



Trans Mountain Pipeline ULC



Trans Mountain Expansion Project

An Application Pursuant to Section 52 of the National Energy Board Act

December 2013

Volume



Environmental Alignment Sheets

ENVIRONMENTAL NOTES

GENERAL INFORMATION

The Environmental Alignment Sheets (EAS) provide information pertaining to the environmental and socio-economic setting above the Photomosaic. Potential environmental and socio-economic issues identified during Project planning, and their corresponding mitigation measures, are positioned below their respective location on the Photomosaic.

Discipline-specific Environmental Notes are included below the Photomosaic outlining mitigation measures as described in the Pipeline Environmental Protection Plan (Pipeline EPP) to be implemented during construction of the Project. The mitigation measures included on these Index Sheets do not include all of the potential mitigation measures that may be implemented. Consult the Pipeline EPP for additional protection measures as necessary. Pipeline EPP Section, Appendix and Construction Drawing references are provided in these Environmental Notes. Construction Drawings can be found in Appendix R of the Pipeline EPP.

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION

Jurisdiction - Includes information regarding the regional or municipal jurisdictional authority of the land encountered along the corridor.

Land Ownership/Disposition - Indicates whether land is Private, Crown Land, or a mixture of Crown and Private Land (Mixed) and indicates Crown Land dispositions and other key land designations where applicable.

Land Use - Indicates the predominant land use at the time of survey.

Socio-Economic and Agricultural Considerations - Indicates select communities located within 5km of the corridor and select agricultural operations encountered along the corridor.

Heritage/Traditional Land Use - Indicates ranges (buffered) of known archeological concerns and areas with known Traditional Land Use values encountered along the corridor.

Wildlife and Wildlife Habitat - Identifies important wildlife habitat ranges and site-specific features encountered along the corridor and provincially identified habitat ranges.

Vegetation - Indicates rare plants, lichens and liverworts, and rare ecological communities encountered along the corridor.

Wetlands - Indicates the classification of the wetlands encountered along the corridor.

Fish Habitat Sensitivity - Indicates the fish sensitivity rating encountered along the corridor. Areas of high fish habitat sensitivity are assigned based on the quality of the habitat and the proposed instream construction work window.

Hydrology - Indicates watercourse and drainage crossings as well as the locations of shallow wells and shallow groundwater encountered along the corridor.

Soils Parent Material - Indicates parent material encountered along the corridor from which current soils have evolved.

POTENTIAL ENVIRONMENTAL ISSUES

Indicates where potential environmental and socio-economic issues or adverse effects may occur along the corridor as described in the Environmental and Socio-Economic Assessment. Additional information for each of the disciplines is provided in the Environmental Notes and in the Pipeline EPP.

Environmental Notes associated with potential environmental issues are arranged by discipline in the following categories:

Discipline	Note Prefix
Agriculture	AG
Aquatics	AQ
Archaeology	AK
Hydrology	HY
Soils	SO
Traditional Land Use	TLU
Vegetation	VG
Wetlands	WT
Wildlife	WF

ENVIRONMENTAL PROTECTION

Construction Work Window - Identifies the allowable work window for site-specific environmental features.

Soil Handling - Indicates the recommended topsoil depth to be salvaged as well as the topsoil stripping procedure.

Soils - Identifies the locations where measures will be implemented to address wind and water erosion, compaction and rutting and trench instability.

Watercourse Crossing (Pipeline/Vehicle) Methods - Identifies locations with recommended pipeline and equipment crossing methods for watercourses, drainages and channels.

Forest Type - Timber salvage studies will be completed prior to construction. General locations where coniferous and deciduous salvageable timber is encountered along the eventual route will be provided in this band. Rollback areas will be identified for access control, wildlife movement and erosion control.

Vegetation - Identifies locations where measures will be implemented to mitigate impacts to rare plants, plant communities, lichens and liverworts.

Wildlife and Fish Habitat - Identifies locations where measures will be implemented to address concerns related to sensitive wildlife features, provincially identified wildlife ranges, and sensitive fish habitat.

Heritage/Traditional Land Use - Identifies locations where potential Heritage resource measures are being considered in ongoing discussions with applicable regulators and communities.

Socio-Economic and Agricultural Considerations - Identifies locations where measures may be implemented to address agricultural impacts encountered along the corridor.

Special Measures - Indicates site-specific measures to be implemented to address potential environmental issues.

GENERAL

Topsoil Depth: Salvage topsoil from all areas to be graded. The area salvaged is to correspond to the area that is to be graded. Where soils are not readily distinguishable by colour, strip to a minimum of 10 cm from all lands except for areas of disturbed land, areas with rocky outcrops (unless otherwise specified), and treed areas which have root zone material stripped to a minimum of 15-20 cm. Salvage topsoil to a maximum depth of 40 cm unless a greater depth is specifically noted for selected soils, as discussed below.

Overstrip topsoils at select locations with saline or sodic lower subsoils, or sands and gravels at depth which occurs on native grassland, irrigated lands and/or areas of high wind erosion. Resource-specific mitigation measures have been identified for soils and are presented in Appendix F of the Pipeline EPP.

Soils Handling Procedures: Salvage topsoil from the entire construction right-of-way area (see Drawing 30 [Topsoil or Root Zone Material Salvage in Forest - Full Right-of-Way] and Drawing 35 [Topsoil Salvage on Agricultural Lands - Full Right-of-Way] provided in Appendix R of the Pipeline EPP) on all land uses during non-frozen conditions (Sections 7.0 and Section 8.0 of the Pipeline EPP). Exceptions where the topsoil salvage width is to be reduced include, but are not limited to, native grasslands, wetlands, rare plant sites, areas with urban development or where requested on the Line List. Mitigation measures to be applied in designated three-lift areas are outlined below.

Salvage all available topsoil (min. 10 cm and max. 40 cm) and root zone material (min. 15-20 cm or 50% organic material and 50% mineral soil). Where soils are not readily distinguishable by colour, the Environmental Inspector(s) will provide direction based on an evaluation of soil texture and structure as well as the recommended depths noted on the EAS. Overstrip topsoils to a total depth at select locations with saline or sodic lower subsoils, or sands and gravels at depth which occurs on native grassland, irrigated lands and/or areas of high wind.

Salvage topsoil from a blade width (Blade) centered over the trench (see Drawing 29 [Topsoil or Root Zone Material Salvage – Blade Width/Frozen] provided in Appendix R of the Pipeline EPP) on native grassland and at all locations except designated three-lift areas during frozen soil conditions.

Salvage topsoil from the trench and spoil area (see Drawing 33 [Topsoil or Root Zone Material Salvage - Trench and Spoil Area] provided in Appendix R of the Pipeline EPP) in areas of urban development.

Three-Lift Soils Handling: Salvage topsoil from the trench and spoil area on lands requiring three-lift soils handling (see Drawing 31 [Topsoil or Root Zone Material Salvage - Three-Lift Soils Handling on Cultivated Land] and Drawing 32 [Topsoil or Root Zone Material Salvage - Three-Lift Soils Handling on Well-Sodded Land] provided in Appendix R of the Pipeline EPP). At three-lift soil handling areas, square brackets indicate upper subsoil salvage depths. For example, “20 [30]” indicates 20 cm of topsoil followed by 30 cm of upper subsoil is to be salvaged.

Salvage topsoil from the full right-of-way on lands requiring three-lift soils handling during non-frozen conditions.

Salvage topsoil from a blade width centred over the trench on lands requiring three-lift soils handling during frozen conditions.

Ensure that the lower lift of subsoil is backfilled before the upper lift of subsoil where three-lift soils handling has been conducted.

Compact the lower lift of subsoil prior to backfilling of the upper lift at locations where three-lift soils handling has been conducted.

Construction Work Window: Abide by construction timing windows. For a complete list of Least Risk Timing Windows/Restricted Activity Periods associated with watercourses and wildlife features and habitat areas, see Appendices E to Q of the Pipeline EPP.

AGRICULTURE

AG-Note 1: Plant-Based Agriculture – Ensure production systems are effectively re-established. Adhere to measures outlined in Section 7.0 and Section 8.0 of the Pipeline EPP and the Agricultural Management Plan (see Appendix C of the Pipeline EPP).

AG-Note 2: Livestock Operations – Provide an appropriate period of notification to allow for the relocation of production and ensure production systems are effectively re-established. Adhere to measures outlined in Section 7.0 and Section 8.0 of the Pipeline EPP and the Agricultural Management Plan (Appendix C of the Pipeline EPP).

AG-Note 3: Organic Lands – Ensure the diligent implementation of Organic Land construction mitigation. Adhere to measures outlined in Section 7.0 and Section 8.0 of the Pipeline EPP and the Agricultural Management Plan (Appendix C of the Pipeline EPP).

AQUATICS

AQ-Note 1: Sensitive Fish Habitat – Implement the appropriate measures outlined in Section 7.0 and Appendix I of the Pipeline EPP in areas with highly sensitive fish habitat.

AQ-Note 2: Vehicle Watercourse Crossing Methods: See Appendix I and Section 8.7 the Pipeline EPP for a complete list of recommended vehicle crossing methods for open water and frozen conditions and instream work windows.

AQ-Note 3: Pipeline Watercourse Crossing Methods: See Section 8.7 and Appendix I of the Pipeline EPP for a complete list of pipeline crossing methods, including contingency crossing methods and instream work windows.

AQ-Note 4: Navigable Waters – Adhere to the notification measures provided in Section 4.0 of the Pipeline EPP for Navigable Watercourses. Notify recreational boaters of the hazards associated with instream construction in accordance with NEB requirements or approval conditions for navigable waters. Place warning signs (e.g., Warning – Pipeline Construction Ahead) up and downstream of all navigable crossings.

ARCHAEOLOGY

AK-Note1: Heritage Site – Site-specific mitigation requirements will be determined through consultation with applicable regulators prior to construction. Suspend work in proximity (i.e., within 30 m) to archaeological (e.g., arrow heads, modified bone, pottery fragments, fossils) discovered during construction. No work at that particular location shall continue until permission is granted by the appropriate regulatory authority. Follow the contingency measures identified provided in the Heritage Resources Discovery Contingency Plan in Appendix B of the Pipeline EPP.

HYDROLOGY

HY-Note 1: Shallow Groundwater – Adhere to the applicable mitigation measures found in Section 7.0 and Section 8.0 of the Pipeline EPP. Implement the appropriate site specific mitigation measures outlined in Appendix G of the Pipeline EPP.

HY-Note 2: Shallow Well - Adhere to the applicable mitigation measures found in Section 7.0 and Section 8.0 of the Pipeline EPP. Implement the appropriate site specific mitigation measures outlined in Appendix G of the Pipeline EPP.

SOILS

SO-Note 1: Erosion Control: Suspend topsoil handling operations if drifting or topsoil loss is evident. Implement erosion control measures outlined in Section 7.0 and Section 8.0 of the Pipeline EPP and in the Soil Erosion and Sediment Control Contingency Plan (Appendix B of the Pipeline EPP) at locations where wind or water erosion has been identified.

SO-Note 2: Compaction and Rutting: Work during dry and/or frozen soil conditions to ensure that there is sufficient frost or low soil moisture to allow construction to take place without causing excessive rutting or soil compaction. Implement measures outlined in Section 7.0 and Section 8.0 of the Pipeline EPP and in the Wet/Thawed Soils Contingency Plan (Appendix B of the Pipeline EPP) to reduce compaction and rutting of susceptible soils.

SO-Note 3: Unstable Trench: Store salvaged topsoil or root zone material at a sufficient distance from the trench so that topsoil or root zone material is not lost in the trench, if trench instability is anticipated. Back slope the trench walls until stable. Suspend trenching and salvage a wider area of topsoil/root zone material if the trench walls slough into the trench and the potential for topsoil/root zone material/subsoil mixing exists. Backslope the trench walls until stable. Equip backhoe with a swamp bucket, if practical, to avoid or reduce trench sloughing.

TRADITIONAL LAND USE

TLU-Note1: TLU Site: Implement the mitigation measures outlined in Appendix Q of the Pipeline EPP for Traditional Land Use Sites. Implement the contingency measures identified in the Traditional Land Use Sites Discovery Contingency Plan (see Appendix B of the Pipeline EPP) in the event traditional land use sites not previously identified are found during pipeline and associated component construction.

WETLANDS

WT-Note 1: Wetland: Adhere to the Wetland Crossing Mitigation Measures found in Section 8.7.4 of the Pipeline EPP. A list of wetlands encountered along the corridor and associated mitigation measures is provided in Appendix K of the Pipeline EPP. Review the measures presented in the Water Crossing Construction Monitoring Management Plan (see Appendix C of the Pipeline EPP) where applicable.

WT-Note 2: Potentially Navigable Wetland: Adhere to the notification measures provided in Section 4.0 of the Pipeline EPP for Navigable Wetlands. Notify recreational boaters of the hazards associated with pipeline construction activities in accordance with NEB requirements or approval conditions for Navigable Wetlands. Place warning signs (e.g., Warning – Pipeline Construction Ahead) on either side of the Navigable Wetland crossing.

WILDLIFE

WF-Note 1: Amphibian Breeding Ponds/Streams: Adhere to the General Pipeline Construction Mitigation Measures found in Section 7.0 of the Pipeline EPP. In BC, a 150 m buffer is shown in the ranges indicated; however the buffer may be smaller depending on surrounding land uses. Implement the appropriate buffer for amphibian breeding ponds/amphibian streams and mitigation measures outlined in Appendix L of the Pipeline EPP.

WF-Note 2: Raptor Nest: Adhere to the General Pipeline Construction Mitigation Measures found in Section 7.0 of the Pipeline EPP. Implement the appropriate species specific buffer and mitigation measures for raptor nests outlined in Appendix L of the Pipeline EPP.

WF-Note 3: Mineral licks: Adhere to the General Pipeline Construction Mitigation Measures found in Section 7.0 of the Pipeline EPP. Implement a 100 m setback from identified mineral licks. For detailed information regarding mitigation measures for mineral licks see Appendix L of the Pipeline EPP.

WF-Note 4: Construction Timing: Implement the General Pipeline Construction Mitigation Measures found in Section 7.0 of the Pipeline EPP. Adhere to the Least Risk Window/Restricted Activity Period applicable to site-specific wildlife habitat features when necessary. Notify the appropriate authorities if construction activities are scheduled to occur within timing windows. For detailed information regarding timing windows and mitigation measures see Appendix L of the Pipeline EPP.

WF-Note 5: Provincially Identified Wildlife Areas: Adhere to the General Pipeline Construction Mitigation Measures found in Section 7.0 of the Pipeline EPP. Implement the least risk window/timing restriction and mitigation measures identified for each provincially identified wildlife area in Appendix L of the Pipeline EPP.

VEGETATION

VG-Note 1: Rare Plant and Rare Ecological Communities: Adhere to the General Pipeline Construction Mitigation Measures found in Section 7.0 of the Pipeline EPP. Implement the appropriate site-specific mitigation measures related to known rare plants, rare lichens, rare liverworts and rare ecological communities of concern as identified in Appendix J of the Pipeline EPP. Follow the Rare Ecological Community and Rare Plant Population Management Plan (see Appendix C of the Pipeline EPP).

LEGEND

DISPOSITIONS (ALBERTA)

Disposition Type	Abbreviation
Consultative Notation	CNT
Disposition Reservation	DRS
Forest Grazing Lease	FGL
Forestry Road	FRD
Grazing Lease	GRL
Grazing Permit	GRP
Holding Reservation	HRS
Industrial Sample Plot	ISP
Protective Notation	PNT
Trapping Area	TPA

LAND TENURES (BRITISH COLUMBIA)

Land Tenure Type	Abbreviation
Environment, Conservation, & Recreation	ENV C&R
Agriculture	AGRI
Guide Outfitter	GOA
Trapper	TR
Community Forests	CM FST
Residential	RES
Protected Area (Parks & Rec)	PROT
Community Watersheds	CM WATR

TOPOGRAPHY CLASSES

Symbol	% Slope	Description
1	0-0.5	Level
2	0.5-2	Nearly Level
3	2-5	Very Gentle Slopes
4	6-9	Gentle Slopes
5	10-15	Moderate Slopes
6	16-30	Strong Slopes
7	31-45	Very Strong Slopes
8	46-70	Extreme Slopes
9	70-100	Steep Slopes
10	> 100	Very Steep Slopes

AGRICULTURAL LAND USES

Type Of Agricultural Operation	Agriculture Type (EAS Label if Applicable)	General Description
Livestock Operation	Beef facility (BEEF)	beef/feed lot within the corridor
	Equestrian facility (EQUESTRIAN)	barns, paddocks and riding rink
	Dairy facility (DAIRY)	dairy barns within the corridor
	Other livestock facilities (LIVESTOCK)	recognizable livestock barns
	Poultry facility (POULTRY)	poultry facility within the corridor
Organic Operation	Organic crops confirmed (ORGANIC)	organic production lands
Plant-based Operation	Mixed berries (BERRIES)	mixed berry fields
	Field nursery/Container nursery (NURSERY)	field production tree nursery or container nurseries with recognizable irrigation systems
	Irrigated forage/alfalfa/forage/corn (FORAGE)	irrigated forage or pasture/silage corn rotation for dairy facilities
	Display gardens (GARDEN)	classification for Minter Gardens in Rosedale
	Raspberries (RASPBERRY)	raspberry fields
	Hazelnut	hazelnut grove
	Blueberries (BLUEBERRY)	blueberry fields
Turf	turf farm	

LAND USES

Land Use* (EAS Label if Applicable)	Description
Cleared	land which has had the trees removed but was never plowed
Cultivated	land used for the purposes of growing crops (excluding hay crops)
Disturbed Land (DL)	industrial or residential land or soils which have been disturbed due to prior construction activity
Hay	land used primarily for hay production
Major Rivers (RIVER)	major watercourses encountered by the corridor
Native Grassland	land that supports native grassland vegetation
Open Water	open bodies of water
Recreational	land designated for recreational use (e.g. ball park and golf course)
Tame Pasture (P)	cleared land that is not being cultivated and does not support native grassland vegetation which is predominantly used for grazing
Topsoil Berm	areas with topsoil that has been salvaged and stored in a berm
Tree Farm	land used primarily commercial tree production
Treed (T)	areas that are treed (a description of tree species present is available in the site inspection list of the soils technical reports)
Treed Pasture (T-P)	areas that are a mixture of trees and pasture
No Access (NA)	access was not permitted by the landowner, leaseholder or occupant
Not Surveyed (NS)	surveys will be completed prior to hearing

Note: *Locations with poor sod cover have been indicated by placing "- poor sod" after the land use.

MISCELLANEOUS LAND UNITS

Land Use	EAS Label	Description
Drainage Channel	DC	areas generally without defined bed and banks with poorly drained undifferentiated gleysolic soils along intermittent drains
Disturbed Land	DL	land disturbed by prior construction activities
Gravel Pit	GP	land disturbed due to prior gravel excavation
Landscaped Topsoil	LT	land that had prior construction activity and has been reclaimed and landscaped
No Access	NA	areas with no soil investigations as access was not permitted by the landowner, leaseholder or occupant
Open Water	O	open bodies of water
Rough Broken	RB	steep slopes along drainage channels highly susceptible to soil erosion and slumping when the protective vegetation is removed
Rock	RO	consolidated hard rock at or near the surface
River	RI	major rivers
Stream Channel	SC	channels with defined banks with undifferentiated regosolic and gleysolic soils developed on recent fluvial sediments
Topsoil Berm	TB	topsoil that has been salvaged and stored in a berm

HYDROLOGY

Hydrological Feature (EAS Label If Applicable)	Description
Shallow Groundwater (Shallow GW)	locations along the corridor with increased potential to experience groundwater discharge in open excavations by intersecting the water table or comprising the integrity of a shallow confining unit
Shallow Well	areas with shallow wells that may be compromised by the pipeline construction activity

SOIL PHASES

Soil Phase	EAS Label	Description
Bouldery	by	soils that are bouldery at the surface
Disturbed	di	soils that have been previously disturbed by construction activities
Gleyed	gl	soils that are imperfectly drained and exhibit mottling and gleying features in the subsoil
Overlying gravel	/gv	soils that are gravelly at depth
Peaty	pt	gleysolic soils that have 20-50 cm of the surface peat
Overlying hard rock	/ro	soils that have hard rock within a metre of the surface
Shallow	sh	soils that have an unconforming parent material within 1.0 m of the surface
Stony	st	soils that are stonier than normal

SOILS PARENT MATERIALS

Parent Material	EAS Label	Description
Colluvium	C	Colluvial deposits occur mostly on or at the base of steep slopes and consist of materials originating from nearby sources which have been re-deposited by the action of gravity. The deposits are usually loose, moderately to rapidly permeable and variable in depth to hard bedrock. Usual textures are gravelly sandy loam with a high proportion of stones and cobbles. They tend to be unstable and in some areas may still actively be accumulating. Topography is usually moderately to extremely sloping in areas of colluvium.
Colluvial fan	Cf	Colluvial fan deposits occur in areas below steeply sloping valley walls where the material has spread out onto the undulating to strongly rolling valley bottoms. The material is generally very coarse textured and reflects the lithology of the local bedrock or till materials from the adjacent uplands. The material is non-saline, non-sodic and usually non-calcareous.
Eolian	E	Surface material is usually stone-free to slightly stony and silt loam to loam textured while the underlying till is usually loam to sandy loam textured and gravelly or extremely stony.
Fluvial	F	Most fluvial deposits occur on level to gently undulating floodplains but also occur near some of the smaller creeks and rivers. Textures range from sandy to silty in the surface and usually grade to sand at depths of 0.5 to 2 m. Most areas are affected by high groundwater tables and many areas are poorly drained. Periodic flooding during the winter months is common on these deposits.
Fluvial fan	Ff	Colluvial-fluvial fan deposits usually occur where relatively swiftly flowing streams abruptly lose velocity and deposit part of their sediment load in a fan shaped pattern. Many are still in the process of formation. The deposits are usually moderately to excessively stony and are variable in texture, with coarse to moderately coarse textured being the most common. Topography varies from gently to steeply sloping in the direction of stream flow.
Glaciofluvial	GF	Glaciofluvial deposits vary from gravelly to loamy sand to sand textured. Glaciofluvial deposits occur on undulating to gently rolling upland terraces but occasionally may also occur on steeply sloping terrain. Glaciofluvial sands and gravels are non-saline, non-sodic and non-calcareous.
Glaciolacustrine	GL	Glaciolacustrine clays and loams occur mainly on gently undulating to gently rolling landscapes. The glaciolacustrine clays and loams are non-saline and non-sodic.
Glaciomarine	GM	Glaciomarine sediments consist of massive, compact, very slowly permeable silty to clayey sediments which have not been preloaded by glacial ice as is the case with till deposits. The glaciomarine deposits, which were laid down in near-shore locations during glacial recession and subsequently exposed through isostatic rebound, contain variable amounts (usually minor) of stones, cobbles and gravel incorporated from floating ice. Topography varies from gently undulating to strongly sloping on the eolian veneer deposits that overlie till or glaciomarine materials.
Hard consolidated rock	R	Assemblage of hard minerals bound together or sometimes a mass of a single mineral.
Lacustrine	L	Stone-free lacustrine deposits range in texture from silt loam to silty clay and occur on relatively level topography. Lacustrine deposits consist of sediments deposited in lake environments during post-glacial time. Most areas of lacustrine deposits have shallow groundwater tables.
Organic	O	Organic deposits form when the rate of organic accumulation exceeds the rate of decomposition. The peat is derived from accumulations of reeds, sedges, grasses and moss, in various stages of decomposition. In some areas a proportion of mineral material is mixed with the organic material which was usually carried in and deposited during flooding by adjacent water courses.
Pitted Deltaic	PD	Pitted deltaic deposits vary in texture from fine sandy loam to silty clay loam and occur on gently undulating to strongly rolling landscapes. The deposits are non-saline and non-sodic but occasionally may be weakly calcareous to the surface.
Till	T	Till is usually moderately to very stony but can be exceedingly stony. Some of the till deposits may be gravelly in texture and sometimes hard consolidated bedrock occurs within a metre of the surface. The till is non-saline and non-sodic but can be moderately calcareous within 50 cm of the surface. Till deposits occur on undulating to extremely sloping terrain.
Weathered bedrock	B	Underlying bedrock is soft and can be excavated using normal construction equipment.
Not applicable	-	Soil parent material not discernible or not present.
No Access	NA	Access was not permitted by the landowner, leaseholder or occupant.
Not surveyed	NS	Surveys will be completed prior to hearing.

SUMMARY OF SOIL CHARACTERISTICS IN ALBERTA

Soil Symbol	Soil Name	RK Range ¹	Proportion of Corridor (By Province)	Soil Classification	Parent Material	Texture Class	Topsoil Depth Range (cm)	Colour Differentiation	Erosion Rating ²		Susceptible to Compaction and Rutting	Susceptible to Trench Instability	Comments/Mitigation
									Wind	Water			
AGS	Angus Ridge	0.89 to 24.15	3.82%	orthic and eluviated black chernozems	till	loam-clay loam	14-53	excellent	M	S-H	--	--	---
AV	Alluvium	135.05 to 224.06	0.16%	orthic regosol and orthic humic regosol	fluvial	sandy loam-silty loam	20	fair	M	S	--	--	Salvage upper 15-20 cm of material.
BMV	Bremay	157.56 to 214.73	3.65%	gleyed gray luvisol	till	clay loam-clay	0-25	poor-fair	M	S	Yes	--	No topsoil in treed areas.
COA	Cooking Lake	84.56 to 120.88	4.84%	orthic gray luvisol	till	loam-clay loam	0-22	poor-fair	M	S-H	--	--	No topsoil in treed areas.
CVL	Carvel	66.98 to 84.56	3.70%	dystric gray luvisol	pitted deltaic	sandy loam-silty clay loam	10-35	good	M-H	S-H	--	--	--
DC	Drainage Channel	138.89 to 166.18	0.05%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	--
DEV1	Devon 1	65.96 to 246.36	2.42%	terric mesisol	organic/glaciofluvial, glaciolacustrine or till	organic/sandy loam-clay	0	--	S	S	Yes	--	Underlying mineral material will be encountered within trench depth. Salvage upper 40 cm of peat.
DEV2	Devon 2	65.37 to 245.27	4.13%	typic mesisol	organic	organic	0	--	S	S	Yes	--	--
DKT	Dekalta	122 to 212.51	0.74%	dystric gray luvisol	till	clay loam-clay	14-25	good	M	S	--	--	--
DL	Disturbed Land	2.25 to 247.31	1.52%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	--
EBG	Evansburg	131.79 to 158.21	0.54%	gleyed gray luvisol	glaciolacustrine	clay	0-19	poor-fair	M	S	Yes	-	No topsoil in treed areas.
ELP	Elk Point	118.89 to 215.15	0.13%	dystric gray luvisol	glaciofluvial	sandy loam	17-22	good	H	S	--	Yes	--
glAV	gleyed Alluvium	220.29 to 220.86	0.17%	gleyed regosol	fluvial	silty loam-sandy loam	8	fair	M-H	S	--	Yes	--
glDKT	gleyed Dekalta	128.58 to 149.97	0.82%	gleyed dystric gray luvisol	till	clay loam-clay	14-25	good	M	S	Yes	--	--
glGBL	gleyed Gabriel	210.27 to 210.86	0.17%	gleyed dystric gray luvisol	glaciofluvial/till	sandy loam/clay loam	18-20	good	H	S	--	--	--
glMLA	gleyed Macola	127.38 to 145.94	0.89%	gleyed dystric gray luvisol	glaciolacustrine	clay	14-23	good	S-M	S	Yes	--	--
glRSV	gleyed Rosevear	200.07 to 237.5	0.77%	gleyed gray luvisol	glaciolacustrine	silty clay loam-clay	0-18	fair	M	S	Yes	--	Little or no topsoil in treed areas.
glUCS	gleyed Uncas	101.88 to 101.99	0.03%	gleyed dystric gray luvisol	till	loam-clay loam	20	good	M	S	Yes	--	--
HGT	Haight	1.4 to 40.53	0.50%	orthic and rego humic gleysol	glaciolacustrine or till	silty clay-clay	27-42	good	S	S	Yes	--	Susceptible to unstable trench walls in excessively wet areas.
HOD	Hoadley	172.32 to 172.58	0.08%	orthic gray luvisol	glaciofluvial/till	sandy loam/clay loam	10	fair	H	S	--	--	Salvage upper 15-20 cm of material.
HUB	Hubalta	120.88 to 244.92	9.17%	orthic gray luvisol	till	clay loam-clay	0-24	poor-fair	M	S-H	--	--	Little or no topsoil in treed areas.
KHS	Keephills	87.22 to 92.23	0.80%	dystric gray luvisol	glaciolacustrine	clay loam-clay	8-27	good	M	S-M	--	--	--
KSY	Kerensky	46.66 to 216.67	0.10%	orthic and rego humic gleysol	glaciolacustrine	sandy loam-silty clay loam	22	good	S-M	S	Yes	--	May have unstable trench walls in excessively wet areas.
LT	Landscaped Topsoil	2.34 to 43.48	2.95%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	--
MDE	Modeste	159.28 to 218.01	0.32%	orthic gray luvisol	weathered bedrock	sandy loam-loam	0-14	poor-fair	M	S-H	--	--	Soft sandstone slabs may be encountered throughout the material.
MKY	MacKay	174.91 to 180.67	0.47%	orthic gleysol and orthic luvisol	till	loam-clay loam	0-5	poor-fair	S-M	S	Yes	--	Salvage upper 15-20 cm of material (mainly peat) may have unstable trench walls in excessively wet areas.

Soil Symbol	Soil Name	RK Range ¹	Proportion of Corridor (By Province)	Soil Classification	Parent Material	Texture Class	Topsoil Depth Range (cm)	Colour Differentiation	Erosion Rating ²		Susceptible to Compaction and Rutting	Susceptible to Trench Instability	Comments/Mitigation
									Wind	Water			
MLA	Macola	125.44 to 173.92	2.23%	dystric gray luvisol	glaciolacustrine	clay	10-24	good	S-M	S-M	Yes	--	--
MMO	Malmo	12.21 to 41.1	3.11%	orthic and eluviated black chernozems	glaciolacustrine	silty clay-clay	20-52	good	S-M	S-H	Yes	--	--
MYW	Maywood	130.2 to 158.62	1.79%	orthic gray luvisol	glaciolacustrine	clay	0-17	poor-fair	S-M	S-M	Yes	--	Little or no topsoil in treed areas.
O	Open Water	13.94 to 171.51	0.12%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	--
ONW	Onoway	86.65 to 213.88	0.94%	orthic and rego humic gleysol	till	loam-clay loam	10-25	good	M	S	Yes	--	Susceptible to unstable trench walls when excessively wet.
PHS	Peace Hills	4.83 to 37.97	0.85%	orthic black chernozem	glaciofluvial	sandy loam	23-54	excellent	H	S-M	--	Yes	--
POK	Ponoka	33.29 to 34.09	0.13%	orthic and eluviated black chernozems	glaciolacustrine	loam-silty clay loam	24	excellent	M	S	--	--	--
PRM	Primula	72.72 to 211.92	0.36%	eluviated eutric brunisol	glaciofluvial	loamy sand	10-20	poor	H	S-H	--	Yes	Very coarse textured.
ptKSY	peaty Kerensky	206.77 to 208.93	0.19%	peaty orthic humic gleysol and peaty rego humic gleysol	glaciolacustrine	sandy loam-silty clay loam	35-40	good	S-M	S	Yes	--	Salvage both the peat & underlying stopsoil. May have unstable trench walls in excessively wet areas.
ptMKY	peaty MacKay	170.93 to 199.01	0.35%	peaty orthic gleysols and peaty orthic luvisols	till	loam-clay loam	0-23	poor-fair	S-M	S	Yes	--	Salvage the surface peat. May have unstable trench walls in excessively wet areas.
ptONW	peaty Onoway	162.31 to 195.62	0.54%	peaty orthic humic gleysol and peaty rego humic gleysol	till	loam-clay loam	10-15	good	M	S	Yes	--	Susceptible to unstable trench walls when excessively wet. Salvage both the peat and topsoil to a maximum depth of 40 cm.
ptRCS	peaty Rochester	245.5 to 245.59	0.03%	peaty rego humic gleysol and peaty orthic humic gleysol	glaciofluvial	sandy loam-loamy sand	10-15	good	H	S	Yes	Yes	Salvage both the peat and topsoil to a maximum depth of 40 cm.
ptRVN	peaty Raven	140.95 to 236.79	0.25%	peaty orthic humic gleysol and peaty rego humic gleysol	glaciolacustrine	clay	10-30	good	S	S	Yes	--	Susceptible to unstable trench walls when excessively wet. Salvage both the peat and topsoil to a maximum depth of 40 cm.
ptWVO	peaty Wildwood	178.64 to 235.22	0.61%	peaty orthic gleysols and peaty orthic luvisols	glaciolacustrine	clay-silty clay	0	--	S	S	Yes	--	Susceptible to unstable trench walls in excessively wet areas. Salvage the surface peat.
RB	Rough Broken	24.15 to 224.16	0.61%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	H	N/A ³	N/A ³	--
RCS	Rochester	5.11 to 18.41	0.10%	rego humic gleysol and orthic humic gleysol	glaciofluvial	loamy sand	50-60	good	H	S	Yes	Yes	--
RI	Major River	33.39 to 223.91	0.11%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	--
RSV	Rosevear	192.77 to 238.96	1.98%	orthic gray luvisol	glaciolacustrine	silty clay loam-clay	0-22	poor-fair	M	S	--	--	Little or no topsoil in treed areas.
RVN	Raven	126.78 to 239.14	0.58%	orthic and rego humic gleysol	glaciolacustrine	clay	10-30	good	S	S	Yes	--	Susceptible to unstable trench walls when excessively wet.
SC	Stream Channel	4.81 to 207.32	0.30%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	--
shBMY	shallow Bremay	173.92 to 174.91	0.29%	gleyed gray luvisol	till/weathered bedrock	clay loam-clay/loam-sandy loam	0	--	M	S	Yes	--	Soft sandstone slabs may be encountered within trench depth.
shDKT	shallow Dekalta	160.54 to 160.8	0.08%	dystric gray luvisol	till/weathered bedrock	clay loam-clay/loam-sandy loam	20	good	M	M	--	--	Soft sandstone slabs may be encountered within trench depth.
shHUB	shallow Hubalta	173.4 to 242.97	0.55%	orthic gray luvisol	till/weathered bedrock	clay loam-clay/loam-sandy loam	0-13	poor-fair	M	S-M	--	--	Consolidated sandstone slabs may be encountered within trench depth.
shRCS	shallow Rochester	212.51 to 212.77	0.08%	rego humic gleysol and orthic humic gleysol	glaciofluvial/till	sandy loam-loamy sand/clay loam	15	good	H	S	Yes	Yes	Surface stoniness may be increased due to underlying till.

Soil Symbol	Soil Name	RK Range ¹	Proportion of Corridor (By Province)	Soil Classification	Parent Material	Texture Class	Topsoil Depth Range (cm)	Colour Differentiation	Erosion Rating ²		Susceptible to Compaction and Rutting	Susceptible to Trench Instability	Comments/Mitigation
									Wind	Water			
shRSV	shallow Rosevear	191.94 to 192.77	0.25%	orthic gray luvisol	glaciolacustrine/till	silty clay loam-clay/loam-clay loam	18-25	fair	M	S	--	--	Surface stoniness may be increased due to underlying till.
stCOA	stony Cooking Lake	118.29 to 118.51	0.06%	orthic gray luvisol	stony till	stony loam-stony clay loam	0	--	M	S	--	--	Exceedingly stony till.
SUC	Sundance	245.27 to 246.96	0.44%	brunisol gray luvisol	glaciofluvial	sandy loam-loamy sand	0-13	poor-fair	H	S-M	--	Yes	Little or no topsoil in treed areas.
TB	Topsoil Berm	4.62 to 35.19	0.08%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	--
UCS	Uncas	85.59 to 120.12	0.86%	dystric gray luvisol	till	loam-clay loam	13-30	good	M	S	--	-	--
WTB	Winterburn	32.05 to 74.83	6.45%	orthic dark grey chernozem	pitted deltaic	sandy loam-silty clay loam	15-70	good	M-H	S-H	--	--	--
WVO	Wildwood	158.97 to 226.54	0.35%	orthic gleysol and orthic luvisol	glaciolacustrine	clay-silty clay	0	--	S	S	Yes	--	Susceptible to unstable trench walls in excessively wet areas.
NA	No Access	0 to 232.68	5.24%	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴
NS	Not Surveyed	247.31 to 339.44	27.14%	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴

Sources: Mentiga Pedology Consultants Ltd. 2013a

- Notes:**
- 1 Soil units occur intermittently between listed RK locations.
 - 2 Erosion Hazard Ratings: S = slight; M = moderate; and H = high.
 - 3 Non applicable soil properties indicated by: N/A = not applicable.
 - 4 Soil properties to be determined following subsequent studies are indicated by: TBD = to be determined.

SUMMARY OF SOIL CHARACTERISTICS IN BRITISH COLUMBIA

Soil Symbol	Soil Name	RK Range ¹	Proportion of Corridor (By Province)	Soil Classification	Parent Material	Texture Class	Topsoil Depth Range (cm)	Colour Differentiation	Erosion Rating ²		Susceptible to Compaction and Rutting	Susceptible to Trench Instability	Comments/Mitigation
									Wind	Water			
ALB1	Albreta 1	496.82 to 542.08	1.70%	eluviated eutric brunisol	glaciofluvial	gravelly sandy loam-loamy sand	0	--	M-H	S-H	--	Yes	Gravelly material.
ALB2	Albreta 2	518.87 to 538.72	1.43%	eluviated eutric and dystric brunisols	glaciofluvial	loamy sand-sand	0	--	H	S	--	Yes	--
ALB2/gv	Albreta 2 overlying gravel	516.19 to 540.58	0.32%	eluviated eutric and dystric brunisols	glaciofluvial	loamy sand-sand/gravel	0	--	H	S-M	--	Yes	Gravel at 35-90 cm below the surface. Overstrip to 25 cm.
ALL	Allie	692.46 to 767.73	3.98%	orthic and brunisolic gray luvisol	till	loam-clay loam	0-20	fair	M	S-H	--	--	No topsoil in treed areas.
AND	Andrew	865.3 to 865.56	0.04%	eluviated eutric brunisol	glaciofluvial	gravelly sandy loam-gravelly loamy sand	0	--	H	S-H	--	Yes	Gravelly material.
AND1	Andrew 1	861.88 to 862.34	0.07%	orthic black chernozem	glaciofluvial	gravelly sandy loam-gravelly loamy sand	13-16	good	M	H	--	Yes	Gravelly material.
AV	Alluvium	496.64 to 600.23	0.10%	orthic regosol and orthic humic regosol	fluvial	sandy loam-silty loam	20	fair	M	S	--	--	Salvage upper 15-20 cm of material.
BFD	Banford	1083.31 to 1083.43	0.02%	terric humisol	organic/fluvial or lacustrine	organic/silty clay loam	25	fair	S	S	Yes	--	Salvage upper 25 cm of peat. Unstable trench walls in excessively wet areas.
BLP	Blackpool	600.46 to 760.06	0.69%	orthic regisol	fluvial	fine sandy loam-silty loam/sandy loam-loamy sand	0-20	fair	M-H	S	--	Yes	--
BLP/gv	Blackpool overlying gravel	735.39 to 737.21	0.11%	orthic regisol	fluvial	fine sandy loam-silty loam/gravelly loamy sand	10	fair	M	S	--	Yes	Gravel at 15-25 cm below the surface. Overstrip to 15 cm.
BLR	Blue River	610.19 to 758.9	0.16%	rego humic gleysol	fluvial	loam-silty loam-fine sandy loam	15-26	good	M	S	Yes	--	Unstable trench walls in excessively wet areas.
BRY	Berry	1146.7 to 1148.19	0.14%	gleyed podzolic gray luvisol	glaciomarine	silty clay loam-silty clay	12-31	fair-good	M	S-M	--	--	Very firm Bt horizon at 38-48 cm below the surface.
byCHM1	bouldery Cheam 1	1052.51 to 1054.09	0.26%	orthic sombric brunisol and orthic humo-ferric podzol	bouldery colluvium	bouldery sandy loam-bouldery loamy sand	10-25	good	M-H	H	--	--	Bouldery colluvial material.
byKKT1	bouldery Kwikwit 1	548.23 to 558.87	0.26%	eluviated and orthic dystric brunisols	bouldery glaciofluvial	bouldery gravelly loamy sand	0	--	M-H	S-M	--	Yes	Boulders on surface may hinder salvage operations.
byMIN	bouldery Minnie	899.96 to 907.34	0.48%	orthic eutric brunisols	bouldery till	bouldery loam-bouldery sandy loam	0	--	M-H	M-H	--	--	Little or no topsoil in treed areas.
byRSM	bouldery Roserim	680.6 to 682.41	0.29%	eluviated and orthic eutric brunisols	bouldery till	bouldery sandy loam-loam	0	--	M-H	H	--	--	Boulders on surface may hinder salvage operations.
bySC	bouldery Stream Channel	592.9 to 1071.37	0.03%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³
bySES1	bouldery Struthers 1	669.89 to 677.61	0.46%	eluviated and orthic eutric brunisols	glaciofluvial	bouldery gravelly sandy loam-loamy sand	0	--	M-H	S	--	Yes	Boulders on surface may hinder salvage operations.
bySPN	bouldery Stukemapten	566.95 to 567.84	0.15%	eluviated dystric brunisol	bouldery fluvial fan	bouldery gravelly sandy loam-loam	0	--	M-H	M	--	--	Boulders on surface may hinder salvage operations.
CAY	Cayenne	640.93 to 761.37	0.70%	eluviated and orthic dystric brunisols	colluvium	gravelly sandy loam-loamy sand	0-15	fair	M-H	S-M	--	--	Variable textured material.
CGH	Cavanaugh	820.95 to 970.24	1.61%	orthic and eluviated eutric brunisols	colluvium	gravelly sandy loam-gravelly loamy sand	0	--	H	M-H	--	Yes	Gravelly colluvium.

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									Wind	Water			
CHM1	Cheam 1	1054.09 to 1074.26	0.21%	orthic sombric brunisol and orthic humo-ferric podzol	colluvium	gravelly sandy loam-gravelly loamy sand	8-28	good	M-H	M-H	--	--	Usually exceedingly stony.
CHS	Chasm	811.85 to 966.86	1.52%	orthic and eluviated eutric brunisols	colluvial fan	sandy loam-loam	0-14	poor-fair	M	S-H	--	--	Little or no topsoil in treed areas.
CKN	Calkins	1131.82 to 1131.87	0.01%	regio humic gleysol	eolian/till	silty loam/loam-silty clay loam	27	good	M	S	Yes	--	Unstable trench walls in excessively wet areas.
COM	Commonage	963.53 to 963.88	0.06%	orthic dark brown chernozem	colluvial fan	loam-sandy loam	20	fair	M	H	--	--	Occurs on grassy slopes.
CRY	Cranberry	523.69 to 525.68	0.27%	orthic regisol	fluvial-glaciofluvial	loamy sand	0-10	fair	H	S	--	Yes	--
CTW	Cottonwood	493.65 to 619.41	0.65%	eluviated and orthic eutric brunisols	glaciolacustrine	silty loam-fine sandy loam	0	--	M	S-M	--	--	--
CVH	Carvolth	1083.9 to 1095.37	0.86%	regio humic gleysol	fluvial	loam-clay loam-silty clay loam	14-70	good	M	S	Yes	--	Unstable trench walls in excessively wet areas.
CVH1	Carvolth 1	1086.82 to 1095.06	0.38%	regio humic gleysol	fluvial	loam-silty clay loam/sandy loam-loamy sand	14-40	good	M	S	Yes	Yes	Sands at 40-90 cm below the surface. Recommended for the 3-lift soil handling procedure.
diCAY	disturbed Cayenne	642.57 to 669.09	0.85%	-	colluvium-fluvial fan	gravelly sandy loam	0	--	M-H	S-H	--	--	Disturbed due to prior construction activities. Salvage upper 15-20 cm of material.
diKKT1	disturbed Kwikoi 1	655.51 to 656.06	0.09%	-	glaciofluvial	gravelly sandy loam-loamy sand	14-18	fair	M-H	M	--	Yes	Disturbed due to prior construction activities. Salvage upper 15-20 cm of material.
diRSM	disturbed Roserim	669.09 to 669.75	0.11%	-	till	gravelly sandy loam-loam	0	--	M-H	M-H	--	--	Disturbed due to prior construction activities. Salvage upper 15-20 cm of material.
diSES1	disturbed Struthers 1	715.15 to 716.04	0.12%	-	glaciofluvial	gravelly sandy loam-loamy sand	0	--	M-H	S	--	Yes	Disturbed due to prior construction activities.
diSWA	disturbed Snookwa	658.77 to 660.95	0.35%	-	till	gravelly sandy loam-loamy sand	0-22	fair	M-H	S-H	--	--	Disturbed due to prior construction activities.
DL	Disturbed Land	498.15 to 1147.42	3.31%	not applicable	Not applicable	Not applicable	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³
DXN	Dixon	1110.48 to 1129.22	0.26%	regio humic gleysol	lacustrine/fluvial	silty clay loam/sand	25-37	good	M	S	Yes	Yes	Sands at 50-80 cm below the surface. Recommended for the 3-lift soil handling procedure.
ELK	Elk	1082.71 to 1088.33	0.22%	regio humic gleysol and regio gleysol	fluvial	loam-silty loam-sandy loam	8-35	good	M	S	Yes	--	Unstable trench walls in excessively wet areas.
EXU	Exlou	754.31 to 765.02	0.47%	orthic gray luvisol	glaciolacustrine	fine sandy loam-silty loam-loam	5-17	fair	M	S-H	--	--	--
FAF	Fairfield	1051.34 to 1084.31	0.07%	gleyed humic regosol and gleyed melanic brunisol	fluvial	loam-silty loam-silty clay loam	15-40	good	M	S	--	--	--
FAF1	Fairfield 1	1048.61 to 1094.08	0.58%	gleyed humic regosol and gleyed melanic brunisol	fluvial	loam-silty loam-silty clay loam/sandy loam-loamy sand	10-33	good	M	S	--	Yes	Sands at 26-90 cm below the surface. Some of these soils have been recommended for the 3-lift soil handling procedure.
FLT	Flat Creek	812.31 to 812.7	0.06%	orthic brown chernozem	fluvial	silty loam-loam	7-15	poor-fair	M	S	--	--	Occurs on river terraces.
FOX	Fox	489.64 to 504.2	0.43%	eluviated and orthic dystric brunisols	bouldery till	silty loam-loam	0	--	M	M-H	--	--	Stones consist mainly of schist bedrock fragments.
FRS	Frances	847.14 to 928.09	0.09%	orthic and geyed regosols	fluvial	loam-silty loam-loamy sand	0	--	M	S	--	--	--
FTZ	Fitzwilliam	502.95 to 503.28	0.05%	eluviated and orthic eutric brunisols	glaciofluvial	gravelly clay sand	0	--	H	H	--	Yes	--
GHT1	Ghita 1	552.07 to 663.58	0.36%	terric mesisol	organic/fluvial-glaciofluvial	organic/silty loam-sand	0	--	S	S	Yes	Yes	Underlying silts and sands will be encountered within trench depth. Salvage upper 40 cm of material.

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									Wind	Water			
GHT2	Ghita 2	608.7 to 666.22	0.56%	typic mesisol	organic	organic	0	--	S	S	Yes	--	Salvage upper 40 cm of material.
glALB2	gleyed Albreta 2	522.57 to 522.82	0.04%	gleyed eluviated dystric brunisol	glaciofluvial	loamy sand-sand	0	--	H	S	--	Yes	--
glALL	gleyed Allie	695.56 to 695.75	0.03%	gleyed and gleyed brunisolic gray luvisols	till	loam-clay loam	14	fair	M	S	Yes	--	Salvage upper 15 cm of material.
glAV	gleyed Alluvium	619.82 to 620.28	0.05%	gleyed regosol	fluvial	silty loam-sandy loam	8	fair	M-H	S	--	Yes	--
glBLP	gleyed Blackpool	600.25 to 600.46	0.03%	gleyed regosol	fluvial	silty loam-loam	0	--	M	S	--	Yes	--
glCTW	gleyed Cottonwood	622.43 to 624.05	0.26%	gleyed eluviated eutric brunisol and gleyed eutric brunisol	glaciolacustrine	silty loam-fine sandy loam	0	--	M	S	Yes	--	--
glNLN	gleyed Nicholson	1137.36 to 1137.83	0.08%	gleyed podzolic gray luvisol and gleyed brunisolic gray luvisol	glaciomarine	silty clay loam-silty clay	0-5	poor-fair	M	S	Yes	--	--
glTPL	gleyed Trapp Lake	871.55 to 871.88	0.05%	gleyed dark brown chernozem	till	loam-sandy loam	17	fair-good	M	S	Yes	--	--
glVMT	gleyed Valemount	524.78 to 525.12	0.06%	gleyed eluviated dystric brunisol	fluvial fan	silty loam-silt	0	--	M	S	--	--	--
glWHC	gleyed Whatcom	1134.85 to 1137.22	0.06%	gleyed luvic humo-ferric podzol	eolian/glaciomarine	silty loam/silty clay loam	27	good	M	S	Yes	--	Very firm Bt horizon at 65 cm below the surface.
GLY1	Glossey 1	825.83 to 970.85	0.98%	eluviated and orthic eutric brunisols	glaciofluvial	gravelly sandy loam-gravelly sand	0-14	poor-fair	H	S-H	--	Yes	Little or no topsoil in treed areas.
GLY2	Glossey 2	865.56 to 912	0.41%	eluviated and orthic eutric brunisols	glaciofluvial	sandy loam-loamy sand	0-25	poor-fair	H	S-H	--	Yes	Little or no topsoil in treed areas.
GLY2/gv	Glossey 2 overlying gravel	967.08 to 967.56	0.08%	orthic eutric brunisols	glaciofluvial	sandy loam-loamy sand/gravelly sand	0	--	H	S	--	Yes	Gravel at 70 cm below the surface.
GPS1	Glimpse 1	885.66 to 886.31	0.11%	orthic dark brown chernozem	glaciofluvial	gravelly loamy sand	11-12	fair-good	H	S	--	Yes	Gravelly below the topsoil.
GPS2	Glimpse 2	886.31 to 886.56	0.04%	orthic dark brown chernozem	glaciofluvial	loamy sand-sand	14	fair-good	H	M	--	Yes	--
GVY	Glen Valley	1123.85 to 1124.52	0.11%	typic fibrisol	organic	organic	0	--	S	S	Yes	--	Salvage upper 40 cm of peat for replacement.
GWN	Gwenn	886.56 to 887.04	0.08%	orthic and eluviated black chernozems	eolian/glaciofluvial	sandy loam-silty loam/gravelly sand	11-20	good	M	S-M	--	--	Gravel at shallow depths.
HPD	Hopedale	1101.63 to 1106.88	0.30%	rego humic gleysol	fluvial	loam-silty loam/sand	20-32	good	M	S	Yes	Yes	Sands at 40-80 cm below the surface. Recommended for the 3-lift soil handling procedure.
HRS	Harrison	1062.25 to 1084.39	0.08%	orthic dystric brunisol	fluvial fan-colluvium	gravelly sandy loam-gravelly loamy sand	7	poor-fair	M-H	M	--	--	Little or no topsoil in treed areas. Usually exceedingly stony.
HRS1	Harrison 1	1071.37 to 1075.84	0.57%	orthic sombric brunisol and orthic humo-ferric podzol	fluvial fan-colluvium	gravelly sandy loam-gravelly loamy sand	10-30	good	M-H	S-H	--	--	Usually exceedingly stony.
HZW	Hazelwood	1122.42 to 1128.85	0.79%	orthic and rego humic gleysol	lacustrine	silty clay loam-silty clay	15-54	good	S-M	S	Yes	--	Unstable trench walls in excessively wet areas.
ISR	Isar	1046.96 to 1147.38	0.19%	orthic regosol and orthic humic regosol	fluvial	gravelly sandy loam-gravelly loamy sand	0-25	poor-good	M-H	S	--	Yes	Often gravelly at depth and no topsoil horizon.
JCK	Jackman	500.37 to 528.02	0.96%	eluviated and orthic dystric brunisols	eolian	sandy loam-loamy sand	0	--	H	S-H	--	Yes	Very coarse textured material may hinder revegetation efforts.
KKT1	Kwikoit 1	545.93 to 664.87	3.04%	eluviated and orthic dystric brunisols	glaciofluvial	gravelly sandy loam-loamy sand	0	--	M-H	S-H	--	Yes	Gravelly material.

Soil Symbol	Soil Name	RK Range ¹	Proportion of Corridor (By Province)	Soil Classification	Parent Material	Texture Class	Topsoil Depth Range (cm)	Colour Differentiation	Erosion Rating ²		Susceptible to Compaction and Rutting	Susceptible to Trench Instability	Comments/Mitigation
									Wind	Water			
KKT2	Kwikoit 2	544.18 to 640.93	3.78%	eluviated and orthic dystric brunisols	glaciofluvial	loamy sand-sand	0	--	H	S-H	--	Yes	--
KKT2/gv	Kwikoit 2 overlying gravel	550.31 to 551.96	0.27%	eluviated and orthic dystric brunisols	glaciofluvial	loamy sand-sand/gravel	0	--	H	M-H	--	Yes	Gravel at 35-60 cm below the surface. Overstrip to 25 cm.
KKT3	Kwikoit 3	625.75 to 655.31	0.45%	orthic dystric brunisol	glaciofluvial-fluvial	silty loam-loam-sandy loam	0	--	M-H	S	--	--	--
KWY	Kenworthy	1077.47 to 1083.31	0.29%	orthic sombric brunisol and orthic humo-ferric podzol	colluvium	sandy loam-loam to gravel	11-25	good	M	S	--	--	--
LBM	Lundbom	847.78 to 928.47	0.24%	orthic brown chernozem	glaciolacustrine	silty loam-silty clay loam	8-22	poor-fair	M	S-H	--	--	--
LBM1	Lundbom 1	860.4 to 936.18	0.31%	orthic dark brown chernozem	glaciolacustrine	loam-silty loam	12-25	fair-good	M	S-M	--	--	Some of these soils have been recommended to be overstripped to the 20 cm depth.
LDB	Lac du Bois	931.08 to 932.08	0.13%	solonchic dark brown chernozem	glaciolacustrine	silty clay loam	9-11	fair	M	M	--	--	Salts at 22-35 cm below the surface.
LHN	Lichen	700.61 to 719.83	0.53%	orthic and brunisolic gray luvisol	glaciolacustrine	silty loam-silty clay loam	8-23	fair-good	M	S-M	--	--	Often irrigated hay fields.
LLW	Laidlaw	1046.51 to 1092.76	0.67%	orthic dystric brunisol	fluvial	sandy loam-loamy sand	0-17	fair	H	S-M	--	Yes	--
LUC	Lucerne	492.04 to 506.95	0.56%	eluviated dystric brunisol	till	sandy loam-loam-silty loam	0	--	M	M-H	--	--	Upper 10-15 cm of material is usually not as stony.
LZC	Lonzo Creek	1114.8 to 1120.96	0.88%	ortho humo-ferric podzol and orthic dystric brunisol	eolian/till	loam-silty loam/loam-sandy loam	0-20	poor-fair	M	S-H	--	--	Till at 25-50 cm below the surface.
MIN	Minnie	868.81 to 910.03	1.70%	orthic gray luvisol and eluviated eutric brunisol	till	loam-sandy loam	0-4	poor-fair	M-H	S-H	--	--	Little or no topsoil in treed areas.
MNE	McNomee	558.87 to 560.4	0.25%	orthic regisol	fluvial	fine sandy loam/gravelly loamy sand-sand loam-sandy loam	0	--	M-H	S	--	Yes	Gravel at 20-22 cm below the surface.
MQN	McQueen	822.27 to 828.99	0.70%	orthic dark brown chernozem	till	loam-sandy loam	8-21	fair-good	M	S-H	--	--	--
MSQ	Mosquito	651.64 to 733.56	0.36%	gleyed humic regosol	fluvial	fine sandy loam-loam/sandy loam-loamy sand	10-22	fair-good	M	S	Yes	Yes	--
MSY	Mossey	826.01 to 827.13	0.18%	orthic black chernozem	till	loam-sandy loam	12-18	good	M	M-H	--	--	--
MVE	McElvee	1104.35 to 1106.19	0.07%	rego humic gleysol	fluvial	loam-silty clay loam	25-32	good	M	S	Yes	--	Unstable trench walls in excessively wet areas.
NVN	Niven	1104.45 to 1105.21	0.04%	cumulic humic gleysol	lacustrine/organic	silty loam/silty clay loam-silty clay	28-32	good	M	S	Yes	--	Peat at 40-55 cm below the surface.
O	Open Water	643.74 to 661.47	0.08%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³
OHG	Orthic Humic Gleysol	876.19 to 887.23	0.04%	orthic humic gleysol	till or glaciofluvial	loam-sandy loam	20	good	S-M	S	Yes	--	May have unstable trench walls in excessively wet areas.
ptBLR	peaty Blue River	588.94 to 656.76	0.13%	peaty rego humic gleysol	fluvial	organic/loam-silty loam-fine sandy loam	0-25	good	S	S-M	Yes	--	Salvage both the peat and underlying topsoil. Unstable trench walls in excessively wet areas.
ptRHG	peaty Rego Humic Gleysol	606.12 to 672.53	0.12%	peaty rego humic gleysol	glaciofluvial-colluvium	sandy loam-loam/gravelly sandy loam	20-25	fair-good	S	S	Yes	Yes	Salvage both the peat and underlying topsoil to a maximum depth of 40 cm.
ptVLN	peaty Vermillion Lakes	522.82 to 533.41	0.06%	peaty rego gleysol	organic/fluvial	organic/silty loam-gravelly loamy sand	0	--	S	S	Yes	--	Salvage peat material. Unstable trench walls in excessively wet areas.

Soil Symbol	Soil Name	RK Range ¹	Proportion of Corridor (By Province)	Soil Classification	Parent Material	Texture Class	Topsoil Depth Range (cm)	Colour Differentiation	Erosion Rating ²		Susceptible to Compaction and Rutting	Susceptible to Trench Instability	Comments/Mitigation
									Wind	Water			
RB	Rough Broken	683.21 to 1147.31	0.62%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	H	N/A ³	N/A ³	N/A ³
RHG	Rego Humic Gleysol	643.98 to 644.09	0.02%	regu humic gleysol	glaciofluvial-colluvium	sandy loam-loam/gravelly sandy loam	10-20	fair-good	M	S	Yes	Yes	These soils are of very minor extent.
RI	Major River	496.75 to 1102.33	0.28%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³
RO	Rock	492.78 to 1116.25	1.91%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³
RSM	Roserim	664.87 to 750.72	2.65%	eluviated and orthic eutric brunisols	till	gravelly sandy loam-loam	0-18	fair	M-H	S-H	--	--	--
RYD	Ryder	1129.22 to 1131.82	0.31%	ortho humo-ferric podzol and orthic dystric brunisol	eolian/till	loam-silty loam/loam-sandy loam	10-15	poor-fair	M	S-H	--	--	Till at 50-85 cm below the surface.
saFLT	saline Flat Creek	815.75 to 816.49	0.12%	saline orthic brown chernozem	fluvial	silty loam-loam	7-10	poor-fair	M	S	--	--	These soils are strongly saline below the topsoil horizon.
SC	Stream Channel	1051.43 to 1145.63	0.09%	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³
SCT	Scat	1140.35 to 1147.83	0.14%	orthic and regu humic gleysol	eolian/glaciomarine	silty loam/silty clay loam-silty clay	0-40	poor-good	M	S	Yes	-	Unstable trench walls in excessively wet areas.
SES1	Struthers 1	666.57 to 768.52	1.43%	eluviated and orthic eutric brunisols	glaciofluvial	gravelly sandy loam-loamy sand	0-20	fair	M-H	S-H	--	Yes	Gravelly material.
SES2	Struthers 2	666.22 to 767.99	2.40%	eluviated and orthic eutric brunisols	glaciofluvial	loamy sand-sand	0-25	fair	H	S-H	--	Yes	--
SES2/gv	Struthers 2 overlying gravel	726.88 to 768.98	0.54%	eluviated and orthic eutric brunisols	glaciofluvial	loamy sand-sand/gravel	0-24	fair	H	S	--	Yes	Gravel at 25-40 cm below the surface. Overstrip to 25 cm or carry out 3-lift soil handling procedure.
SES3	Struthers 3	675.76 to 761.92	0.87%	eluviated and orthic eutric brunisols	glaciofluvial	silty loam-loam-sandy loam	0-15	fair	M	S-M	--	--	Some of these soils have gravel at 42-80 cm below the surface. Those that have gravel at depth have been recommend to be overstripped to 25 cm or the 3-lift soil handling procedure.
shALL	shallow Allie	743.48 to 766.81	0.39%	orthic and brunisolic gray luvisol	till/hard consolidated bedrock	stony loam/rock	0	--	M	M-H	--	--	Hard rock will be encountered at 30-70 cm below the surface.
shBySPN	shallow, bouldery Stukemaptan	548.74 to 549.28	0.09%	eluviated dystric brunisol	bouldery fluvial fan	bouldery gravelly sandy loam/rock	0	--	M-H	H	--	--	Hard rock at 40 cm.
shCHM	shallow Cheam	1044.19 to 1078.32	0.23%	orthic and eluviated dystric brunisols	colluvium/hard consolidated bedrock	gravelly loam-sandy loam/rock	0-5	fair	M-H	H	--	--	Consolidated hard rock within 55 cm of surface.
shCHM1	shallow Cheam 1	1064.92 to 1066.08	0.14%	orthic sombric brunisol and orthic humo-ferric podzol	colluvium/hard consolidated bedrock	sandy loam-loam	20-40	good	M-H	H	--	--	Consolidated hard rock at 35-75 cm below the surface.
shCHS	shallow Chasm	961.66 to 966.36	0.22%	orthic and eluviated eutric brunisols	colluvial fan/hard consolidated bedrock	sandy loam-loam/rock	0	--	M	H	--	--	Hard rock at shallow depths.
shCTW	shallow Cottonwood	647.82 to 648.62	0.10%	eluviated and orthic eutric brunisols	glaciolacustrine/till	silty loam/loam	0	--	M	S	--	--	--
shCTY	shallow Courtney	847.53 to 847.78	0.04%	orthic brown chernozem	colluvium/hard consolidated bedrock	gravelly sandy loam-loam/rock	11	poor-fair	H	H	--	--	Hard rock at shallow depths.
shFLT	shallow Flat Creek	812.7 to 813.62	0.10%	orthic brown chernozem	fluvial/till	silty loam-loam/stony loam	11-14	poor-fair	M	S-M	--	--	Stony till within 50 cm of the surface.
shJCK	shallow Jackman	513.59 to 514.1	0.08%	eluviated dystric brunisol	eolian/till	loamy sand/loam	0	--	H	S	--	Yes	Till at 75 cm below the surface.

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									Wind	Water			
shLUC	shallow Lucerne	504.2 to 544.18	0.49%	eluviated dystric brunisol	till/hard consolidated bedrock	sandy loam-loam-silty loam/rock	0	--	M	H	--	--	Hard rock will be encountered at 30-80 cm below the surface.
shMIN	shallow Minnie	868.63 to 901.72	0.38%	orthic gray luvisol and eluviated eutric brunisol	till/hard consolidated bedrock	loam-sandy loam/rock	0	--	M-H	S-H	--	--	Hard rock at shallow depths.
shRSM	shallow Roserim	684.54 to 742.84	0.19%	eluviated and orthic eutric brunisols	till/hard consolidated bedrock	gravelly sandy loam/rock	0	--	M-H	H	--	--	Hard rock at 40-70 cm.
shSWA	shallow Snookwa	593.52 to 635.97	0.38%	eluviated and orthic dystric brunisols	till/hard consolidated bedrock	gravelly sandy loam/rock	0	--	M-H	H	--	--	Weathered bedrock or hard rock at 28-75 cm below the surface.
shTIM	shallow Timber	889.71 to 890.05	0.05%	eluviated eutric brunisol	till/hard consolidated bedrock	loam-sandy loam/rock	0	--	M	H	--	--	Hard rock at shallow depths.
shTKW	shallow Tunkwa	870.76 to 870.84	0.01%	orthic gray luvisol	till/hard consolidated bedrock	sandy loam-clay loam/rock	0	--	M	H	--	--	Hard rock at shallow depths.
shTLE	shallow Tullee	883.4 to 887.17	0.15%	orthic black chernozem	till/hard consolidated bedrock	loam-sandy loam/rock	22-24	good	M	M-H	--	--	Hard rock at shallow depths.
shTNQ	shallow Tranquille	847.99 to 849.5	0.17%	orthic brown chernozem	till/hard consolidated bedrock	loam-sandy loam/rock	10-14	poor-fair	M	H	--	--	Hard rock at shallow depths.
shTPL	shallow Trapp Lake	855.96 to 935.17	0.23%	orthic dark brown chernozem	till/hard consolidated bedrock	loam-sandy loam/rock	9-17	fair-good	M	H	--	--	Hard rock at shallow depths.
SIM	Sim	1121.75 to 1122.39	0.10%	rego humic gleysol	lacustrine or fluvial	loam, silty loam, silty clay loam	34-44	good	M	S	Yes	--	Sandy layer from 36-100 cm below the surface. Recommended for the 3-lift soil handling procedure.
SMS	Sumas	1086.59 to 1114.01	1.01%	rego humic gleysol	fluvial	sandy loam-loamy sand	10-42	good	H	S	Yes	Yes	--
SPN	Stukemaptern	547.36 to 580.99	0.58%	eluviated dystric brunisol	fluvial-colluvium	gravelly sandy loam-loamy sand	0	--	M-H	S-H	--	--	Variable textured material.
SRD	Sardis	1081.65 to 1121.39	0.65%	orthic humic regosol and orthic regosol	fluvial	gravelly loam-gravelly sandy loam	0-29	fair-good	H	S	--	Yes	--
SSE	Sunshine	1144.81 to 1146.55	0.10%	ortho humo-ferric podzol and orthic dystric brunisol	fluvial-glaciofluvial	sandy loam-loamy sand	15-30	good	H	S	--	Yes	--
stGLY1	stony Glossey 1	819.87 to 825.83	0.09%	eluviated and orthic eutric brunisols	glaciofluvial	stony, gravelly sandy loam-stony, gravelly sand	0	--	H	S	--	Yes	Stony and gravelly material.
stLUC	stony Lucerne	492.84 to 493.65	0.13%	eluviated dystric brunisol	stony till	stony sandy loam-loam	0	--	M	H	--	--	Extremely stony till.
stMIN	stony Minnie	877.02 to 879.63	0.21%	orthic and eluviated eutric brunisols	stony till	stony loam-stony sandy loam	0	--	M-H	S-H	--	--	Little or no topsoil in treed areas.
stmQN	stony McQueen	824.23 to 824.45	0.03%	orthic dark brown chernozem	stony till	stony loam-stony sandy loam	10	fair-good	M	H	--	--	--
stRSM	stony Roserim	701.98 to 702.7	0.12%	eluviated and orthic eutric brunisols	stony till	stony sandy loam	10-20	fair	M-H	S	--	--	Extremely stony till.
stTIM	stony Timber	875.34 to 875.98	0.10%	eluviated eutric brunisol	stony till	stony loam-stony sandy loam	0	--	M	M-H	--	--	Little or no topsoil in treed areas.
stWOO	stony Woodley	491.38 to 516.19	0.16%	eluviated and orthic dystric brunisols	fluvial fan	stony sandy loam-stony loamy sand	0	--	M-H	S-H	--	Yes	Stony and gravelly conditions may hamper root zone salvaging.
SWA	Snookwa	565.42 to 663.22	4.97%	eluviated and orthic dystric brunisols	till	gravelly sandy loam-loamy sand	0	--	M-H	M-H	--	--	No topsoil in treed areas.
TIM	Timber	851.39 to 955.95	0.70%	eluviated eutric brunisol	till	loam-sandy loam	0	--	M	M-H	--	--	Little or no topsoil in treed areas.
TKW	Tunkwa	866.12 to 952.97	2.07%	orthic gray luvisol	till	sandy loam-clay loam	0-10	--	M	S-H	--	--	Little or no topsoil in treed areas.
TLE	Tullee	854.2 to 892.29	1.38%	orthic black chernozem	till	loam-sandy loam	8-38	good	M	S-H	--	--	--
TNQ	Tranquille	841.06 to 929.63	1.57%	orthic brown chernozem	till	loam-sandy loam	10-33	poor-fair	M	S-H	--	--	--

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									Wind	Water			
TPL	Trapp Lake	852.78 to 948.32	3.04%	orthic dark brown chernozem	till	loam-sandy loam	8-28	fair-good	M	S-H	--	--	--
TYM	Typic Mesisol	869.85 to 879.73	0.05%	typic mesisol	organic	organic	0	--	S	S	Yes	--	Salvage upper 40 cm of peat material.
VLN	Vermillion Lakes	490.09 to 523.69	0.14%	rego gleysol	fluvial	silty loam	0-25	fair-good	M	S	Yes	--	Unstable trench walls in excessively wet areas.
VMT	Valemount	506.95 to 520.36	0.65%	eluviated and orthic dystric brunisols	fluvial fan	silty loam-very fine sandy loam	0-15	fair	M	S	--	--	--
WHC	Whatcom	1131.87 to 1145.87	1.26%	luvic humo-ferric podzol	eolian/glaciomarine	silty loam/silty clay loam	0-35	poor-good	M	S-H	--	--	Very firm Bt horizon at 40-85 cm below the surface.
WOO	Woodley	495.87 to 518.87	0.70%	eluviated and orthic dystric brunisols	fluvial fan	sandy loam-gravelly loamy sand	0	--	M-H	S-H	--	Yes	Upper 20-40 cm of material is usually gravel-free.
NA	No Access	652.02 to 1146.7	6.68%	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴
NS	Not Surveyed	970.85 to 1081.03	13.53%	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴	TBD ⁴

Sources: Mentiga Pedology Consultants Ltd. 2013b,c,d

Notes: 1 Soil units occur intermittently between listed RK locations.

2 Erosion Hazard Ratings: S = slight;
M = moderate; and
H = high.

3 Non applicable soil properties indicated by: N/A = not applicable.

4 Soil properties to be determined following subsequent studies are indicated by: TBD = to be determined.

WETLANDS

Dominant Wetland Class	General Wetland Class Characteristics	Wetland Type (EAS Label If Applicable)	Description Of Wetland Type
Bog	Wetlands that have a water table at or near the surface however they do not experience water flow and depend on precipitation for the majority of water inputs.	Treed bog	Coniferous tree species (e.g., black spruce and tamarack) dominate the upper story with Sphagnum mosses.
Fen	Peat accumulating wetlands that tend to have their surfaces level with the water table and typically have water flow on the surface as well as subsurface.	Non-woody fen (NW FEN)	Graminoid/sedge dominated vegetation communities with brown mosses present.
		Shrubby fen	Upper story of the vegetation community dominated by shrubs such as Labrador tea, willows and birches.
		Treed fen	Coniferous tree species (e.g., black spruce and tamarack) dominate the upper story with brown mosses.
Swamp	Tend to be mineral wetlands with the occasional peat veneer. The water table in these wetlands tends to be at or below the surface.	Broad leafed tree swamp (BLT SWAMP)	Deciduous tree species (e.g., paper birch, aspen) dominate the upper story of the vegetation community.
		Mixedwood treed swamp (MXDTR SWAMP)	Deciduous and coniferous tree species (e.g., paper birch, aspen, spruce) dominate the upper story of the vegetation community.
		Needle-leaf treed swamp (NLTR SWAMP)	Coniferous tree species (e.g., spruce species) dominate the upper story of the vegetation community.
		Shrubby swamp	Shrub species (e.g., willows) dominate the upper story of the vegetation community.
Marsh	Mineral wetlands with shallow water levels that can fluctuate quickly. Permanency of water also varies within this type of wetland.	Alkali marsh	Marshes with water levels present until summer. Water and soil chemistry is saline in nature.
		Deep marsh	Marshes with semi-permanent water levels (often present into the fall).
		Seasonal Emergent Marsh (SE MARSH)	Marshes with temporary or seasonal water levels (often dry by spring or late summer).
Shallow Open Water	Tend to be more permanent in nature and can associated with other wetland types. Shallow open water wetlands typically are less than 2 m deep.	Open water pond (OPEN POND)	Ponds with permanent water levels.

VEGETATION

ALBERTA

Species Name	EAS Label	Common Name
Anastrophyllum helleranum	ANASHEL	Anastrophyllum liverwort
Betula papyrifera, Lycopodium annotinum	BETU/LYCO	white birch, stiff club-moss
Botrychium crenulatum	BOTRCRE	dainty moonwort
Botrychium sp.	BOTRSP	grape fern species
Botrychium spathulatum	BOTRSPA	spoon-shaped moonwort
Cardamine pratensis	CARDPRA	meadow bitter cress
Carex capitata	CARECAP	capitate sedge
Carex rostrata marsh	CAREROS	beaked sedge marsh
Carex limosa - Scheuchzeria palustris/Sphagnum teres - S. Subsecundum	CAREX/SCHE/SPHA	mud sedge - scheuchzeria/thin-leaved peat moss
Chrysosplenium iowense	CHRYIOW	golden saxifrage
Conocephalum salebrosum	CONOSAL	snakeskin liverwort
Coptis trifolia	COPTTRI	goldthread
Glyceria elata	GLYCELA	tufted tall manna grass
Gymnocarpium disjunctum	GYMNDIS	western oak fern
Juncus brevicaudatus	JUNCBRE	short-tail rush
Juncus sp	JUNCSP	rush species
Lactuca biennis	LACTBIE	tall blue lettuce
Najas flexilis	NAJAFLE	slender naiad
Potamogeton strictifolius	POTASTR	linear-leaved pondweed
Riccardia latifrons	RICCLAT	Riccardia liverwort
Salix bebbiana, Cornus stolonifera	SALI/CORN	beaked willow/red-osier dogwood
Sphenopholis obtusata	SPHEOBT	prairie wedge grass

BRITISH COLUMBIA

Species Name	EAS Label	Common Name
Abies amabilis/Thuja plicata/Oplopanax horridus	ABIE/THUJ/OPLO	amabilis fir - western redcedar/devil's club
Ahtiana sphaerosporella	AHTISPH	mountain candlewax
Anemone canadensis	ANEMCAN	Canada anemone
Anemone virginiana var. cylindroidea	ANEMVIR	riverbank anemone
Arctoparmelia incurva	ARCTINC	finger ring
Artemisia tridentata/Pseudoroegneria spicata	ARTE/PSEU	big sagebrush/bluebunch wheatgrass
Azolla mexicana	AZOLMEX	Mexican mosquito fern
Bartramia halleriana	BARTHAL	Haller's apple moss
Botrychium alaskense	BOTRALA	Alaska moonwort
Botrychium ascendens	BOTRASC	upswept moonwort
Botrychium crenulatum	BOTRCRE	dainty moonwort
Botrychium echo	BOTRECH	reflected moonwort
Botrychium hesperium	BOTRHES	western moonwort
Botrychium michiganense sp. nov. ined.	BOTRMIC	Michigan moonwort
Botrychium montanum	BOTRMON	mountain moonwort
Botrychium pedunculatum	BOTRPED	stalked moonwort
Botrychium simplex var. compositum	BOTRSIM	least moonwort
Botrychium spathulatum	BOTRSPA	spoon-shaped moonwort
Botrychium tunux	BOTRTUN	moosewort
Pterigynandrum filiforme	BROTROE	Pterigynandrum moss
Carex canescens ssp. disjuncta	CARECAN	silvery sedge
Carex sychnocephala	CARESYC	many-headed sedge
Carex tenera	CARETEN	tender sedge
Carex tonsa var. tonsa	CARETON	bald sedge
Carex vulpinoidea	CAREVUL	fox sedge
Cephaloziella sp.	CEPHSP	Cephaloziella liverwort
Chrysosplenium sp.	CHRYSP	golden-saxifrage species
Crepis atribarba ssp. originalis	CREPATR	slender hawkbeard
Dicranum montanum	DICRMON	Dicranum moss
Dryopteris cristata	DRYOCRI	crested wood fern
Eleocharis nitida	ELEONIT	neat spike rush
Epilobium leptocarpum	EPILLEP	small-fruited willowherb
Hydrophyllum tenuipes	HYDRTEN	Pacific waterleaf
Leptogium tenuissimum	LEPTTEN	birdnest vinyl
Letharia columbiana	LETHCOL	brown-eyed wolf
Peltigera sp. nov blue	PELTNOVBLU	Peltigera lichen
Picea hybrid spp - Pseudotsuga menziesii/Abies lasiocarpa	PICE/PSEU/ABIE	hybrid spruce species - Douglas-fir/subalpine fir
Pinus contorta/Vaccinium myrtilloides/Cladonia spp.	PINU/VACC/CLAD	lodgepole pine/velvet-leaved blueberry/Clad lichens
Populus trichocarpa - Alnus rubra/Rubus spectabilis	POPU/ALNU/RUBU	black cottonwood -red alder/salmonberry
Pseudocypbellaria rainierensis	PSEURAI	oldgrowth specklebelly
Pyrola elliptica	PYROELL	white wintergreen
Racomitrium affine	RACOAFF	Racomitrium moss
Salix exigua Shrubland	SALIEXI	narrow-leaf willow shrubland
Silene sp	SILESP	campion species
Thuja plicata - Betula papyrifera/Gymnocarpium dryopteris	THUJ/BETU/GYM	western redcedar - paper birch/oak fern
Thuja plicata - Picea sitchensis/Lysichiton americanus	THUJ/PICE/LYSI	western redcedar - sitka spruce/skunk cabbage
Tritomaria exsecta	TRITEXS	cut notchwort
Typha latifolia marsh	TYPHLAT	common cattail marsh
Usnea quasirigida	USNEQUA	Usnea lichen

FISH AND FISH HABITAT

ALBERTA

Class	Description
Class B/C	watercourses classes designated by AESRD fisheries biologists and defined in Codes of Practice
W	wetland
NCD	non-classified drainage

BRITISH COLUMBIA

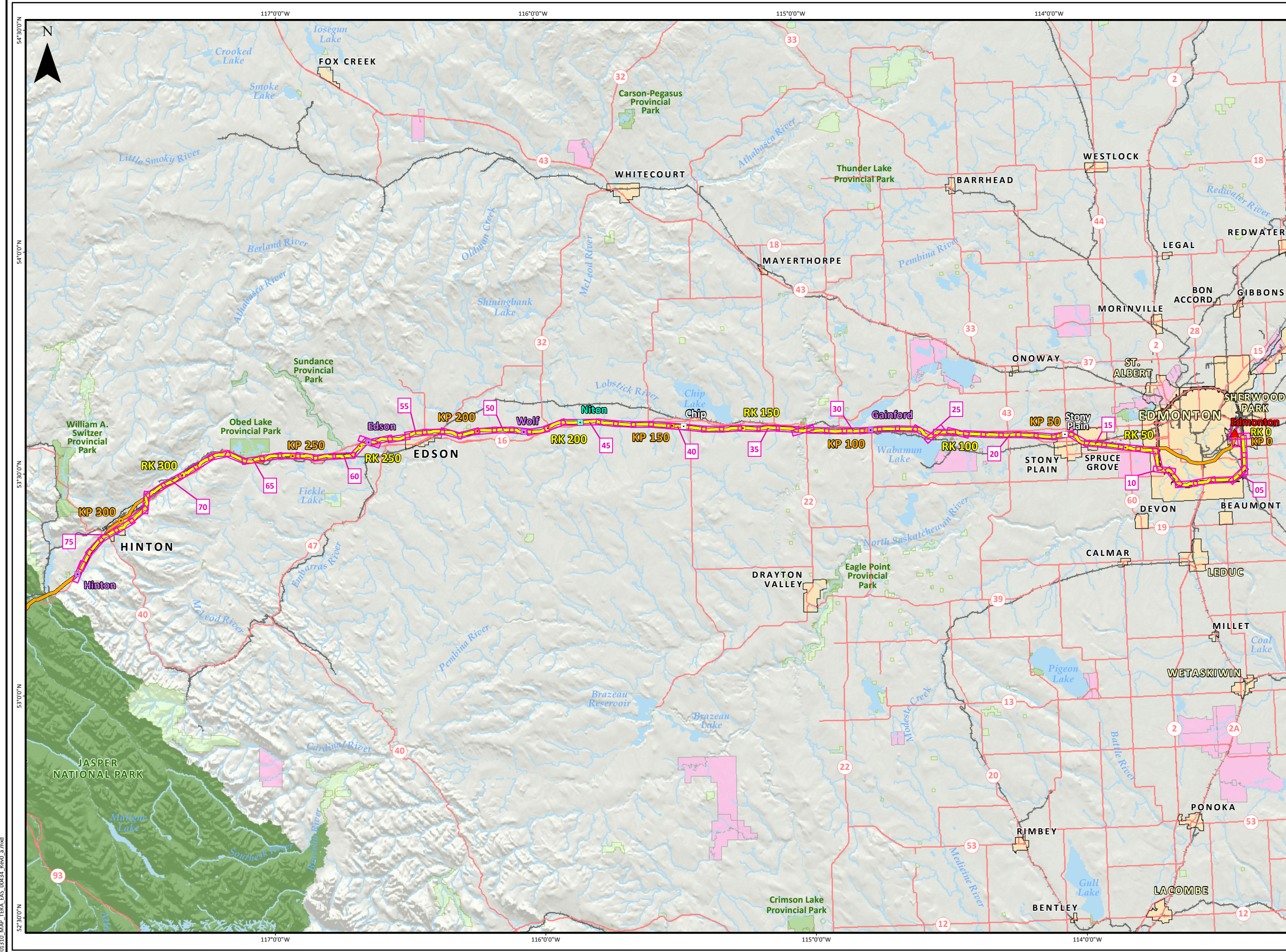
Class	Description
S1A (fish-bearing large rivers)	mean channel width > 100 m
S1B (fish-bearing)	mean channel width > 20-100 m
S2 (fish-bearing)	mean channel width > 5-20 m
S3 (fish-bearing)	mean channel width 1.5-5 m
S4 (fish-bearing)	mean channel width < 1.5 m
S5 (nonfish-bearing)	mean channel width > 3 m
S6 (nonfish-bearing)	mean channel width ≤ 3 m
W	wetland
NCD	non-classified drainage
NVC	no visible channel

WILDLIFE AND WILDLIFE HABITAT

Wildlife Feature	EAS Label
Amphibian Breeding Pond	AMPH-POND
Amphibian Breeding Stream	AMPH-STREAM
Raptor Nest	RAPTOR NEST
Mineral Lick	MINERAL LICK

POTENTIAL ENVIRONMENTAL ISSUES

Biophysical Discipline	EAS Label	Description
Agriculture	AGRI (CROP)	Plant-based Agricultural Operations
	AGRI (LIVESTOCK)	Livestock Agricultural Operations
	AGRI (ORGANIC)	Organic Agricultural Operations
Aquatics	WC (CLASS)	Watercourse Crossings (Class of the waterbody being crossed)
	FISH	Areas with highly sensitive fish habitat
	NAV WATERS	Navigable or potentially navigable waters
Archaeology	ARKY	Localised areas within these identified ranges have moderate to high archaeological potential
Hydrology	HYDRO	Shallow hydrological features of concern encountered by the corridor
Soils	WIND ER	Soils with textures susceptible to wind erosion
	WATER ER	Soils in areas with topography that present a water erosion risk
	COMP/RUT	Soils with characteristics that make them prone to compaction and rutting
	UNST TRENCH	Areas with soils susceptible to trench instability when disturbed
Vegetation	RARE COMMUNITY	Rare ecological communities as identified by the Alberta Conservation Management System (ACIMS), the BC Identified Wildlife program and the BC Conservation Data Centre (CDC)
	RARE LICHEN	Rare lichen species as identified by the <i>Species At Risk Act (SARA)</i> , the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), the Alberta <i>Wildlife Act</i> , ACIMS, the BC Identified Wildlife program and the BC CDC
	RARE LIVERWORT	Rare liverwort species identified along the corridor
	RARE PLANT	Rare plant species as identified by <i>SARA</i> , COSEWIC, the Alberta <i>Wildlife Act</i> , ACIMS, the BC Identified Wildlife program and the BC CDC
Wetlands	WETLAND	Wetland encountered by the corridor
	WETLANDS	Group of two or more wetlands encountered by the corridor
	NAV WATERS	Navigable or potentially navigable wetlands
Wildlife	WF FEATURE	Site-specific habitats and habitat features important to wildlife that may be impacted by construction and/or operation of the Project
	WILDLIFE AREA	Provincially identified wildlife areas with specific least risk window/timing restriction and mitigation requirements



ENVIRONMENTAL ALIGNMENT SHEETS OVERVIEW - EDMONTON TO HINTON

TRANS MOUNTAIN EXPANSION PROJECT

- Village / Hamlet
- Kilometre Post (KP)
- Reference Kilometre Post (RK)
- Trans Mountain Pipeline (TMPL)
- Trans Mountain Expansion Project Proposed Pipeline Corridor
- ▲ Terminal
- Pump Station (Pump Additions, Station Modifications and/or Scraper Facilities)
- New Pump Station (Proposed)
- Pump Station (Reactivated)
- Existing Pump Station
- Highway
- Railway
- Environmental Alignment Sheet
- City / Town / District Municipality
- Indian Reserve / Métis Settlement
- Transportation and Utility Corridor (TUC)
- National Park
- Provincial Park
- Protected Area / Natural Area / Provincial Recreation Area / Wilderness Provincial Park / Conservancy Area
- Provincial Boundary

Projection: NAD83 UTM Zone 11N. Baseline TMPL & Facilities: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Transportation: IHS Inc., 2013; BC Forests, Lands and Natural Resource Operations, 2012 & Natural Resources Canada, 2012; Geopolitical Boundaries: Natural Resources Canada, 2003, AltaLIS, 2013, IHS Inc., 2011, BC FLNRO, 2007 & ESRI, 2005; First Nation Lands: Government of Canada, 2013, AltaLIS, 2010 & IHS Inc., 2011; Hydrology: Natural Resources Canada, 2007 & BC Crown Registry and Geographic Base Branch, 2008; Parks and Protected Areas: Natural Resources Canada, 2012, AltaLIS, 2012 & BC FLNRO, 2008; ATS Grid: AltaLIS, 2009; Edmonton TUC: Alberta Infrastructure, 2011; Canadian Hillshade: TERA Environmental Consultants, 2008; US Hillshade: ESRI, 2009.

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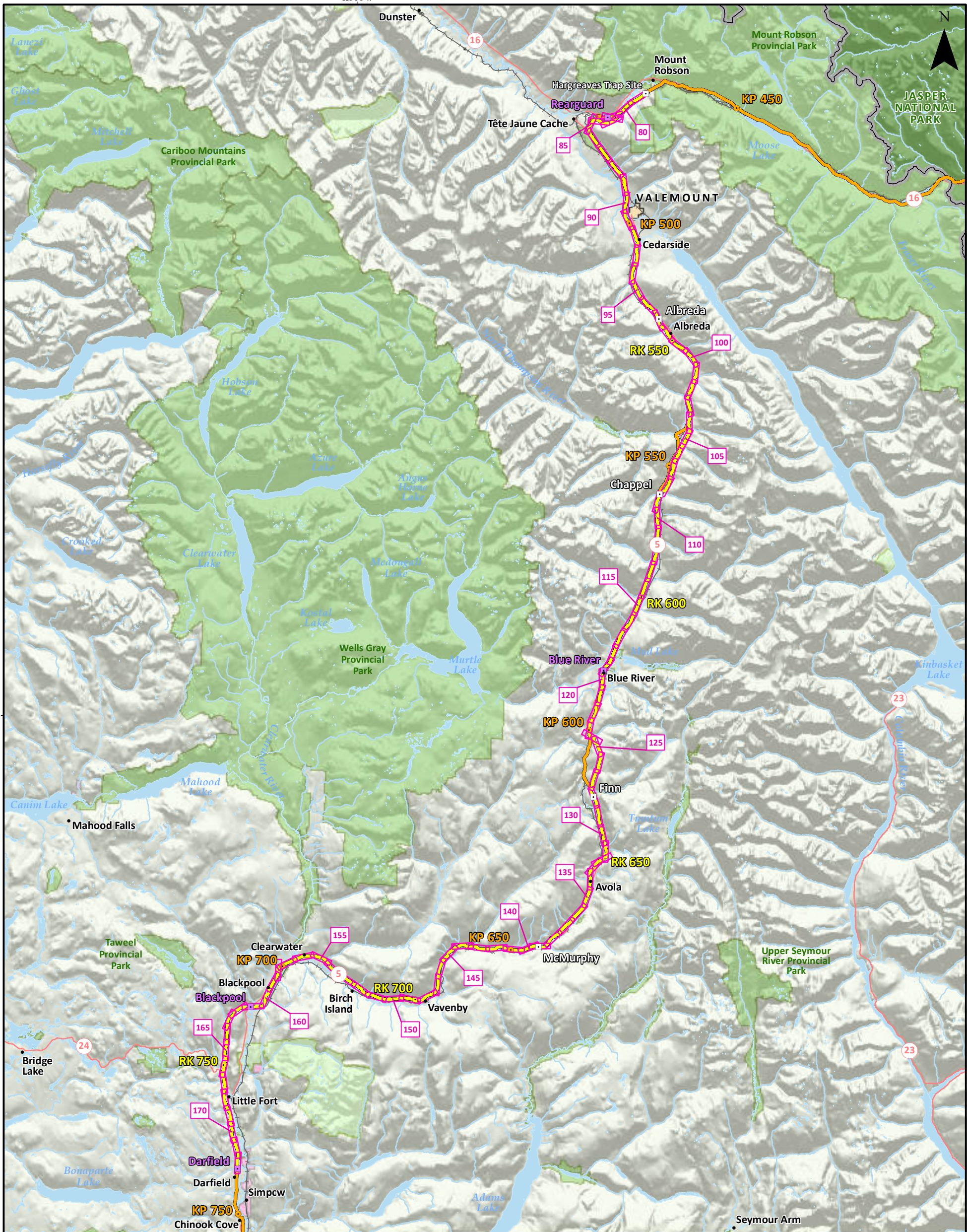
Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.



MAP NUMBER 201310_MAP_TERA_EAS_00434_REV0_A	PAGE SHEET 1 OF 4
DATE December 2013	TERA REF. 7894
SCALE 1:900,000	REVISION 0
DRAWN AJS	DISCIPLINE EAS
CHECKED TPH	DESIGN TGG



ALL LOCATIONS APPROXIMATE



52°0'0"N

52°0'0"N

120°0'0"W



- Village / Hamlet
- Kilometre Post (KP)
- Reference Kilometre Post (RK)
- Trans Mountain Pipeline (TMPL)
- Trans Mountain Expansion Project Proposed Pipeline Corridor
- ▲ Terminal
- Pump Station (Pump Additions, Station Modifications and/or Scraper Facilities)
- New Pump Station (Proposed)
- Pump Station (Reactivated)
- Existing Pump Station
- Highway
- Railway
- Environmental Alignment Sheet
- City / Town / District Municipality
- Indian Reserve / Métis Settlement
- National Park
- Provincial Park
- Protected Area / Natural Area / Provincial Recreation Area / Wilderness Provincial Park / Conservancy Area
- Provincial Boundary

Projection: NAD 1983 UTM 11N. Baseline TMPL & Facilities: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Transportation: IHS Inc., 2013, BC Forests, Lands and Natural Resource Operations, 2012 & Natural Resources Canada, 2012; Geopolitical Boundaries: Natural Resources Canada, 2003, AltaLIS, 2013, IHS Inc., 2011, BC FLNRO, 2007 & ESRI, 2005; First Nation Lands: Government of Canada, 2013, AltaLIS, 2010 & IHS Inc., 2011; Hydrology: Natural Resources Canada, 2007 & BC Crown Registry and Geographic Base Branch, 2008; Parks and Protected Areas: Natural Resources Canada, 2012, AltaLIS, 2012 & BC FLNRO, 2008; ATS Grid: AltaLIS, 2009; Edmonton TUC: Alberta Infrastructure, 2011; Canadian Hillshade: TERA Environmental Consultants, 2008; US Hillshade: ESRI, 2009.

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**ENVIRONMENTAL
ALIGNMENT SHEETS OVERVIEW -
HARGREAVES TO DARFIELD**

**TRANS MOUNTAIN
EXPANSION PROJECT**

MAP NUMBER 201310_MAP_TERA_EAS_00434_REV0_B	PAGE SHEET 2 OF 4
DATE December 2013	REVISION 0
SCALE 1:650,000	DISCIPLINE EAS
DRAWN AJS	DESIGN TGG
ALL LOCATIONS APPROXIMATE	

201310_MAP_TERA_EAS_00434_REV0_B.mxd






- Village / Hamlet
- Kilometre Post (KP)
- Reference Kilometre Post (RK)
- Trans Mountain Pipeline (TMPL)
- Trans Mountain Expansion Project Proposed Pipeline Corridor
- ▲ Terminal
- Pump Station (Pump Additions, Station Modifications and/or Scraper Facilities)
- New Pump Station (Proposed)
- Pump Station (Reactivated)
- Existing Pump Station
- Highway
- Railway
- Environmental Alignment Sheet
- City / Town / District Municipality
- Indian Reserve / Métis Settlement
- National Park
- Provincial Park
- Protected Area / Natural Area / Provincial Recreation Area / Wilderness Provincial Park / Conservancy Area
- Provincial Boundary

Projection: NAD 1983 UTM 11N. Baseline TMPL & Facilities: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UIP, Aug. 23, 2013; Transportation: IHS Inc., 2013, BC Forests, Lands and Natural Resource Operations, 2012 & Natural Resources Canada, 2012; Geopolitical Boundaries: Natural Resources Canada, 2003, AltaLIS, 2013, IHS Inc., 2011, BC FLNRO, 2007 & ESRI, 2005; First Nation Lands: Government of Canada, 2013, AltaLIS, 2010 & IHS Inc., 2011; Hydrology: Natural Resources Canada, 2007 & BC Crown Registry and Geographic Base Branch, 2008; Parks and Protected Areas: Natural Resources Canada, 2012, AltaLIS, 2012 & BC FLNRO, 2008; ATS Grid: AltaLIS, 2009; Edmonton TUC: Alberta Infrastructure, 2011; Canadian Hillshade: TERA Environmental Consultants, 2008; US Hillshade: ESRI, 2009.

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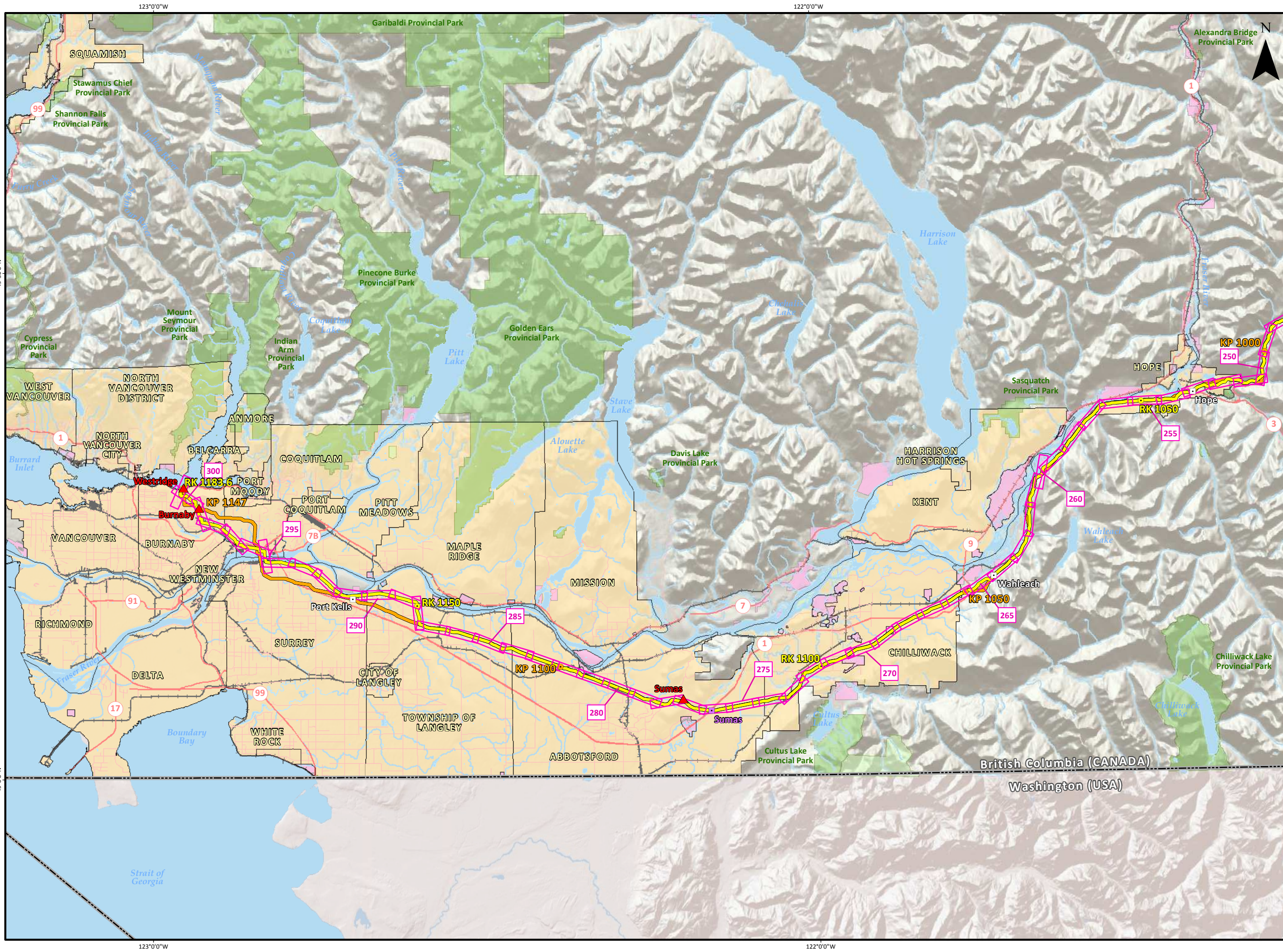


ENVIRONMENTAL ALIGNMENT SHEETS OVERVIEW - BLACK PINES TO HOPE

TRANS MOUNTAIN EXPANSION PROJECT

MAP NUMBER 201310_MAP_TERA_EAS_00434_REV0_C	PAGE SHEET 3 OF 4
DATE December 2013	REVISION 0
SCALE 1:600,000	DISCIPLINE EAS
DRAWN AJS	DESIGN TGG
TERA REF. 7894	PAGE SIZE 11x17
CHECKED TPH	ALL LOCATIONS APPROXIMATE

201310_MAP_TERA_EAS_00434_REV0_C.mxd



ENVIRONMENTAL ALIGNMENT SHEETS OVERVIEW - HOPE TO WESTRIDGE

TRANS MOUNTAIN EXPANSION PROJECT

- Kilometre Post (KP)
- Reference Kilometre Post (RK)
- Existing Trans Mountain Pipeline
- Trans Mountain Expansion Proposed Pipeline Corridor
- ▲ Terminal
- Pump Station (Pump Additions, Station Modifications and/or Scraper Facilities)
- New Pump Station (Proposed)
- Pump Station (Reactivated)
- Existing Pump Station
- Highway
- Railway
- Environmental Alignment Sheet
- City / Town / District Municipality
- Indian Reserve / Métis Settlement
- National Park
- Provincial Park
- Protected Area / Natural Area / Provincial Recreation Area / Wilderness Provincial Park / Conservancy Area
- Provincial Boundary
- International Boundary

Projection: NAD83 UTM Zone 11N. Baseline TMPL & Facilities: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UIP, Aug. 23, 2013; Transportation: IHS Inc., 2013, BC Forests, Lands and Natural Resource Operations, 2012 & Natural Resources Canada, 2012; Geopolitical Boundaries: Natural Resources Canada, 2003, AltaUS, 2013, IHS Inc., 2011, BC FLNRO, 2007 & ESRI, 2005; First Nation Lands: Government of Canada, 2013, AltaUS, 2010 & IHS Inc., 2011; Hydrology: Natural Resources Canada, 2007 & BC Crown Registry and Geographic Base Branch, 2008; Parks and Protected Areas: Natural Resources Canada, 2012, AltaUS, 2012 & BC FLNRO, 2008; ATIS Grid: AltaUS, 2009; Edmonton TUC: Alberta Infrastructure, 2011; Canadian Hillshade: TERA Environmental Consultants, 2008; US Hillshade: ESRI, 2009; World Shaded Relief: Copyright © 2013 Esri.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REV0_D	PAGE SHEET 4 OF 4
DATE December 2013	TERA REF. 7894
SCALE 1:400,000	REVISION 0
DRAWN AJS	DISCIPLINE EAS
CHECKED TPH	DESIGN TGG



201310_MAP_TERA_EAS_00434_REV0_d.mxd

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	SHERWOOD PARK
	LAND OWNERSHIP / DISPOSITION	PRIVATE
	LAND USE	NA
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	[SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE]
	VEGETATION	
	WETLANDS	[SE MARSH]
	FISH HABITAT SENSITIVITY	[SE MARSH]
	HYDROLOGY	
SOILS PARENT MATERIAL	NA	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[WETLANDS]
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CONSTRUCTION WORK WINDOW		
SOILS HANDLING	STRIPPING DEPTH (cm)	NA
	PROCEDURE	TRENCH AND SPOIL; ADJUST AS REQUIRED
SOILS		
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	
WETLANDS		[WT-NOTE 1]
FOREST TYPE (m ³ /ha)		[WT-NOTE 1]
VEGETATION		
WILDLIFE AND FISH HABITAT		WF-NOTE 5
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_12N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB


MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 001 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG


















FROM RK 0.0 TO RK 0.9

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	SHERWOOD PARK	PRIVATE					
	LAND OWNERSHIP / DISPOSITION								
	LAND USE	TREED	C	HAY	DL	C	TREED	HAY	NA
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						WHITE AREA		
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT						SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE		
	VEGETATION								
	WETLANDS		[SHRUBBY SWAMP]				[SHRUBBY SWAMP]	[OPEN POND]	
	FISH HABITAT SENSITIVITY						[SE MARSH]	[SHRUBBY SWAMP]	
	SOILS PARENT MATERIAL		T	[GL or T]	T			GL or T	T

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012



-  Reference Kilometre Post (RK)
-  Kilometre Post (KP)
-  Trans Mountain Pipeline (TMPL)
-  Proposed Pipeline Corridor
-  Trans Mountain Owned Land
-  Soil Inspection
-  Soil Sample
-  Soil Break
-  Other Existing Pipeline
-  Highway
-  Paved Road
-  Trail / Rough Road
-  Railway
-  City / Town
-  Regional District
-  Indian Reserve
-  Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES			[WETLAND]			[WETLANDS]			[WETLANDS]		[WETLANDS]		
			[WIND ER]			[WIND ER]			[WIND ER]		[WIND ER]		
			[COMP RUT]			[COMP RUT]			[COMP RUT]		[COMP RUT]		
			[WIND ER]			[WIND ER]			[WIND ER]		[WIND ER]		

CONSTRUCTION WORK WINDOW							
SOILS HANDLING	STRIPPING DEPTH (cm)	25	30	25	20-25	-	20-30
	PROCEDURE	TRENCH AND SPOIL; ADJUST AS REQUIRED			-	TRENCH AND SPOIL; ADJUST AS REQUIRED	
SOILS		[SO-NOTE 1][SO-NOTE 1]				SO-NOTE 1	
						SO-NOTE 2	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE						
WETLANDS							
							[WT-NOTE 2]
FOREST TYPE (m ³ /ha)							
VEGETATION							
WILDLIFE AND FISH HABITAT							WF-NOTE 5
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES							




TERA ENVIRONMENTAL CONSULTANTS

Soils Description		REFERENCES		REVISION HISTORY			MAP NUMBER	PAGE	ENVIRONMENTAL ALIGNMENT SHEETS	
Soil Phase	Soil Unit	Projection: NAD_1983_UTM_Zone_12N		NO.	DATE	DESCRIPTION	201310_MAP_TERA_EAS_00434_REVO	SHEET 002 OF 301	TRANS MOUNTAIN EXPANSION PROJECT	
Depth of Topsoil (cm)	Topographic Class	This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.		0	Dec 16, 2013	Issued for NEB filing	TERA REF. 7894	REVISION 0	FROM RK 0.9 TO RK 2.8	
byKKL1(10)	6						SCALE 1:15,000	DISCIPLINE EAS	FROM 0 TO 500 m	
							PAGE SIZE 11x17	DESIGN TGG		
							DRAWN CMR	CHECKED DN		

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	STRATHCONA COUNTY				CROWN				SHERWOOD PARK														
	LAND OWNERSHIP / DISPOSITION	MIXED																						
	LAND USE	CULTIVATED		HAY		CULTIVATED		TREET PASTURE		HAY		DL TB		HAY		CULTIVATED		TREET						
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA																						
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS																						
	WILDLIFE / WILDLIFE HABITAT	SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE																						
	VEGETATION																							
	WETLANDS	[OPEN POND]				[SE MARSH]														[SHRUBBY SWAMP]				
	FISH HABITAT SENSITIVITY																							
	HYDROLOGY	[DRAINAGE]						[GOLDBAR CR] [TRIB TO GOLDBAR CR]																
SOILS PARENT MATERIAL	T				[GL or T]				T				GF				T				[T]			



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[WETLAND]	[WC (NCD)]	MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS				[WC (CLASS C)]	[WC (CLASS C)]	[WETLAND]	[WIND ER]				
	[NAV WATERS]	[WIND ER]	[COMP RUT]	[UNST TR/COMP RUT]	[UNST TR]	[WIND ER]	[WIND ER]	[WIND ER]							
CONSTRUCTION WORK WINDOW	[AQ-OPEN]			[AQ-JUL 1 TO APR 15]		[AQ-JUL 1 TO APR 15]									
SOILS HANDLING	STRIPPING DEPTH (cm)	25-30	20-25	40	40	20-25	30-40	[40]	25-35	[10]	-	15-25	30	25	
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE													
SOILS		[SO-NOTE 1]			[SO-NOTE 2]	[SO-NOTE 1]		[SO-NOTES 2 AND 3]	[SO-NOTE 3]	[SO-NOTE 1]			[SO-NOTE 1]		
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]						
WETLANDS		[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 2]	[WT-NOTE 1]										
FOREST TYPE (m ² /ha)															
VEGETATION															
WILDLIFE AND FISH HABITAT															
HERITAGE / TRADITIONAL LAND USE		WF-NOTE 5 AK-NOTE 1													
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS															
SPECIAL MEASURES															

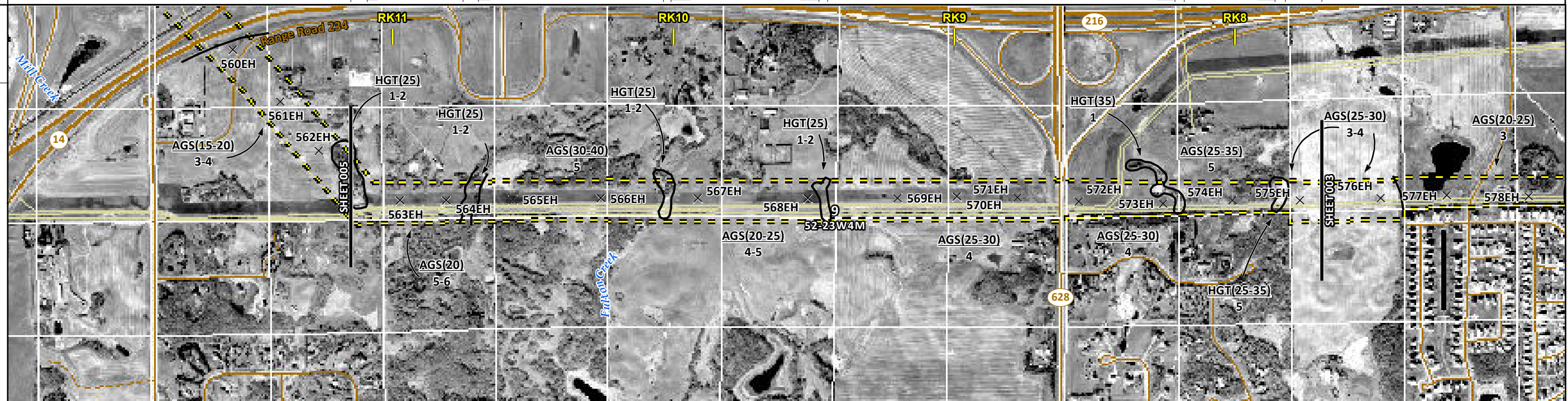
 	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_12N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 003 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT												
			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	DATE December 2013	TERA REF. 7894	REVISION 0	SCALE 1:15,000	PAGE SIZE 11x17
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.															
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB															

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	STRATHCONA COUNTY								
	LAND OWNERSHIP / DISPOSITION	[CROWN]	MIXED	CROWN	MIXED					
	LAND USE	T C	TREED PASTURE	CULTIVATED	TREED [CULTIVATED]					
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA								
	HERITAGE / TRADITIONAL LAND USE									
	WILDLIFE / WILDLIFE HABITAT	SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE								
	VEGETATION									
	WETLANDS	[DEEP MARSH]	[SHRUBBY SWAMP]	[SE MARSH]	[SE MARSH]					
	FISH HABITAT SENSITIVITY									
	HYDROLOGY	[FULTON CR]								
SOILS PARENT MATERIAL	[GL or T]	T	[GL or T]	T	[GL or T]	T	[GL or T]	T	[GL or T]	T

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND] [NAV WATERS] [COMP RUT]	[WETLAND] [NAV WATERS] [COMP RUT]	[WETLAND] [NAV WATERS] [COMP RUT]	[WETLAND] [NAV WATERS] [COMP RUT]	[WETLAND] [NAV WATERS] [COMP RUT]	[WETLAND] [NAV WATERS] [COMP RUT]	[WETLAND] [NAV WATERS] [COMP RUT]	[WETLAND] [NAV WATERS] [COMP RUT]	[WETLAND] [NAV WATERS] [COMP RUT]	[WETLAND] [NAV WATERS] [COMP RUT]	[WETLAND] [NAV WATERS] [COMP RUT]
	WIND/WATER ER	[COMP RUT]	WIND/WATER ER	[COMP RUT]	WIND/WATER ER	[COMP RUT]	WIND ER	[COMP RUT]	WIND/WATER ER	[COMP RUT]	WIND ER

CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO APR 15]											
SOILS HANDLING	STRIPPING DEPTH (cm)	25	20	25	30-40	25	20-25	25	25-30	35	25-35	25-30
SOILS	PROCEDURE	SO-NOTE 1		[SO-NOTE 2]	SO-NOTE 1	[SO-NOTE 2]	SO-NOTE 1	[SO-NOTE 2]	SO-NOTE 1	[SO-NOTE 2]	SO-NOTE 1	[SO-NOTE 2]
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]		[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]
WETLANDS		[WT-NOTE 1]	[WT-NOTE 2]	[WT-NOTE 1]	[WT-NOTE 2]	[WT-NOTE 1]	[WT-NOTE 2]	[WT-NOTE 1]	[WT-NOTE 2]	[WT-NOTE 1]	[WT-NOTE 2]	[WT-NOTE 1]
FOREST TYPE (m ³ /ha)												
VEGETATION												
WILDLIFE AND FISH HABITAT		WF-NOTE 5										
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES												

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_12N
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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 004 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

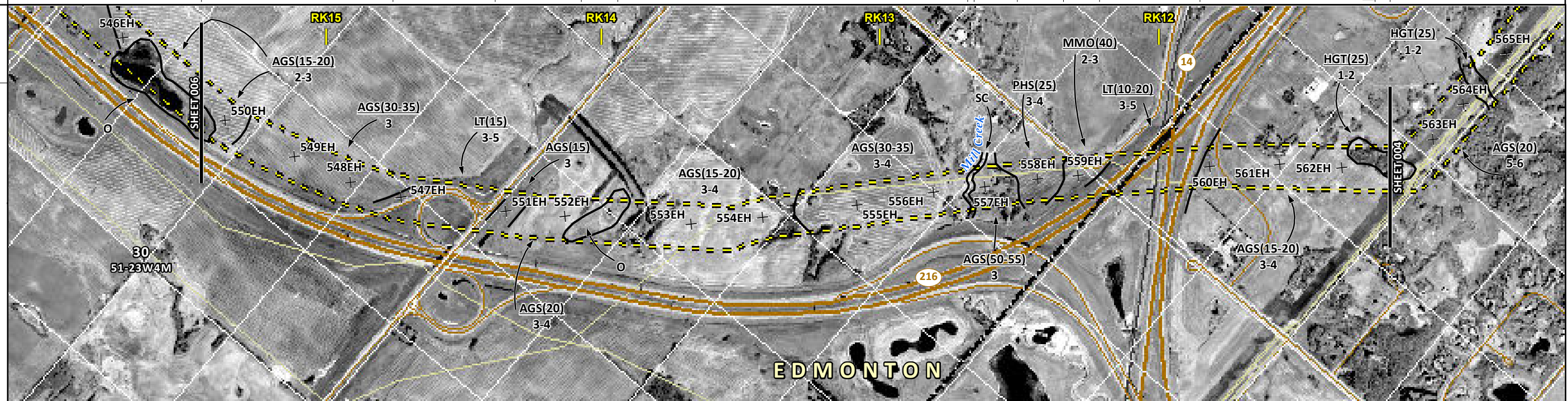
ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 7.7 TO RK 11.2

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	MIXED	CROWN	CITY OF EDMONTON	MIXED	CROWN	MIXED	PRIVATE	STRATHCONA COUNTY	CROWN	
	LAND OWNERSHIP / DISPOSITION											
	LAND USE		CULTIVATED	HAY	CULTIVATED	OPEN WATER	T-P	CULTIVATED	T-P	CULTIVATED	HAY	T
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							WHITE AREA				
	HERITAGE / TRADITIONAL LAND USE											
	WILDLIFE / WILDLIFE HABITAT											SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE
	VEGETATION											
	WETLANDS			SE MARSH		SHRUBBY SWAMP	SE MARSH	DEEP MARSH			DEEP MARSH	
	FISH HABITAT SENSITIVITY					SHRUBBY SWAMP	SE MARSH	HIGH				
	HYDROLOGY						MILL CREEK					
SOILS PARENT MATERIAL		T		T		T		GF	GL		T	GL or T

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
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- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WIND ER	WATER ER	WIND ER	WETLAND	WETLAND	WETLAND	[FISH/NAV WATERS] WC (CLASS C)	WIND ER	[UNST TR [COMP RUT]	WATER ER	WIND ER	WETLAND [NAV WATERS] [COMP RUT]
							[AQ-JUL 1 TO APR 15]					

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO APR 15]													
	SOILS STRIPPING DEPTH (cm)	15-20	30-35	15	20	-	15-20	30-35	10	40	25	40	10-20	15-20	25
	HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE													
	SOILS	SO-NOTE 1													
	WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 2]													
	PIPELINE VEHICLE	[SO-NOTE 3] [SO-NOTE 2]													
	WETLANDS	[WT-NOTE 1] [WT-NOTE 1] [WT-NOTE 1] [WT-NOTE 1] [WT-NOTE 1] [WT-NOTE 1] [WT-NOTE 2] [WT-NOTE 2]													
	FOREST TYPE (m ³ /ha)	[WT-NOTE 1] [WT-NOTE 2]													
VEGETATION	[AQ-NOTE 1]														
WILDLIFE AND FISH HABITAT	WF-NOTE 5														
HERITAGE / TRADITIONAL LAND USE															
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS															
SPECIAL MEASURES	[AQ-NOTE 4]														

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_12N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 005 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 11.2 TO RK 15.5

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF EDMONTON															
	LAND OWNERSHIP / DISPOSITION	MIXED						CROWN									
	LAND USE	HAY				TREADED PASTURE				HAY		CULTIVATED		HAY		OPEN WATER	CULTIVATED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA															
	HERITAGE / TRADITIONAL LAND USE																
	WILDLIFE / WILDLIFE HABITAT	SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE															
	VEGETATION																
	WETLANDS	SHRUBBY SWAMP						[SHRUBBY SWAMP]									
	FISH HABITAT SENSITIVITY																
	HYDROLOGY	[SHALLOW WELL]															
SOILS PARENT MATERIAL	GL	-	T	[GL or T]	T	GF	-	GF	GF	T	-	T	-	T	-	T	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

N

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WILDLIFE AREA [HYDROLOGY]												[WETLAND]		[WC (NCD)]	
	COMP RUT	WIND ER	WATER ER	WIND ER	[COMP RUT]	UNST TR	UNST TR/COMP RUT	UNST TR	WATER ER	UNST TR	WIND ER	WATER ER	[WIND ER]	WIND ER	[NAV WATERS]	[AQ-OPEN]

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW																		
	SOILS HANDLING	STRIPPING DEPTH (cm)	25	40	15	[30]	20	35-40	40	35-40	20	40	40	20	10	35	-	15-20	
	SOILS	PROCEDURE	FULL ROW, REDUCE AS APPROPRIATE												[FULL ROW, REDUCE AS APPROPRIATE]				
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	SO-NOTE 2	SO-NOTE 1	[SO-NOTE 2]	[SO-NOTE 3]	SO-NOTES 2 AND 3	SO-NOTE 3	SO-NOTE 1	SO-NOTE 3								[AQ-NOTE 3]	[AQ-NOTE 2]
	WETLANDS		[WT-NOTE 1]												[WT-NOTE 1]				
	FOREST TYPE (m ³ /ha)																		
	VEGETATION																		
WILDLIFE AND FISH HABITAT		WF-NOTE 5																	
HERITAGE / TRADITIONAL LAND USE																			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS																			
SPECIAL MEASURES		[HY-NOTE 2]															[AQ-NOTE 4]		

TRANS MOUNTAIN

tera
ENVIRONMENTAL CONSULTANTS

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_12N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 006 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
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DRAWN CMR	CHECKED DN	DESIGN TGG

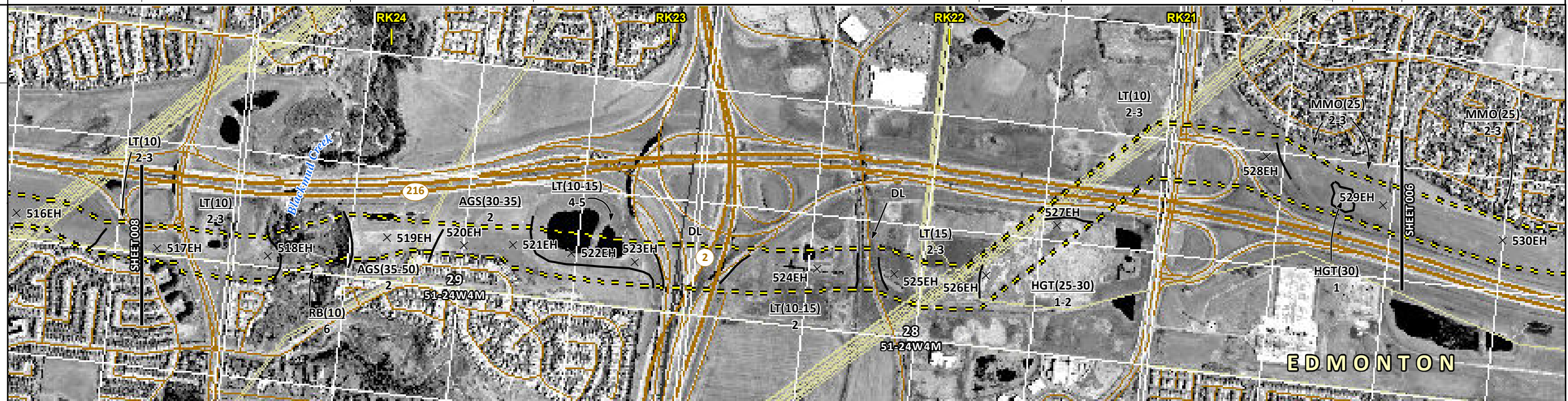
FROM RK 15.5 TO RK 20.2

0 100 200 300 400 500 m

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	CITY OF EDMONTON	PRIVATE	CROWN	MIXED
	LAND OWNERSHIP / DISPOSITION					
	LAND USE	HAY	TREED	HAY	DISTURBED LAND	HAY
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				WHITE AREA	
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT				SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE	
	VEGETATION					
	WETLANDS				SE MARSH	
	FISH HABITAT SENSITIVITY		[HIGH]			
	HYDROLOGY		[BLACKMUD CREEK]		[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL				GL or T	GL [GL or T] GL	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[FISH]	[WC (CLASS C)]	[WC (NCD)]	WETLANDS	[WC (NCD)]							
	[NAV WATERS]			COMP RUT	COMP RUT							
CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO APR 15]		[AQ-OPEN]		[AQ-OPEN]							
SOILS HANDLING	STRIPPING DEPTH (cm)	10	15-20	35-40	30-35	10-15	15	25-30	10	25	30	25
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE					FULL ROW; REDUCE AS APPROPRIATE					
SOILS		SO-NOTE 1					SO-NOTE 2					
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]	
WETLANDS								WT-NOTE 1				
FOREST TYPE (m ³ /ha)												
VEGETATION												
WILDLIFE AND FISH HABITAT		[AQ-NOTE 1]				WF-NOTE 5						
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES		[AQ-NOTE 4]										

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
byKKL1(10)
6
Topographic Class

REFERENCES

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 007 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

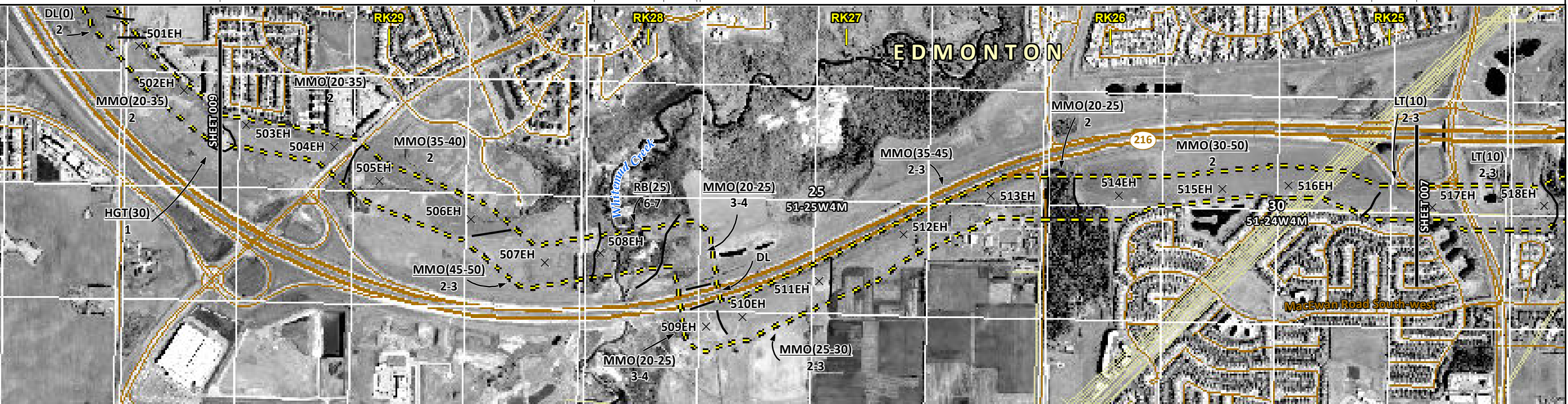
FROM RK 20.2 TO RK 24.9

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	MIXED	CITY OF EDMONTON	CROWN		
	LAND OWNERSHIP / DISPOSITION						
	LAND USE		HAY	TREED	HAY	[TREED]	HAY
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			WHITE AREA			
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT				SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE		
	VEGETATION						
	WETLANDS		[SE MARSH]				
	FISH HABITAT SENSITIVITY			[HIGH]			
	HYDROLOGY			[WHITEMUD CREEK]			
SOILS PARENT MATERIAL		GL	GL	GL			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[FISH] [WC (CLASS B)]	[NAV WATERS]	[WATER ER] [WIND ER]	[COMP RUT] [WIND ER]

CONSTRUCTION WORK WINDOW												
SOILS HANDLING	STRIPPING DEPTH (cm)	20-35	35-40	40	25	20-25	20-25	35-40	20-25	30-40	10	
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE						FULL ROW; REDUCE AS APPROPRIATE				
SOILS		SO-NOTE 1						SO-NOTE 1				
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	SO-NOTE 2						SO-NOTE 2				
WETLANDS		[AQ-NOTE 3]						[AQ-NOTE 2]				
FOREST TYPE (m ³ /ha)		[WT-NOTE 1]										
VEGETATION												
WILDLIFE AND FISH HABITAT		[AQ-NOTE 1]						WF-NOTE 5				
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES		[AQ-NOTE 4]										

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_12N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 008 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
		DISCIPLINE	EAS
		DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

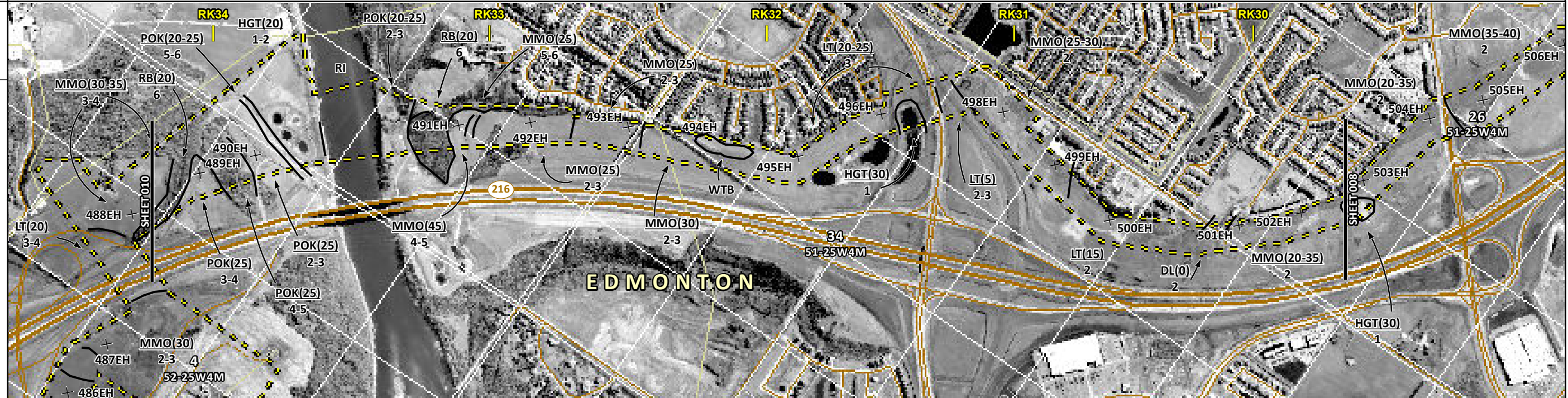
FROM RK 24.9 TO RK 29.7

P:\GIS\TMAP\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LR\Revs

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	CITY OF EDMONTON	CROWN	CROWN
	LAND OWNERSHIP / DISPOSITION	DRS010014 PNT765110	MIXED	MIXED	MIXED
	LAND USE	P TREED P TREED HAY P TREED RIVER HAY TREED			HAY
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		WHITE AREA		
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT		KEY WILDLIFE AND BIODIVERSITY ZONE	SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE	
	VEGETATION				
	WETLANDS			[SE MARSH] [SE MARSH]	[SE MARSH]
	FISH HABITAT SENSITIVITY		HIGH		[SE MARSH]
	HYDROLOGY		NORTH SASKATCHEWAN RIVER		
SOILS PARENT MATERIAL	[GL] - [GL]	[GL or T] - [GL]	GL	PD	[GL or T] - [GL]

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WIND/WATER ER] [WATER ER] [WIND ER] [WIND ER]	FISH WC (CLASS C) [NAV WATERS] [WIND/WATER ER]	[WATER ER] [WIND ER]	[WETLAND] [WETLAND]	[WETLAND] [WETLAND]	[WETLAND] [WETLAND]
CONSTRUCTION WORK WINDOW	[AQ-AUG 1 TO SEP 15]					

SOILS	STRIPPING DEPTH (cm)	[30-35] 20	25	[20-25] 20	-	[20-25] 20	40	25	30	-	20-25	30	[20-25] 10	25-30	15	-	20-35	
HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE																	
SOILS	SO-NOTE 1		SO-NOTE 2		SO-NOTE 1		SO-NOTE 2		SO-NOTE 2		SO-NOTE 1		SO-NOTE 2		SO-NOTE 1		SO-NOTE 2	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	AQ-NOTE 3		AQ-NOTE 2		[WT-NOTE 1][WT-NOTE 1][WT-NOTE 1]											[WT-NOTE 1][WT-NOTE 1]	
WETLANDS																		
FOREST TYPE (m ² /ha)																		
VEGETATION																		
WILDLIFE AND FISH HABITAT	AQ-NOTE 1																	
HERITAGE / TRADITIONAL LAND USE																		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS																		
SPECIAL MEASURES	AQ-NOTE 4																	

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_12N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

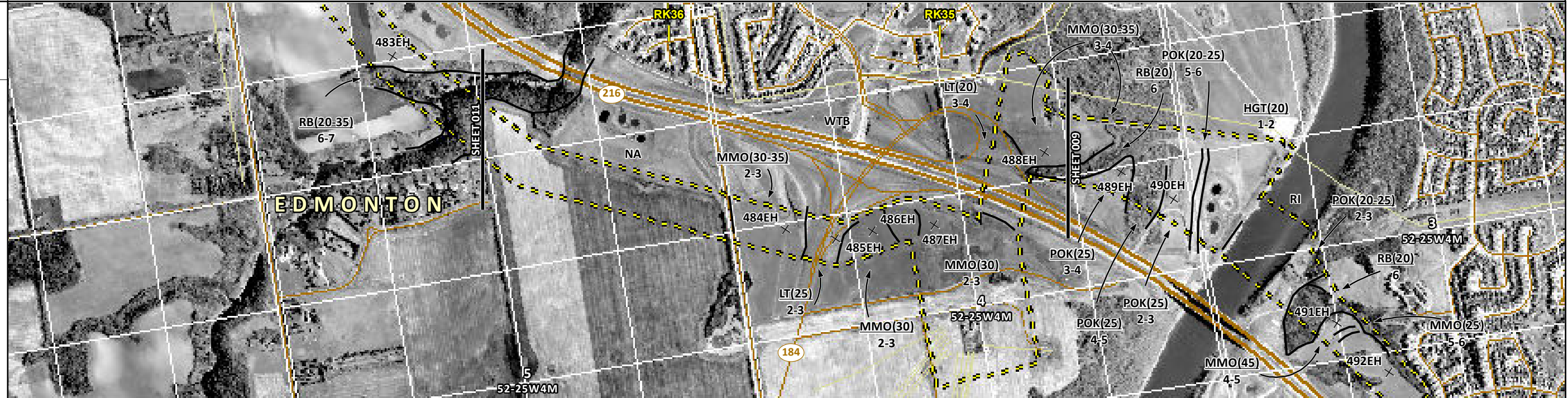
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REVISION HISTORY						MAP NUMBER	PAGE	ENVIRONMENTAL ALIGNMENT SHEETS	
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	201310_MAP_TERA_EAS_00434_REVO	SHEET 009 OF 301	TRANS MOUNTAIN EXPANSION PROJECT	
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	7894	0	FROM	TO
						SCALE	DISCIPLINE	RK 29.7	RK 34.2
						1:15,000	EAS	0 100 200 300 400 500 m	
						DRAWN	DESIGN		
						CMR	TGG		

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	MIXED	CITY OF EDMONTON	CROWN	MIXED	CROWN
	LAND OWNERSHIP / DISPOSITION					
	LAND USE	NA		HAY		P
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		WHITE AREA			
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT	[KEY WILDLIFE AND BIODIVERSITY ZONE]		SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE		
	VEGETATION					
	WETLANDS					
	FISH HABITAT SENSITIVITY					
	HYDROLOGY					
SOILS PARENT MATERIAL	NA	GL	-	GL	-	GL

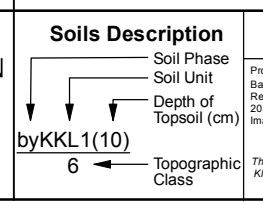
11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	COMP RUT	WIND ER	COMP RUT	WIND ER	COMP RUT	WIND ER	COMP RUT	WIND ER

CONSTRUCTION WORK WINDOW									
SOILS HANDLING	STRIPPING DEPTH (cm)	NA	30-35	25	30	-	30	20	30-35
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			FULL ROW; REDUCE AS APPROPRIATE				
	SOILS	SO-NOTE 1	SO-NOTE 1	SO-NOTE 1	SO-NOTE 1	SO-NOTE 1	SO-NOTE 1	SO-NOTE 2	SO-NOTE 2
WATERCOURSE CROSSINGS	PIPELINE VEHICLE								
WETLANDS									
FOREST TYPE (m ² /ha)									
VEGETATION									
WILDLIFE AND FISH HABITAT		WF-NOTE 5							
HERITAGE / TRADITIONAL LAND USE									
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									
SPECIAL MEASURES									



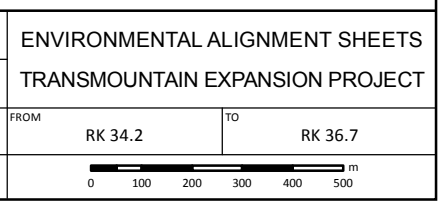
REFERENCES

Projection: NAD_1983_UTM_Zone_12N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: Altalis, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: Altalis, 2009; First Nation Lands: Government of Canada, 2013; Altalis, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; Altalis, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012; provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY						
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	

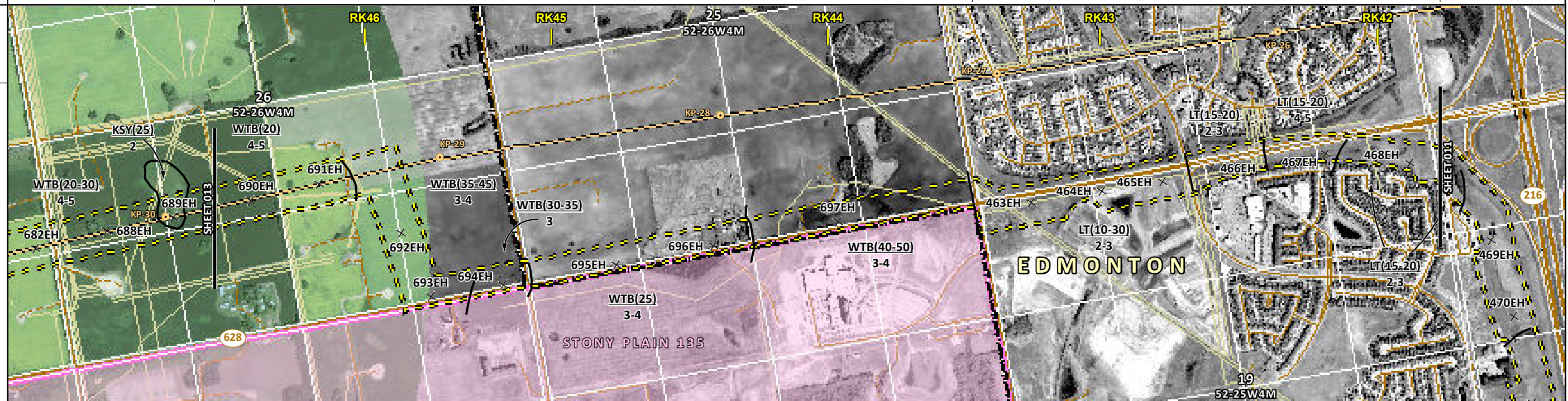
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 010 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS
DATE December 2013	TERA REF. 7894	TRANS MOUNTAIN EXPANSION PROJECT
SCALE 1:15,000	PAGE SIZE 11x17	FROM RK 34.2
DRAWN CMR	CHECKED DN	TO RK 36.7
	DISCIPLINE EAS	
	DESIGN TGG	



ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY		PRIVATE		CITY OF EDMONTON	
	LAND OWNERSHIP / DISPOSITION					CROWN	
	LAND USE	HAY	CULTIVATED	TAME PASTURE	CULTIVATED	HAY	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA					
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT	SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE					
	VEGETATION						
	WETLANDS	[SE MARSH]					
	FISH HABITAT SENSITIVITY						
	HYDROLOGY						
SOILS PARENT MATERIAL	PD						

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WINDWATER ER		WIND ER		WATER ER	
	[WETLAND]					

CONSTRUCTION WORK WINDOW						
SOILS HANDLING	STRIPPING DEPTH (cm)	20	35-40	30-35	25	15-20
	PROCEDURE	SO-NOTE 1				SO-NOTE 1
SOILS	SO-NOTE 1					
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[WT-NOTE 1]				
WETLANDS						
FOREST TYPE (m ³ /ha)						
VEGETATION						
WILDLIFE AND FISH HABITAT	WF-NOTE 5					
HERITAGE / TRADITIONAL LAND USE						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						
SPECIAL MEASURES						

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
byKKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_12N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 012 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
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DRAWN CMR	CHECKED DN	DESIGN TGG

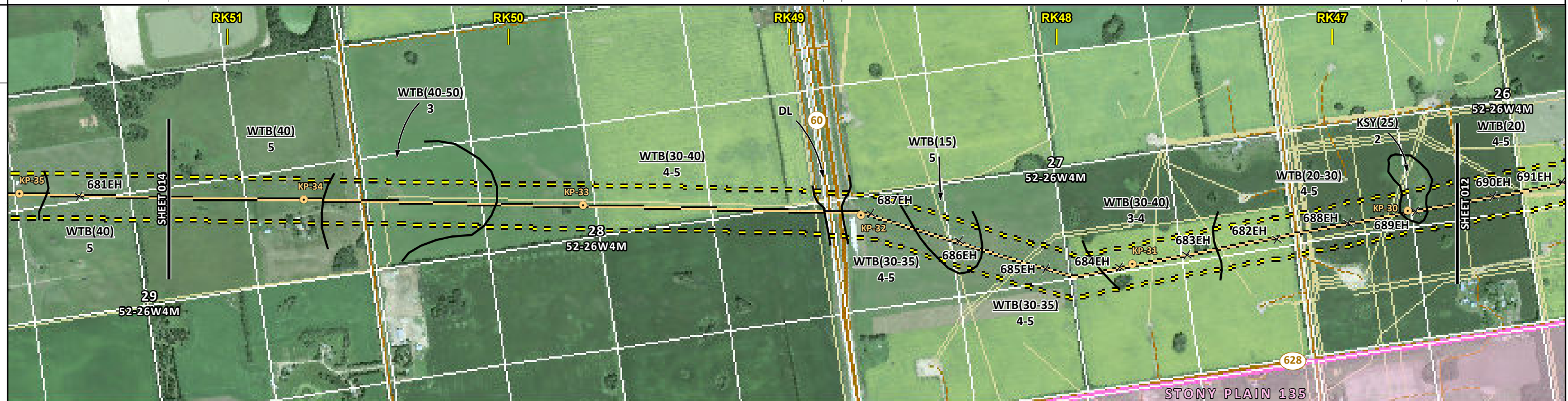
FROM RK 41.8 TO RK 46.5

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY						
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	CROWN [MIXED]	CROWN	[MIXED]	PRIVATE	
	LAND USE	CULTIVATED	HAY	CULTIVATED	HAY	CULTIVATED	HAY	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA						
	HERITAGE / TRADITIONAL LAND USE							
	WILDLIFE / WILDLIFE HABITAT	SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE						
	VEGETATION							
	WETLANDS	[SE MARSH]				[SHRUBBY SWAMP]	[SE MARSH]	[SHRUBBY SWAMP]
	FISH HABITAT SENSITIVITY							
	HYDROLOGY	[SHALLOW WELL]						
SOILS PARENT MATERIAL		PD	-		PD		GL PD	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[HYDROLOGY]	[WETLAND]			[WETLAND]	[WETLAND]	WIND/WATER ER [WETLAND]	[WIND ER] [COMPUT]
	WIND/WATER ER	WIND ER	WIND/WATER ER		WIND/WATER ER	WIND ER		[WIND ER] [COMPUT] [WIND/WATER ER]

CONSTRUCTION WORK WINDOW												
SOILS HANDLING	STRIPPING DEPTH (cm)	40	40	30-40	-	30-35	15	30-35	30-40	20-30	25	20
PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE					FULL ROW; REDUCE AS APPROPRIATE					
SOILS		SO-NOTE 1					SO-NOTE 1					
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[WT-NOTE 1]					[WT-NOTE 1] [WT-NOTE 1]		[WT-NOTE 1]			
WETLANDS												
FOREST TYPE (m ² /ha)												
VEGETATION												
WILDLIFE AND FISH HABITAT		WF-NOTE 5										
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES		[HY-NOTE 2]										

TRANS MOUNTAIN
tera ENVIRONMENTAL CONSULTANTS

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_12N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 013 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANS MOUNTAIN EXPANSION PROJECT

FROM RK 46.5 TO RK 51.2

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY				
	LAND OWNERSHIP / DISPOSITION	PRIVATE				
	LAND USE	CULTIVATED	TREE FARM	TAME PASTURE	TREED	HAY
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA				
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT	SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE				
	VEGETATION					
	WETLANDS	[SE MARSH]				
	FISH HABITAT SENSITIVITY					
	HYDROLOGY					
SOILS PARENT MATERIAL	PD					



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]				
	WIND ER				
	WIND/WATER ER				

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW					
	SOILS HANDLING	STRIPPING DEPTH (cm)	40	25-35	40	40
		PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			
	SOILS	SO-NOTE 1				
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[WT-NOTE 1]			
	WETLANDS					
	FOREST TYPE (m ³ /ha)					
	VEGETATION					
	WILDLIFE AND FISH HABITAT	WF-NOTE 5				
	HERITAGE / TRADITIONAL LAND USE					
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						
SPECIAL MEASURES						

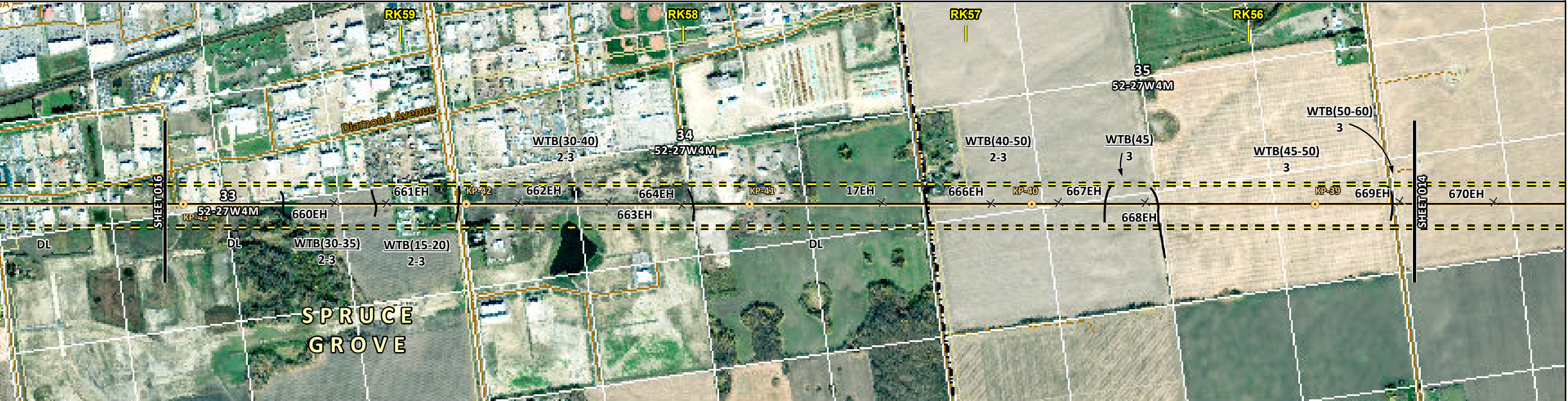
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_12N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 014 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 51.2 TO RK 55.4 				
			NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.	DATE	TERA REF.	REVISION
			0	Dec 16, 2013	Issued for NEB filing	CMR	DN		TW/GB	December 2013	7894	0
			SCALE	1:15,000	PAGE SIZE	11x17	DISCIPLINE	EAS	DESIGN	TGG		

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF SPRUCE GROVE				PRIVATE	PARKLAND COUNTY			
	LAND OWNERSHIP / DISPOSITION									
	LAND USE	DISTURBED LAND		CULTIVATED			DISTURBED LAND		CULTIVATED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					WHITE AREA				
	HERITAGE / TRADITIONAL LAND USE									
	WILDLIFE / WILDLIFE HABITAT					SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE				
	VEGETATION									
	WETLANDS	[SE MARSH]		[OPEN POND]						
	FISH HABITAT SENSITIVITY									
	HYDROLOGY	[DOG CREEK]					[SHALLOW WELL]			
SOILS PARENT MATERIAL	PD					PD				

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND] [WC (CLASS C)] [WETLAND] [NAV WATERS] [NAV WATERS]	WILDLIFE AREA	[HYDROLOGY]
CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO APR 15]	WIND ER	WIND ER

ENVIRONMENTAL PROTECTION	SOILS STRIPPING DEPTH (cm)	-	30-35	15-20	30-40	-	40
	HANDLING PROCEDURE	-	FULL ROW; REDUCE AS APPROPRIATE			-	FULL ROW; REDUCE AS APPROPRIATE
	SOILS	SO-NOTE 1					
	WATERCOURSE CROSSINGS	PIPELINE	[AQ-NOTE 3]				
		VEHICLE	[AQ-NOTE 2]				
	WETLANDS	[WT-NOTE 1][WT-NOTE 1] [WT-NOTE 2][WT-NOTE 2]					
	FOREST TYPE (m ³ /ha)						
	VEGETATION						
	WILDLIFE AND FISH HABITAT	WF-NOTE 5					
	SPECIAL MEASURES	[AQ-NOTE 4]		[HY-NOTE 2]			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_12N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATIS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 015 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 55.4 TO RK 59.8

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	TOWN OF STONY PLAIN	[SPRUCE GROVE; STONY PLAIN] [SPRUCE GROVE] [SPRUCE GROVE/STONY PLAIN] STONY PLAIN [SPRUCE GROVE/STONY PLAIN]	CITY OF SPRUCE GROVE	
	LAND OWNERSHIP / DISPOSITION		PRIVATE		
	LAND USE	[CULTIVATED] [TREED]	CULTIVATED	TREED CULTIVATED HAY CULTIVATED TREED	CULTIVATED DISTURBED LAND
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		WHITE AREA		
	HERITAGE / TRADITIONAL LAND USE		HERITAGE CONSIDERATIONS AT LOCALISED AREAS		
	WILDLIFE / WILDLIFE HABITAT		SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE		
	VEGETATION				
	WETLANDS			SE MARSH	
	FISH HABITAT SENSITIVITY				
	HYDROLOGY	[TRIB TO ATIM CREEK]	[ATIM CREEK]		
SOILS PARENT MATERIAL	PD	PD	PD		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (CLASS C)]	[WC (CLASS C)]	WILDLIFE AREA MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS	WETLAND	WIND ER
--------------------------------	----------------	----------------	--	---------	---------

CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO APR 15]	[AQ-JUL 1 TO APR 15]		WIND ER			
SOILS HANDLING	STRIPPING DEPTH (cm)	35 15-20 35	40	20	30	35	30-40
SOILS	PROCEDURE						FULL ROW; REDUCE AS APPROPRIATE
SOILS	SO-NOTE 1			SO-NOTE 1			SO-NOTE 1
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 2]			WT-NOTE 1
WETLANDS							
FOREST TYPE (m ³ /ha)							
VEGETATION							
WILDLIFE AND FISH HABITAT							WF-NOTE 5 AK-NOTE 1
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES							

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_12N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER: 201310_MAP_TERA_EAS_00434_REVO
PAGE: SHEET 016 OF 301
ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

DATE: December 2013
TERA REF.: 7894
REVISION: 0

SCALE: 1:15,000
PAGE SIZE: 11x17
DISCIPLINE: EAS
DRAWN: CMR
CHECKED: DN
DESIGN: TGG

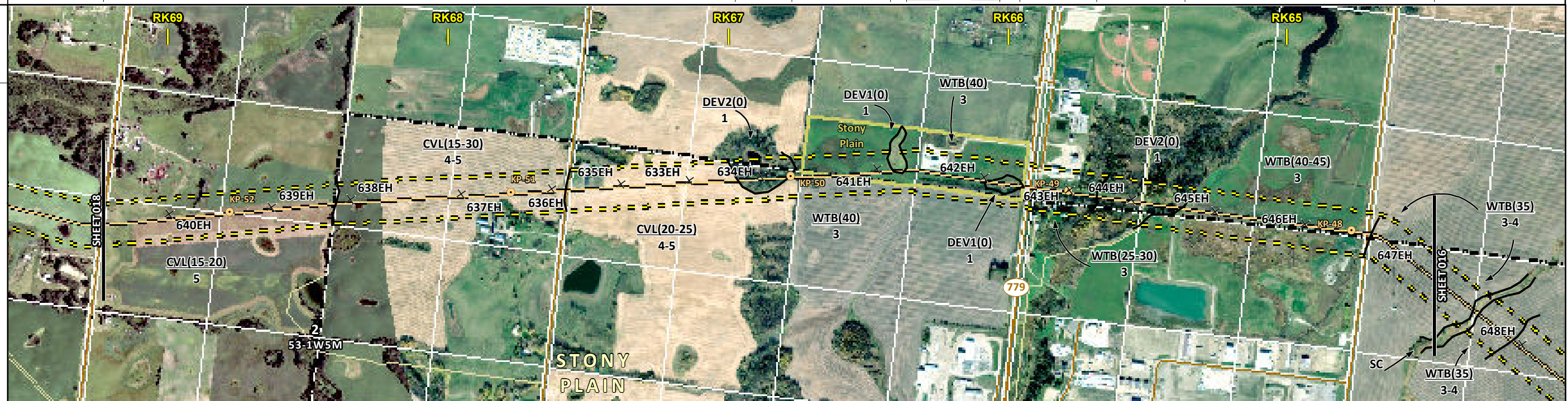
FROM: RK 59.8 TO: RK 64.4

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY				TOWN OF STONY PLAIN				
	LAND OWNERSHIP / DISPOSITION	PRIVATE								
	LAND USE	CULTIVATED	HAY	CULTIVATED	TREED	CULTIVATED	HAY	TREED	HAY	CULTIVATED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA								
	HERITAGE / TRADITIONAL LAND USE									
	WILDLIFE / WILDLIFE HABITAT	[RAPTOR NEST] SENSITIVE RAPTOR RANGE (BALD EAGLE); SHARP-TAILED GROUSE RANGE								
	VEGETATION									
	WETLANDS	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SHRUBBY SWAMP]	[OPEN POND]	[SE MARSH]		
	FISH HABITAT SENSITIVITY									
	HYDROLOGY	[DRAINAGE]	[TRIB TO ATIM CREEK]							
SOILS PARENT MATERIAL		PD		O	PD	[O/GF, GL or T]	PD	[O/GF, GL or T]	PD	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WC (CLASS C)]	WETLANDS
		WIND/WATER ER			WIND ER	[WF FEATURE COMP RUT]	WIND ER	[COMP RUT]	WIND ER	[NAV WATERS COMP RUT]	WIND ER

CONSTRUCTION WORK WINDOW	[AQ-OPEN]									[AQ-JUL 1 TO APR 15]			
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	15-30	20-25	15-20	40	40	40	40	25-30	15-20	40	35
SOILS	PROCEDURE	FULL ROW, REDUCE AS APPROPRIATE											
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 2]		[SO-NOTE 2]	[SO-NOTE 1]	[SO-NOTE 2]	[SO-NOTE 1]	[SO-NOTE 2]	[SO-NOTE 1]	[SO-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]
WETLANDS		[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]				[WT-NOTE 2]	[WT-NOTE 1]	
FOREST TYPE (m ³ /ha)													
VEGETATION													
WILDLIFE AND FISH HABITAT					[WF-NOTE 2]								
HERITAGE / TRADITIONAL LAND USE													
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS													
SPECIAL MEASURES													

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATIS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REV0	PAGE	SHEET 017 OF 301
DATE	December 2013	REVISION	0
SCALE	1:15,000	DISCIPLINE	EAS
DRAWN	CMR	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 64.4 TO RK 69.2

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY									
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	TAME PASTURE	CULTIVATED	TREED	CULTIVATED	TAME PASTURE	TREED	NA	CULTIVATED	NA	CULTIVATED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA									
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS									
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS	[SE MARSH]					SE MARSH			[SHRUBBY SWAMP]	
	FISH HABITAT SENSITIVITY						[SE MARSH]			[HIGH]	
	HYDROLOGY	[TRIB TO ATIM CREEK]									
SOILS PARENT MATERIAL	PD	GF	PD	NA	PD	NA	PD	NA	PD		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS									
	[WETLAND]	UNST TR			WIND/WATER ER	WETLANDS			WIND/WATER ER	[WETLANDS] [NAV WATERS] [WC (CLASS C)]
CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO APR 15]									

ENVIRONMENTAL PROTECTION	SOILS	STRIPPING DEPTH (cm)	15-25	25-35	15-20	40	20-25	15-20	NA	15	15-25	NA	[15-20]
	SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE										
	SOILS		SO-NOTE 3	SO-NOTE 1						SO-NOTE 1	[SO-NOTE 1]		
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE											
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]										
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 2]										
	WETLANDS		[WT-NOTE 1]										
	WETLANDS		[WT-NOTE 1]										
	WETLANDS		[WT-NOTE 2]										
	WETLANDS		[WT-NOTE 2]										
FOREST TYPE (m ³ /ha)													
VEGETATION													
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]												
HERITAGE / TRADITIONAL LAND USE	AK-NOTE 1												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS													
SPECIAL MEASURES	[AQ-NOTE 4]												

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N

Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 018 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 69.2 TO RK 73.5

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY									
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	HAY	TREED	TAME PASTURE	TREED	TAME PASTURE	TREED	TAME PASTURE	CULTIVATED	TAME PASTURE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS	[SE MARSH]									
	FISH HABITAT SENSITIVITY										
	HYDROLOGY										
SOILS PARENT MATERIAL	PD			GF			PD				

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
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- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]									
	WIND/WATER ER			WIND ER			UNST TR		WIND/WATER ER	

CONSTRUCTION WORK WINDOW										
SOILS HANDLING	STRIPPING DEPTH (cm)	15-25	30	15-25	20	15-20	20-30	30-40	15-25	
SOILS	FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1									
SOILS	SO-NOTE 3									
WATERCOURSE CROSSINGS	PIPELINE VEHICLE									
WETLANDS	[WT-NOTE 1]									
FOREST TYPE (m ³ /ha)										
VEGETATION										
WILDLIFE AND FISH HABITAT										
HERITAGE / TRADITIONAL LAND USE										
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS										
SPECIAL MEASURES										

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 019 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

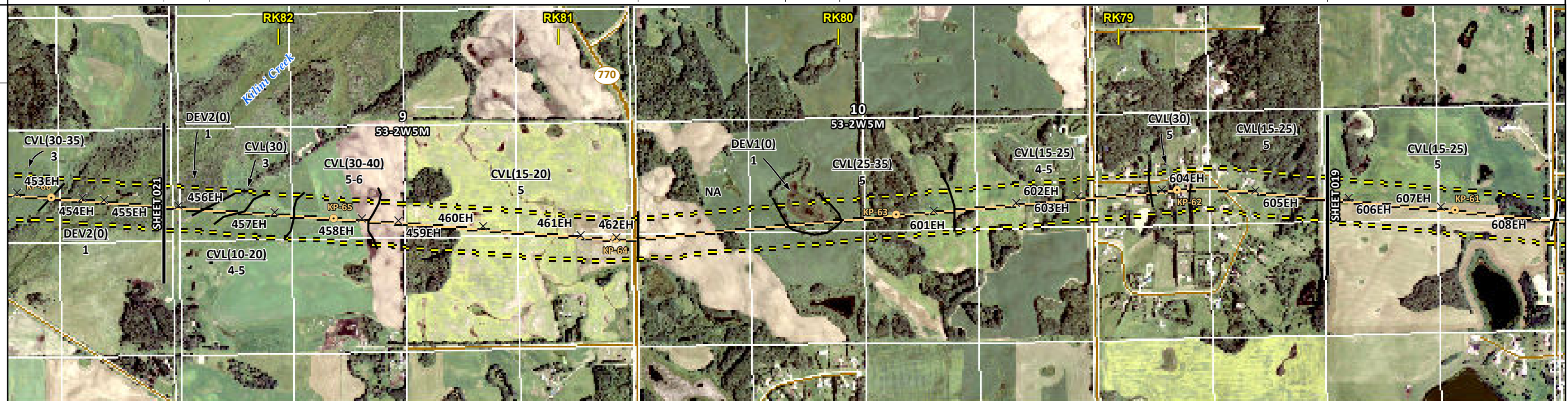
FROM RK 73.5 TO RK 78.3

P:\GIS\TERRA\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LR\Revs

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY												
	LAND OWNERSHIP / DISPOSITION	PRIVATE												
	LAND USE	TREED	CULTIVATED			NA	TREED	HAY	C	TREED	CULTIVATED	TAME PASTURE	TREED	HAY
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	[CARVEL - 3.17 KM S OF CORRIDOR] WHITE AREA												
	HERITAGE / TRADITIONAL LAND USE													
	WILDLIFE / WILDLIFE HABITAT													
	VEGETATION													
	WETLANDS	[SHRUBBY SWAMP]	[SHRUBBY SWAMP]	[DEEP MARSH]	[SHRUBBY SWAMP]	[SE MARSH]								
	FISH HABITAT SENSITIVITY													
	HYDROLOGY	[DRAINAGE]												
SOILS PARENT MATERIAL	O	PD			NA	O/GF, GL or T	PD							

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
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- Highway
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- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLANDS] [NAV WATERS] [COMP RUT]	[WIND ER]	[WIND/WATER ER]	[WC (NCD)]	[WETLAND]	[WETLAND] [NAV WATERS] [COMP RUT]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]
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CONSTRUCTION WORK WINDOW	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
SOILS	[SO-NOTE 2] [SO-NOTE 1] [SO-NOTE 2] [SO-NOTE 1]
WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 2]
PIPELINE VEHICLE	[WT-NOTE 1] [WT-NOTE 2] [WT-NOTE 1] [WT-NOTE 1] [WT-NOTE 1] [WT-NOTE 1]
WETLANDS	[WT-NOTE 1] [WT-NOTE 2]
FOREST TYPE (m ³ /ha)	
VEGETATION	
WILDLIFE AND FISH HABITAT	
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPL, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 020 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 78.3 TO RK 82.4

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY							
	LAND OWNERSHIP / DISPOSITION	PRIVATE							
	LAND USE	TREED	NA	HAY	NA	TREED	CULTIVATED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA							
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS							
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION	[CHRYIOW]							
	WETLANDS	[TREED FEN]	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SHRUBBY SWAMP]	[SHRUBBY SWAMP]	[SE MARSH]
	FISH HABITAT SENSITIVITY	[TREED BOG][DEEP MARSH]							
	HYDROLOGY	[TRIB TO KILINI CREEK]	[TRIB TO KILINI CREEK]	[DRAINAGE]	[SHALLOW WELL]				
SOILS PARENT MATERIAL	O	GL	NA	GL	NA	GL	T		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[RARE PLANT]	[WC (CLASS C)]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]
	CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO APR 15]	[AQ-JUL 1 TO APR 15]	[AQ-OPEN]					
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	NA	20-30	NA	15-20	20	
	SOILS	PROCEDURE	SO-NOTE 2	SO-NOTE 1	FULL ROW, REDUCE AS APPROPRIATE	SO-NOTE 1	SO-NOTE 1		
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 2]			
	WETLANDS		[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]
	FOREST TYPE (m ² /ha)								
	VEGETATION		[VG-NOTE 1]						
	WILDLIFE AND FISH HABITAT			[AQ-NOTE 1]					
	HERITAGE / TRADITIONAL LAND USE				AK-NOTE 1				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									
SPECIAL MEASURES		[AQ-NOTE 4]	[AQ-NOTE 4]	[HY-NOTE 2]					

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

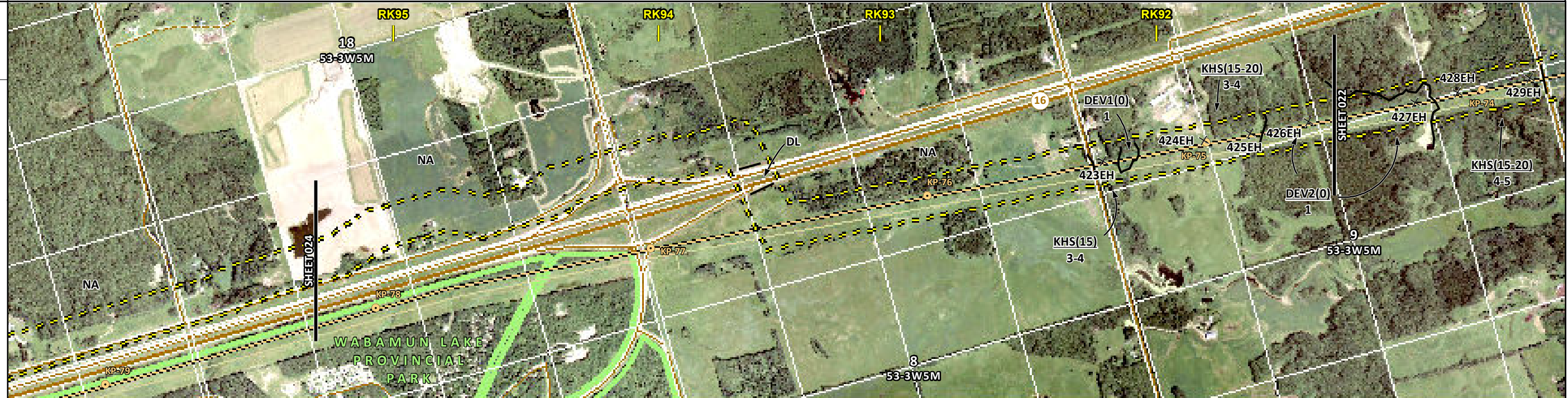
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 022 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 87.1 TO RK 91.4

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY							
	LAND OWNERSHIP / DISPOSITION	PRIVATE							
	LAND USE	NA	[DL]	NA	TREED PASTURE	P	TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA							
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS							
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION								
	WETLANDS	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SHRUBBY SWAMP]	[SHRUBBY SWAMP]	[TREED FEN]	
	FISH HABITAT SENSITIVITY	[HIGH]	[HIGH]	[HIGH]	[HIGH]				
	HYDROLOGY	[TRIB TO WABAMUN LAKE]		[TRIB TO KILINI CREEK]					
SOILS PARENT MATERIAL	NA	-	NA	[GL O GF, GL or T]	GL	O			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[FISH] [WC (CLASS C)] [NAV WATERS]	[WETLAND] [WETLAND]	[WETLAND]	[WETLAND] [WC (CLASS C)] [NAV WATERS]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]
CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO APR 15]		[AQ-JUL 1 TO APR 15]			[WIND ER]	WIND ER	COMP RUT	COMP RUT

ENVIRONMENTAL PROTECTION	SOILS STRIPPING DEPTH (cm)	NA	-	NA	15	40	15-20		
	HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE		FULL ROW; REDUCE AS APPROPRIATE		[SO-NOTE 1]	SO-NOTE 1	[SO-NOTE 2]	SO-NOTE 2
	WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 2]		[AQ-NOTE 3] [AQ-NOTE 2]					
	PIPELINE VEHICLE	[WT-NOTE 1]	[WT-NOTE 1] [WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]
	WETLANDS								
	FOREST TYPE (m ³ /ha)								
	VEGETATION		[AQ-NOTE 1]		[AQ-NOTE 1]				
	WILDLIFE AND FISH HABITAT			AK-NOTE 1					
	HERITAGE / TRADITIONAL LAND USE								
	SPECIAL MEASURES	[AQ-NOTE 4]		[AQ-NOTE 4]					



Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

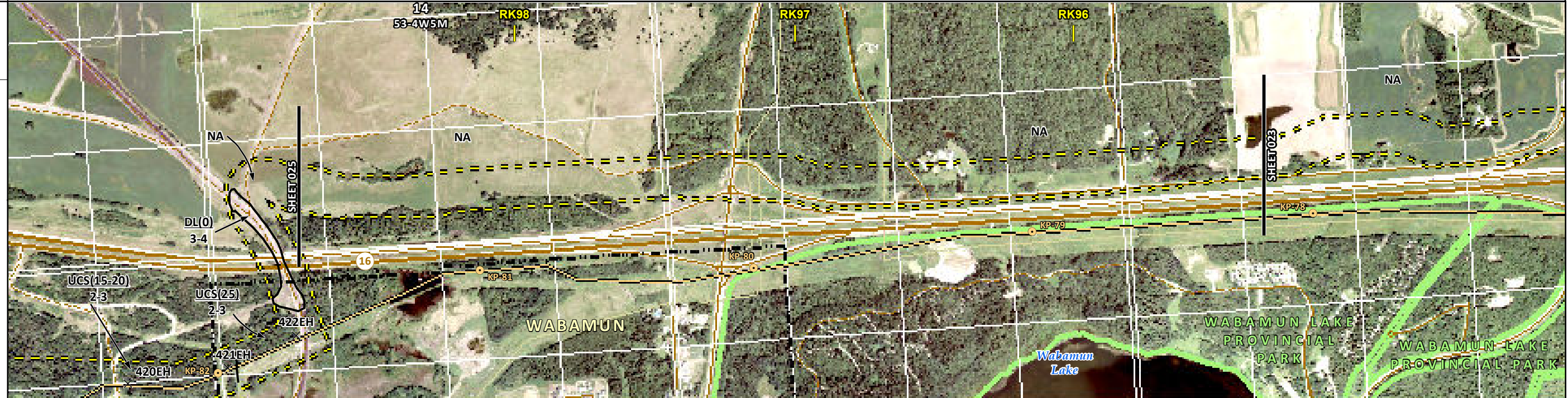
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 023 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 91.4 TO RK 95.3

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY
	LAND OWNERSHIP / DISPOSITION	PRIVATE
	LAND USE	NA
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	
	VEGETATION	
	WETLANDS	[SE MARSH] [SE MARSH]
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	[DRAINAGE]
SOILS PARENT MATERIAL	NA	

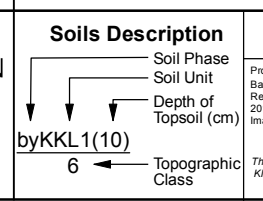
11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)] [WETLAND] [WETLAND]
--------------------------------	--------------------------------

CONSTRUCTION WORK WINDOW	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
SOILS	NA FULL ROW; REDUCE AS APPROPRIATE
WATERCOURSE CROSSINGS	PIPELINE VEHICLE [AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS	[WT-NOTE 1] [WT-NOTE 1]
FOREST TYPE (m ³ /ha)	
VEGETATION	
WILDLIFE AND FISH HABITAT	
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	



REFERENCES

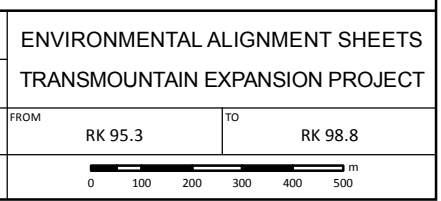
Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 024 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG



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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY	PRIVATE	VILLAGE OF WABAMUN	[PARKLAND COUNTY]
	LAND OWNERSHIP / DISPOSITION				
	LAND USE		TREED	TAME PASTURE	NA
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		WHITE AREA		
	HERITAGE / TRADITIONAL LAND USE		TLU SITE		
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION		[SAL/CORN]		
	WETLANDS		SE MARSH		
	FISH HABITAT SENSITIVITY		SHRUBBY SWAMP		
	HYDROLOGY				
SOILS PARENT MATERIAL		O	T	NA	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		WETLANDS	TLU		
		COMP RUT		WINDER	

CONSTRUCTION WORK WINDOW					
SOILS HANDLING	STRIPPING DEPTH (cm)		15-20	25	NA
	PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE	FULL ROW; REDUCE AS APPROPRIATE	
SOILS			SO-NOTE 2	SO-NOTE 1	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE				
WETLANDS			WT-NOTE 1		
FOREST TYPE (m ³ /ha)					
VEGETATION			[VG-NOTE 1]		
WILDLIFE AND FISH HABITAT					
HERITAGE / TRADITIONAL LAND USE			TLU-NOTE 1		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES					

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
byKKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 025 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
		DISCIPLINE	EAS
		DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANSMOUNTAIN EXPANSION PROJECT

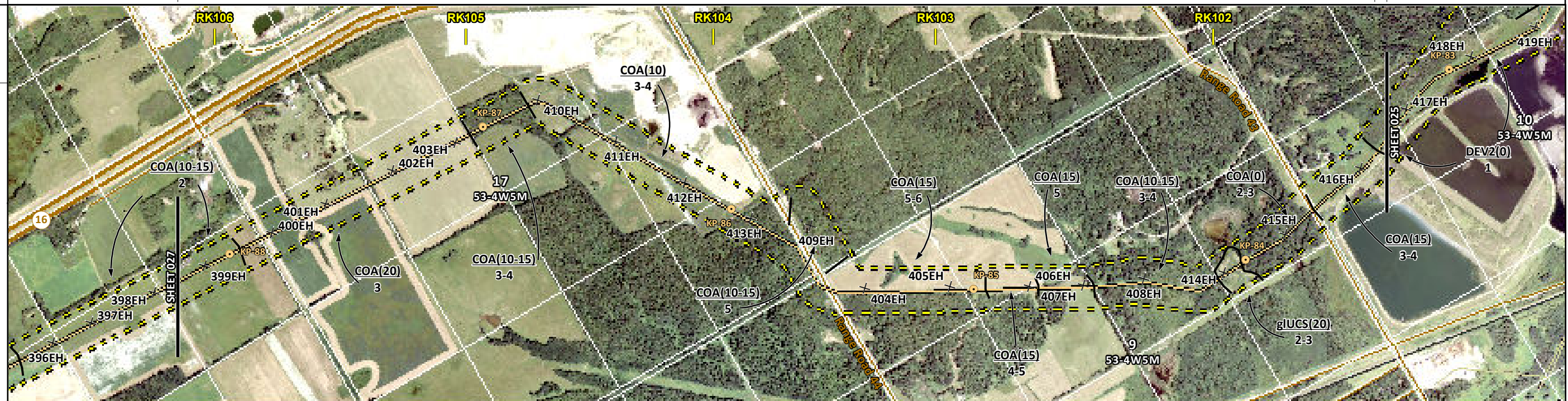
FROM RK 98.8 TO RK 101.2

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY											
	LAND OWNERSHIP / DISPOSITION	PRIVATE											
	LAND USE	TAME PASTURE	HAY	TREED	HAY	TREED	HAY	TREED	HAY	TREED	P	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA											
	HERITAGE / TRADITIONAL LAND USE												
	WILDLIFE / WILDLIFE HABITAT												
	VEGETATION												
	WETLANDS	SHRUBBY SWAMP SE MARSH SHRUBBY SWAMP											
	FISH HABITAT SENSITIVITY												
	HYDROLOGY	DRAINAGE DRAINAGE DRAINAGE											
SOILS PARENT MATERIAL	T O												

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- Soil Sample
- Soil Break
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- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	WETLAND	[WETLANDS]
	WIND ER		WIND/WATER ER	[COMP RUT]	[COMP RUT]

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]		
SOILS HANDLING	STRIPPING DEPTH (cm)	10-15	20	15-20	15
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			
		SO-NOTE 1			
				[SO-NOTE 2]	[SO-NOTE 2]
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 2]
		[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	
WETLANDS				WT-NOTE 1	[WT-NOTE 1]
FOREST TYPE (m ³ /ha)					
VEGETATION					
WILDLIFE AND FISH HABITAT					
HERITAGE / TRADITIONAL LAND USE					
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES					

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
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NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 026 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 101.2 TO RK 106.1

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY										
	LAND OWNERSHIP / DISPOSITION	PRIVATE										
	LAND USE	HAY	TREED	TAME PASTURE	HAY	TREED PASTURE	TREED	HAY	TREED	HAY - POOR SOD	NA	HAY
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA										
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS										
	WILDLIFE / WILDLIFE HABITAT											
	VEGETATION											
	WETLANDS	[SHRUBBY SWAMP]										
	FISH HABITAT SENSITIVITY											
	HYDROLOGY	[TRIB TO WABAMUN L DRAINAGE]			[DRAINAGE TRIB TO WABAMUN L TRIB TO WABAMUN L]			[DRAINAGE]				
SOILS PARENT MATERIAL	T			-			T					

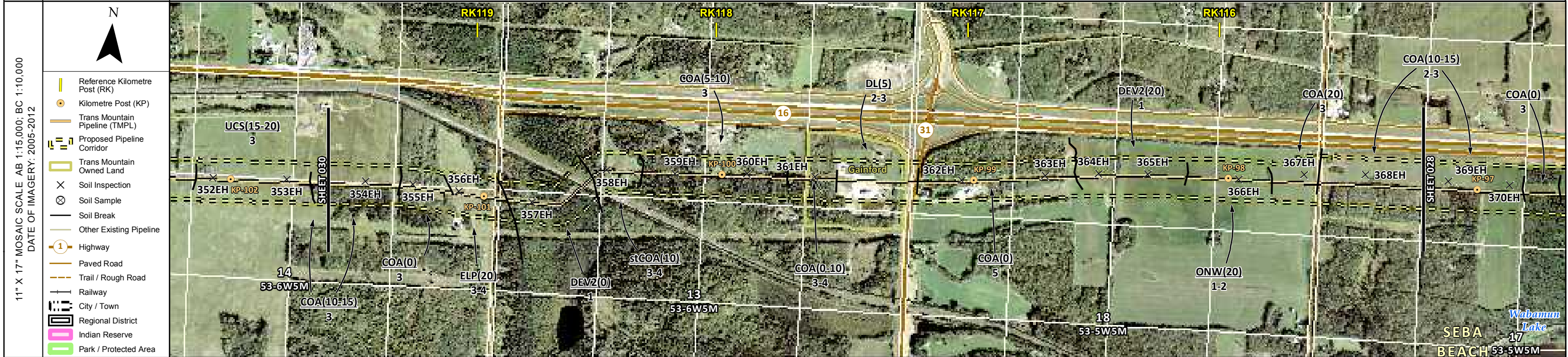


POTENTIAL ENVIRONMENTAL ISSUES	[WC (CLASS C)] [WC (NCD)] [WC (CLASS C)] [WC (NCD)] [WC (CLASS C)] [WC (NCD)] [WC (CLASS C)] [WC (NCD)] [WC (CLASS C)] [WC (NCD)] [WC (CLASS C)] [WC (NCD)]										
	MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS [WC (NCD)] [WETLAND] [WIND/WATER ER] [WIND ER]										
CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO APR 15] [AQ-OPEN] [AQ-OPEN] [AQ-JUL 1 TO APR 15] [AQ-JUL 1 TO APR 15] [AQ-OPEN] [AQ-OPEN] [AQ-OPEN] [AQ-OPEN] [AQ-OPEN] [AQ-OPEN] [AQ-OPEN]										
SOILS HANDLING	STRIPPING DEPTH (cm) 10-15 15-20 15 10 15-20 20-25 15-20 15 NA 15 20										
SOILS	PROCEDURE FULL ROW; REDUCE AS APPROPRIATE										
WATERCOURSE CROSSINGS	PIPELINE VEHICLE [AQ-NOTE 3] [AQ-NOTE 2] [AQ-NOTE 3] [AQ-NOTE 2] [AQ-NOTE 3] [AQ-NOTE 2] [AQ-NOTE 3] [AQ-NOTE 2] [AQ-NOTE 3] [AQ-NOTE 2] [AQ-NOTE 3] [AQ-NOTE 2]										
WETLANDS	[WT-NOTE 1]										
FOREST TYPE (m ³ /ha)											
VEGETATION											
WILDLIFE AND FISH HABITAT	AK-NOTE 1										
HERITAGE / TRADITIONAL LAND USE											
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											
SPECIAL MEASURES											

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 028 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
			NO. DATE DESCRIPTION BY CHKD. APPR.	DATE December 2013 TERA REF. 7894 REVISION 0	SCALE 1:15,000 PAGE SIZE 11x17 DISCIPLINE EAS FROM RK 110.5 TO RK 115.2	DRAWN CMR CHECKED DN DESIGN TGG	DISCIPLINE EAS DESIGN TGG	

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY											
	LAND OWNERSHIP / DISPOSITION	PRIVATE			MIXED PNT980061			PRIVATE					
	LAND USE	P - POOR SOD	TREED	HAY	TREED	P	TREED	TREED PASTURE	TREED	DISTURBED LAND	TREED	TAME PASTURE	HAY
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA											
	HERITAGE / TRADITIONAL LAND USE	[TLU SITE]											
	WILDLIFE / WILDLIFE HABITAT												
	VEGETATION												
	WETLANDS	TREED FEN						[SHRUBBY SWAMP]					
	FISH HABITAT SENSITIVITY												
	HYDROLOGY	[DRAINAGE]						[DRAINAGE]					
SOILS PARENT MATERIAL	T	GF	O	stT	T	-	T	O	T				

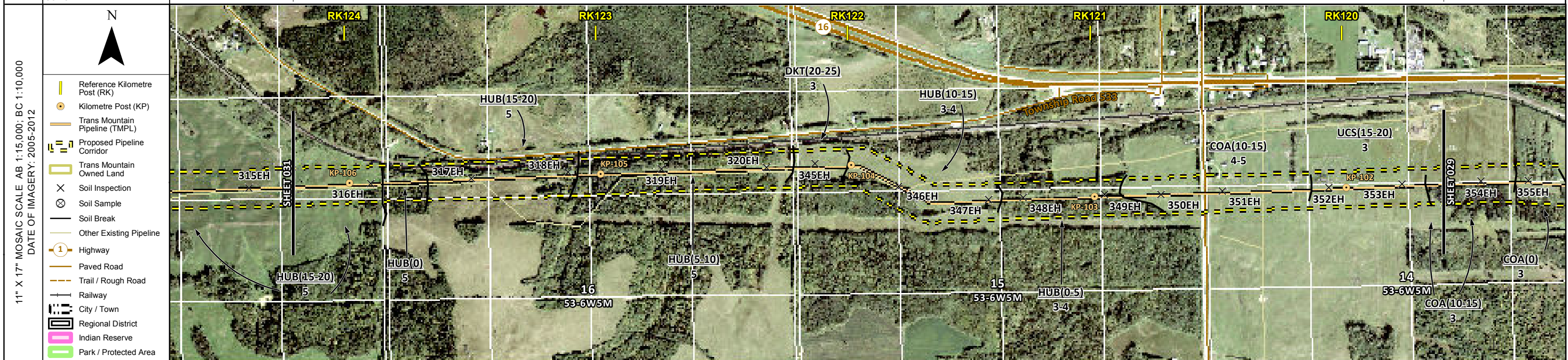


ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)] [WC (NCD)] [WETLAND] [WETLAND]												
	CONSTRUCTION WORK WINDOW	[AQ-OPEN] [AQ-OPEN]												
	SOILS HANDLING	STRIPPING DEPTH (cm)	10-15	15-20	20	15-20	10	10	15-20	10	20	10-15		
	SOILS	PROCEDURE	SO-NOTE 1			SO-NOTE 3			SO-NOTE 2			SO-NOTE 1		
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE				WT-NOTE 1			[AQ-NOTE 3] [AQ-NOTE 2]			[AQ-NOTE 3] [AQ-NOTE 2]		
	WETLANDS					WT-NOTE 1						[WT-NOTE 1]		
	FOREST TYPE (m ² /ha)													
	VEGETATION													
	WILDLIFE AND FISH HABITAT													
	HERITAGE / TRADITIONAL LAND USE		[TLU-NOTE 1]											
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS														
SPECIAL MEASURES														

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATIS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REV0	PAGE SHEET 029 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 115.2 TO RK 119.6 				
			NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.	DATE	TERA REF.	REVISION
			0	Dec 16, 2013	Issued for NEB filing	CMR	DN		TW/GB	December 2013	7894	0
							SCALE	PAGE SIZE	DISCIPLINE			
							1:15,000	11x17	EAS			
							DRAWN	CHECKED	DESIGN			
							CMR	DN	TGG			

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY							
	LAND OWNERSHIP / DISPOSITION	PRIVATE							
	LAND USE	TREED	TAME PASTURE	TREED	TAME PASTURE	TREED	TAME PASTURE	P - POOR SOD	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA							
	HERITAGE / TRADITIONAL LAND USE	[TLU SITE]							
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION								
	WETLANDS	[SE MARSH]				[SHRUBBY SWAMP]		[SE MARSH]	
	FISH HABITAT SENSITIVITY								
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]					
SOILS PARENT MATERIAL									

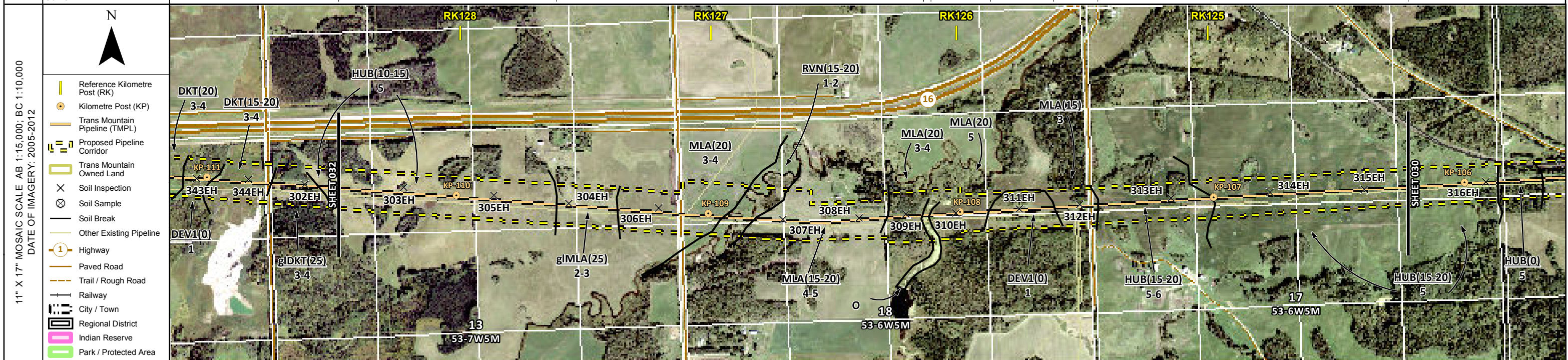


ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[WETLAND]	[WETLAND]		
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]					
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	20-25	15-20	10-15	15-20	[10-15]	
	SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE						
	SOILS		SO-NOTE 1						
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]				
	WATERCOURSE CROSSINGS		[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]				
	WETLANDS		[WT-NOTE 1]			[WT-NOTE 1]	[WT-NOTE 1]		
	FOREST TYPE (m ³ /ha)								
	VEGETATION								
WILDLIFE AND FISH HABITAT									
HERITAGE / TRADITIONAL LAND USE		[TLU-NOTE 1]							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									
SPECIAL MEASURES									

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 030 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 119.6 TO RK 124.2 				
			NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.	DATE	TERA REF.	REVISION
			0	Dec 16, 2013	Issued for NEB filing	CMR	DN		TW/GB	December 2013	7894	0
										SCALE	PAGE SIZE	DISCIPLINE
						1:15,000	11x17	EAS				
						DRAWN	CHECKED	DESIGN				
						CMR	DN	TGG				

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY										
	LAND OWNERSHIP / DISPOSITION	PRIVATE										
	LAND USE	CULTIVATED	TAME PASTURE	CULTIVATED	P	CULTIVATED	P	O	T-P	TREED	CULTIVATED	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA										
	HERITAGE / TRADITIONAL LAND USE											
	WILDLIFE / WILDLIFE HABITAT											
	VEGETATION											
	WETLANDS	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SHRUBBY SWAMP]	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SE MARSH]	
	FISH HABITAT SENSITIVITY											
	HYDROLOGY	[TRIB TO ISLE LAKE]					[TRIB TO STURGEON RIVER]					
SOILS PARENT MATERIAL	T	GL	GL	O/GF, GL or T	GL	T						



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[WETLAND]	[WC (CLASS C)]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]
	WIND/WATER ER	WIND ER	COMP RUT	WIND/WATER ER	WIND ER	WIND/WATER ER	COMP RUT	WIND ER	WIND/WATER ER	

CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO APR 15]	[AQ-JUL 1 TO APR 15]								
SOILS STRIPPING DEPTH (cm)	10-15	25	20	15-20	20	20	40	15	15-20	
SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE									
SOILS	SO-NOTE 1		SO-NOTE 2	SO-NOTE 1		SO-NOTE 1	SO-NOTE 2		SO-NOTE 1	
WATERCOURSE CROSSINGS PIPELINE VEHICLE			[AQ-NOTE 3]	[AQ-NOTE 3]		[AQ-NOTE 2]				
WETLANDS	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1][WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]
FOREST TYPE (m ³ /ha)										
VEGETATION										
WILDLIFE AND FISH HABITAT										
HERITAGE / TRADITIONAL LAND USE										
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS										
SPECIAL MEASURES			[AQ-NOTE 4]							

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 031 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
		DISCIPLINE	EAS
		DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANSMOUNTAIN EXPANSION PROJECT

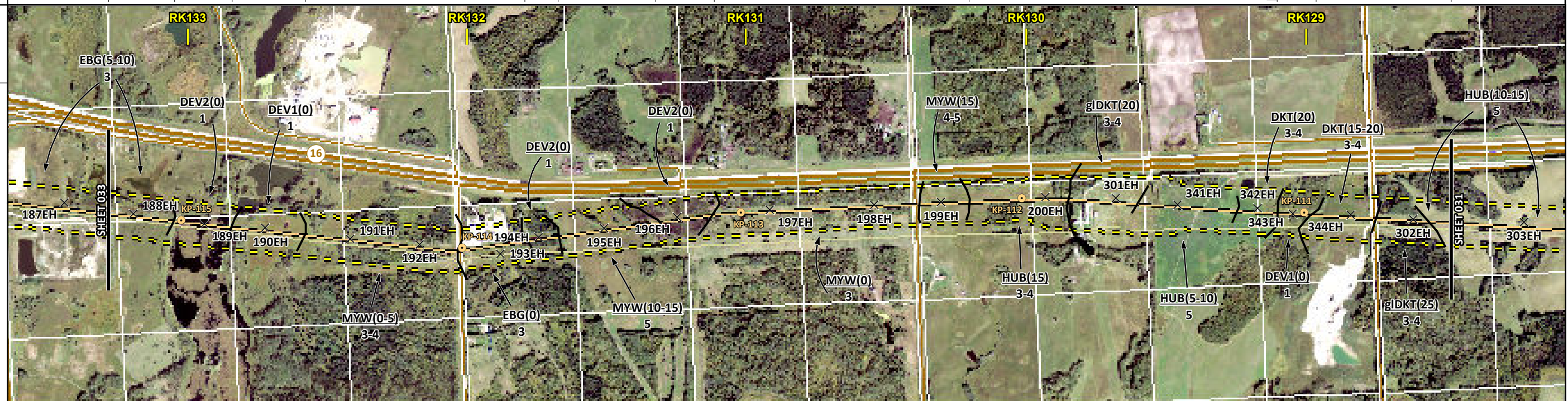
FROM RK 124.2 TO RK 128.5

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PARKLAND COUNTY												
	LAND OWNERSHIP / DISPOSITION	CROWN [MIXED] PRIVATE [PNT760036; PNT910073; PNT764250] DRS1402												
	LAND USE	TREED PASTURE	TREED	TAME PASTURE	TREED	TAME PASTURE	TREED	TAME PASTURE	HAY	TREED	HAY	T-P [CULTIVATED]		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA												
	HERITAGE / TRADITIONAL LAND USE													
	WILDLIFE / WILDLIFE HABITAT													
	VEGETATION													
	WETLANDS	OPEN POND	SE MARSH	SHRUBBY FEN	SHRUBBY SWAMP	SE MARSH	SE MARSH	SE MARSH	SHRUBBY SWAMP	OPEN POND	SHRUBBY SWAMP			
	FISH HABITAT SENSITIVITY													
	HYDROLOGY													
SOILS PARENT MATERIAL	GL	O	O/GF, GL or T	GL	O	GL	O	GL	T	O/GF, GL or T	T			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	NAV WATERS	WETLANDS	WETLAND	WETLAND	WETLAND	WETLAND	WETLAND	NAV WATERS	WETLANDS	WETLAND
	WIND ER	WIND ER	COMP RUT	WIND/WATER ER	WIND ER	WIND/WATER ER	WIND ER	COMP RUT	WIND/WATER ER	WIND ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW																	
	SOILS HANDLING	STRIPPING DEPTH (cm)	10	15-20	40	15-20	10	15-20	10-15	15-20	15	20	10	20	40	15-20	25	10-15
	SOILS	PROCEDURE	SO-NOTE 1			SO-NOTE 1			SO-NOTE 1			SO-NOTE 1			SO-NOTE 2			SO-NOTE 1
	SOILS	PROCEDURE	SO-NOTE 1			SO-NOTE 1			SO-NOTE 1			SO-NOTE 1			SO-NOTE 2			SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE																
	WETLANDS		WT-NOTE 2	WT-NOTE 1		WT-NOTE 1	WT-NOTE 1	WT-NOTE 1	WT-NOTE 1	WT-NOTE 1	WT-NOTE 1	WT-NOTE 1	WT-NOTE 1	WT-NOTE 1	WT-NOTE 1	WT-NOTE 1	WT-NOTE 1	WT-NOTE 1
	FOREST TYPE (m ³ /ha)																	
	VEGETATION																	
	WILDLIFE AND FISH HABITAT																	
	HERITAGE / TRADITIONAL LAND USE																	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS																		
SPECIAL MEASURES																		

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 032 OF 301
DATE	December 2013	REVISION	0
SCALE	1:15,000	DISCIPLINE	EAS
DRAWN	CMR	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

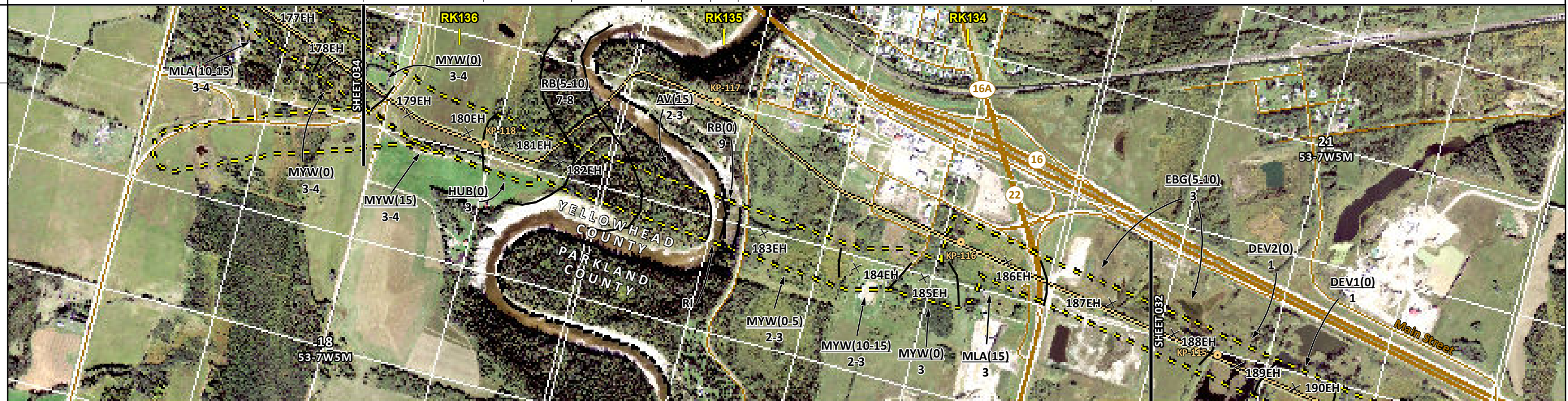
FROM RK 128.5 TO RK 133.3

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY				PARKLAND COUNTY					
	LAND OWNERSHIP / DISPOSITION	PRIVATE				CROWN PNT850593 PNT890256		PRIVATE		CROWN	
	LAND USE	TREED	HAY	TREED	RIVER	TREED	TAME PASTURE	TREED	TREED PASTURE		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS	[SHRUBBY SWAMP]					[OPEN POND]				
	FISH HABITAT SENSITIVITY	[HIGH]					[PEMBINA RIVER]				
	HYDROLOGY										
SOILS PARENT MATERIAL	GL	T	F	-	GL						

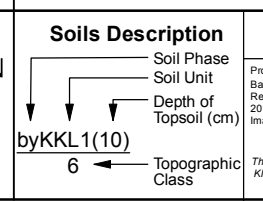
11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[FISH]	[WC (CLASS C)]	[WATER ER]	[NAV WATERS]	WETLAND	[WETLAND]	[NAV WATERS]
	COMP RUT	WIND ER	WATER ER	WIND ER	COMP RUT	WIND ER	
				[AQ-JUL 1 TO AUG 31]			

CONSTRUCTION WORK WINDOW				[AQ-JUL 1 TO AUG 31]						
SOILS HANDLING	STRIPPING DEPTH (cm)	[15-20]	15	15-20	-	15-20	10-15	15-20	15	10
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE				FULL ROW; REDUCE AS APPROPRIATE				
WATERCOURSE CROSSINGS	PIPELINE VEHICLE						[AQ-NOTE 3]			
WETLANDS							[AQ-NOTE 2]			
FOREST TYPE (m ³ /ha)								[WT-NOTE 1]		[WT-NOTE 1]
VEGETATION										[WT-NOTE 2]
WILDLIFE AND FISH HABITAT										[AQ-NOTE 1]
HERITAGE / TRADITIONAL LAND USE										
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS										
SPECIAL MEASURES										[AQ-NOTE 4]



REFERENCES

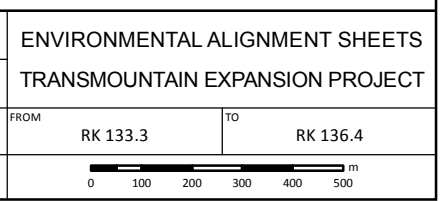
Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 033 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG



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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY												
	LAND OWNERSHIP / DISPOSITION	PRIVATE												
	LAND USE	HAY	CULTIVATED	HAY	TAME PASTURE	HAY	TAME PASTURE	TREED	TAME PASTURE	TREED	P	TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA												
	HERITAGE / TRADITIONAL LAND USE	[TLU SITE]												
	WILDLIFE / WILDLIFE HABITAT													
	VEGETATION													
	WETLANDS	[SE MARSH]							TREED FEN	[SHRUBBY SWAMP]	[OPEN POND]			
	FISH HABITAT SENSITIVITY	[HIGH]												
	HYDROLOGY	[TRIB TO LOBSTICK RIVER]	[DRAINAGE]	[DRAINAGE]									[ZEB-IGLER CREEK]	
SOILS PARENT MATERIAL	[GL -]	[GL -]	[GL -]	[GL -]	[GL -]	[GL -]	[GL -]	[GL -]	[GL -]	[GL -]	[GL -]	[GL -]	[GL -]	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WIND ER]	[WC (CLASS C)]	[WC (NCD)]	[WC (NCD)]	[WETLAND]	[WETLANDS]	[WC (CLASS C)]	[WETLAND]	[NAV WATERS]	[TLU]						
	CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO AUG 31]	[AQ-OPEN]	[AQ-OPEN]				[AQ-JUL 1 TO APR 15]									
	SOILS HANDLING PROCEDURE	[15]	[10]	[20-25]	[10]	[15-20]			[15]	[20]	[15]	[40]	[20]	[40]	[20]	[40]	[15-20]
	SOILS	[SO-NOTE 1]	[SO-NOTE 1]			[SO-NOTE 1]			[SO-NOTE 1]		[SO-NOTE 2]						
	WATERCOURSE CROSSINGS	[PIPELINE]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]						[AQ-NOTE 3]						
		[VEHICLE]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]						[AQ-NOTE 2]						
	WETLANDS			[WT-NOTE 1]							[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 2]				
	FOREST TYPE (m ³ /ha)																
	VEGETATION																
	WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]															
HERITAGE / TRADITIONAL LAND USE											[TLU-NOTE 1]						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS																	
SPECIAL MEASURES	[AQ-NOTE 4]																

Soils Description	Soil Phase	Soil Unit	Depth of Topsoil (cm)	Topographic Class
byKKL1(10)			6	

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATIS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

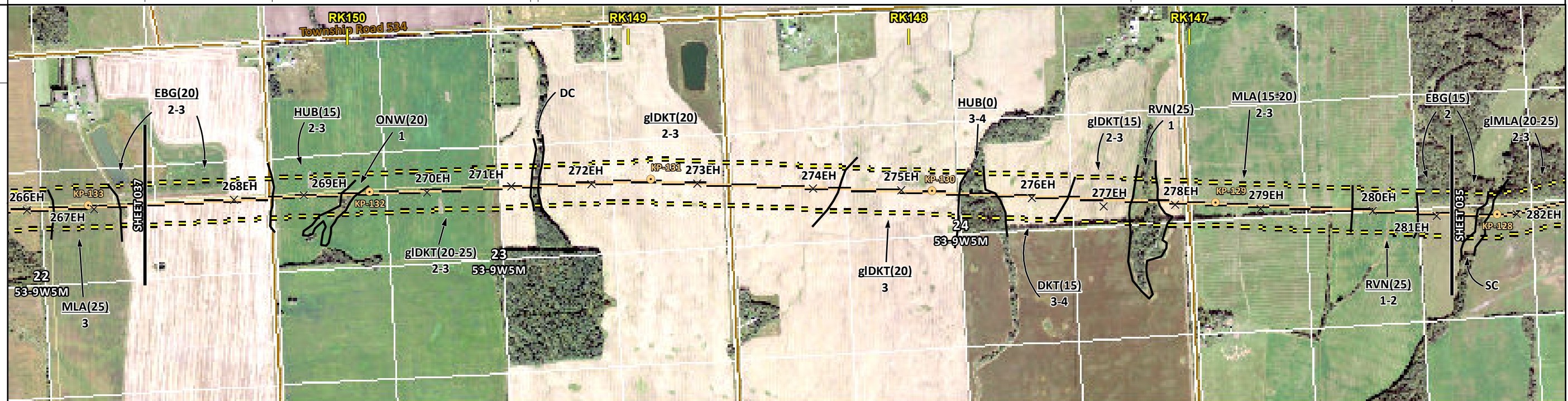
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REVISION HISTORY					MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 035 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS			
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	DATE December 2013	TERA REF. 7894	REVISION 0	TRANS MOUNTAIN EXPANSION PROJECT	
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB				FROM RK 141.2	TO RK 146.1
						SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS	FROM RK 141.2 TO RK 146.1	
						DRAWN CMR	CHECKED DN	DESIGN TGG		

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY									
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	CULTIVATED	HAY	CULTIVATED	TREED	CULTIVATED	TREED	C	HAY		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS	[SE MARSH] [SHRUBBY SWAMP]									
	FISH HABITAT SENSITIVITY										
	HYDROLOGY	[DRAINAGE] [DRAINAGE] [DRAINAGE] [TRIB TO LOBSTICK R] [TRIB TO LOBSTICK RIVER] [TRIB TO LOBSTICK RIVER] [HIGH]									
SOILS PARENT MATERIAL	GL T T GL										

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)] [WC (NCD)] [WC (NCD)] [WC (CLASS C)] [WC (CLASS C)] [COMP RUT] [FISH] [WC (CLASS C)] [WIND ER] [NAV WATERS]											
	CONSTRUCTION WORK WINDOW	[AQ-OPEN] [AQ-OPEN] [AQ-OPEN] [AQ-JUL 1 TO AUG 31] [AQ-JUL 1 TO AUG 31] [WIND ER] [AQ-JUL 1 TO AUG 31]											
	SOILS STRIPPING DEPTH (cm)	20	15	20	20-25	10	20	15-20	15	25	15-20	25	15
	SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE											
	SOILS	SO-NOTE 2		SO-NOTE 1		SO-NOTE 2		SO-NOTE 2		SO-NOTE 1		SO-NOTE 1	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE		[AQ-NOTE 3] [AQ-NOTE 3]		[AQ-NOTE 3] [AQ-NOTE 3]		[AQ-NOTE 3]		[AQ-NOTE 3]		[AQ-NOTE 3]	
	WETLANDS	[W1-NOTE 1]											
	FOREST TYPE (m ³ /ha)												
	VEGETATION												
	WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]											
HERITAGE / TRADITIONAL LAND USE													
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS													
SPECIAL MEASURES	[AQ-NOTE 4]												

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

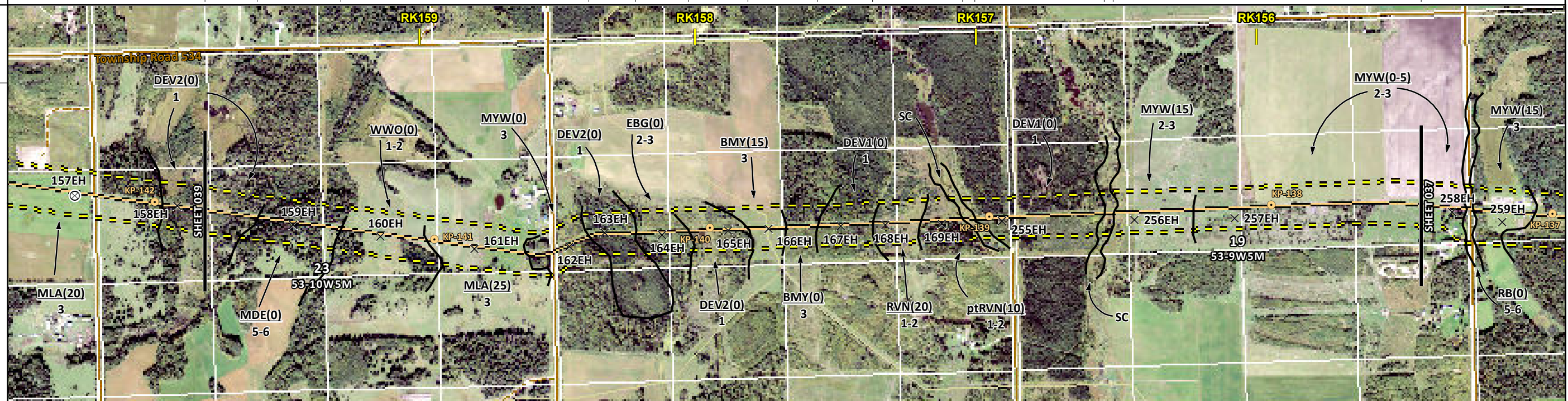
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 036 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 146.1 TO RK 150.7

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY											
	LAND OWNERSHIP / DISPOSITION	CROWN [MIXED] PRIVATE											
	LAND USE	TREED	TAME PASTURE	TREED	HAY	TREED	P	TREED	T-P	TREED	[T-P]	CULTIVATED	T-P
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA											
	HERITAGE / TRADITIONAL LAND USE	[TLU SITE]						[TLU SITE]					
	WILDLIFE / WILDLIFE HABITAT												
	VEGETATION												
	WETLANDS	[SHRUBBY SWAMP]	[NLTR SWAMP]	[SHRUBBY SWAMP]	[SE MARSH]	[SHRUBBY SWAMP]	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SE MARSH]	[SE MARSH]
	FISH HABITAT SENSITIVITY	[TREED FEN]		[SE MARSH]				[MXDTR SWAMP]					
	HYDROLOGY	[TRIB TO CHIP L]	[DRAINAGE]	[DRAINAGE]				[TRIB TO CHIP LAKE]			[TRIB TO CHIP LAKE]		
SOILS PARENT MATERIAL	O	B	GL	GL	O	T	O/GF, GL or T	GL	-	O/GF, GL or T	-	GL	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)] [WC (CLASS C)] [WETLANDS] [NAV WATERS] [COMP RUT]	[WC (NCD)] [WC (NCD)] [WETLANDS] [NAV WATERS] [COMP RUT]	[WC (NCD)] [WC (NCD)] [WETLANDS] [NAV WATERS] [COMP RUT]	[WC (CLASS C)] [WETLANDS] [NAV WATERS] [COMP RUT]	[WC (CLASS C)] [WETLANDS] [NAV WATERS] [COMP RUT]	[WETLAND] [TLU] [COMP RUT] [WIND ER]	
	CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO APR 15]	[AQ-OPEN]	[AQ-OPEN]	[AQ-JUL 1 TO APR 15]	[AQ-JUL 1 TO APR 15]	[AQ-JUL 1 TO APR 15]	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE	15-20	25	15-20	15 15-20 40	20 40 [15-20]	40 [10]
	SOILS		SO-NOTE 1	SO-NOTE 1	SO-NOTE 1	FULL ROW; REDUCE AS APPROPRIATE	SO-NOTE 2	SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	WETLANDS		[WT-NOTE 1]	[WT-NOTE 2]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 2]	[WT-NOTE 1]
	FOREST TYPE (m ³ /ha)							
	VEGETATION							
	WILDLIFE AND FISH HABITAT							
	HERITAGE / TRADITIONAL LAND USE				[TLU-NOTE 1]			[TLU-NOTE 1]

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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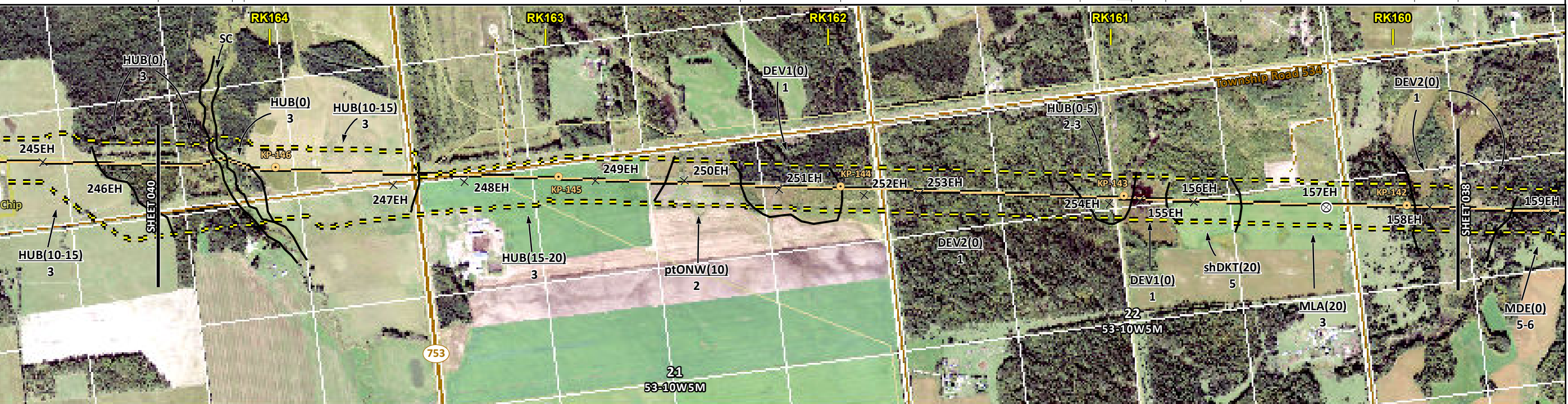
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 038 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 155.4 TO RK 159.8

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY											
	LAND OWNERSHIP / DISPOSITION	PRIVATE					CROWN			PRIVATE		CROWN	
	LAND USE	TREED	HAY	TAME PASTURE	HAY	CULTIVATED	TREED			HAY - POOR SOD	TAME PASTURE	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA											
	HERITAGE / TRADITIONAL LAND USE												
	WILDLIFE / WILDLIFE HABITAT												
	VEGETATION	[CONOSAL]											
	WETLANDS	[DEEP MARSH]			SHRUBBY SWAMP			[DEEP MARSH]			[SHRUBBY SWAMP]		TREED FEN
	FISH HABITAT SENSITIVITY	[HIGH][HIGH]											
	HYDROLOGY	[TRIB TO CHIP L] [TRIB TO CHIP L]											
SOILS PARENT MATERIAL	T	-	T	O/GF, GL or T	O	T	[O/GF, GL or T]	T/B	GL	O			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[FISH][NAV WATERS]	[FISH]	[WC (CLASS C)]	[WC (CLASS C)] [WETLAND]	[NAV WATERS]	[NAV WATERS]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLANDS]	[RARE PLANT]
	[WIND ER]	[WIND ER]	[WIND ER]	[WIND ER]	[WIND ER]	[WIND ER]	[WIND ER]	[WIND ER]	[WIND ER]	[WIND ER]	[WIND ER]

CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO APR 15]	[AQ-JUL 1 TO APR 15]									
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	10-15	15-20	40	15-20	40	20	15-20		
SOILS	PROCEDURE	SO-NOTE 1	SO-NOTE 1		FULL ROW; REDUCE AS APPROPRIATE	SO-NOTE 2	SO-NOTE 1	[SO-NOTE 2]	SO-NOTE 1	SO-NOTE 2	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 2]						
WETLANDS		[WT-NOTE 1]	[WT-NOTE 2]		[WT-NOTE 1]		[WT-NOTE 1]	[WT-NOTE 2]		[WT-NOTE 1]	[WT-NOTE 2]
FOREST TYPE (m ³ /ha)											
VEGETATION											[VG-NOTE 1]
WILDLIFE AND FISH HABITAT		[AQ-NOTE 1]	[AQ-NOTE 1]								
HERITAGE / TRADITIONAL LAND USE											
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											
SPECIAL MEASURES		[AQ-NOTE 4]	[AQ-NOTE 4]								

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 039 OF 301
DATE	December 2013	REVISION	0
SCALE	1:15,000	DISCIPLINE	EAS
DRAWN	CMR	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

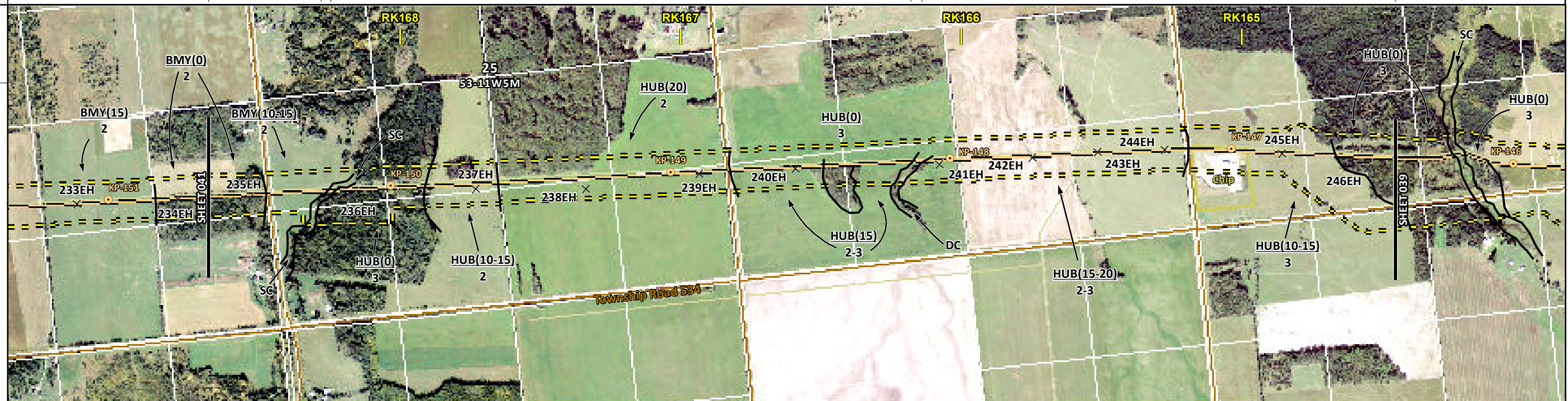
FROM RK 159.8 TO RK 164.4

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY										
	LAND OWNERSHIP / DISPOSITION	PRIVATE										
	LAND USE	TREED	TAME PASTURE	TREED	TAME PASTURE	HAY	TAME PASTURE	TREED				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA										
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS										
	WILDLIFE / WILDLIFE HABITAT											
	VEGETATION											
	WETLANDS											
	FISH HABITAT SENSITIVITY											
	HYDROLOGY	[TRIB TO CHIP LAKE]			[DRAINAGE]			[DRAINAGE]			[DRAINAGE]	
SOILS PARENT MATERIAL												

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (CLASS C)]	MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS [WC (NCD)]				[WC (NCD)]	[WC (NCD)]						
CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO APR 15]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	WIND ER								
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	10-15	15-20	10-15	20	15	10	15	10	15-20	10-15	[15-20]
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE											
SOILS	SO-NOTE 1 SO-NOTE 2	SO-NOTE 1											
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS													
FOREST TYPE (m ³ /ha)													
VEGETATION													
WILDLIFE AND FISH HABITAT		AK-NOTE 1											
HERITAGE / TRADITIONAL LAND USE													
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS													
SPECIAL MEASURES													

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
byKKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 040 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 164.4 TO RK 168.7

P:\GIS\TMEP\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LR\Reb

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PRIVATE	YELLOWHEAD COUNTY	MIXED	CROWN	PRIVATE
	LAND OWNERSHIP / DISPOSITION		CROWN CNT090043; PNT700344		CROWN CNT090043	
	LAND USE		TREED TPA1957			DRS860234 P - POOR SOD
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		WHITE AREA			[MACKAY - 3.85 KM N OF CORRIDOR]
	HERITAGE / TRADITIONAL LAND USE		[TLU SITE]			[TLU SITE]
	WILDLIFE / WILDLIFE HABITAT					
	VEGETATION		COPTTRI			
	WETLANDS	[TREED FEN]	[SHRUBBY SWAMP]	[SHRUBBY SWAMP]	[SHRUBBY SWAMP]	[SE MARSH]
	FISH HABITAT SENSITIVITY					[HIGH]
	HYDROLOGY	[DRAINAGE]				[LITTLE BRULE CREEK]

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)] [WETLAND] [NAV WATERS]	[WETLAND]	[WETLAND] [TLU]	[WETLAND]	[TLU]	[WC (CLASS C)] [WETLAND] [NAV WATERS]	[FISH] [WATER ER]	WIND ER
--------------------------------	---	-----------	--------------------	-----------	-------	---	----------------------	---------

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-JUL 1 TO AUG 31]
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE	15-20 FULL ROW; REDUCE AS APPROPRIATE
SOILS		SO-NOTE 1 SO-NOTE 2
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS		[WT-NOTE 1] [WT-NOTE 2]
FOREST TYPE (m ² /ha)		VG-NOTE 1
VEGETATION		
WILDLIFE AND FISH HABITAT		[AQ-NOTE 1]
HERITAGE / TRADITIONAL LAND USE		[TLU-NOTE 1]
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		[AQ-NOTE 4]

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
byKKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: Altalis, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: Altalis, 2009; First Nation Lands: Government of Canada, 2013; Altalis, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; Altalis, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 042 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

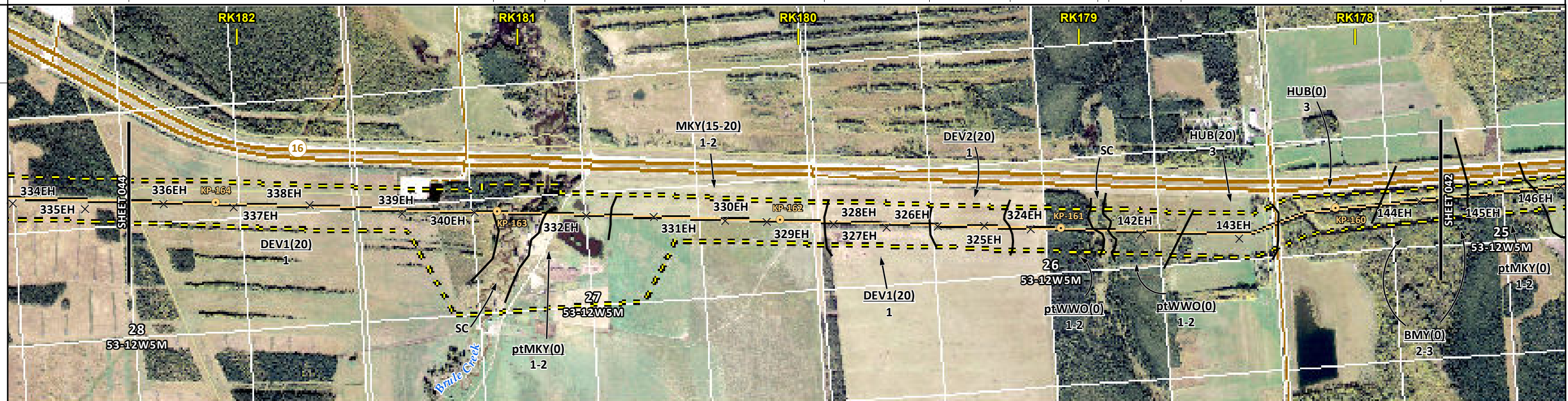
FROM RK 173.3 TO RK 177.7

P:\GIS\TERRA\MAPS\201310_MAP_TERA_EAS_00434\Rev0\AS_Out\Map\Update_201312031

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PRIVATE				YELLOWHEAD COUNTY				CROWN				[MIXED]		PRIVATE	
	LAND OWNERSHIP / DISPOSITION	TAME PASTURE				TAME PASTURE				TAME PASTURE				TAME PASTURE		TAME PASTURE	
	LAND USE	TAME PASTURE				TAME PASTURE				TAME PASTURE				TAME PASTURE		TAME PASTURE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA															
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS															
	WILDLIFE / WILDLIFE HABITAT																
	VEGETATION																
	WETLANDS	[OPEN POND]								[SE MARSH]							
	FISH HABITAT SENSITIVITY	[HIGH]															
	HYDROLOGY	[BRULE CREEK]								[TRIB TO BRULE CREEK]							
SOILS PARENT MATERIAL	O/GF, GL or T				T				O/GF, GL or T				O				

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[NAV WATERS]				MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS				[WC (CLASS C)] [WETLAND] [NAV WATERS]				[WC (CLASS C)] [WETLAND] [NAV WATERS]		[WC (CLASS C)] [WETLAND] [NAV WATERS]	
	COMP RUT				WIND ER				COMP RUT				WIND ER		COMP RUT	

CONSTRUCTION WORK WINDOW	[AQ-JUL 1 TO AUG 31]				[AQ-JUL 1 TO AUG 31]				[AQ-JUL 1 TO AUG 31]				[AQ-JUL 1 TO AUG 31]			
SOILS HANDLING	STRIPPING DEPTH (cm) 40				15-20 10				15-20 40 20				15-20 10 20		15-20	
SOILS	SO-NOTE 2				SO-NOTE 1				SO-NOTE 2				SO-NOTE 2		SO-NOTE 1	
WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 2]				[AQ-NOTE 3] [AQ-NOTE 2]				[AQ-NOTE 3] [AQ-NOTE 2]				[AQ-NOTE 3] [AQ-NOTE 2]		[AQ-NOTE 3] [AQ-NOTE 2]	
WETLANDS	[WT-NOTE 1] [WT-NOTE 2]				[WT-NOTE 1] [WT-NOTE 2]				[WT-NOTE 1] [WT-NOTE 2]				[WT-NOTE 1] [WT-NOTE 2]		[WT-NOTE 1] [WT-NOTE 2]	
FOREST TYPE (m ² /ha)																
VEGETATION	[AQ-NOTE 1]															
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]															
HERITAGE / TRADITIONAL LAND USE	AK-NOTE 1															
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS																
SPECIAL MEASURES	[AQ-NOTE 4]				[AQ-NOTE 4]				[AQ-NOTE 4]				[AQ-NOTE 4]			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
byKKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 043 OF 301
DATE	December 2013	REVISION	0
SCALE	1:15,000	DISCIPLINE	EAS
DRAWN	CMR	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANSMOUNTAIN EXPANSION PROJECT

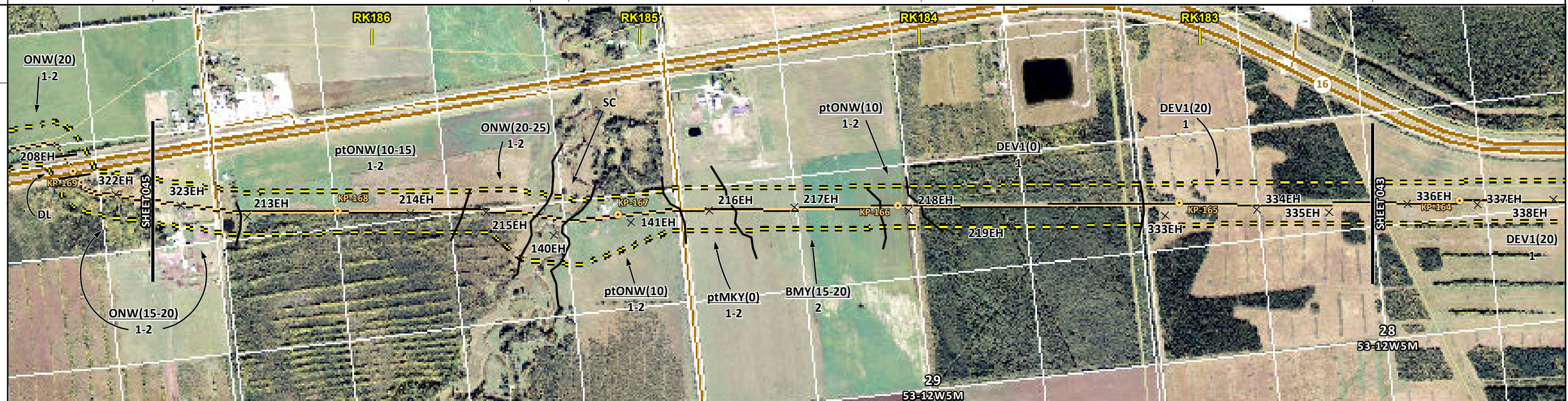
FROM RK 177.7 TO RK 182.4

P:\GIS\TERRA\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LR\Revs

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY							
	LAND OWNERSHIP / DISPOSITION	PRIVATE							
	LAND USE	[MIXED]	TREED	TAME PASTURE	HAY	[CULTIVATED]	TREED	TAME PASTURE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA							
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION								
	WETLANDS								
	FISH HABITAT SENSITIVITY	[HIGH]							
	HYDROLOGY	[LOBSTICK RIVER]							
SOILS PARENT MATERIAL	O/GF, GL or T								

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[FISH] [WC (CLASS C)] [NAV WATERS] [WIND ER] [AQ-JUL 1 TO AUG 31]							
CONSTRUCTION WORK WINDOW	COMP RUT							

ENVIRONMENTAL PROTECTION	SOILS	STRIPPING DEPTH (cm)	15-20	40	20-25	10	40	10	15-20	40		
	HANDLING	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE									
SOILS	SO-NOTE 2				SO-NOTE 1				SO-NOTE 2			
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]				[AQ-NOTE 2]						
WETLANDS												
FOREST TYPE (m ³ /ha)												
VEGETATION												
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]											
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES	[AQ-NOTE 4]											

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
byKKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 044 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG


ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 182.4 TO RK 186.8

P:\GIS\TERRA\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LR\Res

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PRIVATE		CROWN CNT090043; GRL840473 PNT780290; PNT820362		PRIVATE		[MIXED] CROWN [MIXED]		
	LAND OWNERSHIP / DISPOSITION	PRIVATE		CROWN CNT090043; GRL840473 PNT780290; PNT820362		PRIVATE		[MIXED] CROWN [MIXED]		
	LAND USE	HAY	TREED	HAY	TREED	P	TREED	HAY	[DL] TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA								
	HERITAGE / TRADITIONAL LAND USE								TLU SITE	[TLU SITE]
	WILDLIFE / WILDLIFE HABITAT									
	VEGETATION									
	WETLANDS	[MXDTR SWAMP]								
	FISH HABITAT SENSITIVITY									
	HYDROLOGY	[TRIB TO LOBSTICK RIVER]								
SOILS PARENT MATERIAL	T	O	T	O	T	[O/GF, GL or J] T	O	T	T	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012



- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WIND ER		WIND ER		COMP RUT		WIND ER		WIND ER		COMP RUT	
					[WC (CLASS C)] WETLAND [NAV WATERS]				TLU		[TLU]	

CONSTRUCTION WORK WINDOW		[AQ-JUL 1 TO AUG 31]											
SOILS HANDLING	STRIPPING DEPTH (cm)	10-15	15-20	25	15-20	40	10-15	15-20	20	15-20	15-20	15-20	
	PROCEDURE	SO-NOTE 1	SO-NOTE 1	FULL ROW; REDUCE AS APPROPRIATE	SO-NOTE 1	SO-NOTE 1	SO-NOTE 1	SO-NOTE 1	SO-NOTE 1	SO-NOTE 1	SO-NOTE 1	SO-NOTE 2	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2] [WT-NOTE 1]											
WETLANDS													
FOREST TYPE (m ³ /ha)													
VEGETATION													
WILDLIFE AND FISH HABITAT													
HERITAGE / TRADITIONAL LAND USE											TLU-NOTE 1	[TLU-NOTE 1]	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS													
SPECIAL MEASURES	[AQ-NOTE 4]												



Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

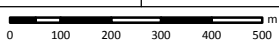
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER: 201310_MAP_TERA_EAS_00434_REV0
 TERA REF: 7894
 SCALE: 1:15,000
 DRAWN: CMR

PAGE: SHEET 045 OF 301
 REVISION: 0
 DISCIPLINE: EAS
 DESIGN: TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM: RK 186.8 TO: RK 191.3



P:\GIS\TERRA\201310_MAP_TERA_EAS_00434\Rev0\AS_Output\LR\Reb

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY									
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	CULTIVATED	TREED	TAME PASTURE	HAY	HAY - POOR SOD	TREED	DL	HAY		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS	[SHRUBBY SWAMP]									
	FISH HABITAT SENSITIVITY	[HIGH]									
	HYDROLOGY	[DRAINAGE] [CARROT CREEK]									
SOILS PARENT MATERIAL	T	F	[GF]	GL	GL/T	T	-	T			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)] [WETLAND]	[WC (CLASS C)]	[NAV WATERS] [UNST TR]	[FISH]
CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-JUL 16 TO AUG 31]		

ENVIRONMENTAL PROTECTION	SOILS	STRIPPING DEPTH (cm)	25	40	15-20	10-15	20	10	15-20	15	20	20-25	25	15-20	-	10-15		
	SOILS HANDLING	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE										[FULL ROW; REDUCE AS APPROPRIATE]					
	SOILS		SO-NOTE 2				SO-NOTE 2				SO-NOTE 1		[SO-NOTE 3]					
	WATERCOURSE CROSSINGS	PIPELINE	[AQ-NOTE 3]										[AQ-NOTE 3]					
	WATERCOURSE CROSSINGS	VEHICLE	[AQ-NOTE 2]										[AQ-NOTE 2]					
	WATERCOURSE CROSSINGS	WETLANDS	[WET-NOTE 1]															
	WETLANDS																	
	FOREST TYPE (m ³ /ha)																	
	VEGETATION																	
	WILDLIFE AND FISH HABITAT		[AQ-NOTE 1]															
HERITAGE / TRADITIONAL LAND USE																		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS																		
SPECIAL MEASURES		[AQ-NOTE 4]																

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 046 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANS MOUNTAIN EXPANSION PROJECT

FROM RK 191.3 TO RK 195.7

P:\GIS\TMAP\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LaRes

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION				YELLOWHEAD COUNTY					
	LAND OWNERSHIP / DISPOSITION		PRIVATE	MIXED [CNT090043; PNT810022] TPA1517	PRIVATE	MIXED	PRIVATE	MIXED	PRIVATE	
	LAND USE		TREED		TAME PASTURE	CLEARED		TAME PASTURE		CULTIVATED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				WHITE AREA					
	HERITAGE / TRADITIONAL LAND USE									
	WILDLIFE / WILDLIFE HABITAT									
	VEGETATION		[CARDPRA] [CHRY OW]							
	WETLANDS		[SHRUBBY FEN]	[DEEP MARSH SHRUBBY SWAMP OPEN POND]	[SE MARSH SE MARSH]					
	FISH HABITAT SENSITIVITY		[HIGH]							
	HYDROLOGY		[LAKE TRIB TO JANUARY CREEK]	[TRIB TO JANUARY CREEK]		[DRAINAGE]	[DRAINAGE]			
SOILS PARENT MATERIAL		GL	[O GF, GL or T]	O	T	O	T			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[RARE PLANTS]	[NAV WATERS]	[WC (CLASS C)]	[WC (CLASS C)]	[WC (NCD)]	[WC (NCD)]
	[FISH]	[WETLANDS]	[WETLANDS]	[WETLANDS]	[WETLANDS]	[WETLANDS]
	[WIND ER]	[COMP RUT]	[WIND ER]	[COMP RUT]	[WIND ER]	[COMP RUT]

CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-OPEN]	[AQ-OPEN]										
SOILS STRIPPING DEPTH (cm)	15-20	40	15-20	10	15-20	10	10-15	25	15	10	25	10	25	
SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE													
SOILS	SO-NOTE 1	SO-NOTE 2	SO-NOTE 1	SO-NOTE 2	SO-NOTE 1	SO-NOTE 2	[SO-NOTE 2]							
WATERCOURSE CROSSINGS			[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]						
PIPELINE VEHICLE			[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]						
WETLANDS			[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]						
FOREST TYPE (m ³ /ha)			[WT-NOTE 2]	[WT-NOTE 2]	[WT-NOTE 2]	[WT-NOTE 2]	[WT-NOTE 2]	[WT-NOTE 2]						
VEGETATION		[VG-NOTE 1]												
WILDLIFE AND FISH HABITAT		[AQ-NOTE 1]												
HERITAGE / TRADITIONAL LAND USE														
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS														
SPECIAL MEASURES														



Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N

Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

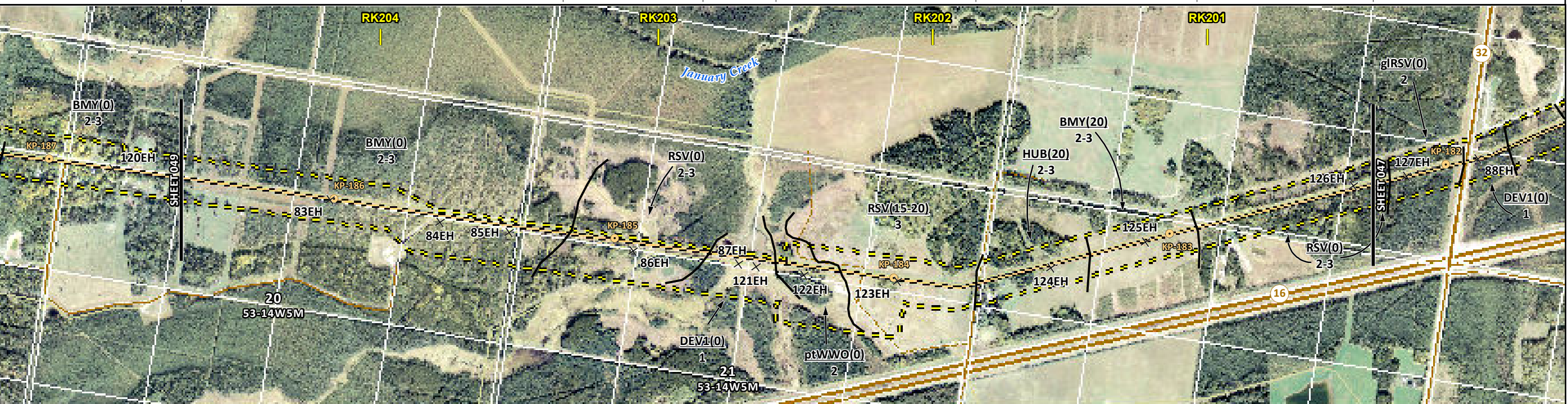
MAP NUMBER 201310_MAP_TERA_EAS_00434_REV0	PAGE SHEET 047 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 195.7 TO RK 200.4

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY			
	LAND OWNERSHIP / DISPOSITION	PRIVATE			
	LAND USE	TREED	HAY	TAME PASTURE	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA			
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS	[NLTR SWAMP]	[SE MARSH]	[SE MARSH]	
	FISH HABITAT SENSITIVITY		[HIGH]	[HIGH]	
	HYDROLOGY		[TRIB TO JANUARY CR]	[TRIB TO JANUARY CR]	
SOILS PARENT MATERIAL	T	GL	O/GF, GL or T	GL	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WETLAND	WETLAND	NAV WATERS (CLASS C)	NAV WATERS (CLASS C)	WETLAND	NAV WATERS	COMP RUT	WIND ER
	COMP RUT	WIND ER	NAV WATERS (CLASS C)	NAV WATERS (CLASS C)	WETLAND	NAV WATERS	COMP RUT	WIND ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31] [AQ-JUL 16 TO AUG 31]			
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	40	15-20
	SOILS HANDLING	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE		
	SOILS		SO-NOTE 1	SO-NOTE 2	SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE		[AQ-NOTE 3] [AQ-NOTE 3]	SO-NOTE 2
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE		[AQ-NOTE 2] [AQ-NOTE 2]	
	WETLANDS		[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]
	WETLANDS		[WT-NOTE 2]	[WT-NOTE 2]	[WT-NOTE 2]
	FOREST TYPE (m ³ /ha)				
	VEGETATION			[AQ-NOTE 1] [AQ-NOTE 1]	
WILDLIFE AND FISH HABITAT					
HERITAGE / TRADITIONAL LAND USE					
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES			[AQ-NOTE 4]		

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 048 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 200.4 TO RK 204.7

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY											
	LAND OWNERSHIP / DISPOSITION	PRIVATE											
	LAND USE	TAME PASTURE	CULTIVATED	HAY	TREED	HAY	TREED	TAME PASTURE	TREED	DL	TREED	HAY	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA											
	HERITAGE / TRADITIONAL LAND USE	[TLU SITE] [TLU SITE]											
	WILDLIFE / WILDLIFE HABITAT												
	VEGETATION												
	WETLANDS	DEEP MARSH											
	FISH HABITAT SENSITIVITY												
	HYDROLOGY	[JANUARY CREEK]											
SOILS PARENT MATERIAL	T	GL	T		GL		GL	T					

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	COMP RUT	WIND ER	[WETLAND NAV WATERS]	[WETLAND NAV WATERS]	COMP RUT	WIND ER	[TLU]	[TLU]	COMP RUT
--------------------------------	----------	---------	----------------------	----------------------	----------	---------	-------	-------	----------

CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31]												
SOILS STRIPPING DEPTH (cm)	15	35	20	15-20	15	15-20	40	[10-15]	15-20	15-20	20	15-20	
SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE										FULL ROW; REDUCE AS APPROPRIATE		
SOILS	SO-NOTE 2		SO-NOTE 1			SO-NOTE 2		SO-NOTE 1		SO-NOTE 1			SO-NOTE 2
WATERCOURSE CROSSINGS	PIPELINE VEHICLE		[AQ-NOTE 3]										
WETLANDS	[AQ-NOTE 2]										WT-NOTE 1		WT-NOTE 2
FOREST TYPE (m ² /ha)													
VEGETATION													
WILDLIFE AND FISH HABITAT													
HERITAGE / TRADITIONAL LAND USE											[TLU-NOTE 1]	[TLU-NOTE 1]	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS													
SPECIAL MEASURES													

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATIS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 049 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

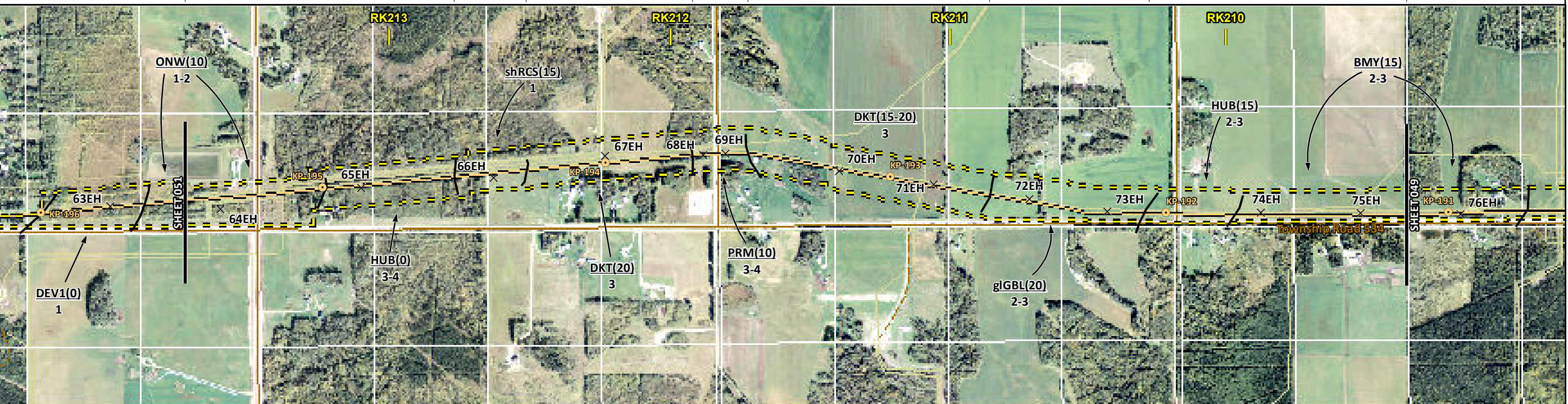
FROM RK 204.7 TO RK 209.4

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY									
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	TREED	TAME PASTURE	HAY	T-P	TAME PASTURE	CULTIVATED	HAY	TAME PASTURE		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS	[SHRUBBY SWAMP]	[SHRUBBY SWAMP]								
	FISH HABITAT SENSITIVITY										
	SOILS PARENT MATERIAL	T	GF/T	T	GF	T	GF/T	T			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		[WETLAND]	[WETLAND]							
	COMP RUT	[UNST TR/COMP RUT]	UNST TR	WIND ER					COMP RUT	

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW										
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	15	20	10	15-20	20	15		
		PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE								
	SOILS		SO-NOTE 2	[SO-NOTES 2 AND 3]	SO-NOTE 3	SO-NOTE 1				SO-NOTE 2	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE									
			[WT-NOTE 1]				[WT-NOTE 1]				
	WETLANDS										
	FOREST TYPE (m ³ /ha)										
	VEGETATION										
	WILDLIFE AND FISH HABITAT										
HERITAGE / TRADITIONAL LAND USE											
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											
SPECIAL MEASURES											

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
byKKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 050 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

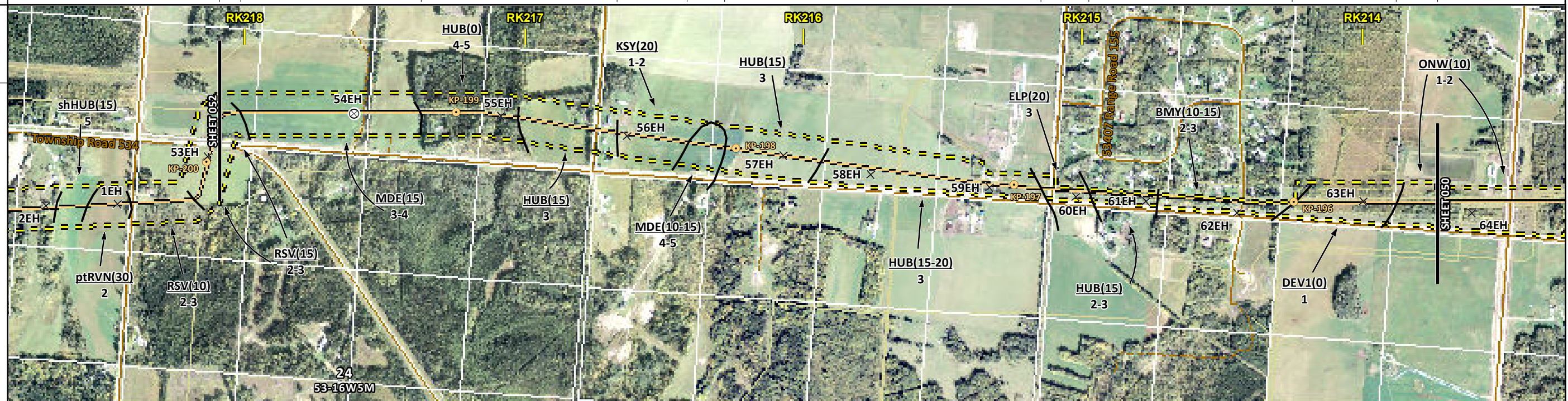
FROM RK 209.4 TO RK 213.7

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY											
	LAND OWNERSHIP / DISPOSITION	PRIVATE											
	LAND USE	HAY	TAME PASTURE	TREED	TAME PASTURE	HAY	TAME PASTURE	HAY	TAME PASTURE	TAME PASTURE	TREED PASTURE	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA											
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS											
	WILDLIFE / WILDLIFE HABITAT												
	VEGETATION												
	WETLANDS												
	FISH HABITAT SENSITIVITY												
	HYDROLOGY												
SOILS PARENT MATERIAL	GL	B	T	GL	B	T	GF	T	O/GF, GL or T	T			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

N

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS											
	[AGRI (LIVESTOCK)]											

CONSTRUCTION WORK WINDOW													
SOILS HANDLING	STRIPPING DEPTH (cm)	15	15-20	15	20	10-15	15	15-20	20	15	10-15	40	15-20
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE											
WATERCOURSE CROSSINGS	PIPELINE VEHICLE												
WETLANDS													
FOREST TYPE (m ³ /ha)													
VEGETATION													
WILDLIFE AND FISH HABITAT													
HERITAGE / TRADITIONAL LAND USE	AK-NOTE 1												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AG-NOTE 2												
SPECIAL MEASURES													

TRANS MOUNTAIN
tera ENVIRONMENTAL CONSULTANTS

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 051 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 213.7 TO RK 218.1

0 100 200 300 400 500 m

P:\GIS\TERRA\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LR\Res

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY									
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED CNT090043; PNT820658 PNT830843; TPA1430	PRIVATE	MIXED CNT090043 TPA1430	PRIVATE					
	LAND USE	HAY	TREED	[CULTIVATED]	TREED	HAY	TREED	HAY			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA									
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS									
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS	TREED FEN	NW FEN [TREED FEN]								
	FISH HABITAT SENSITIVITY	[HIGH] [WOLF CREEK]									
	SOILS PARENT MATERIAL	GL	O	GL	F	GL	T/B	GL			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (CLASS C)] MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS [FISH]										
	WIND ER	COMP RUT	WIND ER	WIND/WATER ER	WIND ER	WIND/WATER ER	WIND ER	COMP RUT	WIND/WATER ER	COMP RUT	WIND ER

CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31]										
SOILS HANDLING	STRIPPING DEPTH (cm)	15	35	15-20	15	15-20	15	40	15-20	15	
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE					FULL ROW; REDUCE AS APPROPRIATE				
SOILS		SO-NOTE 1	SO-NOTE 2	SO-NOTE 1	SO-NOTE 2	SO-NOTE 1	SO-NOTE 2	SO-NOTE 1	SO-NOTE 2	SO-NOTE 1	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]									
WETLANDS		WT-NOTE 1					WT-NOTE 1 WT-NOTE 2				
FOREST TYPE (m ³ /ha)											
VEGETATION		[AQ-NOTE 1]									
WILDLIFE AND FISH HABITAT		AK-NOTE 1									
HERITAGE / TRADITIONAL LAND USE											
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											
SPECIAL MEASURES		[AQ-NOTE 4]									

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 052 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 218.1 TO RK 222.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY												
	LAND OWNERSHIP / DISPOSITION	PRIVATE												
	LAND USE	HAY	TREED	TAME PASTURE	TREED	TAME PASTURE	TREED	TAME PASTURE	TREED PASTURE	RIVER	TREED	HAY	TREED	HAY
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA												
	HERITAGE / TRADITIONAL LAND USE													
	WILDLIFE / WILDLIFE HABITAT													
	VEGETATION													
	WETLANDS	SHRUBBY SWAMP												
	FISH HABITAT SENSITIVITY	HIGH												
	HYDROLOGY	MCLEOD R [DRAINAGE]												
SOILS PARENT MATERIAL	GL	O/GF, GL or T	GL	O	GL	F	F	GL						

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[FISH] [WC (CLASS C)] [WETLAND] [NAV WATERS]	COMP RUT	[FISH] [WC (CLASS C)] [WATER ER] [NAV WATERS]	[FISH] [WC (CLASS C)] [WATER ER] [NAV WATERS]	[FISH] [WC (CLASS C)] [WATER ER] [NAV WATERS]	[FISH] [WC (CLASS C)] [WATER ER] [NAV WATERS]	[FISH] [WC (CLASS C)] [WATER ER] [NAV WATERS]	[FISH] [WC (CLASS C)] [WATER ER] [NAV WATERS]	[FISH] [WC (CLASS C)] [WATER ER] [NAV WATERS]	[FISH] [WC (CLASS C)] [WATER ER] [NAV WATERS]	[FISH] [WC (CLASS C)] [WATER ER] [NAV WATERS]	[FISH] [WC (CLASS C)] [WATER ER] [NAV WATERS]	[FISH] [WC (CLASS C)] [WATER ER] [NAV WATERS]	[FISH] [WC (CLASS C)] [WATER ER] [NAV WATERS]
--------------------------------	---	----------	--	--	--	--	--	--	--	--	--	--	--	--

CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]
SOILS STRIPPING DEPTH (cm)	15	15-20	15	40	15-20	10-15	10	15-20	-	15-20	20	15-20	15	
SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE													
SOILS	SO-NOTE 1													
WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 2]													
PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]													
WETLANDS	[WT-NOTE 1] [WT-NOTE 2]													
FOREST TYPE (m ³ /ha)														
VEGETATION	[AQ-NOTE 1]													
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]													
HERITAGE / TRADITIONAL LAND USE														
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS														
SPECIAL MEASURES	[AQ-NOTE 4]													



Soils Description	Soil Phase Soil Unit Depth of Topsoil (cm) Topographic Class
by KKL1(10)	6

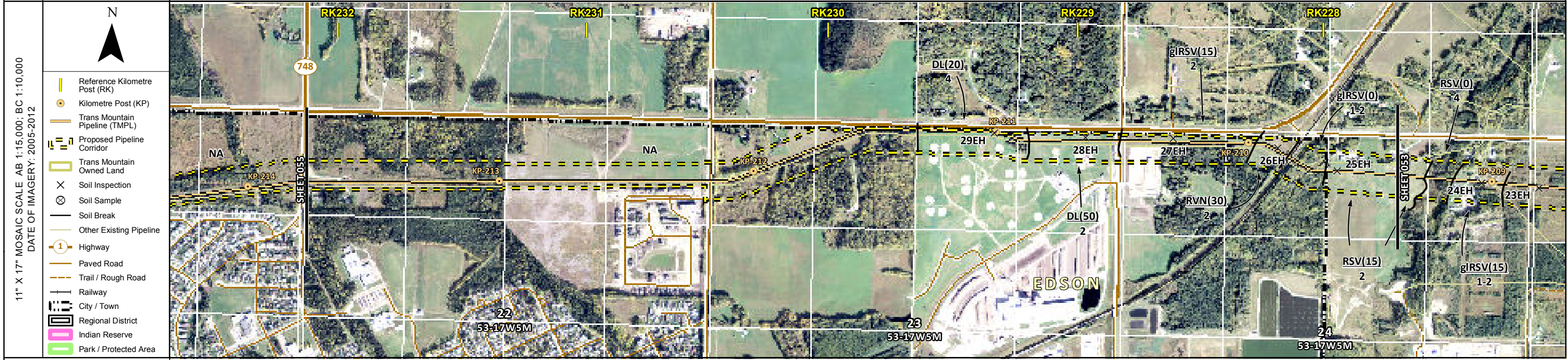
REFERENCES	Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.
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REVISION HISTORY	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 053 OF 301						
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	DATE	TERA REF.	REVISION
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	December 2013	7894	0
						SCALE	PAGE SIZE	DISCIPLINE
						1:15,000	11x17	EAS
						DRAWN	CHECKED	DESIGN
						CMR	DN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS	FROM	TO
TRANS MOUNTAIN EXPANSION PROJECT	RK 222.7	RK 227.7
0 100 200 300 400 500 m		

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	TOWN OF EDSON					YELLOWHEAD COUNTY				
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	NA			RECREATIONAL		DL	HAY		TREED	HAY
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS	[SHRUBBY SWAMP]									
	FISH HABITAT SENSITIVITY										
	HYDROLOGY	[TRIB TO BENCH CREEK]									
SOILS PARENT MATERIAL	NA					GL					



POTENTIAL ENVIRONMENTAL ISSUES	[WC (CLASS C)]	[WETLAND]	COMP RUT	WIND ER	WIND ER
	[AQ-JUL 16 TO AUG 31]				

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31]							
	SOILS HANDLING	STRIPPING DEPTH (cm)	NA	20	40	15	30	15-20	15
	SOILS HANDLING	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	TRENCH AND SPOIL; ADJUST AS REQUIRED		FULL ROW; REDUCE AS APPROPRIATE			
	SOILS					SO-NOTE 1			SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]						
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 2]						
	WETLANDS		[WT-NOTE 1]						
	FOREST TYPE (m ³ /ha)								
VEGETATION									
WILDLIFE AND FISH HABITAT									
HERITAGE / TRADITIONAL LAND USE									
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									
SPECIAL MEASURES									

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 054 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT												
			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	DATE December 2013	TERA REF. 7894	REVISION 0	FROM RK 227.7	TO RK 232.1
			NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.												
			0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB												
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS	FROM RK 227.7	TO RK 232.1	SCALE 0 100 200 300 400 500 m															
DRAWN CMR	CHECKED DN	DESIGN TGG																		

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	TOWN OF EDSON	[YELLOWHEAD COUNTY]	PRIVATE	TOWN OF EDSON
	LAND OWNERSHIP / DISPOSITION				
	LAND USE	[HAY]	TREED	TAME PASTURE	TREED NA
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			WHITE AREA	
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS	[DEEP MARSH]	[SE MARSH]	TREED FEN	
	FISH HABITAT SENSITIVITY	[HIGH]			
	HYDROLOGY	[BENCH CREEK]		[DRAINAGE]	[TRIB TO BENCH CREEK]
SOILS PARENT MATERIAL	GL	O	GL	T	GL NA

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[FISH] [WC (CLASS C)] [WETLAND] [NAV WATERS] COMP RUT WIND ER	WETLANDS COMP RUT	[WC (NCD)] WIND ER	[WC (CLASS C)] COMP RUT
	CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31]		[AQ-OPEN]	[AQ-JUL 16 TO AUG 31]
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE	40 15-20 10 15	FULL ROW; REDUCE AS APPROPRIATE	15-20 NA
	SOILS		SO-NOTE 2 SO-NOTE 1	SO-NOTE 2 SO-NOTE 1	SO-NOTE 2
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS		[WT-NOTE 1] [WT-NOTE 2]	[WT-NOTE 1]	
	FOREST TYPE (m ³ /ha)				
	VEGETATION				
	WILDLIFE AND FISH HABITAT		[AQ-NOTE 1]		
	SPECIAL MEASURES		[AQ-NOTE 4]		

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

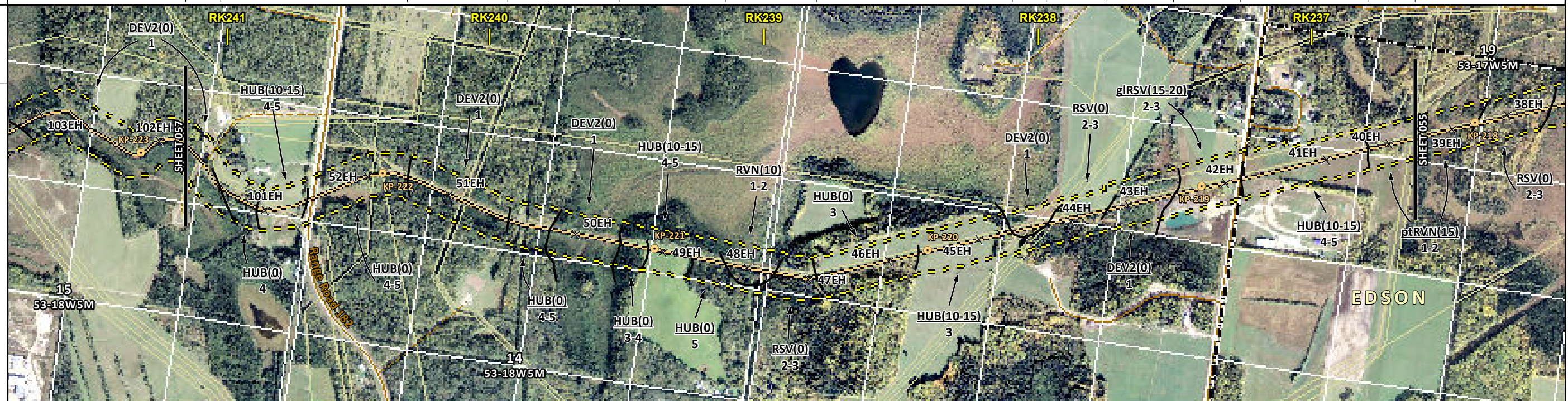
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 055 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 232.1 TO RK 236.6

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY										TOWN OF EDSON		
	LAND OWNERSHIP / DISPOSITION	PRIVATE		MIXED		CROWN CNT090043 GRL090008; GRP787924		PRIVATE						
	LAND USE	TREED	HAY	TREED	HAY	TREED	CULTIVATED	TREED	HAY	TREED	HAY			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA												
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS												
	WILDLIFE / WILDLIFE HABITAT													
	VEGETATION	[SPHEOBT]												
	WETLANDS	[TREED FEN]		[SE MARSH]		[SHRUBBY FEN]		[TREED FEN]						
	FISH HABITAT SENSITIVITY	[SHRUBBY SWAMP]												
	HYDROLOGY													
SOILS PARENT MATERIAL	O	T	O	T	O	T	GL	T	O	GL	O	GL	T	GL

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
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- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[RARE PLANT]	MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS									
	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]
	[COMP RUT]	[WIND ER]	[WIND/WATER ER]	[COMP RUT]	[WIND/WATER ER]	[COMP RUT]	[WIND ER]	[COMP RUT]	[WIND ER]	[COMP RUT]	[WIND ER]

CONSTRUCTION WORK WINDOW												
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	10-15	15-20	10-15	15-20	10	15-20	10-15	40		
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE										
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[SO-NOTE 2]	SO-NOTE 1	SO-NOTE 2	[SO-NOTE 1]	SO-NOTE 2	SO-NOTE 1	SO-NOTE 2	SO-NOTE 1	[SO-NOTE 2]	SO-NOTE 1	SO-NOTE 2
WETLANDS		[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]
FOREST TYPE (m ³ /ha)												
VEGETATION		[VG-NOTE 1]										
WILDLIFE AND FISH HABITAT		AK-NOTE 1										
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES												

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 056 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 236.6 TO RK 241.2

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY				
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	CROWN	MIXED	PRIVATE
	LAND USE	TAME PASTURE		TREED	HAY	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA				
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT	TRUMPETER SWAN WATERBODY - 330 M N OF CORRIDOR				
	VEGETATION	[SPHEOBT]	CONOSAL	[CHRYIOW]		
	WETLANDS	[SHRUBBY FEN]	[SE MARSH]	[SE MARSH]		
	FISH HABITAT SENSITIVITY	[HIGH]				
	HYDROLOGY	[LITTLE SUNDANCE CREEK]				
SOILS PARENT MATERIAL	GF	O	T	T/B	O	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WIND ER]	[FISH]	[RARE PLANTS]	[WETLAND]	[WILDLIFE AREA]
	[UNST TR WIND/WATER ER]	[WETLAND]	[WETLAND]	[WETLAND]	[WILDLIFE AREA]
	[UNST TR WIND/WATER ER]	[UNST TR WIND/WATER ER]	[NAV WATERS]	[WETLAND]	[WILDLIFE AREA]
	[UNST TR WIND/WATER ER]	[UNST TR WIND/WATER ER]	[COMP RUT]	[WETLAND]	[WILDLIFE AREA]
	[UNST TR WIND/WATER ER]	[UNST TR WIND/WATER ER]	[COMP RUT]	[WETLAND]	[WILDLIFE AREA]

CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31]
SOILS STRIPPING DEPTH (cm)	10-15 40 10-15 15-20 15 10-15 15-20
SOILS HANDLING PROCEDURE	FULL ROW, REDUCE AS APPROPRIATE
SOILS	SO-NOTE 1 SO-NOTE 2 SO-NOTE 3 SO-NOTE 2 SO-NOTE 1 SO-NOTE 2
WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 2]
PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS	[WT-NOTE 1] [WT-NOTE 1] [WT-NOTE 2]
FOREST TYPE (m ³ /ha)	[VG-NOTE 1] [VG-NOTE 1]
VEGETATION	[VG-NOTE 1] [VG-NOTE 1]
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	[AQ-NOTE 4]

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
byKKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATIS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 057 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
REVISION	0	DISCIPLINE	EAS
		DESIGN	TGG


ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT


















FROM RK 241.2 TO RK 245.9

P:\GIS\TMAP\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LR\Reb

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY		
	LAND OWNERSHIP / DISPOSITION	PRIVATE		
	LAND USE	DL	TREED	TAME PASTURE
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	WHITE AREA		
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS			
	FISH HABITAT SENSITIVITY			
	SOILS PARENT MATERIAL	NS	GF	O/GF, GL or T GF

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

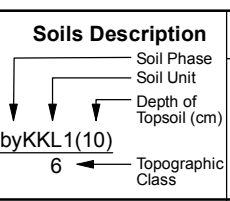


-  Reference Kilometre Post (RK)
-  Kilometre Post (KP)
-  Trans Mountain Pipeline (TMPL)
-  Proposed Pipeline Corridor
-  Trans Mountain Owned Land
-  Soil Inspection
-  Soil Sample
-  Soil Break
-  Other Existing Pipeline
-  Highway
-  Paved Road
-  Trail / Rough Road
-  Railway
-  City / Town
-  Regional District
-  Indian Reserve
-  Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	UNST TR WIND ER	[COMP RUT]	UNST TR WIND/WATER ER
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CONSTRUCTION WORK WINDOW						
SOILS HANDLING	STRIPPING DEPTH (cm)	-	15-20	40	15-20	10-15
SOILS	PROCEDURE	-	FULL ROW; REDUCE AS APPROPRIATE			
WATERCOURSE CROSSINGS	PIPELINE VEHICLE		SO-NOTE 1	[SO-NOTE 2]	SO-NOTE 1	SO-NOTE 3
WETLANDS			SO-NOTE 3			
FOREST TYPE (m ³ /ha)						
VEGETATION						
WILDLIFE AND FISH HABITAT						
HERITAGE / TRADITIONAL LAND USE						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						
SPECIAL MEASURES						

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012; provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

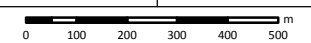
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 058 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:15,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
	DISCIPLINE EAS
	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 245.9 TO RK 247.8

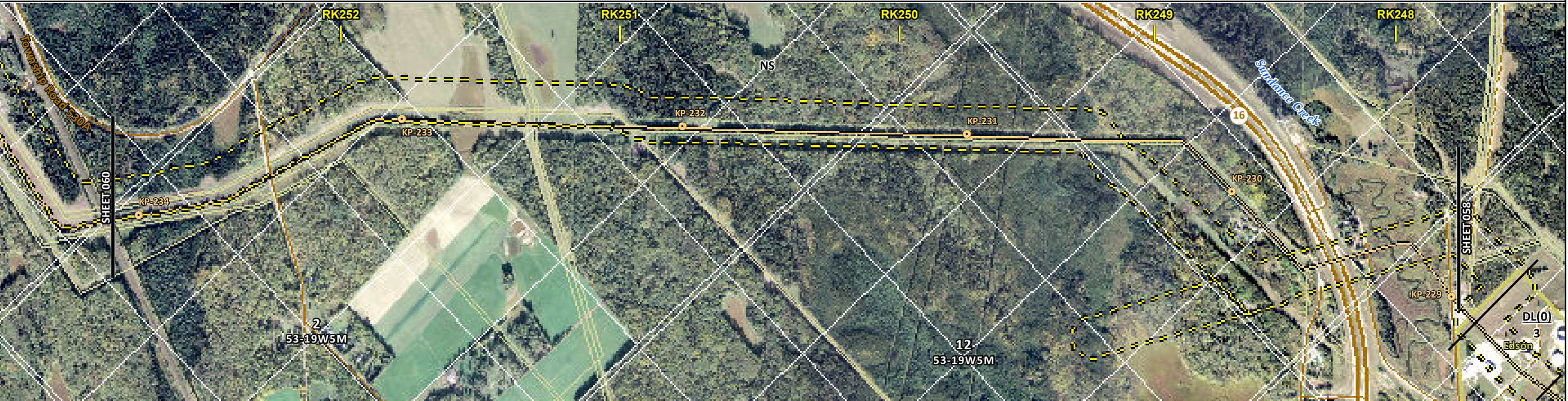


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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY							
	LAND OWNERSHIP / DISPOSITION	GRP850079; TPA1742	CNT090040; CNT920167	CROWN	CNT090040; CNT920167; GRL38603	CNT090040; CNT920167	PRIVATE	[MIXED]	PRIVATE
	LAND USE	TREED	NS	TREED	TREED	[DL]	NS	[DL]	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA							[WHITE AREA]
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION								
	WETLANDS	[NLTR SWAMP]	[TREED FEN]	[SE MARSH]	[SE MARSH]	TREED FEN	[SE MARSH]	[SHRUBBY SWAMP]	
	FISH HABITAT SENSITIVITY								[HIGH]
	HYDROLOGY								[SUNDANCE CREEK]
SOILS PARENT MATERIAL	NS								

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLANDS]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[FISH]	[WC (CLASS C)]	[WETLAND]	[NAV WATERS]
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CONSTRUCTION WORK WINDOW		[AQ-JUL 16 TO AUG 31]										
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	NS	15-20	-	NS	-					
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE						[FULL ROW; REDUCE AS APPROPRIATE]				
SOILS												
WATERCOURSE CROSSINGS	PIPELINE											
	VEHICLE	[AQ-NOTE 3]										
WETLANDS		[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 2]	
		[AQ-NOTE 1]										
FOREST TYPE (m ³ /ha)												
VEGETATION												
WILDLIFE AND FISH HABITAT												
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES		[AQ-NOTE 4]										

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 059 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 247.8 TO RK 252.9

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY				
	LAND OWNERSHIP / DISPOSITION	PRIVATE	[MIXED]	CROWN CNT090040; CNT920167 TPA1742; GRP788018	PRIVATE	CROWN CNT090040; CNT920167 GRL840120; TPA1742 [GRP850079; TPA1742]
	LAND USE	TREED	NS	TREED	NS	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA				
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT	TRUMPETER SWAN WATERBODY - 70 M N OF CORRIDOR		[TRUMPETER SWAN WATERBODY - 650 M S OF CORRIDOR]		
	VEGETATION	[CAREROS]				
	WETLANDS	[SHRUBBY SWAMP]	[DEEP MARSH]	[NLTR SWAMP]	[SE MARSH]	
	FISH HABITAT SENSITIVITY					
	HYDROLOGY	[TRIB TO MCLEOD RIVER]				
SOILS PARENT MATERIAL	NS					



POTENTIAL ENVIRONMENTAL ISSUES	[WC (CLASS C)] [WETLAND] [NAV WATERS]	[RARE COMMUNITY] [WETLAND] [NAV WATERS]	[WETLANDS]	[WILDLIFE AREA]
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CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31]
SOILS HANDLING	STRIPPING DEPTH (cm) 15-20 PROCEDURE NS FULL ROW; REDUCE AS APPROPRIATE
SOILS	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE [AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS	[WT-NOTE 1] [WT-NOTE 2]
FOREST TYPE (m ³ /ha)	
VEGETATION	[VG-NOTE 1]
WILDLIFE AND FISH HABITAT	WF-NOTE 5
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	

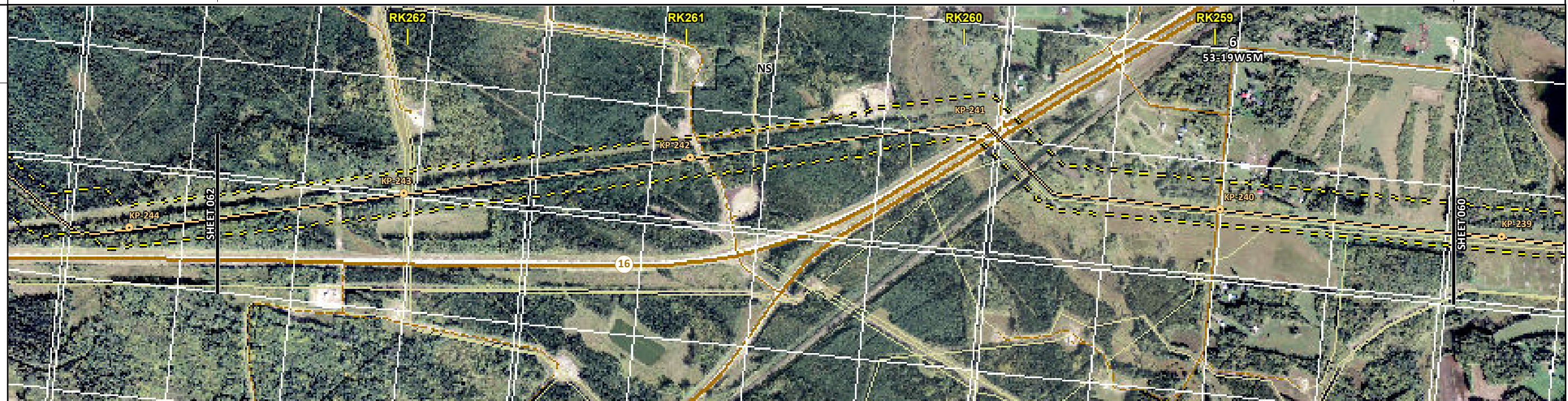
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 060 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 252.9 TO RK 258.1 				
			NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.	DATE	TERA REF.	REVISION
			0	Dec 16, 2013	Issued for NEB filing	CMR	DN		TW/GB	December 2013	7894	0
						SCALE	1:15,000	PAGE SIZE	11x17	DISCIPLINE	EAS	
						DRAWN	CMR	CHECKED	DN	DESIGN	TGG	

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY		
	LAND OWNERSHIP / DISPOSITION	CROWN CNT090040; CNT920167 TPA2821	[MIXED] PRIVATE	[CROWN] PRIVATE
	LAND USE	TREED	[TPA1742] [DL]	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA	[MARLBORO - 1.21 KM NE OF CORRIDOR]	
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			[TRUMPETER SWAN WATERBODY - 70 M N OF CORRIDOR]
	VEGETATION	[CHRYIOW]		
	WETLANDS	TREED FEN	[SHRUBBY SWAMP]	[SHRUBBY SWAMP]
	FISH HABITAT SENSITIVITY		[HIGH]	
	HYDROLOGY		[TRIB TO MCLEOD RIVER]	
SOILS PARENT MATERIAL		NS		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[RARE PLANT]	[FISH] [WC (CLASS C)] [WETLAND] [NAV WATERS]	[WETLAND]	[WILDLIFE AREA]
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CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31]
SOILS HANDLING	STRIPPING DEPTH (cm) 15-20 PROCEDURE FULL ROW; REDUCE AS APPROPRIATE
WATERCOURSE CROSSINGS	PIPELINE VEHICLE [AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS	[WT-NOTE 1] [WT-NOTE 2] [WT-NOTE 1]
FOREST TYPE (m ³ /ha)	[VG-NOTE 1]
VEGETATION	[AQ-NOTE 1]
WILDLIFE AND FISH HABITAT	[WF-NOTE 5]
SPECIAL MEASURES	[AQ-NOTE 4]

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 061 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:15,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
DISCIPLINE EAS	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 258.1 TO RK 262.7

P:\GIS\TERRA\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LaRes

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY	
	LAND OWNERSHIP / DISPOSITION	CROWN CNT090040; CNT920167	
	LAND USE	TPA2821 TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA	
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND	
	VEGETATION		
	WETLANDS	NLTR SWAMP [TREED FEN]	
	FISH HABITAT SENSITIVITY		
	HYDROLOGY		
SOILS PARENT MATERIAL	NS		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WF FEATURE	WETLAND	WETLAND
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CONSTRUCTION WORK WINDOW	WF-NOTE 4
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	15-20 FULL ROW; REDUCE AS APPROPRIATE
SOILS	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE
	WT-NOTE 1 [WT-NOTE 1]
WETLANDS	
FOREST TYPE (m ³ /ha)	
VEGETATION	
WILDLIFE AND FISH HABITAT	WF-NOTE 1
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB


MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 062 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 262.7 TO RK 267.7

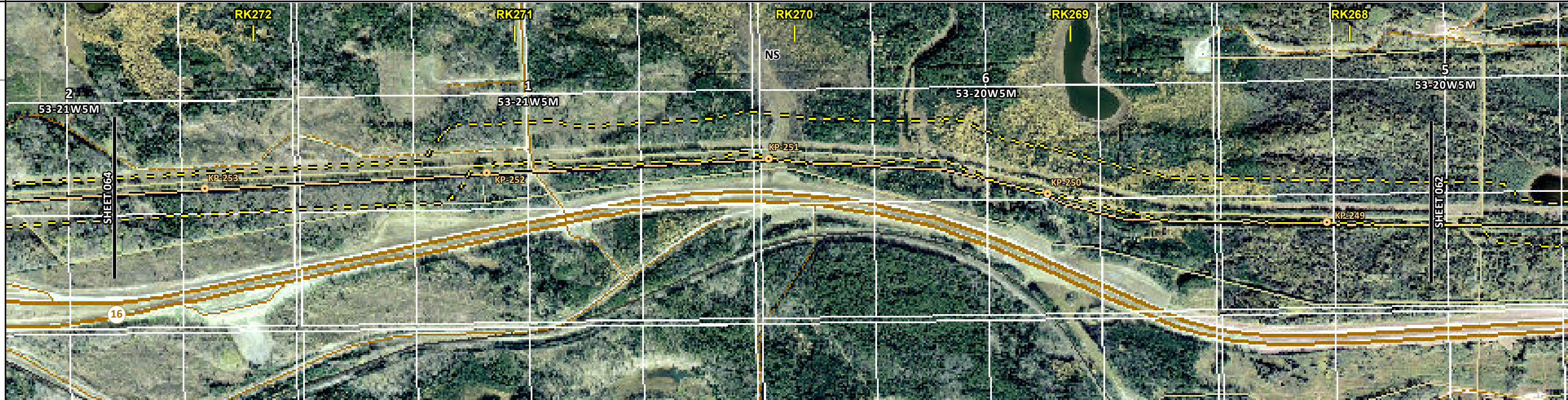
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY		
	LAND OWNERSHIP / DISPOSITION	TPA1987	DRS820068	CROWN
	LAND USE			TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			GREEN AREA
	HERITAGE / TRADITIONAL LAND USE			HERITAGE CONSIDERATIONS AT LOCALISED AREAS
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS		[SE MARSH]	[SE MARSH]
	FISH HABITAT SENSITIVITY		[HIGH]	
	HYDROLOGY		[TRIBUT TO MCLEOD R]	[TRIBUT TO MCLEOD R]
SOILS PARENT MATERIAL			NS	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012



- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES			[WC (CLASS C)] MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS		
			[FISH] [WETLAND] [NAV WATERS]	[WC (CLASS C)] [WETLAND] [NAV WATERS]	WETLAND

CONSTRUCTION WORK WINDOW		[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS		[WT-NOTE 1] [WT-NOTE 2]	[WT-NOTE 1] [WT-NOTE 2]
FOREST TYPE (m ³ /ha)			
VEGETATION		[AQ-NOTE 1]	
WILDLIFE AND FISH HABITAT			
HERITAGE / TRADITIONAL LAND USE		AK-NOTE 1	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			[AQ-NOTE 4]



Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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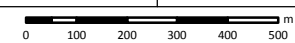
REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 063 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 267.7 TO RK 272.5

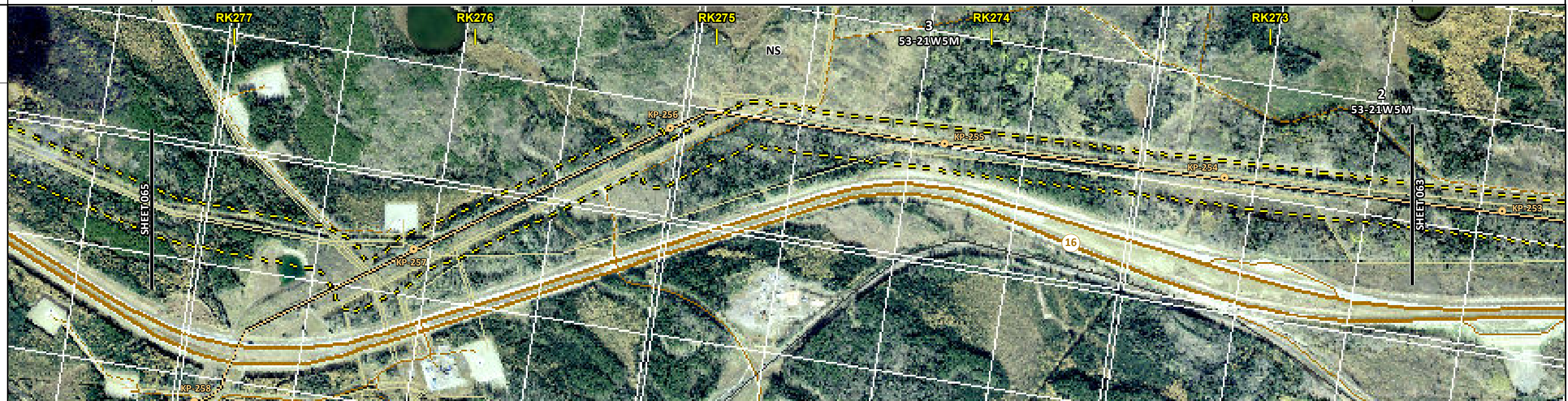


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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY		
	LAND OWNERSHIP / DISPOSITION	CROWN		
	LAND USE	TPA1987 TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA		
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS	TREED FEN		
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	DRAINAGE		
SOILS PARENT MATERIAL	NS			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WETLAND	WC (NCD)
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	AQ-OPEN
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	15-20 FULL ROW; REDUCE AS APPROPRIATE
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE AQ-NOTE 3 AQ-NOTE 2
	WETLANDS	WT-NOTE 1
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES		

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

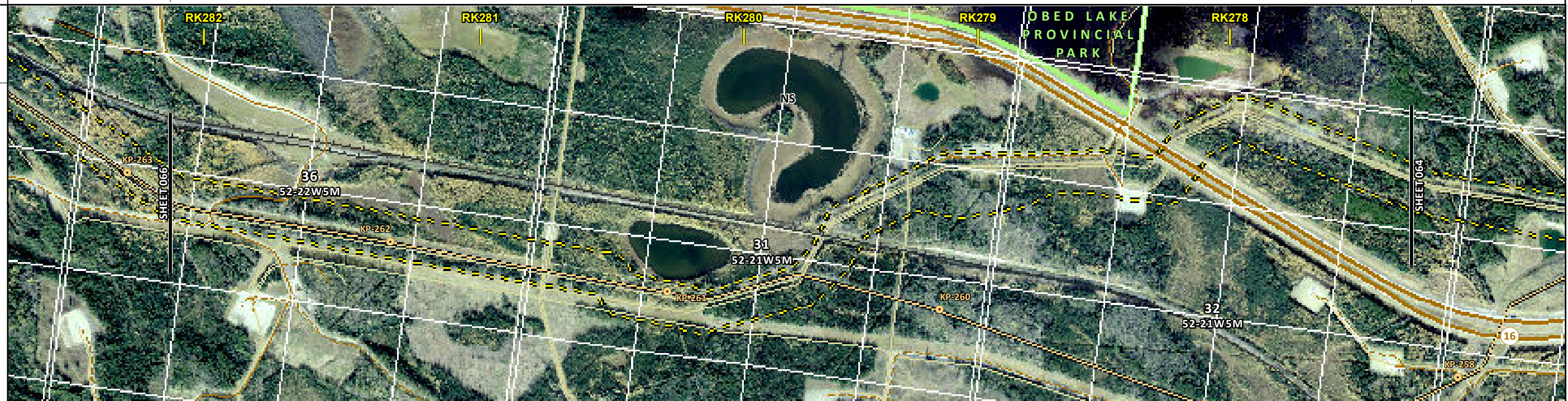
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 064 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 272.5 TO RK 277.3

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY	
	LAND OWNERSHIP / DISPOSITION	CROWN CNT090044	CROWN TPA1987
	LAND USE	TREED	DL TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA	
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		
	VEGETATION	[CARECAP]	
	WETLANDS	[TREED FEN] NW FEN	TREED FEN
	FISH HABITAT SENSITIVITY		
	HYDROLOGY		
SOILS PARENT MATERIAL	NS		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	WETLAND NAV WATERS	[RARE PLANTS]	WETLAND
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW		15-20		15-20	
	SOILS HANDLING	STRIPPING DEPTH (cm)	FULL ROW; REDUCE AS APPROPRIATE		FULL ROW; REDUCE AS APPROPRIATE	
	SOILS					
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[WT-NOTE 1]		[WT-NOTE 1]	
	WETLANDS		[WT-NOTE 1]			
	FOREST TYPE (m ³ /ha)		[VG-NOTE 1]			
	VEGETATION					
	WILDLIFE AND FISH HABITAT					
	HERITAGE / TRADITIONAL LAND USE					
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES						

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

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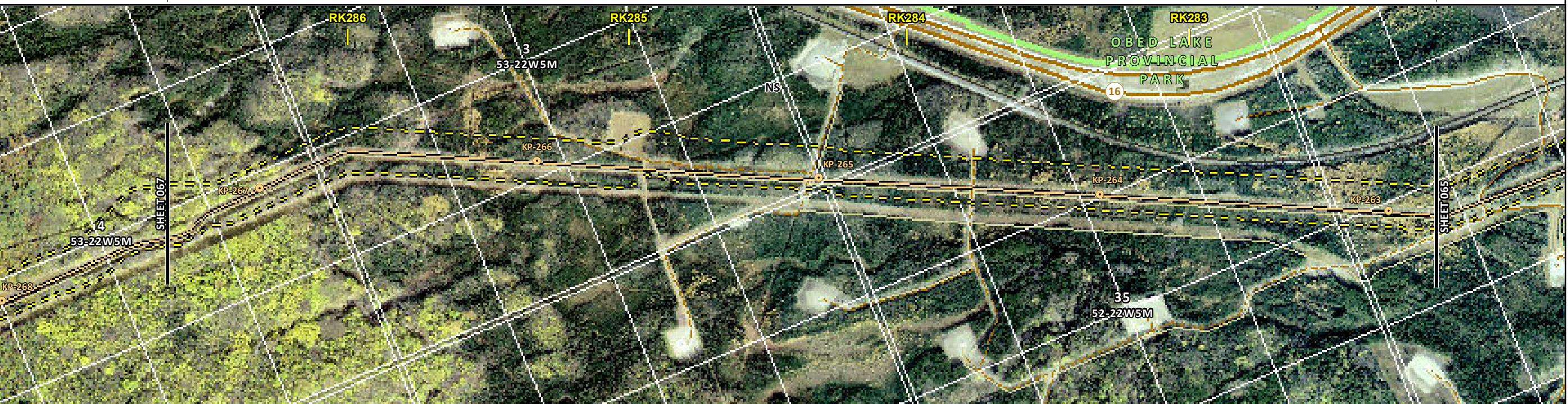
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 065 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 277.3 TO RK 282.1

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY			
	LAND OWNERSHIP / DISPOSITION	TPA1272; CNT090044	CNT090044; CNT980017	CROWN	TPA1255
	LAND USE			TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			GREEN AREA	
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION		CARECAP		
	WETLANDS		NLTR SWAMP		TREED FEN
	FISH HABITAT SENSITIVITY				
	HYDROLOGY				
SOILS PARENT MATERIAL			NS		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[RARE PLANTS]	WETLAND NAV WATERS	WETLAND
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CONSTRUCTION WORK WINDOW		
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
SOILS		
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	
WETLANDS		WT-NOTE 1 WT-NOTE 2
FOREST TYPE (m ³ /ha)		
VEGETATION		VG-NOTE 1
WILDLIFE AND FISH HABITAT		
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 066 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
		DISCIPLINE	EAS
		DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

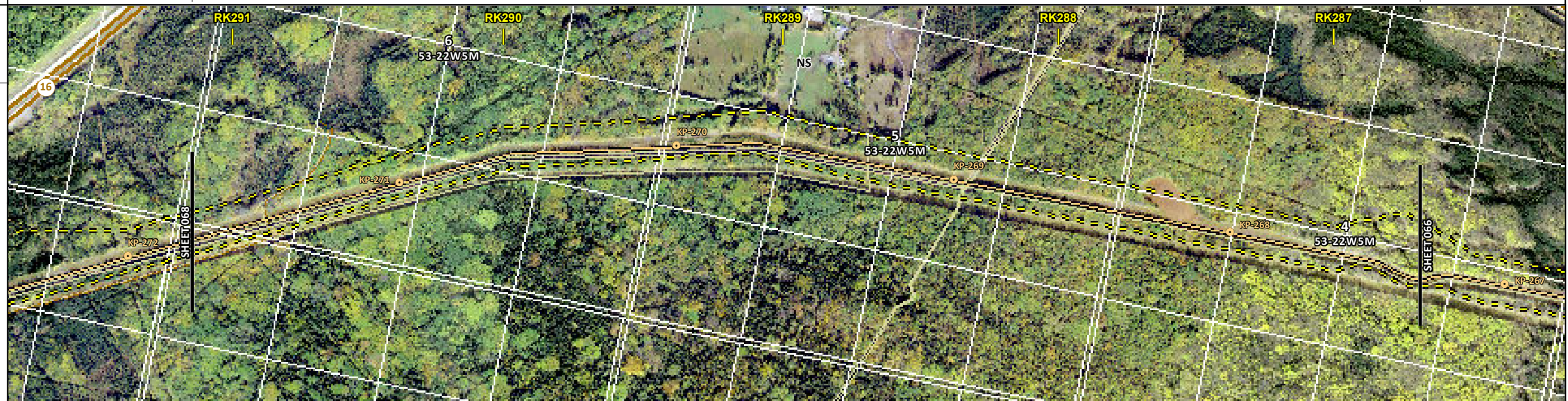
FROM RK 282.1 TO RK 286.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY			
	LAND OWNERSHIP / DISPOSITION	CNT980017; PNT850565	CROWN	PNT850565	
	LAND USE		TPA1272; CNT090044	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		GREEN AREA		
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT		SPECIAL ACCESS ZONE		
	VEGETATION				[GYMNDIS]
	WETLANDS				SE MARSH
	FISH HABITAT SENSITIVITY				
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[WETLAND]	[RARE PLANTS]
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CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	
SOILS HANDLING	STRIPPING DEPTH (cm) 15-20 PROCEDURE FULL ROW; REDUCE AS APPROPRIATE				
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[WT-NOTE 1]
WETLANDS	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	
FOREST TYPE (m ³ /ha)					[VG-NOTE 1]
WILDLIFE AND FISH HABITAT			WF-NOTE 5		

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 067 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 286.7 TO RK 291.1

P:\GIS\TERRA\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LaRes

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY CROWN		
	LAND OWNERSHIP / DISPOSITION	TPA2192; CNT090044	TREED	TPA1272; CNT090044
	LAND USE		TREED	DL
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		GREEN AREA	
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			SPECIAL ACCESS ZONE
	VEGETATION	[SPHEOBT]		[CONOSAL] [SPHEOBT]
	WETLANDS			[SHRUBBY SWAMP]
	FISH HABITAT SENSITIVITY	[HIGH]		[HIGH]
	HYDROLOGY	[PONOKA CREEK]	[TRIB TO PONOKA CREEK]	[ROOSTER CR DRAINAGE]
SOILS PARENT MATERIAL			NS	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[RARE PLANT]	[RARE PLANT]	[WILDLIFE AREA]
	[FISH] [WC (CLASS C)] [NAV WATERS]	[WC (CLASS C)]	[RARE PLANT] [WC (NCD)] [WC (CLASS C)] [RARE PLANTS] [WETLAND]
CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31] [AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm) 15-20	15-20	15-20
PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE		FULL ROW; REDUCE AS APPROPRIATE
WATERCOURSE CROSSINGS	PIPELINE [AQ-NOTE 3] [AQ-NOTE 2]	VEHICLE [AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 3] [AQ-NOTE 2] [AQ-NOTE 2]
WETLANDS			[WT-NOTE 1]
FOREST TYPE (m ² /ha)			[VG-NOTE 1] [VG-NOTE 1]
VEGETATION	[VG-NOTE 1]		[VG-NOTE 1] [VG-NOTE 1]
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]		[AQ-NOTE 1] [WF-NOTE 5]
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES	[AQ-NOTE 4]		

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 068 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

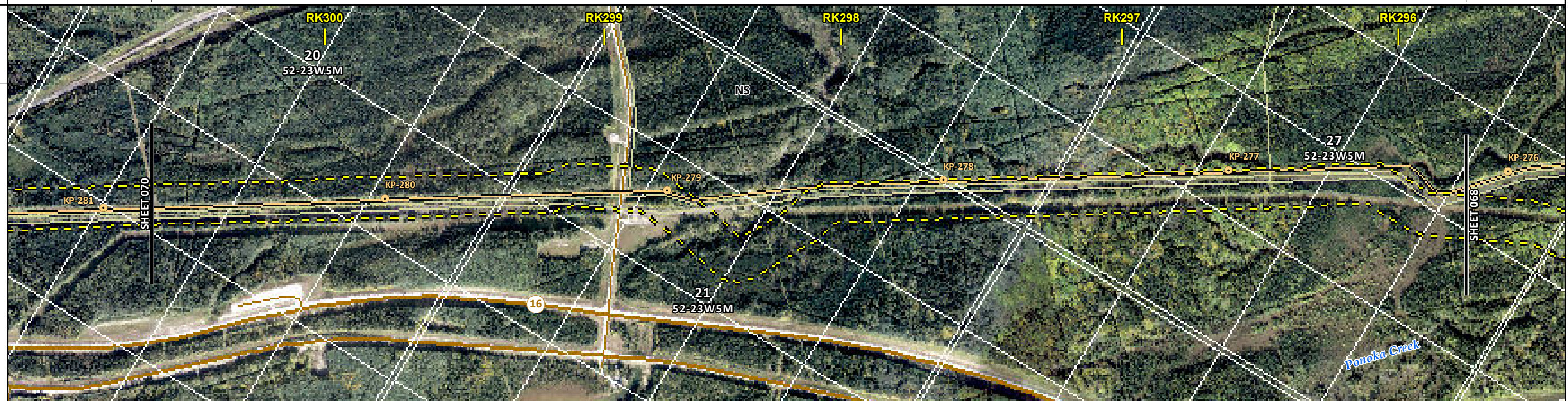
FROM RK 291.1 TO RK 295.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY	
	LAND OWNERSHIP / DISPOSITION	CNT980017; HRS070008	CROWN CNT980017 TPA2192; CNT090044
	LAND USE	TREED	DL TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA	
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND	GRIZZLY BEAR ZONE
	VEGETATION		
	WETLANDS	SE MARSH	NW FEN
	FISH HABITAT SENSITIVITY	[HIGH]	
	HYDROLOGY	[DRAINAGE]	[TRIB TO ROUND CROFT CR] [ROUND CROFT CR] [DRAINAGE]
SOILS PARENT MATERIAL	NS		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	WETLAND WF FEATURE	[FISH] [WC (CLASS C)] [WC (CLASS C)]	[WC (NCD)] [WETLANDS] [NAV WATERS]
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm) 15-20	WF-NOTE 4	-	15-20
	SOILS	FULL ROW; REDUCE AS APPROPRIATE			
	WATERCOURSE CROSSINGS	PIPELINE [AQ-NOTE 3] VEHICLE [AQ-NOTE 2]	WT-NOTE 1	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS	[AQ-NOTE 1] [AQ-NOTE 2]			
	FOREST TYPE (m ³ /ha)				
	VEGETATION				
	WILDLIFE AND FISH HABITAT	WF-NOTE 1 WF-NOTE 5			
	HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES					

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 069 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 295.7 TO RK 300.6

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY								
	LAND OWNERSHIP / DISPOSITION	CROWN CNT980017; HRS070005; PNT980055	PRIVATE	MIXED	CROWN PNT980055	MIXED	CROWN	MIXED	CROWN	CNT980017; HRS070008
	LAND USE	TREED	NS	TREED	[DL]	TREED				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA								
	HERITAGE / TRADITIONAL LAND USE									
	WILDLIFE / WILDLIFE HABITAT	GRIZZLY BEAR ZONE								
	VEGETATION									
	WETLANDS	NLTR SWAMP	SE MARSH							
	FISH HABITAT SENSITIVITY	[HIGH][HIGH]				[HIGH]				
	HYDROLOGY	[HUNT_CR] TRIB TO HUNT CR				[SANDSTONE CREEK]			[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL	NS									

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WETLAND	[NAV WATERS][FISH] [FISH] WETLANDS [WC (CLASS C)] [NAV WATERS] [WC (CLASS C)]	WILDLIFE AREA	[FISH] [WC (CLASS C)]	[WC (NCD)]	[WC (NCD)]
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CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31][AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-OPEN]	[AQ-OPEN]
SOILS STRIPPING DEPTH (cm)	15-20	NS	15-20	15-20
HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE		FULL ROW; REDUCE AS APPROPRIATE	
SOILS				
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3][AQ-NOTE 3] [AQ-NOTE 2][AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS	WT-NOTE 1	WT-NOTE 1		
FOREST TYPE (m ³ /ha)	[WT-NOTE 2][WT-NOTE 2]			
VEGETATION				
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1][AQ-NOTE 1]		WF-NOTE 5	[AQ-NOTE 1]
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES	[AQ-NOTE 4]			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER: 201310_MAP_TERA_EAS_00434_REVO
PAGE: SHEET 070 OF 301
REVISION: 0
SCALE: 1:15,000
DRAWN: CMR
CHECKED: DN

TERA REF: 7894
PAGE SIZE: 11x17
DISCIPLINE: EAS
DESIGN: TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANS MOUNTAIN EXPANSION PROJECT

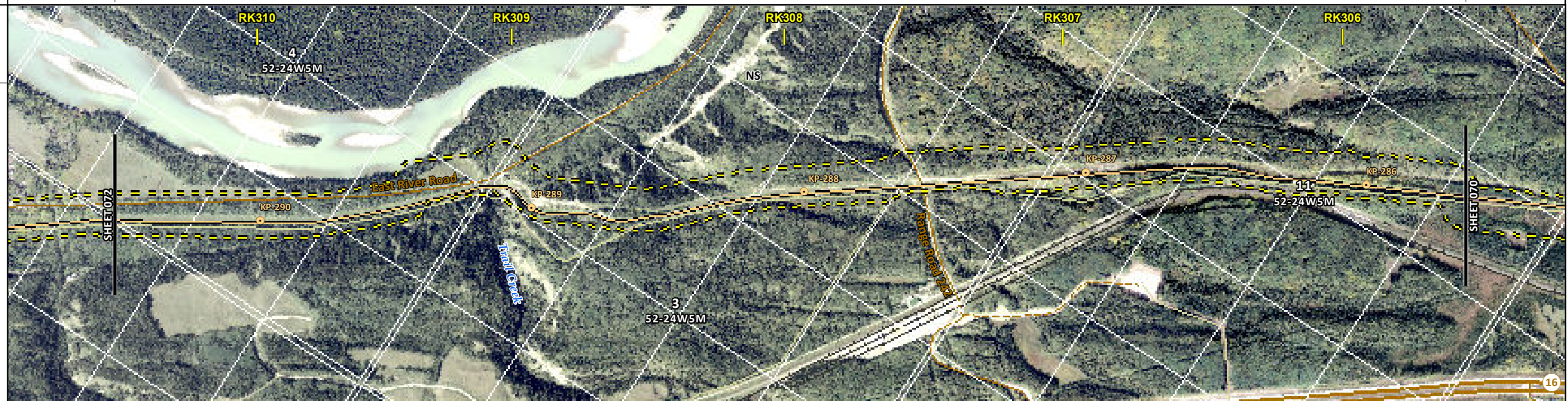
FROM: RK 300.6 TO: RK 305.5

P:\GIS\TERRA\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\Rev0\AS_Output\LaRes

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY														
	LAND OWNERSHIP / DISPOSITION	CROWN			MIXED	CROWN		MIXED	CNT980017	CROWN		CNT980017; HRS070005	MIXED	CROWN		CNT980017; HRS070005; PNT980055
	LAND USE	TPA2192; CNT090044; FGL970007										TPA2192; CNT090044				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											TREED		GREEN AREA		
	HERITAGE / TRADITIONAL LAND USE															
	WILDLIFE / WILDLIFE HABITAT											KEY WILDLIFE AND BIODIVERSITY ZONE		GRIZZLY BEAR ZONE		
	VEGETATION															
	WETLANDS													[NLTR SWAMP]		
	FISH HABITAT SENSITIVITY											[HIGH]				
	HYDROLOGY											[TRAIL CREEK]		[DRAINAGE]		
SOILS PARENT MATERIAL											NS					

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[FISH] [WC (CLASS C)]	[WC (NCD)]	[WC (NCD)]	[WETLAND]
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CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31]	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE	15-20 FULL ROW; REDUCE AS APPROPRIATE	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS			[WT-NOTE 1]
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]	WF-NOTE 5	
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 071 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 305.5 TO RK 310.5

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY								
	LAND OWNERSHIP / DISPOSITION	PNT890168 JSP020561	CROWN	TPA2192; CNT090044	CNT980017	[MIXED] CROWN	CNT830064; CNT980017	MIXED	CROWN	CNT830064; CNT980017; FGL970006
	LAND USE	TREED	NS	DL	TREED	[TPA2192; CNT090044; FGL970007]				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA								
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS								
	WILDLIFE / WILDLIFE HABITAT	GRIZZLY BEAR ZONE		KEY WILDLIFE AND BIODIVERSITY ZONE						
	VEGETATION									
	WETLANDS	[TREED FEN]		[SHRUBBY FEN] [SHRUBBY SWAMP]						
	FISH HABITAT SENSITIVITY					[HIGH]				
	HYDROLOGY	[DRAINAGE]	[TRIB TO ATHABASCA R]	[TRIB TO ATHABASCA R]	[TRIB TO ATHABASCA R]	[TRIB TO ATHABASCA R]	[TRIB TO ATHABASCA RIVER]			
SOILS PARENT MATERIAL	NS									

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (CLASS C)] [WETLAND] [NAV WATERS]	WILDLIFE AREA MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS	[WC (CLASS C)] [WC (CLASS C)]	[WETLAND] [WETLAND]	[FISH] [WC (CLASS C)]
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CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE	15-20 FULL ROW; REDUCE AS APPROPRIATE	NS	-	15-20 FULL ROW; REDUCE AS APPROPRIATE
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS		[WT-NOTE 1] [WT-NOTE 2]		[WT-NOTE 1]	[WT-NOTE 1]
WILDLIFE AND FISH HABITAT			WF-NOTE 5 AK-NOTE 1		[AQ-NOTE 1]

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
by KKL1(10)
- Topographic Class
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 072 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

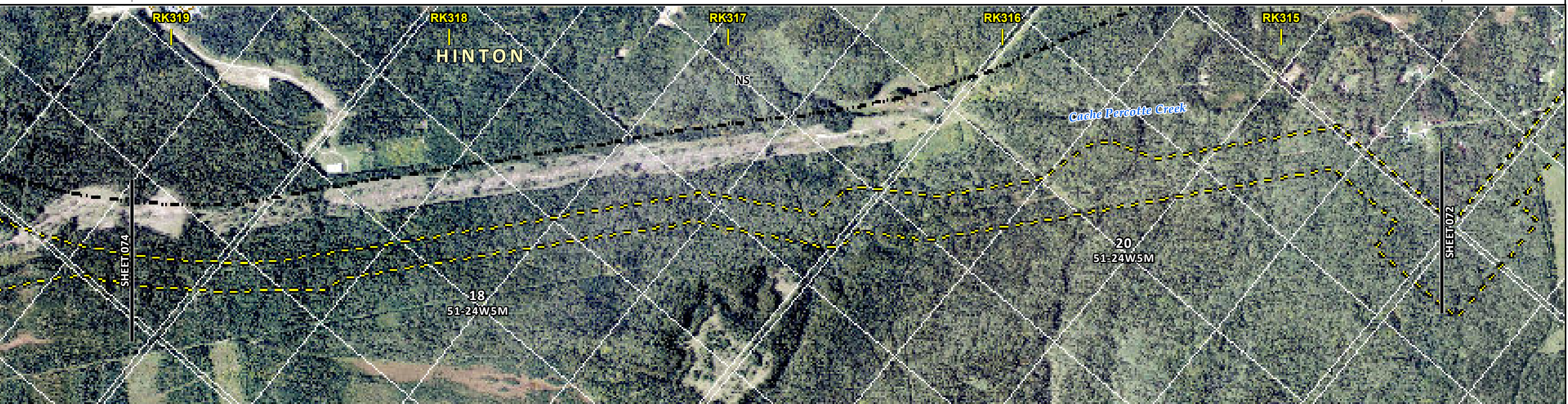
FROM RK 310.5 TO RK 314.3

P:\GIS\TERRA\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LR\Re

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY									
	LAND OWNERSHIP / DISPOSITION	CNT820078; PNT020379	CNT090044; CNT090069 CNT020224; CNT910168	CROWN CNT020224; CNT090044; CNT090069 CNT820078; CNT910168; HRS080002	CNT910168	CNT020224; CNT090044 [CNT910168; FRD660014]	CNT910168	MIXED TPA2192	PRIVATE	MIXED	CROWN PNT890168 TPA2192; CNT090044
	LAND USE	TREED									
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT	GRIZZLY BEAR ZONE									
	VEGETATION										
	WETLANDS										
	FISH HABITAT SENSITIVITY						[HIGH]				[HIGH]
	HYDROLOGY	[TRIB TO HARDISTY CREEK]		[TRIB TO HARDISTY CREEK]		[CACHE PERCOTTE CREEK]		[TRIB TO CACHE PERCOTTE CREEK]		[DRAINAGE/DRAINAGE]	
SOILS PARENT MATERIAL	NS										

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (CLASS C)]	[WC (CLASS C)]	[FISH] [WC (CLASS C)]	[FISH] [WC (CLASS C)]	[WC (NCD)] [WC (NCD)]
	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-OPEN][AQ-OPEN]

CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-OPEN][AQ-OPEN]
SOILS HANDLING	15-20 FULL ROW; REDUCE AS APPROPRIATE				
SOILS					
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3][AQ-NOTE 3]
PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2][AQ-NOTE 2]
WETLANDS					
FOREST TYPE (m ³ /ha)					
VEGETATION					
WILDLIFE AND FISH HABITAT			WF-NOTE 5	[AQ-NOTE 1]	[AQ-NOTE 1]
HERITAGE / TRADITIONAL LAND USE					
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES	[AQ-NOTE 4]				

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 073 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

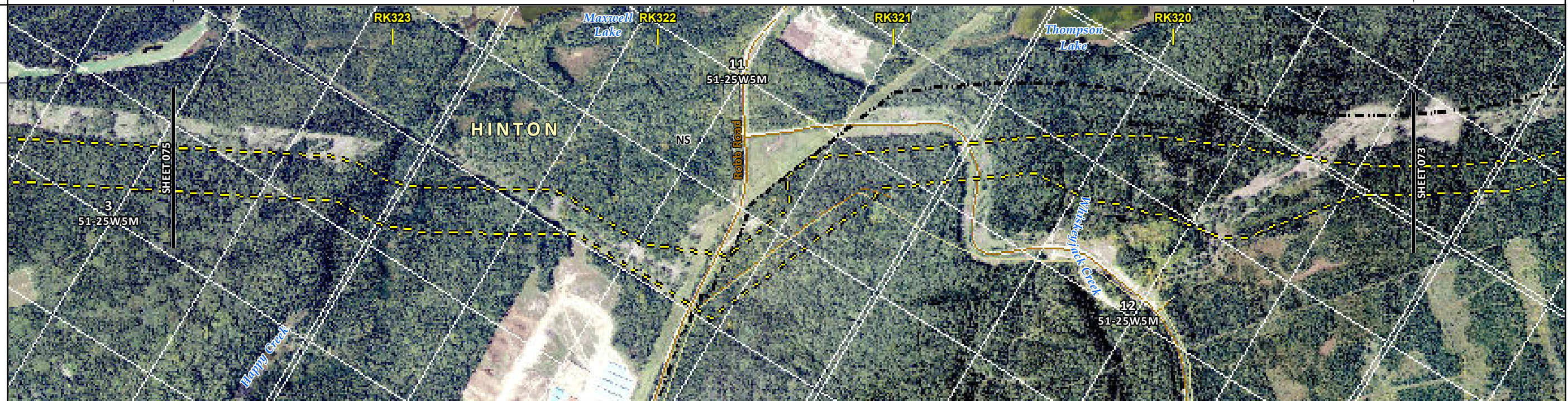
FROM RK 314.3 TO RK 319.1

P:\GIS\TERRA\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\Rev0\AS_Output\LR\Reb

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	TOWN OF HINTON			YELLOWHEAD COUNTY		
	LAND OWNERSHIP / DISPOSITION	CNT090069; CNT820078; HRS080002 TPA2203; CNT090044	CNT090069; CNT910168 CNT090044	CNT090069; CNT910168; HRS080002 CNT090044; CNT820078	CROWN	CNT020224; CNT090044; CNT910168 [CNT820078; CNT830066; HRS080002] [CNT820078; HRS080002] [CNT020224; CNT820078; CNT910168; HRS080002] [CNT020224; CNT910168]	CNT090044; PNT980160 CNT090044; CNT090069 CNT820078; PNT020379
	LAND USE	TREED					
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA					
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS					
	WILDLIFE / WILDLIFE HABITAT	GRIZZLY BEAR ZONE					
	VEGETATION						
	WETLANDS						
	FISH HABITAT SENSITIVITY	[HIGH]					
	HYDROLOGY	[HAPPY CREEK]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[HARDISTY CREEK]
SOILS PARENT MATERIAL	NS						

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (CLASS C)]	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[FISH]	[WC (CLASS C)]
	[AQ-JUL 16 TO AUG 31]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-JUL 16 TO AUG 31]	

CONSTRUCTION WORK WINDOW	[AQ-JUL 16 TO AUG 31]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-JUL 16 TO AUG 31]
SOILS HANDLING	15-20 FULL ROW; REDUCE AS APPROPRIATE						
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS							
FOREST TYPE (m ³ /ha)							
VEGETATION							
WILDLIFE AND FISH HABITAT	WF-NOTE 5 AK-NOTE 1						
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES	[AQ-NOTE 1]						

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 074 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 319.1 TO RK 323.8

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY		TOWN OF HINTON		
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	GRL37679	CNT030007; HRS070009 TPA2203; CNT090044; CNT980017	
	LAND USE	NS	TREED	DL	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA				
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS				
	WILDLIFE / WILDLIFE HABITAT	GRIZZLY BEAR ZONE				
	VEGETATION					
	WETLANDS	[SE MARSH]	[SE MARSH]	TREED FEN	NW FEN	
	FISH HABITAT SENSITIVITY	[SE MARSH]	[HIGH]	[MASKUTA CREEK]		
	HYDROLOGY					
SOILS PARENT MATERIAL			NS			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[FISH] [WC (CLASS C)] [WETLAND] [NAV WATERS] [NAV WATERS]	MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS	[WETLAND] [NAV WATERS]
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CONSTRUCTION WORK WINDOW		[AQ-JUL 16 TO AUG 31]	
SOILS HANDLING PROCEDURE	STRIPPING DEPTH (cm)	NS	15-20
SOILS		FULL ROW; REDUCE AS APPROPRIATE	FULL ROW; REDUCE AS APPROPRIATE
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	
WETLANDS		[WT-NOTE 1] [WT-NOTE 2]	[WT-NOTE 1] [WT-NOTE 2]
FOREST TYPE (m ³ /ha)			
VEGETATION		[AQ-NOTE 1]	
WILDLIFE AND FISH HABITAT			WF-NOTE 5 AK-NOTE 1
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES		[AQ-NOTE 4]	

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATIS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 075 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
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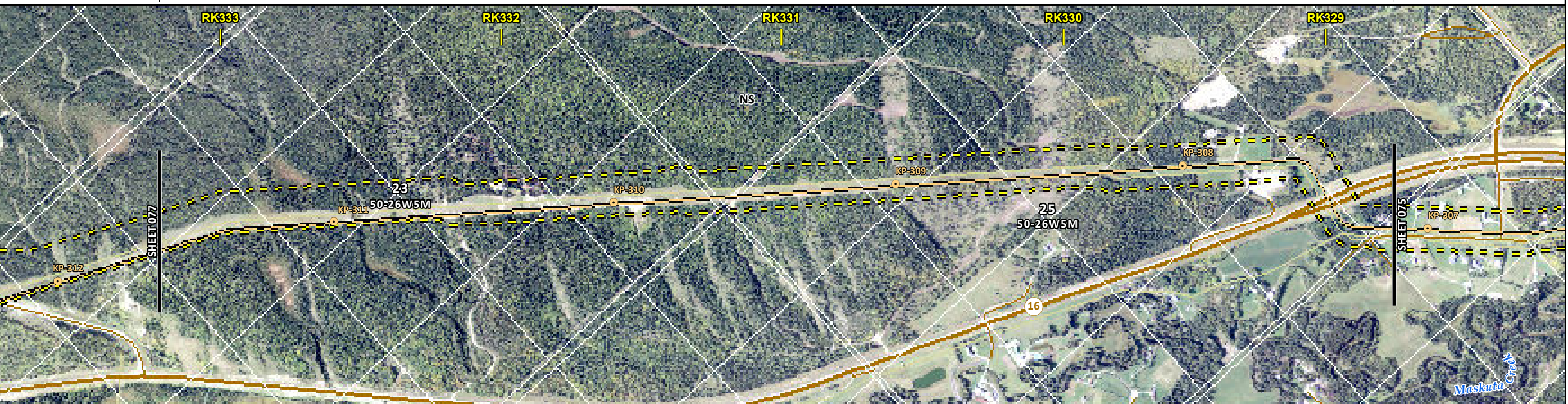
FROM RK 323.8 TO RK 328.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY							
	LAND OWNERSHIP / DISPOSITION	TPA2039; CNT090044; CNT980017	PNT850565	CROWN	[EGL980006]	FGL960010	MIXED	PRIVATE	
	LAND USE	TREED				NS			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA							
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT	GRIZZLY BEAR ZONE				SPECIAL ACCESS ZONE			
	VEGETATION								
	WETLANDS	[NLTR SWAMP]	[SHRUBBY SWAMP]						
	FISH HABITAT SENSITIVITY								
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]			[SHALLOW WELL]		
SOILS PARENT MATERIAL					NS				

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[WETLAND]	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[HYDROLOGY]
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]			
	SOILS STRIPPING DEPTH (cm)	15-20			NS	15-20	[NS]
	HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			[FULL ROW; REDUCE AS APPROPRIATE]		
	SOILS						
	WATERCOURSE CROSSINGS	PIPELINE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]		
		VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]		
	WETLANDS	[WT-NOTE 1]	[WT-NOTE 1]				
	FOREST TYPE (m ³ /ha)						
	VEGETATION						
	WILDLIFE AND FISH HABITAT	WF-NOTE 5					
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES	[HY-NOTE 2]						

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N

Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATIS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 076 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:15,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANSMOUNTAIN EXPANSION PROJECT

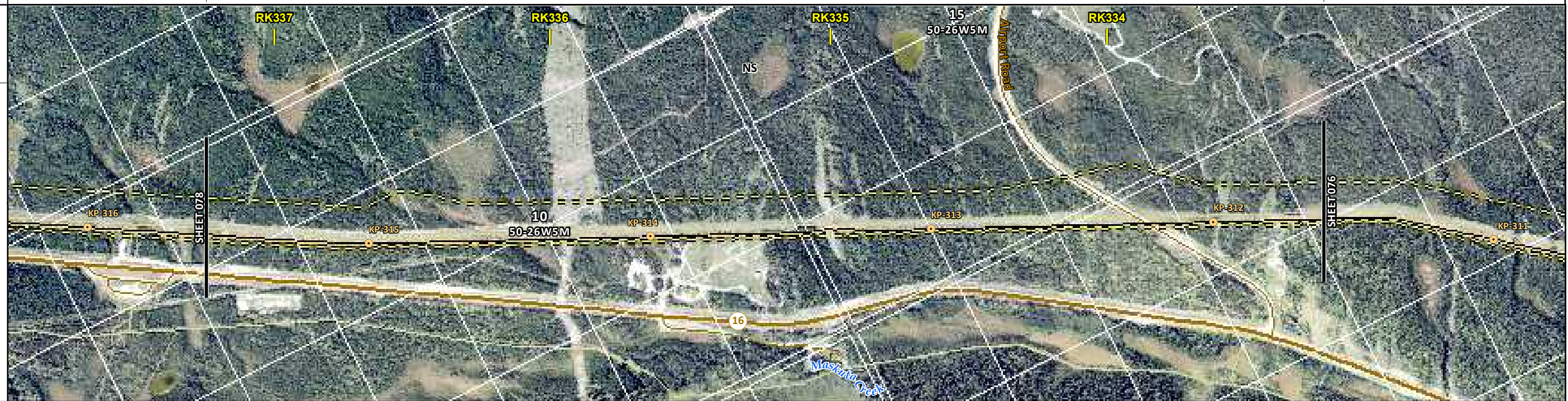
FROM RK 328.7 TO RK 333.2

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY	
	LAND OWNERSHIP / DISPOSITION	PNT020232 TPA2039; CNT090044	CROWN TPA2039; CNT090044; CNT980017
	LAND USE	TREED	NS TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA	
	HERITAGE / TRADITIONAL LAND USE	TLU SITE	
	WILDLIFE / WILDLIFE HABITAT	GRIZZLY BEAR ZONE SPECIAL ACCESS ZONE	
	VEGETATION		
	WETLANDS	[NLTR SWAMP]	TREED FEN
	FISH HABITAT SENSITIVITY		
	HYDROLOGY	[DRAINAGE]	[TRIB TO MASKUTA CR] [TRIB TO MASKUTA CR]
SOILS PARENT MATERIAL	NS		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	WETLAND	[WC (NCD)]	[WC (CLASS C)]	[WC (CLASS C)]	[WC (CLASS C)]
					TLU	

CONSTRUCTION WORK WINDOW		[AQ-OPEN]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]	[AQ-JUL 16 TO AUG 31]
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	NS	15-20	
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
		[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS		[WT-NOTE 1]	WT-NOTE 1		
FOREST TYPE (m³/ha)					
VEGETATION					
WILDLIFE AND FISH HABITAT			WF-NOTE 5		
HERITAGE / TRADITIONAL LAND USE				TLU-NOTE 1	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES					

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATIS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 077 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
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DRAWN CMR	CHECKED DN	DESIGN TGG

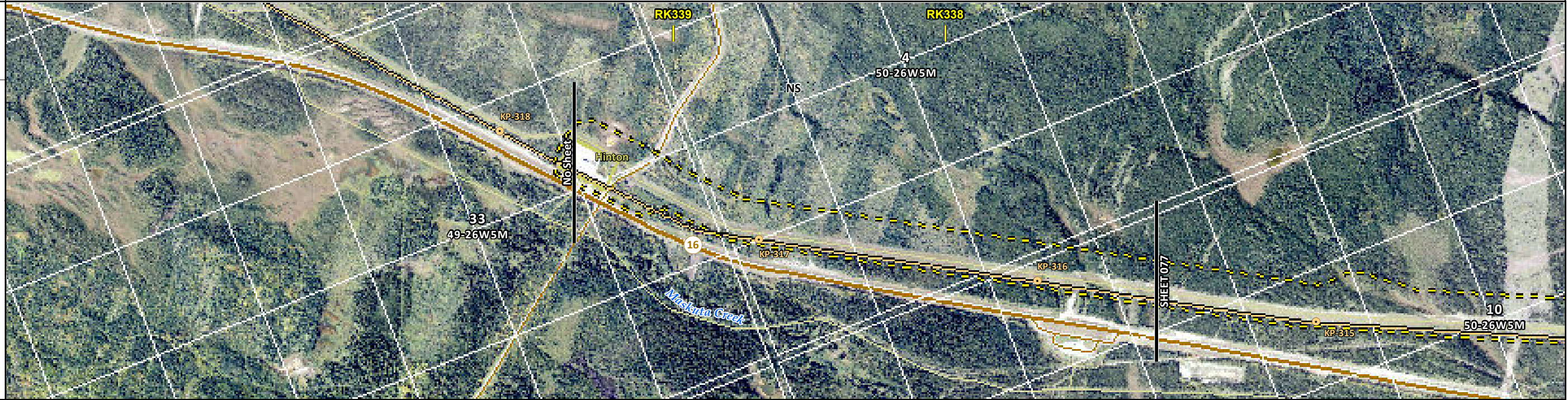
FROM RK 333.2 TO RK 337.2

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	YELLOWHEAD COUNTY		
	LAND OWNERSHIP / DISPOSITION	MIXED HRS070002	CROWN TPA2039; CNT090044 PNT020232	
	LAND USE	DL	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GREEN AREA		
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS		
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND	GRIZZLY BEAR ZONE SPECIAL ACCESS ZONE	
	VEGETATION	JUNCBRE		
	WETLANDS	SHRUBBY FEN	SHRUBBY SWAMP	TREED FEN NLTR SWAMP
	FISH HABITAT SENSITIVITY	TRIB TO MASKUTA CREEK		
	HYDROLOGY	DRAINAGE DRAINAGE		
SOILS PARENT MATERIAL	NS			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[RARE PLANT] [WETLAND] WF FEATURE	WILDLIFE AREA MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS [WC (CLASS C)] [WETLAND]	[WC (NCD)] [WETLAND] [WC (NCD)]	[WETLAND]
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CONSTRUCTION WORK WINDOW	WF-NOTE 4	[AQ-JUL 16 TO AUG 31]	[AQ-OPEN][AQ-OPEN]
SOILS STRIPPING DEPTH (cm)	-	15-20	
HANDLING PROCEDURE	-	FULL ROW; REDUCE AS APPROPRIATE	
SOILS			
WATERCOURSE CROSSINGS PIPELINE VEHICLE		[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3][AQ-NOTE 3] [AQ-NOTE 2][AQ-NOTE 2]
WETLANDS	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1] [WT-NOTE 1]
FOREST TYPE (m ³ /ha)			
VEGETATION	[VG-NOTE 1]		
WILDLIFE AND FISH HABITAT	WF-NOTE 1		WF-NOTE 5 AK-NOTE 1
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 078 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:15,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 337.2 TO RK 339.4

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	FRASER-FORT GEORGE REGIONAL DISTRICT	CROWN		
	LAND OWNERSHIP / DISPOSITION		MIXED			
	LAND USE		GOA701151; TR0702T006 TREED	TR0702T006		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT					
	VEGETATION					
	WETLANDS					
	FISH HABITAT SENSITIVITY					
	HYDROLOGY			[DRAINAGE DRAINAGE]		
SOILS PARENT MATERIAL	byT	T	Ff	byT	F	byT

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES									[WC (NCD)] [WC (NVC)]
			UNST TR WIND/WATER ER					COMP RUT WIND ER	WIND/WATER ER

CONSTRUCTION WORK WINDOW									
SOILS HANDLING	STRIPPING DEPTH (cm)				15-20				
	PROCEDURE				FULL ROW; REDUCE AS APPROPRIATE				
SOILS			SO-NOTE 3		SO-NOTE 1			SO-NOTE 2	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE								[AQ-NOTE 3] [AQ-NOTE 3] [AQ-NOTE 2] [AQ-NOTE 2]
WETLANDS									
FOREST TYPE (m ³ /ha)									
VEGETATION									
WILDLIFE AND FISH HABITAT									
HERITAGE / TRADITIONAL LAND USE									
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									
SPECIAL MEASURES									

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 079 OF 301
DATE	December 2013	REVISION	0
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TERA REF.	7894	CHECKED	DN
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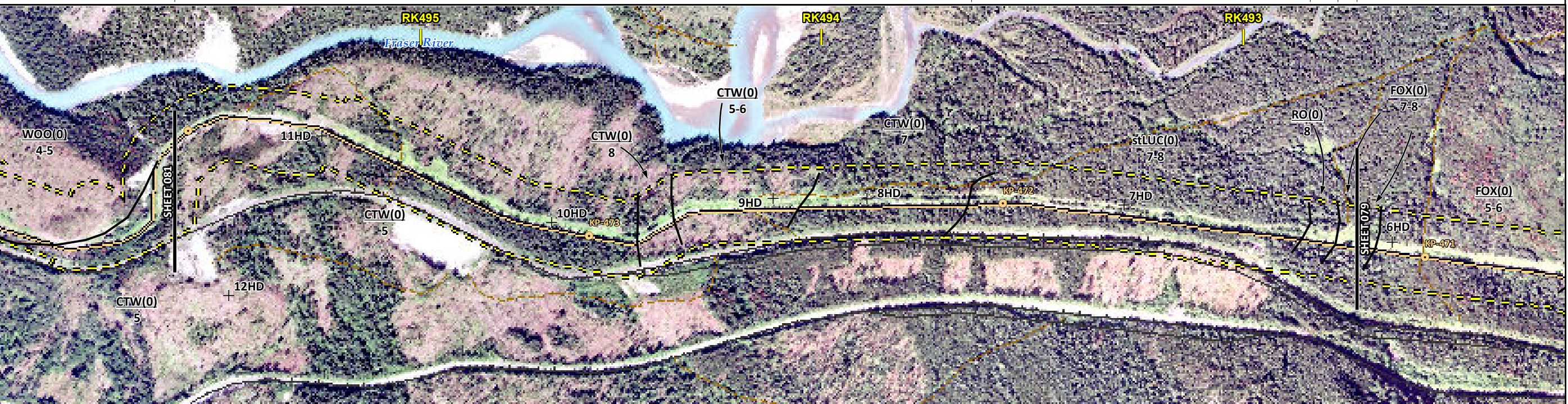
ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 489.6 TO RK 492.7

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	CROWN	MIXED	ENV C&R	CROWN
	LAND USE	GOA701151; TR0702T006 TREED			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY				
	HYDROLOGY				
SOILS PARENT MATERIAL		GL		stT	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WIND/WATER ER
--------------------------------	---------------

CONSTRUCTION WORK WINDOW		
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1
SOILS		
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION		
WILDLIFE AND FISH HABITAT		
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		



Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 080 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

**ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT**

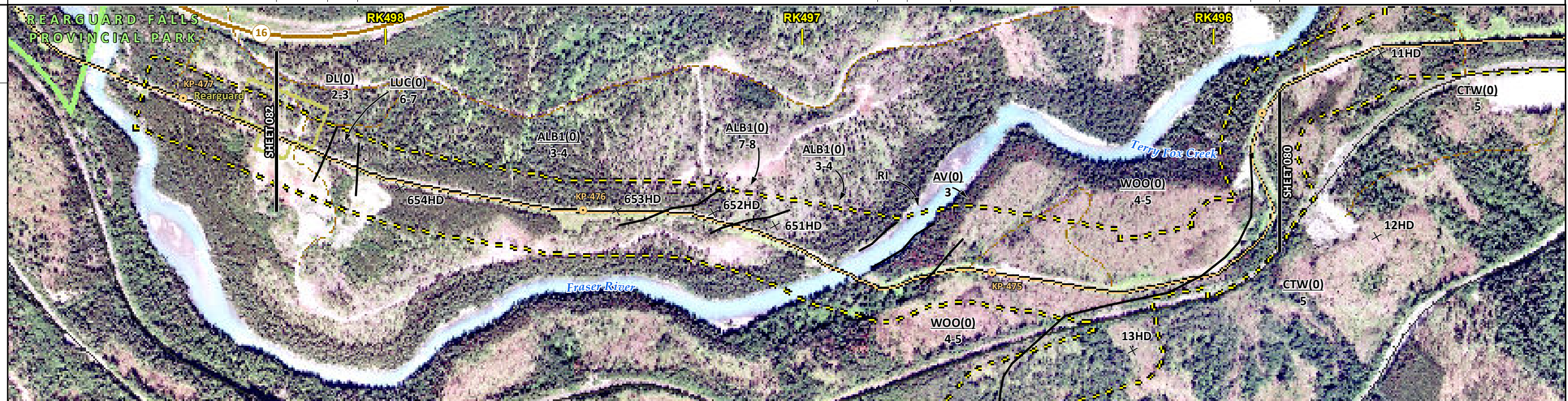
FROM RK 492.7 TO RK 495.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION		MIXED ENV C&R	[CROWN]	
	LAND USE	GOA701151; TR0703T001 TREED	RIVER	GOA701151; TR0702T006 TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY		HIGH		
	HYDROLOGY	[DRAINAGE]	[FRASER RIVER]		
SOILS PARENT MATERIAL		GF	F	FF	GL

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[FISH] [WC (S1B)]
	[WIND/WATER ER]	[NAV WATERS]
	WIND ER UNST TR	UNST TR WIND/WATER ER
	[AQ-OPEN]	[AQ-JUL 15 TO AUG 15]

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-JUL 15 TO AUG 15]
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
SOILS		SO-NOTE 1 SO-NOTE 3
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION		[AQ-NOTE 1]
WILDLIFE AND FISH HABITAT		
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		[AQ-NOTE 4]

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 081 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

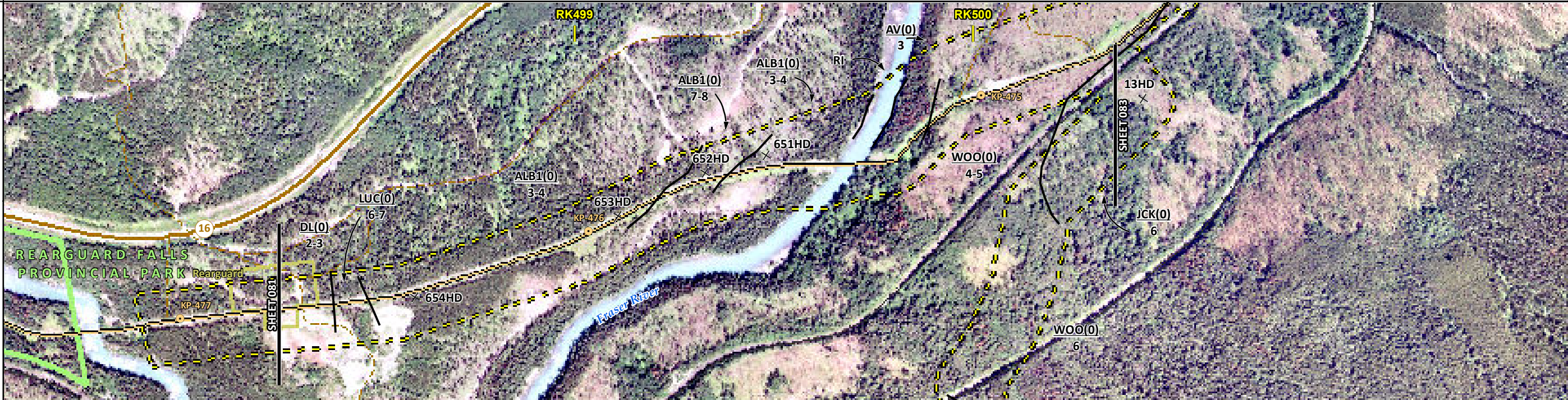
FROM RK 495.7 TO RK 498.3

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	MIXED			
	LAND USE	ENV C&R GOA701151; TR0703T001 TREED		GOA701151; TR0702T006 RIVER TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY	HIGH			
	HYDROLOGY	FRASER RIVER			
SOILS PARENT MATERIAL	T	GF	F	Ff	E

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WIND/WATER ER	WIND ER	UNST TR	WIND/WATER ER	WIND ER	NAV WATERS	WIND ER	UNST TR	WIND/WATER ER
						FISH [WC (S1B)]			

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW		[AQ-JUL 15 TO AUG 15]
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20
		PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
	SOILS		SO-NOTE 1 SO-NOTE 3
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS		
	FOREST TYPE (m ³ /ha)		
	VEGETATION		[AQ-NOTE 1]
	WILDLIFE AND FISH HABITAT		
	SPECIAL MEASURES		[AQ-NOTE 4]

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 082 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT																										
			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY		CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	<table border="1"> <thead> <tr> <th>DATE</th> <th>TERA REF.</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td>December 2013</td> <td>7894</td> <td>0</td> </tr> </tbody> </table>	DATE	TERA REF.	REVISION	December 2013	7894	0	<table border="1"> <thead> <tr> <th>SCALE</th> <th>PAGE SIZE</th> <th>DISCIPLINE</th> </tr> </thead> <tbody> <tr> <td>1:10,000</td> <td>11x17</td> <td>EAS</td> </tr> </tbody> </table>	SCALE	PAGE SIZE	DISCIPLINE	1:10,000	11x17	EAS	<table border="1"> <thead> <tr> <th>DRAWN</th> <th>CHECKED</th> <th>DESIGN</th> </tr> </thead> <tbody> <tr> <td>CMR</td> <td>DN</td> <td>TGG</td> </tr> </tbody> </table>	DRAWN	CHECKED	DESIGN
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	FRASER-FORT GEORGE REGIONAL DISTRICT	MIXED	CROWN	MIXED
	LAND OWNERSHIP / DISPOSITION		GOA701151; TR0702T006			
	LAND USE		TREED			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT					
	VEGETATION					
	WETLANDS					
	FISH HABITAT SENSITIVITY					
	HYDROLOGY					
SOILS PARENT MATERIAL	GF	T	FF	E		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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POTENTIAL ENVIRONMENTAL ISSUES		UNST TR	WIND/WATER ER	UNST TR
--------------------------------	--	---------	---------------	---------

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW			
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	
	SOILS HANDLING	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	
	SOILS		SO-NOTE 1	SO-NOTE 3
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE		
	WETLANDS			
	FOREST TYPE (m ³ /ha)			
	VEGETATION			
	WILDLIFE AND FISH HABITAT			
	HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES				

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 083 OF 301
DATE December 2013	TERA REF. 7894
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REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 500.6 TO RK 503.1

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	CROWN	
	LAND USE	GOA701151; TR0702T006 TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		
	VEGETATION		
	WETLANDS	[SHRUBBY SWAMP]	[SHRUBBY SWAMP]
	FISH HABITAT SENSITIVITY	[CHANNEL]	[CHANNEL]
	HYDROLOGY		
SOILS PARENT MATERIAL	T	T/R byT GF	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
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POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[WC (S6)]	[WETLAND]	[WC (S6)]	UNST TR
	WATER ER		WIND/WATER ER		

CONSTRUCTION WORK WINDOW		[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE	15-20 FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1	
SOILS			SO-NOTE 3
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS		[WT-NOTE 1]	[WT-NOTE 1]
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT			
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
byKKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPL, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 084 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

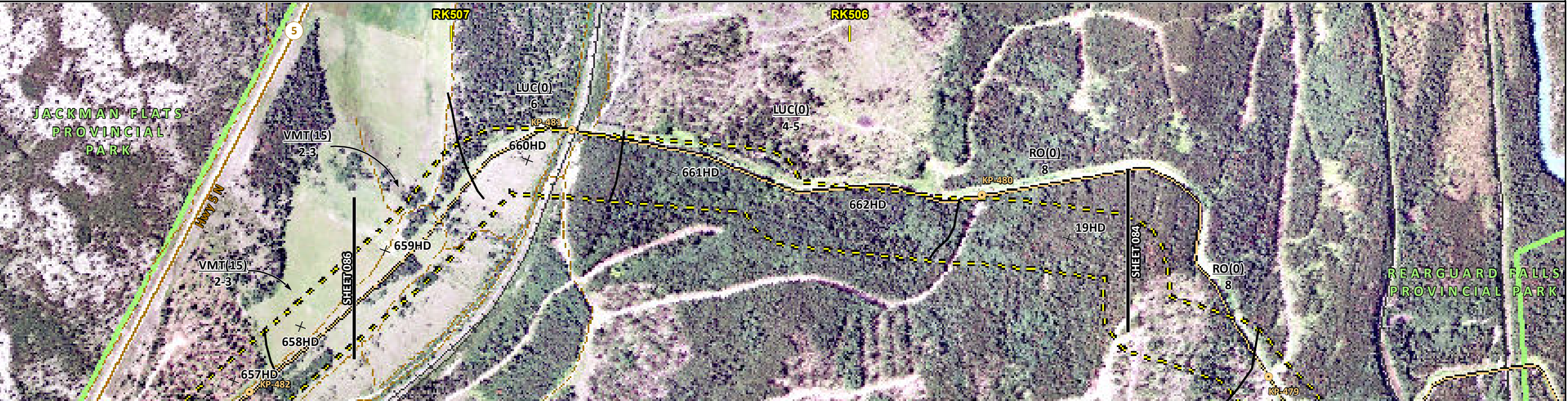
FROM RK 503.1 TO RK 505.3

P:\GIS\TMEP\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LaRes

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	PRIVATE	[MIXED]	CROWN
	LAND USE	HAY		TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	FORAGE		
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS			
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	[CHANNEL]	[CHANNEL]	[DRAINAGE]
SOILS PARENT MATERIAL	FF			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	AGRI (CROP)	[WC (S6)]	[WC (S6)]	[WC (NVC)]
	WIND ER		WIND/WATER ER	WATER ER
	[AQ-OPEN]		[AQ-OPEN]	[AQ-OPEN]

CONSTRUCTION WORK WINDOW			
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	
	SOILS	SO-NOTE 1	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]
		[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS			
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT			
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AG-NOTE 1		
SPECIAL MEASURES			

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATIS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 085 OF 301
DATE December 2013	TERA REF. 7894
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DRAWN CMR	CHECKED DN
	DISCIPLINE EAS
	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 505.3 TO RK 507.3

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT									
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	ENV C&R	CROWN	[MIXED]	PRIVATE				
	LAND USE			TREED							
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									HAY	
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION	[CARETON PINU/VACC/CLAD]	[CARETON PINU/VACC/CLAD]	[PINU/VACC/CLAD]	[CARETON]	[CARETON [CARETON]	CARETON				
	WETLANDS		[SHRUBBY SWAMP]								
	FISH HABITAT SENSITIVITY										
	HYDROLOGY	[DRAINAGE]									
SOILS PARENT MATERIAL	E	F		E					Ff		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[RARE PLANT / RARE COMMUNITY]	[RARE PLANTS RARE COMMUNITY]	[RARE COMMUNITY] [RARE PLANT]	[RARE PLANT]	RARE PLANTS		AGRI (CROP)
	[WC (NVC)]		WETLANDS [NAV WATERS]				
	UNST TR	COMP RUT		UNST TR			
		WIND ER			WIND/WATER ER		WIND ER

CONSTRUCTION WORK WINDOW	[AQ-OPEN]						
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	25		15-20		
	PROCEDURE			FULL ROW; REDUCE AS APPROPRIATE			
SOILS		SO-NOTE 3	SO-NOTE 2	SO-NOTE 1	SO-NOTE 3		
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]					
WETLANDS			WT-NOTE 1 [WT-NOTE 2]				
FOREST TYPE (m ³ /ha)							
VEGETATION		[VG-NOTE 1]	[VG-NOTE 1]	[VG-NOTE 1] [VG-NOTE 1]	[VG-NOTE 1][VG-NOTE 1]	VG-NOTE 1	
WILDLIFE AND FISH HABITAT							
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							AG-NOTE 1
SPECIAL MEASURES							

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 086 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
		DISCIPLINE	EAS
		DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 507.3 TO RK 510.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT							
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	CROWN AGRI	MIXED	PRIVATE			
	LAND USE	TREED	HAY		TAME PASTURE	TREED			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					FORAGE	FORAGE		
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION					CARETON	CARETON		
	WETLANDS								
	FISH HABITAT SENSITIVITY								
	HYDROLOGY					[DRAINAGE]	[DRAINAGE]		
SOILS PARENT MATERIAL	E/T	E	FF	E					

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
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- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	AGRI (CROP)	WIND ER	UNST TR	WINDWATER ER	AGRI (CROP)	RARE PLANTS	[WC (NVC)]	WIND ER	[AQ-OPEN]	UNST TR	[AQ-OPEN]	[RARE PLANTS]	[RARE PLANTS]	[RARE PLANTS]	AGRI (CROP)	
	CONSTRUCTION WORK WINDOW																
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20									15	15-20				
	SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE														
	SOILS		SO-NOTE 3									SO-NOTE 1	SO-NOTE 3				
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE															
	WATERCOURSE CROSSINGS																
	WETLANDS																
	FOREST TYPE (m ³ /ha)																
	VEGETATION																
WILDLIFE AND FISH HABITAT																	
HERITAGE / TRADITIONAL LAND USE																	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS										AG-NOTE 1					AG-NOTE 1		
SPECIAL MEASURES																	

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 087 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
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REVISION 0	DISCIPLINE EAS
DESIGN TGG	

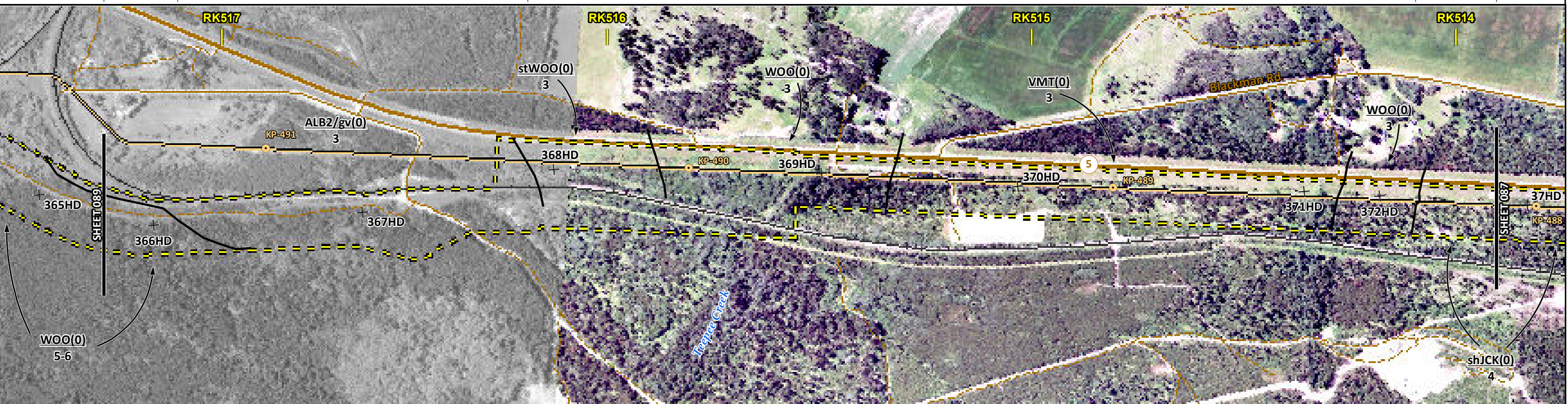
ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 510.7 TO RK 513.9

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	MIXED CM FST GOA701151; TR0702T006	PRIVATE MIXED PRIVATE [GOA701151; TR0702T006]
	LAND USE		TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		
	VEGETATION	[CARETON]	[CARETON]
	WETLANDS		
	FISH HABITAT SENSITIVITY	[HIGH]	
	HYDROLOGY	[TEEPEE CREEK]	[HOGAN CREEK]
SOILS PARENT MATERIAL	Ff	Gf	Ff E/T

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[FISH] [WC (S3)] [RARE PLANTS] [RARE PLANT] [WC (S8)]
	LOW QUALITY SUBSOILS UNST TR WIND ER [AQ-JUN 15 TO AUG 15] [AQ-OPEN] UNST TR

CONSTRUCTION WORK WINDOW	[AQ-JUN 15 TO AUG 15]	[AQ-OPEN]
SOILS STRIPPING DEPTH (cm)	15-20	25
SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	OVERSTRIP
SOILS	SO-NOTE 3	SO-NOTE 1
WATERCOURSE CROSSINGS PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION	[VG-NOTE 1] [VG-NOTE 1]	
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]	
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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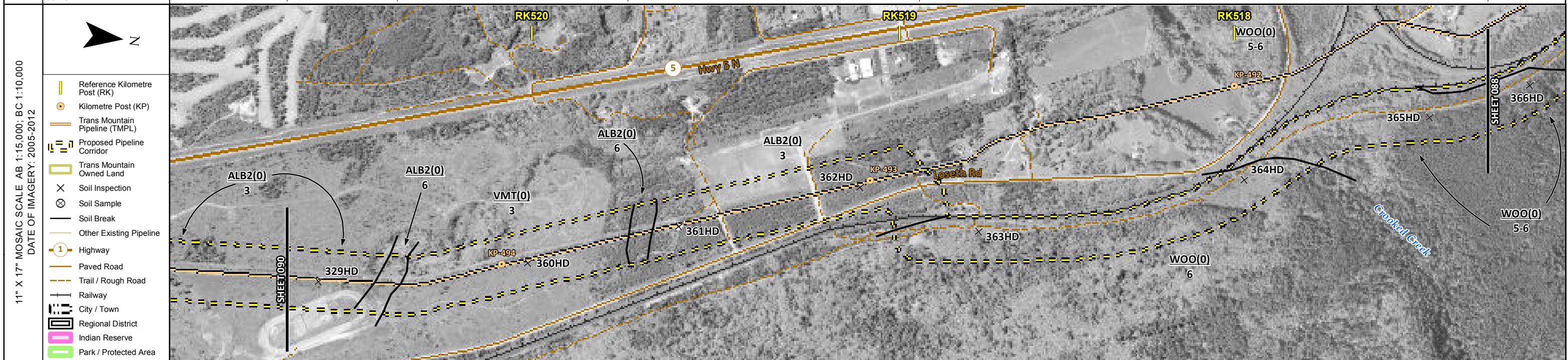
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 088 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 513.9 TO RK 517.3

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT															
	LAND OWNERSHIP / DISPOSITION	CROWN CM FST; RES GOA701151; TR0702T006				[MIXED]	PRIVATE		CM FST; RES GOA701151; TR0702T006			[MIXED]	PRIVATE CM FST; ENV C&R GOA701151; TR0702T006		[MIXED]	CM FST	
	LAND USE	TREED															
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS																
	HERITAGE / TRADITIONAL LAND USE																
	WILDLIFE / WILDLIFE HABITAT																
	VEGETATION	CARETON [BOTRHES BOTRMIC BOTRHES]															
	WETLANDS																
	FISH HABITAT SENSITIVITY																
	HYDROLOGY																
SOILS PARENT MATERIAL	GF				Ff				GF				Ff				



POTENTIAL ENVIRONMENTAL ISSUES	RARE PLANTS											
	UNST TR WIND ER				[WIND/WATER ER] WIND ER				UNST TR WIND/WATER ER			

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	15-20											
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1											
	SOILS	SO-NOTE 3				SO-NOTE 1				SO-NOTE 3			
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE											
	WETLANDS												
	FOREST TYPE (m ³ /ha)												
	VEGETATION	VG-NOTE 1											
	WILDLIFE AND FISH HABITAT												
	HERITAGE / TRADITIONAL LAND USE												
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES													

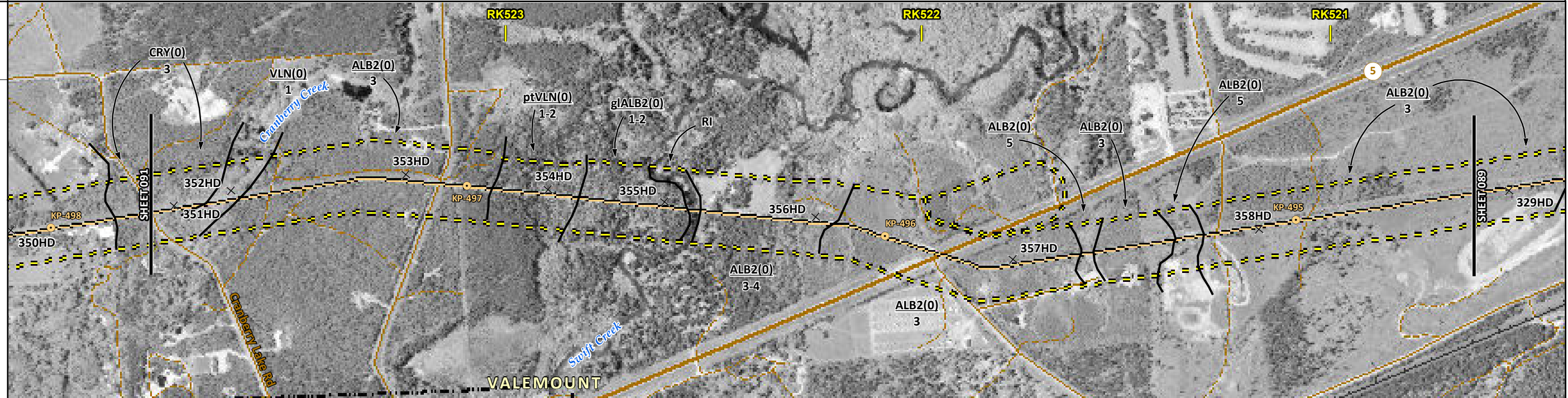
	Soils Description	REFERENCES				REVISION HISTORY				MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 089 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT													
	Soil Phase Soil Unit Depth of Topsoil (cm) Topographic Class	Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.				<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>				NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	DATE December 2013	TERA REF. 7894	REVISION 0	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.																			
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byKKL1(10) 6	This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.				<table border="1"> <thead> <tr> <th>SCALE</th> <th>PAGE SIZE</th> <th>DISCIPLINE</th> <th>DESIGN</th> </tr> </thead> <tbody> <tr> <td>1:10,000</td> <td>11x17</td> <td>EAS</td> <td>TGG</td> </tr> </tbody> </table>				SCALE	PAGE SIZE	DISCIPLINE	DESIGN	1:10,000	11x17	EAS	TGG	FROM RK 517.3	TO RK 520.7							
SCALE	PAGE SIZE	DISCIPLINE	DESIGN																						
1:10,000	11x17	EAS	TGG																						

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT										
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	PRIVATE	MIXED ENV C&R	PRIVATE	[MIXED]	CROWN	CM FST; RES	GOA701151; TR0702T006		
	LAND USE			TREED	[RIVER]			TREED				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											
	HERITAGE / TRADITIONAL LAND USE											
	WILDLIFE / WILDLIFE HABITAT		AMPH-POND									
	VEGETATION		PINU/VACC/CLAD	[CARETON]					[BOTRHES BOTRHES BOTRPED BOTRHES]	CARETON	[BOTRMIC CARETON]	CARETON
	WETLANDS		DEEP MARSH									
	FISH HABITAT SENSITIVITY				[HIGH]							
	HYDROLOGY		[CRANBERRY CREEK]		[SWIFT CREEK]	SHALLOW GW			[DRAINAGE DRAINAGE]	[DRAINAGE]		
SOILS PARENT MATERIAL		F-GF	F	GF	OIF	GF	-		GF			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (S6)]	[RARE COMMUNITY]	[RARE PLANTS]	[FISH] [WC (S1B)]	HYDROLOGY	[WC (NVC)]	[WC (NVC)]	[WC (NVC)]	RARE PLANTS
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[WF-NOTE 4]		[AQ-JUL 15 TO AUG 15]		[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	
	SOILS HANDLING	STRIPPING DEPTH (cm)		15-20			15-20			
	SOILS	PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE			FULL ROW; REDUCE AS APPROPRIATE			
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 2]		[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	
	WETLANDS		[WT-NOTE 1]			[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	
	FOREST TYPE (m ² /ha)									
	VEGETATION		[VG-NOTE 1]	[VG-NOTE 1]						[VG-NOTE 1]
	WILDLIFE AND FISH HABITAT		[WF-NOTE 1]			[AQ-NOTE 1]				
	SPECIAL MEASURES					[AQ-NOTE 4]	HY-NOTE 1			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 090 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DESIGN	TGG	DISCIPLINE	EAS
REVISION	0	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

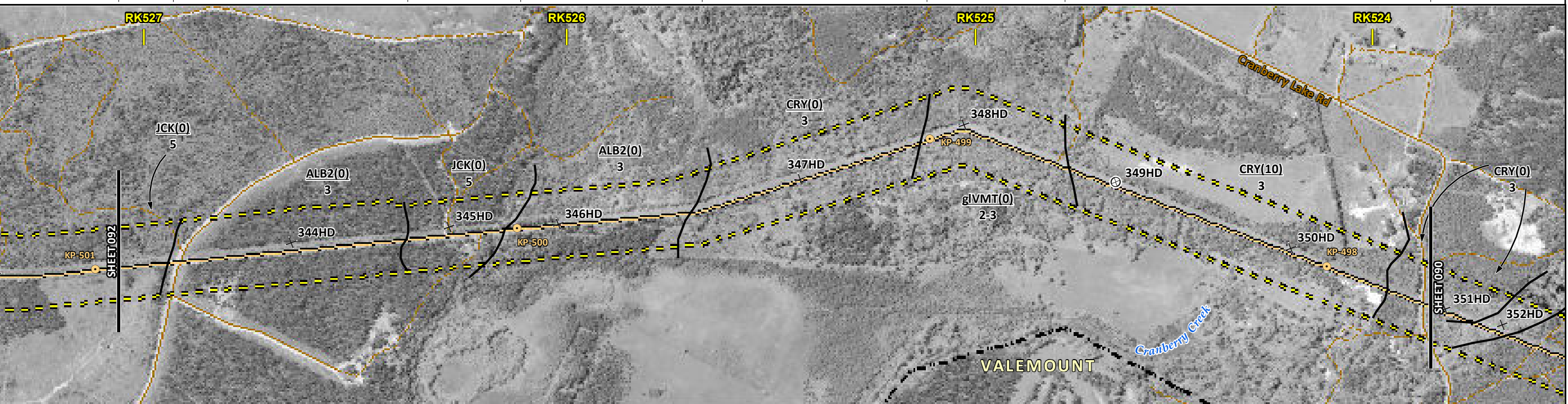
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 520.7 TO RK 523.9

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	CROWN	MIXED CM FST; RES [GOA701151; TR0702T005]	CROWN	MIXED CM FST GOA701151; TR0702T006
	LAND USE	TREED			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS	[DEEP MARSH]			
	FISH HABITAT SENSITIVITY				
	HYDROLOGY	[CRANBERRY CREEK]		[DRAINAGE]	
SOILS PARENT MATERIAL	E	GF	E	GF	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
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- Trans Mountain Owned Land
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- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WIND/WATER ER]	WIND ER	WIND/WATER ER	UNST TR	[WC (NVC)]	[WC (NVC)]	[NAV WATERS] [WETLAND]
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20
	SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
	SOILS		SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	SO-NOTE 3
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 2]
	WETLANDS		[WT-NOTE 1]
	WETLANDS		[WT-NOTE 2]
	FOREST TYPE (m ³ /ha)		
VEGETATION			
WILDLIFE AND FISH HABITAT			
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N

Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 091 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

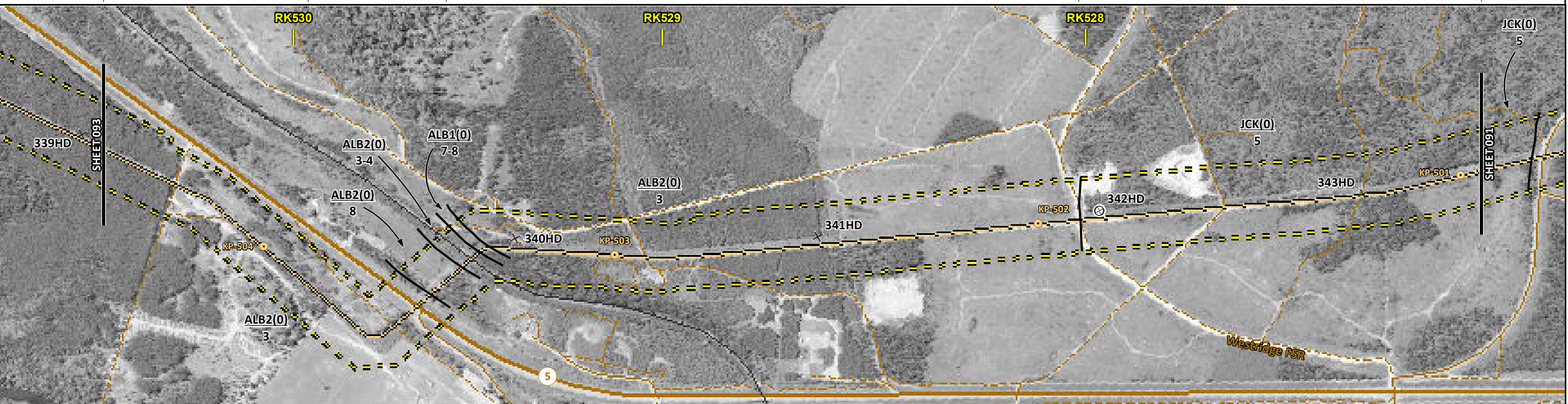
ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 523.9 TO RK 527.1

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	CROWN CM FST; ENV C&R TR0702T005	PRIVATE	MIXED	CROWN CM FST; RES
	LAND USE	TREED	DISTURBED LAND	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION	[CARETON]			
	WETLANDS				
	FISH HABITAT SENSITIVITY				
	HYDROLOGY	SHALLOW GW			
SOILS PARENT MATERIAL	GF		GF	E	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[RARE PLANTS]	[WIND ER]	[WIND/WATER ER]	[WIND/WATER ER]	UNST TR	WIND ER	WIND/WATER ER
--------------------------------	---------------	-----------	-----------------	-----------------	---------	---------	---------------

CONSTRUCTION WORK WINDOW							
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	15-20	10	15-20		
SOILS	FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1 SO-NOTE 3						
WATERCOURSE CROSSINGS	PIPELINE VEHICLE						
WETLANDS							
FOREST TYPE (m ³ /ha)	[VG-NOTE 1]						
VEGETATION							
WILDLIFE AND FISH HABITAT							
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES	HY-NOTE 1						

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 092 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
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DRAWN CMR	CHECKED DN	DESIGN TGG

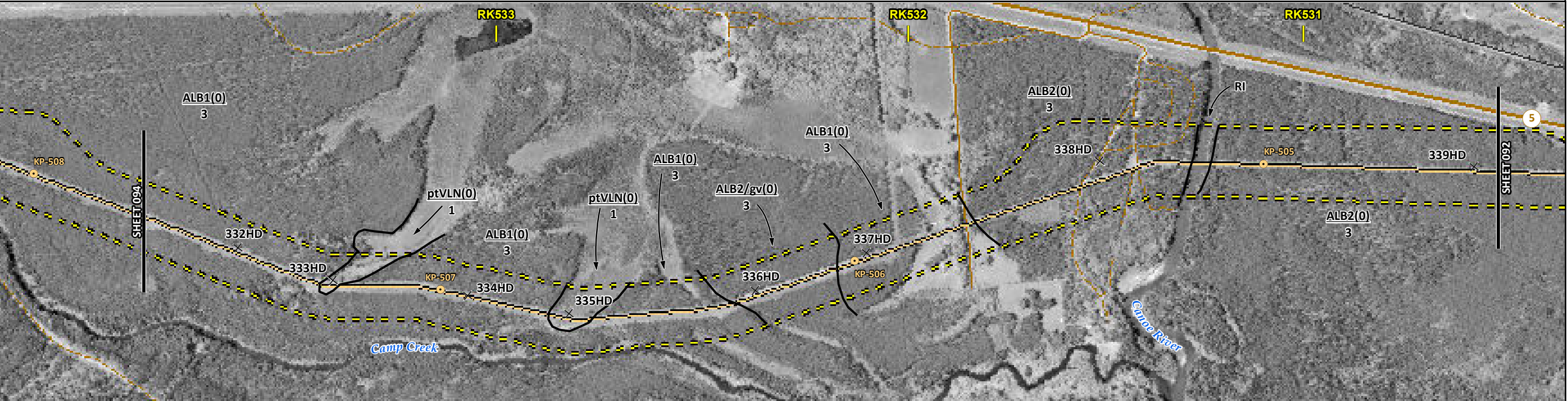
FROM RK 527.1 TO RK 530.5

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT											
	LAND OWNERSHIP / DISPOSITION	CROWN ENV C&R GOA701151; TR0702T005			[MIXED]		PRIVATE		[MIXED]		CROWN CM FST; ENV C&R TR0702T005		
	LAND USE	TREED											
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	FORAGE											
	HERITAGE / TRADITIONAL LAND USE												
	WILDLIFE / WILDLIFE HABITAT												
	VEGETATION	CARETON	CARETON	[BOTRPED]	[CARETON]	CARETON	[CARETON]	[BOTRPED]	CARETON				
	WETLANDS	[NW FEN]			[NW FEN]	[NW FEN]							
	FISH HABITAT SENSITIVITY				[TREED FEN]				[HIGH]	[CANOE RIVER]			
	HYDROLOGY				SHALLOW GW								
SOILS PARENT MATERIAL	GF	O/F	GF	O/F							SHALLOW GW		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
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- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	RARE PLANTS	RARE PLANTS	[RARE PLANTS]	[RARE PLANTS]	RARE PLANTS	[RARE PLANTS]	[RARE PLANT]	[FISH] [WC (S1B)]	RARE PLANTS
	UNST TR WIND ER	[WETLAND] [NAV WATERS] [COMP RUT]	UNST TR WIND ER	[HYDROLOGY] [WETLANDS] [COMP RUT]	[NAV WATERS] [WETLAND]	UNST TR WIND ER	AGRI (CROP)	[NAV WATERS]	HYDROLOGY
								[AQ-JUL 15 TO AUG 15]	UNST TR WIND ER

CONSTRUCTION WORK WINDOW		[AQ-JUL 15 TO AUG 15]							
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20			25	15-20			15-20
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE							
SOILS		SO-NOTE 1	[SO-NOTE 2]	SO-NOTE 1	[SO-NOTE 2]	SO-NOTE 1	[SO-NOTE 2]	[AQ-NOTE 3]	SO-NOTE 1
		SO-NOTE 3		SO-NOTE 3		SO-NOTE 3		[AQ-NOTE 2]	SO-NOTE 3
WATERCOURSE CROSSINGS	PIPELINE VEHICLE							[AQ-NOTE 3]	
WETLANDS		[WT-NOTE 1]	[WT-NOTE 2]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 2]	[WT-NOTE 1]		
FOREST TYPE (m ³ /ha)		VG-NOTE 1		VG-NOTE 1	[VG-NOTE 1]	VG-NOTE 1	[VG-NOTE 1][VG-NOTE 1]	[VG-NOTE 1]	VG-NOTE 1
VEGETATION								[AQ-NOTE 1]	
WILDLIFE AND FISH HABITAT									
HERITAGE / TRADITIONAL LAND USE									
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							AG-NOTE 1		
SPECIAL MEASURES				HY-NOTE 1				[AQ-NOTE 4]	HY-NOTE 1

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

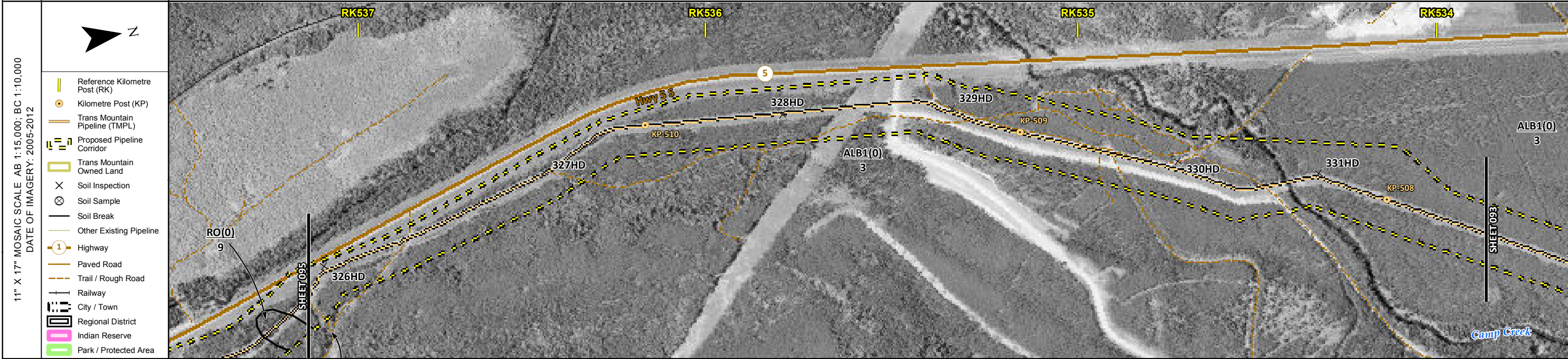
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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 093 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 530.5 TO RK 533.9

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION	ENV C&R CROWN ENV C&R MIXED ENV C&R CROWN
	LAND USE	GOA701151; TR0702T005 TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	
	VEGETATION	CARETON CARETON
	WETLANDS	
	FISH HABITAT SENSITIVITY	[HIGH] [CAMP CREEK]
	HYDROLOGY	
SOILS PARENT MATERIAL	GF	



POTENTIAL ENVIRONMENTAL ISSUES	UNST TR WIND ER	[RARE PLANTS]	[FISH] [WC (S2)] [NAV WATERS]	[RARE PLANTS]
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CONSTRUCTION WORK WINDOW	[AQ-JUL 15 TO AUG 15]
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
SOILS	15-20 FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1 SO-NOTE 3
WATERCOURSE CROSSINGS	PIPELINE VEHICLE [AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS	
FOREST TYPE (m ³ /ha)	
VEGETATION	VG-NOTE 1 VG-NOTE 1
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	[AQ-NOTE 4]

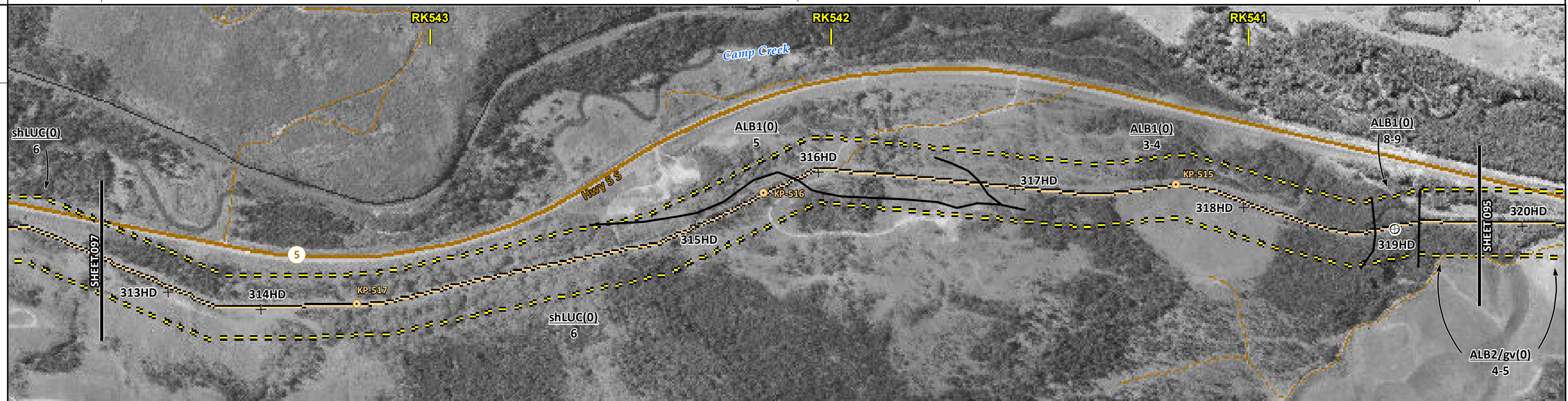
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 094 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 533.9 TO RK 537.2 				
			NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.	DATE	TERA REF.	REVISION
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						CMR	DN	TGG				

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	ENV C&R	ENV C&R
	LAND USE		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		
	VEGETATION		
	WETLANDS	MXDTR SWAMP	
	FISH HABITAT SENSITIVITY		[HIGH]
	HYDROLOGY	[CHANNEL]	[CHANNEL]
SOILS PARENT MATERIAL	T/R		GF

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
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- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (S6)]	[WC (S6)]	[WC (S6)]	WETLAND	[WC (S6)]	[WC (S6)]	[FISH] [WC (S3)]
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]		[AQ-OPEN]	[AQ-OPEN]	UNST TR WIND ER [AQ-JUL 15 TO APR 15]
	SOILS HANDLING	STRIPPING DEPTH (cm)		15-20				25
	SOILS HANDLING	PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE				OVERSTRIP
	SOILS			SO-NOTE 1			SO-NOTE 3	
	WATERCOURSE CROSSINGS	PIPELINE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	WATERCOURSE CROSSINGS	VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
	WETLANDS			WT-NOTE 1				
	FOREST TYPE (m ³ /ha)							
	VEGETATION							[AQ-NOTE 1]
WILDLIFE AND FISH HABITAT								
HERITAGE / TRADITIONAL LAND USE								
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
SPECIAL MEASURES								

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

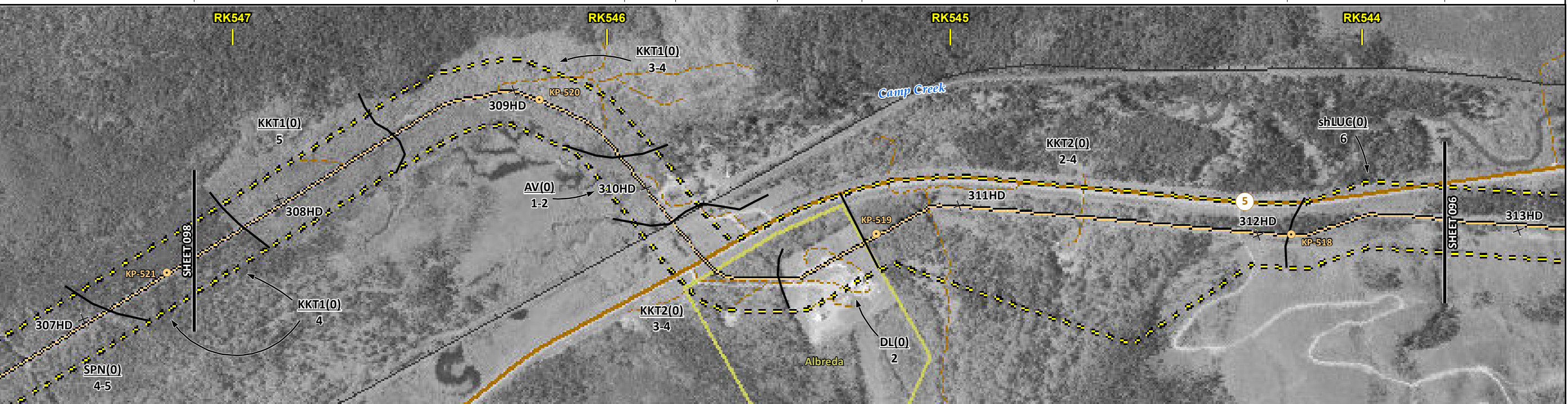
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 096 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 540.4 TO RK 543.8

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER-FORT GEORGE REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	MIXED	CROWN ENV C&R GOA701151; TR0702T005	[MIXED]	PRIVATE
	LAND USE				TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION	[PINU/VACC/CLAD]			
	WETLANDS		SHRUBBY SWAMP		
	FISH HABITAT SENSITIVITY	[HIGH]		[HIGH]	
	HYDROLOGY	[CHANNEL]	[DRAINAGE CHANNEL CAMP CR]	[SHALLOW GW]	[DRAINAGE]
SOILS PARENT MATERIAL		GF	F	GF	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[RARE COMMUNITY]	[FISH]	[WC (S3)]	[WC (NCD)]	[WC (S6)]	[FISH]	[WC (S2)]	[WC (NVC)]
	WIND ER	WIND/WATER ER	UNST TR	WIND ER	HYDROLOGY	UNST TR	UNST TR	WIND/WATER ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN AQ-OPEN AQ-JUL 15 TO AUG 15]	[AQ-OPEN]
	SOILS STRIPPING DEPTH (cm)		15-20	15-20
	SOILS HANDLING PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE	FULL ROW; REDUCE AS APPROPRIATE
	SOILS		SO-NOTE 3	SO-NOTE 3
	WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2 AQ-NOTE 2 AQ-NOTE 2]	[AQ-NOTE 2]
	WETLANDS		WT-NOTE 1	WT-NOTE 2
	FOREST TYPE (m ³ /ha)			
	VEGETATION	[VG-NOTE 1]		
	WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]		
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES		[AQ-NOTE 4]	[HY-NOTE 1]	

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 097 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

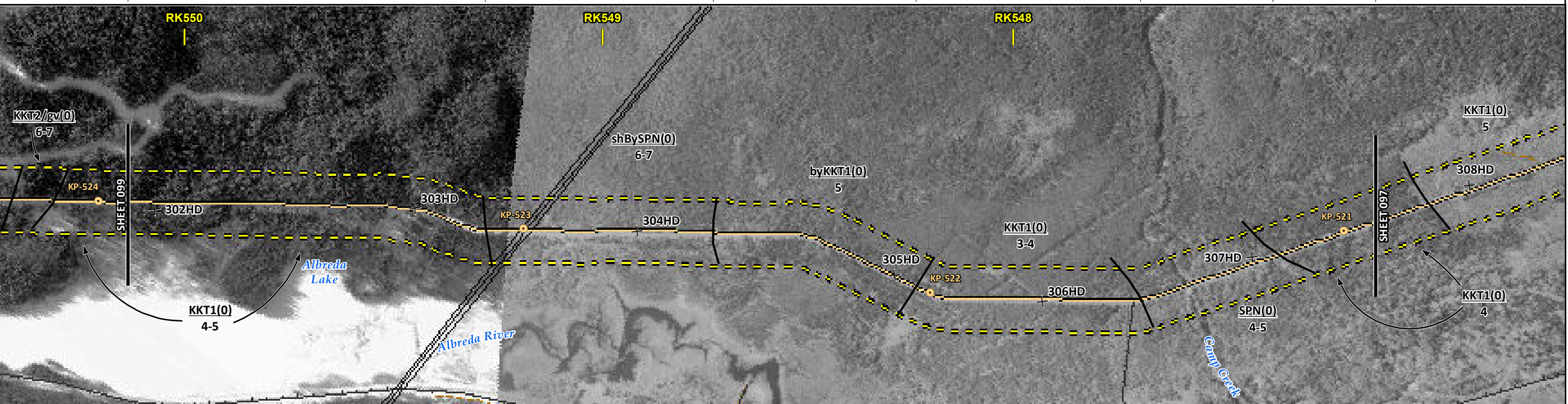
FROM RK 543.8 TO RK 547.1

P:\GIS\TERRA\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\Rev0\AS_Output\LR\Revs

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT								FRASER-FORT GEORGE REGIONAL DISTRICT														
	LAND OWNERSHIP / DISPOSITION	[MIXED]	CROWN	MIXED	CROWN	MIXED	PRIVATE	MIXED	CROWN	[MIXED]	PRIVATE	MIXED	ENV C&R	PRIVATE	MIXED	CROWN	[MIXED]							
	LAND USE	TR0343T001								GOA701151; TR0702T005 TREED				GOA701151; TR0702T005										
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS																							
	HERITAGE / TRADITIONAL LAND USE																							
	WILDLIFE / WILDLIFE HABITAT	[WELLS GRAY CARIBOU HERD RANGE]																						
	VEGETATION																							
	WETLANDS																							
	FISH HABITAT SENSITIVITY																							
	HYDROLOGY	[CHANNEL]	[CHANNEL]	[CHANNEL]	[CHANNEL]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]						
SOILS PARENT MATERIAL	GF				byFf				byGF				GF				F-C				GF			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
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- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WILDLIFE AREA]	[WC (S6)]	[WC (S6)]	[WC (S6)]	[WC (S6)]	[WC (NVC)]	[FISH]	[WC (S2)]	[NAV WATERS]	UNST TR	WIND/WATER ER	UNST TR	WIND ER	WIND/WATER ER	UNST TR	WIND ER
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-JUL 15 TO AUG 15]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm) 15-20 PROCEDURE FULL ROW; REDUCE AS APPROPRIATE															
	SOILS	SO-NOTE 3															
	WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	WETLANDS																
	FOREST TYPE (m ³ /ha)																
	VEGETATION																
	WILDLIFE AND FISH HABITAT	[WF-NOTE 5]															
	SPECIAL MEASURES	[AQ-NOTE 4]															

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 098 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

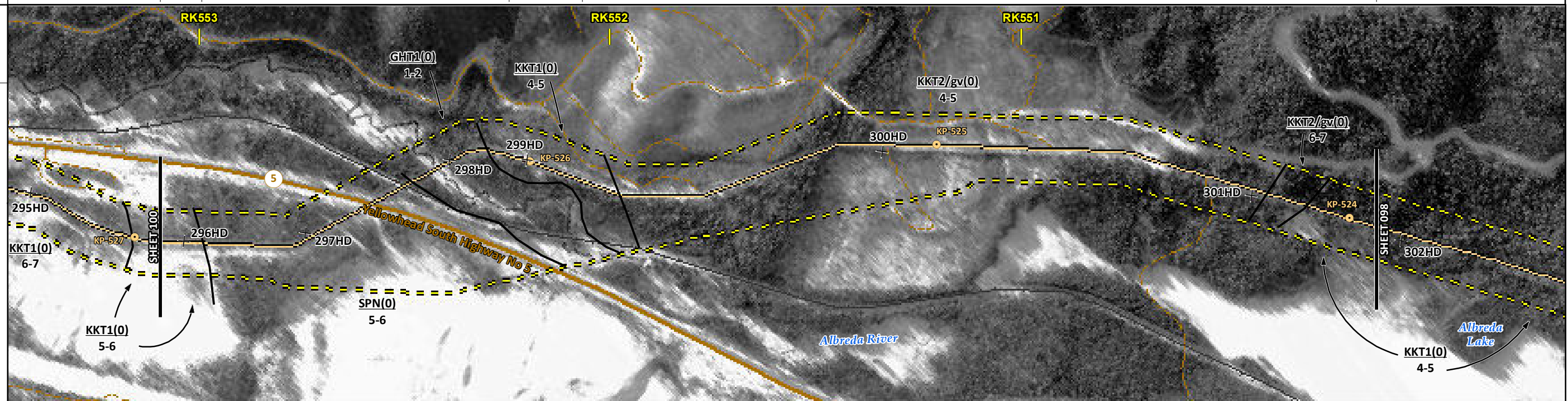
FROM RK 547.1 TO RK 550.1

P:\GIS\TMAP\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LR\Res

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	MIXED	THOMPSON-NICOLA REGIONAL DISTRICT	CROWN	MIXED
	LAND OWNERSHIP / DISPOSITION			TR0343T001		
	LAND USE			TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT				WELLS GRAY CARIBOU HERD RANGE	
	VEGETATION					
	WETLANDS					
	FISH HABITAT SENSITIVITY	[HIGH]				
	HYDROLOGY	[ROBINA CREEK]		[CHANNEL]	[CHANNEL]	[DRAINAGE]
SOILS PARENT MATERIAL	GF	F-C	O/F-GF	GF		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[FISH] [WC (SS/S2)]	[WC (SS)]	[WC (SS)]	[WC (NCD)]
	CONSTRUCTION WORK WINDOW	[AQ-JUL 22 TO AUG 15]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE	15-20 FULL ROW; REDUCE AS APPROPRIATE	40 OVERSTRIP	15-20 FULL ROW; REDUCE AS APPROPRIATE
	SOILS	[SO-NOTE 3]	[SO-NOTE 1]	[SO-NOTES 2 AND 3]	[SO-NOTE 1] [SO-NOTE 3]
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS				
	FOREST TYPE (m ³ /ha)				
	VEGETATION				
	WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]			WF-NOTE 5
	SPECIAL MEASURES	[AQ-NOTE 4]			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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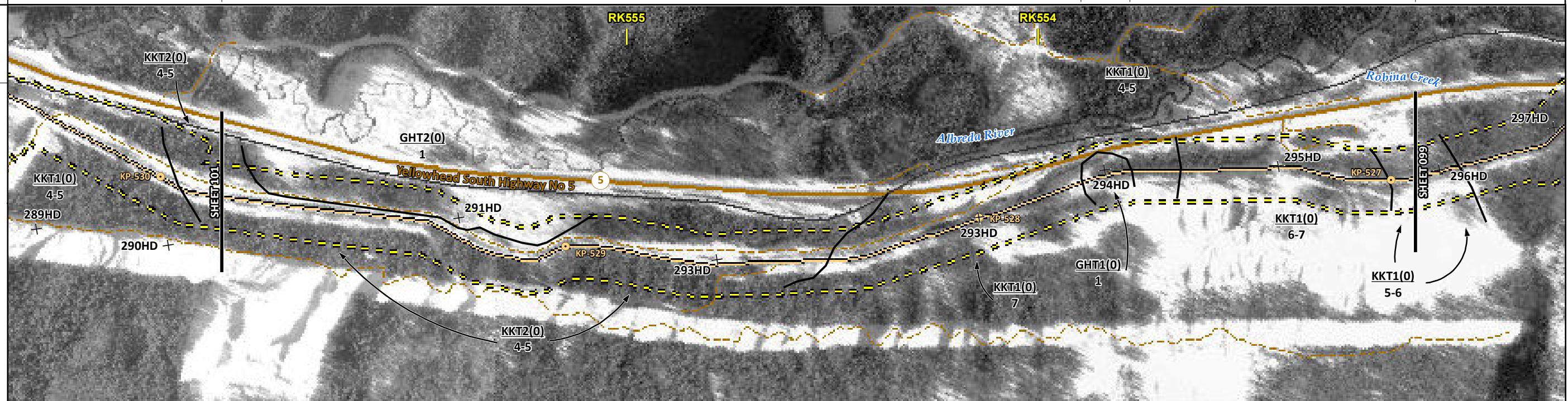
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 099 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 550.1 TO RK 553.1

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	MIXED	CROWN	MIXED	CROWN	MIXED	CROWN
	LAND OWNERSHIP / DISPOSITION	THOMPSON-NICOLA REGIONAL DISTRICT						
	LAND USE	TR0343T001 TREED						
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
	HERITAGE / TRADITIONAL LAND USE							
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND						
	VEGETATION							
	WETLANDS	MXDTR SWAMP			SHRUBBY SWAMP			
	FISH HABITAT SENSITIVITY	HIGH			CHANNEL			
	HYDROLOGY	CHANNEL			CHANNEL			
SOILS PARENT MATERIAL	GF							

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[FISH] [WC (S4)]	WETLAND	[WC (S4)] [WC (S6/S4)]	[WC (S6)]	UNST TR WIND/WATER ER	WETLAND WF FEATURE [UNST TR/COMP RUT]	UNST TR WIND/WATER ER
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CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	WF-NOTE 4	40	15-20
SOILS STRIPPING DEPTH (cm)	15-20						
SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE						
SOILS	SO-NOTE 1 SO-NOTE 3			[SO-NOTES 2 AND 3]			SO-NOTE 1 SO-NOTE 3
WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]		
PIPELINE VEHICLE	WT-NOTE 1			WT-NOTE 1			
WETLANDS							
FOREST TYPE (m ³ /ha)							
VEGETATION							
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]			WF-NOTE 1			
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES							

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

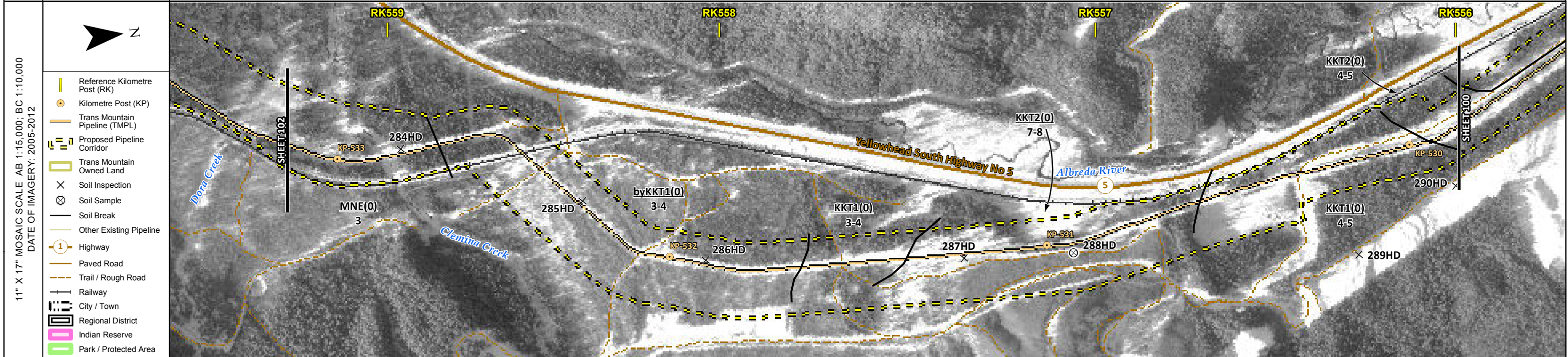
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 100 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 553.1 TO RK 556.0

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT							
	LAND OWNERSHIP / DISPOSITION	MIXED		CROWN	MIXED	CROWN	MIXED	CROWN	
	LAND USE	TR0343T001 TREED							
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION	[CHRYSP]							
	WETLANDS	MXDTR SWAMP			SE MARSH		OPEN POND		
	FISH HABITAT SENSITIVITY								
	HYDROLOGY			[DRAINAGE]		[CHANNEL]		[CHANNEL]	
SOILS PARENT MATERIAL	F		byGF		GF				



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	WETLAND	WIND ER	UNST TR	[WC (NVC)]	WETLAND	[WC (\$6/S4)]	FISH	[RARE PLANTS]	[WC (S5/S3)]
	CONSTRUCTION WORK WINDOW				[AQ-OPEN]		[AQ-OPEN]			[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm)		15-20						
	SOILS	PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE						
	SOILS			SO-NOTE 1						
	SOILS			SO-NOTE 3						
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE			[AQ-NOTE 3]		[AQ-NOTE 3]			[AQ-NOTE 3]
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE			[AQ-NOTE 2]		[AQ-NOTE 2]			[AQ-NOTE 2]
	WETLANDS		WT-NOTE 1			WT-NOTE 1		WT-NOTE 1		WT-NOTE 2
	FOREST TYPE (m ³ /ha)									
VEGETATION									[VG-NOTE 1]	
WILDLIFE AND FISH HABITAT									AQ-NOTE 1	
HERITAGE / TRADITIONAL LAND USE										
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS										
SPECIAL MEASURES										

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 101 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

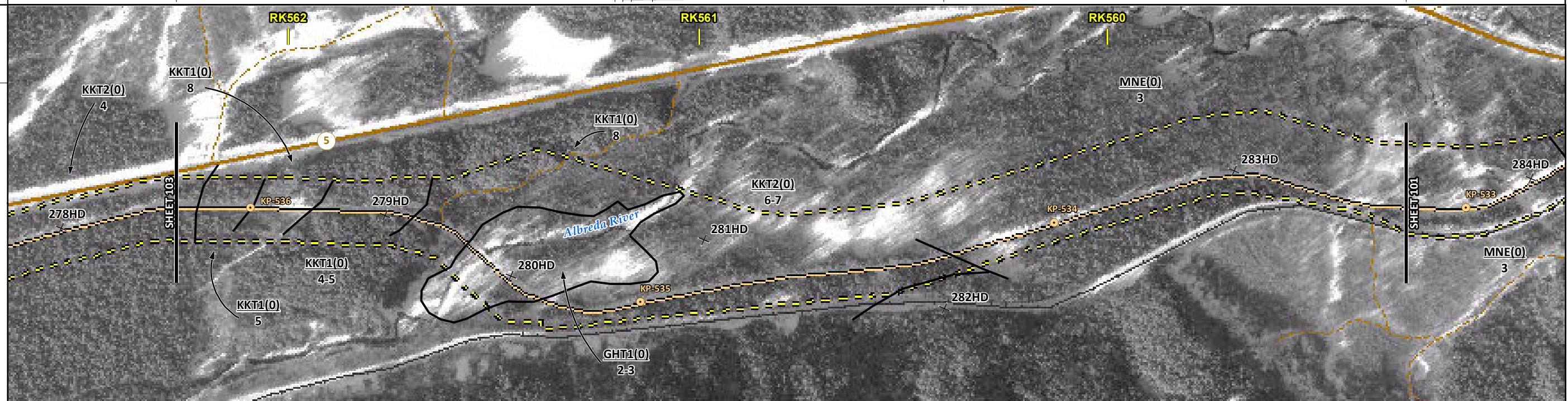
FROM RK 556.0 TO RK 559.3

P:\GIS\TERRA\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LR\Reb

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	THOMPSON-NICOLA REGIONAL DISTRICT	MIXED	CROWN	MIXED
	LAND OWNERSHIP / DISPOSITION		TR0343T001			
	LAND USE		TREED			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT					
	VEGETATION					
	WETLANDS			SHRUBBY SWAMP		MXDTR SWAMP
	FISH HABITAT SENSITIVITY		[HIGH]			
	HYDROLOGY	[CHANNEL]	[ALBRED RIVER]	[CHANNEL]	[CHANNEL]	[CHANNEL]
SOILS PARENT MATERIAL	GF	[O/F-GF]	GF	F		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (S6)]	[NAV WATERS] [FISH] [WC (S1B)]	[WC (S6)]	WETLANDS	[WC (S6)]	[WC (S6)]
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-JUL 22 TO AUG 15]	[AQ-OPEN]		[AQ-OPEN]	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	[40] [15-20] [40]	15-20		
	SOILS HANDLING	PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE			
	SOILS		SO-NOTE 1	[SO-NOTE 1]	SO-NOTE 1		
	SOILS		SO-NOTE 3	[SO-NOTES 2 AND 3] [SO-NOTE 3] [SO-NOTES 2 AND 3]	SO-NOTE 3		
	WATERCOURSE CROSSINGS	PIPELINE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]		[AQ-NOTE 3]
	WATERCOURSE CROSSINGS	VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]		[AQ-NOTE 2]
	WETLANDS				WT-NOTE 1		WT-NOTE 1
	WETLANDS						
FOREST TYPE (m ³ /ha)							
VEGETATION							
WILDLIFE AND FISH HABITAT			[AQ-NOTE 1]				
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES			[AQ-NOTE 4]				

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
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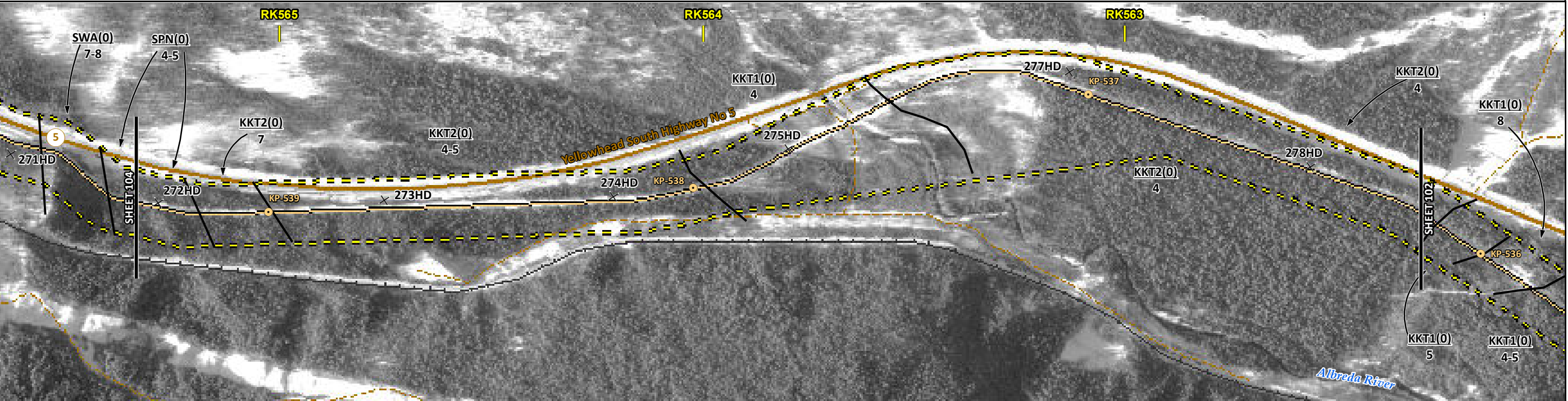
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 102 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 559.3 TO RK 562.3

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	CROWN	MIXED	CROWN
	LAND USE	TR0343T001 TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS	[MXDTR SWAMP]		
	FISH HABITAT SENSITIVITY	[HIGH][HIGH]		
	HYDROLOGY	[CHANNEL]	[DRAINAGE]	[ALBREDAR CHANNEL]
SOILS PARENT MATERIAL	F-C		GF	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (S6)]	[WC (NVC)]	[FISH]	[WC (S2)]	[WC (S4)]	[WETLAND]
			[NAV WATERS]			
		WINDWATER ER	UNST TR		WIND ER	

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-JUL 22 TO AUG 15]	[AQ-OPEN]
SOILS HANDLING	15-20 FULL ROW; REDUCE AS APPROPRIATE			
SOILS	SO-NOTE 1 SO-NOTE 3			
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS	[WT-NOTE 1]			
FOREST TYPE (m ³ /ha)				
VEGETATION	[AQ-NOTE 1][AQ-NOTE 1]			
WILDLIFE AND FISH HABITAT				
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES	[AQ-NOTE 4]			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

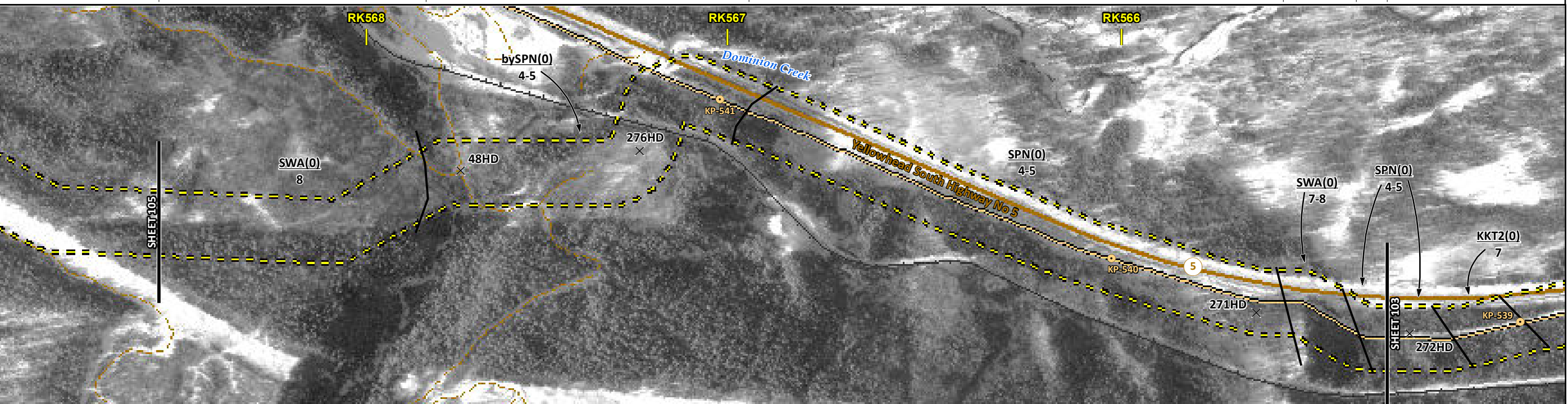
FROM RK 562.3 TO RK 565.3

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	CROWN	MIXED	CROWN
	LAND USE	TR0343T001	TREED	TR0343T001
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND		
	VEGETATION	[ANEMCAN]		
	WETLANDS	SHRUBBY SWAMP		[DEEP MARSH]
	FISH HABITAT SENSITIVITY	[HIGH]		
	HYDROLOGY	[CHANNEL]	[CHANNEL]	
SOILS PARENT MATERIAL		byFf	F-C	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
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- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WIND/WATER ER	WETLAND WC (S4) WF FEATURE	[FISH] WC (S3)	[RARE PLANTS]	WETLAND [NAV WATERS]
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN] [AQ-JUL 15 TO AUG 15]
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	15-20 FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE [AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS	[AQ-NOTE 3] [AQ-NOTE 2] WT-NOTE 1 WT-NOTE 1 WT-NOTE 2
	FOREST TYPE (m ³ /ha)	
	VEGETATION	[VG-NOTE 1]
	WILDLIFE AND FISH HABITAT	WF-NOTE 1 [AQ-NOTE 1]
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES		

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N

Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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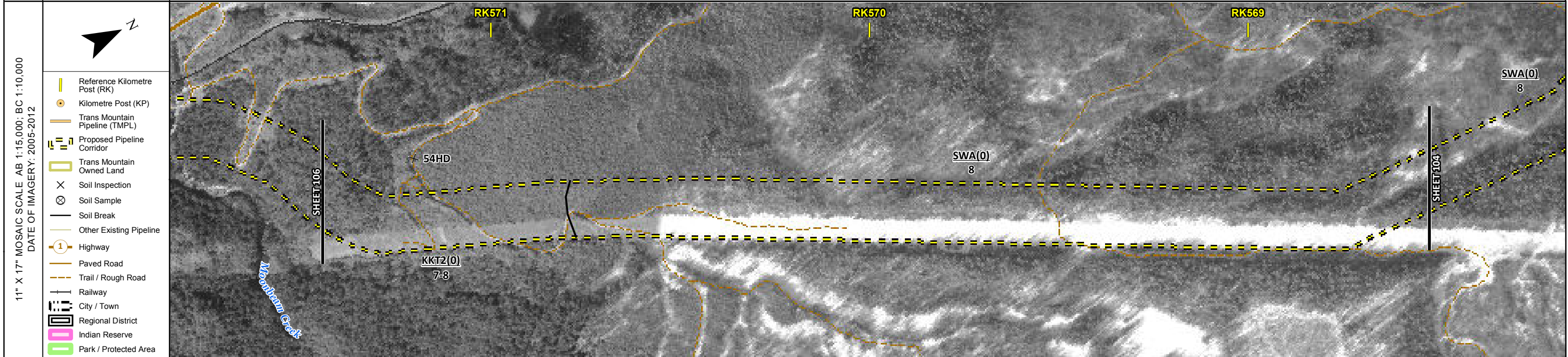
REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 104 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 565.3 TO RK 568.5

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	CROWN	
	LAND USE	TR0343T002	TR0343T001
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	TREED	
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		
	VEGETATION		
	WETLANDS		
	FISH HABITAT SENSITIVITY		
	HYDROLOGY		
SOILS PARENT MATERIAL	GF	T	



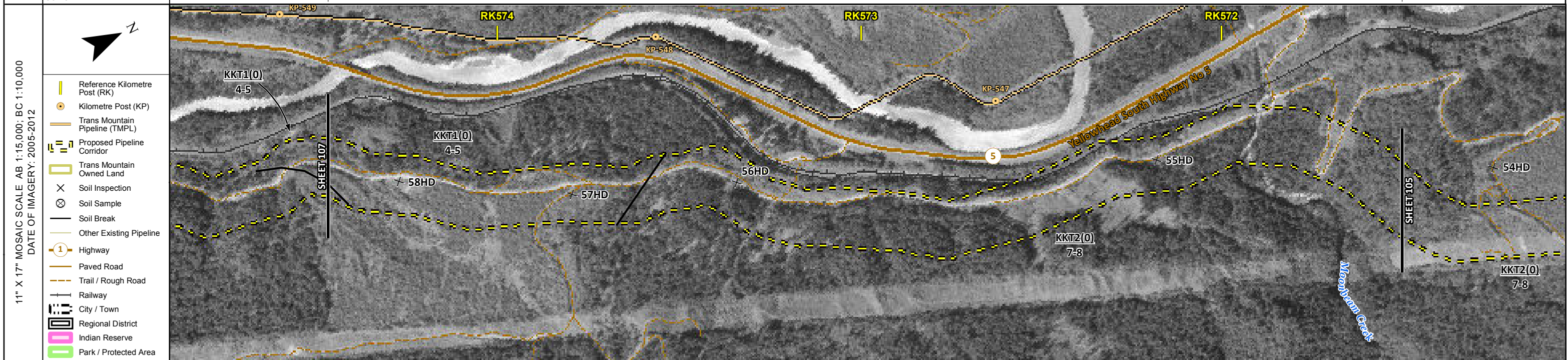
POTENTIAL ENVIRONMENTAL ISSUES	UNST TR	WIND/WATER ER
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	SO-NOTE 3
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
	WETLANDS	
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES		

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	<table border="1"> <tr> <td>MAP NUMBER</td> <td>201310_MAP_TERA_EAS_00434_REVO</td> <td>PAGE</td> <td>SHEET 105 OF 301</td> </tr> <tr> <td>DATE</td> <td>December 2013</td> <td>TERA REF.</td> <td>7894</td> </tr> <tr> <td>SCALE</td> <td>1:10,000</td> <td>PAGE SIZE</td> <td>11x17</td> </tr> <tr> <td>DRAWN</td> <td>CMR</td> <td>CHECKED</td> <td>DN</td> </tr> </table>	MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 105 OF 301	DATE	December 2013	TERA REF.	7894	SCALE	1:10,000	PAGE SIZE	11x17	DRAWN	CMR	CHECKED	DN	<table border="1"> <tr> <td>ENVIRONMENTAL ALIGNMENT SHEETS</td> <td></td> </tr> <tr> <td>TRANS MOUNTAIN EXPANSION PROJECT</td> <td></td> </tr> <tr> <td>FROM</td> <td>RK 568.5</td> <td>TO</td> <td>RK 571.5</td> </tr> <tr> <td>DISCIPLINE</td> <td>EAS</td> <td>DESIGN</td> <td>TGG</td> </tr> </table>	ENVIRONMENTAL ALIGNMENT SHEETS		TRANS MOUNTAIN EXPANSION PROJECT		FROM	RK 568.5	TO	RK 571.5	DISCIPLINE	EAS	DESIGN	TGG
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.																																							
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT				
	LAND OWNERSHIP / DISPOSITION	CROWN				
	LAND USE	TR0343T002 TREED				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT	WELLS GRAY CARIBOU HERD RANGE				
	VEGETATION					
	WETLANDS					
	FISH HABITAT SENSITIVITY					
	HYDROLOGY	[DRAINAGE]	[CHANNEL]	[CHANNEL]	[CHANNEL]	[DRAINAGE]
SOILS PARENT MATERIAL	GF					



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (S5)]	[WC (S6)]	[WC (S6)]	[WC (NCD)]	[WC (S6)]
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
	SOILS HANDLING	15-20 FULL ROW; REDUCE AS APPROPRIATE					
	SOILS	SO-NOTE 1 SO-NOTE 3					
	WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
	WETLANDS						
	FOREST TYPE (m ³ /ha)						
	VEGETATION						
	WILDLIFE AND FISH HABITAT	WF-NOTE 5					

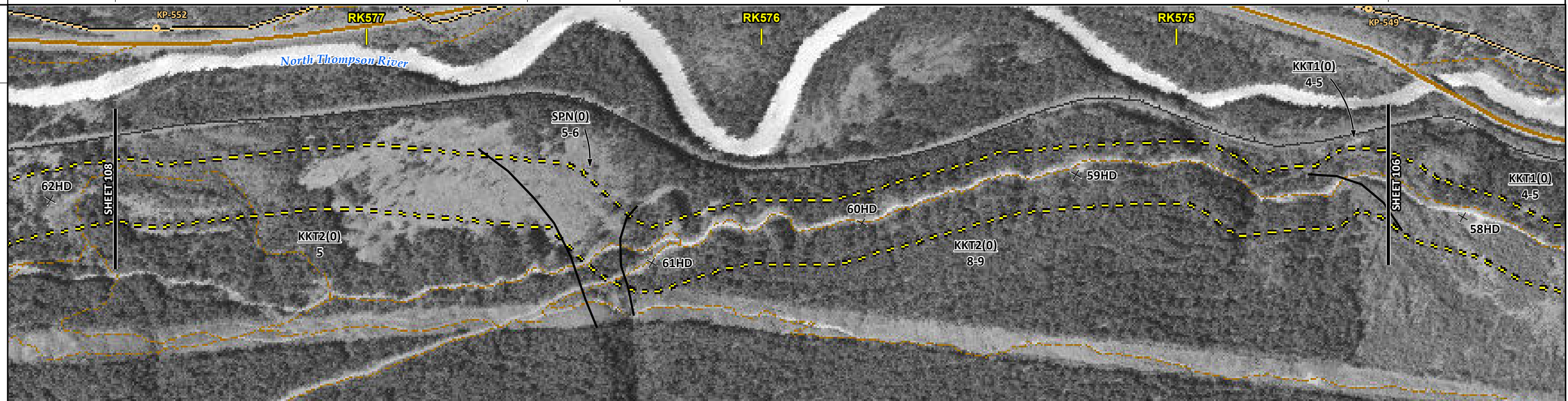
	Soils Description	REFERENCES <small>Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small>	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 106 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT																							
	Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class		<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY		CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	<table border="1"> <thead> <tr> <th>DATE</th> <th>TERA REF.</th> <th>REVISION</th> <th>DISCIPLINE</th> <th>DESIGN</th> </tr> </thead> <tbody> <tr> <td>December 2013</td> <td>7894</td> <td>0</td> <td>EAS</td> <td>TGG</td> </tr> </tbody> </table>	DATE	TERA REF.	REVISION	DISCIPLINE	DESIGN	December 2013	7894	0	EAS	TGG	SCALE 1:10,000	PAGE SIZE 11x17	FROM RK 571.5	TO RK 574.5
	NO.		DATE	DESCRIPTION	BY	CHKD.	APPR.																								
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB																										
DATE	TERA REF.	REVISION	DISCIPLINE	DESIGN																											
December 2013	7894	0	EAS	TGG																											
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P:\GIS\TMEP\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LR\Res

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION			THOMPSON-NICOLA REGIONAL DISTRICT						
	LAND OWNERSHIP / DISPOSITION		MIXED	CROWN						
	LAND USE			TR0343T002		TREED				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									
	HERITAGE / TRADITIONAL LAND USE									
	WILDLIFE / WILDLIFE HABITAT			WELLS GRAY CARIBOU HERD RANGE						
	VEGETATION									
	WETLANDS									
	FISH HABITAT SENSITIVITY			[HIGH]						
	HYDROLOGY		[CHANNEL]	[DRAINAGE]	[CHANNEL]	[DRAINAGE]	[CHANNEL][DRAINAGE]	[DRAINAGE]	[CHANNEL]	[CHANNEL]
SOILS PARENT MATERIAL		GF		F-C				GF		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (S6)]	[WC (NCD)]	[FISH] [WC (SS/S2)]	[WC (NCD)]	[WC (NCD)] [WC (S6)]	[WC (NCD)]	[WC (S6)]	[WC (S5)]	[WC (SS)]	
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-JUN 1 TO AUG 15]	[AQ-OPEN]	[AQ-OPEN][AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	
	SOILS HANDLING	15-20 FULL ROW, REDUCE AS APPROPRIATE									
	SOILS	SO-NOTE 3			SO-NOTE 1				SO-NOTE 3		
	WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS										
	FOREST TYPE (m ³ /ha)										
	VEGETATION										
	WILDLIFE AND FISH HABITAT	[AQ-NOTE 1] WF-NOTE 5									
	SPECIAL MEASURES	[AQ-NOTE 4]									

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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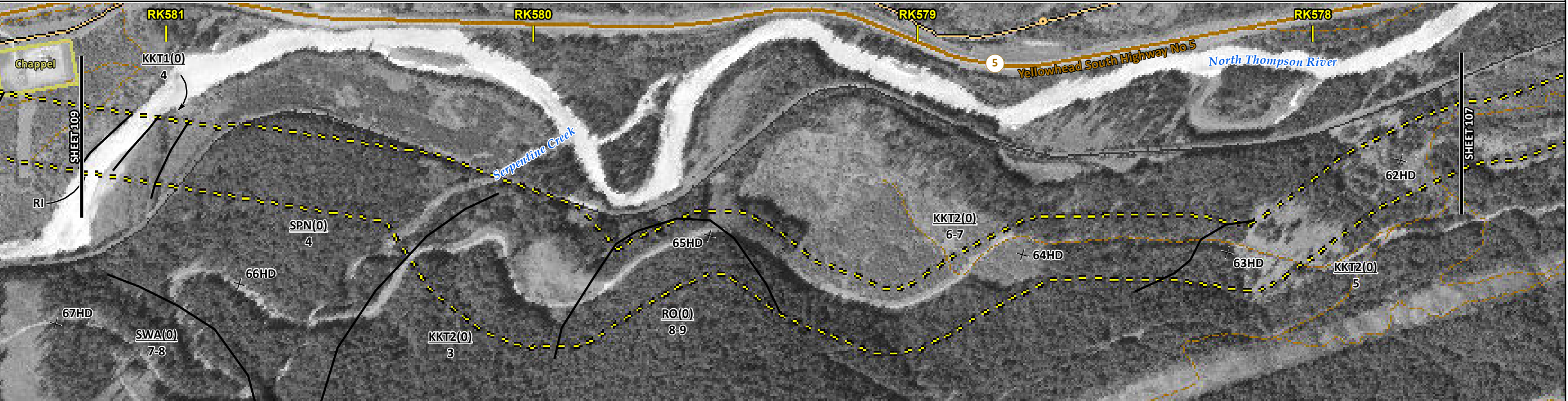
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 107 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 574.5 TO RK 577.6

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	MIXED	CROWN	MIXED	THOMPSON-NICOLA REGIONAL DISTRICT	CROWN	MIXED
	LAND OWNERSHIP / DISPOSITION	[TR0344T002]		TR0343T002				
	LAND USE	[TRED] RIVER]		TRED				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
	HERITAGE / TRADITIONAL LAND USE							
	WILDLIFE / WILDLIFE HABITAT	WELLS GRAY CARIBOU HERD RANGE						
	VEGETATION							
	WETLANDS							
	FISH HABITAT SENSITIVITY	HIGH						
	HYDROLOGY	[NORTH THOMPSON RIVER]		[CHANNEL]		[CHANNEL]		[SWITCH CREEK]
SOILS PARENT MATERIAL	GF	-	GF	F-C	GF	-	GF	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Soil Break
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- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[FISH] [WC (S1A)]	[WC (S6)]	[WC (S6)]	[WC (S5/S3)]
	CONSTRUCTION WORK WINDOW	[AQ-JUL 22 TO AUG 15]	[AQ-OPEN]	[AQ-OPEN]	[AQ-JUL 15 TO AUG 15]
	SOILS HANDLING	[STRIPPING DEPTH (cm) 15-20]	[FULL ROW; REDUCE AS APPROPRIATE]	[FULL ROW; REDUCE AS APPROPRIATE]	[FULL ROW; REDUCE AS APPROPRIATE]
	SOILS	[SO-NOTE 1] [SO-NOTE 3]	[SO-NOTE 3]	[SO-NOTE 1]	[SO-NOTE 3]
	WATERCOURSE CROSSINGS	[PIPELINE] [AQ-NOTE 3]	[VEHICLE] [AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 3]
	WETLANDS				
	FOREST TYPE (m ³ /ha)				
	VEGETATION				
	WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]		[WF-NOTE 5]	
	SPECIAL MEASURES	[AQ-NOTE 4]			

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
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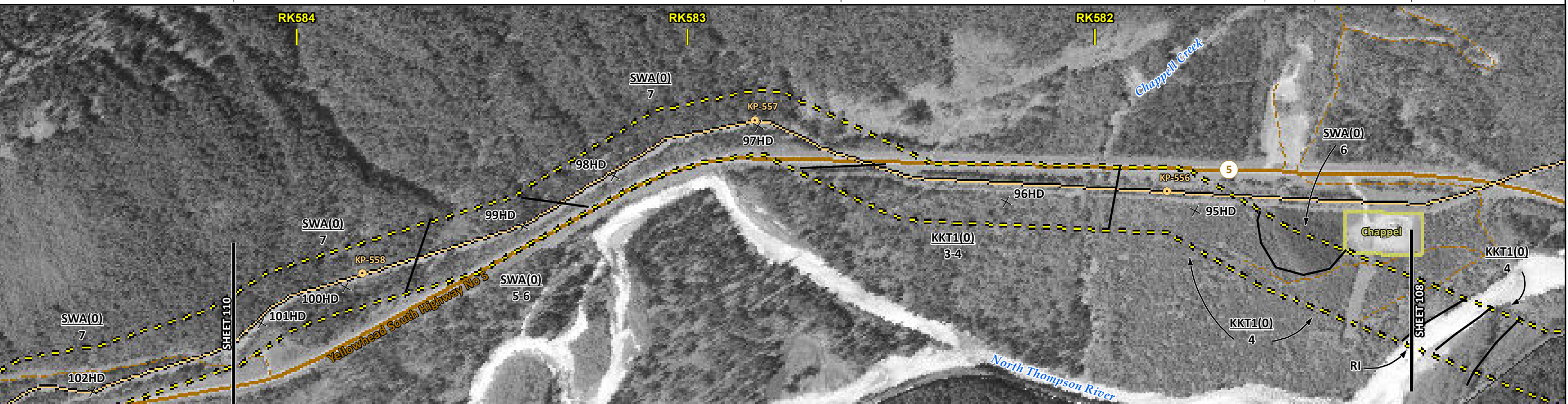
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 108 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 577.6 TO RK 581.2

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	CROWN			
	LAND USE	TR0344T002 TREED			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT	WELLS GRAY CARIBOU HERD RANGE			
	VEGETATION	[BOTRCRE]	[BOTRCRE]	[BOTRCRE]	[BOTRCRE]
	WETLANDS				
	FISH HABITAT SENSITIVITY				
	HYDROLOGY	[CHANNEL]	[AMY CREEK]	[CHANNEL DRAINAGE CHANNEL DRAINAGE DRAINAGE]	
SOILS PARENT MATERIAL		T		GF	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
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- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (S6)]	[WC (S6)]	[WC (S6)]	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[WC (S6)]	[WC (NCD)]	[WC (NCD)]	WILDLIFE AREA	[RARE PLANT]	[RARE PLANT]
			WIND/WATER ER							UNST TR WIND ER	[WIND/WATER ER]	UNST TR WIND ER

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]			
SOILS HANDLING	15-20 FULL ROW, REDUCE AS APPROPRIATE SO-NOTE 1											
SOILS	SO-NOTE 3											
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS												
FOREST TYPE (m ³ /ha)												
VEGETATION	[VG-NOTE 1] [VG-NOTE 1]											
WILDLIFE AND FISH HABITAT	WF-NOTE 5											
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES												

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 109 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

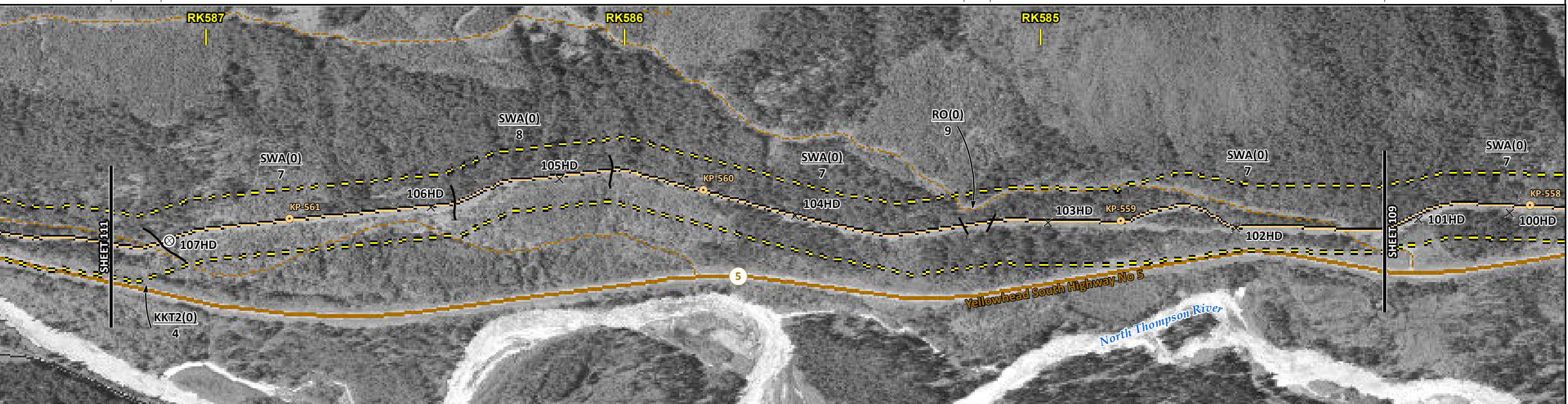
FROM RK 581.2 TO RK 584.2

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT									
	LAND OWNERSHIP / DISPOSITION	CROWN									
	LAND USE	TR0344T002 TREED									
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	ENV C&R									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT	WELLS GRAY CARIBOU HERD RANGE									
	VEGETATION	[BOTRPED]	[BOTRPED]								
	WETLANDS										
	FISH HABITAT SENSITIVITY										
	HYDROLOGY	[CHANNEL]	[DRAINAGE]	[DRAINAGE]	[CHANNEL]	[CHANNEL]	[CHANNEL]	[DRAINAGE]	[CHANNEL]	[CHANNEL]	[DRAINAGE]
SOILS PARENT MATERIAL	GF		T								T

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
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- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (S6)]	[WC (NVC)]	[WC (NCD)]	[RARE PLANT]	[WC (S6)]	[WC (S6)]	[WC (S6)]	[WC (NCD)]	[WC (S6)]	[WC (S6)]	[WC (NCD)]	[WC (NCD)]
CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]		[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	WIND/WATER ER
SOILS HANDLING	15-20 FULL ROW; REDUCE AS APPROPRIATE											
SOILS	SO-NOTE 3											
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS												
FOREST TYPE (m ³ /ha)												
VEGETATION	[VG-NOTE 1][VG-NOTE 1]											
WILDLIFE AND FISH HABITAT	WF-NOTE 5											
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES												

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

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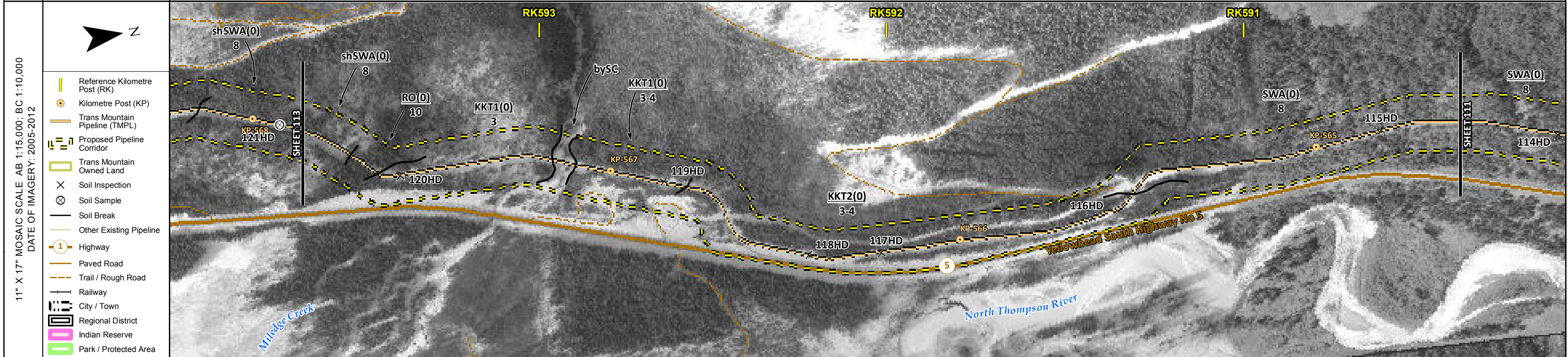
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SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 584.2 TO RK 587.2

P:\GIS\TMEP\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\Rev0\AS_Output\LR\Reb

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	CROWN			
	LAND USE	TR0344T002 TREED			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	ENV C&R			
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT	WELLS GRAY CARIBOU HERD RANGE			
	VEGETATION		[BOTRHES] [BOTRPED]	[BOTRHES] [BOTRASC] [BOTRHES]	[BOTRHES]
	WETLANDS	SHRUBBY SWAMP			
	FISH HABITAT SENSITIVITY	HIGH			
	HYDROLOGY	[MILEDGE CREEK] [DRAINAGE] [CHANNEL] [CHANNEL] [CHANNEL]			
SOILS PARENT MATERIAL	T/R	-	GF	GF	



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WATER ER]	[WIND/WATER ER]	[NAV WATERS]	[FISH] [WC (S)B]	[RARE PLANTS] [WC (NVC)] [WC (S6)] [RARE PLANT]	[WETLAND]	[WC (S6)] [RARE PLANTS]	
	CONSTRUCTION WORK WINDOW	[AQ-AUG 7 TO AUG 15]				[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20						
	SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE				FULL ROW; REDUCE AS APPROPRIATE		
	SOILS		SO-NOTE 1		SO-NOTE 3	SO-NOTE 1			
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE			[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS						WT-NOTE 1		
	FOREST TYPE (m ³ /ha)								
	VEGETATION				[AQ-NOTE 1]		VG-NOTE 1	[VG-NOTE 1][VG-NOTE 1]	[VG-NOTE 1]
	WILDLIFE AND FISH HABITAT							WF-NOTE 5	
HERITAGE / TRADITIONAL LAND USE									
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									
SPECIAL MEASURES				[AQ-NOTE 4]					

Soils Description

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Soil Unit
Depth of Topsoil (cm)
byKKL1(10)
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NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 112 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

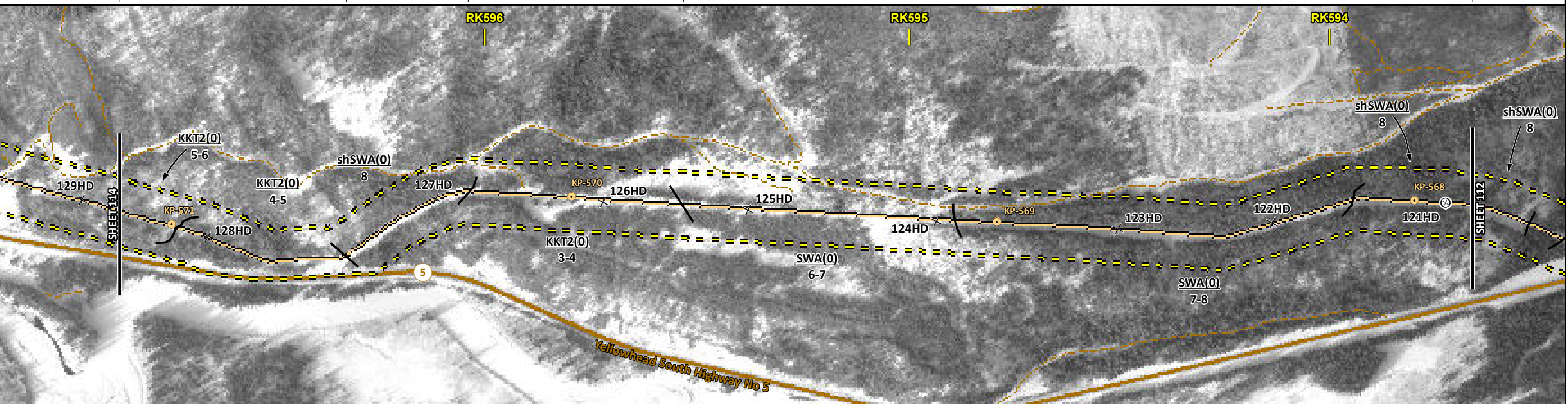
FROM RK 590.4 TO RK 593.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	CROWN		ENV C&R	
	LAND USE	TR0344T002 TREED			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT	WELLS GRAY CARIBOU HERD RANGE UNGULATE WINTER RANGE (MOUNTAIN CARIBOU)			
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY				
	HYDROLOGY	[DRAINAGE][CHANNEL]		[CHANNEL]	
SOILS PARENT MATERIAL	GF	T/R	GF	T	T/R

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (S6)] [WC (NVC)]	UNST TR WINDWATER ER	UNST TR WIND ER	WINDWATER ER	[WC (S6)]
--------------------------------	-------------------------	-------------------------	--------------------	--------------	-----------

CONSTRUCTION WORK WINDOW	[AQ-OPEN][AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE	15-20 FULL ROW; REDUCE AS APPROPRIATE
SOILS	SO-NOTE 3	SO-NOTE 1
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION		
WILDLIFE AND FISH HABITAT		WF-NOTE 5
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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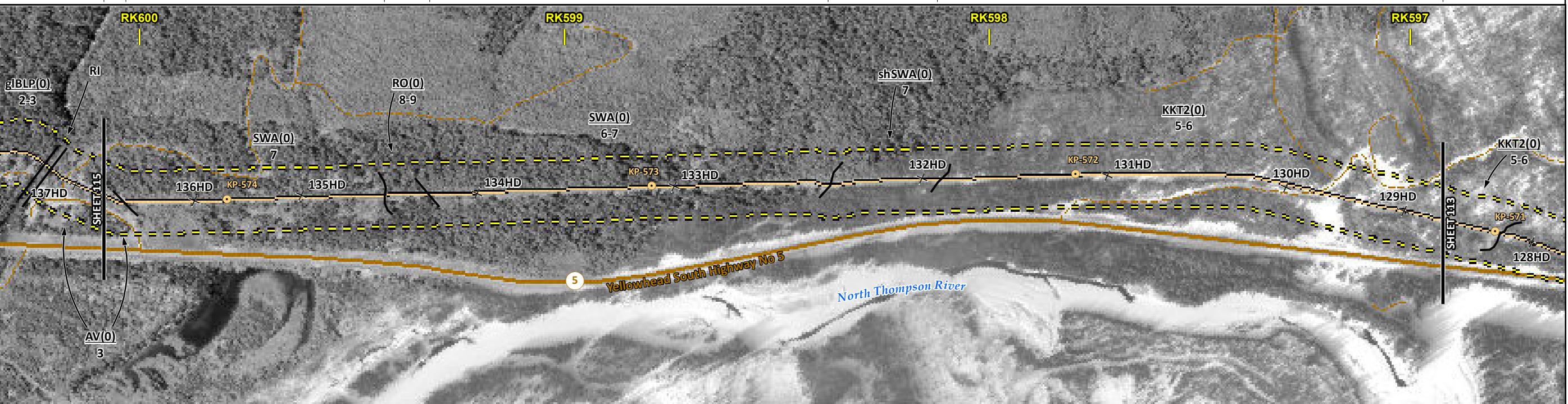
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 113 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 593.7 TO RK 596.9

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT				
	LAND OWNERSHIP / DISPOSITION	CROWN ENV C&R TR0344T002				
	LAND USE	TREED				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT	WELLS GRAY CARIBOU HERD RANGE UNGULATE WINTER RANGE (MOUNTAIN CARIBOU)				
	VEGETATION					
	WETLANDS					
	FISH HABITAT SENSITIVITY					
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[CHANNEL]
SOILS PARENT MATERIAL	F	T	-	T	T/R	GF

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (S6) / WC (NCD)]	[WC (S6) / WC (NCD)]	[WC (S6)]	[WC (S6)]
	[WIND ER]	WIND/WATER ER	WATER ER	WIND/WATER ER	UNST TR

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20				
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE				
SOILS		SO-NOTE 1				SO-NOTE 3
WATERCOURSE CROSSINGS	PIPELINE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS						
FOREST TYPE (m ³ /ha)						
VEGETATION						
WILDLIFE AND FISH HABITAT				WF-NOTE 5		
HERITAGE / TRADITIONAL LAND USE						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						
SPECIAL MEASURES						

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)

by KKL1(10)
6

Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 114 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
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		DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANSMOUNTAIN EXPANSION PROJECT

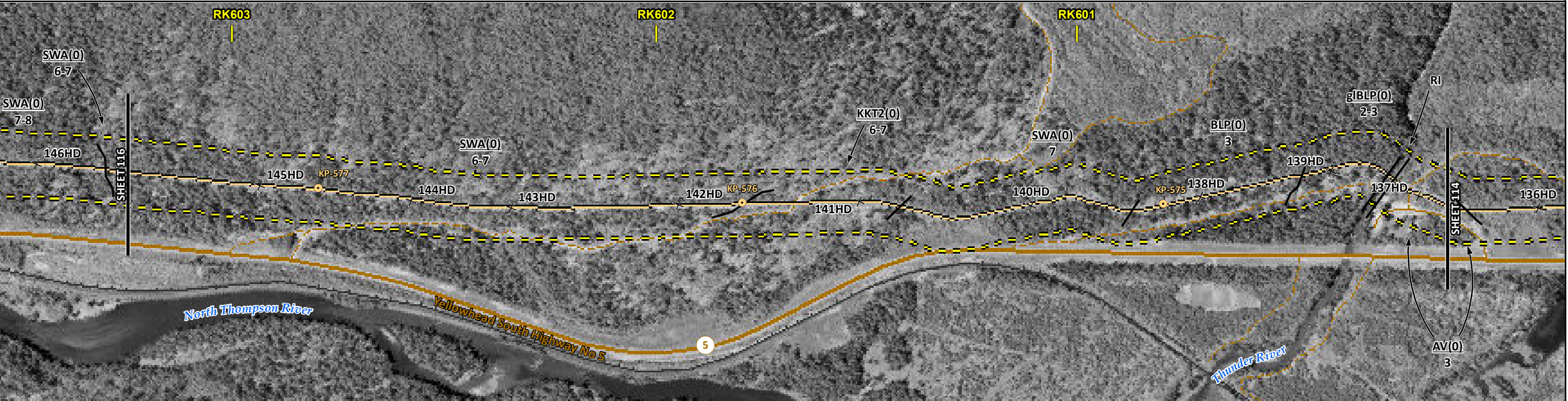
FROM RK 596.9 TO RK 600.1

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	CROWN		
	LAND USE	TR0344T002 Treed		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT	WELLS GRAY CARIBOU HERD RANGE		
	VEGETATION			
	WETLANDS	[MXDTR SWAMP]	[OPEN POND]	MXDTR SWAMP
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	[DRAINAGE]		[CHANNEL]
SOILS PARENT MATERIAL	T	GF	F	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
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- Highway
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- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	WILDLIFE AREA	[WC (SB)]
	WIND/WATER ER	UNST TR	WETLANDS [NAV WATERS]
			WETLAND
			UNST TR WIND ER
			WIND ER
			[AQ-OPEN]

CONSTRUCTION WORK WINDOW			
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	15-20
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	[FULL ROW; REDUCE AS APPROPRIATE]
SOILS		SO-NOTE 1	SO-NOTE 1
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]
		[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS		[WT-NOTE 1]	[WT-NOTE 1]
		[WT-NOTE 2]	
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT		WF-NOTE 5	
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

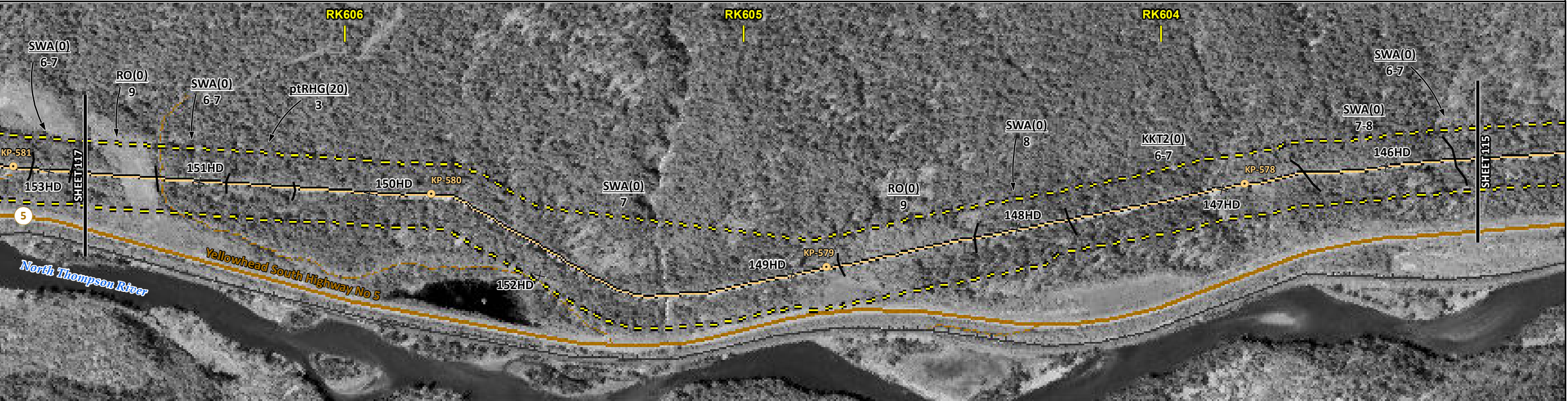
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 115 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT									
			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY		CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	DATE December 2013
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT						
	LAND OWNERSHIP / DISPOSITION	CROWN						
	LAND USE	TR0344T003	TREED	TR0344T002				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
	HERITAGE / TRADITIONAL LAND USE							
	WILDLIFE / WILDLIFE HABITAT							
	VEGETATION	[BOTRHES]						
	WETLANDS							
	FISH HABITAT SENSITIVITY							
	HYDROLOGY	[CHANNEL]	[CHANNEL]	[DRAINAGE]	[CHANNEL]			
SOILS PARENT MATERIAL	-	T	GF-C	T	-	T	GF	T

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
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- Highway
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- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (S5)]	[WC (S6)]	[WC (NCD)]	[WC (S6)]		
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]		
	SOILS HANDLING	STRIPPING DEPTH (cm) 15-20	40	15-20			
	SOILS	SO-NOTE 1	SO-NOTES 2 AND 3	SO-NOTE 1	SO-NOTE 3		
	WATERCOURSE CROSSINGS	PIPELINE [AQ-NOTE 3]	VEHICLE [AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]
	WETLANDS						
	FOREST TYPE (m ³ /ha)						
	VEGETATION	[VG-NOTE 1]					
	WILDLIFE AND FISH HABITAT						
	HERITAGE / TRADITIONAL LAND USE						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES							

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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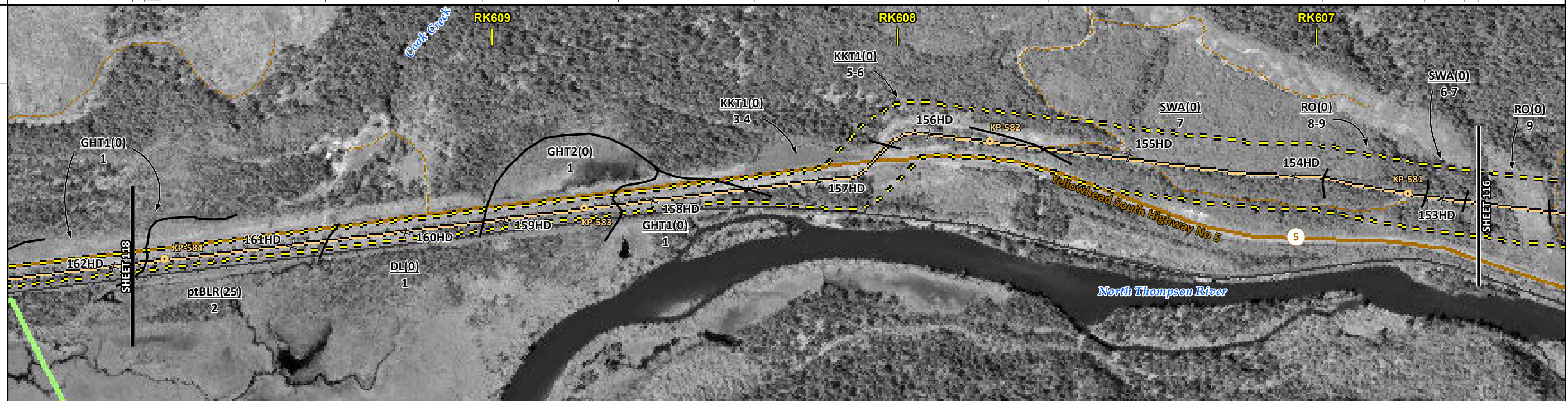
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DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 603.2 TO RK 606.6

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT							
	LAND OWNERSHIP / DISPOSITION	[CROWN] [MIXED]	PRIVATE		CROWN				
	LAND USE	[TR0344T003]			TR0344T003				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION								
	WETLANDS								
	FISH HABITAT SENSITIVITY								
	HYDROLOGY				[CHANNEL]				
SOILS PARENT MATERIAL	[O/F-GF]	F	-	O	O/F-GF	GF	T	-	T

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[UNST TR/COMP RUT]	COMP RUT	COMP RUT	UNST TR/COMP RUT	WIND ER	UNST TR	[WC (S6)]	WIND/WATER ER	WATER ER	[WIND/WATER ER]	[WATER ER]
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CONSTRUCTION WORK WINDOW							[AQ-OPEN]			
SOILS STRIPPING DEPTH (cm)	40	25		40				15-20		
HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			FULL ROW; REDUCE AS APPROPRIATE			SO-NOTE 1			
SOILS	[SO-NOTES 2 AND 3]	SO-NOTE 2		SO-NOTE 2	SO-NOTES 2 AND 3		SO-NOTE 3	SO-NOTE 1		
WATERCOURSE CROSSINGS	PIPELINE	VEHICLE					[AQ-NOTE 3]	[AQ-NOTE 2]		
WETLANDS										
FOREST TYPE (m ³ /ha)										
VEGETATION										
WILDLIFE AND FISH HABITAT										
HERITAGE / TRADITIONAL LAND USE										
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS										
SPECIAL MEASURES										

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

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ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

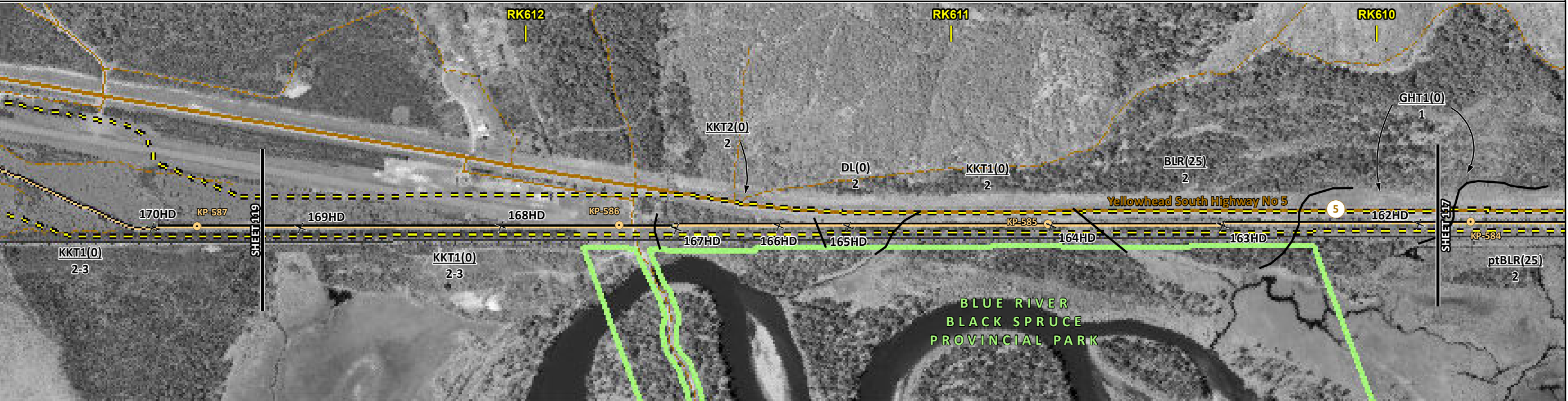
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION	CROWN
	LAND USE	TR0344T003 TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	
	VEGETATION	
	WETLANDS	SHRUBBY SWAMP
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	SHALLOW GW
SOILS PARENT MATERIAL	GF GF F O/F-GF	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	HYDROLOGY	WETLAND
	UNST TR WIND ER	UNST TR WIND ER COMP RUT UNST TR/COMP RUT

CONSTRUCTION WORK WINDOW				
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	15-20	25
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	FULL ROW; REDUCE AS APPROPRIATE	40
SOILS		SO-NOTE 1 SO-NOTE 3	SO-NOTE 3 SO-NOTE 1	SO-NOTE 2 SO-NOTES 2 AND 3
WATERCOURSE CROSSINGS	PIPELINE VEHICLE			
WETLANDS			WT-NOTE 1	
FOREST TYPE (m ³ /ha)				
VEGETATION				
WILDLIFE AND FISH HABITAT				
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES		HY-NOTE 1		

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY					
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 118 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
	DISCIPLINE EAS
	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

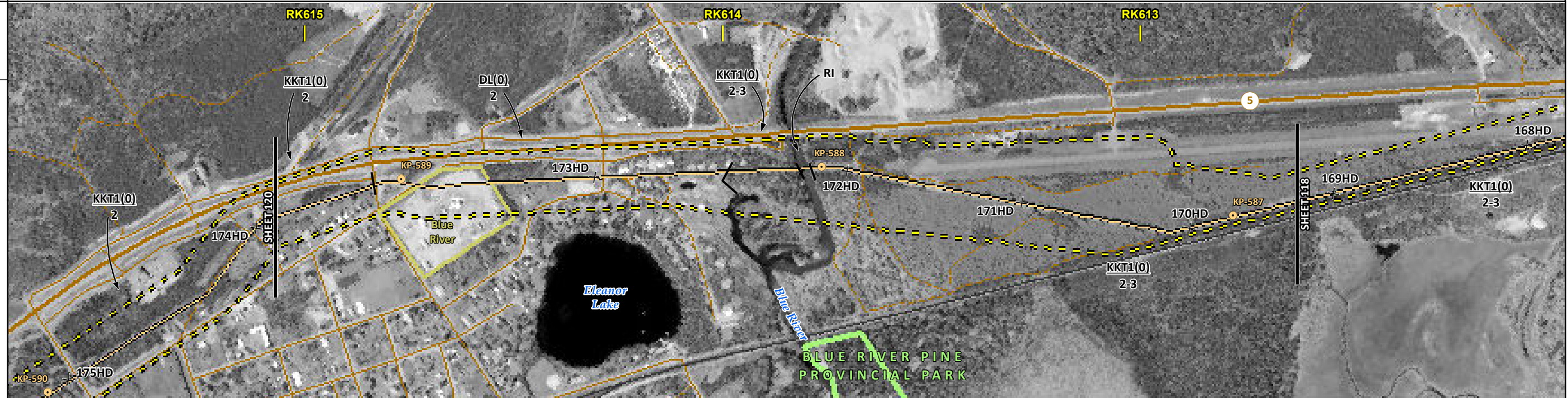
FROM RK 609.9 TO RK 612.6

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT										
	LAND OWNERSHIP / DISPOSITION	PRIVATE			MIXED	CROWN			MIXED	PRIVATE	MIXED	CROWN
	LAND USE	DISTURBED LAND			TREED	RIVER			TREED	TR0344T003		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS										
	WILDLIFE / WILDLIFE HABITAT											
	VEGETATION											
	WETLANDS											
	FISH HABITAT SENSITIVITY	[HIGH]										
	HYDROLOGY	[DRAINAGE] [BLUE RIVER] [SHALLOW GW]										
SOILS PARENT MATERIAL	GF			GF			GF			GF		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS	[NAV WATERS] HYDROLOGY	[WC (S1B)]	
	UNST TR WIND ER		UNST TR WIND ER		UNST TR WIND ER

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-AUG 7 TO AUG 15]	
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	15-20
	PROCEDURE	FULL ROW	FULL ROW; REDUCE AS APPROPRIATE
SOILS	SO-NOTE 1	SO-NOTE 1	SO-NOTE 1
	SO-NOTE 3	SO-NOTE 3	SO-NOTE 3
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]
		[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS			
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT		[AQ-NOTE 1]	
HERITAGE / TRADITIONAL LAND USE		AK-NOTE 1	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES		[AQ-NOTE 4]	HY-NOTE 1

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

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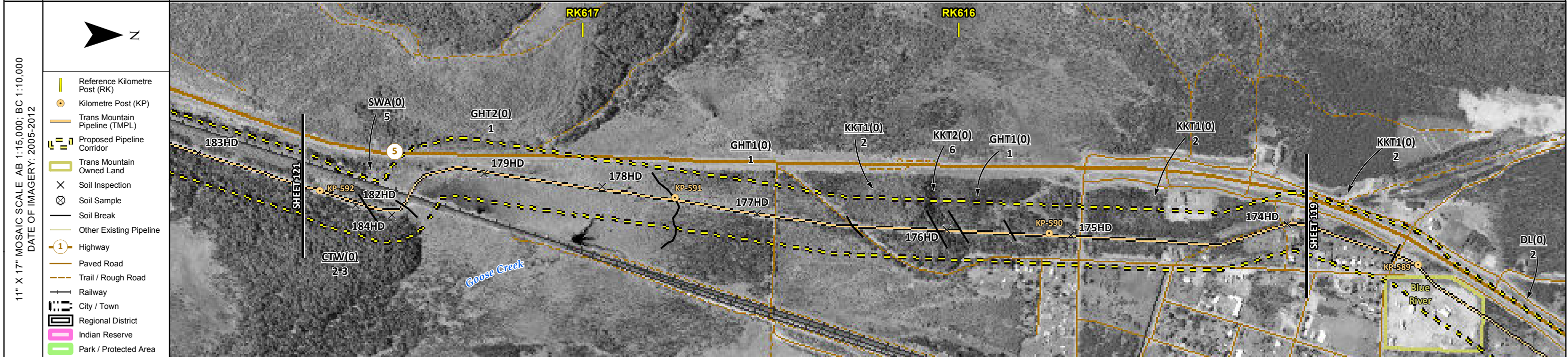
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DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANS MOUNTAIN EXPANSION PROJECT

FROM RK 612.6 TO RK 615.1

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	MIXED	PRIVATE
	LAND USE	TR0344T003	TR0344T003
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		TREED
	HERITAGE / TRADITIONAL LAND USE		[DISTURBED LAND]
	WILDLIFE / WILDLIFE HABITAT		AMPH-POND
	VEGETATION		
	WETLANDS	[MXDTR SWAMP]	[SE MARSH] [SHRUBBY SWAMP] [MXDTR SWAMP] [SHRUBBY SWAMP]
	FISH HABITAT SENSITIVITY		[HIGH] [GOOSE CREEK]
	HYDROLOGY		SHALLOW GW
SOILS PARENT MATERIAL	GL T	O O/F-GF GF O/F-GF GF	



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	NAV WATERS	[WIND/WATER ER]	[WIND/WATER ER]	[WETLAND]
	[WIND ER]	[WIND/WATER ER]	COMP RUT	[FISH]	[WETLANDS]
			[AQ-OPEN]	[WF FEATURE]	[WIND/WATER ER]
			WF-NOTE 4	[WC (NCD-W)]	[UNST TR/COMP RUT]
				HYDROLOGY	[UNST TR/COMP RUT]
					[UNST TR WIND ER]
					[UNST TR WIND ER]

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW				
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	40	15-20
	SOILS	PROCEDURE	SO-NOTE 1	FULL ROW; REDUCE AS APPROPRIATE	SO-NOTE 1
	SOILS		SO-NOTE 2	SO-NOTES 2 AND 3	SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE			[SO-NOTES 2 AND 3]
	WATERCOURSE CROSSINGS		[AQ-NOTE 3]		
	WATERCOURSE CROSSINGS		[AQ-NOTE 2]		
	WETLANDS		[WT-NOTE 1]	WT-NOTE 1	[WT-NOTE 1]
	FOREST TYPE (m ² /ha)		WT-NOTE 2		
	VEGETATION				
WILDLIFE AND FISH HABITAT			WF-NOTE 1		
HERITAGE / TRADITIONAL LAND USE			[AQ-NOTE 1]		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES				HY-NOTE 1	

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO
PAGE	SHEET 120 OF 301
REVISION	0
SCALE	1:10,000
DRAWN	CMR
TERA REF.	7894
PAGE SIZE	11x17
CHECKED	DN
DISCIPLINE	EAS
DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANS MOUNTAIN EXPANSION PROJECT

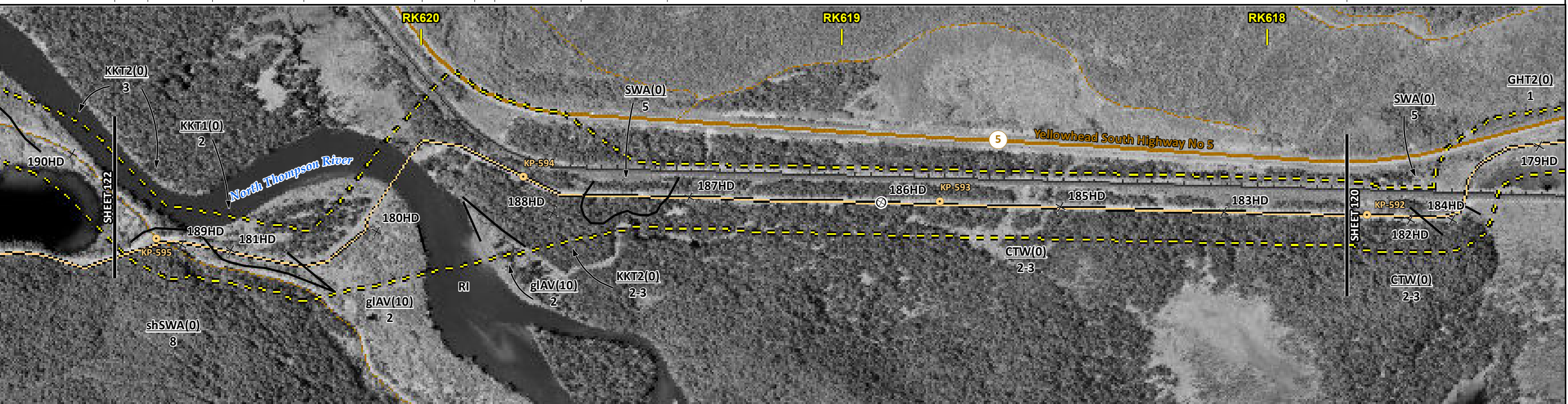
FROM RK 615.1 TO RK 617.8

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT						
	LAND OWNERSHIP / DISPOSITION	CROWN		MIXED				
	LAND USE	TR0343T003		TR0344T003				
		TREED	RIVER	TREED				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
	HERITAGE / TRADITIONAL LAND USE							
	WILDLIFE / WILDLIFE HABITAT							
	VEGETATION	[DRYOCRI]						
	WETLANDS	[MXDTR SWAMP]	[SHRUBBY SWAMP]	[SHRUBBY SWAMP]				
	FISH HABITAT SENSITIVITY							
HYDROLOGY	[NORTH THOMPSON RIVER]							
SOILS PARENT MATERIAL	GF	T/R	GF	F	F	GF	T	GL

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area

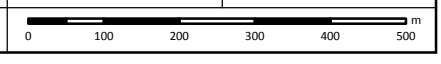


POTENTIAL ENVIRONMENTAL ISSUES	[RARE PLANTS]	[WETLANDS]	[WC (S1A)]	[WETLAND]	[WETLAND]
	[UNST TR] [WIND ER]	[WIND/WATER ER]	[UNST TR]	[WIND ER]	[WIND ER]

CONSTRUCTION WORK WINDOW	[AQ-JUL 22 TO AUG 15]
SOILS STRIPPING DEPTH (cm)	15-20
HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
SOILS	[SO-NOTE 3] [SO-NOTE 1] [SO-NOTE 3]
WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 2]
PIPELINE VEHICLE	[WT-NOTE 1] [WT-NOTE 1]
WETLANDS	[WT-NOTE 1]
FOREST TYPE (m ³ /ha)	
VEGETATION	[VG-NOTE 1]
WILDLIFE AND FISH HABITAT	
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	

Soils Description	Soil Phase Soil Unit Depth of Topsoil (cm) Topographic Class
REFERENCES	Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.

REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 121 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB
SCALE 1:10,000			TERA REF. 7894	REVISION 0	
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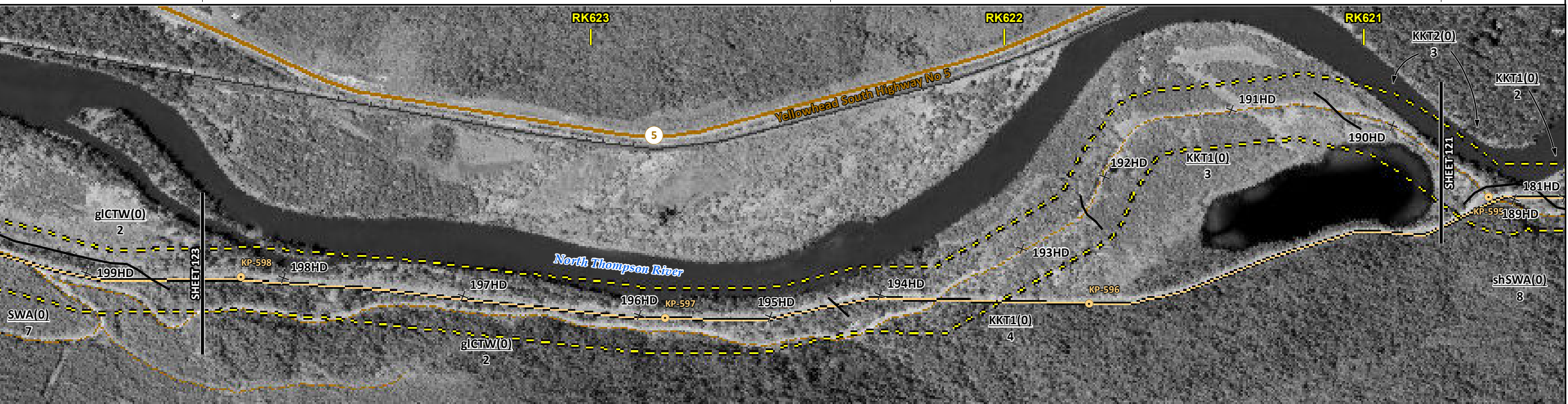


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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	CROWN	
	LAND USE	TR0343T003 TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND	
	VEGETATION	DRYOCRI	
	WETLANDS	MXDTR SWAMP	[DEEP MARSH] [OPEN POND]
	FISH HABITAT SENSITIVITY		
	HYDROLOGY	[DRAINAGE]	
SOILS PARENT MATERIAL	GL	GF	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WETLAND	[W.C. (NCD)]	[RARE PLANTS]
	COMP RUT	WIND ER	[WETLANDS] [NAV WATERS]
		[AQ-OPEN]	WF FEATURE UNST TR

CONSTRUCTION WORK WINDOW			
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	WF-NOTE 4
	PROCEDURE	FULL ROW, REDUCE AS APPROPRIATE	
SOILS		SO-NOTE 1	SO-NOTE 3
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	
		[AQ-NOTE 2]	
WETLANDS		WT-NOTE 1	[WT-NOTE 1] [WT-NOTE 2]
FOREST TYPE (m ³ /ha)			
VEGETATION			[VG-NOTE 1]
WILDLIFE AND FISH HABITAT			WF-NOTE 1
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

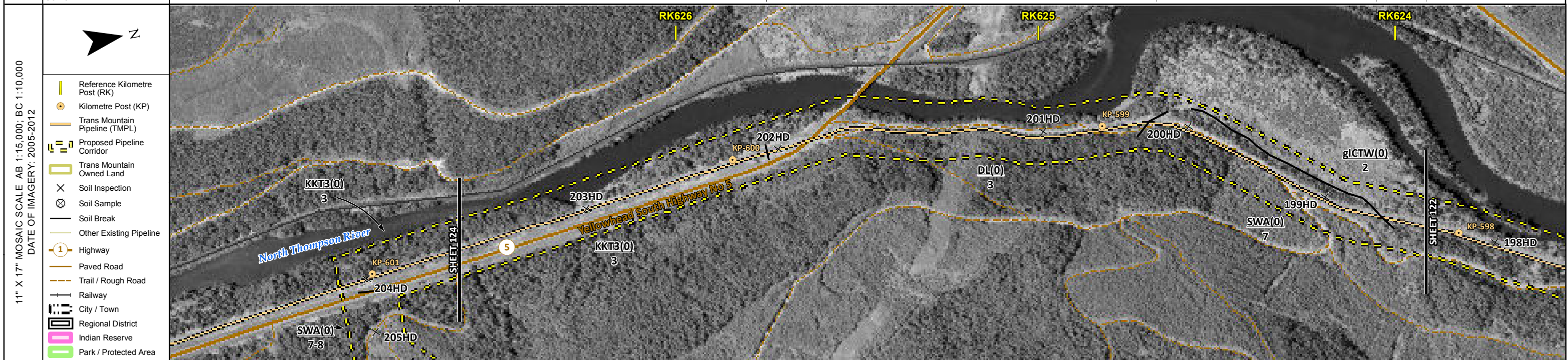
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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 122 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
	DISCIPLINE EAS
	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 620.8 TO RK 623.9

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	CROWN		
	LAND USE	TR0343T003 TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS			
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	[CHANNEL]		
SOILS PARENT MATERIAL	GF-F	T	GL	



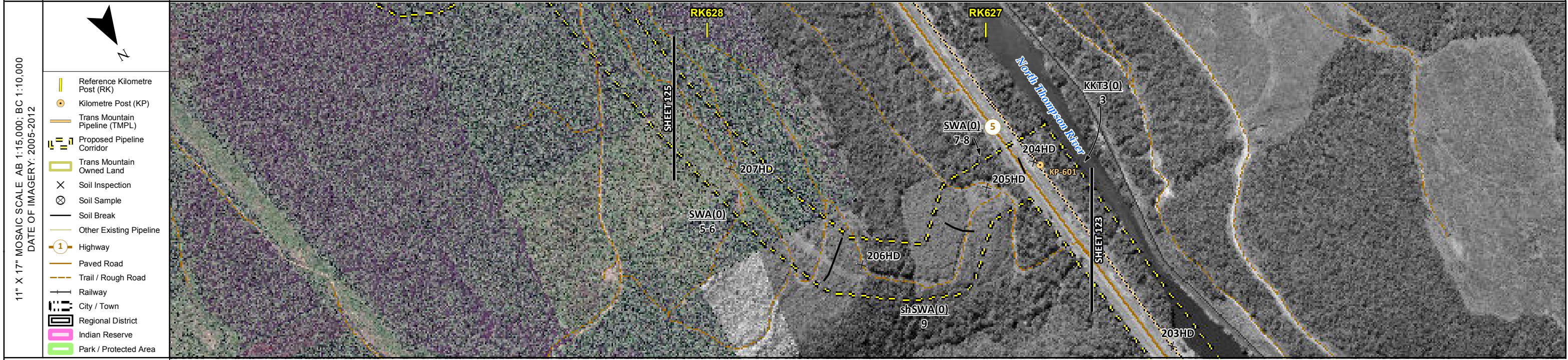
POTENTIAL ENVIRONMENTAL ISSUES				[WC (S6)]
		WIND ER		WINDWATER ER
				COMP RUT WIND ER [AQ-OPEN]

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW			
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	15-20
	SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	SO-NOTE 1
	SOILS			SO-NOTE 2
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE		[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS			
	FOREST TYPE (m ³ /ha)			
	VEGETATION			
	WILDLIFE AND FISH HABITAT			
	HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES				

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 123 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 623.9 TO RK 626.6 				
			NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.	DATE	TERA REF.	REVISION
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION	CROWN
	LAND USE	TR0343T003 TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	
	VEGETATION	
	WETLANDS	
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	
SOILS PARENT MATERIAL	T T/R T GF-F	



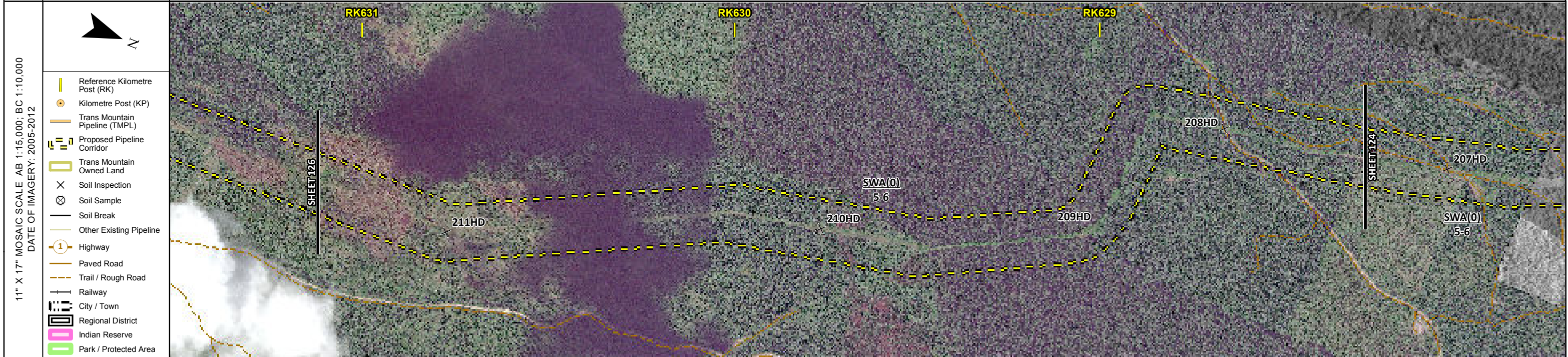
POTENTIAL ENVIRONMENTAL ISSUES				
			WIND/WATER ER	WINDER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	15-20 FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
	WETLANDS	
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES		

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	<table border="1"> <tr> <td>MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO</td> <td>PAGE SHEET 124 OF 301</td> </tr> <tr> <td>DATE December 2013</td> <td>TERA REF. 7894</td> </tr> <tr> <td>SCALE 1:10,000</td> <td>PAGE SIZE 11x17</td> </tr> <tr> <td>DRAWN CMR</td> <td>CHECKED DN</td> </tr> </table>	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 124 OF 301	DATE December 2013	TERA REF. 7894	SCALE 1:10,000	PAGE SIZE 11x17	DRAWN CMR	CHECKED DN	<table border="1"> <tr> <td>REVISION 0</td> <td>DISCIPLINE EAS</td> <td>DESIGN TGG</td> </tr> </table>	REVISION 0	DISCIPLINE EAS	DESIGN TGG	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 626.6 TO RK 628.1
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.																							
	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB																							
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 124 OF 301																												
DATE December 2013	TERA REF. 7894																												
SCALE 1:10,000	PAGE SIZE 11x17																												
DRAWN CMR	CHECKED DN																												
REVISION 0	DISCIPLINE EAS	DESIGN TGG																											

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	TR0342T001	CROWN
	LAND USE		TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		TR0343T003
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT	GROUNDHOG CARIBOU HERD RANGE	
	VEGETATION		
	WETLANDS		
	FISH HABITAT SENSITIVITY		
	HYDROLOGY		
SOILS PARENT MATERIAL			



POTENTIAL ENVIRONMENTAL ISSUES

WILDLIFE AREA

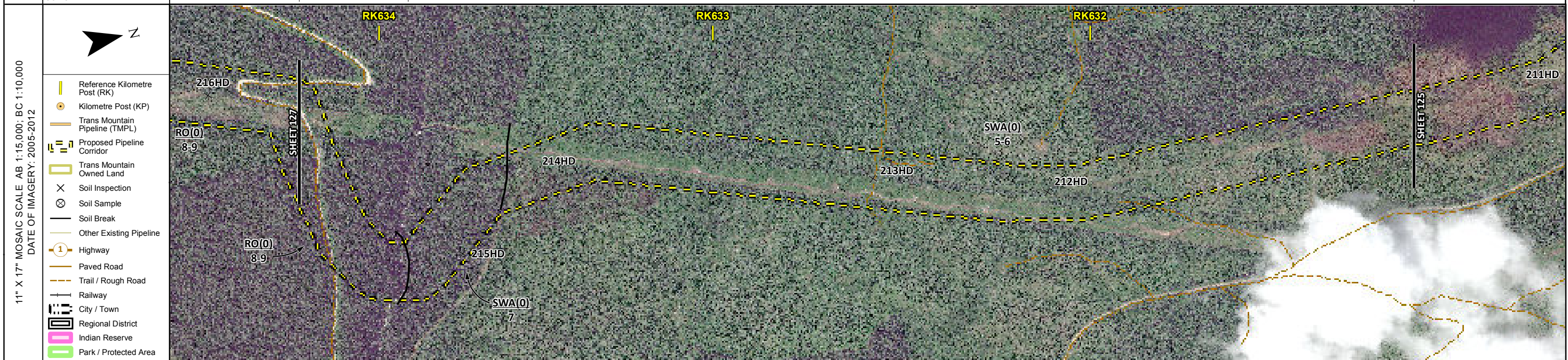
WIND/WATER ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
		15-20 FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1
	SOILS	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
	WETLANDS	
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	WF-NOTE 5
	HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 125 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 628.1 TO RK 631.1 				
			NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.	DATE	TERA REF.	REVISION
			0	Dec 16, 2013	Issued for NEB filing	CMR	DN		TW/GB	December 2013	7894	0
						SCALE	PAGE SIZE	DISCIPLINE				
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						DRAWN	CHECKED	DESIGN				
						CMR	DN	TGG				

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION	CROWN TR0342T001
	LAND USE	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	GROUNDHOG CARIBOU HERD RANGE
	VEGETATION	
	WETLANDS	
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	[DRAINAGE]
SOILS PARENT MATERIAL		



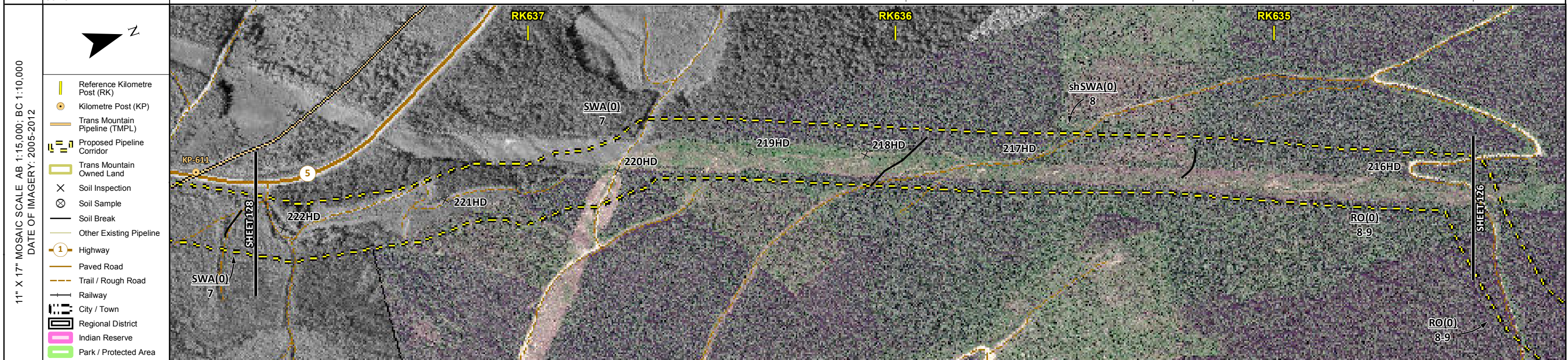
POTENTIAL ENVIRONMENTAL ISSUES	WATER ER	WIND/WATER ER	[WC (NCD)]
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CONSTRUCTION WORK WINDOW			[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	
		SO-NOTE 1	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE		[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS			
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT		WF-NOTE 5	
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
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			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY		CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.										
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB										

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION	CROWN ENV C&R TR0342T001
	LAND USE	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	GROUNDHOG CARIBOU HERD RANGE
	VEGETATION	
	WETLANDS	
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	[DRAINAGE]
SOILS PARENT MATERIAL	T/R	

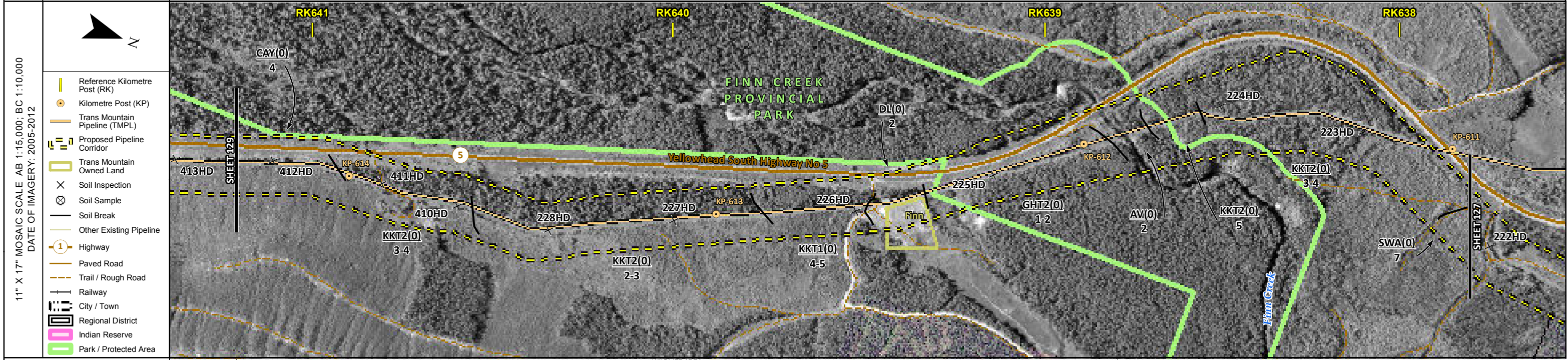


POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	WIND/WATER ER	WATER ER
--------------------------------	------------	---------------	----------

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	15-20 FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
	WETLANDS	[AQ-NOTE 3] [AQ-NOTE 2]
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	WF-NOTE 5
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES		

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small>	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	<table border="1"> <tr> <td>MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO</td> <td>PAGE SHEET 127 OF 301</td> </tr> <tr> <td>DATE December 2013</td> <td>TERA REF. 7894</td> </tr> <tr> <td>SCALE 1:10,000</td> <td>PAGE SIZE 11x17</td> </tr> <tr> <td>DRAWN CMR</td> <td>CHECKED DN</td> </tr> </table>	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 127 OF 301	DATE December 2013	TERA REF. 7894	SCALE 1:10,000	PAGE SIZE 11x17	DRAWN CMR	CHECKED DN	<table border="1"> <tr> <td>ENVIRONMENTAL ALIGNMENT SHEETS</td> <td>FROM RK 634.4</td> <td>TO RK 637.7</td> </tr> <tr> <td>TRANS MOUNTAIN EXPANSION PROJECT</td> <td colspan="2"> </td> </tr> </table>	ENVIRONMENTAL ALIGNMENT SHEETS	FROM RK 634.4	TO RK 637.7	TRANS MOUNTAIN EXPANSION PROJECT		
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.																									
	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB																									
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 127 OF 301																														
DATE December 2013	TERA REF. 7894																														
SCALE 1:10,000	PAGE SIZE 11x17																														
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ENVIRONMENTAL ALIGNMENT SHEETS	FROM RK 634.4	TO RK 637.7																													
TRANS MOUNTAIN EXPANSION PROJECT																															
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<small>PIGISTMPMAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LoRes</small>																															

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	THOMPSON-NICOLA REGIONAL DISTRICT	MIXED	FINN CREEK PROVINCIAL PARK	CROWN	THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION				TR0342T001 TREED	ENV C&R, PROT	ENV C&R	
	LAND USE							
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
	HERITAGE / TRADITIONAL LAND USE							
	WILDLIFE / WILDLIFE HABITAT			GROUNDHOG CARIBOU HERD RANGE				
	VEGETATION							
	WETLANDS				[SHRUBBY SWAMP]	[SHRUBBY SWAMP]		
	FISH HABITAT SENSITIVITY					[HIGH]		
	HYDROLOGY		[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[FINN CREEK] SHALLOW GW	[CHANNEL]
SOILS PARENT MATERIAL	C		GF		O		GF	T



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[WETLAND]	[WC (NCD)]	[FISH] [WETLAND] [WC (S2)] [HYDROLOGY] [NAV WATERS]	[WC (S6)]
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-JUL 22 TO AUG 15]	[AQ-OPEN]	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm) 15-20		40		15-20		
	SOILS	FULL ROW; REDUCE AS APPROPRIATE		FULL ROW; REDUCE AS APPROPRIATE		FULL ROW; REDUCE AS APPROPRIATE		
	WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
	WETLANDS			[WT-NOTE 1]		[WT-NOTE 1]		
	FOREST TYPE (m ³ /ha)							
	VEGETATION						[AQ-NOTE 1]	
	WILDLIFE AND FISH HABITAT			WF-NOTE 5				
HERITAGE / TRADITIONAL LAND USE								
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
SPECIAL MEASURES					[AQ-NOTE 4]	[HY-NOTE 1]		

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER
201310_MAP_TERA_EAS_00434_REVO

PAGE
SHEET 128 OF 301

REVISION
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7894

PAGE SIZE
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DN

DISCIPLINE
EAS

DESIGN
TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANSMOUNTAIN EXPANSION PROJECT

FROM
RK 637.7

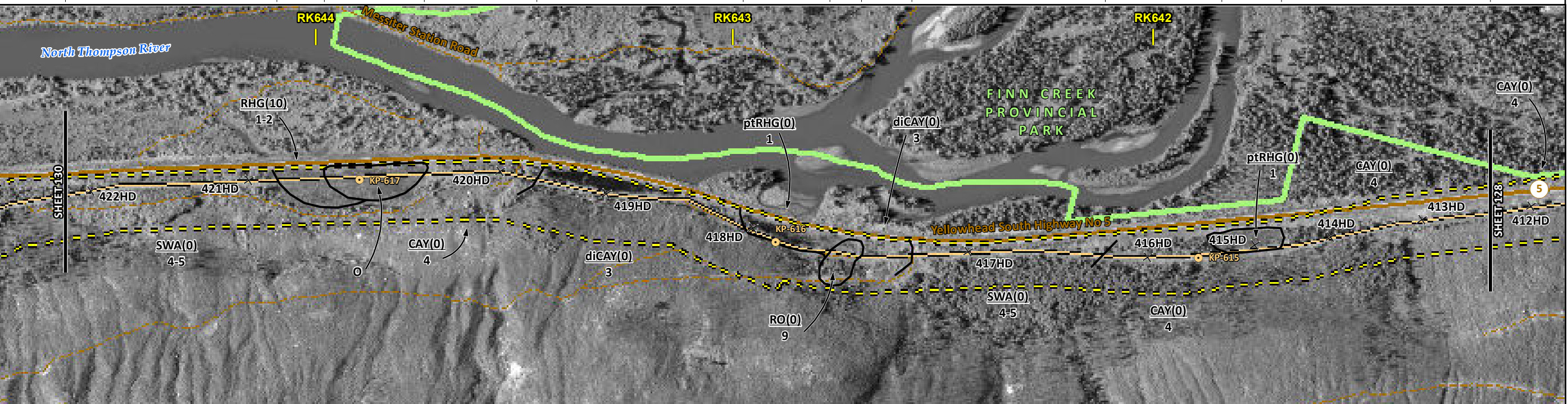
TO
RK 641.2

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT											
	LAND OWNERSHIP / DISPOSITION	MIXED	CROWN	MIXED	CROWN	MIXED	CROWN	MIXED	CROWN	MIXED	CROWN		
	LAND USE	TR0342T001 TREED											
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
	HERITAGE / TRADITIONAL LAND USE												
	WILDLIFE / WILDLIFE HABITAT						AMPH-POND	AMPH-POND		GROUNDHOG CARIBOU HERD RANGE			
	VEGETATION												
	WETLANDS	SE MARSH OPEN POND			OPEN POND		DEEP MARSH	MXDTR SWAMP	SHRUBBY SWAMP	SE MARSH			
	FISH HABITAT SENSITIVITY												
	HYDROLOGY	[CHANNEL] [CHANNEL] [CHANNEL DRAINAGE DRAINAGE] [DRAINAGE]											
SOILS PARENT MATERIAL	T	GF-C	C	C-Ff	GF-C	C-Ff	T	C	GF-C	C			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	WIND/WATER ER	UNST TR/COMP RUT	WIND ER	UNST TR/COMP RUT	WIND ER	WIND/WATER ER	WIND ER	UNST TR/COMP RUT	WIND ER
	CONSTRUCTION WORK WINDOW						[AQ-OPEN]	[AQ-JUL 22 TO OCT 31]	[AQ-OPEN]	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20		15-20	40	15-20	40	15-20	
	SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE		FULL ROW; REDUCE AS APPROPRIATE		FULL ROW; REDUCE AS APPROPRIATE		FULL ROW; REDUCE AS APPROPRIATE	
	SOILS	SO-NOTE	SO-NOTE 1	[SO-NOTES 2 AND 3]	SO-NOTE 1	[SO-NOTES 2 AND 3]	SO-NOTE 1	[SO-NOTES 2 AND 3]	SO-NOTE 1	[SO-NOTES 2 AND 3]
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE					[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	WETLANDS		WT-NOTE 1	WT-NOTE 2	WT-NOTE 1	WT-NOTE 2	WT-NOTE 1	WT-NOTE 2	WT-NOTE 1	WT-NOTE 2
	FOREST TYPE (m ³ /ha)									
	VEGETATION									
	WILDLIFE AND FISH HABITAT			WF-NOTE 1		WF-NOTE 1	AQ-NOTE 1			WF-NOTE 5
HERITAGE / TRADITIONAL LAND USE										
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS										
SPECIAL MEASURES										

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 129 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
	DESIGN TGG

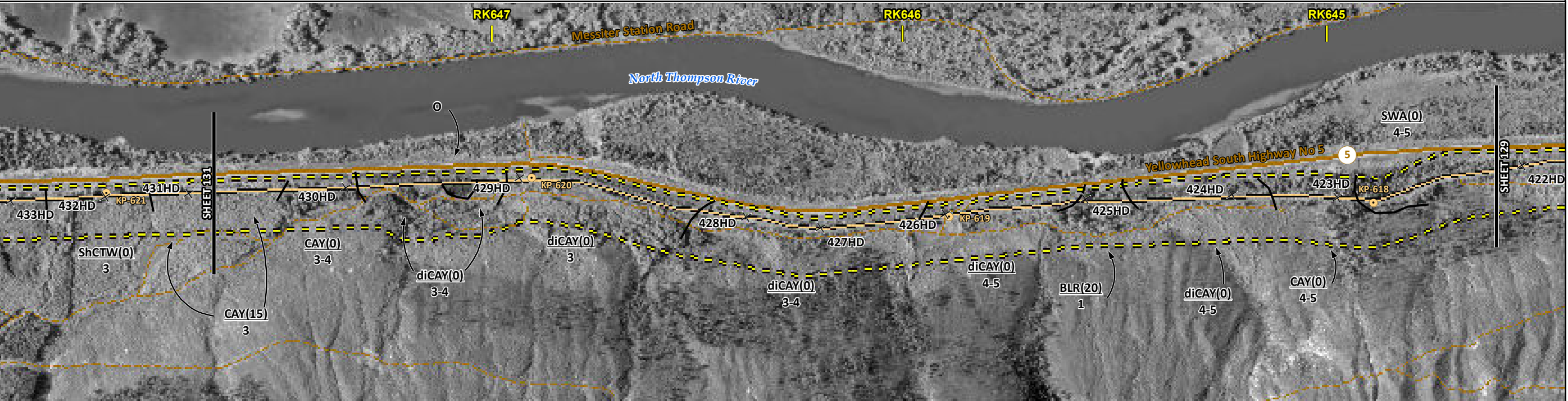
ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 641.2 TO RK 644.6

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION				THOMPSON-NICOLA REGIONAL DISTRICT						
	LAND OWNERSHIP / DISPOSITION		MIXED		PRIVATE		MIXED		PRIVATE	[MIXED]	CROWN
	LAND USE		TR0342T001			TREED	TR0342T001				TR0342T001
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS										
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT									AMPH-POND	
	VEGETATION										
	WETLANDS			[MXDTR SWAMP]						[SE MARSH]	
	FISH HABITAT SENSITIVITY										
	HYDROLOGY				[DRAINAGE]	[CHANNEL]	[DRAINAGE]	[CHANNEL]			[DRAINAGE]
SOILS PARENT MATERIAL			C		C-Ff		F		C-Ff	C	T

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[WC (NVC)]	[WC (S6)]	[WC (NGD)]	[WC (S6)]	[WILDLIFE AREA]	[WETLANDS]	[WF FEATURE]	[WC (NVC)]

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]					
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20			20		WF-NOTE 4		15-20
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE							
		SO-NOTE 1							
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]		[SO-NOTE 2]		[AQ-NOTE 3]
		[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]				[AQ-NOTE 2]
WETLANDS		[WT-NOTE 1]							
FOREST TYPE (m ³ /ha)									
VEGETATION									
WILDLIFE AND FISH HABITAT		WF-NOTE 5							
HERITAGE / TRADITIONAL LAND USE		WF-NOTE 1							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									
SPECIAL MEASURES									

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 130 OF 301
DATE	December 2013	REVISION	0
SCALE	1:10,000	DISCIPLINE	EAS
DRAWN	CMR	DESIGN	TGG

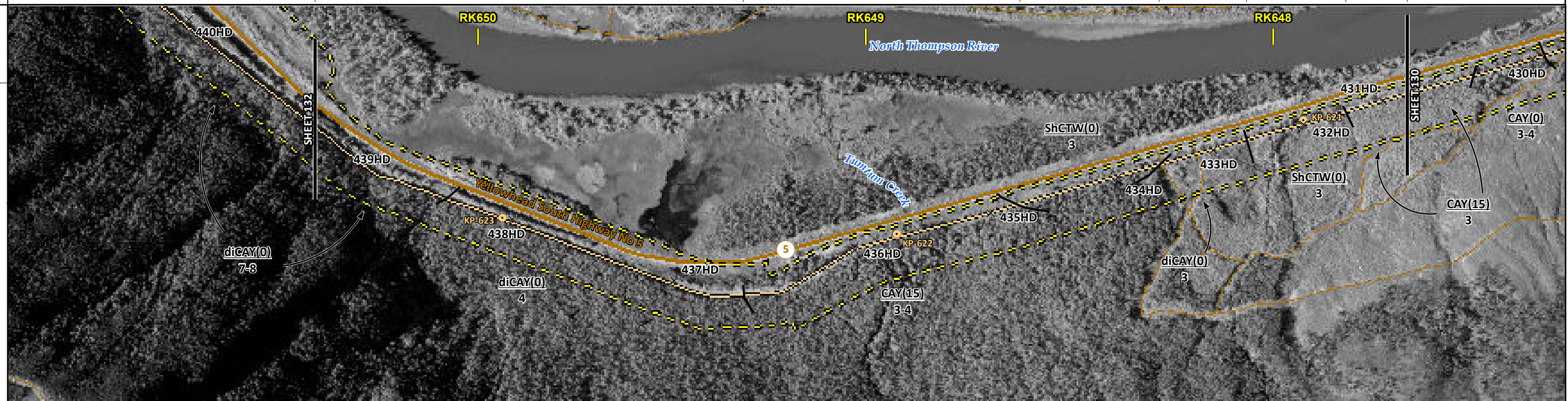
ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 644.6 TO RK 647.7

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT										
	LAND OWNERSHIP / DISPOSITION	MIXED [CROWN]					MIXED					
	LAND USE	TR0342T001 TREED										
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											
	HERITAGE / TRADITIONAL LAND USE											
	WILDLIFE / WILDLIFE HABITAT	[GROUNDHOG CARIBOU HERD RANGE]										
	VEGETATION											
	WETLANDS	[DEEP MARSH MIXTR SWAMP]					[SHRUBBY SWAMP] [SHRUBBY FEN]					
	FISH HABITAT SENSITIVITY	[OPEN POND]					[HIGH]					
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[CHANNEL]	[CHANNEL]	[TUMTUM CREEK]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	
SOILS PARENT MATERIAL	C-Ff			C			GL/T			C		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WC (NVC)]	[WC (S4)]	WILDLIFE AREA	[WC (S6/S3)]	[FISH] [WC (S2)]	[WC (NCD)]	[WC (NVC)]
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]		[AQ-OPEN]	[AQ-JUL 22 TO AUG 15]	[AQ-OPEN]	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm)		15-20		FULL ROW; REDUCE AS APPROPRIATE		SO-NOTE 1	
	WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
	WETLANDS	WIND/WATER ER		WIND ER		WT-NOTE 1		WT-NOTE 1	
	FOREST TYPE (m ³ /ha)	[AQ-NOTE 1]		[AQ-NOTE 1]		[AQ-NOTE 1]		[AQ-NOTE 1]	
	VEGETATION	[AQ-NOTE 1]		[AQ-NOTE 1]		[AQ-NOTE 1]		[AQ-NOTE 1]	
	WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]		[AQ-NOTE 1]		[AQ-NOTE 1]		[AQ-NOTE 1]	
	SPECIAL MEASURES	[AQ-NOTE 4]		[AQ-NOTE 4]		[AQ-NOTE 4]		[AQ-NOTE 4]	

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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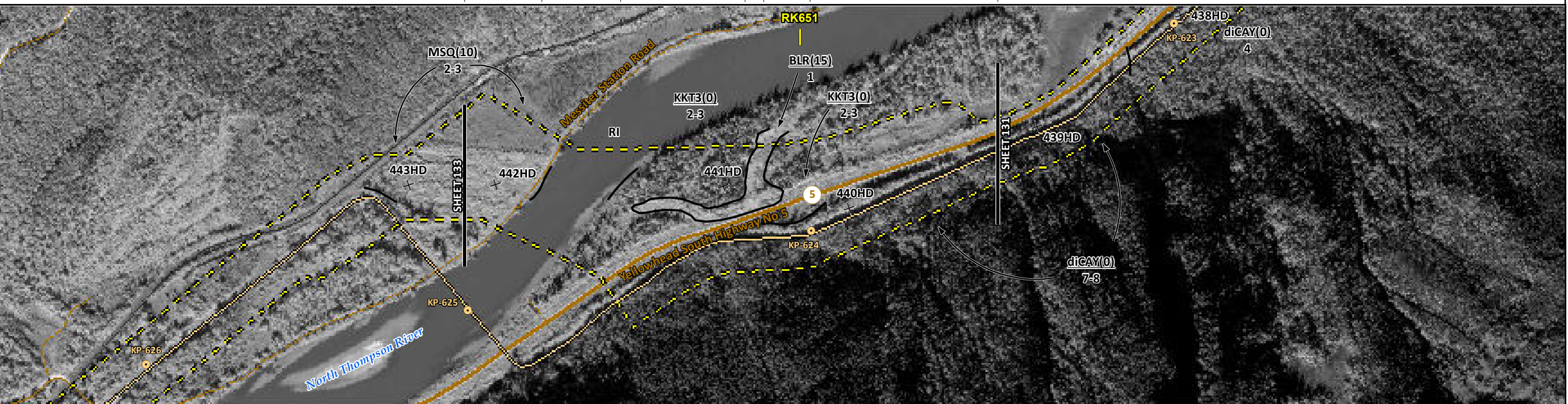
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 131 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 647.7 TO RK 650.4

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT						
	LAND OWNERSHIP / DISPOSITION	PRIVATE	CROWN			MIXED		
	LAND USE	TREED	RIVER	TR0342T001			TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
	HERITAGE / TRADITIONAL LAND USE							
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND						
	VEGETATION							
	WETLANDS	SE MARSH						
	FISH HABITAT SENSITIVITY	HIGH			NORTH THOMPSON RIVER			DRAINAGE DRAINAGE
	HYDROLOGY							
SOILS PARENT MATERIAL	F	-	GF-F	F	GF-F	C-Ff		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		UNST TR/COMP RUT	FISH WC (S1A)	WETLAND WF FEATURE	WC (NVC)
CONSTRUCTION WORK WINDOW		WIND ER	NAV WATERS	WF-NOTE 4	WIND/WATER ER
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20		15-20	
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE		FULL ROW; REDUCE AS APPROPRIATE	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	SO-NOTE 1	AQ-NOTE 3	SO-NOTE 1	AQ-NOTE 3
WETLANDS		SO-NOTES 2 AND 3	AQ-NOTE 2	SO-NOTE 2	AQ-NOTE 2
FOREST TYPE (m ³ /ha)				WT-NOTE 1	
VEGETATION					
WILDLIFE AND FISH HABITAT			AQ-NOTE 1	WF-NOTE 1	
HERITAGE / TRADITIONAL LAND USE					
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES			AQ-NOTE 4		

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 132 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 650.4 TO RK 651.8

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	PRIVATE	
	LAND USE	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		
	VEGETATION		
	WETLANDS	[MXDTR SWAMP]	[SHRUBBY SWAMP]
	FISH HABITAT SENSITIVITY	[HIGH]	[HIGH]
	HYDROLOGY	[CHANNEL]	[CHANNEL]
SOILS PARENT MATERIAL	GF-F	NA	F

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WETLAND	[FISH] [WC (S3)]	[FISH] [WC (S3)]	WETLANDS [NAV WATERS]	UNST TR/COMP RUT WIND ER
	WIND ER				

CONSTRUCTION WORK WINDOW		[AQ-JUL 15 TO AUG 15]	[AQ-JUL 22 TO AUG 15]
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	
SOILS		[SO-NOTE 1]	[SO-NOTE 1] [SO-NOTES 2 AND 3]
WATERCOURSE CROSSINGS	PIPELINE	[AQ-NOTE 3]	[AQ-NOTE 3]
	VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS		[WT-NOTE 1]	[WT-NOTE 1] [WT-NOTE 2]
FOREST TYPE (m ³ /ha)			
VEGETATION		[AQ-NOTE 1]	[AQ-NOTE 1]
WILDLIFE AND FISH HABITAT			
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 133 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 651.8 TO RK 654.3

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT					
	LAND OWNERSHIP / DISPOSITION	PRIVATE		MIXED		PRIVATE	
	LAND USE	NA	TREED	DISTURBED LAND	TR0342T001	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT						
	VEGETATION						
	WETLANDS	[SE MARSH]	[SHRUBBY SWAMP]	[SHRUBBY SWAMP]	[SHRUBBY SWAMP]	[SE MARSH]	[MXDTR SWAMP]
	FISH HABITAT SENSITIVITY				[HIGH]		
	HYDROLOGY				[AVOLA CREEK]	[CHANNEL]	
SOILS PARENT MATERIAL	NA	F	GF		GF	GF-F	



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]
	CONSTRUCTION WORK WINDOW		COMP RUT	UNST TR	WIND/WATER ER	WIND ER	[AQ-OPEN]	
	SOILS STRIPPING DEPTH (cm)	NA	20	15-20			15-20	
	SOILS HANDLING PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE				FULL ROW; REDUCE AS APPROPRIATE	
	SOILS		SO-NOTE 2		SO-NOTE 3		SO-NOTE 1	
	WATERCOURSE CROSSINGS PIPELINE VEHICLE				[AQ-NOTE 3]		[AQ-NOTE 3]	[AQ-NOTE 2]
	WETLANDS	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	WT-NOTE 1		[WT-NOTE 1]	[WT-NOTE 1]
	FOREST TYPE (m ³ /ha)							
	VEGETATION							
	WILDLIFE AND FISH HABITAT				[AQ-NOTE 1]			
HERITAGE / TRADITIONAL LAND USE								
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
SPECIAL MEASURES								

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 134 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 654.3 TO RK 657.2 											
			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY		CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	DATE December 2013	TERA REF. 7894	REVISION 0
			NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.										
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SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS	FROM RK 654.3																

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	MIXED	PRIVATE	MIXED	PRIVATE
	LAND USE	TR0342T001	TREED	TR0342T001	NA
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS		SHRUBBY FEN [NW FEN]	SHRUBBY SWAMP	[SE MARSH]
	FISH HABITAT SENSITIVITY		[HIGH]		
	HYDROLOGY	[CHANNEL]	[CHANNEL]		[DRAINAGE]
SOILS PARENT MATERIAL	T		O	NA	



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (S6)]	[FISH] [WC (S3)]	WETLANDS [NAV WATERS]	WETLAND	[WC (NCD)] [WETLAND]
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-JUL 15 TO AUG 15]	WIND ER	COMP RUT	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm) 15-20	20	FULL ROW; REDUCE AS APPROPRIATE	40	NA
	SOILS	SO-NOTE 1		SO-NOTE 2		
	WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]			[AQ-NOTE 3]
	PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]			[AQ-NOTE 2]
	WETLANDS			WT-NOTE 1		WT-NOTE 1
	WETLANDS			[WT-NOTE 2]		[WT-NOTE 1]
	FOREST TYPE (m ³ /ha)					
	VEGETATION					
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]					
HERITAGE / TRADITIONAL LAND USE						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						
SPECIAL MEASURES						

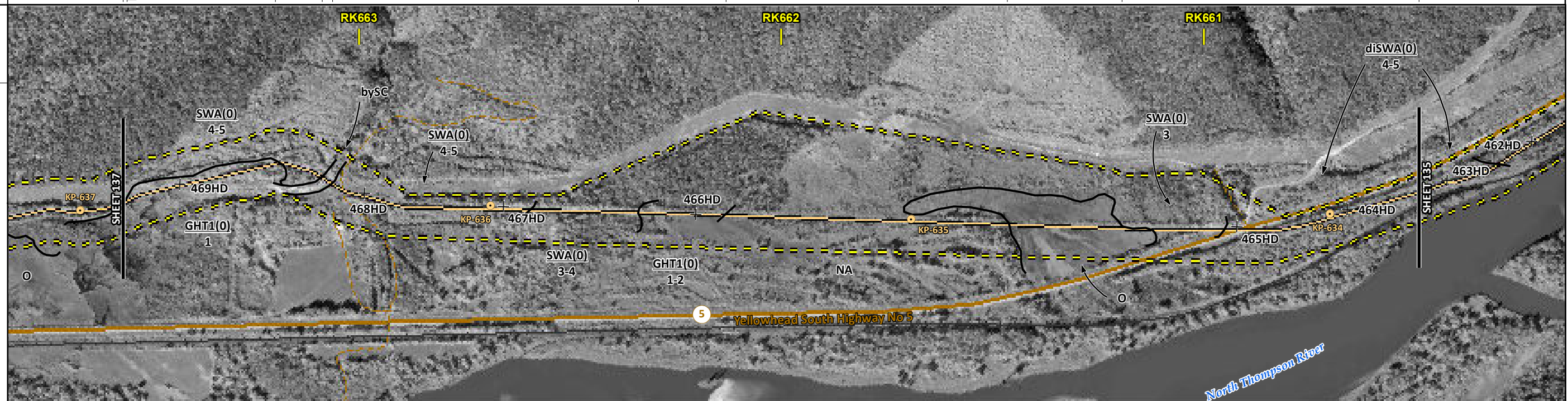
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_11N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO DATE December 2013 SCALE 1:10,000 DRAWN CMR	PAGE SHEET 135 OF 301 REVISION 0 DISCIPLINE EAS DESIGN TGG	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 657.2 TO RK 660.5
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.												
	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB												

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT						
	LAND OWNERSHIP / DISPOSITION	MIXED	PRIVATE	MIXED	PRIVATE	MIXED	CROWN	MIXED
	LAND USE	TR0342T001		TR0342T001			TR0342T001	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
	HERITAGE / TRADITIONAL LAND USE							
	WILDLIFE / WILDLIFE HABITAT	[RAPTOR NEST]						
	VEGETATION	[BOTRHES]						
	WETLANDS	[SHRUBBY SWAMP]	[OPEN POND]		[SHRUBBY FEN]	[DEEP MARSH]	[SHRUBBY SWAMP]	
	FISH HABITAT SENSITIVITY			[HIGH]				
	HYDROLOGY			[CHANNEL]				
SOILS PARENT MATERIAL	[GF]	O/F-GF	T	-	O/F-GF	NA		T

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[RARE PLANT]	[UNST TR/COMP RUT]	[FISH]	[WETLANDS]	[NAV WATERS]	[WIND/WATER ER]	[WIND ER]	[UNST TR/COMP RUT]	[WETLANDS]	[NAV WATERS]	[WIND ER]	[WIND/WATER ER]
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CONSTRUCTION WORK WINDOW	[WF-NOTE 4]	[AQ-JUL 22 TO OCT 31]										
SOILS HANDLING	STRIPPING DEPTH (cm)	[15-20]	40	15-20	40	15-20					15-20	
SOILS	[SO-NOTE 1]	[SO-NOTE 3]	SO-NOTES 2 AND 3	[SO-NOTE 1]	SO-NOTE 1			SO-NOTES 2 AND 3				FULL ROW; REDUCE AS APPROPRIATE
WATERCOURSE CROSSINGS	PIPELINE			[AQ-NOTE 3]	[AQ-NOTE 2]							
WETLANDS	[WT-NOTE 1]	[WT-NOTE 2]							[WT-NOTE 1]	[WT-NOTE 2]		
FOREST TYPE (m ³ /ha)	[VG-NOTE 1]											
VEGETATION	[WF-NOTE 2]	[AQ-NOTE 1]										
WILDLIFE AND FISH HABITAT												
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES			[AQ-NOTE 4]									

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 136 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

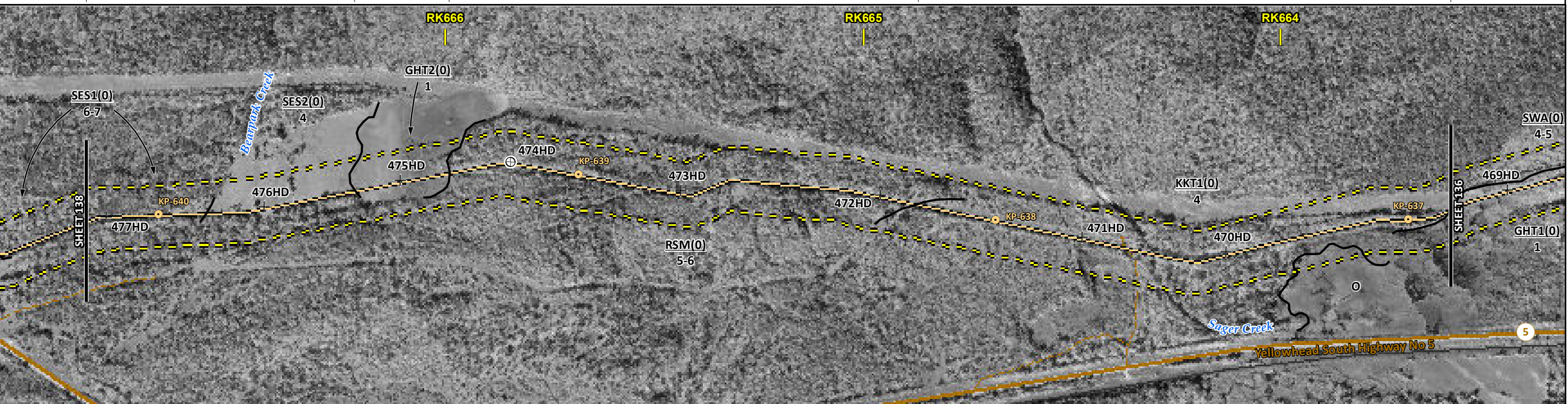
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 660.5 TO RK 663.6

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT											
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	PRIVATE	MIXED	PRIVATE	MIXED	CROWN	MIXED				
	LAND USE	TR0342T001	TREED	TAME PASTURE	TR0342T001	TREED	TR0342T001						
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
	HERITAGE / TRADITIONAL LAND USE												
	WILDLIFE / WILDLIFE HABITAT			AMPH-POND		AMPH-POND					RAPTOR NEST		
	VEGETATION	[BOTRALA][BOTRSPA]	[BOTRPED]	[DRYOCRI]				[BOTRHES]					
	WETLANDS		[OPEN POND]	[DEEP MARSH]		[SHRUBBY SWAMP]					[DEEP MARSH]		
	FISH HABITAT SENSITIVITY												
	HYDROLOGY	[DRAINAGE]											
SOILS PARENT MATERIAL		GF	O		T					GF			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[RARE PLANTS]	[RARE PLANTS]	[RARE PLANTS]	[RARE PLANTS]	[RARE PLANTS]	[RARE PLANTS]	[RARE PLANTS]	[RARE PLANTS]	[RARE PLANTS]	[RARE PLANTS]	[RARE PLANTS]
	CONSTRUCTION WORK WINDOW	[WC (NCD)]	[WETLAND]	[NAV WATERS]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]	[WETLAND]
	SOILS HANDLING	WIND/WATER ER	UNST TR	WIND ER	COMP RUT	WF FEATURE	WF FEATURE	WF FEATURE	WF FEATURE	WF FEATURE	WF FEATURE	WF FEATURE
	SOILS	[AQ-OPEN]										
	WATERCOURSE CROSSINGS											
	WETLANDS											
	FOREST TYPE (m ³ /ha)											
	VEGETATION											
	WILDLIFE AND FISH HABITAT											
	HERITAGE / TRADITIONAL LAND USE											
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES												

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATIS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

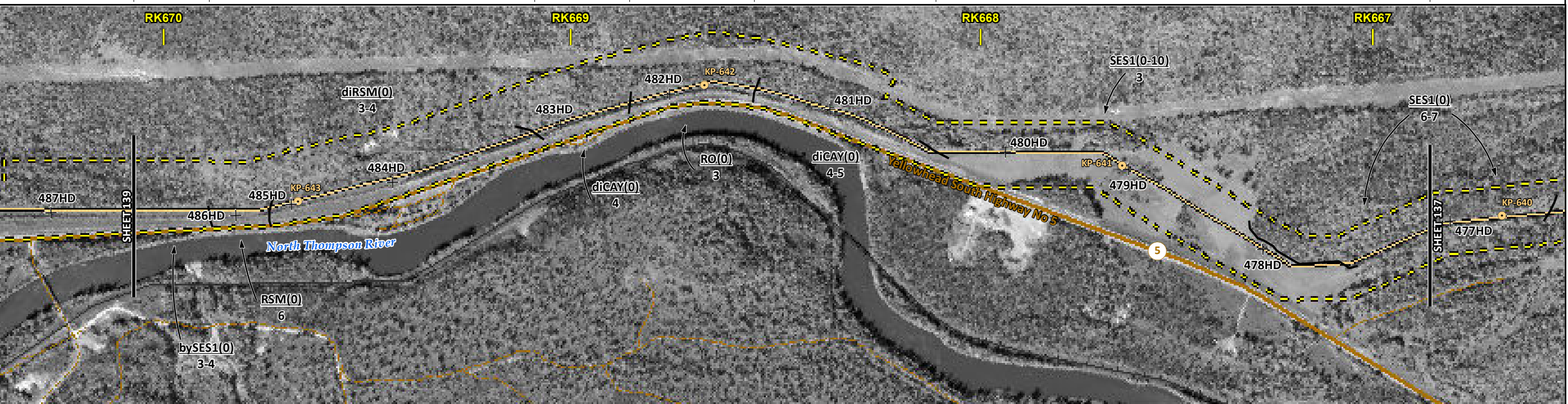
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 137 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 663.6 TO RK 666.9

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PRIVATE	[MIXED]	CROWN	THOMPSON-NICOLA REGIONAL DISTRICT	[MIXED]	PRIVATE
	LAND OWNERSHIP / DISPOSITION			TR0342T001			
	LAND USE		TREED			TAME PASTURE	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT						
	VEGETATION		[CAREVUL]				
	WETLANDS						
	FISH HABITAT SENSITIVITY						
	HYDROLOGY		[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	
SOILS PARENT MATERIAL	GF	T	C-Ff		C-Ff		GF

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		[WIND/WATER ER]	[WIND/WATER ER]	[WIND/WATER ER]	[WIND/WATER ER]	[WIND/WATER ER]	[WIND/WATER ER]	[WIND/WATER ER]	[WIND/WATER ER]
	UNST TR WIND ER								

CONSTRUCTION WORK WINDOW		[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]		
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20				10	15-20
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE				SO-NOTE 1	SO-NOTE 3
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]		
WETLANDS		[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]		
FOREST TYPE (m ³ /ha)							
VEGETATION		[VG-NOTE 1]					
WILDLIFE AND FISH HABITAT							
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES							

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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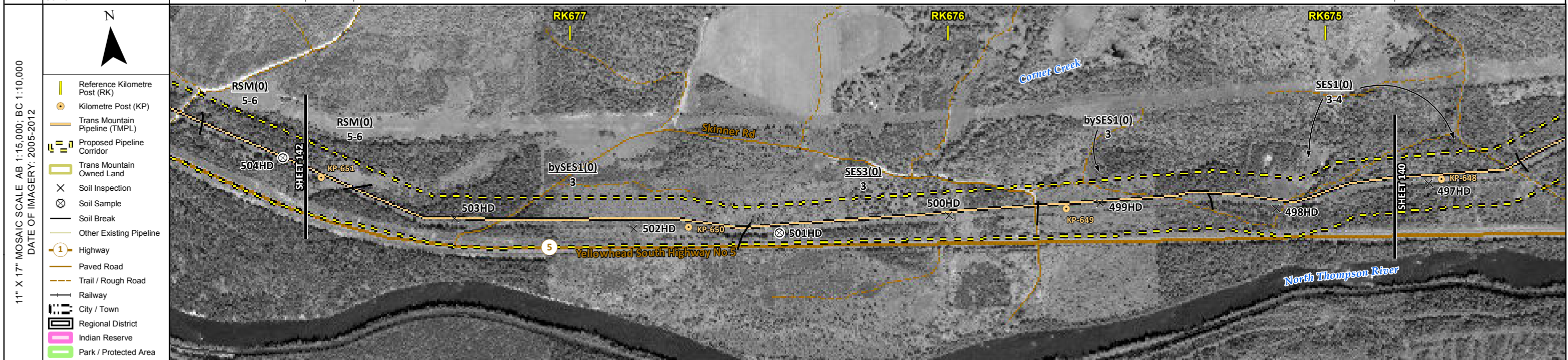
MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 138 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 666.9 TO RK 670.1

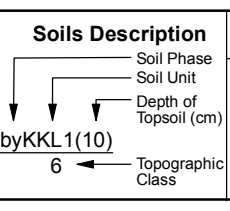
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	CROWN ENV C&R TR0340T004	PRIVATE
	LAND USE	TREED	TREED PASTURE
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		
	VEGETATION		
	WETLANDS	[SE MARSH]	
	FISH HABITAT SENSITIVITY		[HIGH]
	HYDROLOGY	[DRAINAGE]	[CORNET CREEK]
SOILS PARENT MATERIAL	T	GF	



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[WC (NVC)]	[FISH] [WC (S3)]
	[WIND/WATER ER]	UNST TR	WIND ER UNST TR

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-JUL 22 TO OCT 31]
	SOILS STRIPPING DEPTH (cm)	15-20	10
	SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	
	SOILS	SO-NOTE 3	SO-NOTE 1
	WATERCOURSE CROSSINGS PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]
	WETLANDS	[AQ-NOTE 2]	[AQ-NOTE 2]
	FOREST TYPE (m ³ /ha)	[W1-NOTE 1]	
	VEGETATION		
	WILDLIFE AND FISH HABITAT		[AQ-NOTE 1]
	HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			



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SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

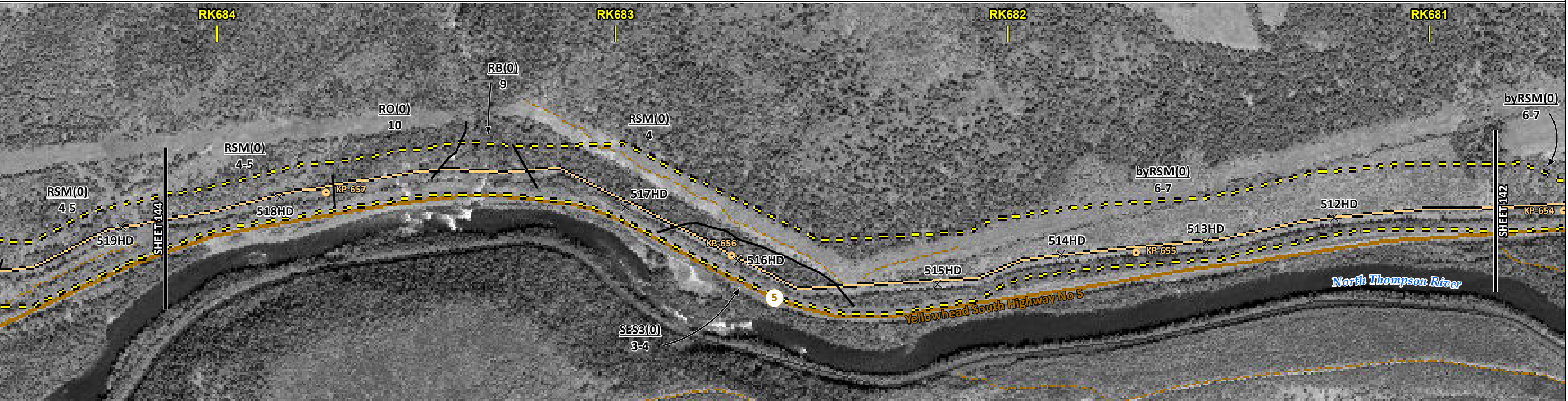
FROM RK 674.8 TO RK 677.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	PRIVATE	ENV C&R	CROWN	
	LAND USE	TR0342T001	TR0340T004	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY	[HIGH]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]
	HYDROLOGY	[MAD RIVER]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL		GF		byT	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
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- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[FISH] [WC (S2)]	[WC (NVC)]	[WC (NVC)]	[WC (NVC)]	[WC (NCD)]	[WC (NCD)]
	[NAV WATERS]	LOW QUALITY SUBSOILS				
	WIND/WATER ER	WATER ER	WIND ER	WIND/WATER ER		

CONSTRUCTION WORK WINDOW	[AQ-AUG 7 TO SEP 31]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE	15-20 FULL ROW; REDUCE AS APPROPRIATE	25 OVERSTRIP	15-20 FULL ROW; REDUCE AS APPROPRIATE		
SOILS			SO-NOTE 1			
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS						
FOREST TYPE (m ³ /ha)						
VEGETATION						
WILDLIFE AND FISH HABITAT		[AQ-NOTE 1]				
HERITAGE / TRADITIONAL LAND USE						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						
SPECIAL MEASURES		[AQ-NOTE 4]				

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 143 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

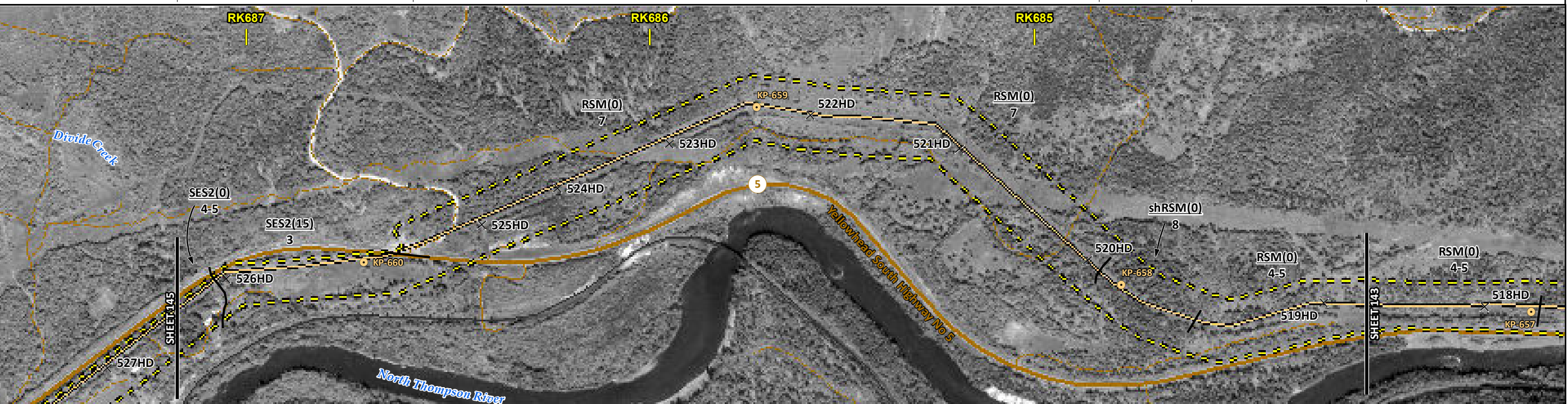
FROM RK 680.8 TO RK 684.1

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION				THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION			PRIVATE	[MIXED]	PRIVATE	
	LAND USE		TREED	TAME PASTURE		TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				[TR0342T001]		
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT						
	VEGETATION						
	WETLANDS						
	FISH HABITAT SENSITIVITY						
	HYDROLOGY		[DIVIDE CREEK]				
SOILS PARENT MATERIAL			GF		T	T/R	T

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC(S6)]	UNST TR	WIND ER	WINDWATER ER
--------------------------------	----------	---------	---------	--------------

CONSTRUCTION WORK WINDOW	[AQ-OPEN]			
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	15	15-20
SOILS			SO-NOTE 3	FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 2]	
WETLANDS				
FOREST TYPE (m ³ /ha)				
VEGETATION				
WILDLIFE AND FISH HABITAT				
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES				

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 144 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

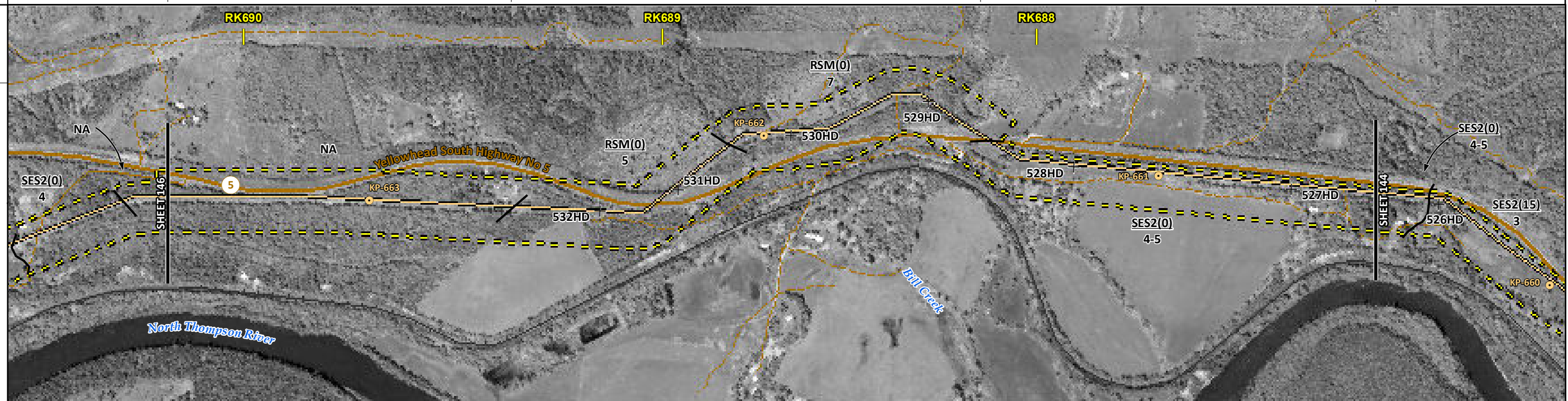
FROM RK 684.1 TO RK 687.2

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	PRIVATE		
	LAND USE	TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	FORAGE		
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS			
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	[DRAINAGE]	[BLACKBERG CREEK]	[BILL CREEK]
SOILS PARENT MATERIAL	NA	T	GF	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
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- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WC (S6)]	[WC (S6)]	AGRI (CROP)
				UNST TR

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20		
		PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE		
	SOILS			SO-NOTE 1	SO-NOTE 3
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
			[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
	WETLANDS				
	FOREST TYPE (m ³ /ha)				
	VEGETATION				
	WILDLIFE AND FISH HABITAT				
HERITAGE / TRADITIONAL LAND USE					
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				AG-NOTE 1	
SPECIAL MEASURES					

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
byKKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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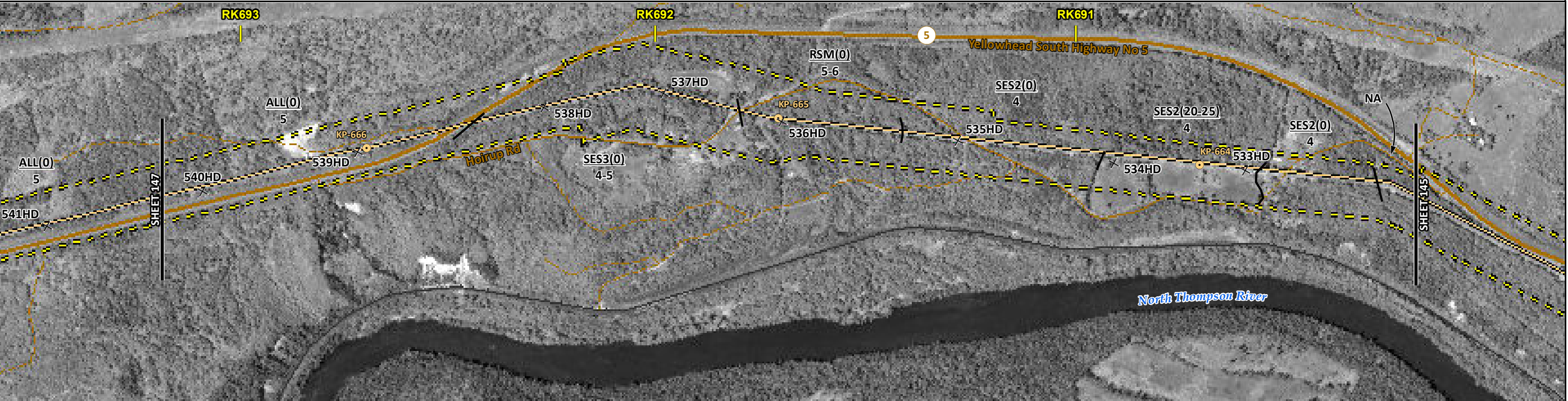
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 145 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 687.2 TO RK 690.2

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	PRIVATE		
	LAND USE	TREED	TAME PASTURE	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS	[SHRUBBY SWAMP]		
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	[DRAINAGE DRAINAGE]	[DRAINAGE DRAINAGE]	[CHANNEL CHANNEL]
SOILS PARENT MATERIAL	GF	GF	NA	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		[WC (NCD)] [WC (NCD)] [WETLAND]	[WC (NVC)] [WC (NVC)]	[WC (S6)]	[WC (S6)]
	WIND/WATER ER			UNST TR WIND ER	

CONSTRUCTION WORK WINDOW		[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20		20-25	15-20
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			
	SOILS	SO-NOTE 1			
	SOILS	SO-NOTE 3			
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3][AQ-NOTE 3]	[AQ-NOTE 3][AQ-NOTE 3]	[AQ-NOTE 3][AQ-NOTE 3]	[AQ-NOTE 3][AQ-NOTE 3]
		[AQ-NOTE 2][AQ-NOTE 2]	[AQ-NOTE 2][AQ-NOTE 2]	[AQ-NOTE 2][AQ-NOTE 2]	[AQ-NOTE 2][AQ-NOTE 2]
		[WT-NOTE 1]			
WETLANDS					
FOREST TYPE (m ³ /ha)					
VEGETATION					
WILDLIFE AND FISH HABITAT					
HERITAGE / TRADITIONAL LAND USE					
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES					

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 146 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
		DISCIPLINE	EAS
		DESIGN	TGG

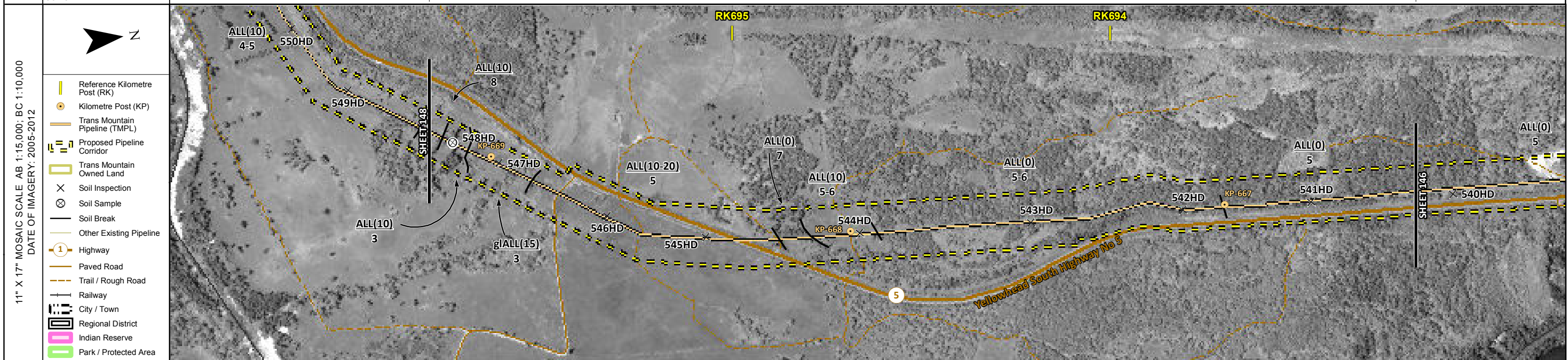
ENVIRONMENTAL ALIGNMENT SHEETS

TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 690.2 TO RK 693.2

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	PRIVATE	
	LAND USE	TAME PASTURE	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND	
	VEGETATION		
	WETLANDS	[SE MARSH]	[SE MARSH] [OPEN POND]
	FISH HABITAT SENSITIVITY		
	HYDROLOGY	[DRAINAGE] CHANNEL	
SOILS PARENT MATERIAL	T		



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND] [WIND ER] [COMP RUT] [WIND/WATER ER] [WF FEATURE] [WC (NCD)] [WC (S6)] [WETLANDS] [NAV WATERS] [WIND/WATER ER]
CONSTRUCTION WORK WINDOW	[AQ-OPEN] [AQ-OPEN]
SOILS HANDLING	WF-NOTE 4 10 15 10-20 15-20 FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1
SOILS	SO-NOTE 2
WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 3] [AQ-NOTE 2] [AQ-NOTE 2]
PIPELINE VEHICLE	[WT-NOTE 1] [WT-NOTE 1] [WT-NOTE 2]
WETLANDS	
FOREST TYPE (m ³ /ha)	
VEGETATION	
WILDLIFE AND FISH HABITAT	WF-NOTE 1
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	

ENVIRONMENTAL PROTECTION

TRANS MOUNTAIN

tera
ENVIRONMENTAL CONSULTANTS

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 147 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS

TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 693.2 TO RK 695.9

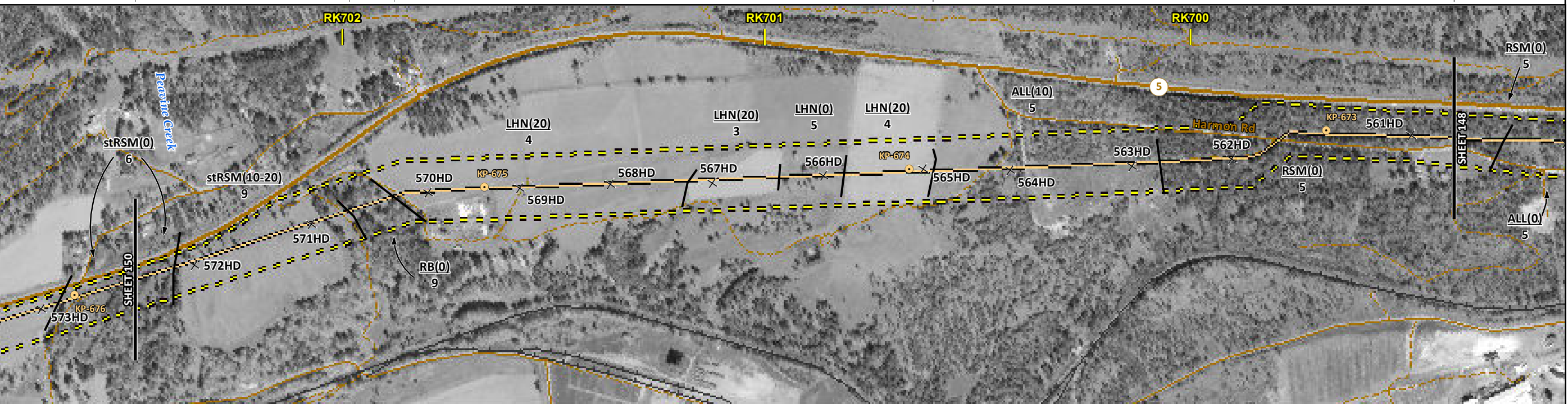
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT											
	LAND OWNERSHIP / DISPOSITION	PRIVATE											
	LAND USE	TREED	TAME PASTURE	TREED	HAY	TAME PASTURE	HAY	TAME PASTURE	HAY	TAME PASTURE	TREED PASTURE	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	FORAGE											
	HERITAGE / TRADITIONAL LAND USE												
	WILDLIFE / WILDLIFE HABITAT												
	VEGETATION												
	WETLANDS												
	FISH HABITAT SENSITIVITY												
	HYDROLOGY	[DRAINAGE]			[DRAINAGE]			[DRAINAGE]			[DRAINAGE]		
SOILS PARENT MATERIAL	stT			GL			T						

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- Soil Sample
- Soil Break
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- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	WIND/WATER ER
CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	WIND/WATER ER

SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	10-20	15-20	20	10	20	10	15-20
SOILS		FULL ROW, REDUCE AS APPROPRIATE SO-NOTE 1							
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS									
FOREST TYPE (m ³ /ha)									
VEGETATION									
WILDLIFE AND FISH HABITAT									
HERITAGE / TRADITIONAL LAND USE									
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AG-NOTE 1							
SPECIAL MEASURES									

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

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DATE	December 2013	TERA REF.	7894
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DISCIPLINE	EAS	DESIGN	TGG

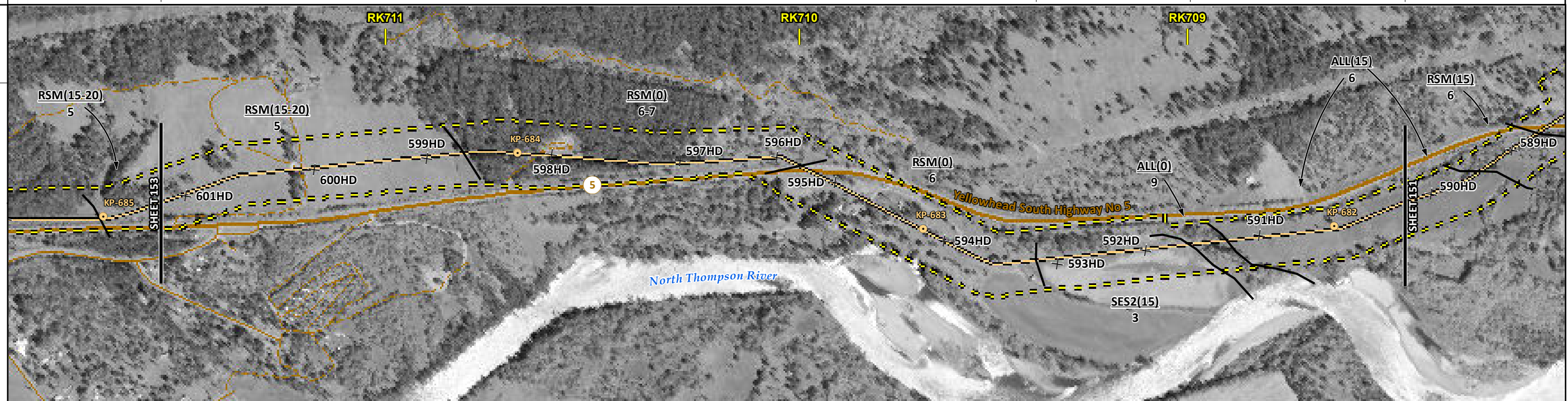
ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 699.4 TO RK 702.5

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT									
	LAND OWNERSHIP / DISPOSITION	PRIVATE		MIXED	CROWN			PRIVATE			
	LAND USE	P	HAY			TREED		TAME PASTURE	HAY	TREED	TAME PASTURE
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	FORAGE									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS	[SE MARSH]									
	FISH HABITAT SENSITIVITY										
	HYDROLOGY	[SHALLOW WELL]		[DRAINAGE] [NOBLEQUARTZ CR]		[DRAINAGE]		[DRAINAGE]			
SOILS PARENT MATERIAL			T			GF			T		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
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- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[HYDROLOGY]	[WC (SS)] [WC (NVC)]	[WC (NVC)]		AGRI (CROP)	[WC (NVC)]	[WETLAND]	
	CONSTRUCTION WORK WINDOW		[AQ-OPEN]	[AQ-AUG 7 TO AUG 15]	[AQ-OPEN]		UNST TR WIND ER	WINDWATER ER	
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20			10	15	15-20	15
	SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1						
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]		SO-NOTE 3	[AQ-NOTE 3] [AQ-NOTE 2]	
	WETLANDS							[WI-NOTE 1]	
	FOREST TYPE (m ³ /ha)								
	VEGETATION								
	WILDLIFE AND FISH HABITAT								
	HERITAGE / TRADITIONAL LAND USE								
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						AG-NOTE 1			
SPECIAL MEASURES		[HY-NOTE 2]							

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 152 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

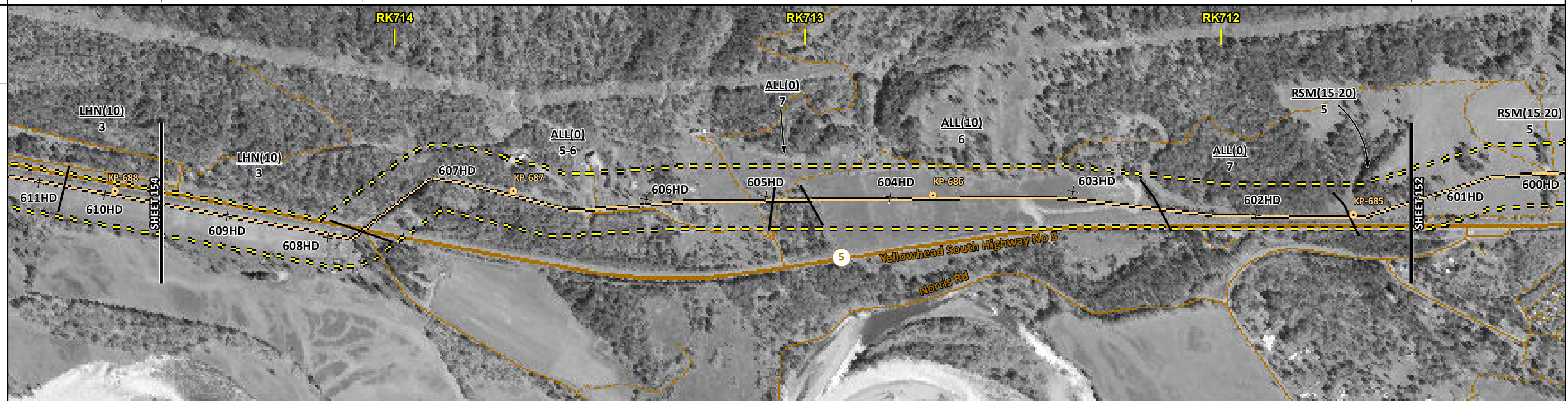
FROM RK 708.5 TO RK 711.5

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT									
	LAND OWNERSHIP / DISPOSITION	PRIVATE	[MIXED]	PRIVATE							
	LAND USE	HAY	[TR0342T001]	TREED	TAME PASTURE	TREED	TAME PASTURE	HAY	TREED	P	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	FORAGE									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS										
	FISH HABITAT SENSITIVITY										
	HYDROLOGY		[SHALLOW WELL]	[DRAINAGE]			[DRAINAGE]				
SOILS PARENT MATERIAL	GL		T								

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	AGRI (CROP)	[HYDROLOGY]	[WC (NVC)]	[WC (NVC)]
	WIND ER		WIND/WATER ER	

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm) 10	15-20
PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1	
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]
PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION		
WILDLIFE AND FISH HABITAT		
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AG-NOTE 1	
SPECIAL MEASURES	[HY-NOTE 2]	

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
byKKL1(10)
- Topographic Class
6

REFERENCES

Projection: NAD_1983_UTM_Zone_11N
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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 153 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
DISCIPLINE EAS	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 711.5 TO RK 714.6

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT				IN THOMPSON RIVER PP [THOMPSON-NICOLA] IN THOMPSON RIVER PP		THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	CROWN	[MIXED] PRIVATE	MIXED PROT	PRIVATE	MIXED PROT		PRIVATE	
	LAND USE	TR0339T001		TR0339T001		TR0339T001	TR0340T006		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION								
	WETLANDS								
	FISH HABITAT SENSITIVITY	HIGH							
	HYDROLOGY	[CLEARWATER RIVER]							
SOILS PARENT MATERIAL	GF								



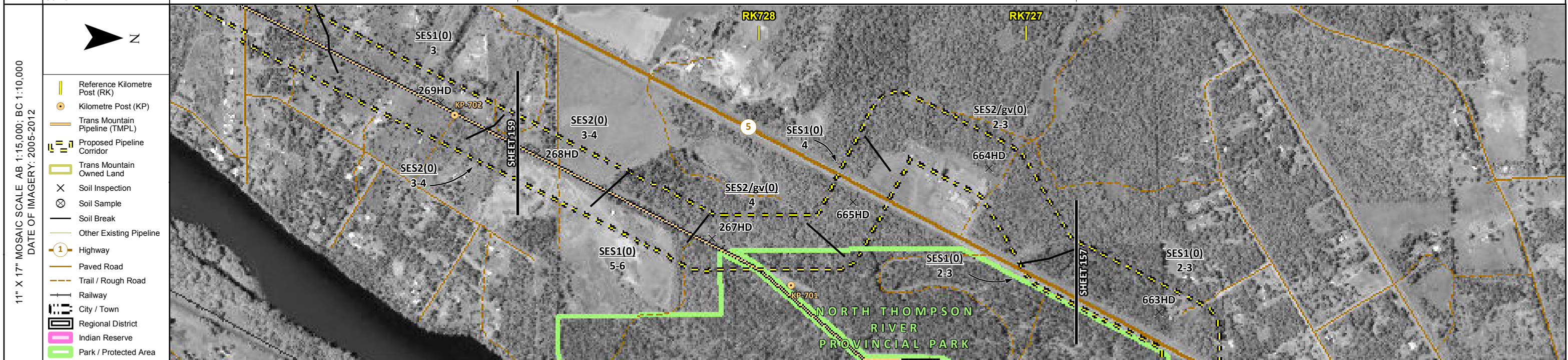
POTENTIAL ENVIRONMENTAL ISSUES	WIND ER	UNST TR	WIND/WATER ER	FISH WC (S1A)	UNST TR
				NAV WATERS	WIND ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-AUG 7 TO AUG 15]	
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20
	SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
	SOILS		SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	AQ-NOTE 3
	WATERCOURSE CROSSINGS		AQ-NOTE 2
	WETLANDS		
	FOREST TYPE (m ³ /ha)		
	VEGETATION		
	WILDLIFE AND FISH HABITAT		AQ-NOTE 1
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES		AQ-NOTE 4	

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 157 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 723.8 TO RK 726.8 				
			NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.	DATE	TERA REF.	REVISION
			0	Dec 16, 2013	Issued for NEB filing	CMR	DN		TW/GB	December 2013	7894	0
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	PROT	PRIVATE
	LAND USE	TREED	TAME PASTURE	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY				
	SOILS PARENT MATERIAL		GF		



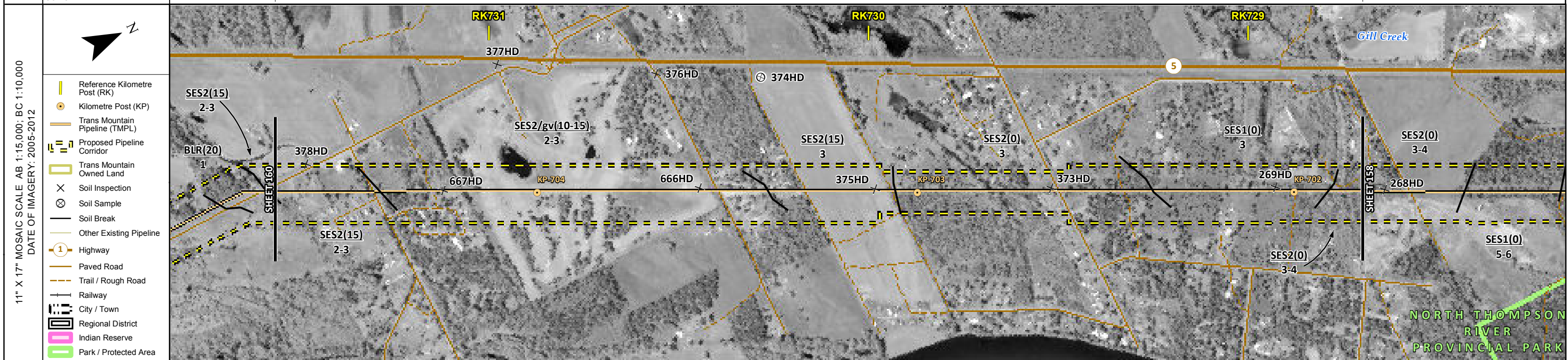
POTENTIAL ENVIRONMENTAL ISSUES			LOW QUALITY SUBSOILS UNSTR		LOW QUALITY SUBSOILS	
	WIND ER	WIND/WATER ER		WIND ER		

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW							
	SOILS HANDLING	STRIPPING DEPTH (cm)	10	15-20	25	15-20	25	15-20
		PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE		OVERSTRIP	FULL ROW	OVERSTRIP	FULL ROW; REDUCE AS APPROPRIATE
	SOILS		SO-NOTE 1 SO-NOTE 3					
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE						
	WETLANDS							
	FOREST TYPE (m ³ /ha)							
	VEGETATION							
	WILDLIFE AND FISH HABITAT							
	HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
SPECIAL MEASURES								

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 158 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 726.8 TO RK 728.7 				
			NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.	DATE	TERA REF.	REVISION
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT					
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	PRIVATE			
	LAND USE	TR0339T001	TREED	RECREATIONAL	TREED	HAY	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	FORAGE					
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND					
	VEGETATION						
	WETLANDS						
	FISH HABITAT SENSITIVITY	[GILL CREEK]					
	HYDROLOGY	GF					



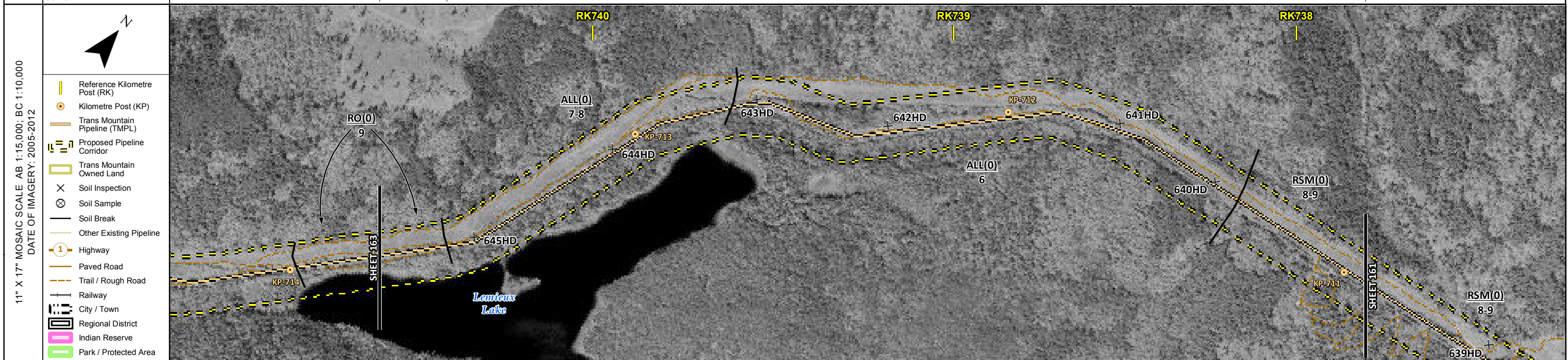
POTENTIAL ENVIRONMENTAL ISSUES	LOW QUALITY SUBSOILS	[WC (NCD-W)]
	WF FEATURE	UNST TR WIND ER
		[AQ-OPEN]

CONSTRUCTION WORK WINDOW	WF-NOTE 4	15-20	25	15	15-20	10
SOILS HANDLING PROCEDURE	[FULL ROW; REDUCE AS APPROPRIATE]	OVERSTRIP			FULL ROW; REDUCE AS APPROPRIATE	
SOILS				SO-NOTE 1 SO-NOTE 3		
WATERCOURSE CROSSINGS						[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS						
FOREST TYPE (m ³ /ha)						
VEGETATION						
WILDLIFE AND FISH HABITAT	WF-NOTE 1					
HERITAGE / TRADITIONAL LAND USE						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				AG-NOTE 1		
SPECIAL MEASURES						

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 159 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT																													
			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	<table border="1"> <thead> <tr> <th>DATE</th> <th>TERA REF.</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td>December 2013</td> <td>7894</td> <td>0</td> </tr> </tbody> </table>	DATE	TERA REF.	REVISION	December 2013	7894	0	<table border="1"> <thead> <tr> <th>SCALE</th> <th>PAGE SIZE</th> <th>DISCIPLINE</th> </tr> </thead> <tbody> <tr> <td>1:10,000</td> <td>11x17</td> <td>EAS</td> </tr> </tbody> </table>	SCALE	PAGE SIZE	DISCIPLINE	1:10,000	11x17	EAS	<table border="1"> <thead> <tr> <th>CHECKED</th> <th>DESIGN</th> </tr> </thead> <tbody> <tr> <td>DN</td> <td>TGG</td> </tr> </tbody> </table>	CHECKED	DESIGN	DN	TGG	FROM RK 728.7	TO RK 731.6	
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	CROWN		
	LAND USE	TR0339T002	TREED	TR0339T001
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND		
	VEGETATION	[BOTRSIM]		
	WETLANDS	[SE MARSH]		
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL				



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WETLAND] WF FEATURE	[WC (NVC)]	[WC (NVC)]
	WATER ER		WIND/WATER ER	

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	WF-NOTE 4	15-20	FULL ROW; REDUCE AS APPROPRIATE
SOILS	SO-NOTE 1		
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS	[WT-NOTE 1]		
FOREST TYPE (m ³ /ha)			
VEGETATION	[VG-NOTE 1]		
WILDLIFE AND FISH HABITAT	WF-NOTE 1		
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 162 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DESIGN	TGG	DISCIPLINE	EAS
REVISION	0	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANSMOUNTAIN EXPANSION PROJECT

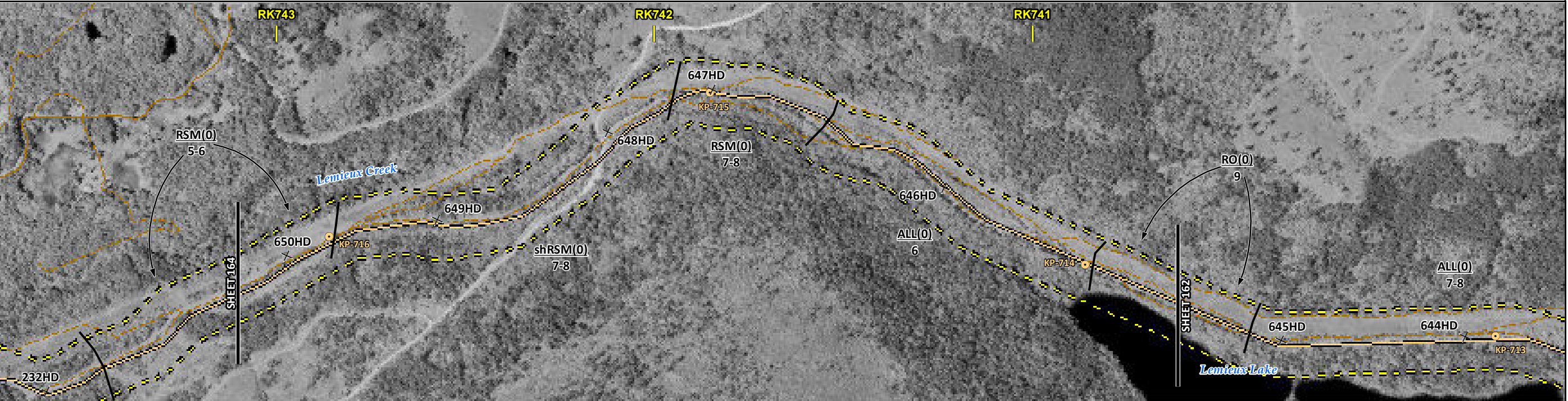
FROM RK 737.8 TO RK 740.6

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION		CROWN	
	LAND USE	TR0339T001	TREED	TR0339T002
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION		[CARETEN]	
	WETLANDS		[MXDTR SWAMP]	
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL		T/R		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[WETLAND]	[WC (NVC)]
			WIND/WATER ER		WATER ER

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm) 15-20 PROCEDURE FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1			
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS			[WT-NOTE 1]	
FOREST TYPE (m ³ /ha)				
VEGETATION			[VG-NOTE 1]	
WILDLIFE AND FISH HABITAT				
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES				

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

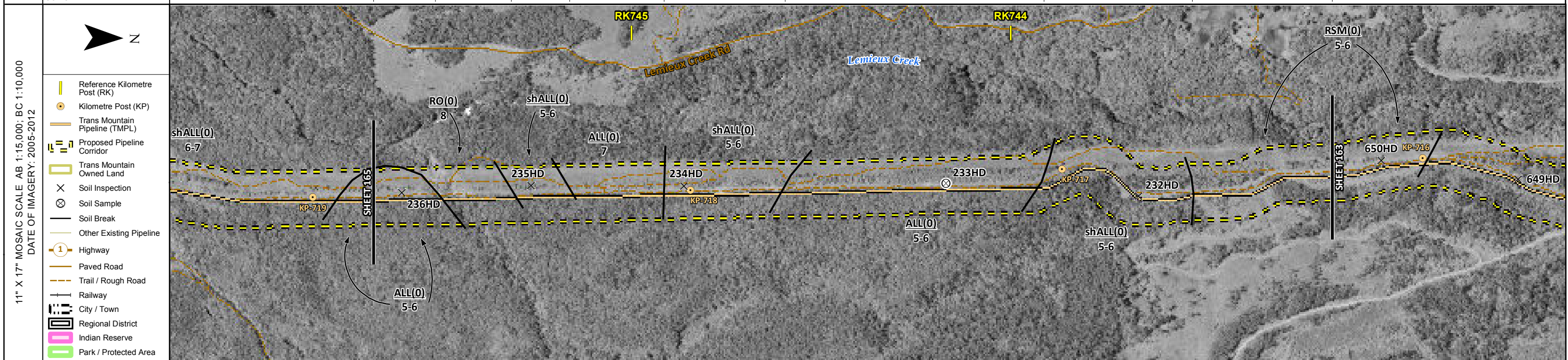
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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 163 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 740.6 TO RK 743.1

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PRIVATE	THOMPSON-NICOLA REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION		CROWN
	LAND USE		TR0339T001 TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		
	VEGETATION		
	WETLANDS	[SE MARSH]	
	FISH HABITAT SENSITIVITY		
	HYDROLOGY	[DRAINAGE]	
SOILS PARENT MATERIAL	T	T/R	T



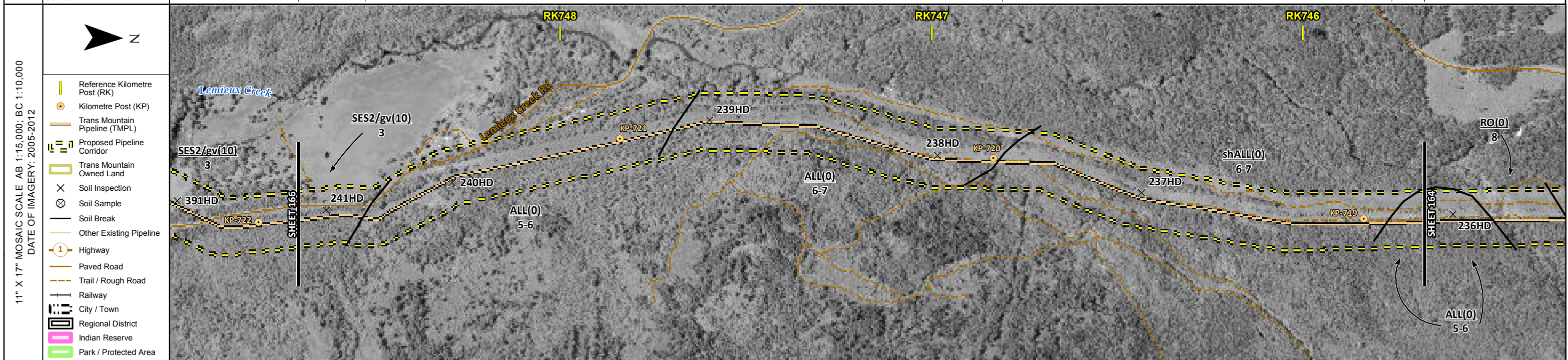
POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)] [WETLAND]
	WIND/WATER ER WATER ER WIND/WATER ER

CONSTRUCTION WORK WINDOW	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm) 15-20 PROCEDURE FULL ROW, REDUCE AS APPROPRIATE SO-NOTE 1
WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 2] [WI-NOTE 1]
PIPELINE VEHICLE	
WETLANDS	
FOREST TYPE (m ³ /ha)	
VEGETATION	
WILDLIFE AND FISH HABITAT	
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO DATE December 2013 SCALE 1:10,000 DRAWN CMR	PAGE SHEET 164 OF 301 REVISION 0 DISCIPLINE EAS DESIGN TGG	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 743.1 TO RK 745.7
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.												
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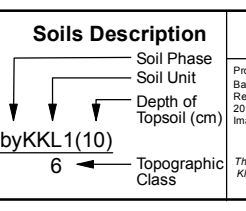
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION				THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION		PRIVATE	MIXED		PRIVATE
	LAND USE		TAME PASTURE		TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AGRICULTURAL LAND RESERVE			
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT					
	VEGETATION					
	WETLANDS					
	FISH HABITAT SENSITIVITY					
	HYDROLOGY					
SOILS PARENT MATERIAL		GF	T		T/R	T



POTENTIAL ENVIRONMENTAL ISSUES	[LOW QUALITY SUBSOILS]	UNST TR WIND ER	WIND/WATER ER
--------------------------------	------------------------	--------------------	---------------

CONSTRUCTION WORK WINDOW			
SOILS	STRIPPING DEPTH (cm)	25	15-20
HANDLING	PROCEDURE	OVERSTRIP	FULL ROW; REDUCE AS APPROPRIATE
SOILS		SO-NOTE 3	SO-NOTE 1
WATERCOURSE CROSSINGS	PIPELINE VEHICLE		
WETLANDS			
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT			
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			



REFERENCES

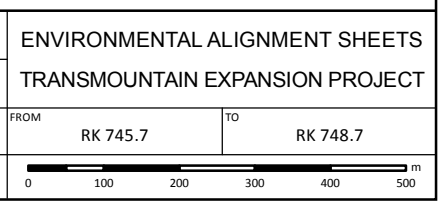
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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 165 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
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SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

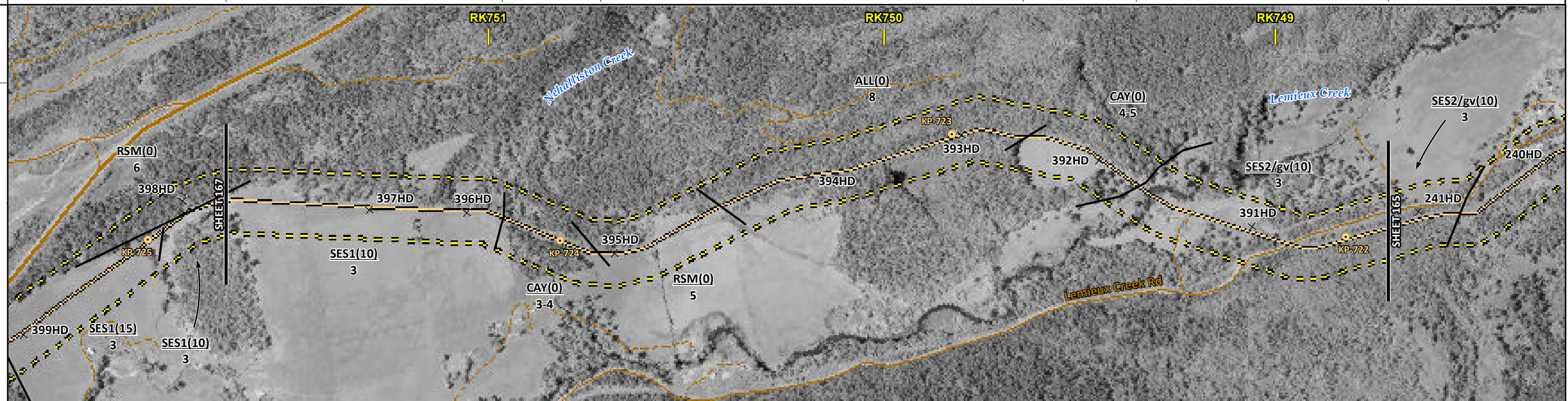


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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT							
	LAND OWNERSHIP / DISPOSITION	PRIVATE							
	LAND USE	TAME PASTURE	HAY	TREED	TAME PASTURE	TREED	TAME PASTURE	TAME PASTURE	TAME PASTURE
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	FORAGE			AGRICULTURAL LAND RESERVE			FORAGE	
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION	[THUJ/BETU/GYM]							
	WETLANDS	[SHRUBBY SWAMP]		SE MARSH		MXDTR SWAMP	[OPEN POND]	[SHRUBBY SWAMP]	
	FISH HABITAT SENSITIVITY	[HIGH]						[HIGH]	
	HYDROLOGY	[NEHALLISTON CREEK]						[LEMIEUX CREEK]	
SOILS PARENT MATERIAL	GF		C		T		C		GF

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	AGRI (CROP)	[FISH]	[WC (S2)]	WETLANDS	[NAV WATERS]	[RARE COMMUNITY]	AGRI (CROP)	[FISH]	[WC (S1B)]	LOW QUALITY SUBSOILS
	CONSTRUCTION WORK WINDOW			[AQ-JUL 22 TO AUG 15]						[AQ-JUL 22 TO AUG 15]		
	SOILS HANDLING	STRIPPING DEPTH (cm)	10	15-20	10	15-20				25		
	SOILS	PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE						OVERSTRIP		
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE										
	WETLANDS		[WT-NOTE 1]							[AQ-NOTE 3]	[AQ-NOTE 2]	
	FOREST TYPE (m ³ /ha)											
	VEGETATION									[WT-NOTE 2]		
	WILDLIFE AND FISH HABITAT											[AQ-NOTE 1]
	HERITAGE / TRADITIONAL LAND USE											
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			AG-NOTE 1							AG-NOTE 1		
SPECIAL MEASURES				[AQ-NOTE 4]						[AQ-NOTE 4]		

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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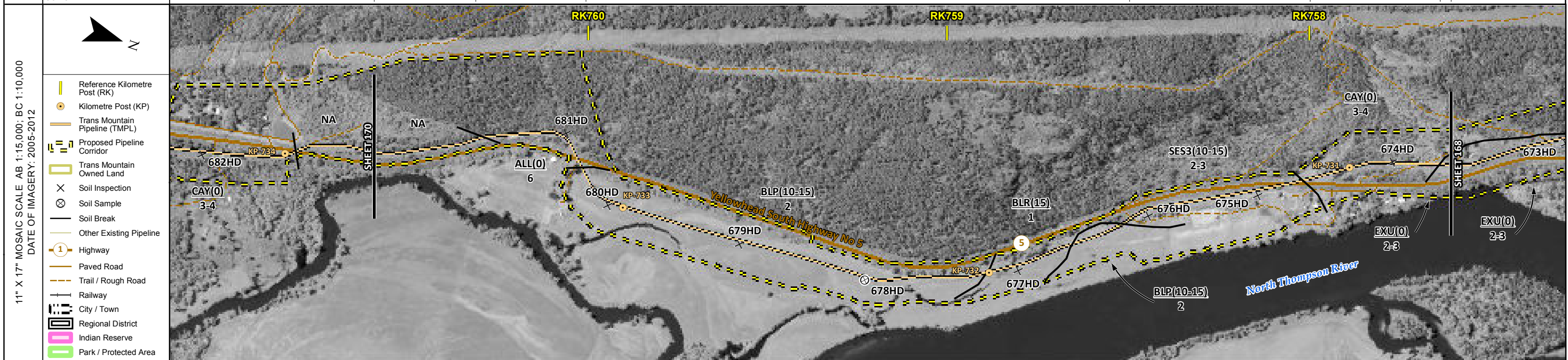
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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 166 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 748.7 TO RK 751.6

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT											
	LAND OWNERSHIP / DISPOSITION	MIXED	CROWN	MIXED	PRIVATE	MIXED	PRIVATE	MIXED	PRIVATE				
	LAND USE	TREED	TR0328T001	TAME PASTURE	TR0328T001	HAY	TR0328T001	TREED					
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			FORAGE			AGRICULTURAL LAND RESERVE						
	HERITAGE / TRADITIONAL LAND USE												
	WILDLIFE / WILDLIFE HABITAT				AMPH-POND								
	VEGETATION												
	WETLANDS												
	FISH HABITAT SENSITIVITY											[HIGH]	
	HYDROLOGY		[DRAINAGE]									[MONTIGNEY CREEK]	
SOILS PARENT MATERIAL	NA	T	F	GF	C	[GL]							

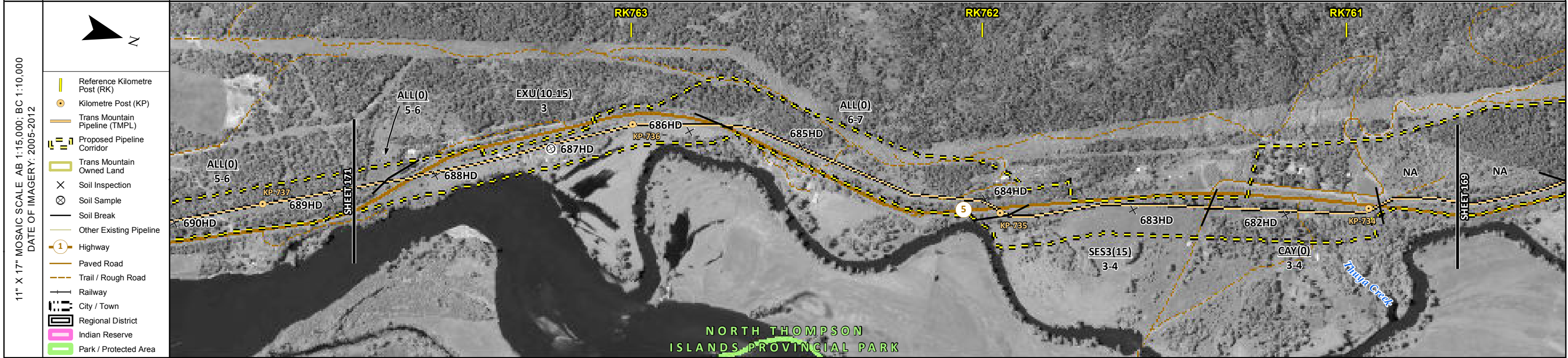


POTENTIAL ENVIRONMENTAL ISSUES	AGRI (CROP)	[WC (NCD)]	[FISH] [WC (S3)]
	WIND/WATER ER	UNST TR	WF FEATURE
		COMP RUT WIND ER	UNST TR
			[AQ-JUL 22 TO OCT 31]

CONSTRUCTION WORK WINDOW	[AQ-OPEN]								
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	10-15	15	10-15	15-20			
SOILS	PROCEDURE		FULL ROW, REDUCE AS APPROPRIATE						
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]				
WETLANDS									
FOREST TYPE (m ³ /ha)									
VEGETATION									
WILDLIFE AND FISH HABITAT									
HERITAGE / TRADITIONAL LAND USE									
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			AG-NOTE 1						
SPECIAL MEASURES									

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 169 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT									
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		SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS													
		DRAWN CMR	CHECKED DN	DESIGN TGG													

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT							
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	PRIVATE	MIXED	PRIVATE	MIXED	PRIVATE	MIXED
	LAND USE	TREED	HAY	TAME PASTURE	TREED	HAY	TREED	TREED	TR0328T001
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE							
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION								
	WETLANDS								
	FISH HABITAT SENSITIVITY	[HIGH]							
	HYDROLOGY	[DRAINAGE]	[BRYAN CREEK]						[THUYA CREEK]
SOILS PARENT MATERIAL	T	GL	T	GF	C	NA			



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WC (NCD)]	[FISH] [WC (S2)]	[NAV WATERS]	
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-JUL 22 TO OCT 31]		
	SOILS HANDLING	STRIPPING DEPTH (cm) 15-20	10-15	15-20	15	15-20
	SOILS	FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1				
	WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	
	PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	
	WETLANDS					
	FOREST TYPE (m ³ /ha)					
	VEGETATION					
	WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]				
HERITAGE / TRADITIONAL LAND USE						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						
SPECIAL MEASURES	[AQ-NOTE 4]					

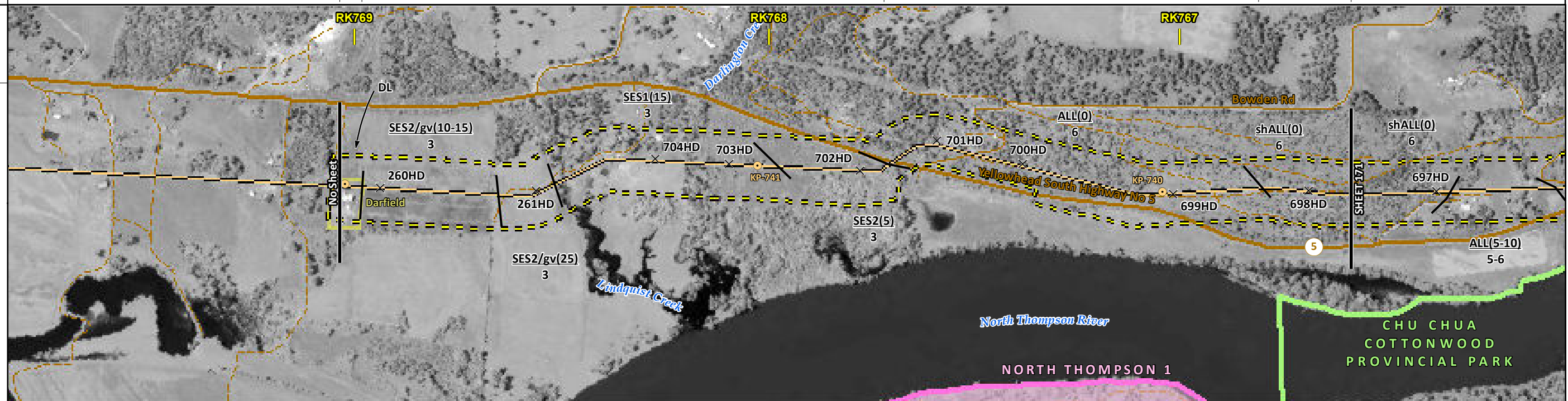
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			NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.	DATE	TERA REF.	REVISION
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			SCALE	1:10,000	PAGE SIZE	11x17	DISCIPLINE	EAS	DESIGN	TGG		

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT					
	LAND OWNERSHIP / DISPOSITION	PRIVATE					
	LAND USE	DL	CULTIVATED	HAY	TAME PASTURE	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE					
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT						
	VEGETATION	[ANEMVIR]					
	WETLANDS						
	FISH HABITAT SENSITIVITY	[HIGH]		[HIGH]			
	HYDROLOGY	[LINDQUIST CREEK]		[DARLINGTON CREEK]		[CHANNEL]	
SOILS PARENT MATERIAL	GF		T		T/R		

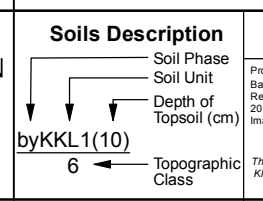
11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	LOW QUALITY SUBSOILS	[AGRI (LIVESTOCK)] [FISH] [WC (S2)]	[RARE PLANTS] [FISH] [WC (S2)]	[WC (S6/S3)]	WIND/WATER ER
CONSTRUCTION WORK WINDOW		[AQ-JUL 22 TO AUG 15]	[AQ-JUL 22 TO AUG 15]	[AQ-JUL 15 TO AUG 15]	

ENVIRONMENTAL PROTECTION	SOILS STRIPPING DEPTH (cm)	-	(10-15) [15]	(25) [15]	15-20
	SOILS HANDLING PROCEDURE	-	3-LIFT		FULL ROW; REDUCE AS APPROPRIATE
	SOILS		SO-NOTE 3		SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS				
	FOREST TYPE (m ² /ha)				
	VEGETATION			[VG-NOTE 1]	
	WILDLIFE AND FISH HABITAT		[AQ-NOTE 1]	[AQ-NOTE 1]	
	HERITAGE / TRADITIONAL LAND USE				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		[AG-NOTE 2]	[AG-NOTE 1]	
SPECIAL MEASURES		[AQ-NOTE 4]	[AQ-NOTE 4]		



REFERENCES

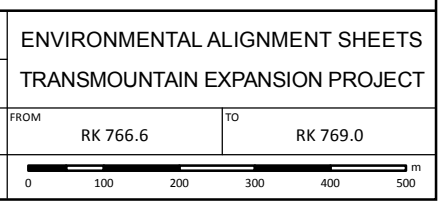
Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 172 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG



ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT							
	LAND OWNERSHIP / DISPOSITION	PRIVATE				MIXED		PRIVATE	
	LAND USE	TAME PASTURE	DL	HAY	DL	TAME PASTURE	NA	TAME PASTURE	DISTURBED LAND
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE				FORAGE			
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION								
	WETLANDS	SE MARSH							
	FISH HABITAT SENSITIVITY								
	HYDROLOGY	DRAINAGE							
SOILS PARENT MATERIAL	Cf	-	Cf	-	Cf	F	NA	Cf	-

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WC (NVC)	AGRI (CROP)	WETLAND
	WIND ER	WIND/WATER ER	WIND/WATER ER

CONSTRUCTION WORK WINDOW	QA-OPT
SOILS STRIPPING DEPTH (cm)	10
HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
SOILS	SO-NOTE 1
WATERCOURSE CROSSINGS	PIPELINE: AQ-NOTE 3 VEHICLE: AQ-NOTE 2
WETLANDS	WT-NOTE 1
FOREST TYPE (m ³ /ha)	
VEGETATION	
WILDLIFE AND FISH HABITAT	
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AG-NOTE 1
SPECIAL MEASURES	

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

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SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

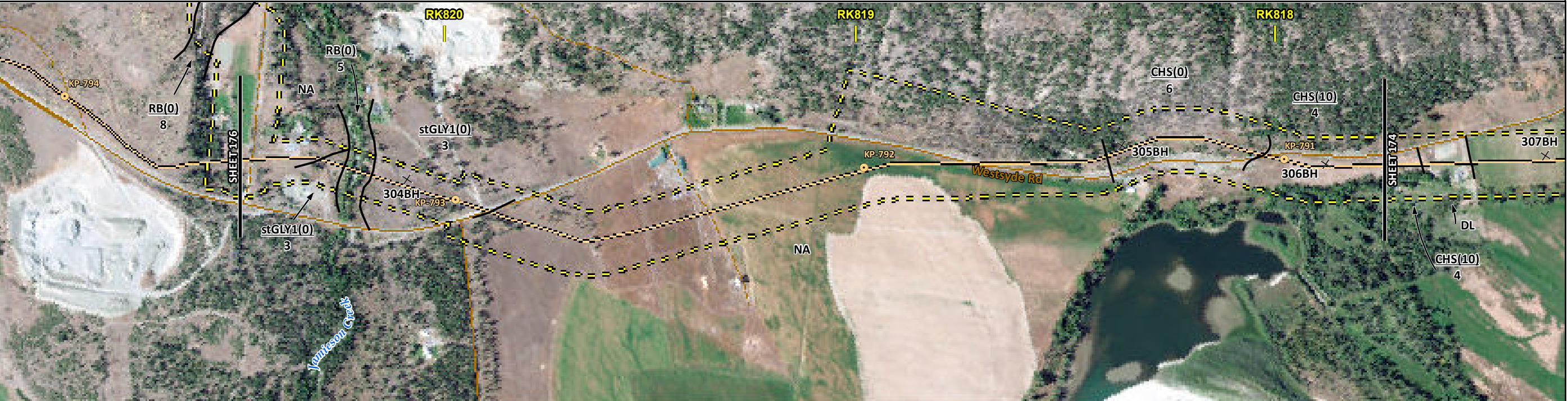
FROM RK 814.8 TO RK 817.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT							
	LAND OWNERSHIP / DISPOSITION	MIXED	CROWN	MIXED	PRIVATE	MIXED ENV C&R TR0329T002	PRIVATE		
	LAND USE	NA	P	TREED	TAME PASTURE	NA	TREED	TAME PASTURE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				AGRICULTURAL LAND RESERVE BEEF	FORAGE		AGRICULTURAL LAND RESERVE	
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION								
	WETLANDS				[SE MARSH]				
	FISH HABITAT SENSITIVITY								
	HYDROLOGY						[DRAINAGE]	[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL	NA	GF	-	GF	NA			Cf	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES			AGRI (LIVESTOCK)		AGRI (CROP)		[WC (NVC)]	[WC (NVC)]	[WC (NVC)]	[WC (NVC)]
		[WATER ER]	[UNST TR]		[WETLAND]					
		[WIND ER]	UNST TR WIND ER							
								WIND/WATER ER		WIND ER

CONSTRUCTION WORK WINDOW							[AQ-OPEN]		[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm)	NA	10	15-20	10	NA		15-20		10	
SOILS	PROCEDURE				SO-NOTE 1	FULL ROW; REDUCE AS APPROPRIATE				SO-NOTE 1	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE		[SO-NOTE 3]		SO-NOTE 3		[AQ-NOTE 3]		[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
							[AQ-NOTE 2]		[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS							[WT-NOTE 1]				
FOREST TYPE (m ² /ha)											
VEGETATION											
WILDLIFE AND FISH HABITAT											
HERITAGE / TRADITIONAL LAND USE											
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					AG-NOTE 2	AG-NOTE 1					
SPECIAL MEASURES											

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 175 OF 301
DATE	December 2013	REVISION	0
SCALE	1:10,000	DISCIPLINE	EAS
DRAWN	CMR	DESIGN	TGG

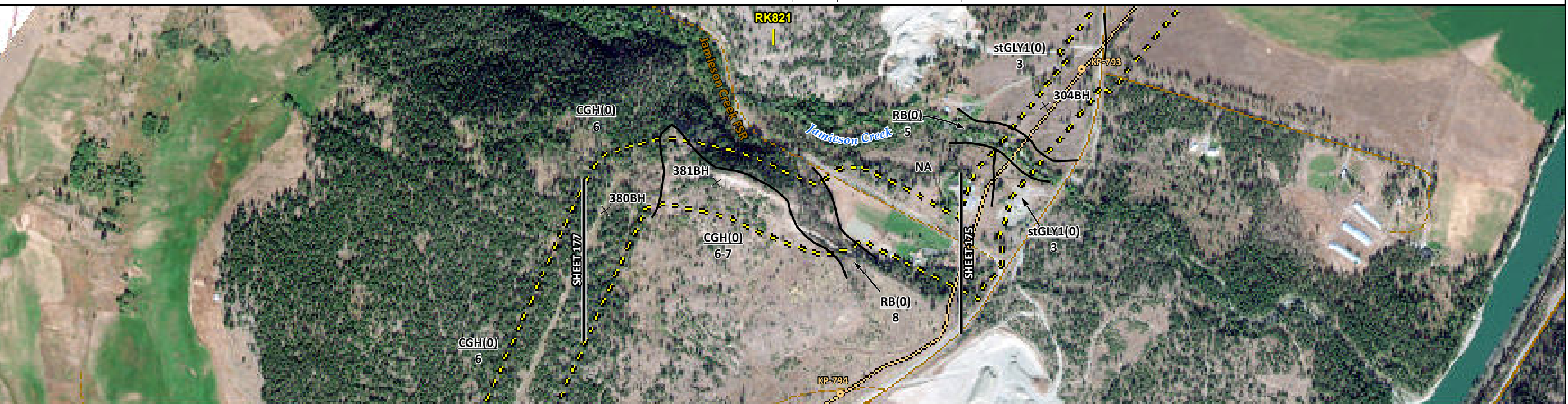
ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 817.7 TO RK 820.5

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	MIXED ENV C&R TR0329T002	PRIVATE	MIXED TR0329T002	PRIVATE [MIXED] TR0329T002
	LAND USE	TREED	NATIVE GRASSLAND	TREED	NA
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE ALR			
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY				
	HYDROLOGY				
SOILS PARENT MATERIAL	C - NA				

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	UNST TR WIND/WATER ER	WATER ER
--------------------------------	-----------------------	----------

CONSTRUCTION WORK WINDOW	
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	15-20 10 15-20 NA
	FULL ROW; REDUCE AS APPROPRIATE BLADE WIDTH FULL ROW; REDUCE AS APPROPRIATE
SOILS	SO-NOTE 1 SO-NOTE 3
WATERCOURSE CROSSINGS	PIPELINE VEHICLE
WETLANDS	
FOREST TYPE (m ³ /ha)	
VEGETATION	
WILDLIFE AND FISH HABITAT	
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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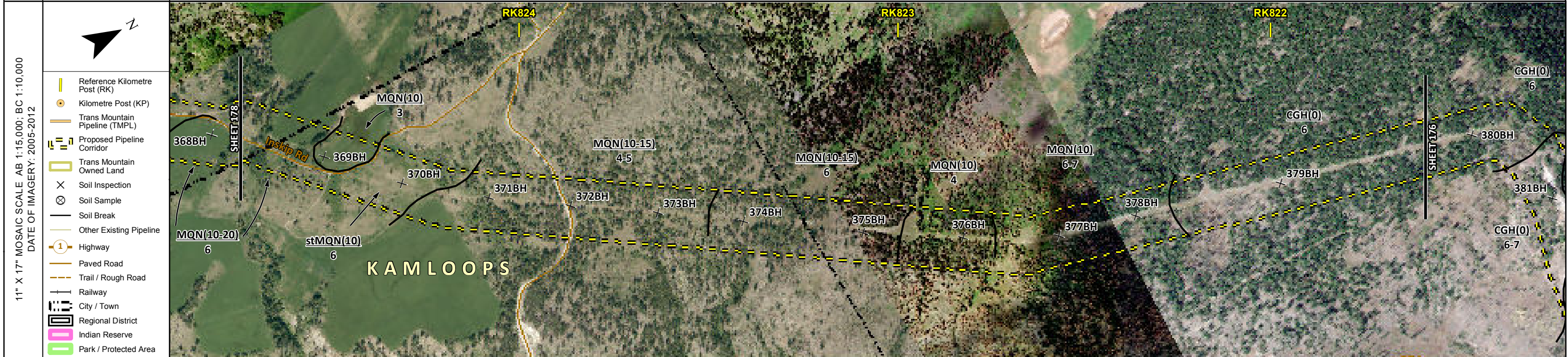
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 176 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 820.5 TO RK 821.6

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		CITY OF KAMLOOPS		THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	CROWN	MIXED	CROWN	MIXED
	LAND USE	[HAY]	TREED	HAY	TAME PASTURE	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	[FORAGE]	AGRICULTURAL LAND RESERVE				
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT	MINERAL LICK					
	VEGETATION						
	WETLANDS	[SE MARSH]					
	FISH HABITAT SENSITIVITY						
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[CHANNEL]			
SOILS PARENT MATERIAL	T	stT	T	C			



POTENTIAL ENVIRONMENTAL ISSUES	[AGR (CROP)]	[WC (NCD)] [WETLAND]	[WC (NVC)]	[WC (S6)]	WF FEATURE UNST TR
	WIND/WATER ER	WIND ER	WIND/WATER ER	WIND ER	WIND/WATER ER
CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]		WF-NOTE 4
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	10	15-20	
SOILS		FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1			SO-NOTE 3
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2] [WT-NOTE 1]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	
WETLANDS					
FOREST TYPE (m ³ /ha)					
VEGETATION					
WILDLIFE AND FISH HABITAT					WF-NOTE 3
HERITAGE / TRADITIONAL LAND USE					
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	[AG-NOTE 1]				
SPECIAL MEASURES					

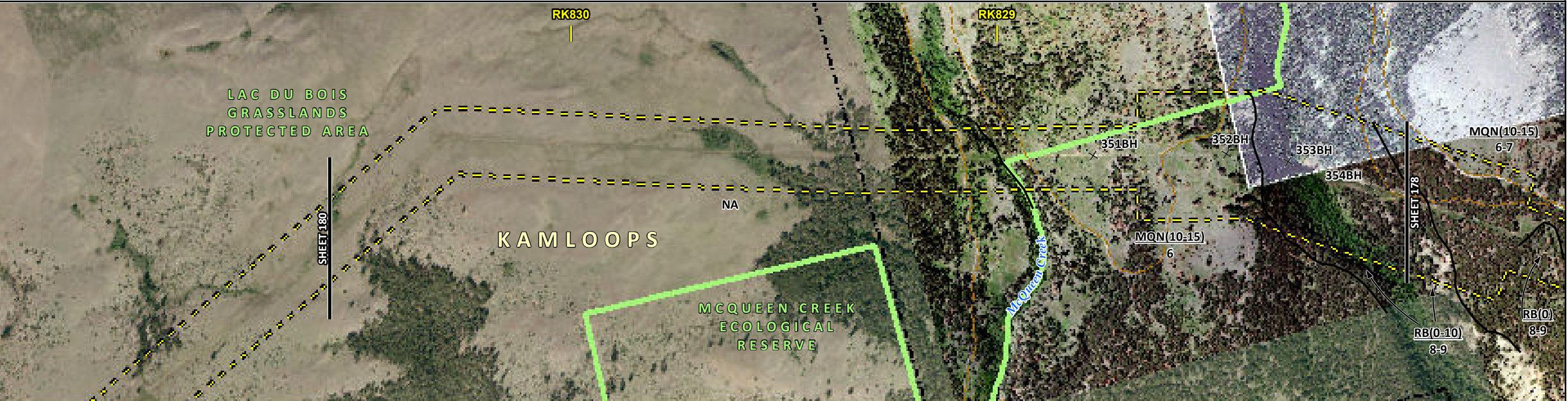
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 177 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT									
			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY		CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	DATE December 2013
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	LAC DU BOIS GRASSLANDS PROTECTED AREA; KAMLOOPS	[LAC DU BOIS GRASSLANDS PROTECTED AREA]	THOMPSON-NICOLA REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION		PROT CROWN	ENV C&R; PROT ENV C&R
	LAND USE		NA TR0329T002	NATIVE GRASSLAND TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AGRICULTURAL LAND RESERVE	AGRICULTURAL LAND RESERVE
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS		[SHRUBBY SWAMP]	
	FISH HABITAT SENSITIVITY			
	HYDROLOGY			
SOILS PARENT MATERIAL		NA		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
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POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]			
			WIND/WATER ER	WATER ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW			
	SOILS HANDLING	STRIPPING DEPTH (cm)	NA	10-15 15-20
		PROCEDURE		BLADE WIDTH FULL ROW; REDUCE AS APPROPRIATE
	SOILS			SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE		
			[WT-NOTE 1]	
	WETLANDS			
	FOREST TYPE (m ³ /ha)			
	VEGETATION			
	WILDLIFE AND FISH HABITAT			
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES				

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

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REVISION HISTORY

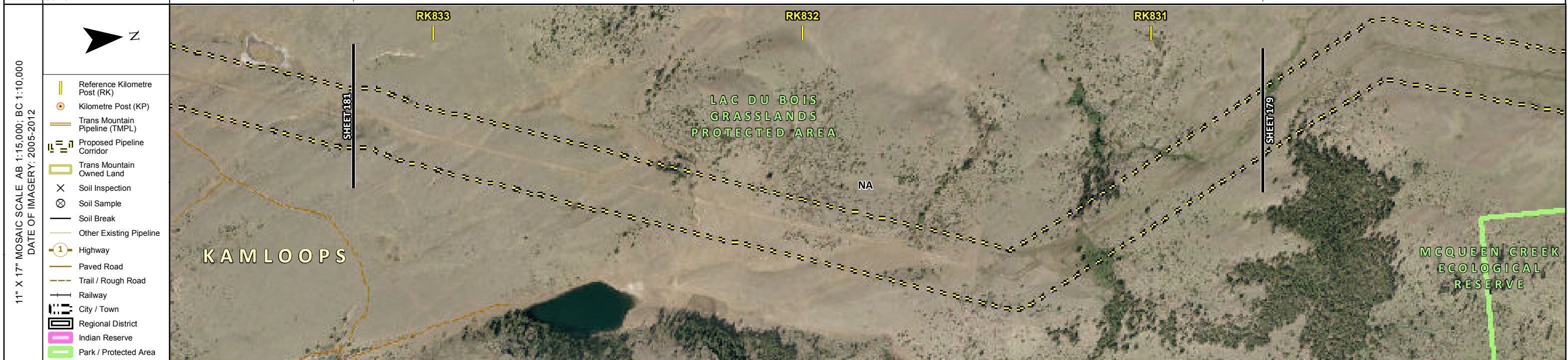
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 179 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 828.0 TO RK 830.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	LAC DU BOIS GRASSLANDS PROTECTED AREA; KAMLOOPS	
	LAND OWNERSHIP / DISPOSITION	CROWN PROT TR0329T002	
	LAND USE	NA	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		
	VEGETATION		
	WETLANDS	BLT SWAMP	SHRUBBY SWAMP
	FISH HABITAT SENSITIVITY		
	HYDROLOGY	DRAINAGE	
SOILS PARENT MATERIAL	NA		



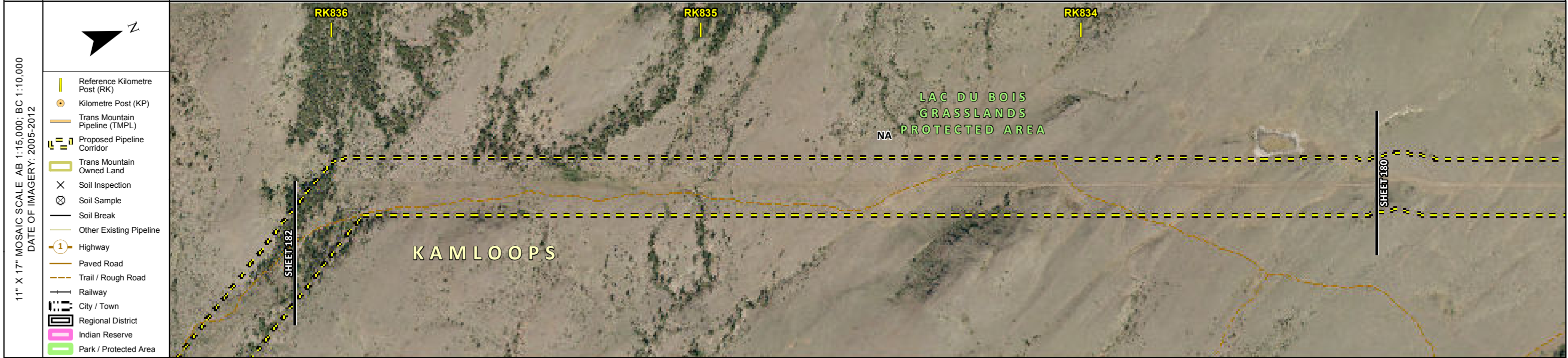
POTENTIAL ENVIRONMENTAL ISSUES	WC (NVC)	WETLAND	WETLAND
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	AQ-OPEN
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	NA BLADE WIDTH
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
	WETLANDS	AQ-NOTE 3 AQ-NOTE 2
	FOREST TYPE (m ³ /ha)	WT-NOTE 1
	VEGETATION	WT-NOTE 1
	WILDLIFE AND FISH HABITAT	
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES		

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	<table border="1"> <tr> <td>MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO</td> <td>PAGE SHEET 180 OF 301</td> </tr> <tr> <td>DATE December 2013</td> <td>TERA REF. 7894</td> </tr> <tr> <td>SCALE 1:10,000</td> <td>PAGE SIZE 11x17</td> </tr> <tr> <td>DRAWN CMR</td> <td>CHECKED DN</td> </tr> </table>	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 180 OF 301	DATE December 2013	TERA REF. 7894	SCALE 1:10,000	PAGE SIZE 11x17	DRAWN CMR	CHECKED DN	<table border="1"> <tr> <td>REVISION 0</td> <td>DISCIPLINE EAS</td> </tr> <tr> <td>DESIGN TGG</td> <td></td> </tr> </table>	REVISION 0	DISCIPLINE EAS	DESIGN TGG		ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 830.7 TO RK 833.2
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.																								
	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB																								
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 180 OF 301																													
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REVISION 0	DISCIPLINE EAS																													
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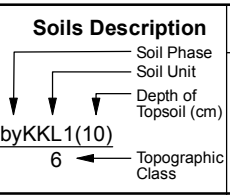
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	LAC DU BOIS GRASSLANDS PROTECTED AREA; KAMLOOPS		
	LAND OWNERSHIP / DISPOSITION	CROWN PROT TR0329T002 NA		
	LAND USE	AGRICULTURAL LAND RESERVE		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS	BLT SWAMP	SE MARSH	ALKALI MARSH
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	DRAINAGE	DRAINAGE	DRAINAGE DRAINAGE DRAINAGE DRAINAGE
SOILS PARENT MATERIAL	NA			



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WC (NVC)]	[WC (NVC)]	[WC (NVC)]	[WC (NVC)]	[WC (NVC)]	[WETLAND]	[WETLAND]
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CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	NA						
SOILS	BLADE WIDTH						
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS	WT-NOTE 1			WT-NOTE 1		WT-NOTE 1	
FOREST TYPE (m ³ /ha)							
VEGETATION							
WILDLIFE AND FISH HABITAT							
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES							



REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 181 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

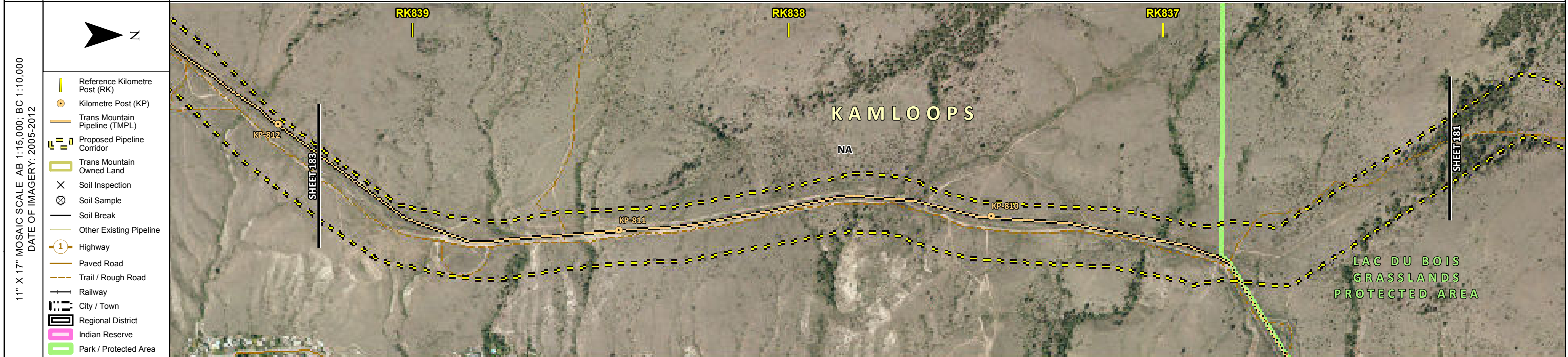
ENVIRONMENTAL ALIGNMENT SHEETS

TRANS MOUNTAIN EXPANSION PROJECT

FROM RK 833.2 TO RK 836.2

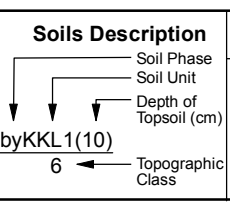
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF KAMLOOPS				CROWN		LAC DU BOIS GRASSLANDS PROTECTED AREA; KAMLOOPS	
	LAND OWNERSHIP / DISPOSITION					TR0329T002		PROT	
	LAND USE					NA			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					AGRICULTURAL LAND RESERVE			
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION								
	WETLANDS								
	FISH HABITAT SENSITIVITY								
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	
SOILS PARENT MATERIAL					NA				



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WC (NGD)]	[WC (NGD)]	[WC (NVC)]	[WC (NCD)]	[WC (NVC)]	[WC (NCD)]	[WC (NCD)]
--------------------------------	------------	------------	------------	------------	------------	------------	------------	------------

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	FULL ROW; REDUCE AS APPROPRIATE						BLADE WIDTH	
SOILS	NA							
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS								
FOREST TYPE (m ³ /ha)								
VEGETATION								
WILDLIFE AND FISH HABITAT								
HERITAGE / TRADITIONAL LAND USE								
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
SPECIAL MEASURES								



REFERENCES	
Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.	
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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 182 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 836.2 TO RK 839.3

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF KAMLOOPS						
	LAND OWNERSHIP / DISPOSITION	ENV C&R	CROWN	MIXED	PRIVATE	MIXED	CITY OF KAMLOOPS	CROWN
	LAND USE	TR0329T002	NA		NATIVE GRASSLAND		TR0329T002	NA
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE						
	HERITAGE / TRADITIONAL LAND USE							
	WILDLIFE / WILDLIFE HABITAT							
	VEGETATION							
	WETLANDS	SE MARSH		SE MARSH				
	FISH HABITAT SENSITIVITY							
	HYDROLOGY	DRAINAGE		DRAINAGE		DRAINAGE		DRAINAGE
SOILS PARENT MATERIAL	NA	T			NA			



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	WETLAND		WC (NVC)	WETLAND	WC (NVC)	WC (NVC) / WC (NCD)
	CONSTRUCTION WORK WINDOW	AQ-OPEN		WIND/WATER ER	AQ-OPEN		
	SOILS STRIPPING DEPTH (cm)	NA		10	NA		
	SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE		BLADE WIDTH	FULL ROW; REDUCE AS APPROPRIATE		
	SOILS			SO-NOTE 1			
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE		AQ-NOTE 3	AQ-NOTE 3	AQ-NOTE 3	AQ-NOTE 3
	WETLANDS	WT-NOTE 1		AQ-NOTE 2	WT-NOTE 1	AQ-NOTE 2	AQ-NOTE 2
	FOREST TYPE (m ³ /ha)						
	VEGETATION						
	WILDLIFE AND FISH HABITAT						
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES							

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 183 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 839.3 TO RK 842.3
			NO. DATE DESCRIPTION BY CHKD. APPR.	DATE December 2013 TERA REF. 7894 REVISION 0	SCALE 1:10,000 PAGE SIZE 11x17 DISCIPLINE EAS	DRAWN CMR CHECKED DN DESIGN TGG	FROM TO	
			0 Dec 16, 2013 Issued for NEB filing CMR DN TW/GB					

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF KAMLOOPS		LAC DU BOIS GRASSLANDS PROTECTED AREA; KAMLOOPS		CITY OF KAMLOOPS	
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	ENV C&R	CROWN	ENV C&R; PROT	ENV C&R
	LAND USE	DISTURBED LAND		TR0329T002 NA			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	[AGRICULTURAL LAND RESERVE]					
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT						
	VEGETATION						
	WETLANDS						[SE MARSH]
	FISH HABITAT SENSITIVITY						
	HYDROLOGY			[DRAINAGE]			[DRAINAGE]
SOILS PARENT MATERIAL						NA	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WETLAND]	[WC (NCD)]	[WC (NVC)]
	[AQ-OPEN]		[AQ-OPEN]	[AQ-OPEN]

CONSTRUCTION WORK WINDOW		[AQ-OPEN]		[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm)		NA	BLADE WIDTH	[FULL ROW, REDUCE AS APPROPRIATE]
SOILS					
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]		[AQ-NOTE 3]	[AQ-NOTE 3]
		[AQ-NOTE 2]		[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS			[WT-NOTE 1]		
FOREST TYPE (m ³ /ha)					
VEGETATION					
WILDLIFE AND FISH HABITAT					
HERITAGE / TRADITIONAL LAND USE					
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES					

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- by KKL1(10)
- 6
- Topographic Class

REFERENCES

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DATE December 2013	TERA REF. 7894	REVISION 0
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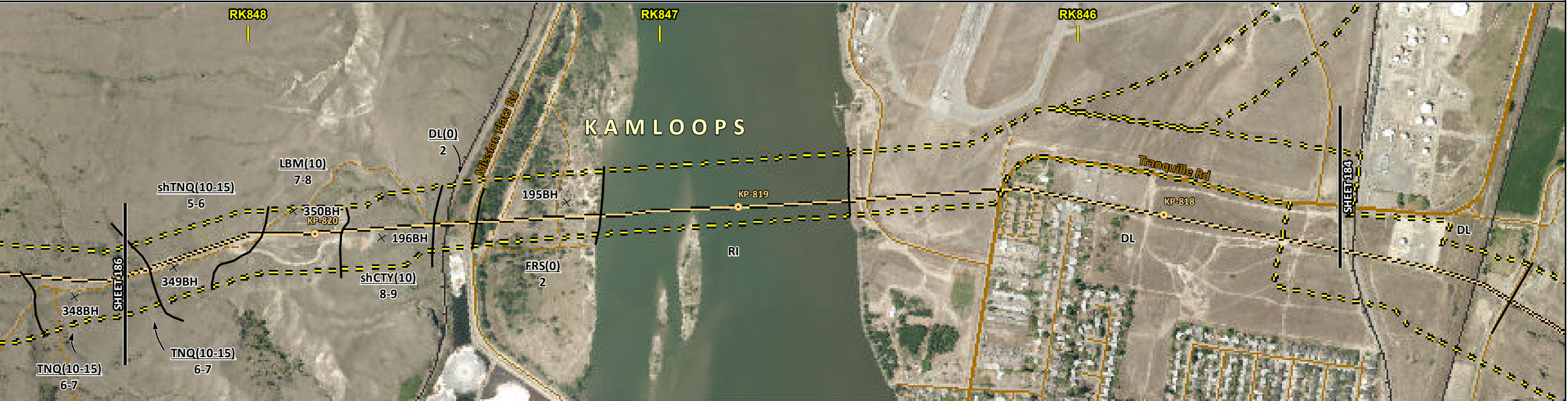
FROM RK 842.3 TO RK 845.4

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF KAMLOOPS					
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	CROWN	PRIVATE		
	LAND USE	NATIVE GRASSLAND	DISTURBED LAND	RIVER	DISTURBED LAND		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	[AGRICULTURAL LAND RESERVE]					
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT						
	VEGETATION	[SALJEXI]	[SALJEXI]	[SALJEXI]			
	WETLANDS	[SE MARSH]					
	FISH HABITAT SENSITIVITY				HIGH		
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	THOMPSON RIVER		
SOILS PARENT MATERIAL	T	T/R	GL	C/R	F	SHALLOW GW	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)] [WETLAND]	[WC (NCD)]	[WC (NCD)]	[RARE COMMUNITY]	FISH WC (S1A) NAV WATERS	
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]		AQ-JUL 22 TO AUG 15	
	SOILS HANDLING	STRIPPING DEPTH (cm) 10-15	10		10		
	SOILS		BLADE WIDTH SO-NOTE 1		[FULL ROW; REDUCE AS APPROPRIATE]	SO-NOTE 1	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]		AQ-NOTE 3 AQ-NOTE 2
	WETLANDS		[WT-NOTE 1]				
	FOREST TYPE (m ³ /ha)						
	VEGETATION				[VG-NOTE 1][VG-NOTE 1]		
	WILDLIFE AND FISH HABITAT					AQ-NOTE 1	
	SPECIAL MEASURES				HY-NOTE 1	AQ-NOTE 4	

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 185 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN

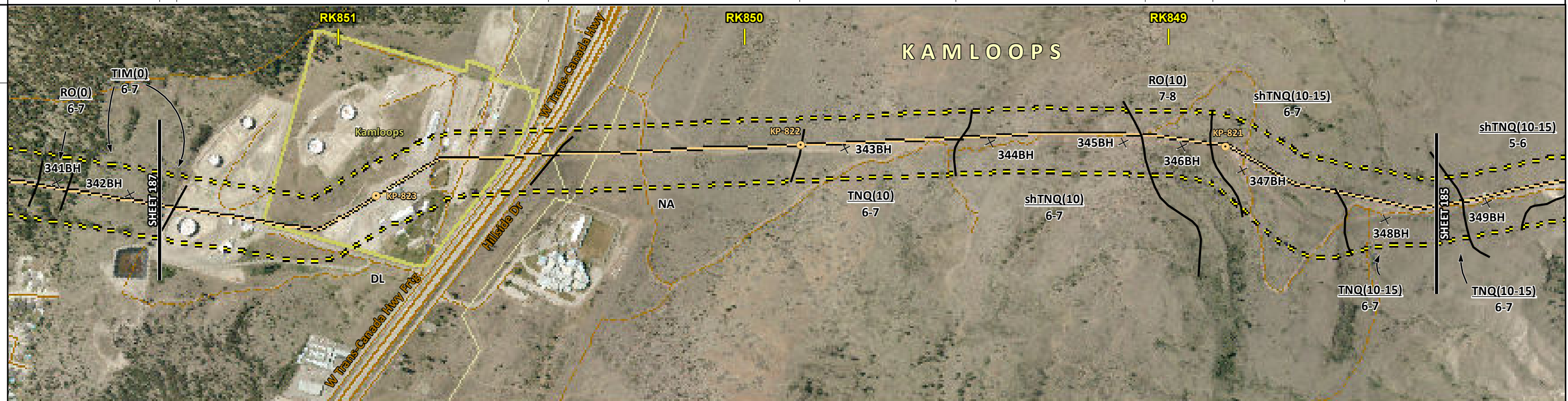
ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 845.4 TO RK 848.3

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PRIVATE	[MIXED]	PRIVATE	CITY OF KAMLOOPS	MIXED	PRIVATE
	LAND OWNERSHIP / DISPOSITION					TR0319T001	
	LAND USE	[TREED]	DISTURBED LAND	NA		NATIVE GRASSLAND	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AGRICULTURAL LAND RESERVE				[AGRICULTURAL LAND RESERVE]
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT		IMPORTANT BIRD AREA				
	VEGETATION						
	WETLANDS						
	FISH HABITAT SENSITIVITY						
	HYDROLOGY			[DRAINAGE]		[DRAINAGE]	
SOILS PARENT MATERIAL			NA		T/R		T/R

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES			[WC (NVC)]		[WC (NVC)]			
	[WIND/WATER ER]				WIND/WATER ER		WATER ER	WIND/WATER ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW		[AQ-OPEN]		[AQ-OPEN]			
	SOILS HANDLING	STRIPPING DEPTH (cm)	[15-20]	NA	10		10-15	
		PROCEDURE	[FULL ROW; REDUCE AS APPROPRIATE]	FULL ROW; REDUCE AS APPROPRIATE		BLADE WIDTH		SO-NOTE 1
		SOILS	[SO-NOTE 1]					
		WATERCOURSE CROSSINGS		[AQ-NOTE 3]		[AQ-NOTE 3]		
		PIPELINE VEHICLE		[AQ-NOTE 2]		[AQ-NOTE 2]		
		WETLANDS						
		FOREST TYPE (m ³ /ha)						
		VEGETATION						
		WILDLIFE AND FISH HABITAT		WF-NOTE 5				

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 186 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
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REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 848.3 TO RK 851.4

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PRIVATE	CITY OF KAMLOOPS	CROWN	MIXED	PRIVATE
	LAND OWNERSHIP / DISPOSITION					
	LAND USE	NATIVE GRASSLAND		TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE				
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT	IMPORTANT BIRD AREA				
	VEGETATION					
	WETLANDS					
	FISH HABITAT SENSITIVITY					
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]		
SOILS PARENT MATERIAL						



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WC (NVC)]	[WC (NVC)]				[WATER ER]	WIND/WATER ER	[WATER ER]	WIND/WATER ER
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]					
	SOILS HANDLING	STRIPPING DEPTH (cm)	10-15	25	10-15		15-20		
		PROCEDURE			BLADE WIDTH		FULL ROW; REDUCE AS APPROPRIATE		
	SOILS					SO-NOTE 1			
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]				
			[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]				
	WETLANDS								
	FOREST TYPE (m ³ /ha)								
	VEGETATION								
	WILDLIFE AND FISH HABITAT					WF-NOTE 5			
HERITAGE / TRADITIONAL LAND USE									
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									
SPECIAL MEASURES									

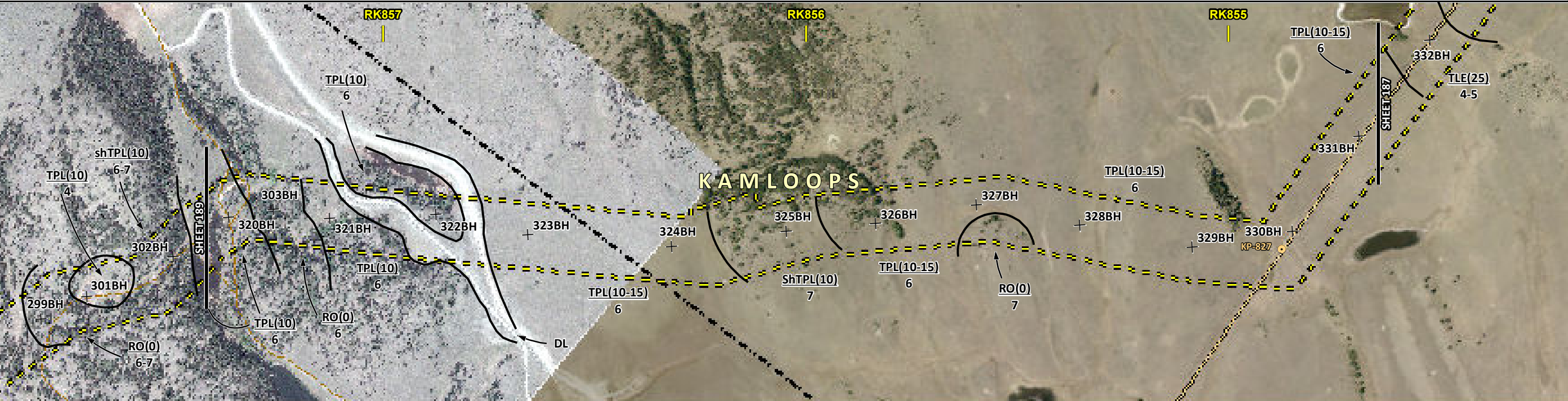
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 187 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT												
			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	DATE December 2013	TERA REF. 7894	REVISION 0	FROM RK 851.4	TO RK 854.5
			NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.												
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB															
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS	CHECKED DN	DESIGN TGG																

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT				CITY OF KAMLOOPS				
	LAND OWNERSHIP / DISPOSITION	PRIVATE		MIXED		PRIVATE				
	LAND USE	TREED		DL		TREED		DL		NATIVE GRASSLAND
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE								
	HERITAGE / TRADITIONAL LAND USE									
	WILDLIFE / WILDLIFE HABITAT	[AMPH-POND]				IMPORTANT BIRD AREA				
	VEGETATION									
	WETLANDS	[ALKALI MARSH]								
	FISH HABITAT SENSITIVITY									
	HYDROLOGY									
SOILS PARENT MATERIAL	T	-	T	-	T	-	T	-	T	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
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- Soil Sample
- Soil Break
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- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WF FEATURE]	[WIND/WATER ER]	[WIND/WATER ER]	[WIND/WATER ER]	[WIND/WATER ER]	[WIND/WATER ER]
	[WIND/WATER ER]	[WIND/WATER ER]	[WIND/WATER ER]	[WIND/WATER ER]	[WIND/WATER ER]	[WIND/WATER ER]

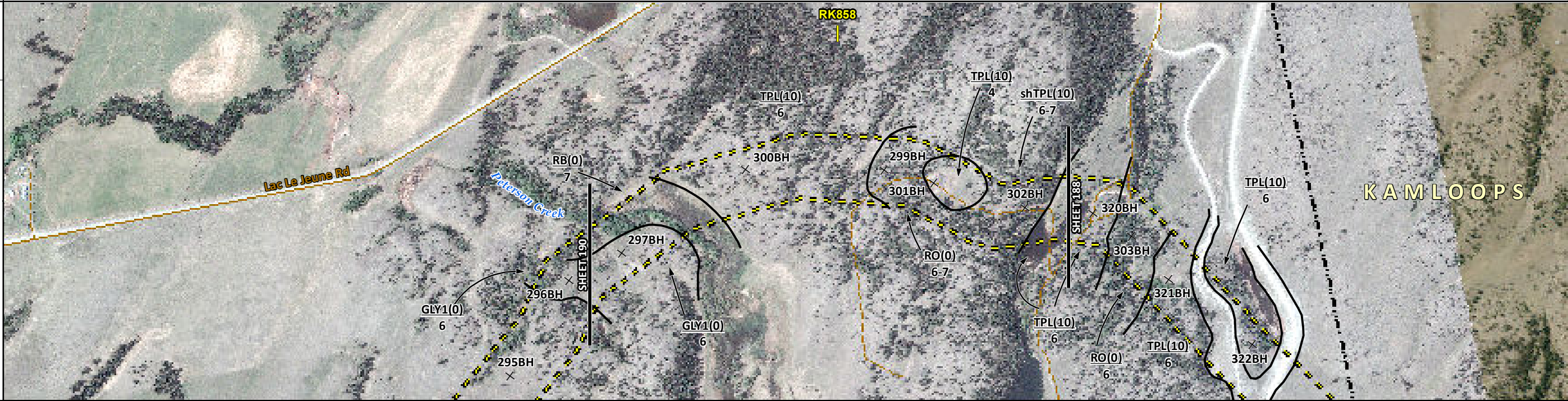
ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[WF-NOTE 4]							
	SOILS STRIPPING DEPTH (cm)	15-20	-	15-20	-	10-15	10		10-15
	SOILS HANDLING PROCEDURE	FULL ROW	-	[FULL ROW]	-			BLADE WIDTH	
	SOILS	SO-NOTE 1		[SO-NOTE 1]				SO-NOTE 1	
	WATERCOURSE CROSSINGS PIPELINE VEHICLE								
	WETLANDS							[WT-NOTE 1]	
	FOREST TYPE (m ³ /ha)								
	VEGETATION								
	WILDLIFE AND FISH HABITAT	[WF-NOTE 1]						WF-NOTE 5	
	HERITAGE / TRADITIONAL LAND USE								
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									
SPECIAL MEASURES									

Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 188 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT																												
		<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY		CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	<table border="1"> <thead> <tr> <th>DATE</th> <th>TERA REF.</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td>December 2013</td> <td>7894</td> <td>0</td> </tr> </tbody> </table>	DATE	TERA REF.	REVISION	December 2013	7894	0	<table border="1"> <thead> <tr> <th>SCALE</th> <th>PAGE SIZE</th> <th>DISCIPLINE</th> </tr> </thead> <tbody> <tr> <td>1:10,000</td> <td>11x17</td> <td>EAS</td> </tr> </tbody> </table>	SCALE	PAGE SIZE	DISCIPLINE	1:10,000	11x17	EAS	<table border="1"> <thead> <tr> <th>CHECKED</th> <th>DESIGN</th> </tr> </thead> <tbody> <tr> <td>DN</td> <td>TGG</td> </tr> </tbody> </table>	CHECKED	DESIGN	DN	TGG	FROM RK 854.5 TO RK 857.4
		NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.																											
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ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT																																			

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	PRIVATE			
	LAND USE	NATIVE GRASSLAND TREED	NATIVE GRASSLAND	TREED NATIVE GRASSLAND	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE			
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT	IMPORTANT BIRD AREA			AMPH-POND
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY				
	HYDROLOGY	SHALLOW GW			
SOILS PARENT MATERIAL	GF	-	T	-	T T/R

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
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- Highway
- Paved Road
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- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES							
		UNST TR	HYDROLOGY			WF FEATURE	
		(WIND/WATER ER)	WATER ER			WIND/WATER ER	
			WIND/WATER ER				
				WATER ER	WIND ER		

CONSTRUCTION WORK WINDOW							WF-NOTE 4
SOILS HANDLING	STRIPPING DEPTH (cm)	10	15-20	10	15-20	10	15-20
	PROCEDURE	BW	FULL ROW	BW	FULL ROW	BW	FULL ROW
SOILS		SO-NOTE 3		SO-NOTE 1			
WATERCOURSE CROSSINGS	PIPELINE VEHICLE						
WETLANDS							
FOREST TYPE (m ² /ha)							
VEGETATION							
WILDLIFE AND FISH HABITAT				WF-NOTE 5		WF-NOTE 1	
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES				HY-NOTE 1			

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012; provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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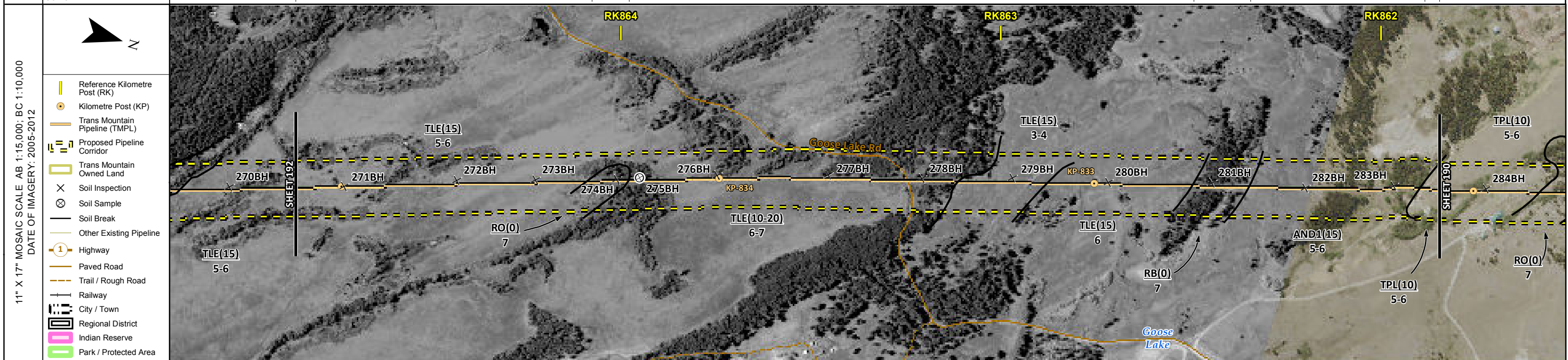
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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 189 OF 301
DATE	December 2013	REVISION	0
SCALE	1:10,000	DISCIPLINE	EAS
DRAWN	CMR	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 857.4 TO RK 858.6

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT									
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	TAME PASTURE	TREED	TAME PASTURE	TREED	TAME PASTURE	TREED	NATIVE GRASSLAND			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE					AGRICULTURAL LAND RESERVE				
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT	IMPORTANT BIRD AREA									
	VEGETATION										
	WETLANDS	[SE MARSH]									
	FISH HABITAT SENSITIVITY										
	HYDROLOGY	[DRAINAGE]					[DRAINAGE]				
SOILS PARENT MATERIAL	T				T			GF	T		



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WETLAND]	[WC (NCD)]
	WIND/WATER ER	[WATER ER]	WIND/WATER ER
	[AQ-OPEN]		[AQ-OPEN]
CONSTRUCTION WORK WINDOW	15	15-20	15
SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE		
SOILS	SO-NOTE 1		
WATERCOURSE CROSSINGS	[AQ-NOTE 3]		[AQ-NOTE 3]
PIPELINE VEHICLE	[AQ-NOTE 2]		[AQ-NOTE 2]
WETLANDS	[WT-NOTE 1]		
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT	WF-NOTE 5		
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]							[AQ-OPEN]
	SOILS HANDLING PROCEDURE	15	15-20	15	15-20	15	10		
	SOILS	SO-NOTE 1							
	WATERCOURSE CROSSINGS	[AQ-NOTE 3]							[AQ-NOTE 3]
	PIPELINE VEHICLE	[AQ-NOTE 2]							[AQ-NOTE 2]
	WETLANDS	[WT-NOTE 1]							
	FOREST TYPE (m ³ /ha)								
	VEGETATION								
	WILDLIFE AND FISH HABITAT	WF-NOTE 5							
	HERITAGE / TRADITIONAL LAND USE								
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									
SPECIAL MEASURES									

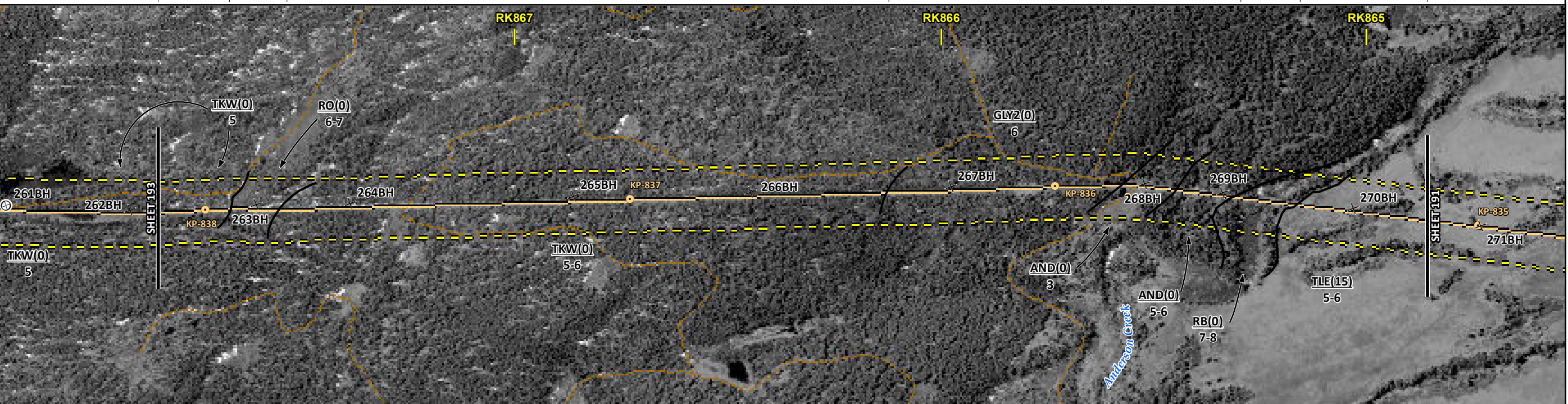
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 191 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 861.8 TO RK 864.9 				
			NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.	DATE	TERA REF.	REVISION
			0	Dec 16, 2013	Issued for NEB filing	CMR	DN		TW/GB	December 2013	7894	0
			SCALE	CHECKED	DESIGN	1:10,000	11x17	EAS	TGG			
			DRAWN			CMR	DN					

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN		THOMPSON-NICOLA REGIONAL DISTRICT		MIXED	PRIVATE
	LAND OWNERSHIP / DISPOSITION	TR0319T002	TR0320T003	TREED			
	LAND USE	AGRICULTURAL LAND RESERVE				TAME PASTURE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					[AGRICULTURAL LAND RESERVE]	
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT	IMPORTANT BIRD AREA					
	VEGETATION						
	WETLANDS			[SE MARSH]			[DEEP MARSH]
	FISH HABITAT SENSITIVITY	[HIGH]					
	HYDROLOGY	[DRAINAGE]	[CHANNEL]	[DRAINAGE]	[ANDERSON CR]	[DRAINAGE]	
SOILS PARENT MATERIAL	T	-	T	GF	-	T	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WC (S6)]	[WC (NCD)]	[WC (NCD-W)]	[WC (NVC)]
	[FISH]	[WETLAND]	[WETLAND]	[WETLAND]	[NAV WATERS]
	WIND/WATER ER	WATER ER	UNST TR	WIND ER	[WIND/WATER ER]
	[AQ-OPEN]	[AQ-OPEN]	[AQ-JUL 22 TO OCT 31]	[AQ-OPEN]	[AQ-OPEN]

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
	SOILS STRIPPING DEPTH (cm)	15-20			15
	SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			
	SOILS	SO-NOTE 1			
	WATERCOURSE CROSSINGS PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
		[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
	WETLANDS		[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 2]
	FOREST TYPE (m ³ /ha)				
	VEGETATION				
	WILDLIFE AND FISH HABITAT			[WF-NOTE 5]	[AQ-NOTE 1]
HERITAGE / TRADITIONAL LAND USE					
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES					

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
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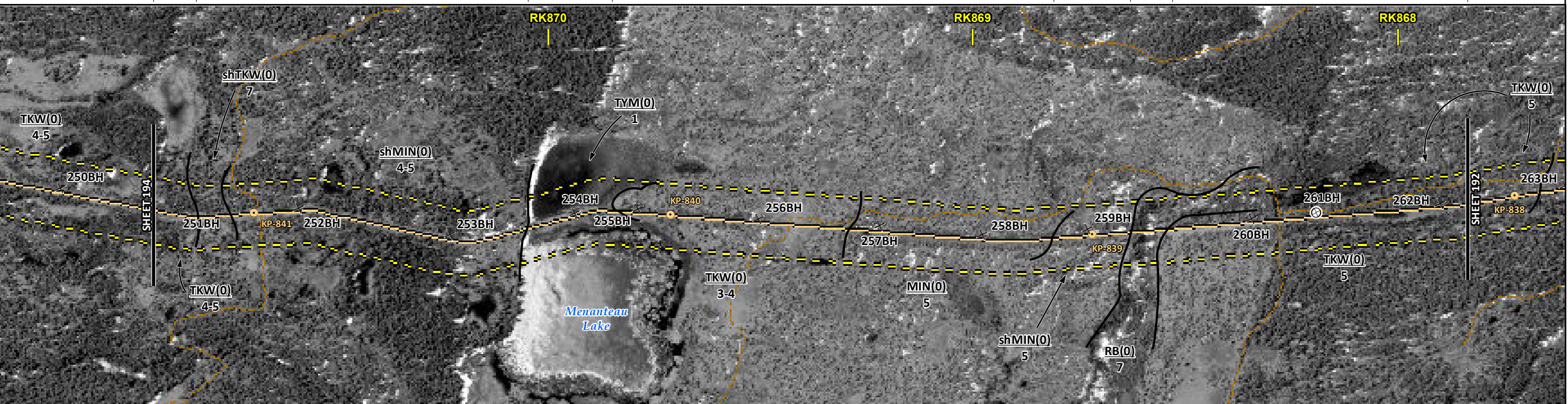
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 192 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 864.9 TO RK 867.8

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT							
	LAND OWNERSHIP / DISPOSITION	CROWN	MIXED	THOMPSON-NICOLA REGIONAL DISTRICT	PRIVATE	[MIXED]	CROWN		
	LAND USE	TR0319T002							
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	TREED							
	HERITAGE / TRADITIONAL LAND USE	AGRICULTURAL LAND RESERVE							
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND	AMPH-POND						
	VEGETATION					[LEPTTEN] [PELTNOVBLU]			
	WETLANDS		DEEP MARSH NW FEN	SHRUBBY FEN / DEEP MARSH [DEEP MARSH]				[DEEP MARSH]	
	FISH HABITAT SENSITIVITY								
	HYDROLOGY						[CHANNEL]		
SOILS PARENT MATERIAL	T	T/R	O	T	T/R		T		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WF FEATURE	NAV WATERS HYDROLOGY WETLANDS COMP RUT	WIND ER	WIND/WATER ER	[RARE LICHEN]	[WC (S6)]	[WETLAND] [NAV WATERS]
	WIND/WATER ER						

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	WF-NOTE 4	WF-NOTE 4				
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE	15-20 40		15-20		
	SOILS		SO-NOTE 1	SO-NOTE 2		SO-NOTE 1	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE					[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS		WT-NOTE 1 WT-NOTE 2				[WT-NOTE 1] [WT-NOTE 2]
	FOREST TYPE (m ³ /ha)						
	VEGETATION						[VG-NOTE 1]
	WILDLIFE AND FISH HABITAT		WF-NOTE 1	WF-NOTE 1			
	HERITAGE / TRADITIONAL LAND USE						
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						
SPECIAL MEASURES			HY-NOTE 1				

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

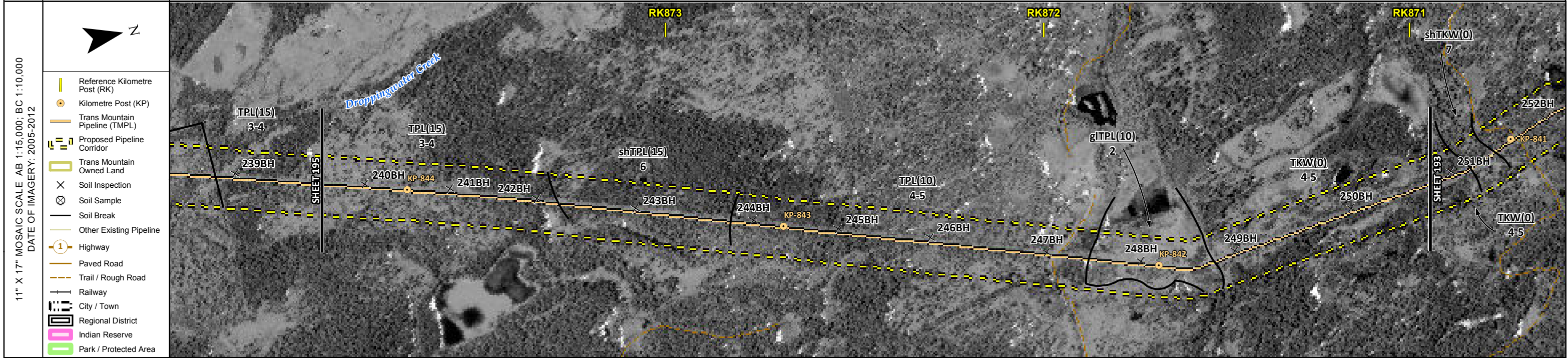
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 193 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 867.8 TO RK 870.9

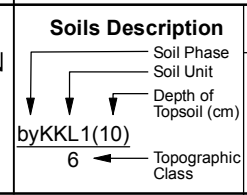
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	CROWN	MIXED	CROWN
	LAND USE	TREED PASTURE	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE		
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS	[SE MARSH] [SHRUBBY SWAMP]		
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	[DRAINAGE]		
SOILS PARENT MATERIAL	T	T/R	T	



POTENTIAL ENVIRONMENTAL ISSUES		[WC (NVC)]	[WETLANDS]
	WIND ER	WIND/WATER ER	COMP RUT WIND ER
			WIND/WATER ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]
	SOILS HANDLING	15-20 FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1
	SOILS	SO-NOTE 2
	WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS	[WT-NOTE 1]
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES		



REFERENCES	
<small>Projection: NAD_1983_UTM_Zone_10N Baseline TML & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small>	
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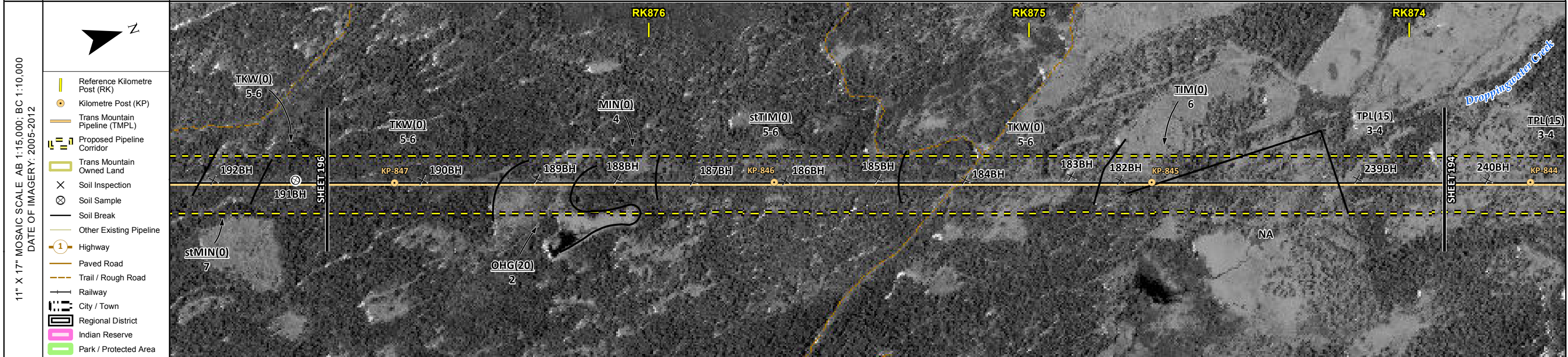
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NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 194 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
DISCIPLINE EAS	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS	
TRANSMOUNTAIN EXPANSION PROJECT	
FROM RK 870.9	TO RK 873.9

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	THOMPSON-NICOLA REGIONAL DISTRICT	MIXED	CROWN
	LAND OWNERSHIP / DISPOSITION		TR0319T002		
	LAND USE		TREED		TREED PASTURE
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AGRICULTURAL LAND RESERVE		
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS			[SE MARSH]	
	FISH HABITAT SENSITIVITY				
	HYDROLOGY		[DRAINAGE] [DRAINAGE]		[DROPPINGWATER CR] [DROPPINGWATER CR]
SOILS PARENT MATERIAL	T	T or GF	T	stT	NA



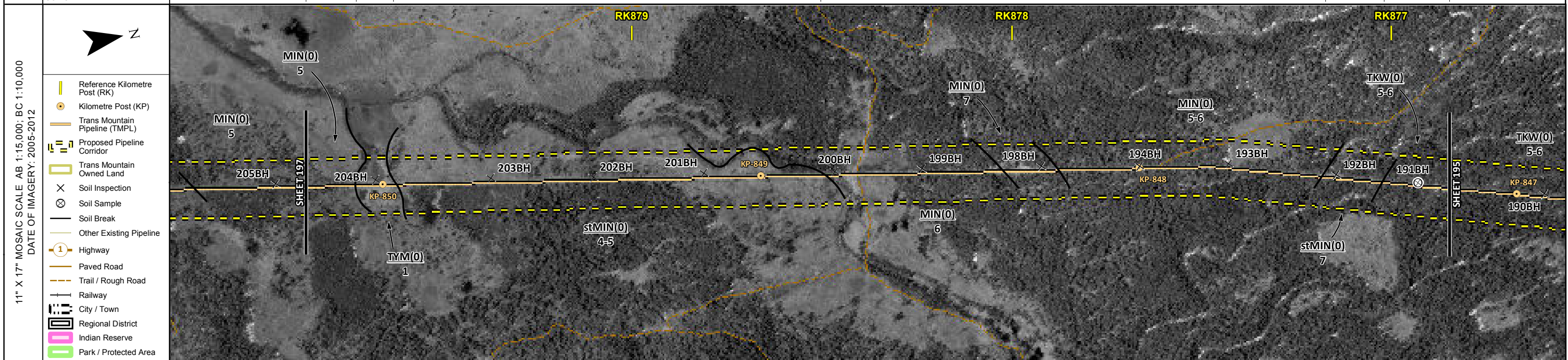
POTENTIAL ENVIRONMENTAL ISSUES			[WC (NCD)]	[WC (NCD)]		[WETLAND]	[WC (NCD)]	[WC (S6)]
	WIND/WATER ER	COMP RUT	WIND ER		WIND/WATER ER		WIND ER	

CONSTRUCTION WORK WINDOW			[AQ-OPEN]	[AQ-OPEN]		[AQ-OPEN]	[AQ-OPEN]	
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	20		15-20			
SOILS	PROCEDURE			FULL ROW; REDUCE AS APPROPRIATE				SO-NOTE 1
WATERCOURSE CROSSINGS	PIPELINE VEHICLE			[AQ-NOTE 3] [AQ-NOTE 2]		[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS							[WT-NOTE 1]	
FOREST TYPE (m ³ /ha)								
VEGETATION								
WILDLIFE AND FISH HABITAT								
HERITAGE / TRADITIONAL LAND USE								
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
SPECIAL MEASURES								

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline Tmpl & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 195 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 873.9 TO RK 876.8 							
			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY		CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	CROWN	
	LAND USE	TR0319T002 TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE	
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		
	VEGETATION		
	WETLANDS	[SE MARSH] [SE MARSH] [SE MARSH]	
	FISH HABITAT SENSITIVITY		
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL	T O stT	T stT T	



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND] [WETLAND] [WETLAND] [WC (NCD)] [WC (NCD)]
	[WIND/WATER ER] [COMP RUT] WIND/WATER ER [AQ-OPEN] [AQ-OPEN]

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]
SOILS STRIPPING DEPTH (cm)	15-20 40	15-20
HANDLING PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE
SOILS	SO-NOTE 1 [SO-NOTE 2]	SO-NOTE 1
WATERCOURSE CROSSINGS		[AQ-NOTE 3] [AQ-NOTE 2]
PIPELINE VEHICLE	[WT-NOTE 1] [WT-NOTE 1]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION		
WILDLIFE AND FISH HABITAT		
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

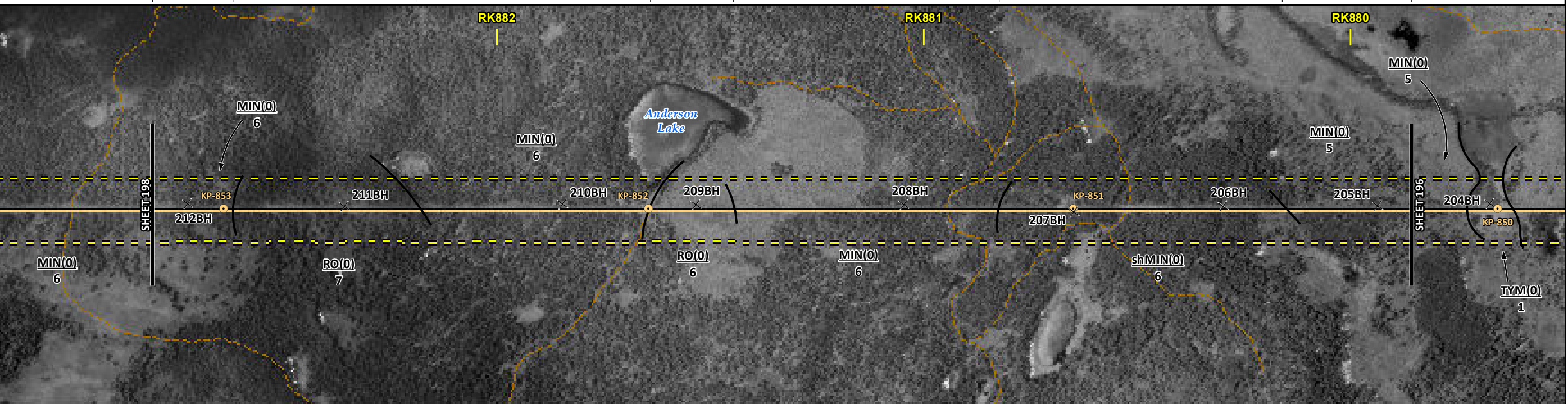
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	CROWN	
	LAND USE	TR0319T002 TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	ALR	AGRICULTURAL LAND RESERVE
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		
	VEGETATION		
	WETLANDS	[SE MARSH]	[SE MARSH]
	FISH HABITAT SENSITIVITY		
	HYDROLOGY	[SHALLOW GW]	[DRAINAGE]
SOILS PARENT MATERIAL		T/R	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[WETLAND]	[HYDROLOGY]	[WETLAND]	[WC (NVC)]	[WC (NVC)]
	WIND/WATER ER	WATER ER	WIND/WATER ER	WATER ER	WIND/WATER ER	[AQ-OPEN]

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
		15-20 FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
		[AQ-NOTE 3] [AQ-NOTE 2] [AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS	[WT-NOTE 1] [WT-NOTE 1]
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	
	SPECIAL MEASURES	[HY-NOTE 1]

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

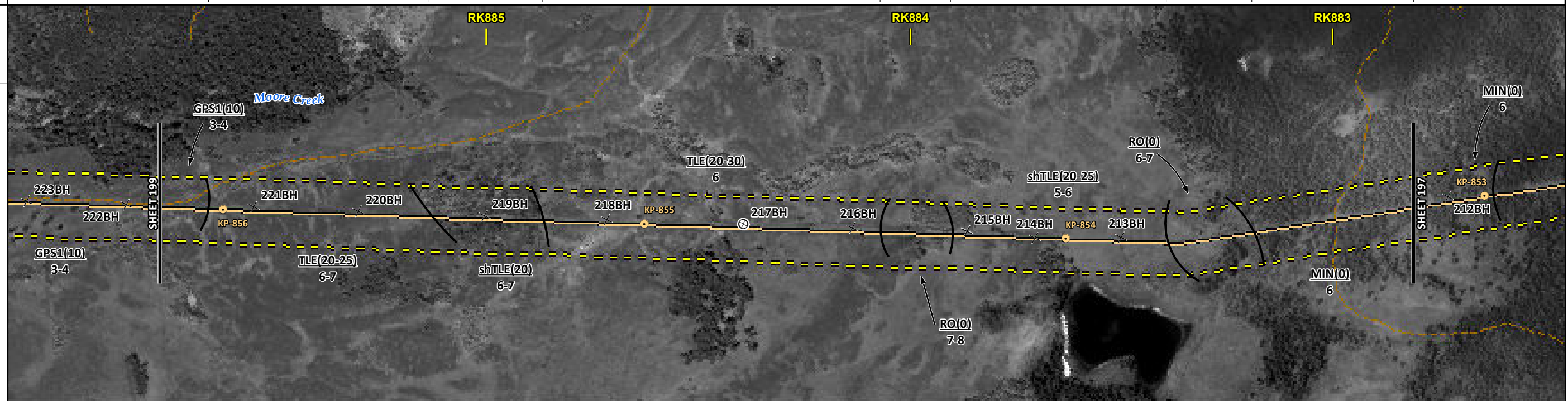
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 197 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 879.9 TO RK 882.8

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT									
	LAND OWNERSHIP / DISPOSITION	PRIVATE					[MIXED]			CROWN	
	LAND USE	TREED PASTURE			TREED	TREED PASTURE			TREED	TREED PASTURE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS										
	FISH HABITAT SENSITIVITY										
	HYDROLOGY	[DRAINAGE]					[DRAINAGE]				
SOILS PARENT MATERIAL	GF	T	T/R	T	T	T/R	T	T	T	T	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (NVC)]			
	UNST TR WIND ER	WIND/WATER ER	WATER ER	WIND/WATER ER	WATER ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]						
	SOILS STRIPPING DEPTH (cm)	10	20-25	20	20-30	15-20	20-25	10	15-20
	HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE							
	SOILS	SO-NOTE 1							
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]					
			[AQ-NOTE 2]	[AQ-NOTE 2]					
WETLANDS									
FOREST TYPE (m ³ /ha)									
VEGETATION									
WILDLIFE AND FISH HABITAT									
HERITAGE / TRADITIONAL LAND USE									
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									
SPECIAL MEASURES									

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N

Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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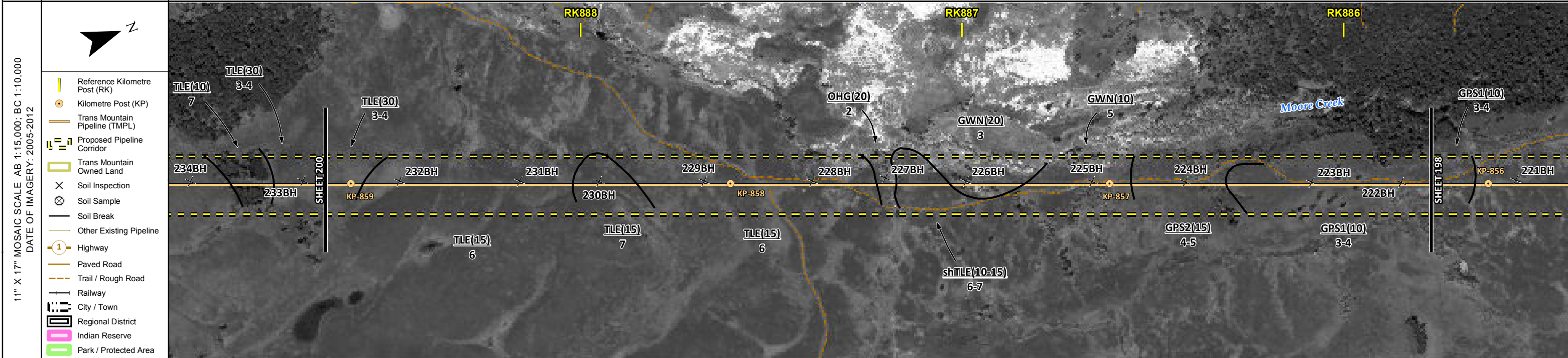
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 198 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
DISCIPLINE EAS	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 882.8 TO RK 885.8

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT									
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	TAME PASTURE					TREED PASTURE				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT	[AMPH-POND]		IMPORTANT BIRD AREA			AMPH-POND				
	VEGETATION										
	WETLANDS			SE MARSH		SE MARSH		SE MARSH			
	FISH HABITAT SENSITIVITY										
	HYDROLOGY	[DRAINAGE]									
SOILS PARENT MATERIAL			T or GF		T/R		E/GF		GF		



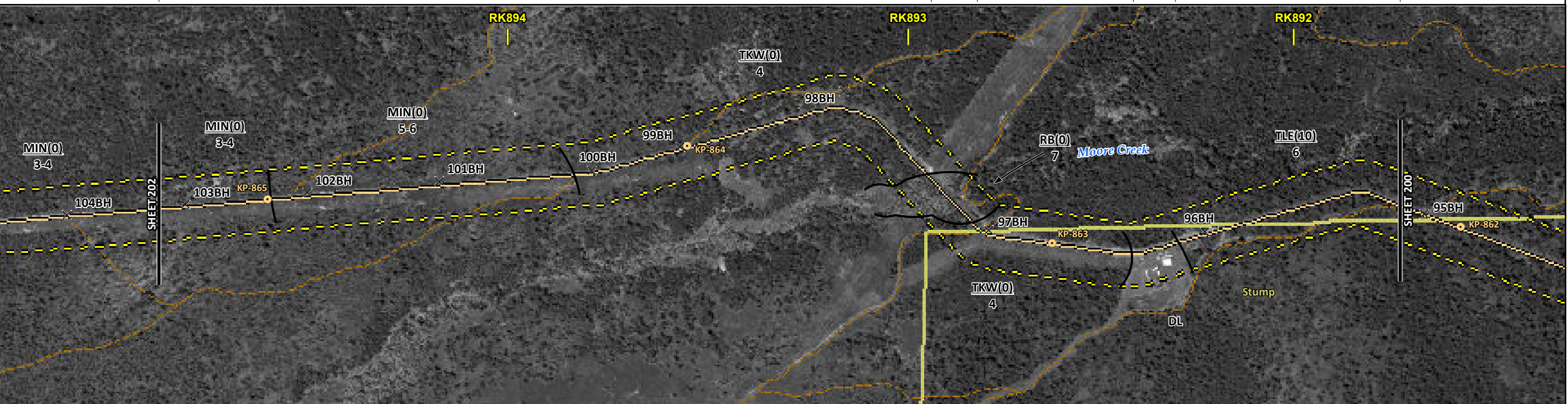
ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WF FEATURE]	[WF FEATURE]	WILDLIFE AREA	WETLAND	WETLAND	[WETLAND]	[WC (NCD)]	
	CONSTRUCTION WORK WINDOW	[WF-NOTE 4]	[WF-NOTE 4]	[WF-NOTE 4]	[WF-NOTE 4]	[WF-NOTE 4]	[WF-NOTE 4]	[WF-NOTE 4]	
	SOILS STRIPPING DEPTH (cm)	30	15	20	10-15	20	10	15	
	SOILS HANDLING PROCEDURE			FULL ROW, REDUCE AS APPROPRIATE					
	SOILS			SO-NOTE 1					SO-NOTE 3
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE							[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS			[WT-NOTE 1]	[WT-NOTE 1]		[WT-NOTE 1]		
	FOREST TYPE (m ³ /ha)								
	VEGETATION								
	WILDLIFE AND FISH HABITAT	[WF-NOTE 1]		WF-NOTE 5	WF-NOTE 1				
HERITAGE / TRADITIONAL LAND USE									
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS									
SPECIAL MEASURES									

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 199 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT												
			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	DATE December 2013	TERA REF. 7894	REVISION 0	SCALE 1:10,000	PAGE SIZE 11x17
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PRIVATE	THOMPSON-NICOLA REGIONAL DISTRICT	MIXED
	LAND OWNERSHIP / DISPOSITION			TR0320T004
	LAND USE	TREED		DL TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE		
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)		
	VEGETATION			
	WETLANDS	NLTR SWAMP		
	FISH HABITAT SENSITIVITY		[HIGH]	
	HYDROLOGY	[DRAINAGE]	[CULTUS CREEK]	[MOORE CREEK]
SOILS PARENT MATERIAL				

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
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- Soil Inspection
- Soil Sample
- Soil Break
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- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WC (S6)]	WETLAND	[FISH] [WC (S2)]	WILDLIFE AREA	[NAV WATERS]
	WIND ER	WIND/WATER ER	WIND ER	WATER ER	WIND ER	WIND/WATER ER

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-JUL 22 TO AUG 31]		
SOILS HANDLING	STRIPPING DEPTH (cm) 15-20		15-20		
SOILS	PROCEDURE FULL ROW; REDUCE AS APPROPRIATE		FULL ROW; REDUCE AS APPROPRIATE		
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	
WETLANDS			WT-NOTE 1		
FOREST TYPE (m ³ /ha)					
VEGETATION					
WILDLIFE AND FISH HABITAT				[AQ-NOTE 1] WF-NOTE 5	
HERITAGE / TRADITIONAL LAND USE					
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES				[AQ-NOTE 4]	

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
by KKL1(10)
- Topographic Class
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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REVISION HISTORY

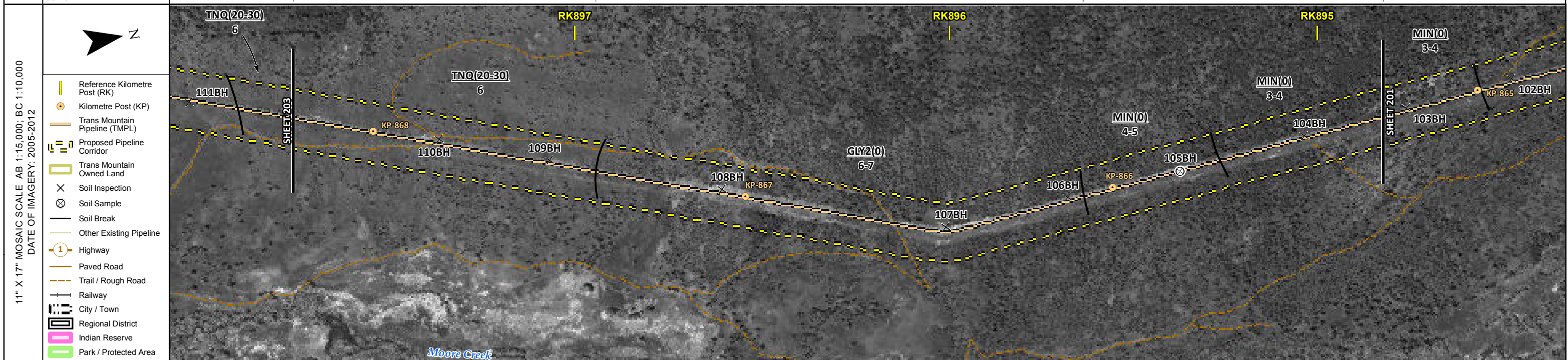
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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 201 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 891.7 TO RK 894.8

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	PRIVATE
	LAND USE	TREED PASTURE		TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE		
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS			
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	[DISAPPEARING STREAM]		
SOILS PARENT MATERIAL	T	GF	T	



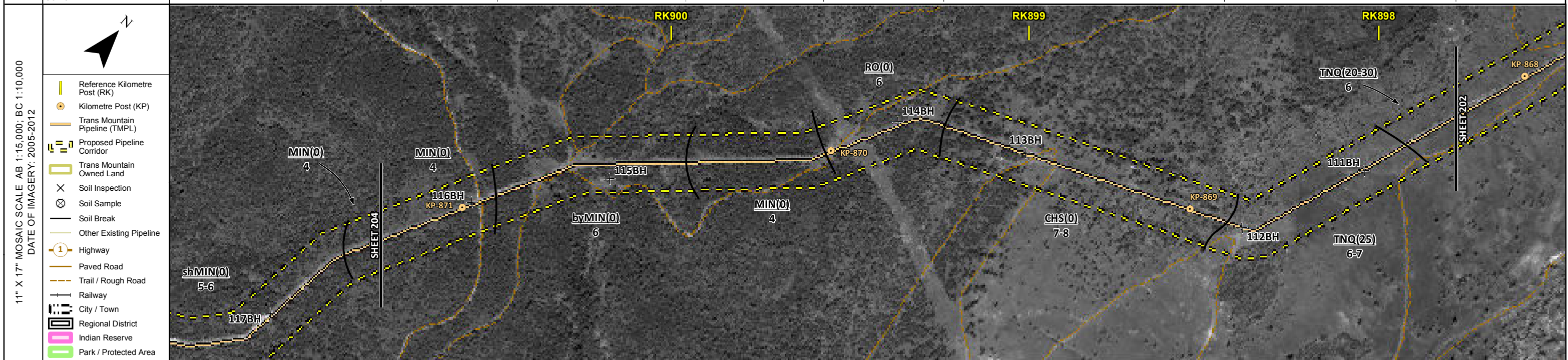
POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	WIND/WATER ER	UNST TR	WIND ER
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CONSTRUCTION WORK WINDOW	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm) 20-30 PROCEDURE FULL ROW; REDUCE AS APPROPRIATE
SOILS	SO-NOTE 1 SO-NOTE 3
WATERCOURSE CROSSINGS	PIPELINE VEHICLE [AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS	
FOREST TYPE (m ³ /ha)	
VEGETATION	
WILDLIFE AND FISH HABITAT	
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 202 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT												
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	CROWN	MIXED PRIVATE	MIXED	PRIVATE
	LAND USE	TR0319T004	TREED	TR0319T004	TREED PASTURE
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS			
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)	UNGULATE WINTER RANGE (MULE DEER)	IMPORTANT BIRD AREA	
	VEGETATION				
	WETLANDS	[NLTR SWAMP]			
	FISH HABITAT SENSITIVITY				
	HYDROLOGY	[ROCKY GULCH] [DRAINAGE]	[DRAINAGE]		
SOILS PARENT MATERIAL	T	byT	T	T	



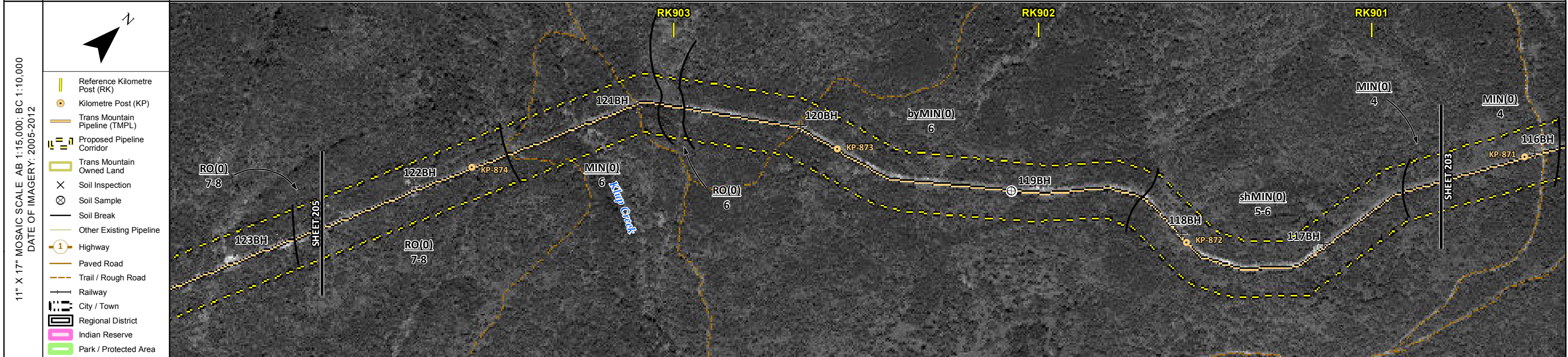
POTENTIAL ENVIRONMENTAL ISSUES	WILDLIFE AREA	MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS	WILDLIFE AREA
	[WC (S6)] [WC (NCD)]	WILDLIFE AREA	[WC (NCD)] [WETLAND]
	WIND ER	WIND/WATER ER	WIND/WATER ER
	[AQ-OPEN] [AQ-OPEN]		[AQ-OPEN]

CONSTRUCTION WORK WINDOW				
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	25	20-30
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE		
		SO-NOTE 1		
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS				[WT-NOTE 1]
FOREST TYPE (m ³ /ha)				
VEGETATION				
WILDLIFE AND FISH HABITAT		WF-NOTE 5	AK-NOTE 1	WF-NOTE 5
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES				

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 203 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 897.8 TO RK 900.8
				NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.									
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DATE December 2013	TERA REF. 7894	REVISION 0	SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS													

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION	CROWN
	LAND USE	TR0319T004 TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	HERITAGE CONSIDERATIONS AT LOCALISED AREAS
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)
	VEGETATION	
	WETLANDS	
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	[KLUP CREEK] [DRAINAGE]
SOILS PARENT MATERIAL	byT T/R	



POTENTIAL ENVIRONMENTAL ISSUES	[WC (SS)]	WILDLIFE AREA MODERATE TO HIGH HERITAGE CONSIDERATIONS AT LOCALISED AREAS [WC (NVC)]
	WATER ER	WIND/WATER ER [AQ-OPEN] [AQ-OPEN]
		WIND/WATER ER
		WIND ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
		15-20 FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1
	SOILS	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE [AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS	
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	WF-NOTE 5 AK-NOTE 1
	HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

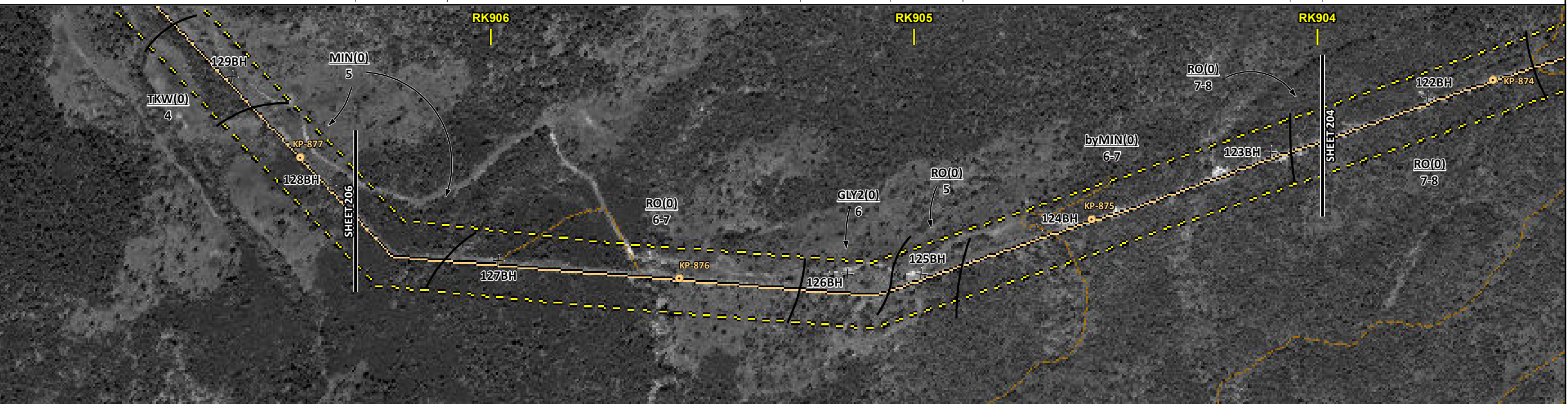
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO DATE December 2013 SCALE 1:10,000 DRAWN CMR	PAGE SHEET 204 OF 301 REVISION 0 TERA REF. 7894 PAGE SIZE 11x17 CHECKED DN DISCIPLINE EAS DESIGN TGG	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 900.8 TO RK 904.0
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.												
	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB												

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	CROWN	
	LAND USE	TR0319T004 TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)	
	VEGETATION		
	WETLANDS	[SE MARSH]	[SE MARSH]
	FISH HABITAT SENSITIVITY		
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL		GF	byT

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WC (NCD)]	[WETLAND]	[WETLAND]	[WC (NCD)]
	WIND/WATER ER	WATER ER	UNST TR WIND/WATER ER	WATER ER	WIND/WATER ER

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	15-20 FULL ROW; REDUCE AS APPROPRIATE		
SOILS	SO-NOTE 1 SO-NOTE 3		
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS	[WT-NOTE 1]		
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT	WF-NOTE 5		
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 205 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 904.0 TO RK 906.4

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	MIXED		CROWN
	LAND USE	TR0319T004 TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS			
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	DRAINAGE		
SOILS PARENT MATERIAL	T			



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]		
	WIND/WATER ER	WIND ER	WIND/WATER ER
	[AQ-OPEN]		

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
		15-20 FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
		[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS	
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	
	HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

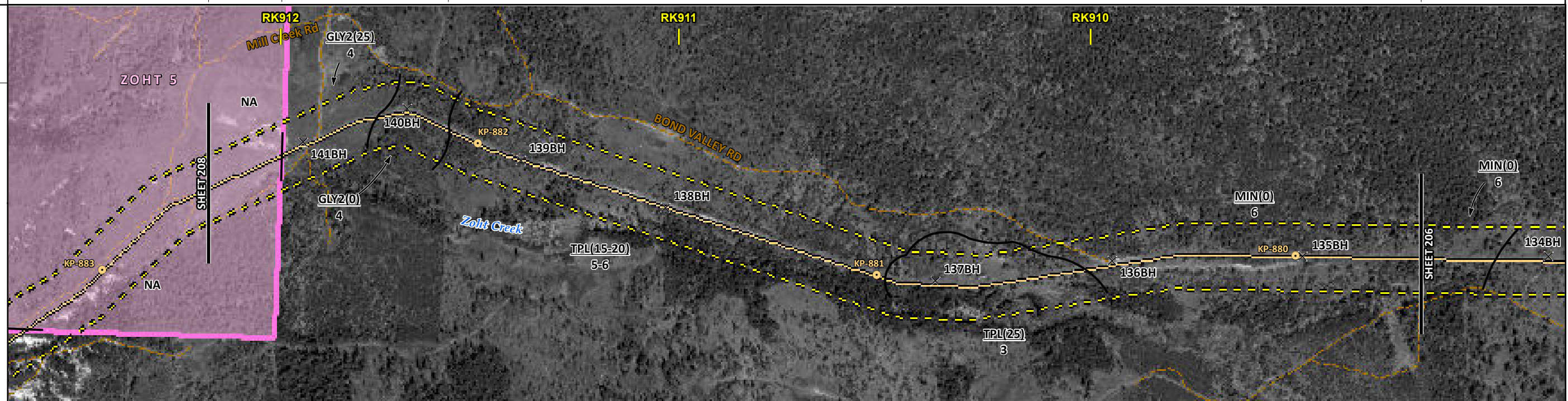
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small>	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 206 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
				NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.									
				0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB									
DATE December 2013	TERA REF. 7894	REVISION 0	SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS	FROM RK 906.4	TO RK 909.2											
DRAWN CMR	CHECKED DN	DESIGN TGG																

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	MIXED	PRIVATE	(MIXED)	CROWN
	LAND USE	NA			TREED PASTURE
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		FORAGE		
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT		UNGULATE WINTER RANGE (MULE DEER)		
	VEGETATION				
	WETLANDS				[OPEN POND]
	FISH HABITAT SENSITIVITY				
	HYDROLOGY		[ZOHT CREEK]		[DRAINAGE]
SOILS PARENT MATERIAL	NA	GF		T	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	AGRI (CROP)	WILDLIFE AREA					
	CONSTRUCTION WORK WINDOW		[AQ-OPEN]		[AQ-OPEN]			
	SOILS HANDLING	STRIPPING DEPTH (cm)	NA	25	10	15-20	25	15-20
	SOILS	PROCEDURE				FULL ROW; REDUCE AS APPROPRIATE		
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE		[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]	
	WETLANDS						[WT-NOTE 1]	[WT-NOTE 2]
	FOREST TYPE (m ³ /ha)							
	VEGETATION							
	WILDLIFE AND FISH HABITAT			WF-NOTE 5				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AG-NOTE 1					

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 207 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

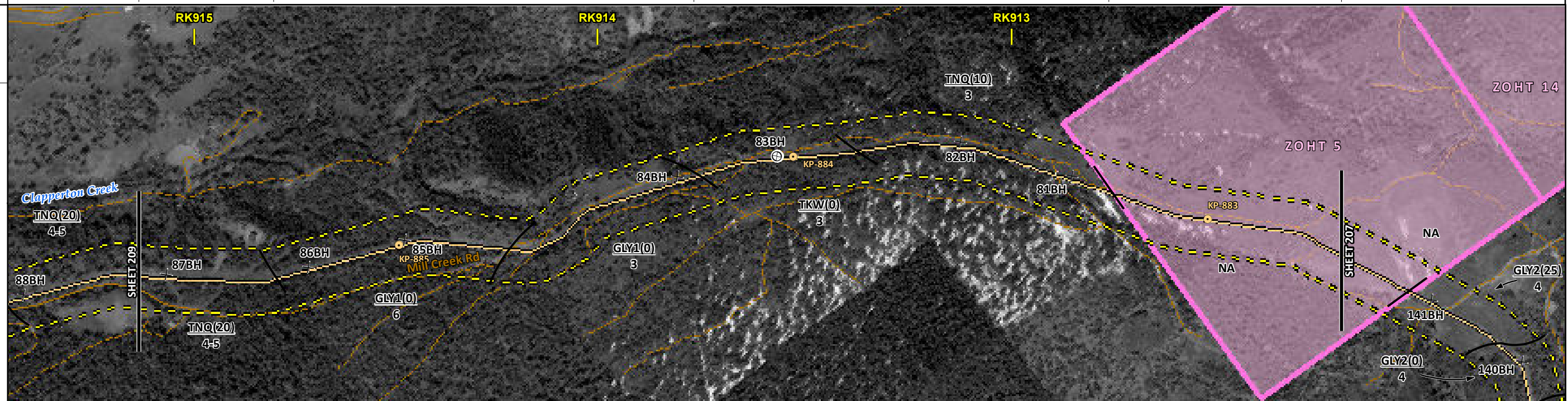
ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 909.2 TO RK 912.2

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT											
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	CROWN	MIXED	PRIVATE	MIXED	PRIVATE	ZOHT 5	MIXED			
	LAND USE	TR0319T004											TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	[FORAGE]											
	HERITAGE / TRADITIONAL LAND USE												
	WILDLIFE / WILDLIFE HABITAT	[UNGULATE WINTER RANGE (MULE DEER)]											
	VEGETATION												
	WETLANDS												
	FISH HABITAT SENSITIVITY												
	HYDROLOGY	[DRAINAGE]						[DRAINAGE]					
SOILS PARENT MATERIAL	GF						NA						

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
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- Soil Break
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- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WILDLIFE AREA	[WC (NVC)]	[WC (NCD)]	[AGRI (CROP)]
	WIND/WATER ER	UNST TR	WINDER	

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]		
	SOILS HANDLING	STRIPPING DEPTH (cm)	20	15-20	NA
	SOILS		SO-NOTE 3	SO-NOTE 1	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 2]
	WETLANDS				
	FOREST TYPE (m ³ /ha)				
	VEGETATION				
	WILDLIFE AND FISH HABITAT		WF-NOTE 5		
	HERITAGE / TRADITIONAL LAND USE				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				[AG-NOTE 1]
SPECIAL MEASURES					

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 208 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

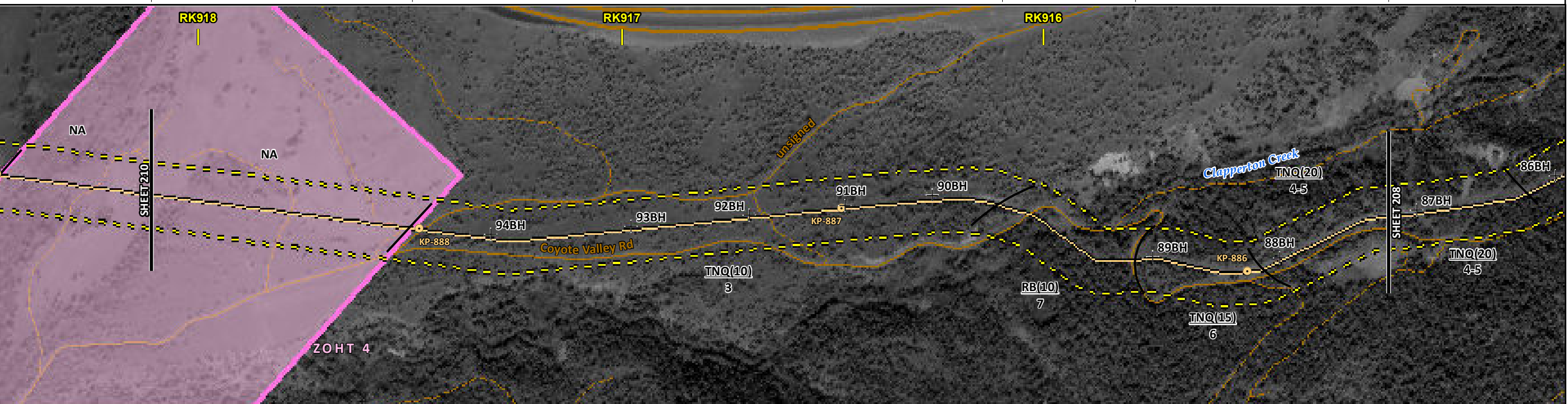
FROM RK 912.2 TO RK 915.1

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	ZOHT 4	PRIVATE	MIXED	PRIVATE
	LAND USE	NA	TREED PASTURE	TR0319T004	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE			
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)			
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY	[HIGH]			
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[CLAPPERTON CREEK]	
SOILS PARENT MATERIAL	NA	T		T	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
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- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WC (NVC)]	[WC (S2)]	[FISH]	[NAV WATERS]
	WIND ER	WATER ER	WATER ER	WIND/WATER ER	

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-JUL 22 TO OCT 31]	WIND/WATER ER
SOILS STRIPPING DEPTH (cm)	NA	10	15-20	20
SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			
SOILS	SO-NOTE 1			
WATERCOURSE CROSSINGS PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 2]
WETLANDS	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
FOREST TYPE (m ³ /ha)				
VEGETATION				
WILDLIFE AND FISH HABITAT	WF-NOTE 5			[AQ-NOTE 1]
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES	[AQ-NOTE 4]			

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

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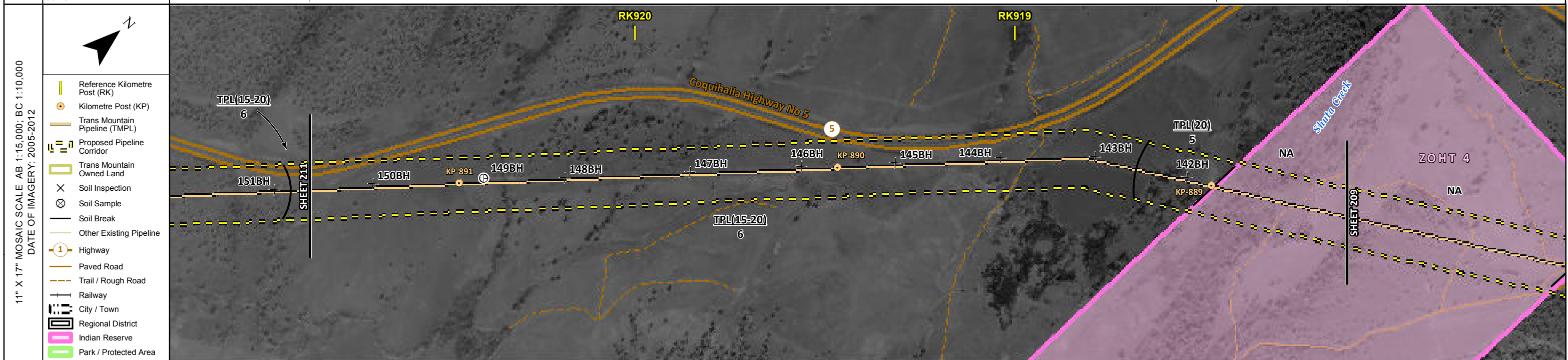
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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 209 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
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DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 915.1 TO RK 918.1

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT				
	LAND OWNERSHIP / DISPOSITION	PRIVATE		ZOHT 4		
	LAND USE	TAME PASTURE		NA		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE				
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT					
	VEGETATION					
	WETLANDS	[SHRUBBY SWAMP]				
	FISH HABITAT SENSITIVITY					
	HYDROLOGY	[CHANNEL]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL	T			NA		



POTENTIAL ENVIRONMENTAL ISSUES	[WC (S6)]	[WC (NVC)]	[WC (NVC) / WC (NCD)]	[WC (NVC)]	[WC (NCD)]	[WC (S6)]	[WETLAND]
CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	
SOILS HANDLING	STRIPPING DEPTH (cm)		15-20		20		NA
SOILS	FULL ROW, REDUCE AS APPROPRIATE						
SOILS	SO-NOTE 1						
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	
PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[WT-NOTE 1]
WETLANDS							
FOREST TYPE (m ³ /ha)							
VEGETATION							
WILDLIFE AND FISH HABITAT							
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES							

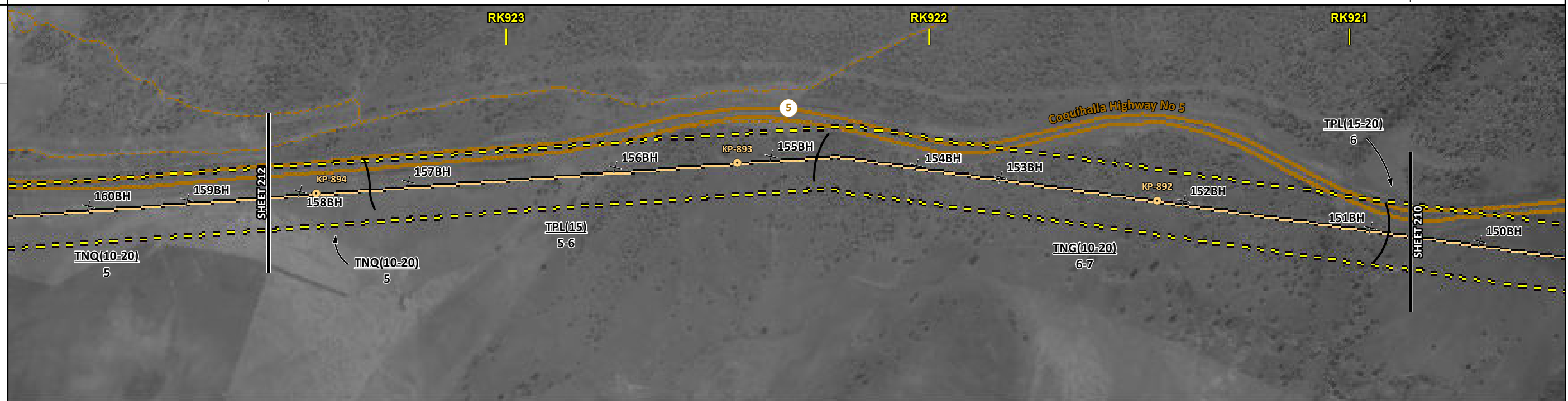
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPL, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: Altalis, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: Altalis, 2009; First Nation Lands: Government of Canada, 2013; Altalis, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; Altalis, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 210 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT									
			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY		CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	DATE December 2013
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.												
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB												

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT					
	LAND OWNERSHIP / DISPOSITION	PRIVATE					
	LAND USE	TAME PASTURE					
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	[AGRICULTURAL LAND RESERVE] [FORAGE]	[AGRICULTURAL LAND RESERVE]			[AGRICULTURAL LAND RESERVE]	
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT						
	VEGETATION						
	WETLANDS						
	FISH HABITAT SENSITIVITY						
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL							

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[AGRI (CROP)]	[WC (NVC)]	[WC (NVC)]	[WC (NVC)]	[WC (NCD)]	[WC (NCD)]	[WC (NVC)]
				WIND/WATER ER			

CONSTRUCTION WORK WINDOW		[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN] [AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm)	10-20		15		10-20	[15-20]
	PROCEDURE				FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1		
WATERCOURSE CROSSINGS	PIPELINE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3] [AQ-NOTE 3]
	VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2] [AQ-NOTE 2]
WETLANDS							
FOREST TYPE (m ³ /ha)							
VEGETATION							
WILDLIFE AND FISH HABITAT							
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		[AG-NOTE 1]					
SPECIAL MEASURES							

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: Altalis, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: Altalis, 2009; First Nation Lands: Government of Canada, 2013; Altalis, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; Altalis, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 211 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

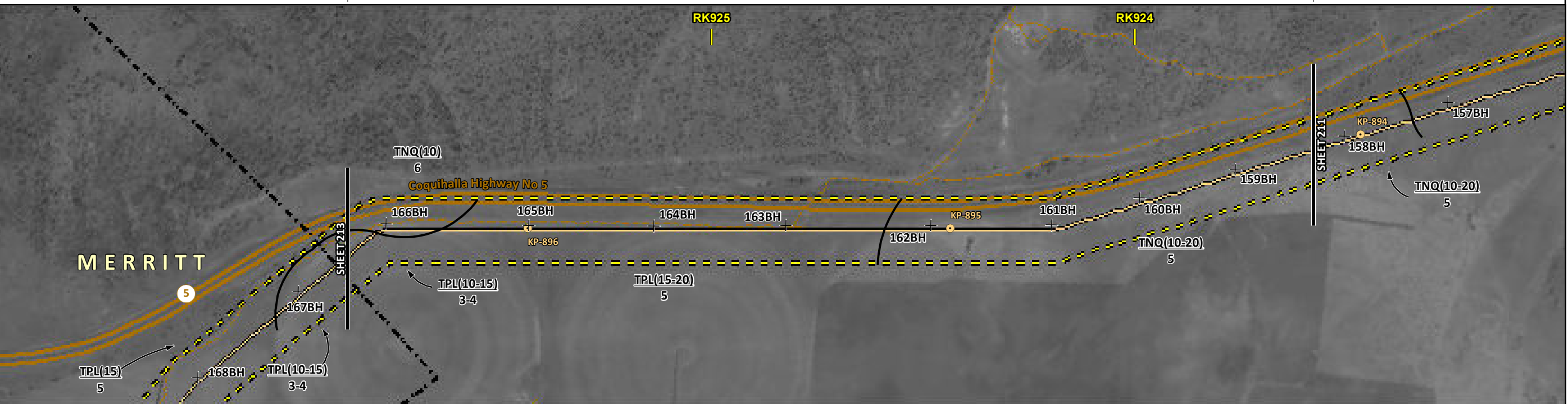
FROM RK 920.9 TO RK 923.6

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION	PRIVATE
	LAND USE	CULTIVATED TAME PASTURE
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE FORAGE
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	
	VEGETATION	
	WETLANDS	
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	[DRAINAGE] [DRAINAGE]
SOILS PARENT MATERIAL	T	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WC (NVC)]
	[WIND_ER]	WIND/WATER ER

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	[10-15] 10	15-20 10-20
PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE SO-NOTE 1
WATERCOURSE CROSSINGS	[AQ-NOTE 3]	[AQ-NOTE 3]
PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION		
WILDLIFE AND FISH HABITAT		
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AG-NOTE 1
SPECIAL MEASURES		

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 212 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

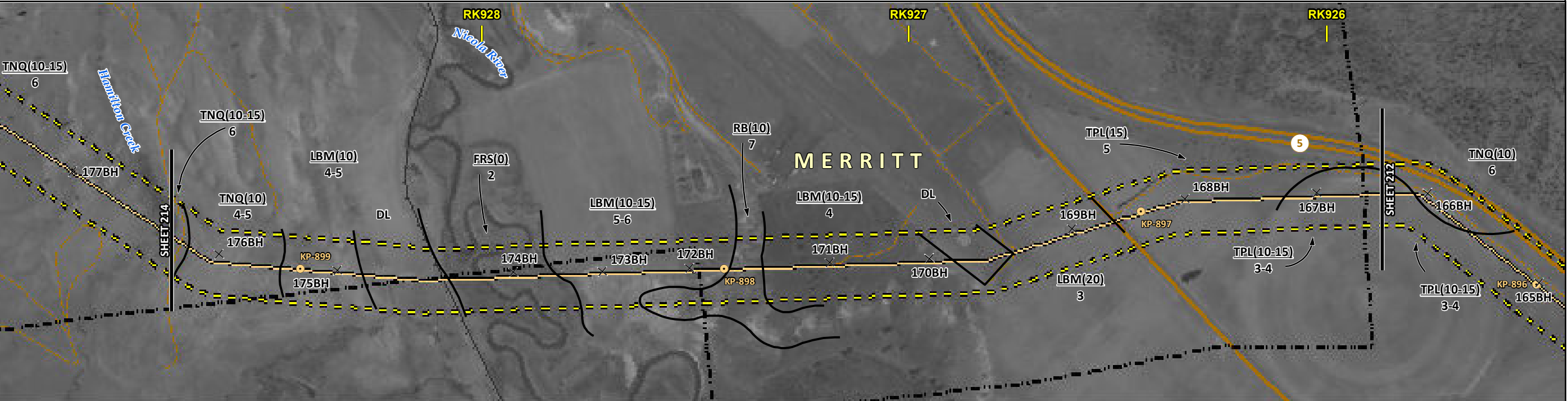
FROM RK 923.6 TO RK 925.9

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF MERRITT	THOMPSON-NICOLA REGIONAL DISTRICT	PRIVATE	CITY OF MERRITT	THOMPSON-NICOLA REGIONAL DISTRICT				
	LAND OWNERSHIP / DISPOSITION									
	LAND USE	NATIVE GRASSLAND	P	DL	TREED	NATIVE GRASSLAND	DL	CULTIVATED	HAY	CULTIVATED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			BEEF		AGRICULTURAL LAND RESERVE			FORAGE	
	HERITAGE / TRADITIONAL LAND USE									
	WILDLIFE / WILDLIFE HABITAT			RAPTOR NEST		RAPTOR NEST				
	VEGETATION					ARTE/PSEU				
	WETLANDS			SHRUBBY SWAMP						
	FISH HABITAT SENSITIVITY									
	HYDROLOGY		HAMILTON CREEK						DRAINAGE	
SOILS PARENT MATERIAL		T	GL	-	F	GL	-	GL	-	T

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Soil Break
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- Highway
- Paved Road
- Trail / Rough Road
- Railway
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- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	AGRI (LIVESTOCK)	RARE COMMUNITY	AGRI (CROP)	[WC (NVC)]	
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]				[AQ-OPEN]	
	SOILS STRIPPING DEPTH (cm)	10-15	10	15-20	10-15	10	10-15
	SOILS HANDLING PROCEDURE	BLADE WIDTH	[FULL ROW]	FULL ROW	BLADE WIDTH	-	FULL ROW; REDUCE AS APPROPRIATE
	SOILS		SO-NOTE 1		SO-NOTE 1		SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]				[AQ-NOTE 3]
			[AQ-NOTE 2]				[AQ-NOTE 2]
	WETLANDS			WT-NOTE 1			
	FOREST TYPE (m ³ /ha)						
	VEGETATION			WF-NOTE 2	VG-NOTE 1	WF-NOTE 2	
WILDLIFE AND FISH HABITAT							
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AG-NOTE 2				AG-NOTE 1	
SPECIAL MEASURES							

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 213 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

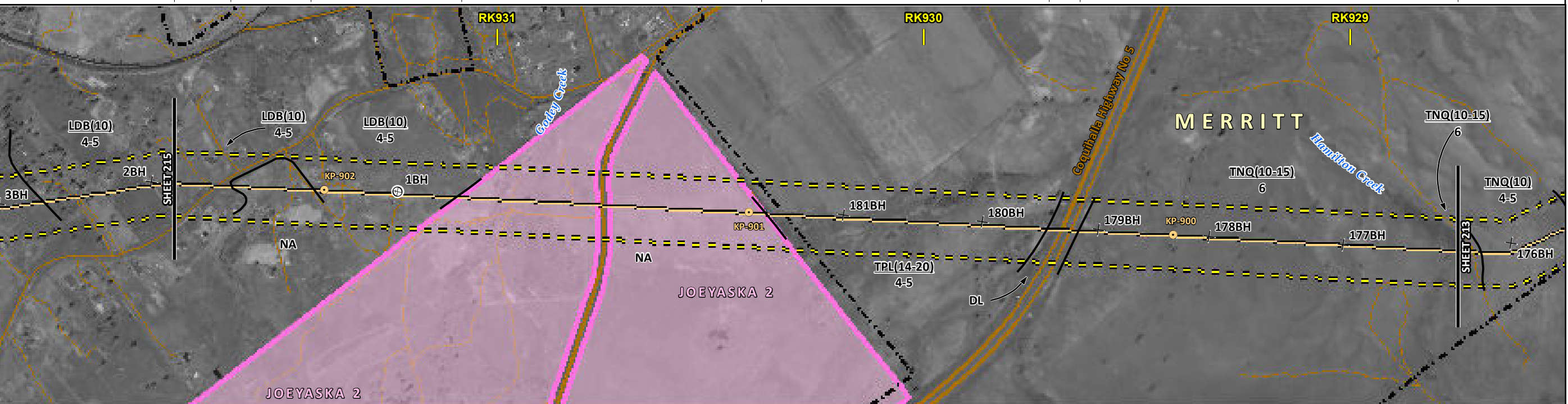
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT				CITY OF MERRITT				
	LAND OWNERSHIP / DISPOSITION	PRIVATE		MIXED		JOEYASKA 2		PRIVATE		
	LAND USE	TAME PASTURE		TAME PASTURE		TAME PASTURE		NATIVE GRASSLAND		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					AGRICULTURAL LAND RESERVE FORAGE				
	HERITAGE / TRADITIONAL LAND USE									
	WILDLIFE / WILDLIFE HABITAT									
	VEGETATION									
	WETLANDS	SE MARSH								
	FISH HABITAT SENSITIVITY									
	HYDROLOGY					DRAINAGE		DRAINAGE		DRAINAGE
SOILS PARENT MATERIAL	GL		NA		GL		NA		T	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
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- Soil Sample
- Soil Break
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- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WETLAND		WIND/WATER ER		WIND/WATER ER		WIND/WATER ER		WIND/WATER ER	
	WETLAND		WIND/WATER ER		WIND/WATER ER		WIND/WATER ER		WIND/WATER ER	

CONSTRUCTION WORK WINDOW	10		10		14-20		10-15	
SOILS STRIPPING DEPTH (cm)	10		10		14-20		10-15	
SOILS HANDLING PROCEDURE	NA		NA		FULL ROW; REDUCE AS APPROPRIATE		BLADE WIDTH	
SOILS	SO-NOTE 1		SO-NOTE 1		SO-NOTE 1		SO-NOTE 1	

WATERCOURSE CROSSINGS	PIPELINE VEHICLE		PIPELINE VEHICLE		PIPELINE VEHICLE		PIPELINE VEHICLE	
	AQ-NOTE 3		AQ-NOTE 3		AQ-NOTE 3		AQ-NOTE 3	
	AQ-NOTE 2		AQ-NOTE 2		AQ-NOTE 2		AQ-NOTE 2	

WETLANDS	WT-NOTE 1							
FOREST TYPE (m ³ /ha)								
VEGETATION								
WILDLIFE AND FISH HABITAT								
HERITAGE / TRADITIONAL LAND USE								
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AG-NOTE 1							
SPECIAL MEASURES								

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 214 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
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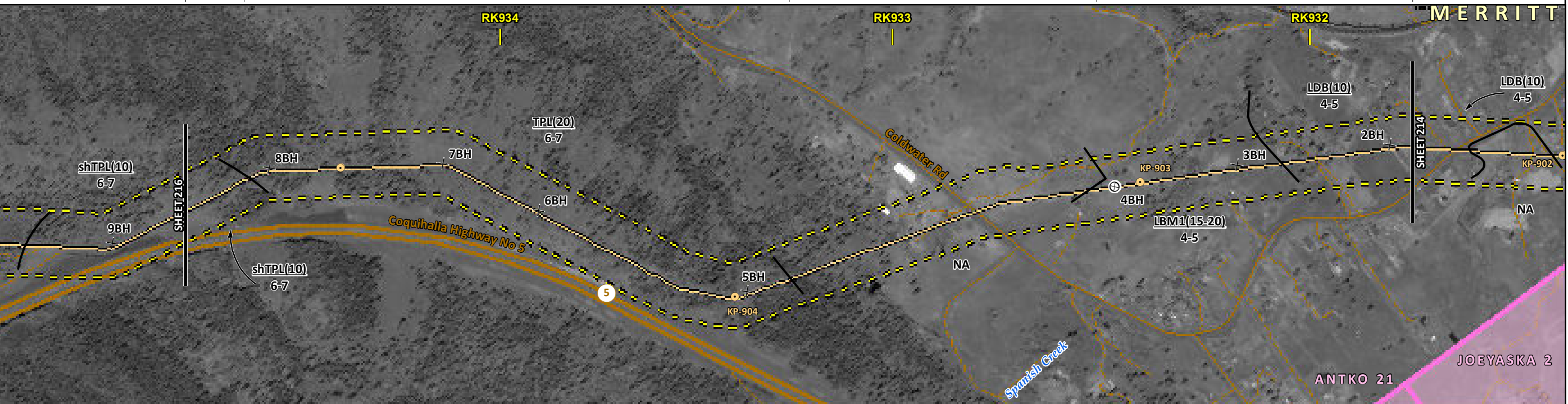
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN		THOMPSON-NICOLA REGIONAL DISTRICT		PRIVATE	
	LAND OWNERSHIP / DISPOSITION	TR0313T004		[MIXED]			
	LAND USE	TREED PASTURE		TREED	NA	TAME PASTURE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			[EQUESTRIAN]	AGRICULTURAL LAND RESERVE		
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)					
	VEGETATION						
	WETLANDS	[SE MARSH]					
	FISH HABITAT SENSITIVITY						
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[SPANISH CREEK]
SOILS PARENT MATERIAL	T/R	T	T	NA	NA	GL	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WC (NVC)]	[WC (NVC)]	[WC (NVC)]	[WC (NVC)]	[WETLAND]	[WC (NCD)]	[WC (NCD)]	
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]		[AQ-OPEN]	[AQ-OPEN]	
	SOILS HANDLING	STRIPPING DEPTH (cm)	10	20	NA	15-20	10			
	SOILS	PROCEDURE	SO-NOTE 1						SO-NOTE 1	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	
	WETLANDS								[WT-NOTE 1]	
	FOREST TYPE (m ³ /ha)									
	VEGETATION									
	WILDLIFE AND FISH HABITAT		WF-NOTE 5							
HERITAGE / TRADITIONAL LAND USE										
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								[AG-NOTE 2]		
SPECIAL MEASURES										

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

byKKL1(10)
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REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

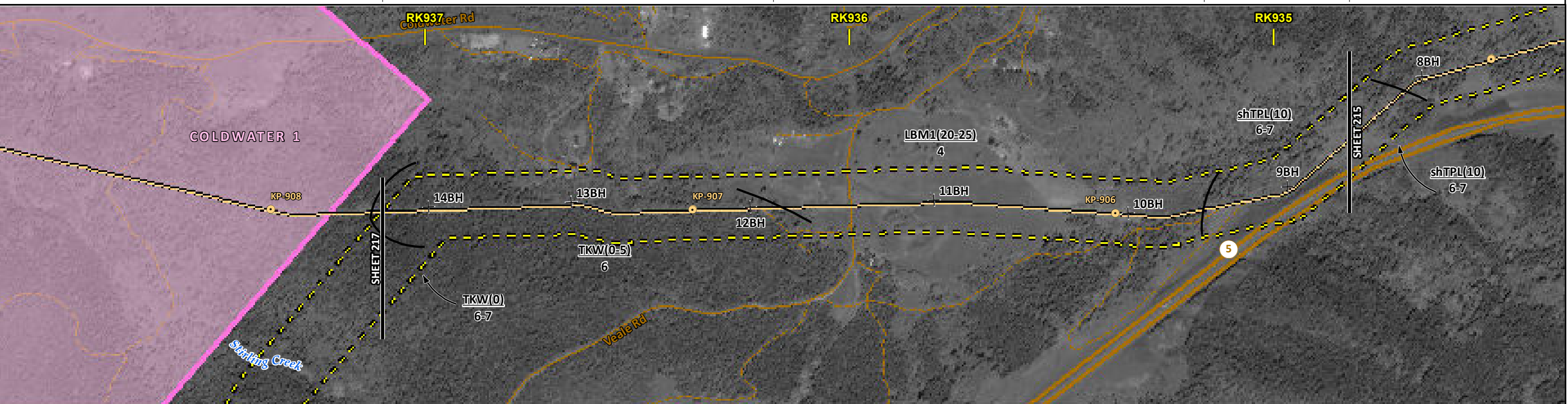
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 215 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 931.8 TO RK 934.8

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT				
	LAND OWNERSHIP / DISPOSITION	CROWN	MIXED	PRIVATE	MIXED	CROWN
	LAND USE	TR0313T004	TREED	TAME PASTURE	TREED PASTURE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT	[UNGULATE WINTER RANGE (MULE DEER)]		UNGULATE WINTER RANGE (MULE DEER)		
	VEGETATION					
	WETLANDS		SHRUBBY SWAMP	[SHRUBBY SWAMP]	[SE MARSH]	
	FISH HABITAT SENSITIVITY					
	HYDROLOGY		[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL		T	GL	T/R		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection (X)
- Soil Sample (⊗)
- Soil Break (—)
- Other Existing Pipeline (—)
- Highway (1)
- Paved Road (—)
- Trail / Rough Road (—)
- Railway (—)
- City / Town (■)
- Regional District (■)
- Indian Reserve (■)
- Park / Protected Area (■)



POTENTIAL ENVIRONMENTAL ISSUES	[WILDLIFE AREA]	WETLAND	[WC (NCD)]	[WETLAND]	[WC (NVC)]	[WC (NVC)]	[WC (NVC)]	[WETLAND]	[WC (NVC)]	WILDLIFE AREA
	WIND/WATER ER	WIND ER	WIND/WATER ER	WIND/WATER ER	WIND/WATER ER	WIND/WATER ER	WIND/WATER ER	WIND/WATER ER	WIND/WATER ER	WIND/WATER ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	
	SOILS STRIPPING DEPTH (cm)	15-20	20-25	10				
	SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE						
	SOILS	SO-NOTE 1						
	WATERCOURSE CROSSINGS PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]
	WETLANDS	WT-NOTE 1	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1]
	FOREST TYPE (m³/ha)							
	VEGETATION							
	WILDLIFE AND FISH HABITAT	[WF-NOTE 5]						WF-NOTE 5
	HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
SPECIAL MEASURES								

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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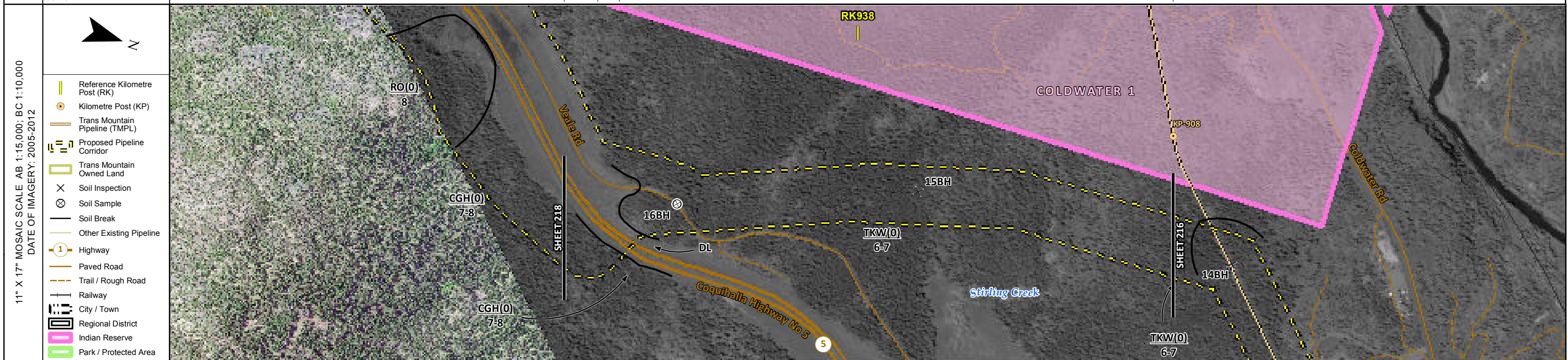
REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 216 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 934.8 TO RK 937.2

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION	CROWN
	LAND USE	TREED DL TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)
	VEGETATION	
	WETLANDS	
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	
SOILS PARENT MATERIAL	C - T	



POTENTIAL ENVIRONMENTAL ISSUES	WILDLIFE AREA
	WIND/WATER ER

CONSTRUCTION WORK WINDOW		
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
SOILS		SO-NOTE 1
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION		
WILDLIFE AND FISH HABITAT		WF-NOTE 5
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

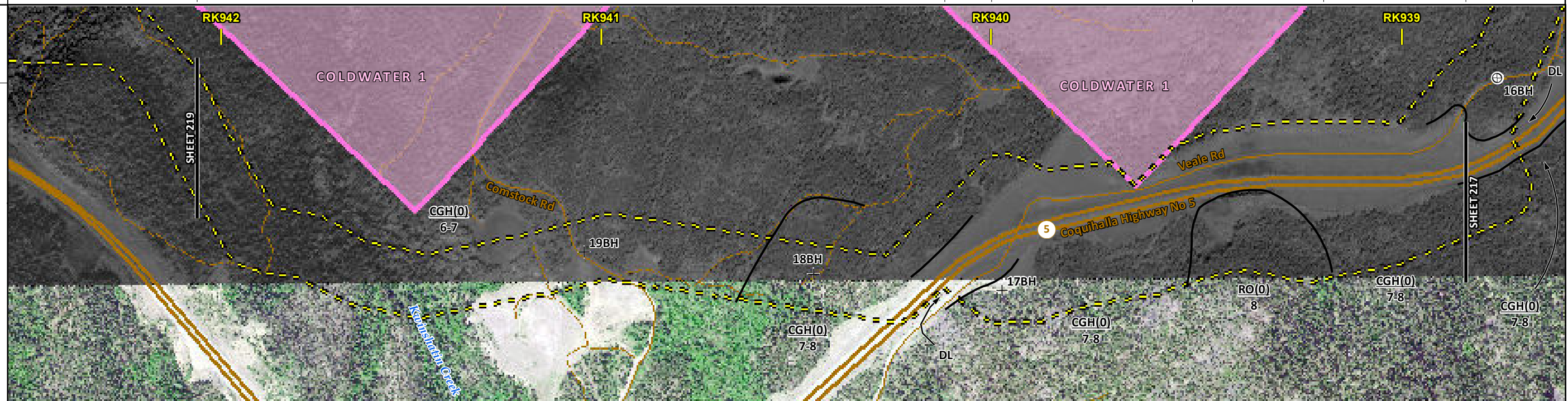
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_10N Baseline Tmpl & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 217 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT									
			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY		CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	DATE December 2013
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.												
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB												

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	CM WATR	CROWN		TR0313T004
	LAND USE	TREED	DL	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)			
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY				
	HYDROLOGY				

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
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- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WILDLIFE AREA			
	UNST TR WIND/WATER ER	UNST TR WIND/WATER ER	UNST TR WIND/WATER ER	UNST TR WIND/WATER ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW				
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	15-20	
		PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	FULL ROW; REDUCE AS APPROPRIATE	
	SOILS		SO-NOTE 1 SO-NOTE 3	SO-NOTE 1 SO-NOTE 3	SO-NOTE 3
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE			
	WETLANDS				
	FOREST TYPE (m ³ /ha)				
	VEGETATION				
	WILDLIFE AND FISH HABITAT	WF-NOTE 5			
	HERITAGE / TRADITIONAL LAND USE				

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
	DISCIPLINE EAS
	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

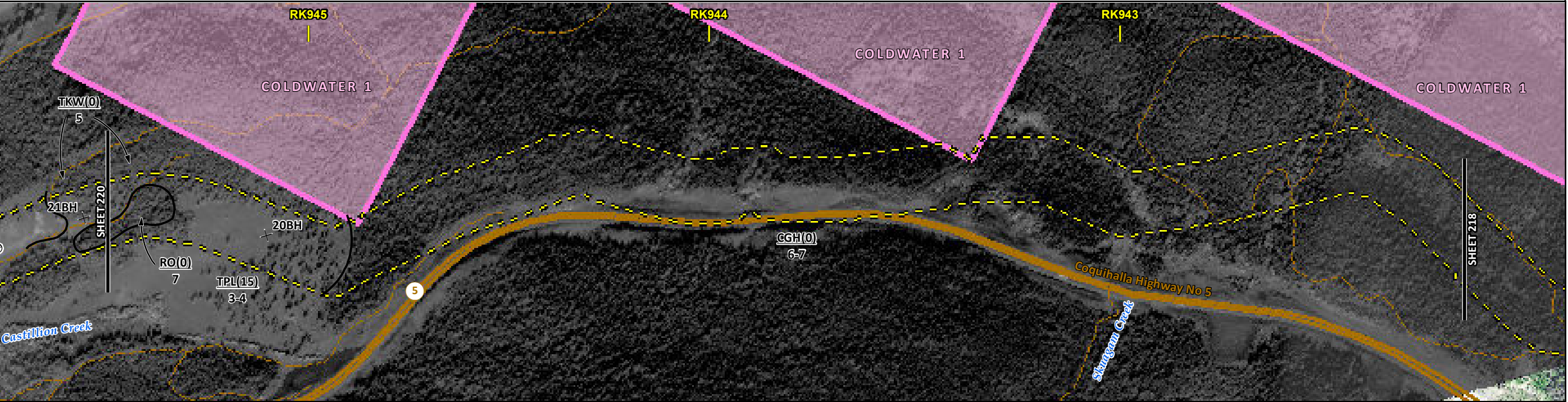
FROM RK 938.8 TO RK 942.1

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PRIVATE	THOMPSON-NICOLA REGIONAL DISTRICT	CROWN	CM WATR
	LAND OWNERSHIP / DISPOSITION	TREED PASTURE		TREED	
	LAND USE				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT		UNGULATE WINTER RANGE (MULE DEER)		
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY				
	HYDROLOGY				
SOILS PARENT MATERIAL					

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		WILDLIFE AREA	
	WATER ER	UNST TR	
	WIND/WATER ER	WIND ER	WIND/WATER ER

CONSTRUCTION WORK WINDOW				
SOILS HANDLING	STRIPPING DEPTH (cm)	10	15	15-20
	PROCEDURE			FULL ROW; REDUCE AS APPROPRIATE
SOILS				SO-NOTE 1
WATERCOURSE CROSSINGS	PIPELINE VEHICLE			SO-NOTE 3
WETLANDS				
FOREST TYPE (m ³ /ha)				
VEGETATION				
WILDLIFE AND FISH HABITAT				WF-NOTE 5
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES				

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 219 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
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		DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANSMOUNTAIN EXPANSION PROJECT

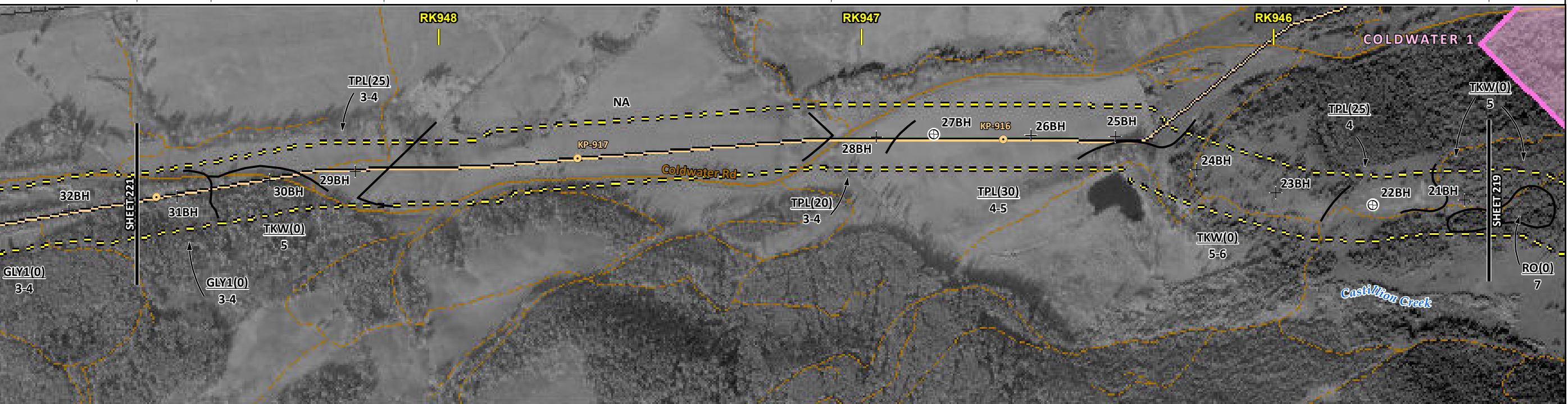
FROM RK 942.1 TO RK 945.5

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT									
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	TREED	HAY	NA	HAY	TREED PASTURE	HAY	TREED PASTURE			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE FORAGE									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS										
	FISH HABITAT SENSITIVITY										
	HYDROLOGY	[DRAINAGE]			[CASTILLION CREEK]				[DRAINAGE]		
SOILS PARENT MATERIAL	GF	T	NA	T							

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
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- City / Town
- Regional District
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- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (NVC)]	[WC (NVC)]
	UNST TR WIND ER	WIND/WATER ER	WIND ER
		WIND ER	WIND/WATER ER
			WIND ER
			WIND/WATER ER

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
SOILS STRIPPING DEPTH (cm)	15-20	25	NA
SOILS HANDLING PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE	
SOILS	SO-NOTE 3	SO-NOTE 1	SO-NOTE 1
WATERCOURSE CROSSINGS PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS			
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT			
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AG-NOTE 1	
SPECIAL MEASURES			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
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Topographic Class

REFERENCES

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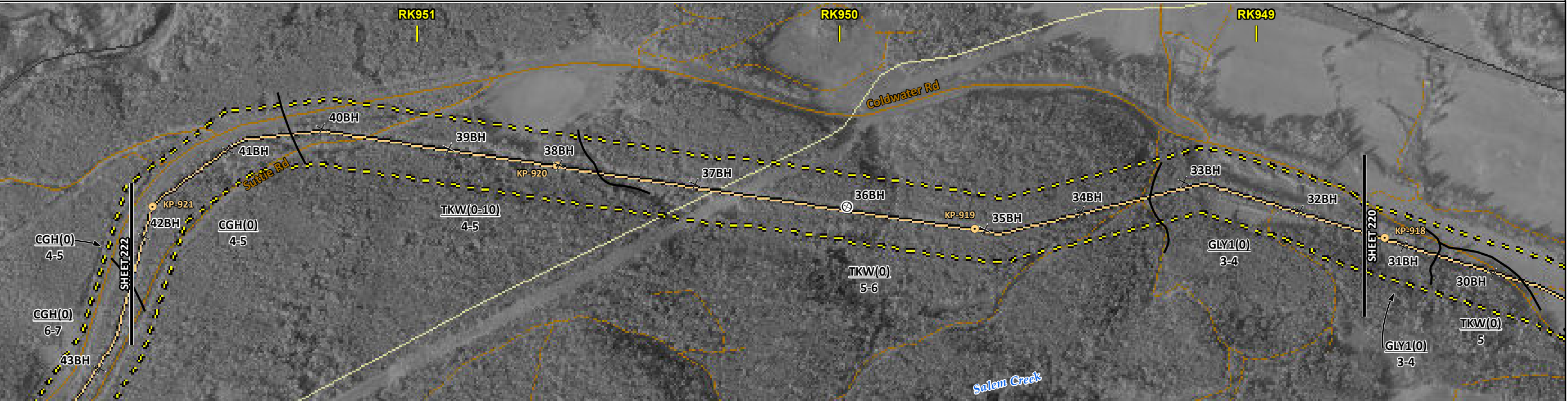
FROM RK 945.5 TO RK 948.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT								
	LAND OWNERSHIP / DISPOSITION	CROWN				MIXED	PRIVATE	MIXED	CROWN	PRIVATE
	LAND USE	TR0313T004						TR0313T004		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE								
	HERITAGE / TRADITIONAL LAND USE									
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)				UNGULATE WINTER RANGE (MULE DEER)				
	VEGETATION									
	WETLANDS									
	FISH HABITAT SENSITIVITY									
	HYDROLOGY	[DRAINAGE]				[DRAINAGE]				
SOILS PARENT MATERIAL	C				T				GF	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
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POTENTIAL ENVIRONMENTAL ISSUES	WILDLIFE AREA	[WC (NVC)]	[WC (NCD)]
		UNST TR	UNST TR WIND ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	
		PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	
	SOILS	SO-NOTE 3	SO-NOTE 1	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 2]
	WETLANDS			
	FOREST TYPE (m ³ /ha)			
	VEGETATION			
	WILDLIFE AND FISH HABITAT	WF-NOTE 5	WF-NOTE 5	
	HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES				

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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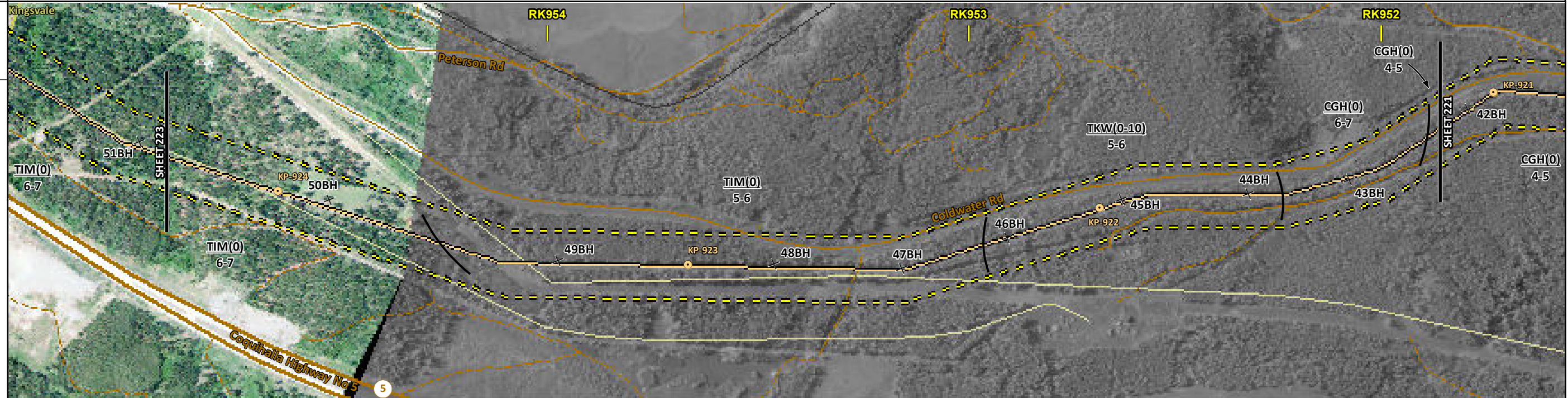
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 221 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 948.7 TO RK 951.8

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	CROWN			
	LAND USE	TR0313T004 TREED			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE			
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)			
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY				
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[CHANNEL]	[DRAINAGE]
SOILS PARENT MATERIAL	C				

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[WC (NCD)]	[WC (S6)]	[WC (NVC)]	UNST TR
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	
	SOILS HANDLING	STRIPPING DEPTH (cm)		15-20		
	SOILS HANDLING	PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE		
	SOILS			SO-NOTE 1		SO-NOTE 3
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
	WETLANDS					
	FOREST TYPE (m ³ /ha)					
	VEGETATION					
WILDLIFE AND FISH HABITAT			WF-NOTE 5			
HERITAGE / TRADITIONAL LAND USE						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						
SPECIAL MEASURES						

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 222 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 951.8 TO RK 954.9

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT										
	LAND OWNERSHIP / DISPOSITION	PRIVATE		MIXED		PRIVATE	MIXED		CROWN	PRIVATE	CROWN	
	LAND USE	TREED	NA	TREED	RIVER	HAY	TR0313T005	TR0313T005	TR0313T004	TREED	DISTURBED LAND	TR0313T004
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE										
	HERITAGE / TRADITIONAL LAND USE											
	WILDLIFE / WILDLIFE HABITAT	UNGLATE WINTER RANGE (MULE DEER)					UNGLATE WINTER RANGE (MULE DEER)					
	VEGETATION											
	WETLANDS	MXDTR SWAMP										
	FISH HABITAT SENSITIVITY	[HIGH]										
	HYDROLOGY	COLDWATER RIVER			[DRAINAGE]			[SHALLOW WELL]			[DRAINAGE]	
SOILS PARENT MATERIAL	Cf	NA	GF	GF		Cf	[SHALLOW WELL]		T	-	T	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	WETLAND		[FISH] [WC (S1B)] [NAV WATERS] [HYDROLOGY]	[WC (NVC)]	WILDLIFE AREA	[HYDROLOGY]	[WC (NCD)]	WILDLIFE AREA	[WC (NCD)]	
	CONSTRUCTION WORK WINDOW	AQ-AUG 7 TO AUG 10		[AQ-OPEN]				[AQ-OPEN]		[AQ-OPEN]	
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	NA	15-20	-	10-15		15-20		15-20
	SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE		-	FULL ROW; REDUCE AS APPROPRIATE		-	FULL ROW; REDUCE AS APPROPRIATE		-
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]		[AQ-NOTE 3]		[AQ-NOTE 3]		[AQ-NOTE 3]		[AQ-NOTE 3]
	WETLANDS		[AQ-NOTE 2]		[AQ-NOTE 2]		[AQ-NOTE 2]		[AQ-NOTE 2]		[AQ-NOTE 2]
	FOREST TYPE (m ³ /ha)		WT-NOTE 1								
	VEGETATION		[AQ-NOTE 1]								
	WILDLIFE AND FISH HABITAT		[AQ-NOTE 1]				WF-NOTE 5				WF-NOTE 5
	SPECIAL MEASURES		[AQ-NOTE 4] [HY-NOTE 1]				[HY-NOTE 2]				

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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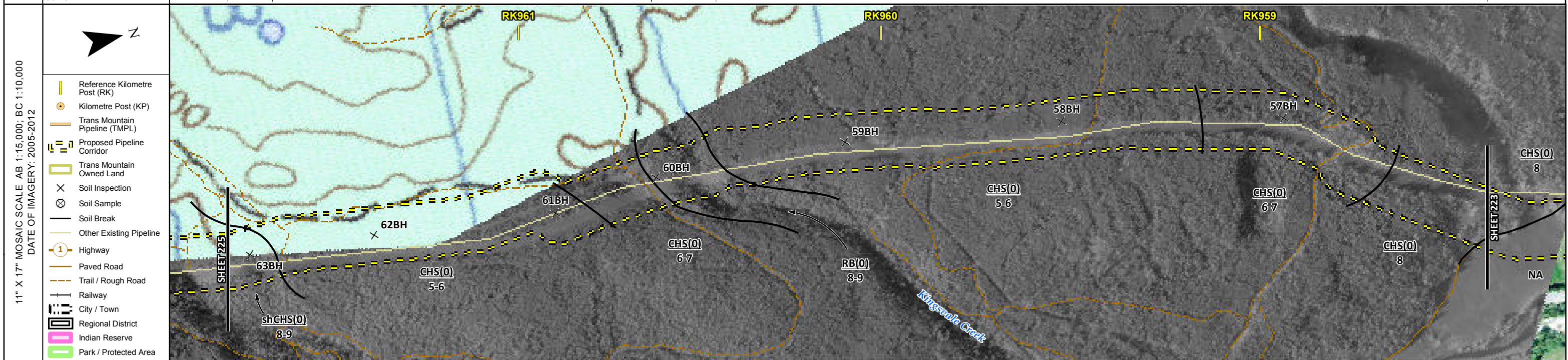
REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 223 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 954.9 TO RK 958.3

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	CROWN		
	LAND USE	TR0313T005		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	TREED		
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)		
	VEGETATION			
	WETLANDS	[SE MARSH]		
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL	Cf/R	Cf	Cf	

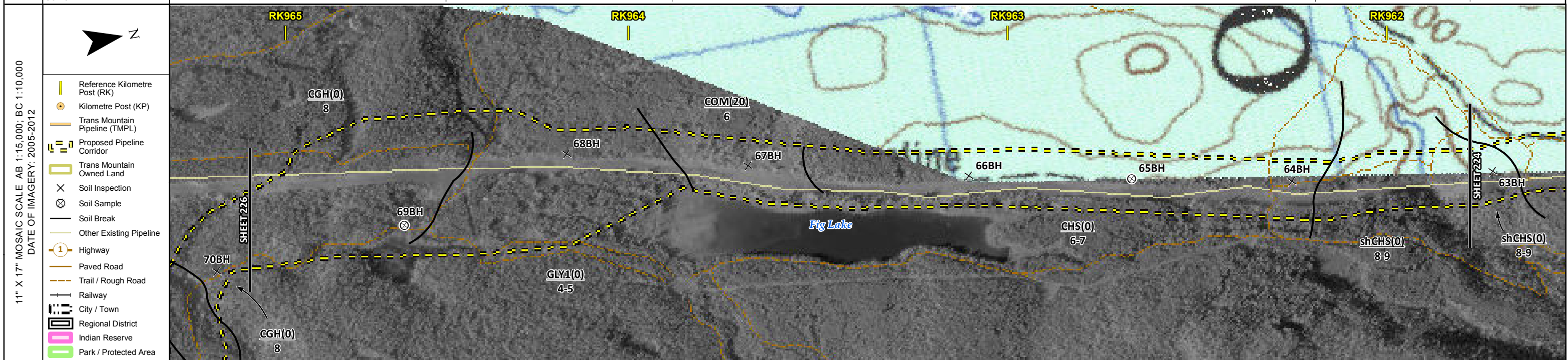


ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[WETLAND]
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	WIND/WATER ER
	SOILS HANDLING	STRIPPING DEPTH (cm)		15-20	
	SOILS HANDLING	PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE	
	SOILS			SO-NOTE 1	
	WATERCOURSE CROSSINGS	PIPELINE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	WATERCOURSE CROSSINGS	VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
	WETLANDS				[WT-NOTE 1]
	FOREST TYPE (m ³ /ha)				
	VEGETATION				
WILDLIFE AND FISH HABITAT				WF-NOTE 5	
HERITAGE / TRADITIONAL LAND USE					
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES					

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO DATE December 2013 SCALE 1:10,000 DRAWN CMR	PAGE SHEET 224 OF 301 REVISION 0 DISCIPLINE EAS DESIGN TGG	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 958.3 TO RK 961.8
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.												
	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB												

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	CROWN		
	LAND USE	TR0313T005 TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)		
	VEGETATION			
	WETLANDS			
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	SHALLOW GW		
SOILS PARENT MATERIAL	C	GF	Cf	Ci/R



POTENTIAL ENVIRONMENTAL ISSUES	WILDLIFE AREA	
	HYDROLOGY	
	WIND/WATER ER	

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	15-20 20 15-20
	SOILS	SO-NOTE 3 SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
	WETLANDS	
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	WF-NOTE 5
	HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES	HY-NOTE 1	

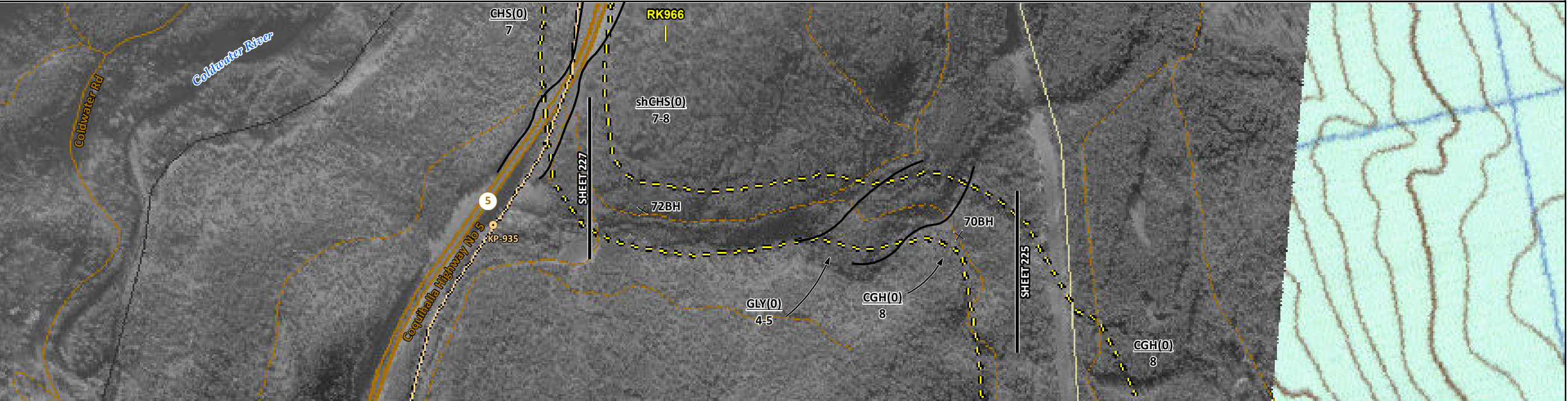
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 225 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 961.8 TO RK 965.1 				
			NO.	DATE	DESCRIPTION	BY	CHKD.		APPR.	DATE	TERA REF.	REVISION
			0	Dec 16, 2013	Issued for NEB filing	CMR	DN		TW/GB	December 2013	7894	0
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						DRAWN	CHECKED	DESIGN				
						CMR	DN	TGG				

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION	CROWN
	LAND USE	TR0313T005 TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)
	VEGETATION	
	WETLANDS	
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	[DRAINAGE]
SOILS PARENT MATERIAL	C/R GF C	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
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- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WILDLIFE AREA	[WC (NVC)]	WIND/WATER ER	UNST TR
		[AQ-OPEN]		

CONSTRUCTION WORK WINDOW		
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
		SO-NOTE 1
		SO-NOTE 3
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION		
WILDLIFE AND FISH HABITAT		WF-NOTE 5
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 226 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
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		DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

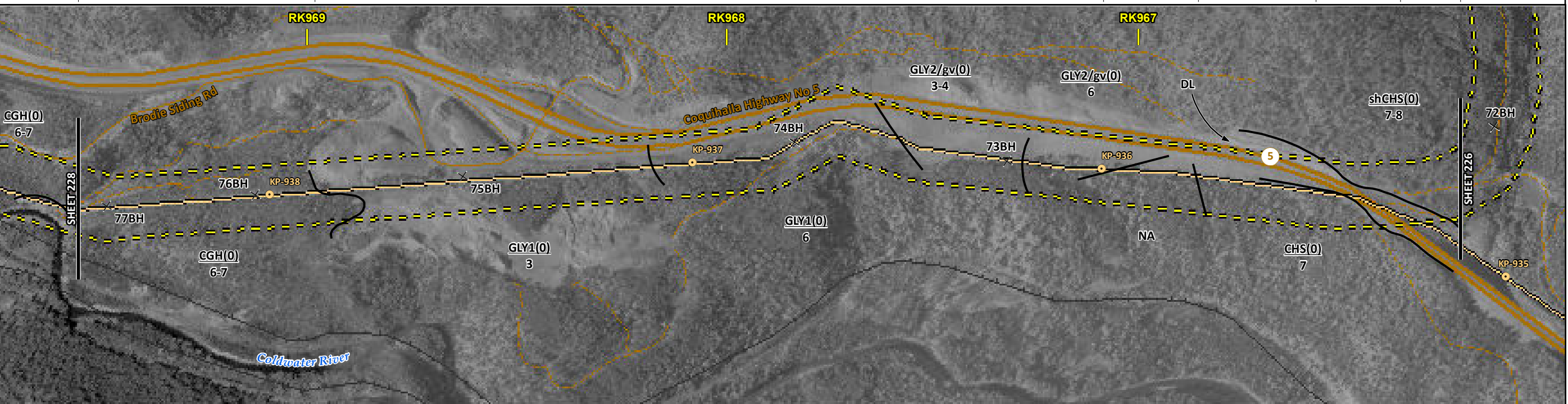
FROM RK 965.1 TO RK 966.2

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT				
	LAND OWNERSHIP / DISPOSITION	CROWN				
	LAND USE	TREED	TR0313T005	DISTURBED LAND	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT	UNGULATE WINTER RANGE (MULE DEER)				
	VEGETATION					
	WETLANDS					
	FISH HABITAT SENSITIVITY					
	HYDROLOGY					
SOILS PARENT MATERIAL	C	GF	NA	Cf	-	Cf/R

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
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POTENTIAL ENVIRONMENTAL ISSUES	WIND/WATER ER				WIND ER	UNST TR	WIND/WATER ER	WIND ER	WIND/WATER ER	WIND/WATER ER	WIND/WATER ER
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW				
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	15-20	
		PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	FULL ROW; REDUCE AS APPROPRIATE	
	SOILS		SO-NOTE 1 SO-NOTE 3	SO-NOTE 1	SO-NOTE 1
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE			
	WETLANDS				
	FOREST TYPE (m ³ /ha)				
	VEGETATION				
	WILDLIFE AND FISH HABITAT	WF-NOTE 5			
	HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES					

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 227 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

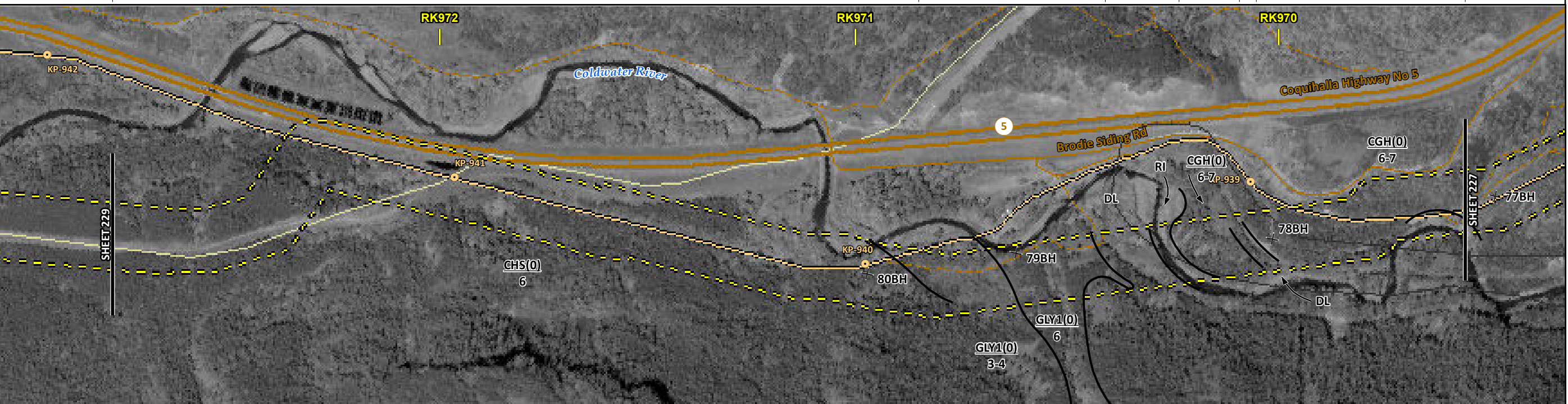
FROM RK 966.2 TO RK 969.5

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	MIXED		THOMPSON-NICOLA REGIONAL DISTRICT		CROWN	
	LAND OWNERSHIP / DISPOSITION	ENV C&R		TR0313T005			
	LAND USE	TREED				DL	RIVER
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					TREED	DL
	HERITAGE / TRADITIONAL LAND USE					TREED	
	WILDLIFE / WILDLIFE HABITAT					UNGULATE WINTER RANGE (MULE DEER)	
	VEGETATION						
	WETLANDS	[OPEN POND]		BLT SWAMP			
	FISH HABITAT SENSITIVITY						
	HYDROLOGY	[DRAINAGE]	[CHANNEL]	[CHANNEL]	[CHANNEL]		
SOILS PARENT MATERIAL	NS		GF		C		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (S6/S3)] [WETLAND] [NAV WATERS]	[WC (S6/S4)] WETLAND	WILDLIFE AREA	[WC (S5)]
				UNST TR WIND/WATER ER	UNST TR WIND/WATER ER

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-JUL 15 TO AUG 15]	[AQ-OPEN]	[AQ-OPEN]
SOILS STRIPPING DEPTH (cm)	15-20			
HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			
SOILS			SO-NOTE 1 SO-NOTE 3	SO-NOTE 1 SO-NOTE 3
WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
PIPELINE VEHICLE		[WT-NOTE 1] [WT-NOTE 2]	[WT-NOTE 1]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS				
FOREST TYPE (m ² /ha)				
VEGETATION				
WILDLIFE AND FISH HABITAT				WF-NOTE 5
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES				

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

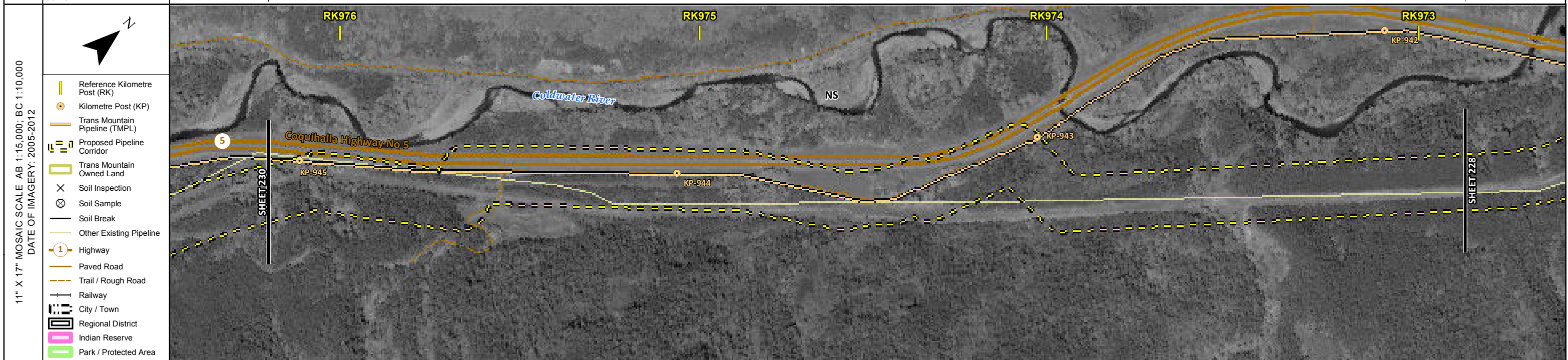
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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 228 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 969.5 TO RK 972.9

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	CROWN ENV C&R TR0313T005 TREED	
	LAND USE	[MIXED]	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT	[AMPH-STREAM]	
	VEGETATION		
	WETLANDS	[SHRUBBY SWAMP]	
	FISH HABITAT SENSITIVITY	[HIGH]	
	HYDROLOGY	[DRAINAGE]	[CHANNEL]
SOILS PARENT MATERIAL	NS		

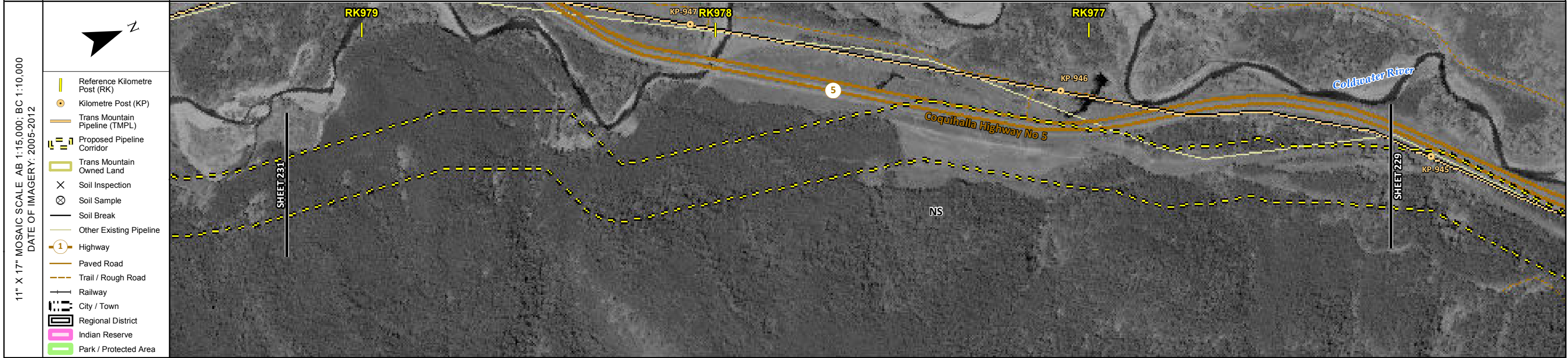


ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WETLAND]	[FISH] [WC (S3)]
	CONSTRUCTION WORK WINDOW	[WF-NOTE 4]	[AQ-OPEN]	[AQ-JUL 22 TO OCT 31]
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	FULL ROW; REDUCE AS APPROPRIATE
	SOILS			
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]
	WETLANDS		[AQ-NOTE 2]	[AQ-NOTE 2]
	FOREST TYPE (m ³ /ha)		[WF-NOTE 1]	
	VEGETATION			
	WILDLIFE AND FISH HABITAT	[WF-NOTE 1]		[AQ-NOTE 1]
	HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES				

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO DATE December 2013 SCALE 1:10,000 DRAWN CMR	PAGE SHEET 229 OF 301 REVISION 0 TERA REF. 7894 PAGE SIZE 11x17 CHECKED DN DISCIPLINE EAS DESIGN TGG	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 972.9 TO RK 976.2
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.												
	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB												

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	ENV C&R	CROWN	ENV C&R
	LAND USE	TREED	TR0313T005	NS
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT	AMPH-STREAM		AMPH-STREAM
	VEGETATION			
	WETLANDS	SE MARSH		
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	DRAINAGE		
SOILS PARENT MATERIAL	NS			



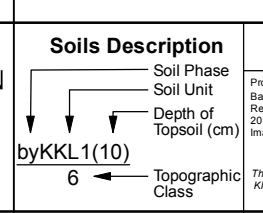
POTENTIAL ENVIRONMENTAL ISSUES	WC (NVC) WETLAND	WF FEATURE	WF FEATURE
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CONSTRUCTION WORK WINDOW	SOILS STRIPPING DEPTH (cm)	15-20	NS	15-20	WF-NOTE 4
SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE				

WATERCOURSE CROSSINGS	PIPELINE VEHICLE	AQ-NOTE 3	AQ-NOTE 2	WT-NOTE 1
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WETLANDS	FOREST TYPE (m ³ /ha)	VEGETATION	WILDLIFE AND FISH HABITAT	WF-NOTE 1
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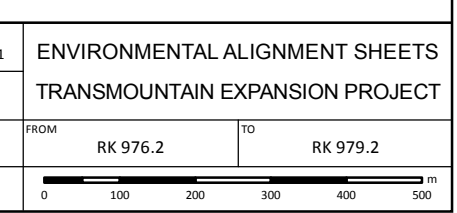
HERITAGE / TRADITIONAL LAND USE	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	SPECIAL MEASURES
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REFERENCES	
Projection: NAD_1983_UTM_Zone_10N	Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.
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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 230 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

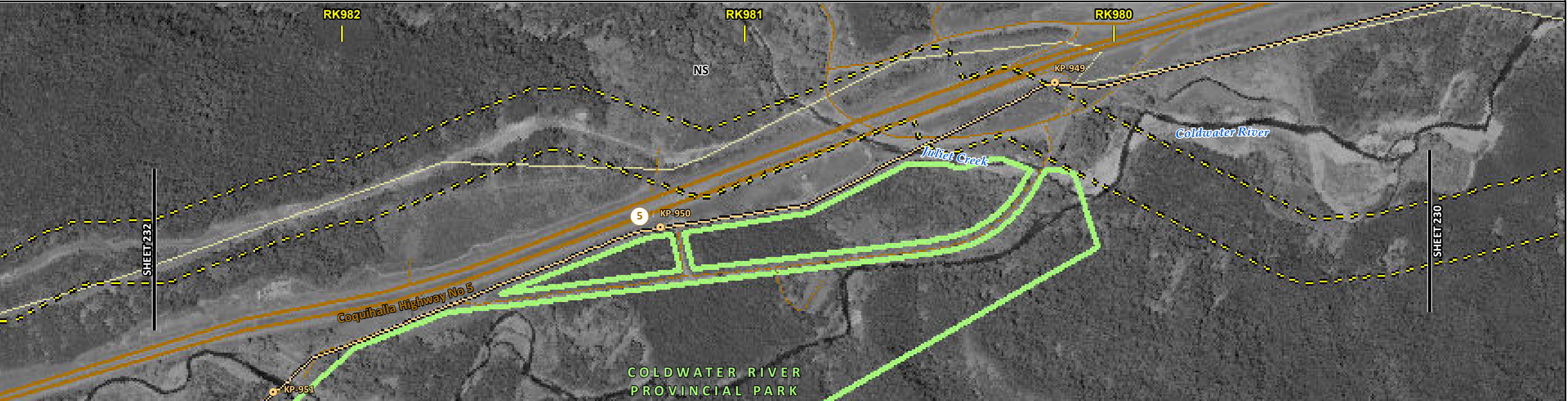


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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	CROWN	MIXED	PRIVATE	CROWN
	LAND USE	TR0313T003	TREED	TR0313T003	TR0313T005
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS				[SE MARSH]
	FISH HABITAT SENSITIVITY			[HIGH]	[HIGH]
	HYDROLOGY			[JULIET CREEK]	[COLDWATER RIVER]
SOILS PARENT MATERIAL			NS		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
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- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		[FISH] [WC (S1B)] [NAV WATERS]	[FISH] [WC (S1B)] [WETLAND] [NAV WATERS]
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CONSTRUCTION WORK WINDOW		[AQ-JUL 15 TO AUG 15]	[AQ-JUL 15 TO AUG 1]
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE	15-20 FULL ROW; REDUCE AS APPROPRIATE	15-20 FULL ROW; REDUCE AS APPROPRIATE
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2] [WT-NOTE 1]
WETLANDS			
FOREST TYPE (m ³ /ha)			
VEGETATION		[AQ-NOTE 1]	[AQ-NOTE 1]
WILDLIFE AND FISH HABITAT		[AQ-NOTE 1]	[AQ-NOTE 1]
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES		[AQ-NOTE 4]	[AQ-NOTE 4]

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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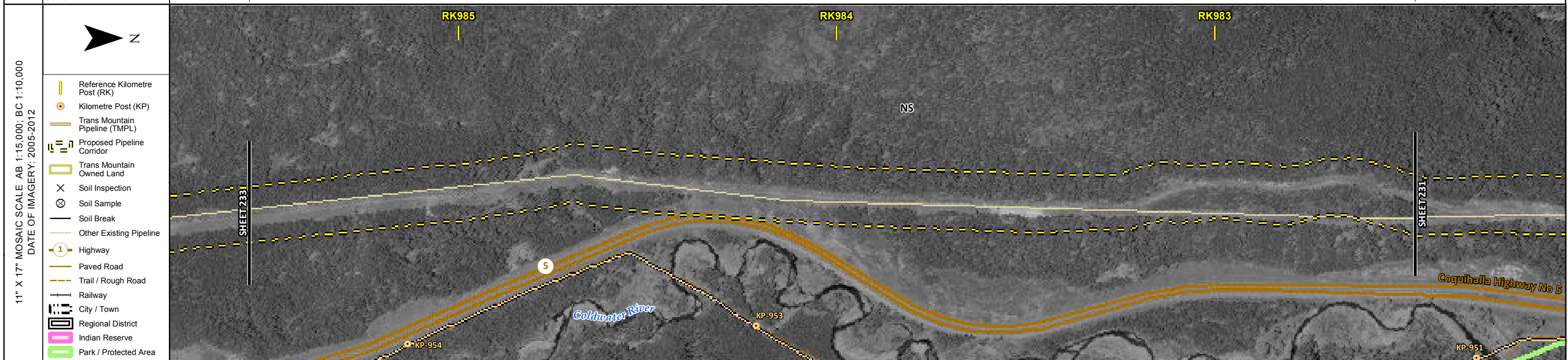
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 231 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
DISCIPLINE EAS	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 979.2 TO RK 982.5

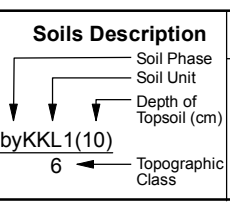
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	CROWN	
	LAND USE	TR0313T003 TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		
	VEGETATION		
	WETLANDS		
	FISH HABITAT SENSITIVITY		
	HYDROLOGY	[CHANNEL]	[CHANNEL]
SOILS PARENT MATERIAL			NS



POTENTIAL ENVIRONMENTAL ISSUES	[WC (S6)]	[WC (S6)]
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CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
SOILS		
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION		
WILDLIFE AND FISH HABITAT		
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		



REFERENCES	
Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: Altalis, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: Altalis, 2009; First Nation Lands: Government of Canada, 2013; Altalis, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; Altalis, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.	
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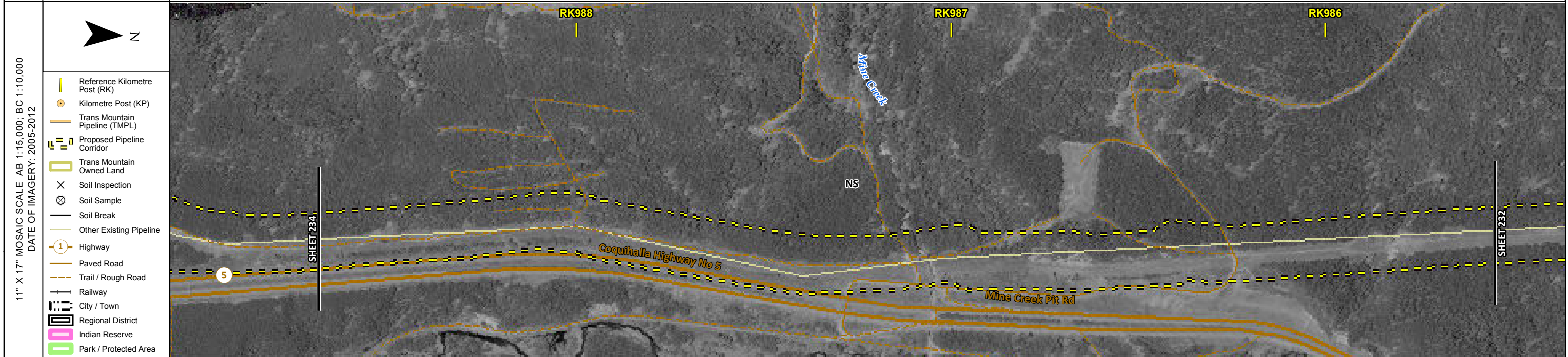
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 232 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 982.5 TO RK 985.6

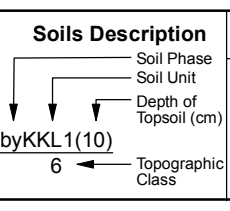
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	CROWN		
	LAND USE	TR0313T003 TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION	[BOTRALA]		
	WETLANDS			
	FISH HABITAT SENSITIVITY	[HIGH]		
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	[MINE CR/DRAINAGE]
SOILS PARENT MATERIAL	NS			



POTENTIAL ENVIRONMENTAL ISSUES	[RARE PLANTS]	[WC (NCD)]	[WC (NCD)]	[FISH] [WC (S2)] [WC (NVC)] [NAV WATERS]	[WC (S6)]
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CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-JUL 22 TO AUG 15]	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE			
	15-20 FULL ROW; REDUCE AS APPROPRIATE			
SOILS				
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS				
FOREST TYPE (m ³ /ha)				
VEGETATION	[VG-NOTE 1]			
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]			
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES	[AQ-NOTE 4]			



REFERENCES

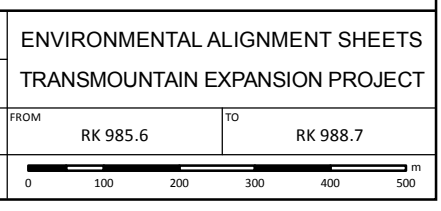
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Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 233 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG



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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	THOMPSON-NICOLA REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	ENV C&R TR0313T005	CROWN	TR0313T003
	LAND USE	TREED	NS	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS	[SE MARSH]		
	FISH HABITAT SENSITIVITY			
	HYDROLOGY			
SOILS PARENT MATERIAL	NS			



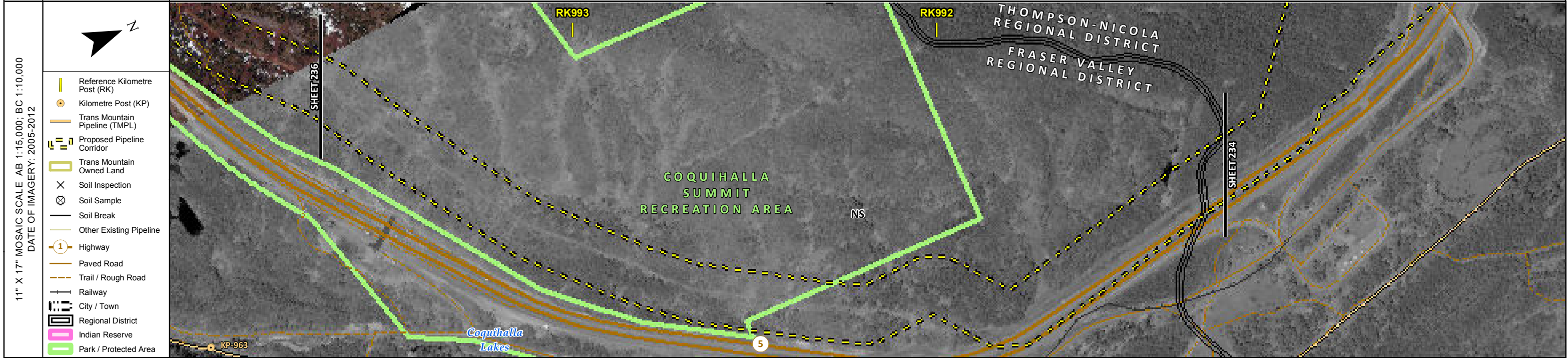
POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	15-20 NS 15-20 FULL ROW, REDUCE AS APPROPRIATE
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
	WETLANDS	[WT-NOTE 1]
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES		

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	<table border="1"> <tr> <td>MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO</td> <td>PAGE SHEET 234 OF 301</td> </tr> <tr> <td>DATE December 2013</td> <td>TERA REF. 7894</td> </tr> <tr> <td>SCALE 1:10,000</td> <td>PAGE SIZE 11x17</td> </tr> <tr> <td>DRAWN CMR</td> <td>CHECKED DN</td> </tr> </table>	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 234 OF 301	DATE December 2013	TERA REF. 7894	SCALE 1:10,000	PAGE SIZE 11x17	DRAWN CMR	CHECKED DN	<table border="1"> <tr> <td>ENVIRONMENTAL ALIGNMENT SHEETS</td> </tr> <tr> <td>TRANS MOUNTAIN EXPANSION PROJECT</td> </tr> <tr> <td>FROM RK 988.7</td> <td>TO RK 991.1</td> </tr> <tr> <td colspan="2"> </td> </tr> </table>	ENVIRONMENTAL ALIGNMENT SHEETS	TRANS MOUNTAIN EXPANSION PROJECT	FROM RK 988.7	TO RK 991.1		
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.																									
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TRANS MOUNTAIN EXPANSION PROJECT																															
FROM RK 988.7	TO RK 991.1																														

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	COQUIHALLA SUMMIT RECREATION AREA	CROWN	FRASER VALLEY REGIONAL DISTRICT	THOMPSON-NICOLA REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION	PROT GOA800753	TREED	GOA800753; TR0313T005	ENV C&R TR0313T005
	LAND USE				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS			[SE MARSH]	[OPEN POND]
	FISH HABITAT SENSITIVITY				
	HYDROLOGY				
SOILS PARENT MATERIAL		NS			



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[WETLAND] [NAV WATERS]
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	15-20 FULL ROW; REDUCE AS APPROPRIATE
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
	WETLANDS	[WT-NOTE 1] [WT-NOTE 2]
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES		

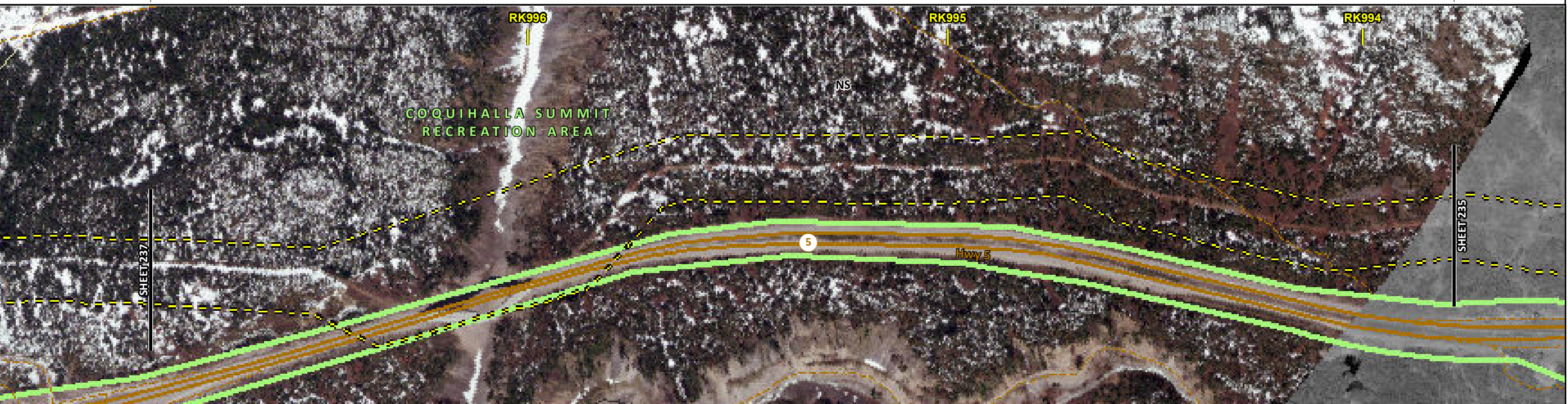
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	<table border="1"> <tr> <td>MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO</td> <td>PAGE SHEET 235 OF 301</td> </tr> <tr> <td>DATE December 2013</td> <td>TERA REF. 7894</td> </tr> <tr> <td>SCALE 1:10,000</td> <td>PAGE SIZE 11x17</td> </tr> <tr> <td>DRAWN CMR</td> <td>CHECKED DN</td> </tr> </table>	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 235 OF 301	DATE December 2013	TERA REF. 7894	SCALE 1:10,000	PAGE SIZE 11x17	DRAWN CMR	CHECKED DN	<table border="1"> <tr> <td>REVISION 0</td> <td>DISCIPLINE EAS</td> <td>DESIGN TGG</td> </tr> </table>	REVISION 0	DISCIPLINE EAS	DESIGN TGG	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 991.1 TO RK 993.8
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.																							
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION		COQUIHALLA SUMMIT RECREATION AREA
	LAND OWNERSHIP / DISPOSITION		CROWN PROT GOA800753
	LAND USE		TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		
	VEGETATION		
	WETLANDS		
	FISH HABITAT SENSITIVITY		
	HYDROLOGY		
SOILS PARENT MATERIAL			NS

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES

CONSTRUCTION WORK WINDOW	
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
SOILS	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE
WETLANDS	
FOREST TYPE (m ³ /ha)	
VEGETATION	
WILDLIFE AND FISH HABITAT	
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	

	15-20	
	FULL ROW; REDUCE AS APPROPRIATE	

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

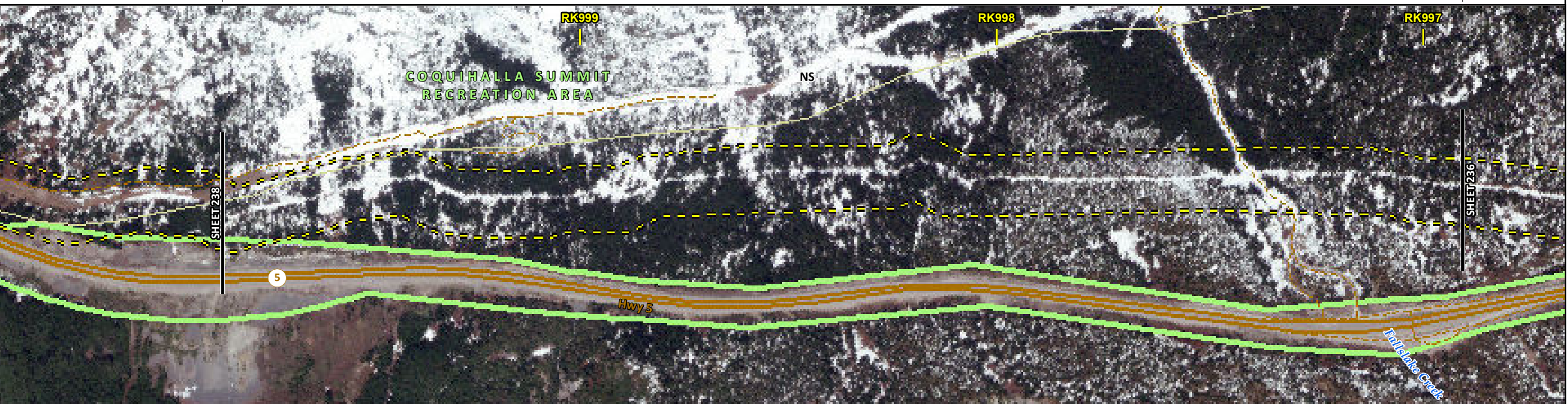
FROM RK 993.8 TO RK 996.9

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	COQUIHALLA SUMMIT RECREATION AREA	
	LAND OWNERSHIP / DISPOSITION	GOA800753; TR0202T008	CROWN PROT GOA800753
	LAND USE		TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT	AMPH-STREAM	AMPH-STREAM
	VEGETATION		
	WETLANDS		
	FISH HABITAT SENSITIVITY		[HIGH] [FALLSLAKE CREEK]
	HYDROLOGY		
SOILS PARENT MATERIAL		NS	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
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- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES										[FISH] [WC (S3)]

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW									[AQ-AUG 1 TO OCT 31]
	SOILS HANDLING	STRIPPING DEPTH (cm)								
		PROCEDURE								
	SOILS									
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE								[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS									
	FOREST TYPE (m ³ /ha)									
	VEGETATION									
	WILDLIFE AND FISH HABITAT									
	HERITAGE / TRADITIONAL LAND USE									
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS										
SPECIAL MEASURES										

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

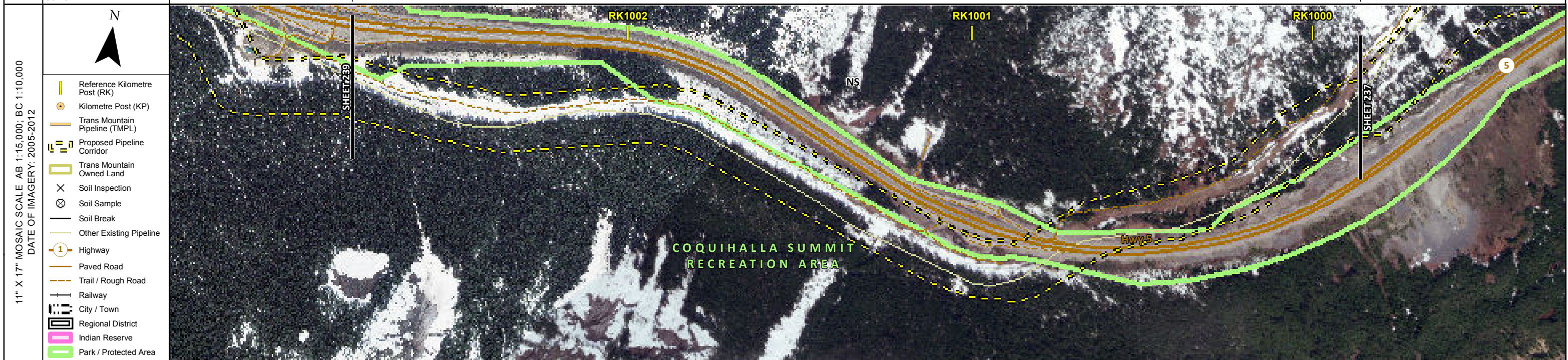
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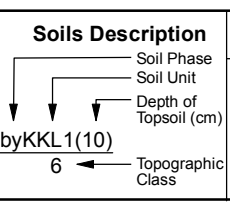
FROM RK 996.9 TO RK 999.9

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	COQUIHALLA SUMMIT RECREATION AREA	[FRASER VALLEY REGIONAL DISTRICT]	COQUIHALLA SUMMIT RECREATION AREA
	LAND OWNERSHIP / DISPOSITION		CROWN PROT GOA800753; TR0202T008	
	LAND USE		TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS			
	FISH HABITAT SENSITIVITY			
	HYDROLOGY			
SOILS PARENT MATERIAL		NS		



POTENTIAL ENVIRONMENTAL ISSUES

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	15-20 FULL ROW; REDUCE AS APPROPRIATE
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
	WETLANDS	
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES		



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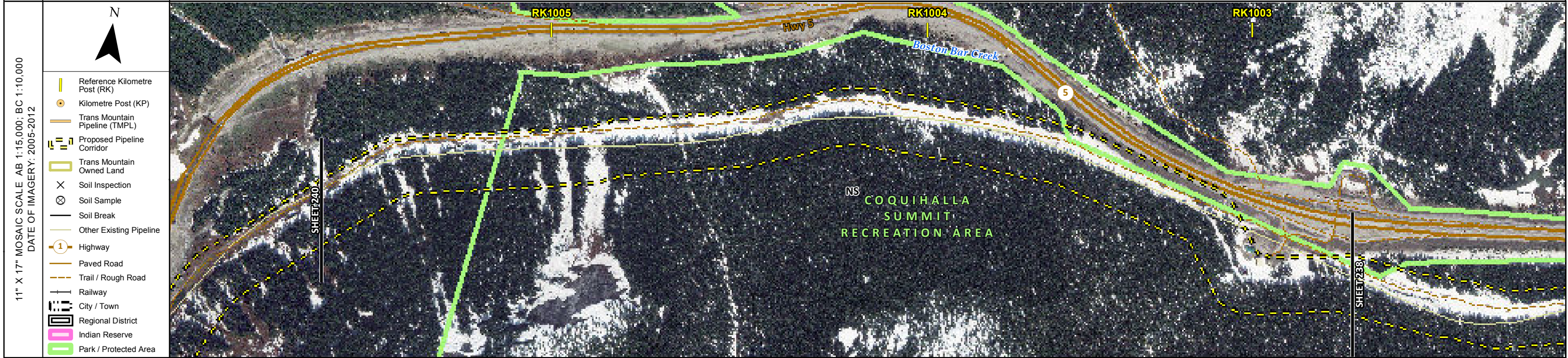
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SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 999.9 TO RK 1002.7

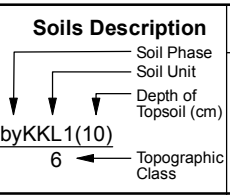
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT	COQUIHALLA SUMMIT RECREATION AREA
	LAND OWNERSHIP / DISPOSITION		CROWN PROT GOA800753; TR0202T008
	LAND USE		TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		AMPH-STREAM
	VEGETATION		
	WETLANDS		
	FISH HABITAT SENSITIVITY		
	HYDROLOGY		



POTENTIAL ENVIRONMENTAL ISSUES		WF FEATURE
--------------------------------	--	------------

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW		WF-NOTE 4
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE	15-20 FULL ROW, REDUCE AS APPROPRIATE
	SOILS		
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	
	WETLANDS		
	FOREST TYPE (m ³ /ha)		
	VEGETATION		
	WILDLIFE AND FISH HABITAT		WF-NOTE 1
	HERITAGE / TRADITIONAL LAND USE		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		



REFERENCES	
<small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small>	
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REVISION HISTORY						
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 239 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
DISCIPLINE EAS	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS	
TRANS MOUNTAIN EXPANSION PROJECT	
FROM RK 1002.7	TO RK 1005.6

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	CROWN	
	LAND USE	GOA800753; TR0202T008 TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT	[AMPH-STREAM]	AMPH-STREAM
	VEGETATION	[ABIE/THUJ/OPLO]	
	WETLANDS		
	FISH HABITAT SENSITIVITY		
	HYDROLOGY		
SOILS PARENT MATERIAL	NS		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WF FEATURE]	WF FEATURE
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[WF-NOTE 4]	WF-NOTE 4
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20
		PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
	SOILS		
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	
	WETLANDS		
	FOREST TYPE (m ³ /ha)		
	VEGETATION	[VG-NOTE 1]	
	WILDLIFE AND FISH HABITAT	[WF-NOTE 1]	WF-NOTE 1
	HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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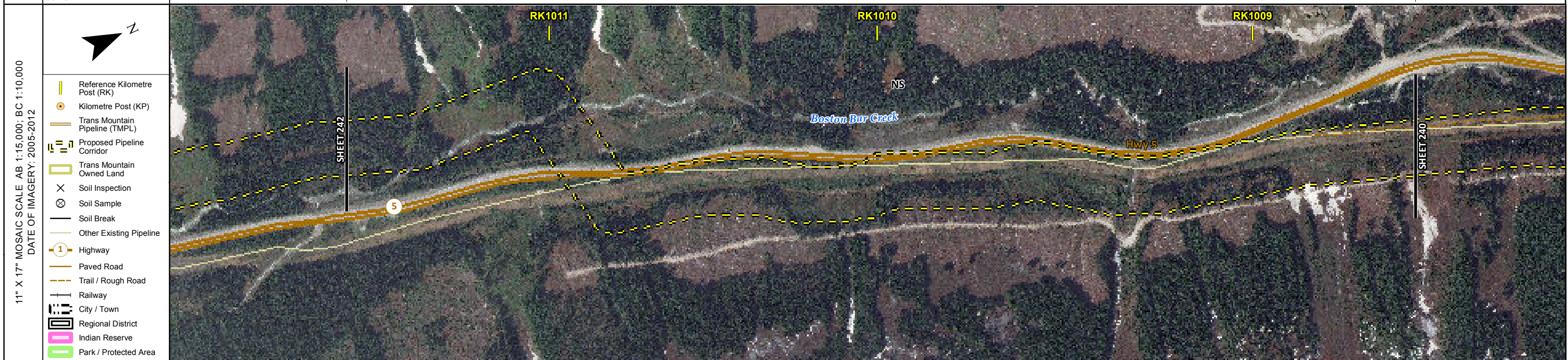
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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 240 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 1005.6 TO RK 1008.6

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	CROWN		
	LAND USE	GOA800753; TR0202T008 TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT	AMPH-STREAM	AMPH-STREAM	AMPH-STREAM
	VEGETATION			
	WETLANDS			
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	[CHANNEL][CHANNEL]	[CHANNEL]	[CHANNEL]
SOILS PARENT MATERIAL	NS			

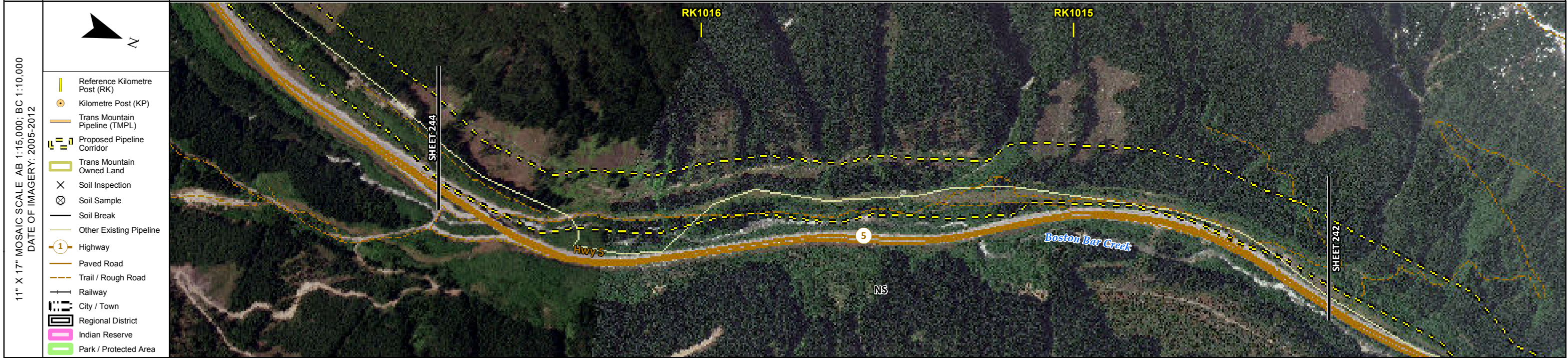


POTENTIAL ENVIRONMENTAL ISSUES	[WC (S6)] [WC (S6)]	[WC (S5)] [NAV WATERS] WF FEATURE	[WC (S6)]
CONSTRUCTION WORK WINDOW	[AQ-OPEN] [AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
SOILS STRIPPING DEPTH (cm)	WF-NOTE 4	15-20	WF-NOTE 4
SOILS HANDLING PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE	
SOILS			
WATERCOURSE CROSSINGS PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
	[AQ-NOTE 2] [AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS			
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT	WF-NOTE 1	WF-NOTE 1	WF-NOTE 1
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES		[AQ-NOTE 4]	

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved. This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.	REVISION HISTORY			MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 241 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 1008.6 TO RK 1011.6 							
			<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY		CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.										
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB										

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT							
	LAND OWNERSHIP / DISPOSITION	CROWN							
	LAND USE	GOA800753; TR0202T008 TREED							
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT	AMPH-STREAMS				AMPH-STREAMS			
	VEGETATION								
	WETLANDS								
	FISH HABITAT SENSITIVITY								
	HYDROLOGY	[DRAINAGE]	[CHANNEL]	[CHANNEL]	[DRAINAGE]	[CHANNEL]	[CHANNEL]	[CHANNEL]	[CHANNEL]
SOILS PARENT MATERIAL	NS								

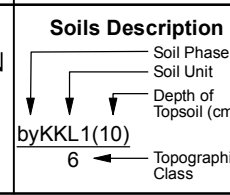


POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (S6)]	[WC (S6)]	[WC (NCD)]	[WC (S5)]	[WC (S5)]	[WC (S5)]	[WC (S5)]	[WC (S5)]	[WC (S6)]	[WC (S5)]
	WF FEATURES			[NAV WATERS]			WF FEATURES				

CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm)		WF-NOTE 4		15-20		WF-NOTE 4				
	PROCEDURE										
	FULL ROW; REDUCE AS APPROPRIATE										

SOILS											
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
		[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]

WETLANDS											
FOREST TYPE (m ³ /ha)											
VEGETATION											
WILDLIFE AND FISH HABITAT	WF-NOTE 1					WF-NOTE 1					
HERITAGE / TRADITIONAL LAND USE											
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											
SPECIAL MEASURES	[AQ-NOTE 4]										



REFERENCES	
Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.	
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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 243 OF 301
DATE	December 2013	TERA REF.	7894
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DRAWN	CMR	CHECKED	DN
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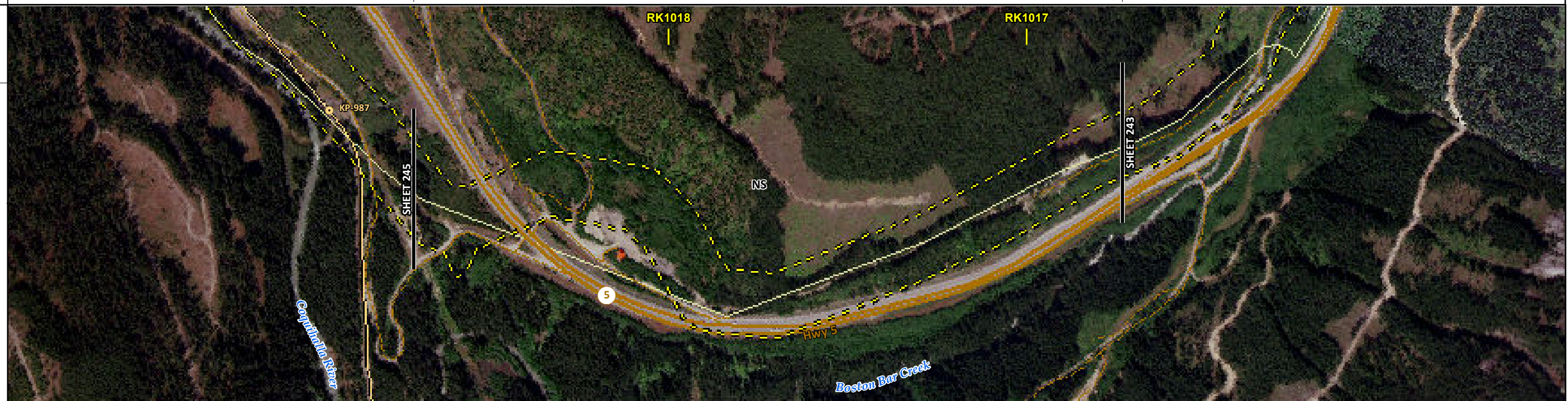
ENVIRONMENTAL ALIGNMENT SHEETS	
TRANS MOUNTAIN EXPANSION PROJECT	
FROM	TO
RK 1014.3	RK 1016.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION	CROWN
	LAND USE	TREED DL TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	
	VEGETATION	
	WETLANDS	
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	[CHANNEL]
SOILS PARENT MATERIAL	NS	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		[WC (S6)]
CONSTRUCTION WORK WINDOW		[AQ-OPEN]
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20 - 15-20
SOILS HANDLING	PROCEDURE	[FULL ROW; REDUCE AS APPROPRIATE] [FULL ROW; REDUCE AS APPROPRIATE]
WATERCOURSE CROSSINGS		[AQ-NOTE 3] [AQ-NOTE 2]
PIPELINE VEHICLE		
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION		
WILDLIFE AND FISH HABITAT		
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES	
<small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small>	
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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 244 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANS MOUNTAIN EXPANSION PROJECT

FROM RK 1016.7 TO RK 1018.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION		MIXED]	FRASER VALLEY REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION			CROWN	
	LAND USE			GOA800753; TR0202T008	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			TREED	
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT			AMPH-STREAMS	AMPH-STREAMS
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY			[HIGH]	[HIGH] [HIGH]
	HYDROLOGY		[LADNER CREEK]	[CHANNEL] [CHANNEL] [CHANNEL]	[CHANNEL] [CHANNEL] [CHANNEL]
SOILS PARENT MATERIAL			NS		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[FISH]			[FISH] [FISH]	
	[WC (S2)]	[WC (S6)]	[WC (S3)] [WC (S6)]	[WC (S3)] [WC (S2)]	[WC (S6)]
	[NAV WATERS]	[NAV WATERS] WF FEATURES	[NAV WATERS] WF FEATURES		

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-AUG 1 TO AUG 31]	[AQ-OPEN] [AQ-OPEN] [AQ-OPEN]	[AQ-AUG 1 TO OCT 31] [AQ-OPEN]	[AQ-OPEN]
	SOILS STRIPPING DEPTH (cm)		15-20		
	SOILS HANDLING PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE		
	WATERCOURSE CROSSINGS PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 3] [AQ-NOTE 3]	[AQ-NOTE 3] [AQ-NOTE 3]	[AQ-NOTE 3]
	WETLANDS		[AQ-NOTE 2] [AQ-NOTE 2] [AQ-NOTE 2]	[AQ-NOTE 2] [AQ-NOTE 2]	[AQ-NOTE 2]
	FOREST TYPE (m ³ /ha)				
	VEGETATION				
	WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]	WF-NOTE 1	WF-NOTE 1	[AQ-NOTE 1] [AQ-NOTE 1]
	HERITAGE / TRADITIONAL LAND USE				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES	[AQ-NOTE 4]	[AQ-NOTE 4]	[AQ-NOTE 4]		

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

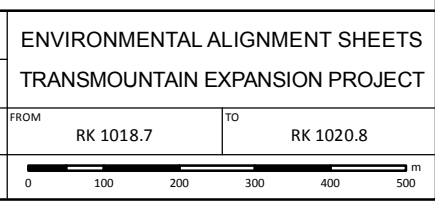
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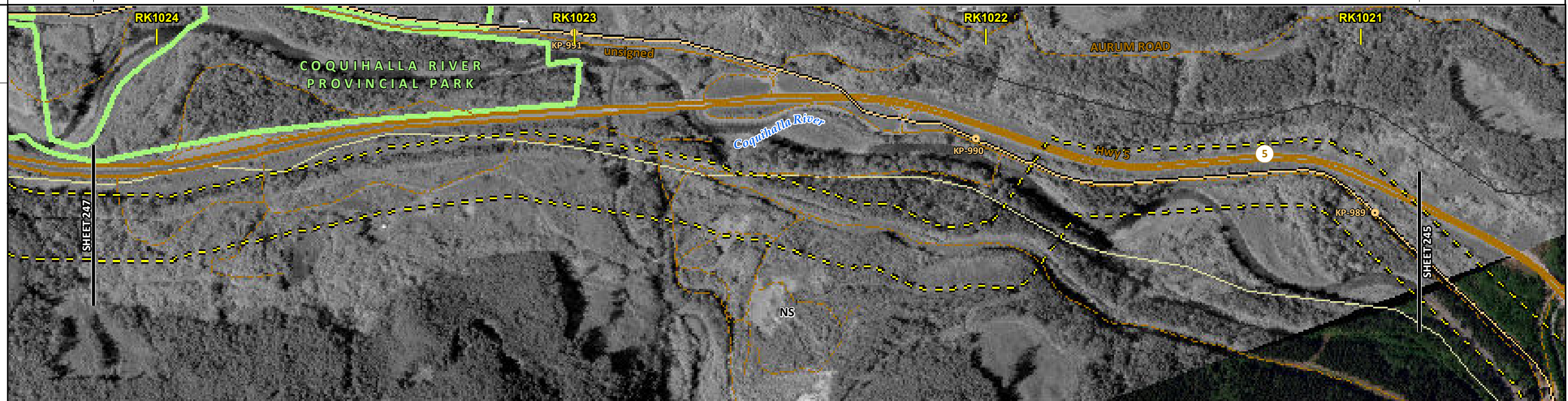
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 245 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS
DATE December 2013	TERA REF. 7894	TRANS MOUNTAIN EXPANSION PROJECT
SCALE 1:10,000	PAGE SIZE 11x17	FROM RK 1018.7
DRAWN CMR	CHECKED DN	TO RK 1020.8
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	CROWN		MIXED
	LAND USE	TREED	[RIVER]	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GOA800753; TR0202T008		
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT	AMPH-STREAM		AMPH-STREAM
	VEGETATION		[AHTISPH] [LETHCOL]	
	WETLANDS			
	FISH HABITAT SENSITIVITY		[HIGH]	[HIGH]
	HYDROLOGY	[DRAINAGE]	[DEWDNEY CREEK] [SHALLOW GW]	[COQUIHALLA RIVER] [SHALLOW GW]
SOILS PARENT MATERIAL		NS		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	WILDLIFE AREA	[WC (NVC)]	[FISH] [WC (S1B)] [HYDROLOGY] [NAV WATERS]	[RARE LICHEN]	[FISH] [WC (S1B)] [HYDROLOGY] [NAV WATERS]	[WC (S5/S3)]	WF FEATURE
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-AUG 1 TO AUG 31]	[AQ-AUG 1 TO AUG 31]	[AQ-AUG 1 TO OCT 31]	[AQ-AUG 1 TO OCT 31]	WF-NOTE 4	
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	-	15-20	-	FULL ROW; REDUCE AS APPROPRIATE	
	SOILS							
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	
	WETLANDS							
	FOREST TYPE (m ³ /ha)							
	VEGETATION	[VG-NOTE 1]						
	WILDLIFE AND FISH HABITAT	WF-NOTE 5	WF-NOTE 1	[AQ-NOTE 1]	[AQ-NOTE 1]	[AQ-NOTE 1]	WF-NOTE 1	
	HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
SPECIAL MEASURES	[AQ-NOTE 4] [HY-NOTE 1]			[AQ-NOTE 4] [HY-NOTE 1]				

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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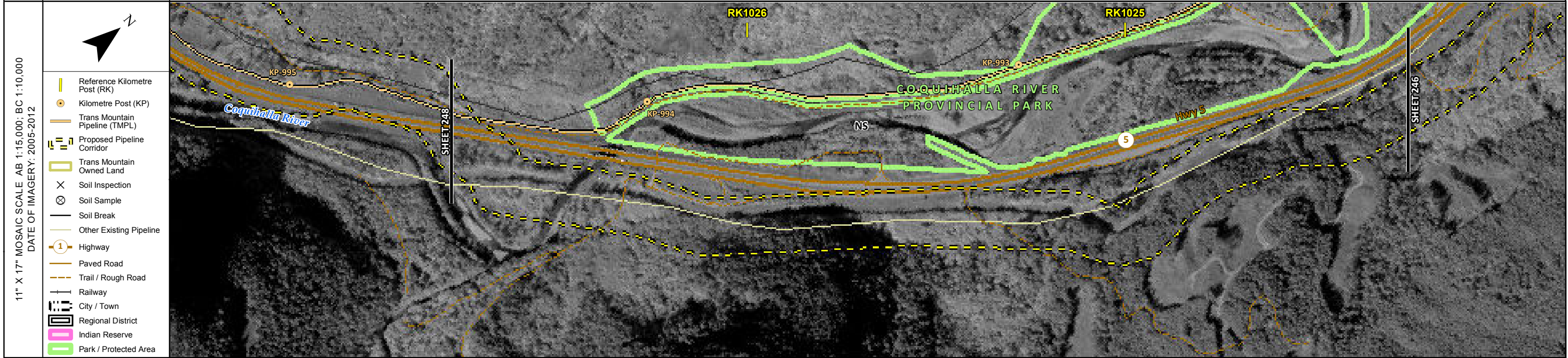
REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 246 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

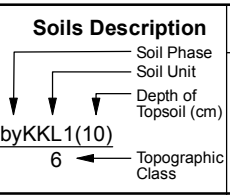
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	CROWN		
	LAND USE	GOA800753; TR0202T008 TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT	AMPH-STREAM WILDLIFE HABITAT AREA (SPOTTED OWL)		
	VEGETATION			
	WETLANDS			
	FISH HABITAT SENSITIVITY	[HIGH]	[HIGH]	[HIGH]
	HYDROLOGY	[COQUIHALLA RIVER]	[CHANNEL]	[KAREN CREEK]
SOILS PARENT MATERIAL	NS			



POTENTIAL ENVIRONMENTAL ISSUES	[FISH] [WC (S1B)]	[FISH] [WC (S3)]	[FISH] [WC (S2)]
	[NAV WATERS]	WF FEATURE	[NAV WATERS]

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-AUG 1 TO AUG 31]	[AQ-AUG 1 TO OCT 31]	[AQ-AUG 1 TO AUG 31]
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	WF-NOTE 4
	SOILS HANDLING PROCEDURE	FULL ROW	-	FULL ROW; REDUCE AS APPROPRIATE
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]
	WETLANDS			
	FOREST TYPE (m ³ /ha)			
	VEGETATION			
	WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]	WF-NOTE 5	[AQ-NOTE 1]
	WILDLIFE AND FISH HABITAT		WF-NOTE 1	[AQ-NOTE 1]
HERITAGE / TRADITIONAL LAND USE		[AQ-NOTE 1; WF-NOTE 5]	WF-NOTE 5	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES	[AQ-NOTE 4]		[AQ-NOTE 4]	



REFERENCES

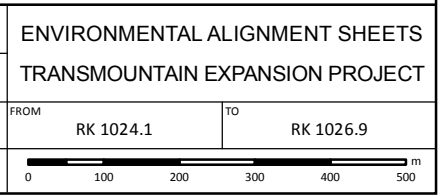
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Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
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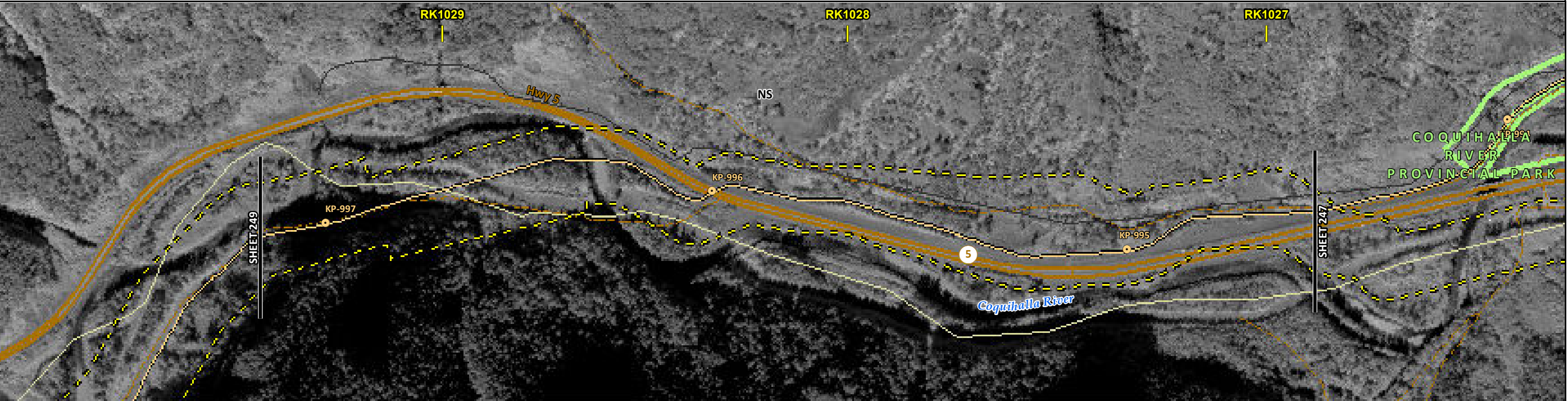
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 247 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG



ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	CROWN			
	LAND USE	TREED	DL	TREED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT	[WILDLIFE HABITAT AREA (SPOTTED OWL)]		[WILDLIFE HABITAT AREA (SPOTTED OWL)]	
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY		[HIGH]		
	HYDROLOGY	[CHANNEL]	[COQUIHALLA RIVER]	[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL		[SHALLOW GW]	NS		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WILDLIFE AREA]	[WC (SS)]	[FISH / WC (S1B)] [HYDROLOGY] [NAV WATERS]	[WC (NVC)]	[WC (NCD)]	[WILDLIFE AREA]
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-AUG 1 TO AUG 31]	[AQ-OPEN]	[AQ-OPEN]		
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	-	15-20		
	SOILS HANDLING	PROCEDURE	FULL ROW	-	FULL ROW		
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	
	WETLANDS						
	FOREST TYPE (m ³ /ha)						
	VEGETATION						
	WILDLIFE AND FISH HABITAT	WF-NOTE 5		[AQ-NOTE 1]			[WF-NOTE 5]
	SPECIAL MEASURES			[AQ-NOTE 4] [HY-NOTE 1]			

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 248 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

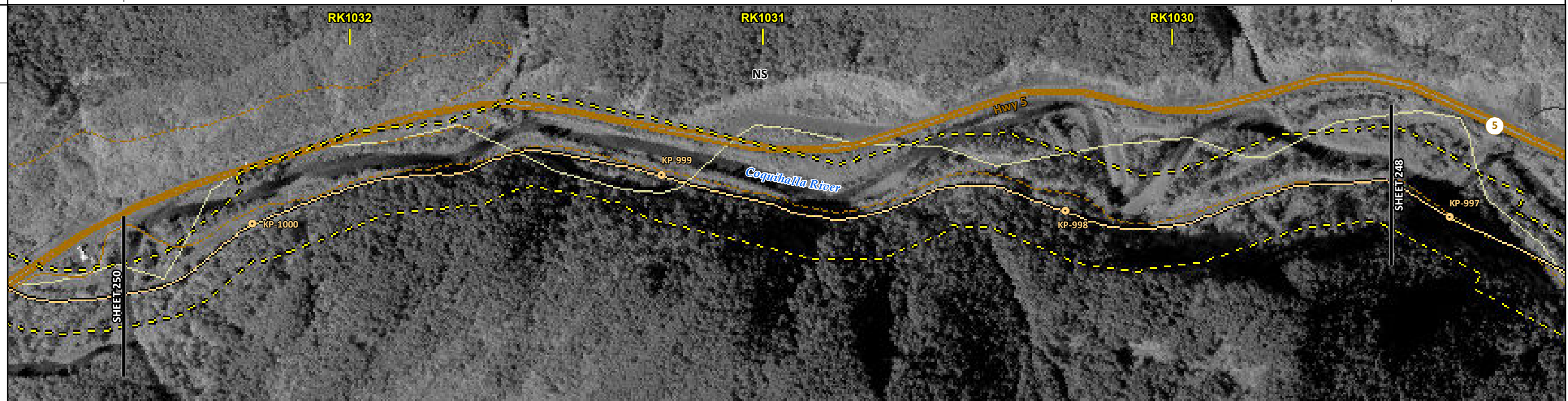
FROM RK 1026.9 TO RK 1029.5

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION		FRASER VALLEY REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION	[MIXED] PRIVATE [MIXED]	CROWN
	LAND USE	[GOA800753; TR0202T008]	GOA800753; TR0202T008
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		TREED
	HERITAGE / TRADITIONAL LAND USE		
	WILDLIFE / WILDLIFE HABITAT		AMPH-STREAM WILDLIFE HABITAT AREA (SPOTTED OWL) UNGULATE WINTER RANGE (MULE DEER AND BLACK TAIL DEER)
	VEGETATION		[CEPHSP]
	WETLANDS		
	FISH HABITAT SENSITIVITY		
	HYDROLOGY		[CHANNEL] [DRAINAGE DRAINAGE] [DRAINAGE]
SOILS PARENT MATERIAL		NS	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		WILDLIFE AREA	[WC (SS)]	[WC (NCD)]	[WC (NCD)]	[WC (NCD)]	[RARE LIVERWORT]
		WF FEATURE	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	

CONSTRUCTION WORK WINDOW		WF-NOTE 4	15-20	FULL ROW
SOILS HANDLING	STRIPPING DEPTH (cm)			
SOILS	PROCEDURE			
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
		[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS				
FOREST TYPE (m ³ /ha)				
VEGETATION				[VG-NOTE 1]
WILDLIFE AND FISH HABITAT		WF-NOTE 1		WF-NOTE 5
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES				

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 249 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
		DISCIPLINE	EAS
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ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

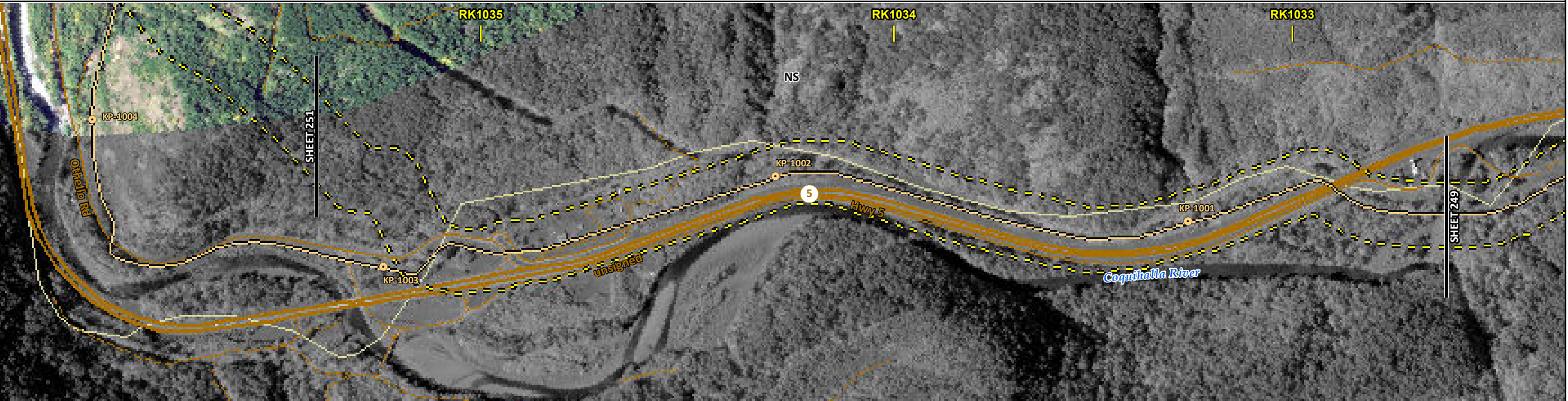
FROM RK 1029.5 TO RK 1032.6

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	CROWN	MIXED	CROWN	MIXED PRIVATE MIXED
	LAND USE	TR0202T007; GOA800753	NS	GOA800753; TR0202T008	GOA800753; TR0202T008
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	TREED		TREED	
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT		WILDLIFE HABITAT AREA (SPOTTED OWL)		WILDLIFE HABITAT AREA (SPOTTED OWL)
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY			[HIGH]	[HIGH]
	HYDROLOGY		[DRAINAGE]	[RAILWAY CREEK]	[COQUIHALLA RIVER] [SHALLOW GW]
SOILS PARENT MATERIAL			NS		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
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- Soil Break
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- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		WILDLIFE AREA [WC (NCD)]	[FISH] [WC (S2)] [NAV WATERS] WF FEATURE	WILDLIFE AREA [FISH] [WC (S1B)] [HYDROLOGY] [NAV WATERS]
--------------------------------	--	-----------------------------	---	--

CONSTRUCTION WORK WINDOW		[AQ-OPEN]	[AQ-AUG 1 TO SEP 15] WF-NOTE 4	[AQ-AUG 1 TO AUG 31]
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20	15-20	
SOILS HANDLING	PROCEDURE	[FULL ROW; REDUCE AS APPROPRIATE]	FULL ROW	[FULL ROW]
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
WETLANDS				
FOREST TYPE (m ³ /ha)				
VEGETATION				
WILDLIFE AND FISH HABITAT		WF-NOTE 5	[AQ-NOTE 1; WF-NOTE 5] WF-NOTE 5 WF-NOTE 1	[AQ-NOTE 1] [WF-NOTE 5]
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
SPECIAL MEASURES			[AQ-NOTE 4]	[AQ-NOTE 4] [HY-NOTE 1]

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPL, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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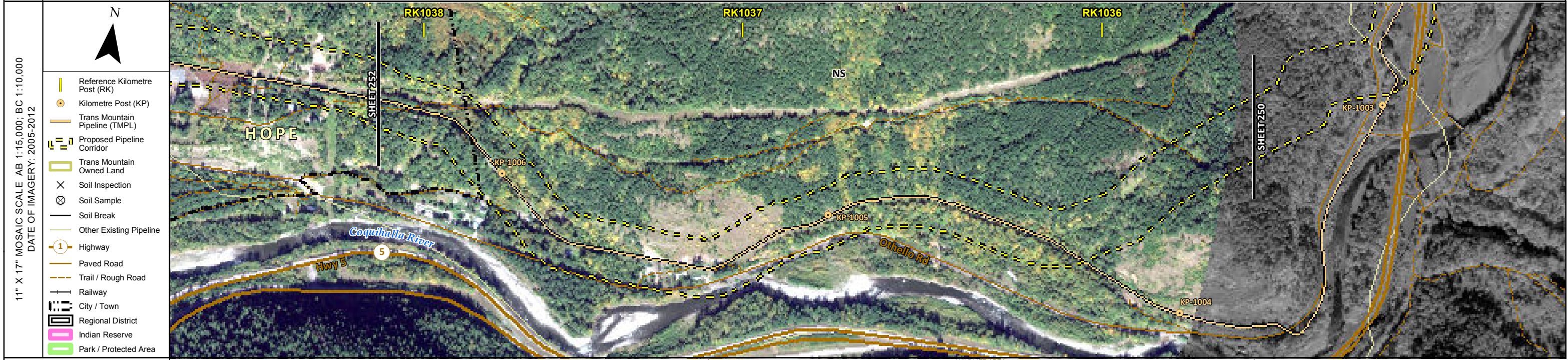
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DATE	December 2013	TERA REF.	7894
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		REVISION	0

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 1032.6 TO RK 1035.5

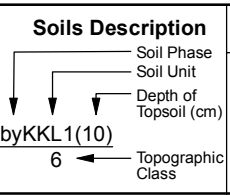
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CROWN	FRASER VALLEY REGIONAL DISTRICT	CROWN
	LAND OWNERSHIP / DISPOSITION	CM FST	MIXED	CM FST
	LAND USE		TR0202T007; GOA800753	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		TREED	
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			WILDLIFE HABITAT AREA (SPOTTED OWL)
	VEGETATION		[SILESP]	
	WETLANDS			
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	[DRAINAGE]	[DRAINAGE]	
SOILS PARENT MATERIAL		NS		



POTENTIAL ENVIRONMENTAL ISSUES	[WC (NVC)]	[RARE PLANTS] [WC (NCD)]	WILDLIFE AREA
	[AQ-OPEN]	[AQ-OPEN]	

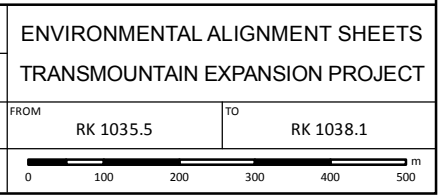
ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20
	SOILS HANDLING	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS		
	FOREST TYPE (m ³ /ha)		
	VEGETATION		[VG-NOTE 1]
	WILDLIFE AND FISH HABITAT		WF-NOTE 5
	HERITAGE / TRADITIONAL LAND USE		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES			



REFERENCES	
Projection: NAD_1983_UTM_Zone_10N	
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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 251 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

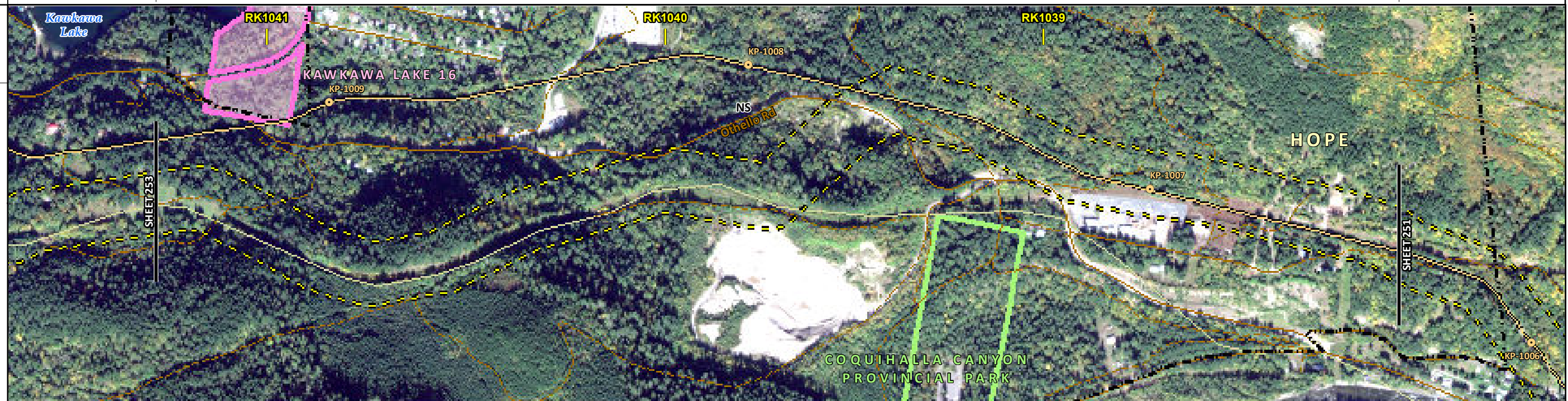


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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION				DISTRICT OF HOPE				FRASER VALLEY REGIONAL DISTRICT
	LAND OWNERSHIP / DISPOSITION		PRIVATE	MIXED	PRIVATE	MIXED	CROWN CM WATR	MIXED	CROWN CM FST
	LAND USE						TR0202T007; GOA800753		TR0202T007; GOA800753
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT								WILDLIFE HABITAT AREA (SPOTTED OWL)
	VEGETATION								
	WETLANDS								
	FISH HABITAT SENSITIVITY								
	HYDROLOGY		[CHANNEL]	[SHALLOW WELL]	[SHALLOW WELL]				
SOILS PARENT MATERIAL					NS				

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WC (S5)]	[HYDROLOGY]	[HYDROLOGY]	WILDLIFE AREA
--------------------------------	-----------	-------------	-------------	---------------

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE [AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS	
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	[HY-NOTE 2] [HY-NOTE 2]	

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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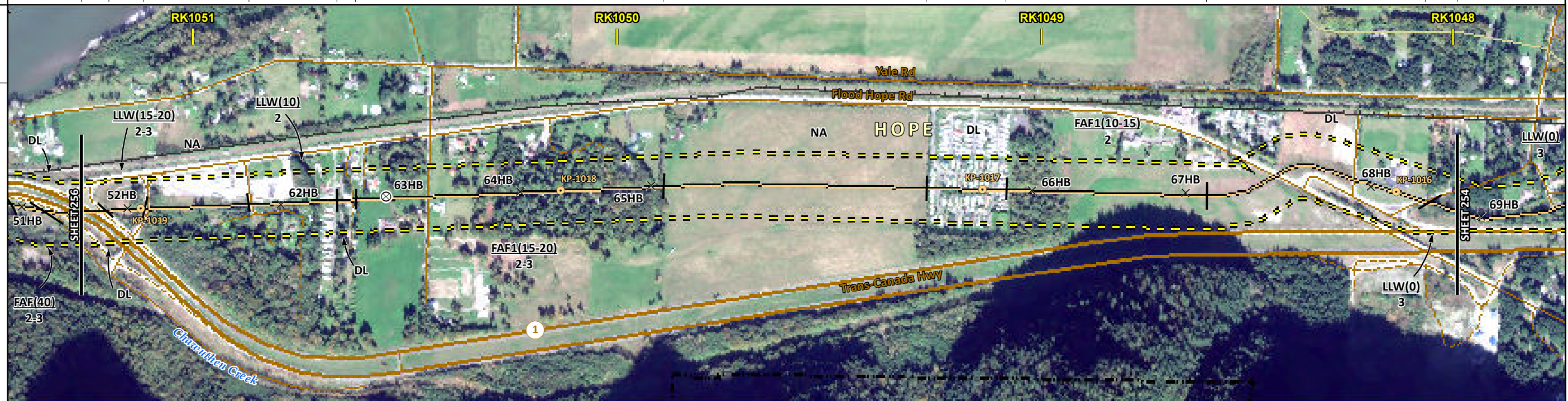
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 252 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 1038.1 TO RK 1041.3

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	DISTRICT OF HOPE											
	LAND OWNERSHIP / DISPOSITION	PRIVATE											
	LAND USE	DL	P	NA	DISTURBED LAND	TAME PASTURE	TREED	NA	DISTURBED LAND	TREED	TAME PASTURE	DISTURBED LAND	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE											
	HERITAGE / TRADITIONAL LAND USE												
	WILDLIFE / WILDLIFE HABITAT												
	VEGETATION												
	WETLANDS												
	FISH HABITAT SENSITIVITY												
	HYDROLOGY												
SOILS PARENT MATERIAL	-	F	NA	F	-	F	NA	-	F	-	F		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Kilometre Post (KP)
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- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	UNST TR WIND ER	UNST TR WIND ER	UNST TR WIND ER	UNST TR WIND ER
--------------------------------	-----------------	-----------------	-----------------	-----------------

CONSTRUCTION WORK WINDOW	SOILS STRIPPING DEPTH (cm)	-	15-20	NA	-	15-20	NA	-	15-20	10-15	-	15-20
HANDLING PROCEDURE	TRENCH AND SPOIL; ADJUST AS REQUIRED											
SOILS	SO-NOTE 1			SO-NOTE 1			SO-NOTE 1			SO-NOTE 1		
WATERCOURSE CROSSINGS	PIPELINE VEHICLE			PIPELINE VEHICLE			PIPELINE VEHICLE			PIPELINE VEHICLE		
WETLANDS												
FOREST TYPE (m ³ /ha)												
VEGETATION												
WILDLIFE AND FISH HABITAT												
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES												

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 255 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

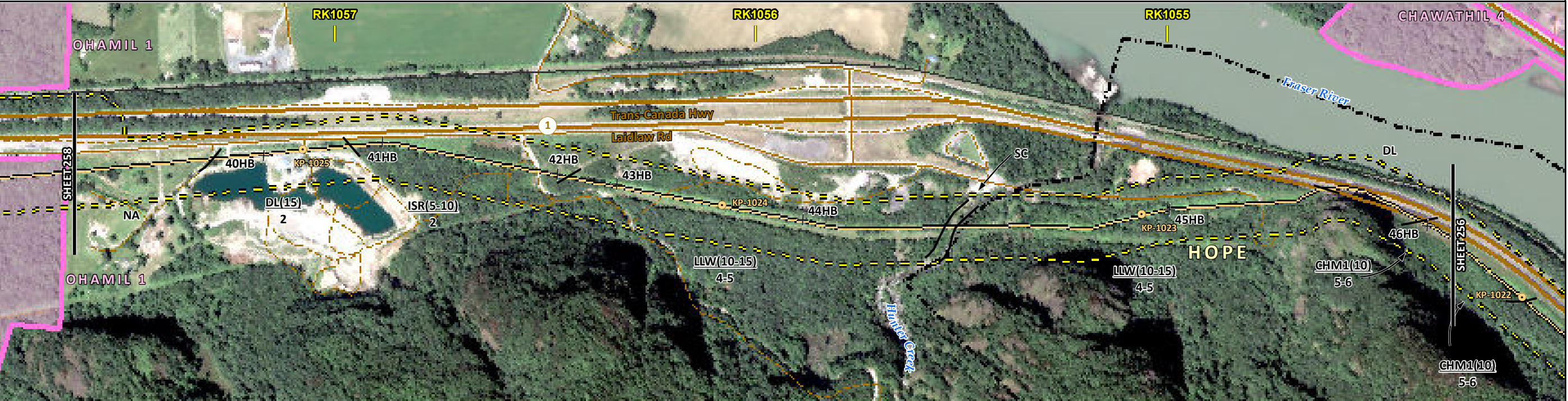
FROM RK 1048.0 TO RK 1051.3

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT				DISTRICT OF HOPE				
	LAND OWNERSHIP / DISPOSITION	PRIVATE	MIXED	CROWN	MIXED	CROWN	MIXED	PRIVATE	MIXED	CROWN
	LAND USE	NA	DISTURBED LAND				TREED		DISTURBED LAND	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE								
	HERITAGE / TRADITIONAL LAND USE									
	WILDLIFE / WILDLIFE HABITAT	RAPTOR NEST								
	VEGETATION									
	WETLANDS									
	FISH HABITAT SENSITIVITY									
	HYDROLOGY	[SHALLOW WELL]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[HUNTER CREEK]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]
SOILS PARENT MATERIAL	NA			F				F		C

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
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- Soil Break
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- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[HYDROLOGY]	[WC (NVC)]	[WC (NCD)]	[FISH]	[WC (S1B)]	[WC (NVC)]	[NAV WATERS]	UNST TR	UNST TR	WF FEATURE	
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-AUG 1 TO SEP 15]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	WF-NOTE 4	
	SOILS HANDLING	STRIPPING DEPTH (cm)	NA	15	15-20	15-20	15-20	15-20	15-20	15-20	15-20	
	SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE									[FULL ROW; REDUCE AS APPROPRIATE]
	SOILS				SO-NOTE 1	SO-NOTE 3	SO-NOTE 1	SO-NOTE 3	SO-NOTE 1	SO-NOTE 3	[SO-NOTE 1]	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	
	WATERCOURSE CROSSINGS	VEHICLE	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	
	WETLANDS											
	FOREST TYPE (m ³ /ha)											
	VEGETATION											
WILDLIFE AND FISH HABITAT						[AQ-NOTE 1]				WF-NOTE 1		
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS												
SPECIAL MEASURES		[HY-NOTE 2]								[AQ-NOTE 4]		

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N

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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 257 OF 301
DATE	December 2013	REVISION	0
SCALE	1:10,000	DISCIPLINE	EAS
DRAWN	CMR	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANS MOUNTAIN EXPANSION PROJECT

FROM RK 1054.3 TO RK 1057.6

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT		
	LAND OWNERSHIP / DISPOSITION	PRIVATE		
	LAND USE	CULTIVATED		OHAMIL 1
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	DAIRY	FORAGE	AGRICULTURAL LAND RESERVE
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS	[SE MARSH]		
	FISH HABITAT SENSITIVITY			
	HYDROLOGY	[DRAINAGE]		
SOILS PARENT MATERIAL	F NA			



POTENTIAL ENVIRONMENTAL ISSUES	AGRI (LIVESTOCK)	AGRI (CROP)	[WETLAND] LOW QUALITY SUBSOILS UNST TR WIND ER	[WC (NVC)]
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW				[AQ-OPEN]	
	SOILS HANDLING	STRIPPING DEPTH (cm)	(25-30) [20]	(15-20) [30]	(15) [35]	NA
	SOILS	PROCEDURE	3-LIFT SO-NOTE 1 SO-NOTE 3			FULL ROW; REDUCE AS APPROPRIATE
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE				[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS	[WT-NOTE 1]				
	FOREST TYPE (m ³ /ha)					
	VEGETATION					
	WILDLIFE AND FISH HABITAT					
HERITAGE / TRADITIONAL LAND USE						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AG-NOTE 2	AG-NOTE 1				
SPECIAL MEASURES						

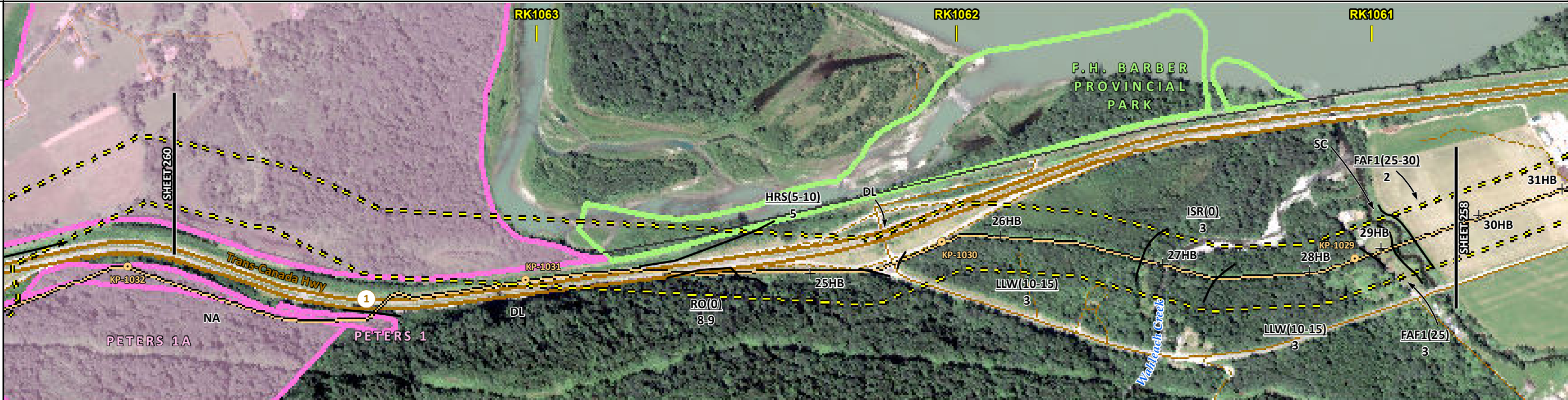
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) byKKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	<table border="1"> <tr> <td>MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO</td> <td>PAGE SHEET 258 OF 301</td> <td>ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT</td> </tr> <tr> <td>DATE December 2013</td> <td>TERA REF. 7894</td> <td>REVISION 0</td> </tr> <tr> <td>SCALE 1:10,000</td> <td>PAGE SIZE 11x17</td> <td>DISCIPLINE EAS</td> </tr> <tr> <td>DRAWN CMR</td> <td>CHECKED DN</td> <td>DESIGN TGG</td> </tr> </table>	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 258 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT	DATE December 2013	TERA REF. 7894	REVISION 0	SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS	DRAWN CMR	CHECKED DN	DESIGN TGG
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DRAWN CMR	CHECKED DN	DESIGN TGG																										
ENVIRONMENTAL ALIGNMENT SHEETS FROM RK 1057.6 TO RK 1060.8 																												

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT		[F.H. BARBER PROVINCIAL PARK]		FRASER VALLEY REGIONAL DISTRICT	
	LAND OWNERSHIP / DISPOSITION	PRIVATE	PETERS 1	MIXED	[GOA200698; PETERS 1]	CROWN	MIXED
	LAND USE		NA		TR0203T005	PROT	PROT; TR0203T005
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AGRICULTURAL LAND RESERVE				
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT						
	VEGETATION						
	WETLANDS		[SHRUBBY SWAMP]		[OPEN POND]		
	FISH HABITAT SENSITIVITY					[HIGH]	[HIGH]
	HYDROLOGY				[DRAINAGE]	[WAHLEACH CREEK]	[CHANNEL]
SOILS PARENT MATERIAL		NS		FF-C		F	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Trail / Rough Road
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- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		[WETLAND]	[WETLAND]	[WETLAND [NAV WATERS]]	[WC (NCD)]	[FISH] [WC (S1B)]	[WC (S6)]	[FISH] [WC (S2)]	[AGRI (LIVESTOCK)]
					WINDWATER ER	[NAV WATERS] UNST TR WIND ER		[NAV WATERS] UNST TR WIND ER	

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW			[AQ-OPEN]		[AQ-AUG 1 TO AUG 15]	[AQ-OPEN]	[AQ-AUG 1 TO SEP 15]
	SOILS STRIPPING DEPTH (cm)		NA			15-20		25 [15-20] [25-30] [20]
	SOILS HANDLING PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE			FULL ROW		FULL ROW
	SOILS			SO-NOTE 1		SO-NOTE 1		[SO-NOTE 1] [SO-NOTE 3]
	WATERCOURSE CROSSINGS PIPELINE VEHICLE			[AQ-NOTE 3] [AQ-NOTE 2]		[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS		[WT-NOTE 1]	[WT-NOTE 1]	[WT-NOTE 1] [WT-NOTE 2]			
	FOREST TYPE (m ³ /ha)							
	VEGETATION						[AQ-NOTE 1]	[AQ-NOTE 1]
WILDLIFE AND FISH HABITAT								
HERITAGE / TRADITIONAL LAND USE								
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							[AG-NOTE 2]	
SPECIAL MEASURES						[AQ-NOTE 4]	[AQ-NOTE 4]	

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

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Projection: NAD_1983_UTM_Zone_10N
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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER: 201310_MAP_TERA_EAS_00434_REV0
 TERA REF: 7894
 SCALE: 1:10,000
 DRAWN: CMR
 CHECKED: DN

PAGE SHEET 259 OF 301
 REVISION 0
 DISCIPLINE EAS
 DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 1060.8 TO RK 1063.9

P:\GIS\TMEP\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\Rev0\LAS_Output\LaRes

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION	MIXED	PETERS 1	PRIVATE	PETERS 1
	LAND USE	TR0203T005 TREED	PETERS 1A	NA	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			AGRICULTURAL LAND RESERVE	
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS			[DEEP MARSH]	
	FISH HABITAT SENSITIVITY				
	HYDROLOGY	[CHANNEL]			
SOILS PARENT MATERIAL	-	C/R	NA	NS	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		[WC (S6)]	[WETLAND] [NAV WATERS]
CONSTRUCTION WORK WINDOW		[WIND/WATER ER]	
SOILS STRIPPING DEPTH (cm)		[WATER ER]	
HANDLING PROCEDURE		[AQ-OPEN]	
SOILS		15-20 40	NA
WATERCOURSE CROSSINGS PIPELINE VEHICLE			FULL ROW; REDUCE AS APPROPRIATE
WETLANDS		SO-NOTE 1	
FOREST TYPE (m ³ /ha)		[AQ-NOTE 3]	
VEGETATION		[AQ-NOTE 2]	
WILDLIFE AND FISH HABITAT			[WT-NOTE 1]
HERITAGE / TRADITIONAL LAND USE			[WT-NOTE 2]
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATIS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 260 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

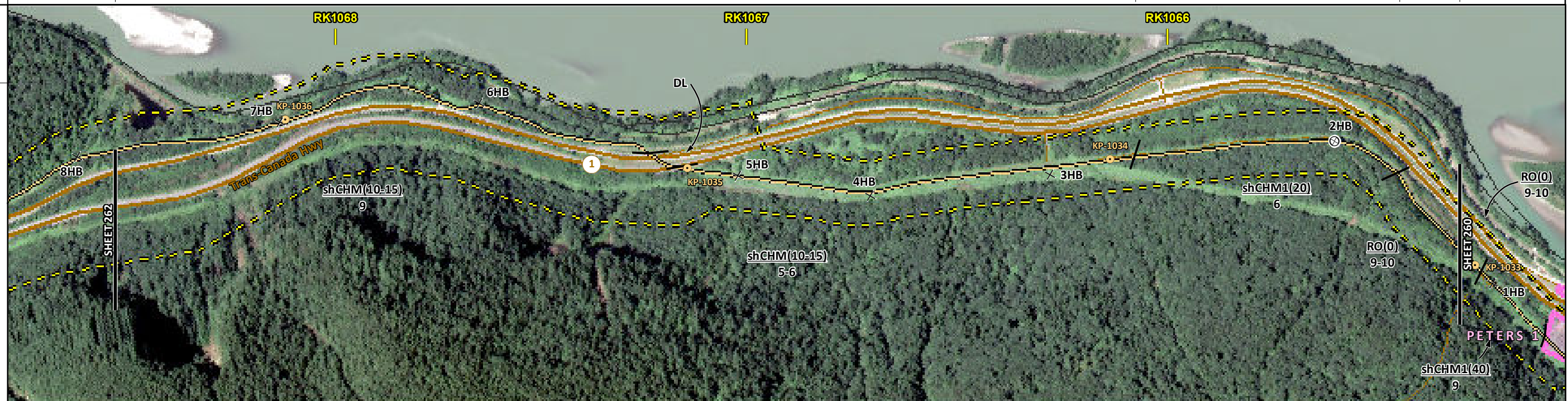
FROM RK 1063.9 TO RK 1065.2

P:\GIS\TERRA\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\Rev0\AS_Output\LR\Res

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT									
	LAND OWNERSHIP / DISPOSITION	CROWN	MIXED	ENV C&R	CROWN	MIXED	PRIVATE	MIXED	CROWN	MIXED	
	LAND USE	TREED									
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	TR0203T005									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS	[SE MARSH]									
	FISH HABITAT SENSITIVITY										
	HYDROLOGY	[DRAINAGE]	[CHANNEL]	[CHANNEL]	[DRAINAGE]	[CHANNEL]	[DRAINAGE]	[CHANNEL]	[DRAINAGE]	[CHANNEL]	[DRAINAGE]
SOILS PARENT MATERIAL	NS					C/R					

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[WC (NCD)]	[WC (SS/S2)]	[WC (S5)]	[WC (NCD)]
				[NAV WATERS]	[NAV WATERS]	
					WIND/WATER ER	WATER ER
	CONSTRUCTION WORK WINDOW		[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]
	SOILS HANDLING	STRIPPING DEPTH (cm)	15-20		20	15-20
		PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			
	SOILS				SO-NOTE 1	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE		[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
			[WT-NOTE 1]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
	WETLANDS					
FOREST TYPE (m ³ /ha)						
VEGETATION						
WILDLIFE AND FISH HABITAT						
HERITAGE / TRADITIONAL LAND USE						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						
SPECIAL MEASURES			[AQ-NOTE 4]	[AQ-NOTE 4]		

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

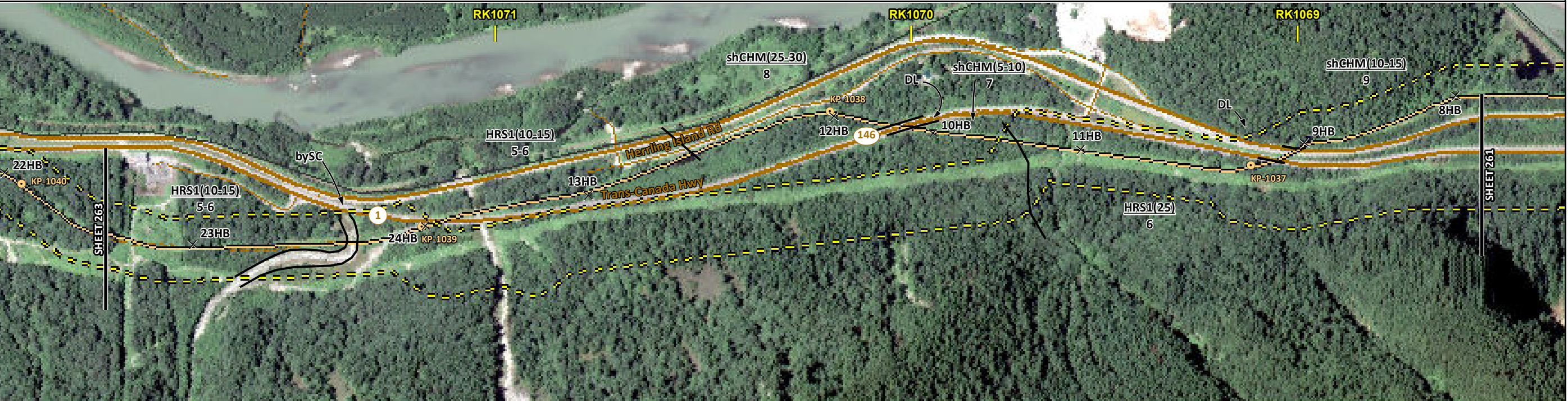
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 261 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 1065.2 TO RK 1068.6

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PRIVATE	MIXED	CROWN	FRASER VALLEY REGIONAL DISTRICT	[MIXED]	CROWN	ENV C&R
	LAND OWNERSHIP / DISPOSITION				TR0203T004		TR0203T005	
	LAND USE				TREED			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
	HERITAGE / TRADITIONAL LAND USE							
	WILDLIFE / WILDLIFE HABITAT						AMPH-STREAM	
	VEGETATION							
	WETLANDS		[SE MARSH]					
	FISH HABITAT SENSITIVITY		[HIGH]					[HIGH]
	HYDROLOGY		[CHANNEL]	[CHANNEL]	[CHANNEL]		[CHANNEL]	[CHANNEL]
SOILS PARENT MATERIAL		F-C	-			NS		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[FISH] WC (S1B)	[WETLAND] NAV WATERS	[WC (S5/S3)]	[WC (S6/S3)]	[WC (S5/S3)]	[FISH] WC (S3)
	WIND/WATER ER				WF FEATURE	

CONSTRUCTION WORK WINDOW	[AQ-AUG 1 TO SEP 15]	[AQ-OPEN]	[AQ-OPEN]	[AQ-AUG 1 TO SEP 15]	[AQ-AUG 1 TO OCT 31]
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20			
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			
SOILS	SO-NOTE 1				
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]	[AQ-NOTE 3]
		[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]	[AQ-NOTE 2]
WETLANDS	[WT-NOTE 1]				
FOREST TYPE (m ³ /ha)					
VEGETATION					
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]				[AQ-NOTE 1]
HERITAGE / TRADITIONAL LAND USE					
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS					
SPECIAL MEASURES	[AQ-NOTE 4]				

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 262 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

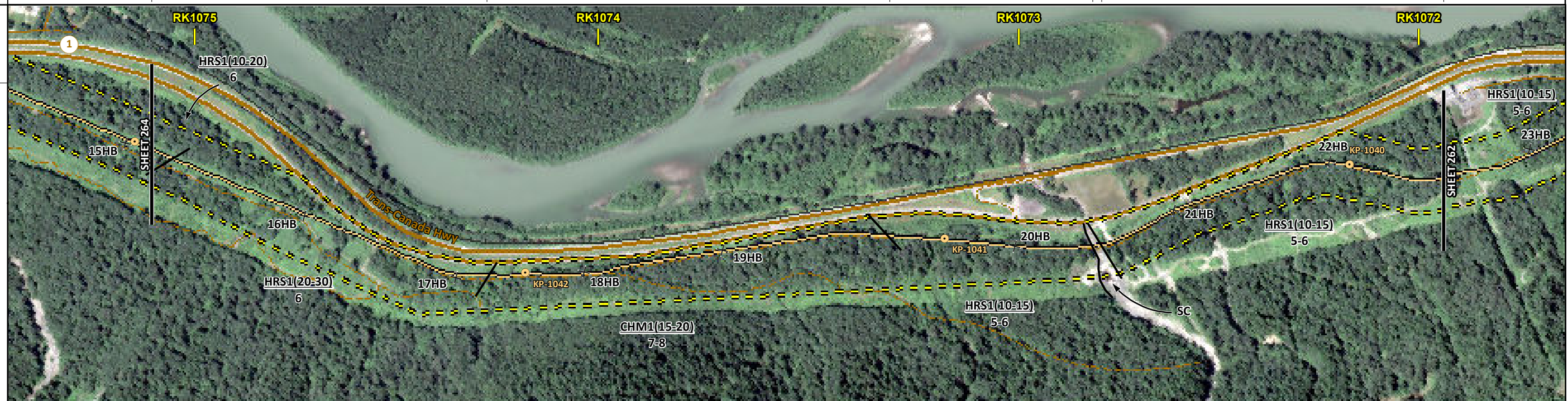
FROM RK 1068.6 TO RK 1071.9

P:\GIS\TERRA\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\rev0\AS_Output\LaRes

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT										
	LAND OWNERSHIP / DISPOSITION	CROWN			[MIXED]	PRIVATE	MIXED	CROWN			[MIXED] [PRIVATE]	
	LAND USE	TREED										
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											
	HERITAGE / TRADITIONAL LAND USE											
	WILDLIFE / WILDLIFE HABITAT	AMPH-STREAM	AMPH-STREAM	AMPH-STREAM	AMPH-STREAM	AMPH-STREAM	AMPH-STREAM	AMPH-STREAM	AMPH-STREAMS	AMPH-STREAMS	AMPH-STREAMS	
	VEGETATION											
	WETLANDS											
	FISH HABITAT SENSITIVITY						[HIGH]					
	HYDROLOGY	[DRAINAGE]	[CHANNEL]	[CHANNEL]	[CHANNEL]	[CHANNEL]	[CHANNEL]	[CHANNEL]	[CHANNEL]	[CHANNEL]	[CHANNEL]	
SOILS PARENT MATERIAL	FF-C			C	FF-C	-	FF-C					

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
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- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[WC (NCD)]	[WC (S3)] [NAV WATERS] WF FEATURE	[WC (S6)]	[WC (S3)]	[WC (S6/S4)]	WF FEATURE	[WC (S6)]	[WC (S6)] [WC (S2)] [NAV WATERS] WF FEATURE	[WC (S5/S2)]	[WC (S5)] [WC (S6/S3)]
	CONSTRUCTION WORK WINDOW	[AQ-OPEN]	[AQ-AUG 1 TO AUG 31] WF-NOTE 4	[AQ-OPEN]	[AQ-AUG 1 TO OCT 31] WF-NOTE 4	[AQ-AUG 1 TO OCT 31] WF-NOTE 4	WF-NOTE 4	[AQ-OPEN]	[AQ-OPEN]	[AQ-AUG 1 TO SEP 15] WF-NOTE 4	[AQ-AUG 1 TO SEP 15] WF-NOTE 4
	SOILS HANDLING PROCEDURE	[15-20]	20-30								
	SOILS										
	WATERCOURSE CROSSINGS	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS										
	FOREST TYPE (m ³ /ha)										
	VEGETATION										
	WILDLIFE AND FISH HABITAT		WF-NOTE 1		WF-NOTE 1		WF-NOTE 1		WF-NOTE 1		WF-NOTE 1
	HERITAGE / TRADITIONAL LAND USE										
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											
SPECIAL MEASURES		[AQ-NOTE 4]						[AQ-NOTE 4]	[AQ-NOTE 4]	[AQ-NOTE 4]	

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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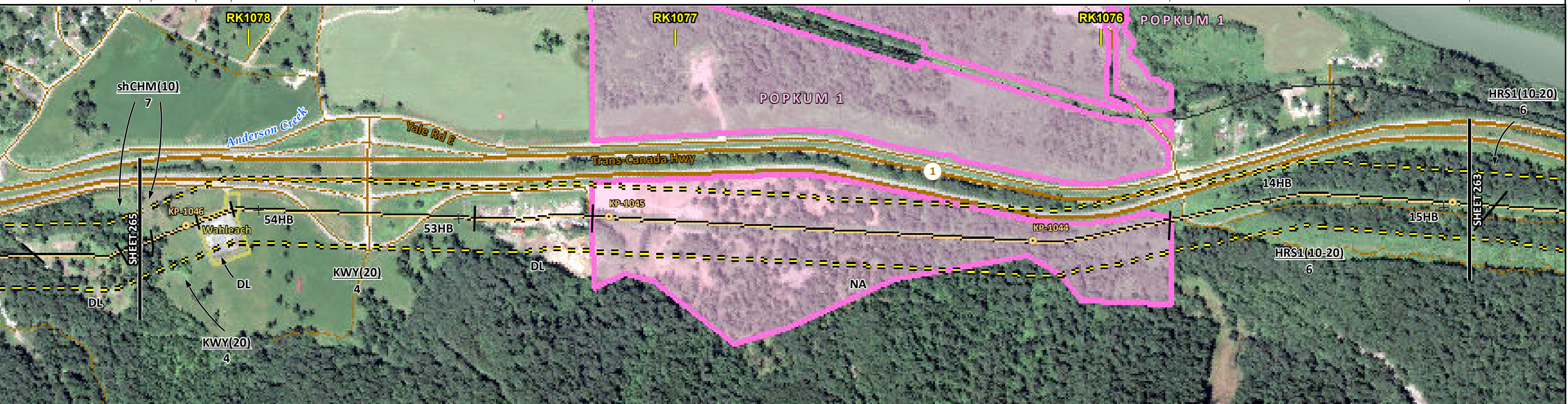
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 263 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 1071.9 TO RK 1075.1

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT										
	LAND OWNERSHIP / DISPOSITION	PRIVATE			POPKUM 1			MIXED	PRIVATE	MIXED		CROWN
	LAND USE	TREED	P	DL	TAME PASTURE	DISTURBED LAND		NA	TR0203T004	TR0203T004		TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE										
	HERITAGE / TRADITIONAL LAND USE											
	WILDLIFE / WILDLIFE HABITAT	AMPH-STREAM										
	VEGETATION											
	WETLANDS											
	FISH HABITAT SENSITIVITY	[HIGH]										
	HYDROLOGY	[ANDERSON CREEK]			[CHANNEL]	[DRAINAGE]	[DRAINAGE]	[DRAINAGE]	[CHANNEL]	[DRAINAGE]		
SOILS PARENT MATERIAL	[C/R]	C	-	C	NA			Ff-C				

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



ENVIRONMENTAL PROTECTION	POTENTIAL ENVIRONMENTAL ISSUES	[FISH] [WC (S2)] [NAV WATERS] WF FEATURE WIND ER [WIND/WATER ER]	[WC (S6)]	[WC (NCD)]	[WC (NVC)]	[WC (NCD)]	[FISH] [WC (S4)]	[WC (NVC)]
	CONSTRUCTION WORK WINDOW	[AQ-AUG 1 TO AUG 15]	[AQ-OPEN]	[AQ-OPEN]	[AQ-OPEN]	[AQ-AUG 1 TO SEP 15]	[AQ-OPEN]	[AQ-OPEN]
	SOILS STRIPPING DEPTH (cm)	15-20 20 -	20	NA	15-20			
	HANDLING PROCEDURE	FULL ROW -	FULL ROW		FULL ROW, REDUCE AS APPROPRIATE			
	SOILS	SO-NOTE 1	SO-NOTE 1		SO-NOTE 1			
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]	[AQ-NOTE 3] [AQ-NOTE 2]
	WETLANDS							
	FOREST TYPE (m ³ /ha)							
	VEGETATION							
	WILDLIFE AND FISH HABITAT	WF-NOTE 1 [AQ-NOTE 1]					[AQ-NOTE 1]	
HERITAGE / TRADITIONAL LAND USE								
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								
SPECIAL MEASURES	[AQ-NOTE 4]							

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

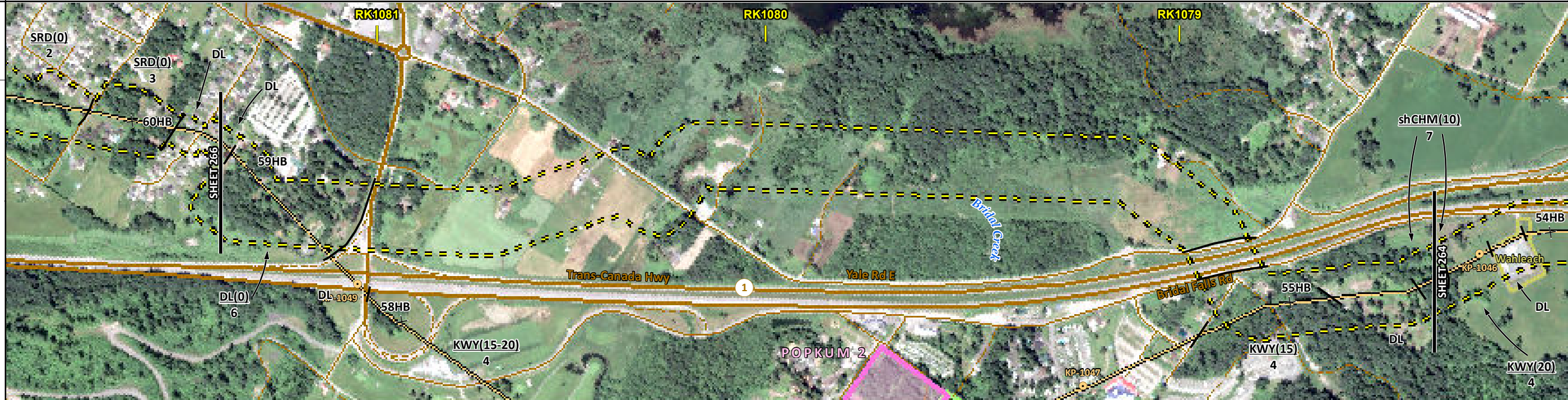
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 264 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 1075.1 TO RK 1078.3

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	FRASER VALLEY REGIONAL DISTRICT									
	LAND OWNERSHIP / DISPOSITION	PRIVATE		MIXED		PRIVATE		MIXED		PRIVATE	
	LAND USE	DISTURBED LAND		TR0203T004		NS		DL	TR0203T004	DISTURBED LAND	TR0203T004
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	GARDEN		AGRICULTURAL LAND RESERVE							
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT			RAPTOR NEST		RAPTOR NEST		[AMPH-STREAM]			
	VEGETATION	[TYPH/LAT]									
	WETLANDS			SE MARSH				SE MARSH			
	FISH HABITAT SENSITIVITY										
	HYDROLOGY										
SOILS PARENT MATERIAL			NS				C		CR		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	AGRI (CROP)	[RARE COMMUNITY]	[WETLAND]	WF FEATURE	WF FEATURE	[WETLAND]	[WF FEATURE]
	WATER ER					WIND ER	[WIND/WATER ER]

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW		WF-NOTE 4	WF-NOTE 4		WF-NOTE 4	
	SOILS HANDLING	STRIPPING DEPTH (cm)	NS		15-20	[15-20]	
		PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			FULL ROW	[FULL ROW]
	SOILS		SO-NOTE 1		SO-NOTE 1	[SO-NOTE 1]	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE		[WT-NOTE 1]		[WT-NOTE 1]	
	WETLANDS						
FOREST TYPE (m ³ /ha)							
VEGETATION		[VG-NOTE 1]					
WILDLIFE AND FISH HABITAT			WF-NOTE 2	WF-NOTE 2		[WF-NOTE 1]	
HERITAGE / TRADITIONAL LAND USE							
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AG-NOTE 1					
SPECIAL MEASURES							

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 265 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

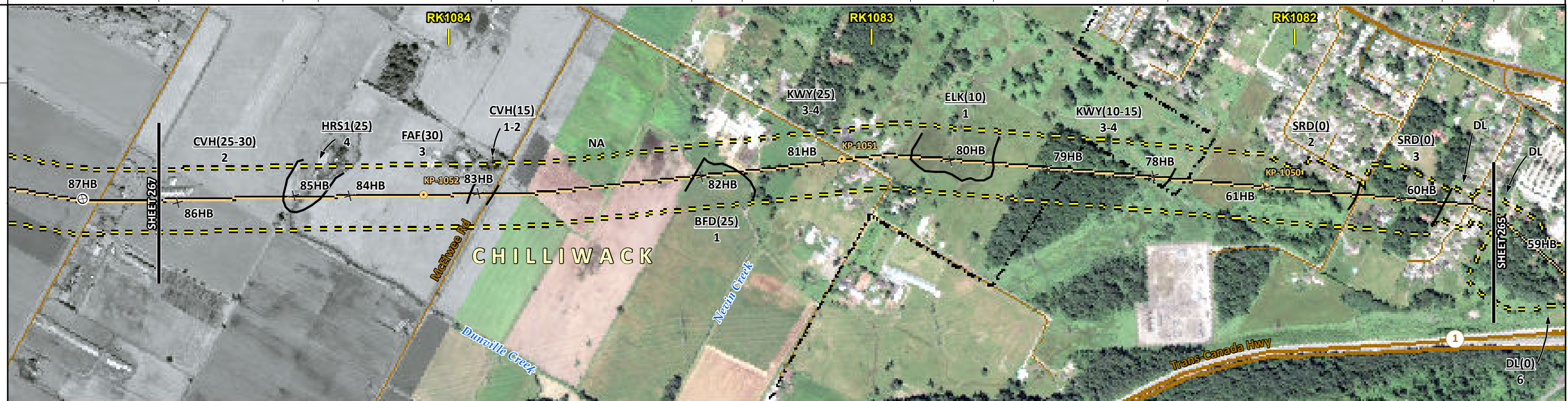
FROM RK 1078.3 TO RK 1081.5

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF CHILLIWACK			PRIVATE			FRASER VALLEY	CITY OF CHILLIWACK	FRASER VALLEY REGIONAL DISTRICT			
	LAND OWNERSHIP / DISPOSITION												
	LAND USE	CULTIVATED	HAY	NA	TAME PASTURE	TREED	TAME PASTURE	TREED	[DISTURBED LAND]				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	[LIVESTOCK]			FORAGE	AGRICULTURAL LAND RESERVE			[GARDEN]				
	HERITAGE / TRADITIONAL LAND USE												
	WILDLIFE / WILDLIFE HABITAT	[AMPH-STREAM]											
	VEGETATION												
	WETLANDS												
	FISH HABITAT SENSITIVITY	[HIGH]											
	HYDROLOGY	[CHANNEL]	[DUNVILLE CREEK]										
SOILS PARENT MATERIAL	F	FF-C	F	NA	OF or L	C	F	C	F				

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[AGRI (LIVESTOCK)]	[WC (S3)]	[FISH] [WC (S3)]	AGRI (CROP)	[AGRI (CROP)]
	[WF FEATURE] COMP RUT	WIND ER	[COMP RUT]	COMP RUT	COMP RUT
	[AQ-OPEN]	[AQ-AUG 1 TO SEP 15]		WIND ER	UNST TR
					[WATER ER]

CONSTRUCTION WORK WINDOW	[WF-NOTE 4]	[AQ-OPEN]	[AQ-AUG 1 TO SEP 15]									
SOILS HANDLING	STRIPPING DEPTH (cm)	25-30	25	30	15	NA	25	10	15-20	10	15-20	-
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE										
SOILS		SO-NOTE 2	SO-NOTE 1	[SO-NOTE 2]	SO-NOTE 2	SO-NOTE 2	SO-NOTE 2	SO-NOTE 1	SO-NOTE 1	SO-NOTE 3	[SO-NOTE 1]	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3]	[AQ-NOTE 2]	[AQ-NOTE 3]	[AQ-NOTE 2]							
WETLANDS												
FOREST TYPE (m ³ /ha)												
VEGETATION												
WILDLIFE AND FISH HABITAT		[WF-NOTE 1]		[AQ-NOTE 1]								
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		[AG-NOTE 2]		AG-NOTE 1							[AG-NOTE 1]	
SPECIAL MEASURES												

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 266 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

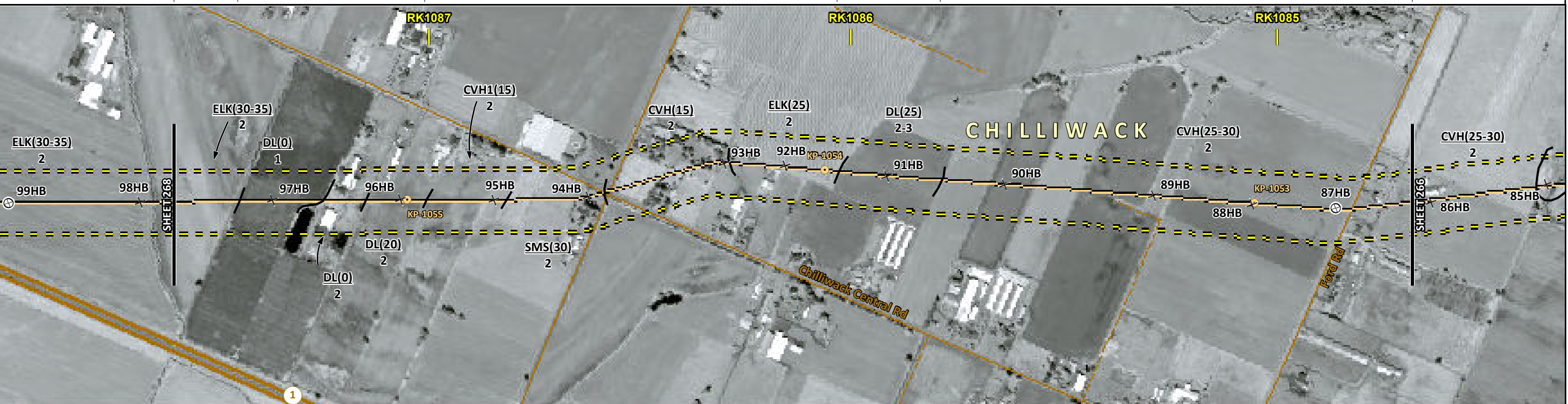
FROM RK 1081.5 TO RK 1084.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF CHILLIWACK									
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	HAY	CULTIVATED	DISTURBED LAND	TAME PASTURE	CULTIVATED	DISTURBED LAND	CULTIVATED	DL [CULTIVATED]		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	MIXED BERRIES DAIRY			AGRICULTURAL LAND RESERVE				FORAGE		[LIVESTOCK]
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT	[AMPH-STREAM]									
	VEGETATION										
	WETLANDS										
	FISH HABITAT SENSITIVITY	[HIGH]									
	HYDROLOGY	[CHANNEL]					[CHANNEL]				
SOILS PARENT MATERIAL	F			F			F				

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	AGRI (CROP)	AGRI (LIVESTOCK)	[FISH] [WC (S3)] [WC (S6)]	AGRI (CROP)	[AGRI (LIVESTOCK)]
	COMP RUT WIND ER	[LOW QUALITY SUBSOILS] UNST TR/COMP RUT	WIND ER COMP RUT	COMP RUT WIND ER	WF FEATURE

CONSTRUCTION WORK WINDOW	[AQ-JUL 15 TO SEP 15]	[AQ-OPEN]			WF-NOTE 4	
SOILS STRIPPING DEPTH (cm)	30-35	20	(15) [35]	30	25	25-30
HANDLING PROCEDURE	[FULL ROW; REDUCE AS APPROPRIATE]	FULL ROW	3-LIFT		FULL ROW; REDUCE AS APPROPRIATE	
SOILS	SO-NOTE 1	SO-NOTE 2	SO-NOTES 2 AND 3	SO-NOTE 1	SO-NOTE 2	SO-NOTE 1
WATERCOURSE CROSSINGS	PIPELINE VEHICLE			[AQ-NOTE 3]	[AQ-NOTE 3]	
				[AQ-NOTE 2]	[AQ-NOTE 2]	
WETLANDS						
FOREST TYPE (m ³ /ha)						
VEGETATION						
WILDLIFE AND FISH HABITAT				[AQ-NOTE 1]		WF-NOTE 1
HERITAGE / TRADITIONAL LAND USE						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AG-NOTE 1	AG-NOTE 2		AG-NOTE 1		AG-NOTE 2
SPECIAL MEASURES						

TRANS MOUNTAIN
tera ENVIRONMENTAL CONSULTANTS

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 267 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 1084.7 TO RK 1087.6

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PRIVATE				CITY OF CHILLIWACK				MIXED				PRIVATE			
	LAND OWNERSHIP / DISPOSITION	PRIVATE				CITY OF CHILLIWACK				MIXED				PRIVATE			
	LAND USE	CULTIVATED	DL	CULTIVATED	DL	CULTIVATED	DL	P	CULTIVATED	DL	P	CULTIVATED	DL	P	HAY		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	LIVESTOCK FORAGE DAIRY				AGRICULTURAL LAND RESERVE											
	HERITAGE / TRADITIONAL LAND USE																
	WILDLIFE / WILDLIFE HABITAT																
	VEGETATION																
	WETLANDS																
	FISH HABITAT SENSITIVITY	HIGH															
	HYDROLOGY	ELK CREEK															
SOILS PARENT MATERIAL	F	-	F	-	F	-	F	-	F	-	F	-	F	-	F		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- | Reference Kilometre Post (RK)
- o Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- x Soil Inspection
- o Soil Sample
- Soil Break
- Other Existing Pipeline
- 1 Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	AGRI (LIVESTOCK) AGRI (LIVESTOCK) AGRI (CROP)	COMP RUT WIND ER	COMP RUT WIND ER	COMP RUT WIND ER	WIND ER	LOW QUALITY SUBSOILS UNST TR/COMP RUT	COMP RUT WIND ER	COMP RUT WIND ER	[FISH] [WC (S3)]	[NAV WATERS]	[AQ-AUG 1 TO SEP 15]
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CONSTRUCTION WORK WINDOW												
SOILS HANDLING	STRIPPING DEPTH (cm)	20-25	-	40	30	-	30	(25-30) [20]	25-30	-	20	30-35
SOILS	PROCEDURE	FULL ROW	-	FULL ROW	-	FULL ROW; REDUCE AS APPROPRIATE	SO-NOTE 1	3-LIFT	FULL ROW	-		FULL ROW; REDUCE AS APPROPRIATE
SOILS		SO-NOTE 1		SO-NOTE 1		SO-NOTE 2	SO-NOTE 1	SO-NOTES 2 AND 3	SO-NOTE 2			SO-NOTE 1
SOILS		SO-NOTE 2		SO-NOTE 2					SO-NOTE 2			SO-NOTE 2
WATERCOURSE CROSSINGS	PIPELINE VEHICLE											
WETLANDS												
FOREST TYPE (m ³ /ha)												
VEGETATION												
WILDLIFE AND FISH HABITAT												
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	[AG-NOTE 2] AG-NOTE 1 [AG-NOTE 2]											
SPECIAL MEASURES	[AQ-NOTE 4]											

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 268 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

TRANS MOUNTAIN EXPANSION PROJECT

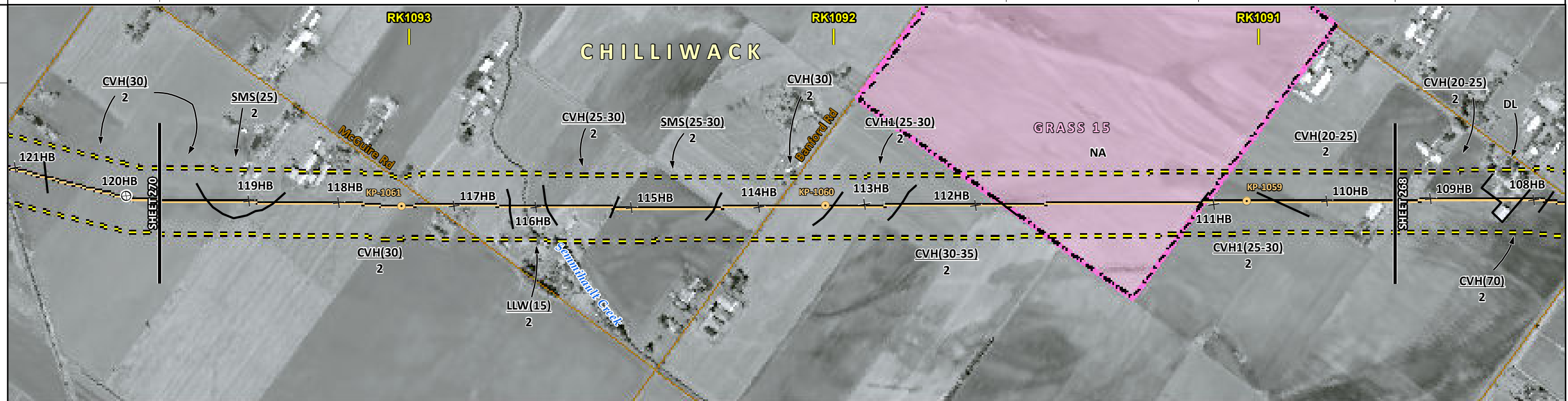
FROM RK 1087.6 TO RK 1090.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF CHILLIWACK									
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	CULTIVATED	HAY	CULTIVATED	HAY	NA	CULTIVATED	GRASS 15			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS										
	FISH HABITAT SENSITIVITY										
	HYDROLOGY										
SOILS PARENT MATERIAL	F										

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
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- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[AGRI (LIVESTOCK)]										
	COMP RUT	UNST TR/COMP RUT	COMP RUT	UNST TR	COMP RUT WIND ER	UNST TR/COMP RUT	COMP RUT	[LOW QUALITY SUBSOILS] UNST TR/COMP RUT	COMP RUT	[LOW QUALITY SUBSOILS] UNST TR/COMP RUT	COMP RUT WIND ER

CONSTRUCTION WORK WINDOW												
SOILS HANDLING	STRIPPING DEPTH (cm)	30	25	30	15	25-30	30	(25-30) [20]	30-35	NA	(25-30) [20]	20-25
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE										
SOILS		SO-NOTE 2		SO-NOTE 2 AND 3		SO-NOTE 2	SO-NOTE 1		SO-NOTE 2	SO-NOTE 1		SO-NOTE 2
WATERCOURSE CROSSINGS	PIPELINE VEHICLE											
WETLANDS												
FOREST TYPE (m ³ /ha)												
VEGETATION												
WILDLIFE AND FISH HABITAT												
HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	[AG-NOTE 2]											
SPECIAL MEASURES												

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N

Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 269 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS

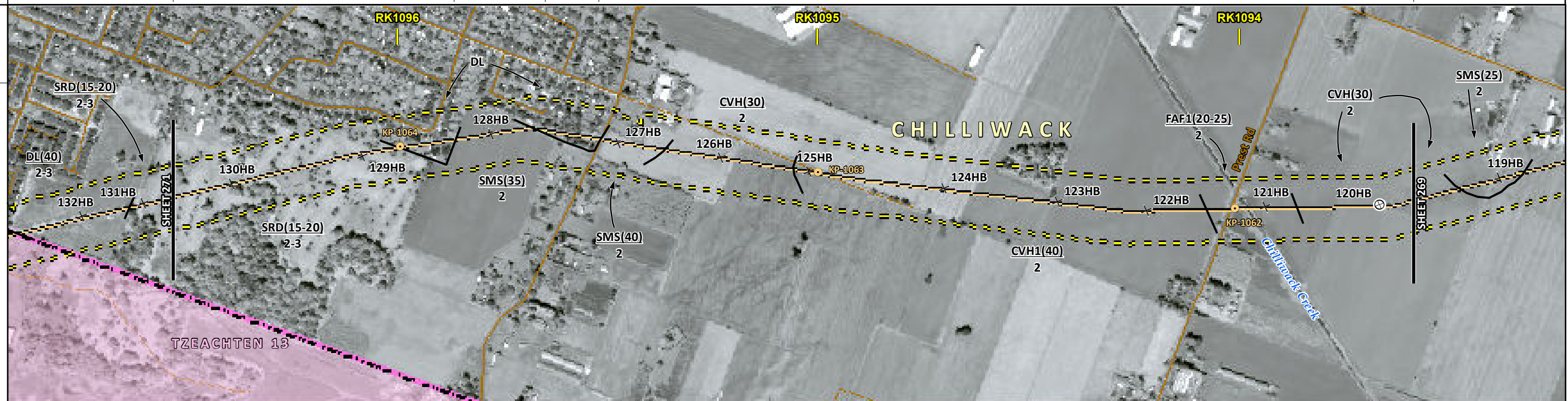
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 1090.7 TO RK 1093.6

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF CHILLIWACK									
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	RECREATIONAL	DL	CULTIVATED	DL	HAY	CULTIVATED				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE									
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT										
	VEGETATION										
	WETLANDS										
	FISH HABITAT SENSITIVITY	[HIGH]									
	HYDROLOGY	[CHILLIWACK CREEK]									
SOILS PARENT MATERIAL	F										

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[NAV WATERS]	[FISH]	[WC (S2)]	LOW QUALITY SUBSOILS			
	UNST TR/COMP RUT WIND ER	[UNST TR/COMP RUT]	COMP RUT	UNST TR/COMP RUT WIND ER	UNST TR	COMP RUT	

CONSTRUCTION WORK WINDOW		[AQ-AUG 1 TO SEP 15]								
SOILS HANDLING	STRIPPING DEPTH (cm)	-	35	-	40	30	(40) [10]	(20-25) [15]	30	
SOILS	PROCEDURE	-	TRENCH AND SPOIL	-	TRENCH AND SPOIL		3-LIFT	[FULL ROW; REDUCE AS APPROPRIATE]		
SOILS			SO-NOTE 1		[SO-NOTES 2 AND 3]	SO-NOTE 2	SO-NOTE 1	SO-NOTES 2 AND 3	SO-NOTE 3	SO-NOTE 2
WATERCOURSE CROSSINGS	PIPELINE VEHICLE							[AQ-NOTE 3]	[AQ-NOTE 2]	
WETLANDS										
FOREST TYPE (m ³ /ha)										
VEGETATION										
WILDLIFE AND FISH HABITAT									[AQ-NOTE 1]	
HERITAGE / TRADITIONAL LAND USE										
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS										
SPECIAL MEASURES									[AQ-NOTE 4]	



Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 270 OF 301
DATE	December 2013	REVISION	0
SCALE	1:10,000	DISCIPLINE	EAS
DRAWN	CMR	DESIGN	TGG

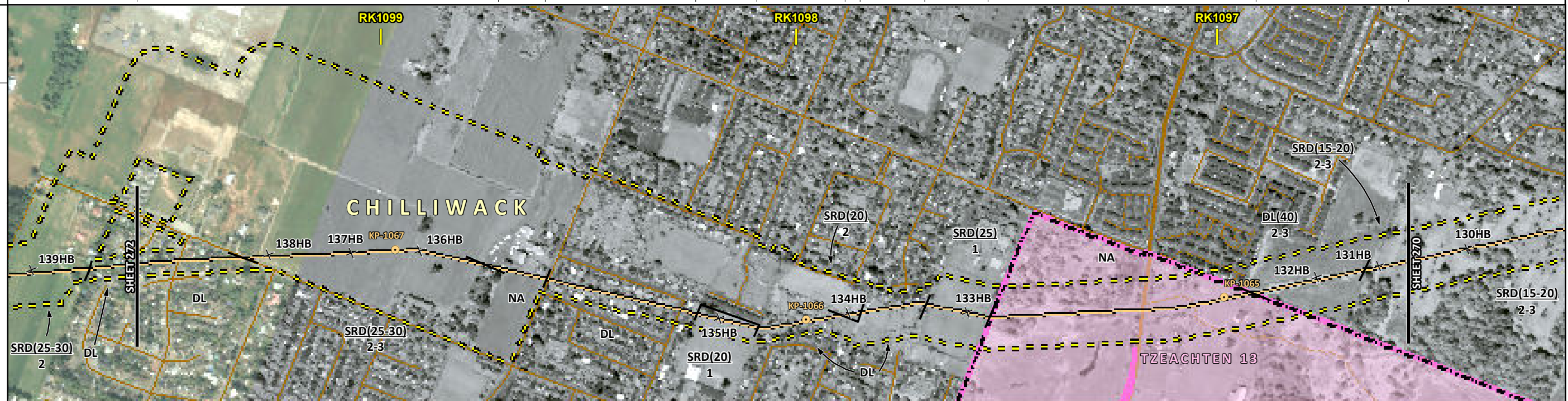
ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 1093.6 TO RK 1096.5

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF CHILLIWACK											
	LAND OWNERSHIP / DISPOSITION	PRIVATE											
	LAND USE	DL	CULTIVATED	NA	DISTURBED LAND	HAY	DISTURBED LAND	P	DL	HAY	NA	DISTURBED LAND	RECREATIONAL
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE RASPBERRY						AGRICULTURAL LAND RESERVE					
	HERITAGE / TRADITIONAL LAND USE												
	WILDLIFE / WILDLIFE HABITAT												
	VEGETATION												
	WETLANDS	[SE MARSH]											
	FISH HABITAT SENSITIVITY	[SE MARSH]											
	HYDROLOGY												
SOILS PARENT MATERIAL	F	NA	F	F	F	NA							

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	AGRI (CROP)	UNST TR WIND ER	UNST TR WIND ER	UNST TR [WIND ER]	UNST TR WIND ER	[WETLAND]	[WETLAND]
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CONSTRUCTION WORK WINDOW													
SOILS HANDLING	STRIPPING DEPTH (cm)	25-30	NA	-	20	-	20	-	25	NA	40	-	-
SOILS HANDLING	PROCEDURE	TRENCH AND SPOIL			TRENCH AND SPOIL		TRENCH AND SPOIL		TRENCH AND SPOIL; ADJUST AS REQUIRED				
SOILS		SO-NOTE 1	SO-NOTE 3	SO-NOTE 1	SO-NOTE 3	SO-NOTE 1	SO-NOTE 3	SO-NOTE 1	SO-NOTE 3				
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[WT-NOTE 1][WT-NOTE 1]											
WETLANDS													
FOREST TYPE (m ³ /ha)													
VEGETATION													
WILDLIFE AND FISH HABITAT													
HERITAGE / TRADITIONAL LAND USE													
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AG-NOTE 1											
SPECIAL MEASURES													

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 271 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

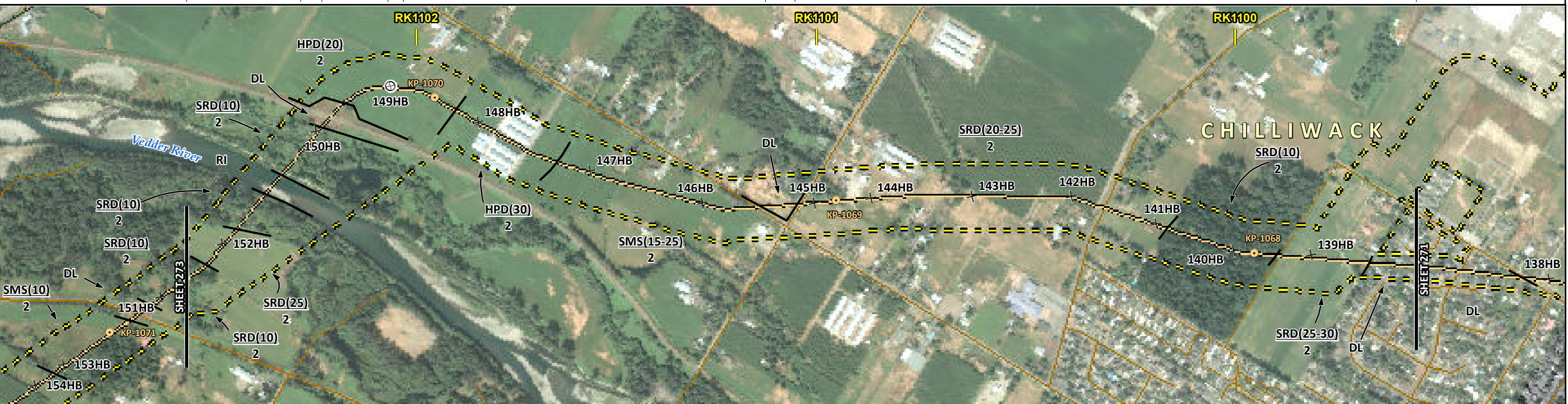
FROM RK 1096.5 TO RK 1099.6

P:\GIS\TMAP\MAP_FILES\EAS\201310_MAP_TERA_EAS_00434\Rev0\AS_Output\LR\Res

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF CHILLIWACK										PRIVATE			
	LAND OWNERSHIP / DISPOSITION	MIXED ENV C&R	CROWN	MIXED											
	LAND USE	TREED	P	TREED RIVER	TREED	TAME PASTURE	HAY			CULTIVATED	HAY	TREED	CULTIVATED	DL	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											AGRICULTURAL LAND RESERVE NURSERY	RASPBERRY		
	HERITAGE / TRADITIONAL LAND USE														
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND													
	VEGETATION														
	WETLANDS	[OPEN POND] [DEEP MARSH]													
	FISH HABITAT SENSITIVITY	[HIGH] [HIGH] [HIGH]													
	HYDROLOGY	[SIDE CHANNEL] [CHILLIWACK/VEDDER R] [SIDE CHANNEL]													
SOILS PARENT MATERIAL	F - F - F - F														

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WF FEATURE	[WC (S2)] [WC (S1B)] [FISH] [FISH]	[NAV WATERS]	[AGRI (LIVESTOCK)]	AGRI (CROP)	AGRI (CROP)	UNST TR WIND ER	UNST TR WIND ER
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CONSTRUCTION WORK WINDOW	[AQ-AUG 1 TO SEP 15] [AQ-AUG 1 TO AUG 15] [AQ-JUL 15 TO SEP 15]																	
SOILS HANDLING PROCEDURE	WF-NOTE 4		25		15-20		20		30		15-25		20-25		15-20		25-30	
SOILS	FULL ROW		-		FULL ROW		-		FULL ROW		-		FULL ROW; REDUCE AS APPROPRIATE		-		-	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE		[AQ-NOTE 3] [AQ-NOTE 3] [AQ-NOTE 3]		[AQ-NOTE 2] [AQ-NOTE 2] [AQ-NOTE 2]													
WETLANDS			[NAV WATERS] [WETLANDS]		[WC (S1B)]													
FOREST TYPE (m ³ /ha)			[NAV WATERS]		[NAV WATERS]													
VEGETATION			[WF-NOTE 1]		[AQ-NOTE 1]													
WILDLIFE AND FISH HABITAT			[WF-NOTE 1]		[AQ-NOTE 1]													
HERITAGE / TRADITIONAL LAND USE																		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							[AG-NOTE 2]		AG-NOTE 1		AG-NOTE 1							
SPECIAL MEASURES							[AQ-NOTE 4] [AQ-NOTE 4] [AQ-NOTE 4]											

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPL, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

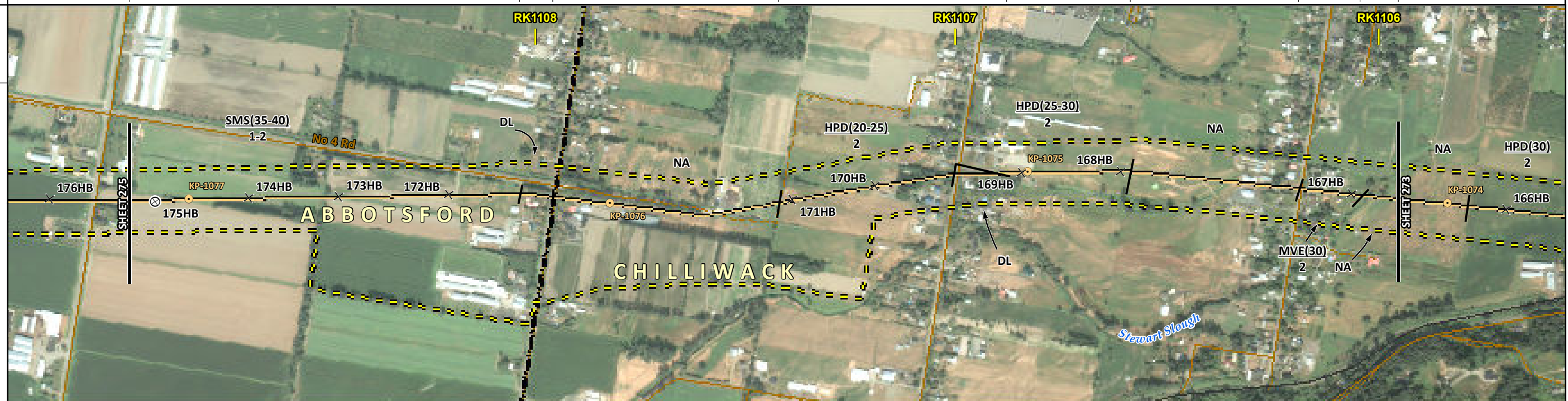
MAP NUMBER 201310_MAP_TERA_EAS_00434_REV0	PAGE SHEET 272 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 1099.6 TO RK 1102.7

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF ABBOTSFORD	PRIVATE	CITY OF CHILLIWACK					
	LAND OWNERSHIP / DISPOSITION								
	LAND USE	CULTIVATED	DL	NA	DISTURBED LAND	TAME PASTURE	NA	HAY	NA
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		EQUESTRIAN	AGRICULTURAL LAND RESERVE	BLUEBERRY	ORGANIC	ORGANIC		
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT				AMPH-POND				
	VEGETATION								
	WETLANDS				OPEN POND				
	FISH HABITAT SENSITIVITY								
	HYDROLOGY								
SOILS PARENT MATERIAL	F	NA	F	NA	F	NA			

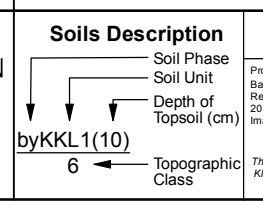
11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	UNST TR/COMP RUT WIND ER	AGRI (LIVESTOCK)	AGRI (CROP)	AGRI (ORGANIC)	AGRI (ORGANIC)
CONSTRUCTION WORK WINDOW				WF-NOTE 4	

ENVIRONMENTAL PROTECTION	SOILS	STRIPPING DEPTH (cm)	35-40	NA	25-30	NA	30	NA
	HANDLING PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE	FULL ROW		FULL ROW		
	SOILS		SO-NOTE 1 SO-NOTES 2 AND 3		SO-NOTE 1 SO-NOTES 2 AND 3		SO-NOTE 1 SO-NOTE 2	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE						
	WETLANDS			WF-NOTE 1 WF-NOTE 2				
	FOREST TYPE (m ³ /ha)							
	VEGETATION				WF-NOTE 1			
	WILDLIFE AND FISH HABITAT							
	HERITAGE / TRADITIONAL LAND USE							
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AG-NOTE 2	AG-NOTE 1	AG-NOTE 3		AG-NOTE 3	
	SPECIAL MEASURES							



REFERENCES

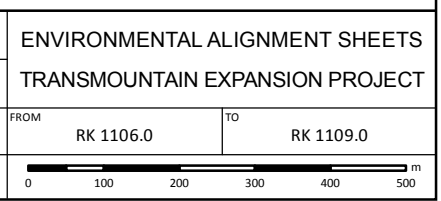
Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012; provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

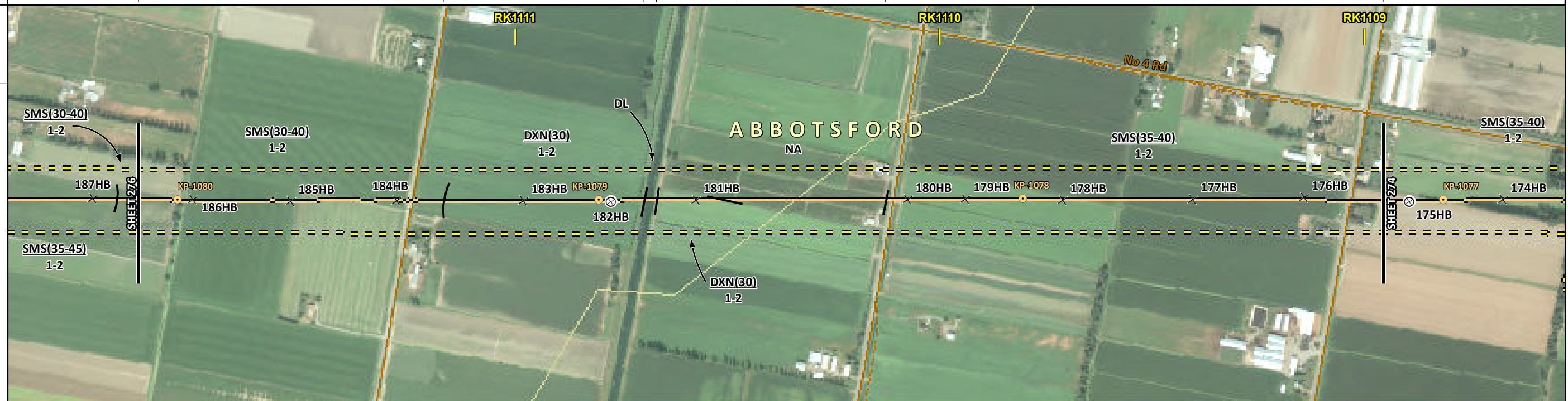
MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 274 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG



ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF ABBOTSFORD				
	LAND OWNERSHIP / DISPOSITION	PRIVATE				
	LAND USE	CULTIVATED		[DL]	CULTIVATED	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	TURF	FORAGE	AGRICULTURAL LAND RESERVE	BLUEBERRY	
	HERITAGE / TRADITIONAL LAND USE					
	WILDLIFE / WILDLIFE HABITAT					
	VEGETATION					
	WETLANDS					
	FISH HABITAT SENSITIVITY	[HIGH]				
	HYDROLOGY	[SUMAS LAKE CANAL]				
SOILS PARENT MATERIAL	F	UF	-	UF	NA	F

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	AGRI (CROP)	[FISH] [WC (\$2)]	[NAV WATERS]	
	UNST TR/COMP RUT WIND ER	UNST TR/COMP RUT WIND ER	UNST TR/COMP RUT WIND ER	UNST TR/COMP RUT WIND ER
		[AQ-JUL 15 TO SEP 15]		

CONSTRUCTION WORK WINDOW				
SOILS HANDLING	STRIPPING DEPTH (cm)	30-40	30	35-40
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE		FULL ROW; REDUCE AS APPROPRIATE
SOILS		SO-NOTE 1 SO-NOTES 2 AND 3	SO-NOTE 1 SO-NOTES 2 AND 3	SO-NOTE 1 SO-NOTES 2 AND 3
WATERCOURSE CROSSINGS	PIPELINE VEHICLE		[AQ-NOTE 3] [AQ-NOTE 2]	
WETLANDS				
FOREST TYPE (m ³ /ha)				
VEGETATION			[AQ-NOTE 1]	
WILDLIFE AND FISH HABITAT				
HERITAGE / TRADITIONAL LAND USE				
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		AG-NOTE 1		
SPECIAL MEASURES			[AQ-NOTE 4]	

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 275 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
		DISCIPLINE	EAS
		DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

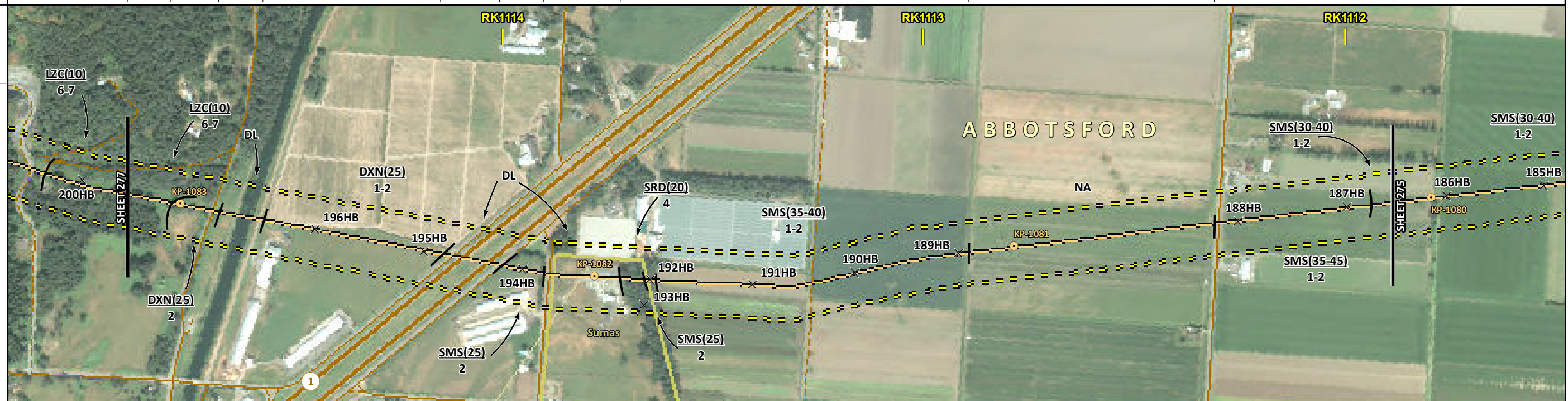
FROM RK 1109.0 TO RK 1111.9

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF ABBOTSFORD									
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	TREED	DL	HAY	DL	HAY	DISTURBED LAND	TREED	CULTIVATED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	[BLUEBERRY]					AGRICULTURAL LAND RESERVE				
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT	RAPTOR NEST									
	VEGETATION										
	WETLANDS										
	FISH HABITAT SENSITIVITY	[HIGH]									
	HYDROLOGY	[SUMAS RIVER]									
SOILS PARENT MATERIAL	E/T	L/F	-	L/F	-	F	-	F	NA	F	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- City / Town
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- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[AGRI (CROP)]	[FISH]	[WC (S1B)]	[NAV WATERS]	[UNST TR/COMP RUT]	[UNST TR/COMP RUT]	[UNST TR/COMP RUT]	[WF FEATURE]	[UNST TR]	[UNST TR/COMP RUT]	[UNST TR/COMP RUT]	[UNST TR/COMP RUT]
	WIND ER	WIND ER	WIND ER	WIND ER	WIND ER	WIND ER	WIND ER	WIND ER	WIND ER	WIND ER	WIND ER	WIND ER

CONSTRUCTION WORK WINDOW	[AQ-AUG 1 TO AUG 15]	WF-NOTE 4											
SOILS STRIPPING DEPTH (cm)	15-20	25	-	25	-	25	-	20	25	35-40	NA	35-40	[30-40]
SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE			FULL ROW	-	FULL ROW	-	FULL ROW; REDUCE AS APPROPRIATE					
SOILS	SO-NOTE 1		[SO-NOTES 2 AND 3]	SO-NOTE 1	[SO-NOTES 2 AND 3]	SO-NOTE 1	[SO-NOTES 2 AND 3]	[SO-NOTE 3]	SO-NOTE 1	[SO-NOTES 2 AND 3]	SO-NOTE 1	[SO-NOTES 2 AND 3]	[SO-NOTES 2 AND 3]
WATERCOURSE CROSSINGS	PIPELINE	[AQ-NOTE 3]	[AQ-NOTE 2]										
WATERCOURSE CROSSINGS	VEHICLE												
WETLANDS													
FOREST TYPE (m ³ /ha)													
VEGETATION													
WILDLIFE AND FISH HABITAT	[AQ-NOTE 1]					WF-NOTE 2							
HERITAGE / TRADITIONAL LAND USE													
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	[AG-NOTE 1]												
SPECIAL MEASURES	[AQ-NOTE 4]												

TRANS MOUNTAIN
tera
ENVIRONMENTAL CONSULTANTS

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 276 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG


ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT


















FROM RK 1111.9 TO RK 1114.9

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION				CITY OF ABBOTSFORD		
	LAND OWNERSHIP / DISPOSITION			PRIVATE	MIXED		PRIVATE
	LAND USE				TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						
	HERITAGE / TRADITIONAL LAND USE						
	WILDLIFE / WILDLIFE HABITAT						
	VEGETATION		HYDRTEN	[HYDRTEN]	[TYPHLAT]		
	WETLANDS		[SHRUBBY SWAMP]				
	FISH HABITAT SENSITIVITY						
	HYDROLOGY						
SOILS PARENT MATERIAL			E/T			E/T	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012



-  Reference Kilometre Post (RK)
-  Kilometre Post (KP)
-  Trans Mountain Pipeline (TMPL)
-  Proposed Pipeline Corridor
-  Trans Mountain Owned Land
-  Soil Inspection
-  Soil Sample
-  Soil Break
-  Other Existing Pipeline
-  Highway
-  Paved Road
-  Trail / Rough Road
-  Railway
-  City / Town
-  Regional District
-  Indian Reserve
-  Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		RARE PLANTS	[RARE PLANTS]	[RARE COMMUNITY]				
		[WETLAND]						
			WIND/WATER ER	WIND ER	WIND/WATER ER	[WATER ER]		WIND/WATER ER

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW						
	SOILS HANDLING	STRIPPING DEPTH (cm)			15-20		
		PROCEDURE			FULL ROW; REDUCE AS APPROPRIATE		
	SOILS				SO-NOTE 1		
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE					
	WETLANDS				[WT-NOTE 1]		
	FOREST TYPE (m ³ /ha)						
	VEGETATION		VG-NOTE 1	[VG-NOTE 1]	[VG-NOTE 1]		
	WILDLIFE AND FISH HABITAT						
	HERITAGE / TRADITIONAL LAND USE						
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS							
SPECIAL MEASURES							



Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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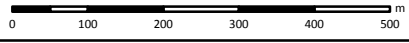
REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 277 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

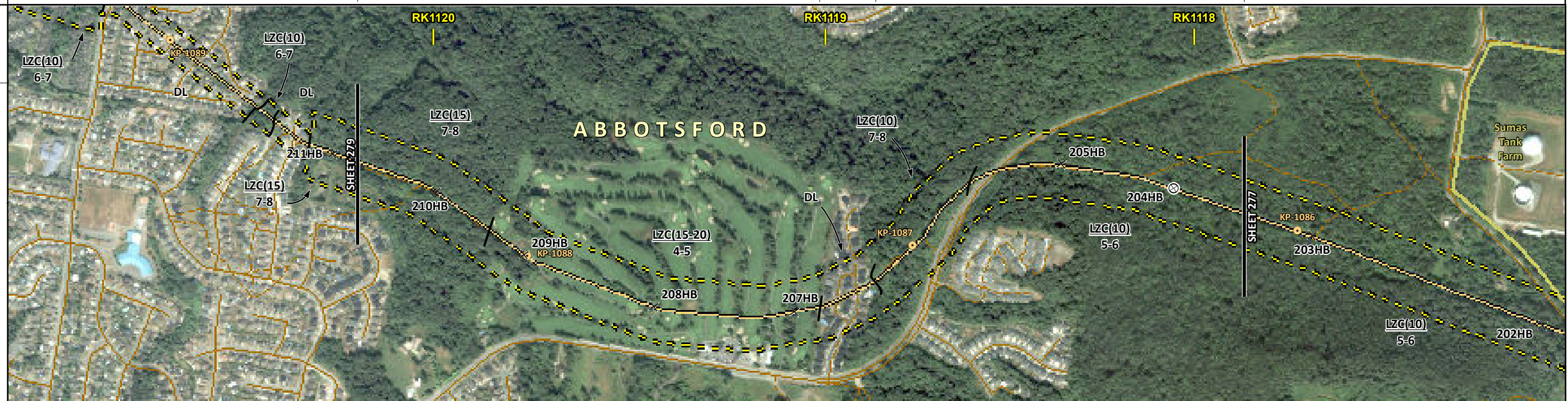
FROM RK 1114.9 TO RK 1117.9



ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF ABBOTSFORD			
	LAND OWNERSHIP / DISPOSITION	PRIVATE			
	LAND USE	TREED	RECREATIONAL	DL	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT	[AMPH-POND]	AMPH-POND		
	VEGETATION	HYDRTEN		HYDRTEN	
	WETLANDS	[SHRUBBY SWAMP]			
	FISH HABITAT SENSITIVITY				
	HYDROLOGY	[TRIB TO CLAYBURN CR/LEDGEVIEW CR]			
SOILS PARENT MATERIAL	ET		ET		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	RARE PLANTS	WIND/WATER ER	[WC (SS)]	WIND/WATER ER	[WETLAND]
	[WF FEATURE]	WIND/WATER ER	[NAV WATERS]		
	[WF-NOTE 4]	[WF-NOTE 4]	[AQ-OPEN]		

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	[WF-NOTE 4]	[WF-NOTE 4]		
	SOILS STRIPPING DEPTH (cm)		15-20		15-20
	SOILS HANDLING PROCEDURE	[FULL ROW; REDUCE AS APPROPRIATE]	TRENCH AND SPOIL; ADJUST AS REQUIRED		FULL ROW; REDUCE AS APPROPRIATE
	SOILS		SO-NOTE 1		SO-NOTE 1
	WATERCOURSE CROSSINGS PIPELINE VEHICLE			[AQ-NOTE 3]	[AQ-NOTE 2]
	WETLANDS				[WT-NOTE 1]
	FOREST TYPE (m ³ /ha)				
	VEGETATION		VG-NOTE 1		VG-NOTE 1
	WILDLIFE AND FISH HABITAT	[WF-NOTE 1]	[WF-NOTE 1]		
	SPECIAL MEASURES			[AQ-NOTE 4]	

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 278 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
	DISCIPLINE EAS
	DESIGN TGG

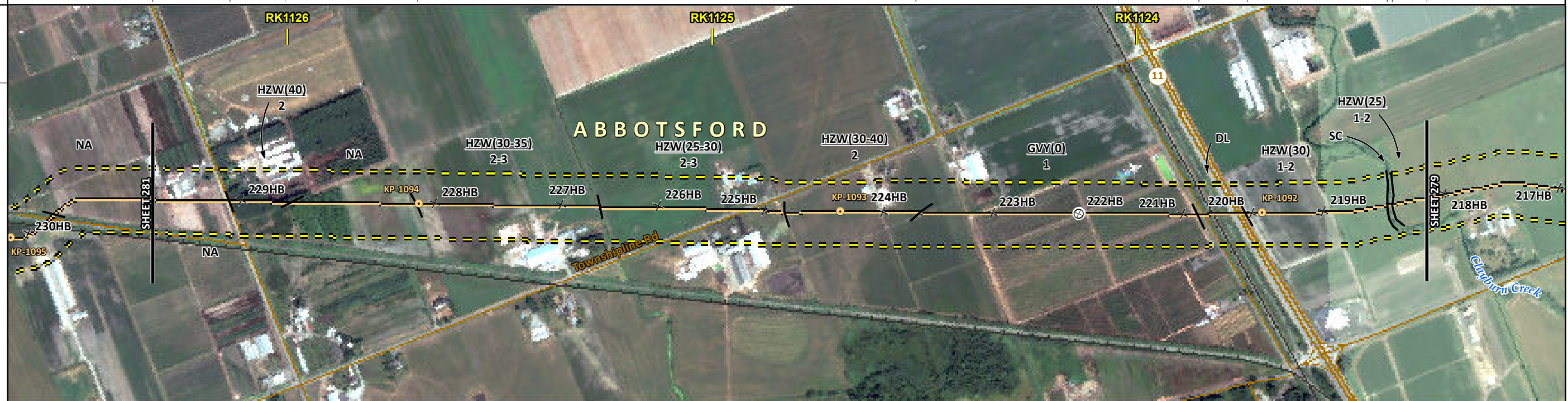
ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 1117.9 TO RK 1120.2

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF ABBOTSFORD											
	LAND OWNERSHIP / DISPOSITION	PRIVATE											
	LAND USE	NA	TREED	NA	HAY	CULTIVATED					DL	CULTIVATED	HAY CULTIVATED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	BLUEBERRY	NURSERY			FORAGE	AGRICULTURAL LAND RESERVE				BLUEBERRY	FORAGE	
	HERITAGE / TRADITIONAL LAND USE												
	WILDLIFE / WILDLIFE HABITAT												
	VEGETATION												
	WETLANDS												
	FISH HABITAT SENSITIVITY											[HIGH]	
	HYDROLOGY	[TRIB TO GILFORD SLOUGH]										[CLAYBURN CREEK]	
SOILS PARENT MATERIAL	NA	L	NA	L	O					L	L		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	AGRI (CROP)	[WC (S3)]	[NAV WATERS]	WIND ER	COMP RUT	[FISH]	[WC (S2)]	COMP RUT	[NAV WATERS]	WIND ER	[COMP RUT]	[WIND ER]
CONSTRUCTION WORK WINDOW		[AQ-OPEN]					[AQ-AUG 1 TO AUG 15]					

ENVIRONMENTAL PROTECTION	SOILS HANDLING	STRIPPING DEPTH (cm)	NA	40	NA	30-35	25-30	30-40	40	-	30	[10]	25
	SOILS		SO-NOTE 1			SO-NOTE 1		SO-NOTE 2			SO-NOTE 1	[SO-NOTE 1]	[SO-NOTE 2]
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE					[AQ-NOTE 3]					[AQ-NOTE 3]	[AQ-NOTE 2]
	WETLANDS												
	FOREST TYPE (m ³ /ha)												
	VEGETATION												
	WILDLIFE AND FISH HABITAT												[AQ-NOTE 1]
	HERITAGE / TRADITIONAL LAND USE												
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS						AG-NOTE 1							
SPECIAL MEASURES						[AQ-NOTE 4]						[AQ-NOTE 4]	



Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

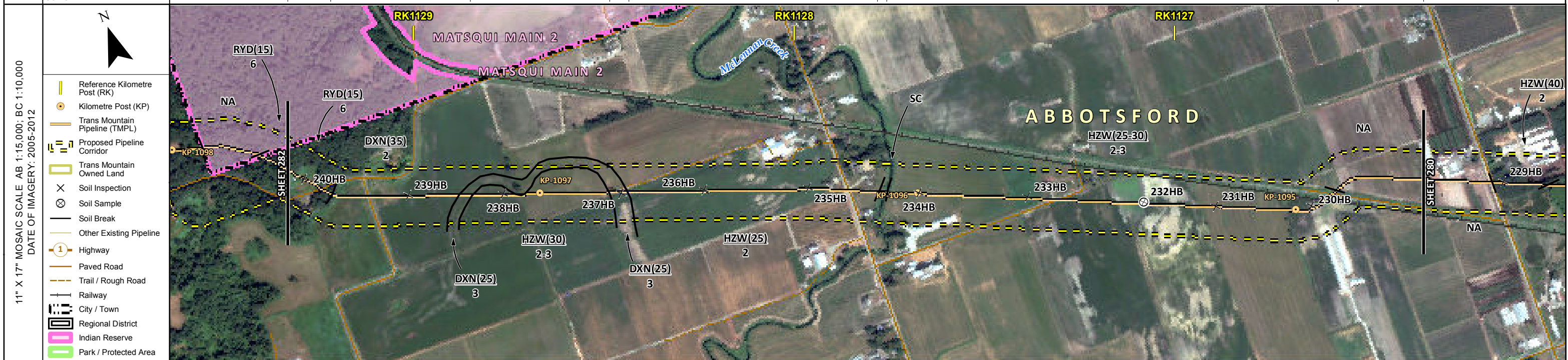
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0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 280 OF 301
DATE	December 2013	REVISION	0
SCALE	1:10,000	DISCIPLINE	EAS
DRAWN	CMR	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 1123.3 TO RK 1126.3

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF ABBOTSFORD							
	LAND OWNERSHIP / DISPOSITION	PRIVATE							
	LAND USE	TREED	CULTIVATED		HAY	TREED		CULTIVATED	NA
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE							BLUEBERRY
	HERITAGE / TRADITIONAL LAND USE								
	WILDLIFE / WILDLIFE HABITAT								
	VEGETATION								
	WETLANDS	[SE MARSH]							
	FISH HABITAT SENSITIVITY	[HIGH]							
	HYDROLOGY	[MCLENNAN CREEK]							
SOILS PARENT MATERIAL	E/T	L/F	L	L/F	L	-	L	NA	



POTENTIAL ENVIRONMENTAL ISSUES	[WIND/WATER ER]	UNST TR/COMP RUT	COMP RUT	UNST TR/COMP RUT	COMP RUT	[NAV WATERS]	[WETLAND]	AGRI (CROP)
CONSTRUCTION WORK WINDOW						[AQ-AUG 1 TO AUG 15]		

ENVIRONMENTAL PROTECTION	SOILS STRIPPING DEPTH (cm)	15-20	35	25	30	25	[15-20]	25-30	NA	
	SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE					-	FULL ROW		
	SOILS	SO-NOTES 2 AND 3		SO-NOTE 1	[SO-NOTES 2 AND 3]		SO-NOTE 2	SO-NOTE 1	SO-NOTE 2	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE					[AQ-NOTE 3]			
	WETLANDS						[AQ-NOTE 2]			
	FOREST TYPE (m ³ /ha)							[WT-NOTE 1]		
	VEGETATION									
	WILDLIFE AND FISH HABITAT						[AQ-NOTE 1]			
	HERITAGE / TRADITIONAL LAND USE									
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS								AG-NOTE 1	
SPECIAL MEASURES						[AQ-NOTE 4]				

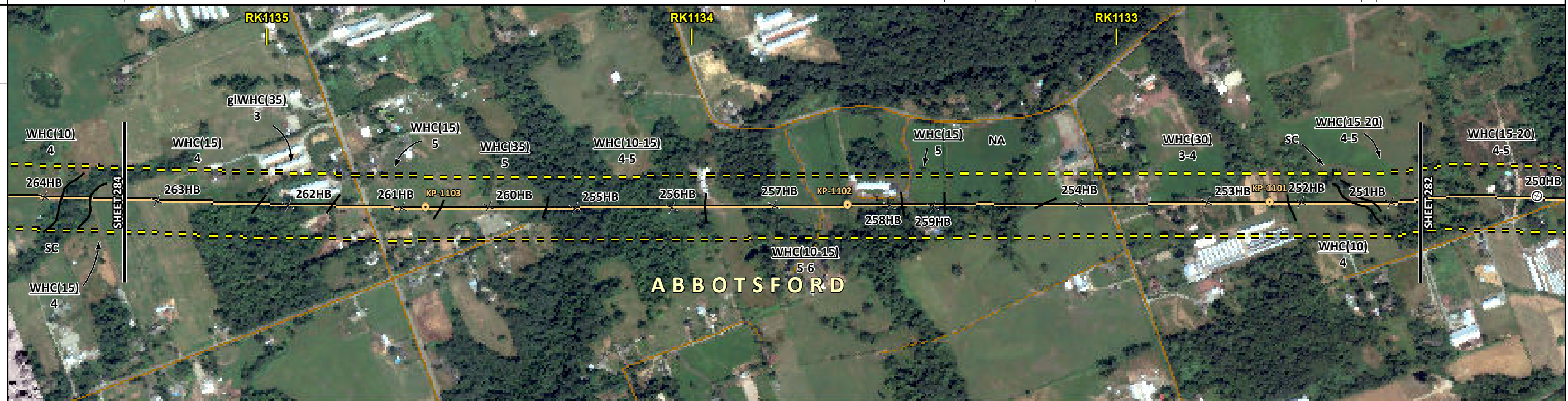
	Soils Description	REFERENCES <small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small>	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 281 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 1126.3 TO RK 1129.3
	NO.			DATE	DESCRIPTION	BY	CHKD.	APPR.										
	0			Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB										
Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	SCALE 1:10,000 DRAWN CMR	TERA REF. 7894 PAGE SIZE 11x17 CHECKED DN	REVISION 0 DISCIPLINE EAS DESIGN TGG															
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF ABBOTSFORD									
	LAND OWNERSHIP / DISPOSITION	PRIVATE									
	LAND USE	P	TREED	TAME PASTURE	TREED	NA	TREED PASTURE				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	POULTRY				AGRICULTURAL LAND RESERVE			NURSERY		
	HERITAGE / TRADITIONAL LAND USE										
	WILDLIFE / WILDLIFE HABITAT						AMPH-POND		RAPTOR NEST		
	VEGETATION										
	WETLANDS	[SE MARSH]									
	FISH HABITAT SENSITIVITY										
	HYDROLOGY	[CHANNEL CHANNEL]									
SOILS PARENT MATERIAL	E/GM			NA			E/GM		E/GM		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	AGRI (LIVESTOCK)	[WC (S6)]	AGRI (CROP)	[WETLAND] WF FEATURE
	WIND ER	COMP RUT	WIND/WATER ER	WIND ER

CONSTRUCTION WORK WINDOW	[AQ-OPEN AQ-OPEN]	WF-NOTE 4	WF-NOTE 4							
SOILS STRIPPING DEPTH (cm)	15	35	15	35	15-20	NA	30	10	10	15-20
SOILS HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE					FULL ROW; REDUCE AS APPROPRIATE				
SOILS	SO-NOTE 2		SO-NOTE 1			SO-NOTE 1			SO-NOTE 1	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	[AQ-NOTE 3 AQ-NOTE 3]		[AQ-NOTE 2 AQ-NOTE 2]		[WT-NOTE 1]				
WETLANDS										
FOREST TYPE (m ³ /ha)										
VEGETATION										
WILDLIFE AND FISH HABITAT	WF-NOTE 1					WF-NOTE 2				
HERITAGE / TRADITIONAL LAND USE										
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AG-NOTE 2					AG-NOTE 1				
SPECIAL MEASURES										

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 283 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 1132.3 TO RK 1135.3

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	TOWNSHIP OF LANGLEY				CITY OF ABBOTSFORD											
	LAND OWNERSHIP / DISPOSITION	PRIVATE															
	LAND USE	P	NA	TREED	TREED PASTURE	NA	T-P	TREED	NA	TREED	NA	TAME PASTURE	TREED	P			
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE															
	HERITAGE / TRADITIONAL LAND USE																
	WILDLIFE / WILDLIFE HABITAT																
	VEGETATION																
	WETLANDS	[SHRUBBY SWAMP]															
	FISH HABITAT SENSITIVITY																
HYDROLOGY	[CHANNEL]																
SOILS PARENT MATERIAL	E/GM	NA	GM	E/GM	NA	E/GM	NA	E/GM	NA	E/GM	NA	E/GM	NA				

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
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- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	[WC (S6)]
	[WIND ER]	[WIND ER]
	[WATER ER]	[WATER ER]
	[WIND ER]	[WIND ER]
		[AQ-OPEN]

CONSTRUCTION WORK WINDOW																			
SOILS HANDLING	STRIPPING DEPTH (cm)	25	NA	15-20	25	NA	10	15-20	NA	15-20	NA	15	10	15-20	15				
SOILS	PROCEDURE	FULL ROW														FULL ROW; REDUCE AS APPROPRIATE			
SOILS		[SO-NOTE 1]		SO-NOTE 1	SO-NOTE 2		SO-NOTE 2		[SO-NOTE 1]			SO-NOTE 1		[SO-NOTE 1]					
WATERCOURSE CROSSINGS	PIPELINE VEHICLE																		[AQ-NOTE 3]
WETLANDS				[WT-NOTE 1]															[AQ-NOTE 2]
FOREST TYPE (m ³ /ha)																			
VEGETATION																			
WILDLIFE AND FISH HABITAT																			
HERITAGE / TRADITIONAL LAND USE																			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS																			
SPECIAL MEASURES																			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 284 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 1135.3 TO RK 1138.4

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	TOWNSHIP OF LANGLEY											
	LAND OWNERSHIP / DISPOSITION	PRIVATE											
	LAND USE	NA	P	NA	TREED	DL	TAME PASTURE	TREED	DL	TREED	P		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE											
	HERITAGE / TRADITIONAL LAND USE												
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND											
	VEGETATION												
	WETLANDS	[OPEN POND]											
	FISH HABITAT SENSITIVITY												
	HYDROLOGY												
SOILS PARENT MATERIAL	NA	E/GM	NA	E/GM	-	E/GM	-	E/GM	NA	E/GM	-	E/GM	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
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- Soil Break
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- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	AGRI (CROP)	[NAV WATERS]	[WETLAND]	[WETLAND]	[NAV WATERS]	[WATER ER]	WIND ER	[WATER ER]	WIND ER

CONSTRUCTION WORK WINDOW													
SOILS STRIPPING DEPTH (cm)	NA	30	NA	40	-	20	WF-NOTE 4	10-15	WF-NOTE 4	15-20	NA	15-20	25
SOILS HANDLING PROCEDURE	FULL ROW, REDUCE AS APPROPRIATE												
SOILS	[SO-NOTE 1]			SO-NOTE 1		SO-NOTE 2		SO-NOTE 1			SO-NOTE 1		
WATERCOURSE CROSSINGS	PIPELINE VEHICLE												
WETLANDS	[WT-NOTE 1]												
FOREST TYPE (m ³ /ha)	[WT-NOTE 2]												
VEGETATION													
WILDLIFE AND FISH HABITAT	WF-NOTE 1												
HERITAGE / TRADITIONAL LAND USE													
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AG-NOTE 1												
SPECIAL MEASURES													

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 285 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

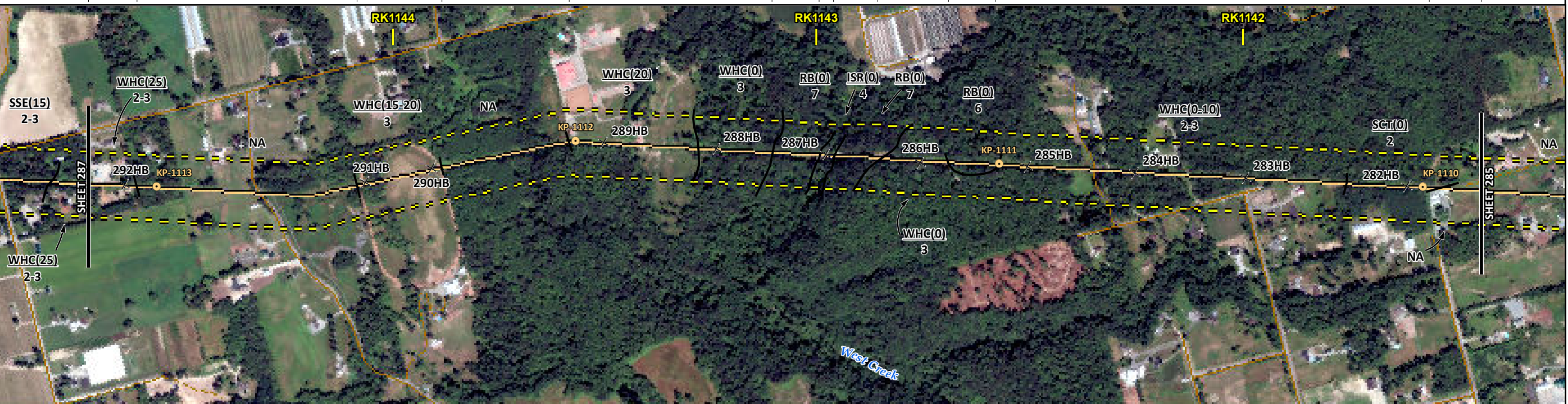
FROM RK 1138.4 TO RK 1141.4

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	TOWNSHIP OF LANGLEY										
	LAND OWNERSHIP / DISPOSITION	PRIVATE										
	LAND USE	TREED	NA	TAME PASTURE	NA	TREED PASTURE	TREED	NA				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE										
	HERITAGE / TRADITIONAL LAND USE											
	WILDLIFE / WILDLIFE HABITAT						AMPH-POND					
	VEGETATION						[THUJ/PICE/LYSI]	POPU/ALNU/RUBU				
	WETLANDS											
	FISH HABITAT SENSITIVITY											
	HYDROLOGY											
SOILS PARENT MATERIAL	E/GM	NA	E/GM	NA	E/GM	-	F	-	E/GM	-	E/GM	NA

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
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- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[RARE COMMUNITY]									
	WIND ER	WIND ER	WIND ER	WIND ER	WIND ER	WIND ER	WIND ER	WIND ER	WIND ER	COMP RUT

CONSTRUCTION WORK WINDOW	WF-NOTE 4										
SOILS STRIPPING DEPTH (cm)	25	NA	15-20	NA	20	20	15-20	NA			
SOILS HANDLING PROCEDURE	FULL ROW, REDUCE AS APPROPRIATE										
SOILS	SO-NOTE 1		SO-NOTE 1			[SO-NOTE 3]		SO-NOTE 1		SO-NOTE 2	
WATERCOURSE CROSSINGS PIPELINE VEHICLE											
WETLANDS											
FOREST TYPE (m ³ /ha)											
VEGETATION						[VG-NOTE 1]	VG-NOTE 1				
WILDLIFE AND FISH HABITAT						WF-NOTE 1	WF-NOTE 1				
HERITAGE / TRADITIONAL LAND USE											
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											
SPECIAL MEASURES											

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AtlasIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AtlasIS, 2009; First Nation Lands: Government of Canada, 2013; AtlasIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AtlasIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 286 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

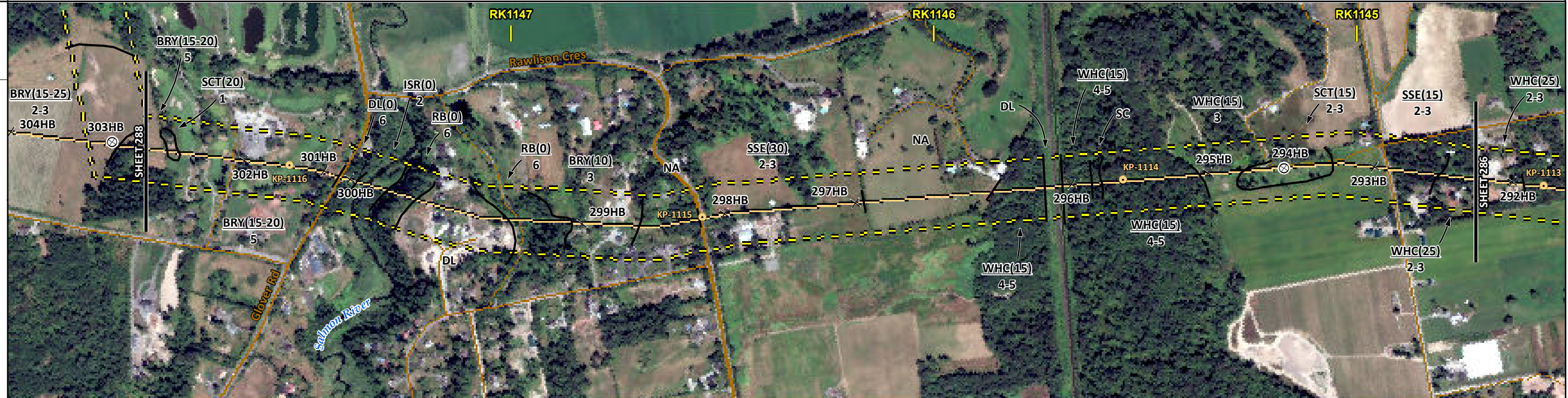
FROM RK 1141.4 TO RK 1144.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	TOWNSHIP OF LANGLEY																																		
	LAND OWNERSHIP / DISPOSITION	PRIVATE				MIXED				PRIVATE				CROWN		MIXED		PRIVATE																		
	LAND USE	T-P		RECREATIONAL				DL		TREED		DISTURBED LAND		TREED		TREED PASTURE		NA		TREED PASTURE		NA		TREED		DL		TREED		T-P		TAME PASTURE		TREED		
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE																																		
	HERITAGE / TRADITIONAL LAND USE																																			
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND																																		
	VEGETATION	[POPU ALNU RUBU]																																		
	WETLANDS	[DEEP MARSH]								[SE MARSH]								[DEEP MARSH]																		
	FISH HABITAT SENSITIVITY	[HIGH]																																		
	HYDROLOGY	[DRAINAGE]				[SALMON RIVER]				[SHALLOW WELL]																										
SOILS PARENT MATERIAL	GM		E/GM		GM				-		F		-		GM		NA		F-GF		NA		E/GM		-		E/GM		-		E/GM		F-GF		E/GM	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WIND] [WATER] [ER] [WC (NCD-W/S4)] [WF FEATURE] [COMP RUT] [WIND/WATER] [ER]				[WETLANDS] [FISH] [HYDROLOGY] [NAV WATERS] [UNST TR] [WATER] [ER]				[RARE COMMUNITY]				[AGRI (CROP)]			
CONSTRUCTION WORK WINDOW	[AQ-OPEN] [AQ-AUG 1 TO AUG 31]				[WF-NOTE 4]				[WF-NOTE 4]				[WF-NOTE 4]			

ENVIRONMENTAL PROTECTION	SOILS	STRIPPING DEPTH (cm)	15-20	20	15-20	-	15-20	-	15-20	10	NA	30	NA	15-20	-	15-20	15	15-20	25
	HANDLING PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE				FULL ROW				FULL ROW; REDUCE AS APPROPRIATE				FULL ROW; REDUCE AS APPROPRIATE					
SOILS	[SO-NOTE 2]				[SO-NOTE 1]				[SO-NOTE 1]				[SO-NOTE 1]						
WATERCOURSE CROSSINGS	PIPELINE	[AQ-NOTE 3]				[AQ-NOTE 3]				[AQ-NOTE 3]				[AQ-NOTE 3]					
WATERCOURSE CROSSINGS	VEHICLE	[AQ-NOTE 2]				[AQ-NOTE 2]				[AQ-NOTE 2]				[AQ-NOTE 2]					
WETLANDS	[WT-NOTE 1]				[WT-NOTE 2]				[WT-NOTE 1]				[WT-NOTE 1]						
FOREST TYPE (m ² /ha)	[WF-NOTE 1]				[AQ-NOTE 1]				[WF-NOTE 1]				[WF-NOTE 1]						
VEGETATION	[VG-NOTE 1]																		
WILDLIFE AND FISH HABITAT	[WF-NOTE 1]																		
HERITAGE / TRADITIONAL LAND USE																			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	[AG-NOTE 1]																		
SPECIAL MEASURES	[AQ-NOTE 4] [HY-NOTE 2]																		

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & Trans Mountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATIS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

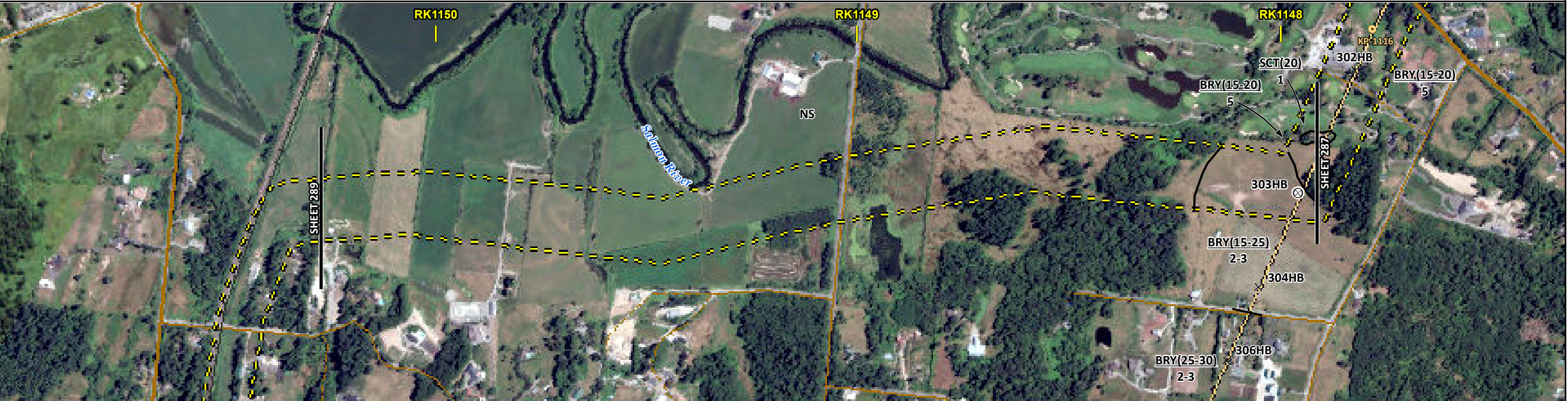
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REVISION HISTORY						MAP NUMBER		PAGE		ENVIRONMENTAL ALIGNMENT SHEETS	
NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	201310_MAP_TERA_EAS_00434_REVO	7894	SHEET 287 OF 301	0	TRANS MOUNTAIN EXPANSION PROJECT	
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	December 2013	7894	0	FROM RK 1144.7 TO RK 1147.9		
						SCALE	PAGE SIZE	DISCIPLINE			
						1:10,000	11x17	EAS			
						DRAWN	CHECKED	DESIGN			
						CMR	DN	TGG			

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	TOWNSHIP OF LANGLEY			
	LAND OWNERSHIP / DISPOSITION	PRIVATE			
	LAND USE	NS	TREED	TAME PASTURE	T-P
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	EQUESTRIAN AGRICULTURAL LAND RESERVE			
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS	[SE MARSH] [SHRUBBY SWAMP]			
	FISH HABITAT SENSITIVITY				
	HYDROLOGY				
SOILS PARENT MATERIAL	NS	GM			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[AGRI (LIVESTOCK)]	[WETLANDS]	[WIND ER]	[WIND/WATER ER]
--------------------------------	--------------------	------------	-----------	-----------------

CONSTRUCTION WORK WINDOW			
SOILS HANDLING	STRIPPING DEPTH (cm)	NS	15-20 15-25 [15-20]
SOILS	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	
SOILS		SO-NOTE 1	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE		
WETLANDS		[WT-NOTE 1]	
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT			
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		[AG-NOTE 2]	
SPECIAL MEASURES			

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- Topographic Class

byKKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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REVISION HISTORY

NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.
0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB

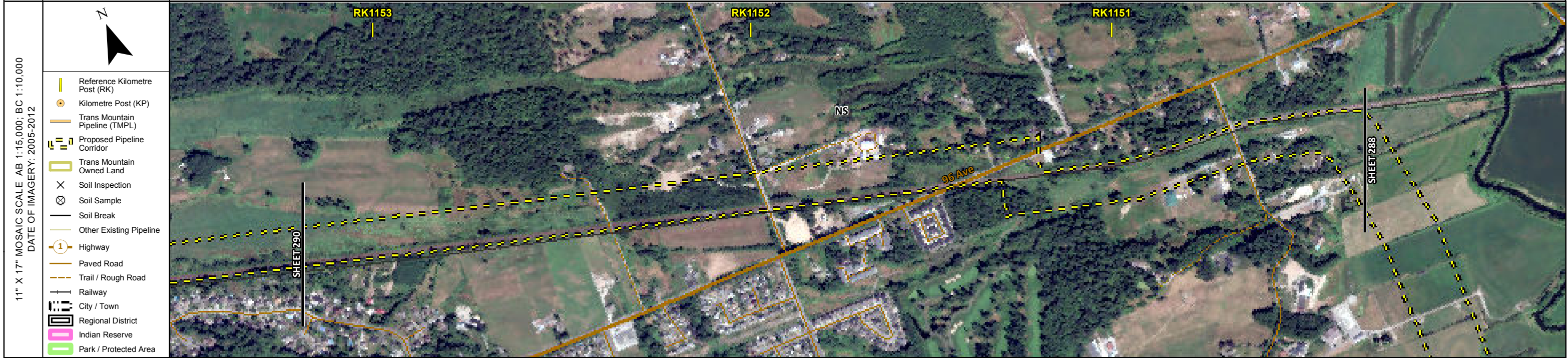
MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 288 OF 301
DATE	December 2013	TERA REF.	7894
SCALE	1:10,000	PAGE SIZE	11x17
DRAWN	CMR	CHECKED	DN
DISCIPLINE	EAS	DESIGN	TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 1147.9 TO RK 1150.3

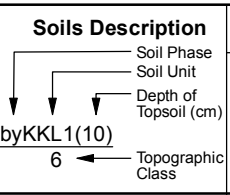
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	TOWNSHIP OF LANGLEY		
	LAND OWNERSHIP / DISPOSITION	PRIVATE		
	LAND USE	NS	TREED	NS
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	AGRICULTURAL LAND RESERVE		
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS	SE MARSH		SE MARSH
	FISH HABITAT SENSITIVITY			
	HYDROLOGY			
SOILS PARENT MATERIAL	NS			



POTENTIAL ENVIRONMENTAL ISSUES	WETLAND	WETLAND
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CONSTRUCTION WORK WINDOW		
SOILS HANDLING	STRIPPING DEPTH (cm)	NS 15-20 NS
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
SOILS		
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	
		WT-NOTE 1 WT-NOTE 1
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION		
WILDLIFE AND FISH HABITAT		
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		



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<small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small>	
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DISCIPLINE EAS	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

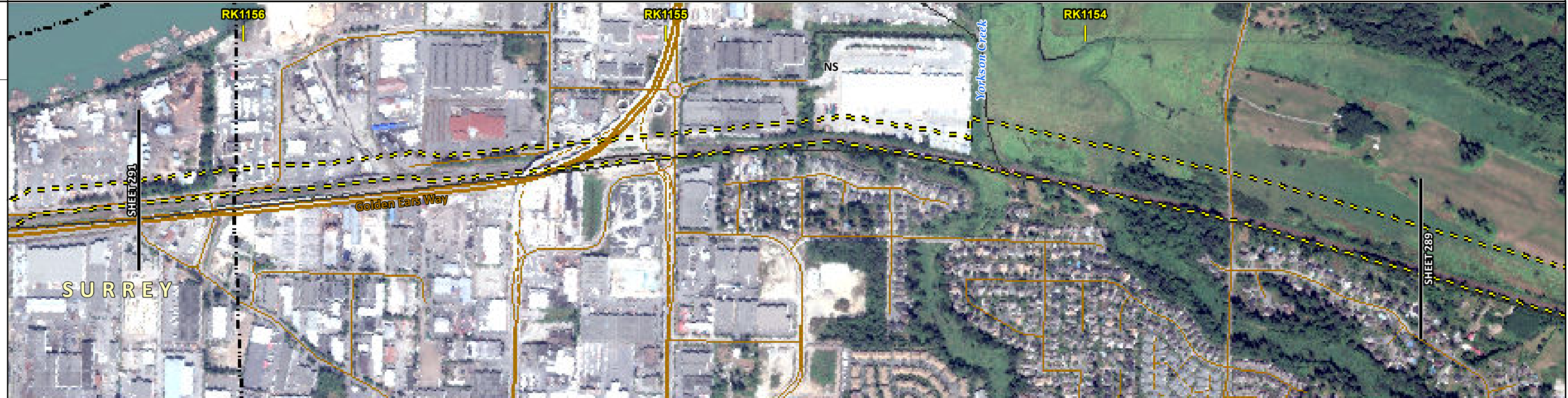
FROM RK 1150.3 TO RK 1153.2

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF SURREY	TOWNSHIP OF LANGLEY	
	LAND OWNERSHIP / DISPOSITION		PRIVATE	
	LAND USE		DISTURBED LAND	NS
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			AGRICULTURAL LAND RESERVE
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT			
	VEGETATION			
	WETLANDS		[SHRUBBY SWAMP]	[SE MARSH] [SE MARSH]
	FISH HABITAT SENSITIVITY			
	HYDROLOGY			
SOILS PARENT MATERIAL			NS	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
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- Trans Mountain Pipeline (TMPL)
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- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES		[WETLAND]	WETLANDS	[WETLAND]
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW		
	SOILS HANDLING	STRIPPING DEPTH (cm)	NS
	PROCEDURE		FULL ROW; REDUCE AS APPROPRIATE
	SOILS		
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE	
	WETLANDS		
	FOREST TYPE (m ³ /ha)		
	VEGETATION		
	WILDLIFE AND FISH HABITAT		
	HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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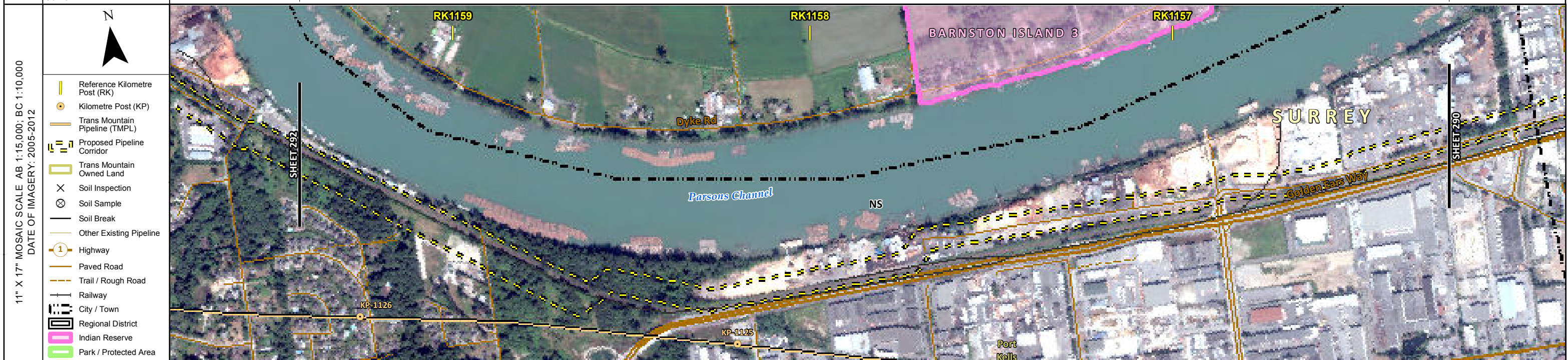
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DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 1153.2 TO RK 1156.2

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF SURREY			
	LAND OWNERSHIP / DISPOSITION	PRIVATE			
	LAND USE	TREED	DISTURBED LAND	TREED	DISTURBED LAND
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY				
	HYDROLOGY	[SHALLOW WELL]			
SOILS PARENT MATERIAL	NS				



POTENTIAL ENVIRONMENTAL ISSUES	[HYDROLOGY]
--------------------------------	-------------

CONSTRUCTION WORK WINDOW			
SOILS	STRIPPING DEPTH (cm)	15-20	15-20
HANDLING	PROCEDURE	TRENCH AND SPOIL; ADJUST AS REQUIRED	TRENCH AND SPOIL; ADJUST AS REQUIRED
SOILS			
WATERCOURSE CROSSINGS	PIPELINE VEHICLE		
WETLANDS			
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT			
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			
[HY-NOTE 2]			

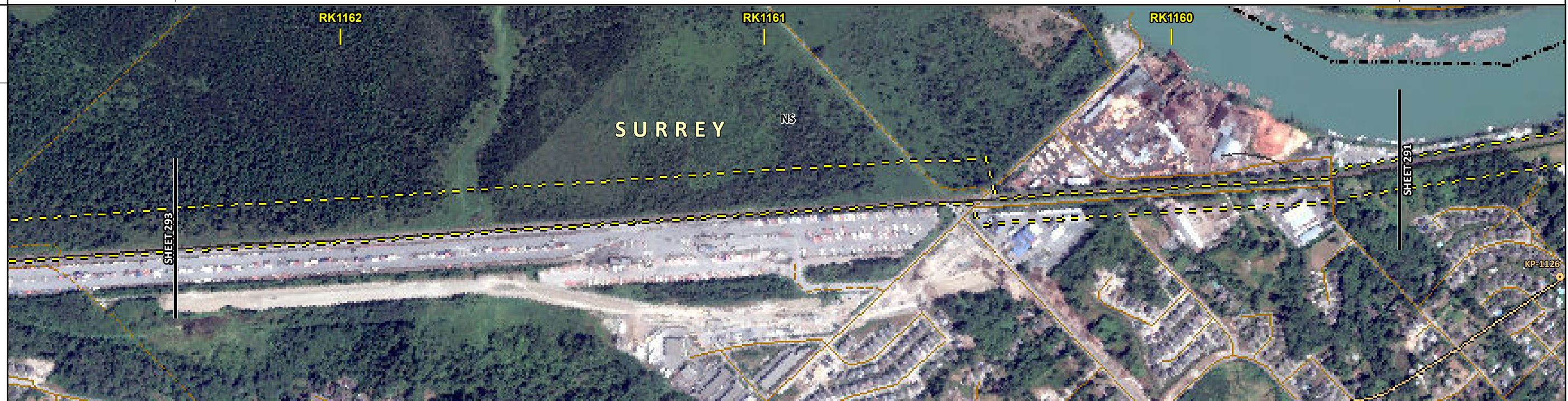
	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	<table border="1"> <tr> <td>MAP NUMBER</td> <td>201310_MAP_TERA_EAS_00434_REVO</td> <td>PAGE</td> <td>SHEET 291 OF 301</td> </tr> <tr> <td>DATE</td> <td>December 2013</td> <td>TERA REF.</td> <td>7894</td> </tr> <tr> <td>SCALE</td> <td>1:10,000</td> <td>PAGE SIZE</td> <td>11x17</td> </tr> <tr> <td>DRAWN</td> <td>CMR</td> <td>CHECKED</td> <td>DN</td> </tr> </table>	MAP NUMBER	201310_MAP_TERA_EAS_00434_REVO	PAGE	SHEET 291 OF 301	DATE	December 2013	TERA REF.	7894	SCALE	1:10,000	PAGE SIZE	11x17	DRAWN	CMR	CHECKED	DN	<table border="1"> <tr> <td>REVISION</td> <td>0</td> <td>DISCIPLINE</td> <td>EAS</td> </tr> <tr> <td>DESIGN</td> <td>TGG</td> <td></td> <td></td> </tr> </table>	REVISION	0	DISCIPLINE	EAS	DESIGN	TGG			ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 1156.2 TO RK 1159.4
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.																																				
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF SURREY
	LAND OWNERSHIP / DISPOSITION	PRIVATE
	LAND USE	TREED DISTURBED LAND TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	
	VEGETATION	
	WETLANDS	DEEP MARSH
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
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- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WETLAND NAV WATERS
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CONSTRUCTION WORK WINDOW			
SOILS	STRIPPING DEPTH (cm)	15-20	15-20
HANDLING	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE	TRENCH AND SPOIL; ADJUST AS REQUIRED
SOILS			
WATERCOURSE CROSSINGS	PIPELINE VEHICLE		
WETLANDS		WT-NOTE 1 WT-NOTE 2	
FOREST TYPE (m ³ /ha)			
VEGETATION			
WILDLIFE AND FISH HABITAT			
HERITAGE / TRADITIONAL LAND USE			
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
SPECIAL MEASURES			

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 292 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
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ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

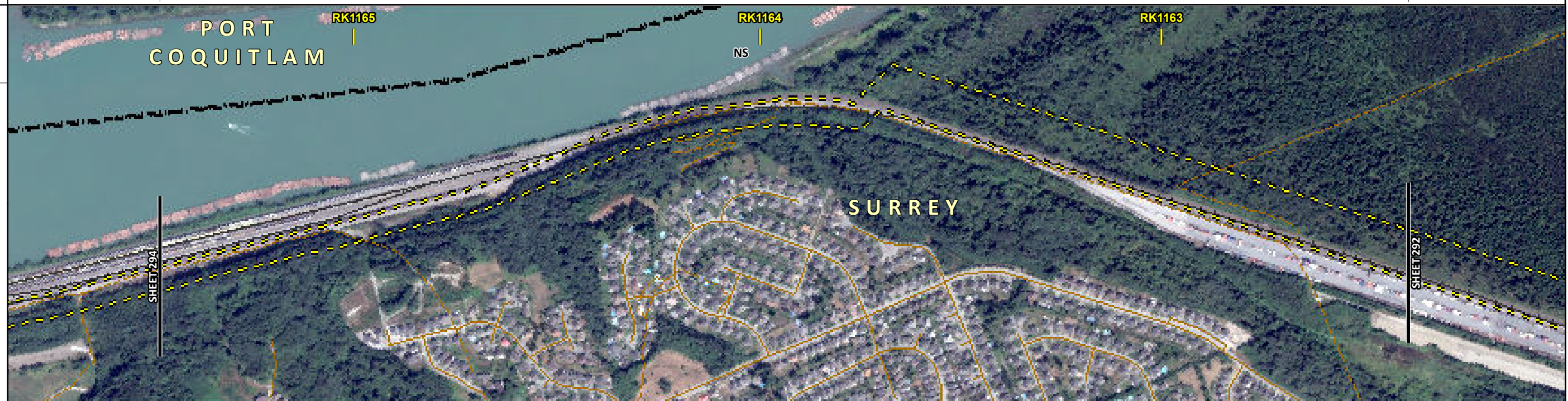
FROM RK 1159.4 TO RK 1162.4

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF SURREY
	LAND OWNERSHIP / DISPOSITION	PRIVATE
	LAND USE	TREED
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	
	VEGETATION	
	WETLANDS	MXDTR SWAMP
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
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POTENTIAL ENVIRONMENTAL ISSUES	WETLAND
--------------------------------	---------

CONSTRUCTION WORK WINDOW		
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
SOILS		
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	
WETLANDS		WT-NOTE 1
FOREST TYPE (m ³ /ha)		
VEGETATION		
WILDLIFE AND FISH HABITAT		
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

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Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 293 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
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DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 1162.4 TO RK 1165.5

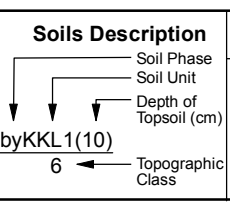
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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF SURREY
	LAND OWNERSHIP / DISPOSITION	PRIVATE
	LAND USE	DISTURBED LAND
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	
	VEGETATION	
	WETLANDS	
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	
SOILS PARENT MATERIAL		



POTENTIAL ENVIRONMENTAL ISSUES	
--------------------------------	--

ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	15-20 FULL ROW; REDUCE AS APPROPRIATE
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
	WETLANDS	
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES		



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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 294 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
DISCIPLINE EAS	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

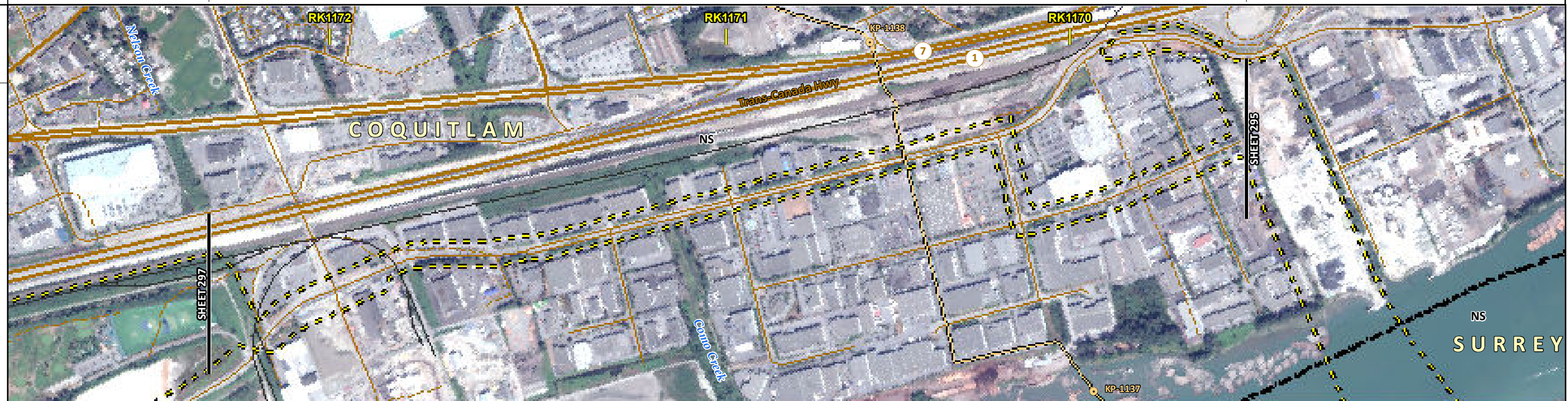
FROM RK 1165.5 TO RK 1168.4

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF COQUITLAM
	LAND OWNERSHIP / DISPOSITION	PRIVATE
	LAND USE	DISTURBED LAND
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	
	VEGETATION	
	WETLANDS	
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	
SOILS PARENT MATERIAL		

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	
CONSTRUCTION WORK WINDOW	
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
SOILS	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE
WETLANDS	
FOREST TYPE (m ³ /ha)	
VEGETATION	
WILDLIFE AND FISH HABITAT	
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
byKKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 296 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 1169.6 TO RK 1172.4

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	PRIVATE	MIXED	CITY OF COQUITLAM	PRIVATE
	LAND OWNERSHIP / DISPOSITION				
	LAND USE			DISTURBED LAND	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS				
	HERITAGE / TRADITIONAL LAND USE				
	WILDLIFE / WILDLIFE HABITAT				
	VEGETATION				
	WETLANDS				
	FISH HABITAT SENSITIVITY				
	HYDROLOGY				
SOILS PARENT MATERIAL			NS		



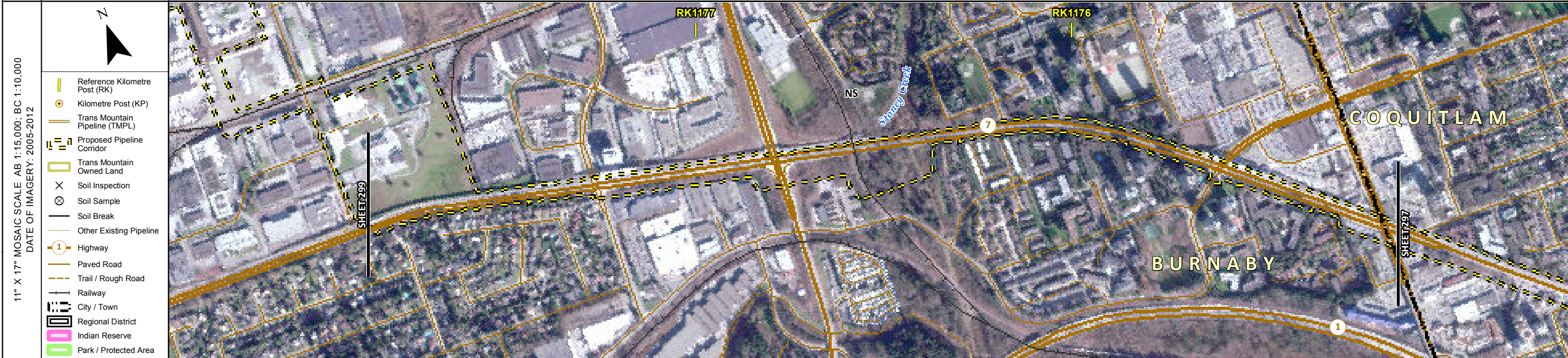
POTENTIAL ENVIRONMENTAL ISSUES	
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
	WETLANDS	
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES		

	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	<table border="1"> <tr> <td>MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO</td> <td>PAGE SHEET 297 OF 301</td> </tr> <tr> <td>DATE December 2013</td> <td>TERA REF. 7894</td> </tr> <tr> <td>SCALE 1:10,000</td> <td>PAGE SIZE 11x17</td> </tr> <tr> <td>DRAWN CMR</td> <td>CHECKED DN</td> </tr> </table>	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 297 OF 301	DATE December 2013	TERA REF. 7894	SCALE 1:10,000	PAGE SIZE 11x17	DRAWN CMR	CHECKED DN	<table border="1"> <tr> <td>ENVIRONMENTAL ALIGNMENT SHEETS</td> <td>PAGE SHEET 297 OF 301</td> </tr> <tr> <td>TRANS MOUNTAIN EXPANSION PROJECT</td> <td>REVISION 0</td> </tr> <tr> <td>FROM RK 1172.4</td> <td>TO RK 1175.1</td> </tr> <tr> <td colspan="2">DISCIPLINE EAS</td> </tr> <tr> <td colspan="2">DESIGN TGG</td> </tr> </table>	ENVIRONMENTAL ALIGNMENT SHEETS	PAGE SHEET 297 OF 301	TRANS MOUNTAIN EXPANSION PROJECT	REVISION 0	FROM RK 1172.4	TO RK 1175.1	DISCIPLINE EAS		DESIGN TGG	
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DESIGN TGG																																			
<small>ENVIRONMENTAL CONSULTANTS</small>																																			

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION				CITY OF BURNABY							BURNABY; COQUITLAM; CITY OF COQUITLAM
	LAND OWNERSHIP / DISPOSITION			PRIVATE		MIXED		PRIVATE		MIXED		PRIVATE
	LAND USE							DISTURBED LAND				
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS											
	HERITAGE / TRADITIONAL LAND USE											
	WILDLIFE / WILDLIFE HABITAT											
	VEGETATION											
	WETLANDS							SHRUBBY SWAMP				
	FISH HABITAT SENSITIVITY											
	HYDROLOGY											
SOILS PARENT MATERIAL							NS					



POTENTIAL ENVIRONMENTAL ISSUES		WETLAND
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ENVIRONMENTAL PROTECTION	CONSTRUCTION WORK WINDOW	
	SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
	SOILS	
	WATERCOURSE CROSSINGS	PIPELINE VEHICLE
	WETLANDS	
	FOREST TYPE (m ³ /ha)	
	VEGETATION	
	WILDLIFE AND FISH HABITAT	
	HERITAGE / TRADITIONAL LAND USE	
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES		

 ENVIRONMENTAL CONSULTANTS	Soils Description Soil Phase Soil Unit Depth of Topsoil (cm) by KKL1(10) 6 Topographic Class	REFERENCES <small>Projection: NAD_1983_UTM_Zone_10N Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.</small> <small>This document is provided by Kinder Morgan Canada Inc. (KMC) for use by the intended recipient only. This information is confidential and proprietary to KMC and is not to be provided to any other recipient without the written consent of KMC. It is not to be used for legal, engineering or surveying purposes, nor for doing any work on or around KMC's pipelines and facilities, all of which require KMC's prior written approval. Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small>	REVISION HISTORY <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD.</th> <th>APPR.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Dec 16, 2013</td> <td>Issued for NEB filing</td> <td>CMR</td> <td>DN</td> <td>TW/GB</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB	MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO DATE December 2013 SCALE 1:10,000 DRAWN CMR	PAGE SHEET 298 OF 301 REVISION 0 TERA REF. 7894 PAGE SIZE 11x17 CHECKED DN DISCIPLINE EAS DESIGN TGG	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT FROM RK 1175.1 TO RK 1177.9
	NO.	DATE	DESCRIPTION	BY	CHKD.	APPR.												
	0	Dec 16, 2013	Issued for NEB filing	CMR	DN	TW/GB												

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF BURNABY
	LAND OWNERSHIP / DISPOSITION	PRIVATE
	LAND USE	DISTURBED LAND
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	RAPTOR NEST
	VEGETATION	
	WETLANDS	
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	
SOILS PARENT MATERIAL	NS	

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

- Reference Kilometre Post (RK)
- Kilometre Post (KP)
- Trans Mountain Pipeline (TMPL)
- Proposed Pipeline Corridor
- Trans Mountain Owned Land
- Soil Inspection
- Soil Sample
- Soil Break
- Other Existing Pipeline
- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	WF FEATURE
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CONSTRUCTION WORK WINDOW	WF-NOTE 4
SOILS HANDLING	STRIPPING DEPTH (cm) PROCEDURE
SOILS	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE
WETLANDS	
FOREST TYPE (m ³ /ha)	
VEGETATION	
WILDLIFE AND FISH HABITAT	WF-NOTE 2
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	

Soils Description

- Soil Phase
- Soil Unit
- Depth of Topsoil (cm)
- byKKL1(10)
- 6
- Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
 Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2013; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 299 OF 301
DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
REVISION 0	DISCIPLINE EAS
DESIGN TGG	

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 1177.9 TO RK 1179.8

P:\GIS\TERRA\MAP_FILES\EAS\2013_10_MAP_TERA_EAS_00434\rev0\AS_Output\LaRees

ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF BURNABY		
	LAND OWNERSHIP / DISPOSITION	PRIVATE		
	LAND USE	DISTURBED LAND	TREED	DISTURBED LAND
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS			
	HERITAGE / TRADITIONAL LAND USE			
	WILDLIFE / WILDLIFE HABITAT	AMPH-POND		
	VEGETATION			
	WETLANDS	[SE MARSH]		
	FISH HABITAT SENSITIVITY			
	HYDROLOGY			
SOILS PARENT MATERIAL	NS			

11" X 17" MOSAIC SCALE AB 1:15,000; BC 1:10,000
DATE OF IMAGERY: 2005-2012

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- Highway
- Paved Road
- Trail / Rough Road
- Railway
- City / Town
- Regional District
- Indian Reserve
- Park / Protected Area



POTENTIAL ENVIRONMENTAL ISSUES	[WETLAND]	WF FEATURE
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CONSTRUCTION WORK WINDOW		WF-NOTE 4
SOILS HANDLING	STRIPPING DEPTH (cm)	15-20
	PROCEDURE	FULL ROW; REDUCE AS APPROPRIATE
SOILS		
WATERCOURSE CROSSINGS	PIPELINE VEHICLE	
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION		
WILDLIFE AND FISH HABITAT		WF-NOTE 1
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
by KKL1(10)
6
Topographic Class

REFERENCES

Projection: NAD_1983_UTM_Zone_10N
Baseline TMPL & TransMountain Lands: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Existing Infrastructure: IHS Inc., 2013; Transportation: IHS Inc., 2013; BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: AltaLIS, 2013; IHS Inc., 2013; BC FLNRO, 2007; ATS Grid: AltaLIS, 2009; First Nation Lands: Government of Canada, 2013; AltaLIS, 2010; IHS Inc., 2013; Natural Resources Canada, 2013; Hydrology: BC FLNRO, 2008; Natural Resources Canada, 2007-2011; Parks and Protected Areas: Natural Resources Canada, 2012; Alberta Tourism, Parks and Recreation, 2012; AltaLIS, 2012; BC FLNRO, 2008; B/W & Colour Imagery 2008-2012: provided by KMC, 2013; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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MAP NUMBER 201310_MAP_TERA_EAS_00434_REVO	PAGE SHEET 300 OF 301	ENVIRONMENTAL ALIGNMENT SHEETS TRANSMOUNTAIN EXPANSION PROJECT
DATE December 2013	TERA REF. 7894	REVISION 0
SCALE 1:10,000	PAGE SIZE 11x17	DISCIPLINE EAS
DRAWN CMR	CHECKED DN	DESIGN TGG

FROM RK 0.0 TO RK 2.7

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ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING INFORMATION	JURISDICTION	CITY OF BURNABY
	LAND OWNERSHIP / DISPOSITION	PRIVATE
	LAND USE	TREED [DISTURBED LAND]
	SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
	HERITAGE / TRADITIONAL LAND USE	
	WILDLIFE / WILDLIFE HABITAT	IMPORTANT BIRD AREA
	VEGETATION	
	WETLANDS	
	FISH HABITAT SENSITIVITY	
	HYDROLOGY	
SOILS PARENT MATERIAL	NS	

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POTENTIAL ENVIRONMENTAL ISSUES	WILDLIFE AREA
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CONSTRUCTION WORK WINDOW	
SOILS HANDLING	STRIPPING DEPTH (cm)
	PROCEDURE
SOILS	
WATERCOURSE CROSSINGS	PIPELINE VEHICLE
WETLANDS	
FOREST TYPE (m ³ /ha)	
VEGETATION	
WILDLIFE AND FISH HABITAT	
HERITAGE / TRADITIONAL LAND USE	
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS	
SPECIAL MEASURES	

	15-20	
	FULL ROW; REDUCE AS APPROPRIATE	
SOILS		
WATERCOURSE CROSSINGS		
WETLANDS		
FOREST TYPE (m ³ /ha)		
VEGETATION		
WILDLIFE AND FISH HABITAT		
	WF-NOTE 5	
HERITAGE / TRADITIONAL LAND USE		
SOCIO-ECONOMIC AND AGRICULTURAL CONSIDERATIONS		
SPECIAL MEASURES		

Soils Description

Soil Phase
Soil Unit
Depth of Topsoil (cm)
Topographic Class

by KKL1(10)
6

REFERENCES	
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DATE December 2013	TERA REF. 7894
SCALE 1:10,000	PAGE SIZE 11x17
DRAWN CMR	CHECKED DN
	DISCIPLINE EAS
	DESIGN TGG

ENVIRONMENTAL ALIGNMENT SHEETS
TRANSMOUNTAIN EXPANSION PROJECT

FROM RK 2.7 TO RK 3.6

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