequate weed control plan in place and that it is adhered to throughout the entire warranty period.
 15. All holes must be filled immediately to ensure public safety. This includes mitigating settlement that would create a future trip hazard.
 16. A [Public Tree Permit](#) will be required for all work within 5 meters of a boulevard or open space tree and 10 meters from a natural stand, as per [Public Tree Bylaw 18825](#). Prior to construction, all City of Edmonton trees within 5 meters of the construction area shall be protected in accordance with the [Tree Preservation Guidelines](#), as well as to designate the trees outside the Access Activity area on City Lands. Please be advised that all costs associated with the removal, replacement or transplanting of trees shall be covered by the



- applicant as per the Corporate Tree Management Policy (C456C). The City of Edmonton will schedule and carry out all required tree work involved with this project.
17. Hard-surface access routes are preferred for large equipment.
 18. Use of the area must be managed carefully to prevent any spills or release of contaminants.
 19. There is no dumping or stockpiling on the site.
 20. This project must not create any safety risk to the general public that has access to this site.
 21. The site is left in an intended state that meets the City's satisfaction.

General Conditions:

- 1) All mitigation measures and commitments outlined by City reviewers must be incorporated into the construction work plan.
- 2) The proponent is responsible for seeking approval for any other regulatory permits from provincial and federal agencies.
- 3) Please contact the Neighbourhood Resource Coordinator Chris Auton (780-496-5924) in the area to ensure appropriate community notification.
- 4) For potential impacts to City parks and facilities:
 - a) Hard surface access/haul routes are preferred.
 - b) Please ensure restoration of the site occurs and meets existing site conditions. All damages to parkland must be restored to City of Edmonton Construction Standards and City Operations' satisfaction.
 - c) Noxious weeds shall be managed and controlled as required within any fenced area and should be the responsibility of the contractor/department during construction.
 - d) Signage must be posted indicating a project contact person and phone number for inquiries.
- 5) All trail closures shall adhere to the City's Trail Closure Procedures. All trail closure activities must be approved through River Valley Operations prior to construction and closure of trails. Please contact **Braeden Holmstrom** (Team Leader, River Valley & Horticulture) at **587-986-2841** to obtain the necessary trail closure approvals. This shall be done a minimum of two weeks in advance of planned construction.
- 6) Please attach this letter for any further City of Edmonton approvals.

Should you have any questions or concerns, please contact me by e-mail or by phone at 780-496-4846.

Regards,

Achyut Adhikari

INTEGRATED INFRASTRUCTURE SERVICES
Infrastructure Planning & Design
Engineering Services Section

City of Edmonton
11004 - 190 Street NW
Edmonton, AB T5S 0G9
Tel.: 780.496.6770



edmonton.ca

Memorandum

Date: April 21, 2023

File: 508.001; CAD: 925+32-24

Posse: No.468053049-001

TO: Achyut Adhikari, Ecological Planner
Planning & Environment Services, Urban Planning and Economy

FROM: Max Dassanayake, M.Eng., P.Eng., Geotechnical Engineer
Engineering Services, Integrated Infrastructure Services

SUBJECT: AA23-10 Geotechnical Review of Project Review Form
Rainbow Valley Road Parking Lot Expansion Project-EIA Amendment

I have reviewed the circulation memorandum issued for the Rainbow Valley Road Parking Lot Expansion Project under the Project Review Form No. AA23-10.

It is understood that as part of the "Terwillegar Drive Stage 2 Upgrades and Rainbow Valley Bridge Renewal and Widening Draft Concept Stormwater Management Plan", completed by Associated Engineering Ltd., the existing "[Whitemud Park Parking Lot](#)", adjacent to the [Rainbow Valley Road NW](#), will be increased in capacity to accommodate 30 more gravelled parking spaces. The Whitemud Drive NW and the Whitemud Creek are located about 70 m to the north and 130 m to the west, respectively. Additionally, It's understood that it is desired to increase the number of parking spaces to accommodate increased public use of the Whitemud Park and the ravine system.

Based on my review of the circulation memorandum, I have the following comments for your consideration:

1. The proponent must ensure that during construction activities, no water or other fluids are discharged onto or toward the River Valley slopes.
2. The proponent must assure construction debris is not dumped within the River Valley lands. Any costs incurred with disposing excess material off site (i.e.,

laboratory testing, transportation, landfill disposal, etc.) is the responsibility of the proponent.

3. Proper Erosion and Sediment Control (ESC) measures must be implemented during the construction of the parking lot extension to avoid directing any sediment laden run-off toward the Whitemud Creek.
4. It is assumed that the proponent will be responsible for all Health, Safety, and Environment (HSE) considerations during site work.
5. Any damage to the turf, vegetation, sidewalks, curbs, roadways, and any City owned and operated infrastructure, which may result from the construction shall be restored to pre-construction conditions in compliance with City standards.
6. All refuelling, cleaning, and maintenance of equipment must be conducted at locations away from River Valley lands to prevent potential for environmental contamination, and appropriate spill containment kits must be maintained on site at all times.
7. Suitable environmental protection practices must be imposed to prevent and contain potential spills of fuels, oils, lubricants, and other hazardous materials arising from construction activities. All spills must be reported to the City's 24/7 spill hotline at 780-496-6666. Placement of drip trays underneath stationary equipment is advised.

Based on review of the PRF information received, it appears that the proposed work will involve limited geotechnical risk to the river valley lands. Provided that appropriate due diligence and good local construction techniques and practices are employed by the proponent and their agents during the site work, and the above guidelines and recommendations are adhered to, I would have no further questions or objections in regard to proceeding with the proposed bridge rehabilitation work.

If you have any questions regarding these comments, please contact me at (780) 293-0097.

MSD