

4415.0125 LAND REQUIREMENTS

For the proposed pipeline, the applicant shall provide the following information:

A. permanent right-of-way length, average width, and estimated acreage:

The Alberta Clipper Project and the Southern Lights Diluent Project will be constructed concurrently within the same construction footprint and will generally be located adjacent to the existing Lakehead System right-of-way. In Minnesota, the Lakehead System right-of-way corridor extends southeasterly in a contiguous manner from the Minnesota-North Dakota border near Bowesmont, North Dakota/Mattson, Minnesota to the Minnesota-Wisconsin border near Wrenshall, Minnesota/Oliver, Wisconsin. The Alberta Clipper Project will extend the length of this corridor from the Minnesota-North Dakota border in Kittson County to the Minnesota-Wisconsin border in Carlton County. The Southern Lights Diluent Project will extend from EELP's Clearbrook terminal facilities in Clearwater County to the Minnesota-Wisconsin border in Carlton County.

The existing right-of-way corridor consists of undefined and defined permanent easements. In locations where the right-of-way is held through undefined ("blanket") easements that do not limit the width of the right-of-way, new easements will not be required to install the pipelines. However, the Applicants will negotiate compensation with the landowner for exercising the existing multiple pipeline rights. Where the right-of-way is held through defined easements that limit the width of corridor, the Applicants will require new easements to install the pipelines and these will be negotiated on a tract-by-tract basis with each landowner. The actual right-of-way requirement for each tract will be determined on the basis of field surveys and final engineering designs. As identified in Tables 4415.125-A and 4415.125-B below, a significant portion of the existing right-of-way corridor is held through undefined easements.

Table 4415.125-A: Minnesota/North Dakota Border to Clearbrook, MN									
Minnesota County	Pipeline Crossed in County	Undefined Easements		Enbridge Fee Property		Unknown Further Title Work Required		Defined Easements	
		Miles	Percent	Miles	Percent	Miles	Percent	Miles	Percent
Kittson	15.3	1.26	8.2%	0.52	3.4%			13.52	88.3%
Marshall	34.6	6.33	18.3%	0.30	0.9%	0.10	0.3%	27.87	80.6%
Pennington	19.7	1.97	10.0%					17.73	90.0%
Red Lake	15.5	1.89	12.2%	1.22	7.9%			12.40	80.0%
Polk	13.6	1.70	12.6%	0.37	2.8%			11.53	84.7%
Clearwater	9.0	1.23	14.1%					7.77	85.9%
Total	107.7	14.38	13.4%	2.42	2.2%	0.10	0.1%	90.51	84.3%

Table 4415.125-B: Clearbrook, MN to Minnesota/Wisconsin Border						
Minnesota County	Pipeline Crossed In County	Total Number of Tracts	Defined Easements By Tract		Undefined Easements By Tract	
			Miles	Percent	Miles	Percent
Clearwater	11.6	83	71	86%	12	14%
Beltrami	22.7	169	147	87%	22	13%
Hubbard	7.8	40	36	90%	4	10%
Cass	34.4	171	142	84%	29	16%
Itasca	50.4	610	356	61%	254	39%
Aitkin	1.1	3	0	0%	3	100%
St. Louis	24.6	110	62	57%	48	43%
Carlton	24.6	121	87	72%	34	28%
Total	177.2	1,307	901	69%	406	31%

Right-of-Way Requirements – East of Clearbrook

Given the Alberta Clipper and Southern Lights Diluent pipelines will generally be installed in parallel adjacent to the southern boundary of the existing right-of-way corridor from the Clearbrook terminal to the Minnesota-Wisconsin border, Enbridge’s design configuration and anticipated construction execution methods are intended to take advantage of the proximity of the pipelines to each other to minimize right-of-way requirements. This typically results in a maximum construction footprint of 140 feet for the combined projects for standard pipeline construction, with typically up to 75 feet of additional permanent easement for both pipelines and 65 feet of temporary workspace from Clearbrook to the Minnesota-Wisconsin border. Both the permanent

easement and the temporary workspace areas may be returned to uses by the landowners that do not impact the pipelines. A depiction of the typical configuration of the existing right-of-way corridor and the proposed configuration of the Alberta Clipper and Southern Lights Diluent pipelines and their construction footprint is provided in the attached figure, “Alberta Clipper and Southern Lights Diluent Projects, Right-of-Way Configuration – East of Enbridge Clearbrook Terminal (Typical).” As depicted in this figure, up to 75 feet of additional permanent easement is necessary to accommodate a 25 foot offset between the existing and new pipelines and a 25 foot buffer zone to the newly located southern boundary of the right-of-way corridor.

In certain limited areas, the right-of-way corridor encounters environmental features (such as extended wetlands) that require special construction methods (such as winter construction). While the typical construction footprint will remain 140 feet in these areas, the Applicants will typically require up to 110 feet of additional permanent easement and 30 feet of temporary workspace to accommodate construction and installation. A depiction of the typical configuration in these limited special construction areas is provided in the attached figure, “Alberta Clipper and Southern Lights Diluent Projects, Right-of-Way Configuration – East of Enbridge Clearbrook Terminal (Winter Construction Typical).” The Applicants have presently identified approximately 60 miles of right-of-way in the following areas that contain environmental features that will necessitate these special construction methods, which will consist primarily of establishing a winter construction working area between the pipelines by means of ice roads from which the pipelines will be installed concurrently:

- Existing milepost 974 to 992 (18 miles), upstream of Deer River Station (MP 992)
- Existing milepost 1019 to 1045 (26 miles), upstream of Floodwood Station (MP 1045)
- Existing milepost 1055 to 1071 (16 miles), downstream of Floodwood Station (MP 1045)

Right-of-Way Requirements – West of Clearbrook

From the Clearbrook terminal west to the Minnesota/North Dakota border, the Alberta Clipper pipeline will generally be constructed and installed adjacent to the existing Lakehead System right-of-way. The Southern Lights Diluent pipeline is not proposed to extend westerly beyond the Clearbrook terminal.

However, as filed in the pending application PL9/PPL-07-360, EELP has also proposed to install the LSr Project pipeline generally within or

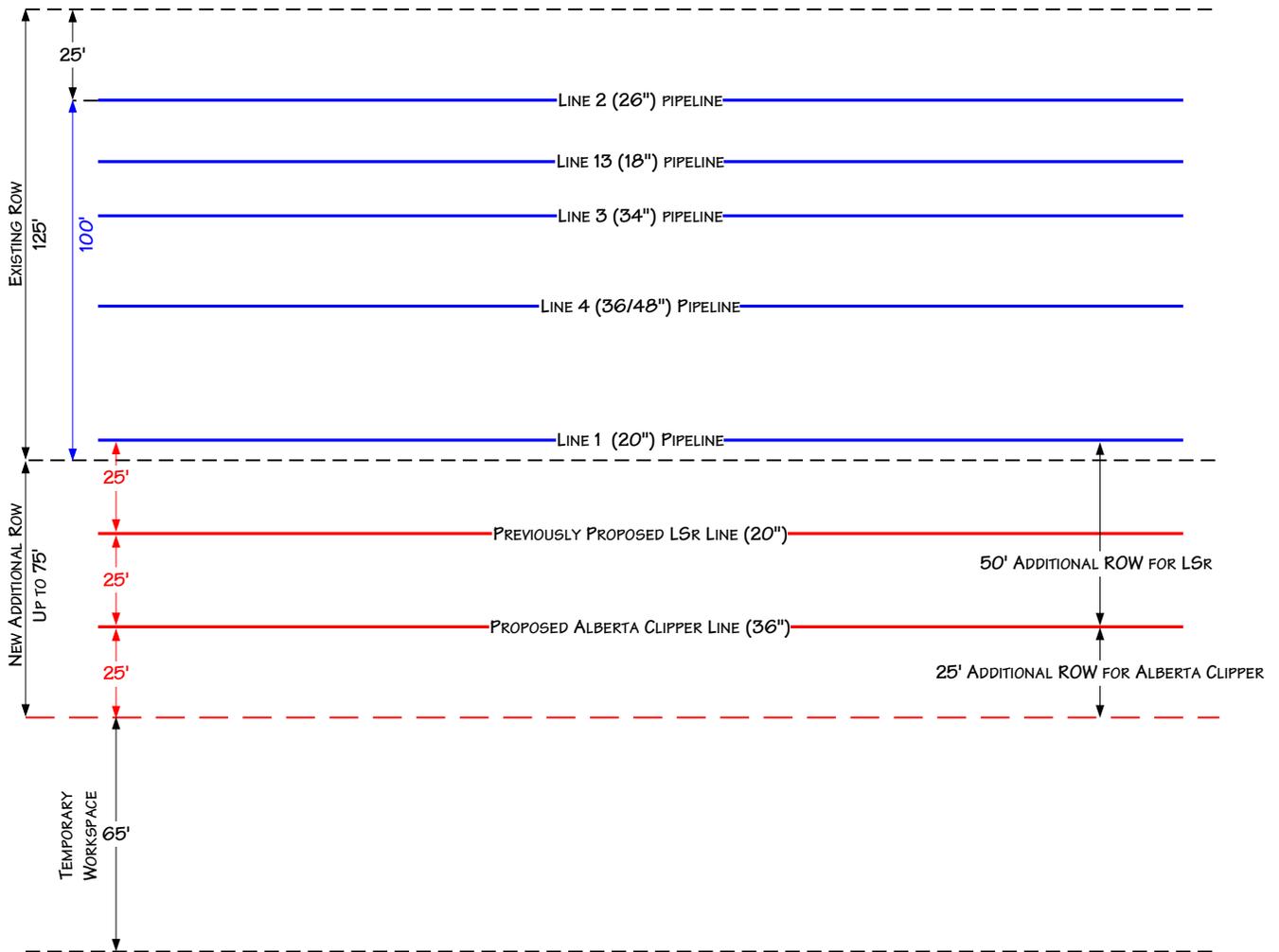
immediately adjacent to the southern boundary of the existing right-of-way corridor of the Lakehead System. The LSr pipeline will be constructed prior to commencement of the Alberta Clipper pipeline construction. As proposed, the LSr pipeline right-of-way requirements include typically up to 50 feet of permanent easement and 50 feet of temporary workspace. The additional permanent easement is required to provide a 25 foot offset from the southernmost pipeline in the existing right-of-way to the LSr pipeline and a 25 foot offset to the newly located southern boundary of the right-of-way.

As the Southern Lights Diluent pipeline will not extend beyond Clearbrook, the right-of-way requirements west of Clearbrook are limited to the Alberta Clipper Project. In order to maintain a 25 foot of offset between the southernmost existing pipeline (which at the time of construction of the Alberta Clipper pipeline will be the LSr pipeline) and a buffer zone to the newly located southern boundary of the right-of-way, up to 25 feet of additional permanent easement and 65 feet of temporary workspace will typically be required to accommodate construction and installation. A depiction of the typical configuration of the existing right-of-way corridor west of Clearbrook and the proposed configuration of the Alberta Clipper and LSr pipelines and their construction footprint is provided in the attached figure, “Alberta Clipper and Southern Lights Diluent Projects, Right-of-Way Configuration – West of Enbridge Clearbrook Terminal (Typical).” Similar to the design configuration east of Clearbrook, the Applicant’s design configuration and anticipated construction execution methods are intended to take advantage of the proximity of the Alberta Clipper pipeline to the LSR pipeline west of Clearbrook to minimize right-of-way requirements.

Right-of-Way Requirements – Acquisition Program

To achieve the right-of-way requirements of all proposed pipelines in a timely manner, the Applicants have implemented a right-of-way acquisition program that is intended to meet the needs of the previously filed LSr Project and the Alberta Clipper and Southern Lights Diluent Projects in a coordinated and cost-effective manner. The intent of the program is to achieve this acquisition goal while at the same time simplify the process for affected landowners through one set of negotiations, which should reduce the complexity of the negotiations and minimize time and resource commitments on the landowners’ part. To that end, acquisition efforts are directed at establishing a contiguous 140 foot construction corridor along the Minnesota right-of-way for typical standard construction methods. Regardless of the nature of the existing easements involved (defined or blanket), acquisition of the required permanent easement and temporary workspace will be on the basis of fair market value per acre.

The Applicants acknowledge that any approvals issued in conjunction with this application will not include the LSr Project right-of-way requirements.



- EXISTING ROW BOUNDARY DEFINED BY LOCATION OF NORTHERN MOST PIPELINE: 25 FEET TO THE NORTH AND 100 FEET TO THE SOUTH.
- BECAUSE PIPELINE SPACING VARIES DUE TO CONSTRUCTION REQUIREMENTS AT THE TIME OF INSTALLATION, THE DISTANCE BETWEEN THE SOUTHERN MOST LINE (LINE 1 (20")) AND SOUTHERN EXISTING ROW BOUNDARY VARIES BETWEEN 0 AND 35 FEET.
- NEW ADDITIONAL ROW REQUIREMENTS WILL VARY ALONG THE PROPOSED ROUTE FROM THE MINNESOTA/NORTH DAKOTA BORDER TO CLEARBROOK, MINNESOTA. THESE ROW REQUIREMENTS WILL DEPEND ON THE LOCATION OF ENBRIDGE'S SOUTHERN MOST EXISTING LINE AND THE EXISTING ROW BOUNDARY. ENBRIDGE WILL NEED UP TO 50 FEET OF ADDITIONAL PERMANENT ROW FOR THE LSR PROJECT, AND WILL NEED ANOTHER 25 FEET OF ADDITIONAL PERMANENT ROW FOR THE ALBERTA CLIPPER PROJECT. THIS ADDITIONAL 25 FEET OF THE PERMANENT ROW FOR THE ALBERTA CLIPPER PROJECT IS NECESSARY TO ALLOW FOR APPROXIMATELY 25-FOOT SPACING BETWEEN THE PROPOSED LSR AND ALBERTA CLIPPER PROJECTS, WHILE ALSO ALLOWING FOR A BUFFER TO THE SOUTHERNMOST PERMANENT ROW BOUNDARY.
- TEMPORARY WORKSPACE ADJACENT TO NEW ADDITIONAL ROW WILL BE REQUIRED TO INSTALL THE PIPELINE(S). TYPICALLY 65' IN WIDTH AND THE LENGTH OF THE ROW WILL BE RENTED FROM LANDOWNERS. ADDITIONAL TEMPORARY WORKSPACE AT CIVIL AND ENVIRONMENTAL CROSSINGS OF UP TO 75' IN WIDTH AND UP TO 300' IN LENGTH ON EACH SIDE OF THE CROSSING WILL BE RENTED.

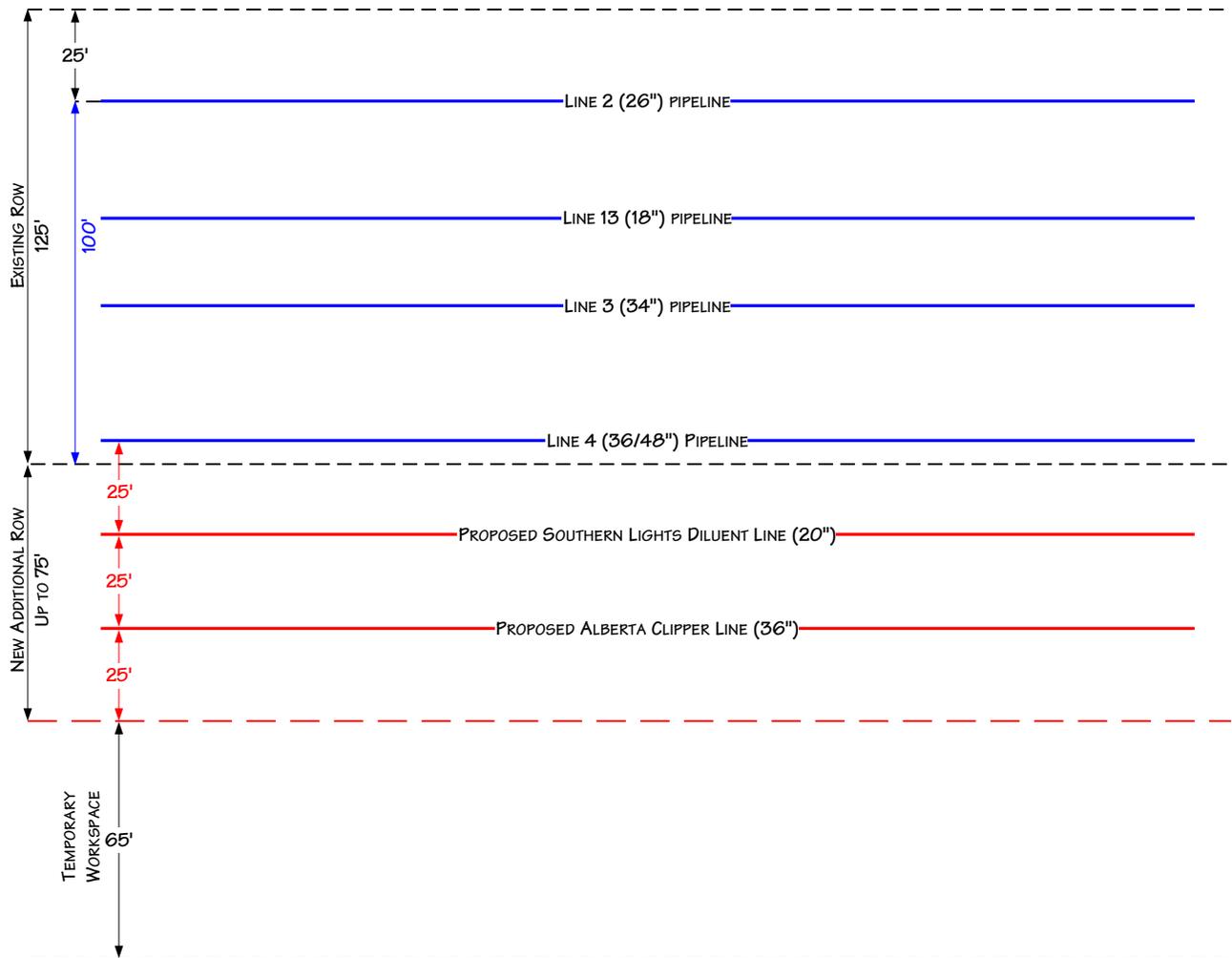
For environmental review purposes only.



Alberta Clipper Project Right-of-Way Configuration

West of Enbridge Clearbrook Terminal
(Typical)

DATE: 8/9/2006
REVISED: 6/21/2007
SCALE: NTSURCE
DRAWN BY: MHN6795
K:\335\ROW_CONFIG_TYPICALS\AC_ROW.VSD



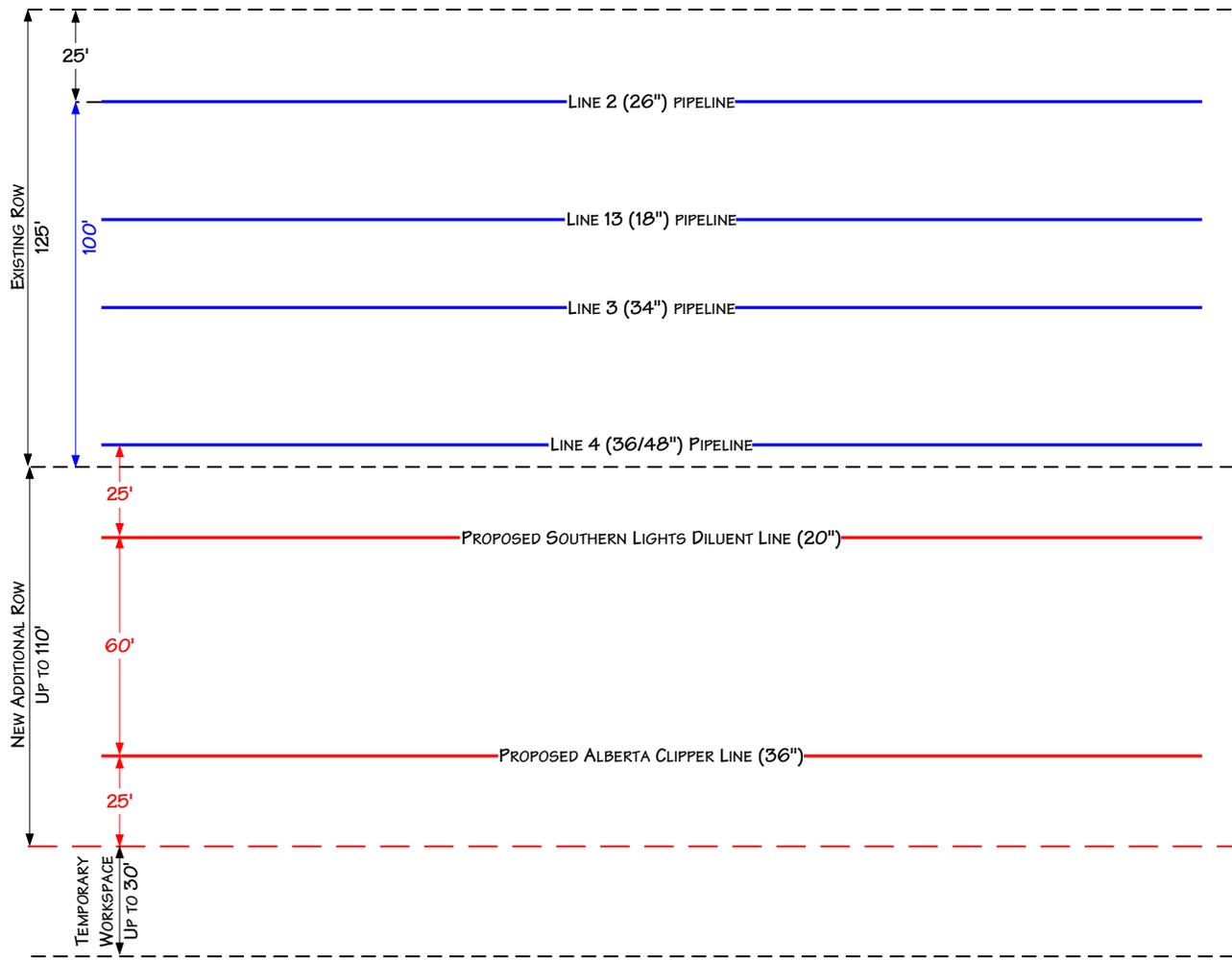
- EXISTING ROW BOUNDARY DEFINED BY LOCATION OF NORTHERN MOST PIPELINE: 25 FEET TO THE NORTH AND 100 FEET TO THE SOUTH.
- BECAUSE PIPELINE SPACING VARIES DUE TO CONSTRUCTION REQUIREMENTS AT THE TIME OF INSTALLATION, THE DISTANCE BETWEEN THE SOUTHERN MOST LINE AND SOUTHERN EXISTING ROW BOUNDARY VARIES BETWEEN 0 AND 35 FEET.
- NEW ADDITIONAL ROW REQUIREMENTS FOR THE ALBERTA CLIPPER AND SOUTHERN LIGHTS DILUENT PROJECTS WILL VARY ALONG THE PROPOSED ROUTE FROM CLEARBROOK, MN TO MN-WI BORDER. THESE ROW REQUIREMENTS WILL DEPEND ON THE LOCATION OF ENBRIDGE'S SOUTHERN MOST EXISTING LINE AND THE EXISTING ROW BOUNDARY. ENBRIDGE WILL NEED UP TO 75 FEET OF ADDITIONAL PERMANENT ROW FOR THE ALBERTA CLIPPER AND SOUTHERN LIGHTS DILUENT PIPELINES WHICH IS NECESSARY TO ALLOW FOR APPROXIMATELY 25-FOOT SPACING BETWEEN THE SOUTHERN LIGHTS DILUENT AND ALBERTA CLIPPER PROJECTS, WHILE ALSO ALLOWING FOR A BUFFER TO THE SOUTHERNMOST PERMANENT ROW BOUNDARY.
- TEMPORARY WORKSPACE ADJACENT TO NEW ADDITIONAL ROW WILL BE REQUIRED TO INSTALL THE PIPELINE(S). TYPICALLY 65' IN WIDTH AND THE LENGTH OF THE ROW WILL BE RENTED FROM LANDOWNERS. ADDITIONAL TEMPORARY WORKSPACE AT CIVIL AND ENVIRONMENTAL CROSSINGS OF UP TO 75' IN WIDTH AND UP TO 300' IN LENGTH ON EACH SIDE OF THE CROSSING WILL BE RENTED.

For environmental review purposes only.



**Alberta Clipper and
 Southern Lights Diluent Projects
 Right-of-Way Configuration
 East of Enbridge Clearbrook Terminal
 (Typical)**

DATE: 8/9/2006
REVISED: 6/21/2007
SCALE: NTSURCE
DRAWN BY: MHN6795
K:\335\ROW_CONFIG_TYPICALS\AC_SL_ROW.VSD



- EXISTING ROW BOUNDARY DEFINED BY LOCATION OF NORTHERN MOST PIPELINE: 25 FEET TO THE NORTH AND 100 FEET TO THE SOUTH.
- BECAUSE PIPELINE SPACING VARIES DUE TO CONSTRUCTION REQUIREMENTS AT THE TIME OF INSTALLATION, THE DISTANCE BETWEEN THE SOUTHERN MOST LINE AND SOUTHERN EXISTING ROW BOUNDARY VARIES BETWEEN 0 AND 35 FEET.
- NEW ADDITIONAL ROW REQUIREMENTS FOR THE ALBERTA CLIPPER AND SOUTHERN LIGHTS DILUENT PROJECTS WILL VARY ALONG THE PROPOSED ROUTE FROM CLEARBROOK, MN TO MN-WI BORDER. THESE ROW REQUIREMENTS WILL DEPEND ON THE LOCATION OF ENBRIDGE'S SOUTHERN MOST EXISTING LINE AND THE EXISTING ROW BOUNDARY. ENBRIDGE WILL NEED UP TO 110 FEET OF ADDITIONAL PERMANENT ROW FOR THE ALBERTA CLIPPER AND SOUTHERN LIGHTS DILUENT PIPELINES TO FACILITATE WINTER CONSTRUCTION METHODS THROUGH EXTENSIVE WETLAND AREAS AND IS NECESSARY TO ALLOW FOR APPROXIMATELY 25-FOOT SPACING BETWEEN THE ALBERTA CLIPPER PROJECT AND THE SOUTHERNMOST ADDITIONAL PERMANENT ROW BOUNDARY.
- TYPICALLY UP TO 30' OF TEMPORARY WORKSPACE ADJACENT TO NEW ADDITIONAL ROW WILL BE RENTED FROM LANDOWNERS.

For environmental review purposes only.



**Alberta Clipper and
 Southern Lights Diluent Projects
 Right-of-Way Configuration
 East of Enbridge Clearbrook Terminal
 (Winter Construction Typical)**

DATE: 8/9/2006
REVISED: 6/21/2007
SCALE: NTSURCE
DRAWN BY: MHN6795
K:\335\ROW_CONFIG_TYPICALS\AC_SL_WINTERROW.VSD

B. temporary right-of-way (workspace) length, estimated width, and estimated acreage:

The Alberta Clipper and Southern Lights Diluent Projects will be constructed using a 140-foot-wide construction right-of-way consisting of existing or new easements and generally 65 feet of temporary work space. Additional temporary extra workspace of up to 75 feet in width and 300 feet in length will be required at feature crossings (e.g., roads, waterbodies). For the 285.1-mile-long portion of the route that will cross Minnesota, construction will affect approximately 4,743 acres of land. No pipe storage yards or private or new access roads have been identified at this time. This information will be filed when available, approximately July 2008.

C. estimated range of minimum trench or ditch dimensions including bottom width, top width, depth, and cubic yards of dirt excavated:

Trenches will be dug using a backhoe or crawler-mounted wheel type ditching machine. Typically, the ditch depth will be a minimum of 56 inches deep to allow for a minimum of 36 inches of ground cover to the top of the pipe. Trench width at the bottom will be a minimum of 4 feet and approximately 17 feet at the top for the Alberta Clipper Project and 2.7 feet at the bottom of the trench and approximately 13 feet at the top for the Southern Lights Diluent Project. The total excavation will comprise approximately 4.2 million cubic yards of soil for the Alberta Clipper Project and approximately 1.6 million cubic yards of soil for the Southern Lights Diluent Project.

D. minimum depth of cover for state and federal requirements:

In accordance with federal requirements (49 CFR Part 195.248), the depth of cover between the top of the pipe and the ground level, road bed, or river bottom will range between 18 to 48 inches, depending on the location of the pipe and the presence of rock.

State law requires that a minimum depth of cover of 54 inches be maintained in certain areas unless waived by the landowner.

Since the adjacent pipelines are buried in accordance with federal requirements, both safety and land use considerations have led the Applicants to propose the installation with a minimum 36-inch depth of cover. This approach will:

- minimize the amount of soil excavated and therefore reduce the total acreage temporarily impacted;

- avoid the potential perception by future excavators that all other parallel pipes are also at a depth of 54 inches;
- create no additional limits on deep plowing;
- facilitate crossings of pipelines at similar depths by other facilities;
- alleviates the potential for existing lines to subside during installation of the new pipelines by installing new lines at close to the same elevation.

To implement the proposed depth of installation, where necessary, landowners will be asked to waive the 54-inch minimum cover requirement, as was done during the 1994, 1998, and 2002 expansion projects.

E. right-of-way sharing or paralleling: type of facility in the right-of-way, and the estimated length, width, and acreage of the right-of-way:

Generally, the Alberta Clipper and Southern Lights Diluent Project will be constructed within and/or adjacent to existing right-of-way and parallel to existing facilities described in Section 4415.0120 Subpart 3, Description of Proposed Pipeline and Associated Facilities. No other facilities owned by other parties share the existing route. However, the proposed route often parallels near by other railroads, pipelines, highways, and other utilities and is crossed by such facilities.