

**Attachment L**  
**Wetland/Peatland Construction Plans**

# WETLAND/PEATLAND CONSTRUCTION PLANS

## MDNR PRIORITY AREAS ON PUBLIC LANDS

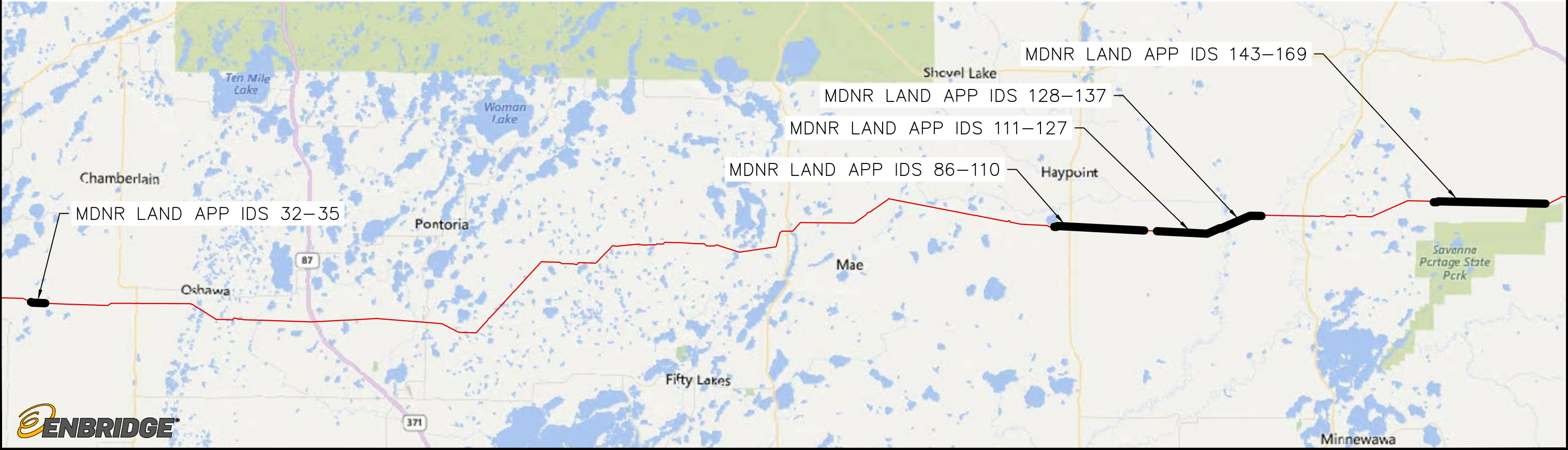
### WADENA, AITKIN, ST. LOUIS COUNTIES

MDNR LAND APP ID	MILE POST	SHEET NUMBER
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32-37	995.7-996.7	03
32-38	995.7-996.8	04
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143-169	1078.3-1084.5	21
143-169	1078.3-1084.5	22





GENERAL NOTES

1. THESE WETLAND/PEATLAND CONSTRUCTION PLANS PRESENT ENBRIDGE’S PROPOSED CROSSING METHOD AND ALTERNATE CROSSING METHOD ASSUMING A CONSTRUCTION START DATE OF DECEMBER 1, 2020. THE CROSSING METHOD MAY CHANGE DEPENDING ON SEASONALITY (I.E., AN OPEN CUT IN FROZEN CONDITIONS MAY BE A PUSH–PULL IN NON–FROZEN CONDITIONS), AND WHERE THAT IS THE CASE, IT IS NOTED.
2. ALL WORK WILL BE CONDUCTED IN COMPLIANCE WITH RELEVANT PORTIONS OF ENBRIDGE’S ENVIRONMENTAL PROTECTION PLAN (“EPP”), POST–CONSTRUCTION VEGETATION MANAGEMENT PLAN FOR PUBLIC LANDS AND WATERS (“VMP”) AND WINTER CONSTRUCTION PLAN.
3. THE MODIFIED UPLAND CONSTRUCTION METHOD (ALSO REFERRED TO AS OPEN CUT OR THE STANDARD WETLAND CONSTRUCTION METHOD) IS PRESENTED IN SECTION 3.3 OF ENBRIDGE’S SUMMARY OF CONSTRUCTION METHODS AND PROCEDURES (“PROCEDURES”), WHICH IS APPENDIX A TO THE EPP. USING THIS METHOD, THE TRENCH IS EXCAVATED USING A BACKHOE (OR EQUIVALENT) OPERATING FROM CONSTRUCTION MATS.
4. THE PUSH–PULL METHOD IS PRESENTED IN SECTION 3.4 OF ENBRIDGE’S PROCEDURES, WHICH IS APPENDIX A TO THE EPP. PUSH–PULL TECHNIQUE CAN ONLY BE UTILIZED IN NON–FROZEN CONDITIONS WHERE THERE IS SUFFICIENT INUNDATION TO PUSH–PULL OR FLOAT THE PIPE AND OPEN WATER CAN BE MAINTAINED. IF THESE CONDITIONS DO NOT EXIST AT THE TIME OF THE CROSSING, THEN THE OPEN CUT METHOD TECHNIQUE WILL BE UTILIZED. USING THIS METHOD, THE TRENCH IS EXCAVATED USING A BACKHOE (OR EQUIVALENT) OPERATING EITHER FROM CONSTRUCTION MATS IN MORE STABLE SOILS, OR FROM AN EXCAVATOR MOUNTED ON TRACKED PONTOONS (REFERRED TO AS A “SWAMPHOE”) ALONG THE TRENCHLINE.
5. IN WINTER CONDITIONS, SPECIAL EQUIPMENT, SUCH AS A TRENCHER, DITCHING MACHINE, OR ROCK SAW, WILL BE USED TO CUT DOWN THROUGH THE FROST LAYER ALONG BOTH TRENCH BOUNDARIES. WHERE FROZEN BLOCKS HAVE BEEN CUT, EXCAVATION EQUIPMENT (E.G., A BACKHOE OR EXCAVATOR) WILL BE USED TO REMOVE THE LARGE FROZEN BLOCKS AND TO PLACE THEM ADJACENT TO THE TRENCH. DEPENDING ON THE DEPTH OF FROST, TRENCHING MAY BE COMPLETED USING CONVENTIONAL EXCAVATORS AS OUTLINED IN SECTION 1.10 OF THE WINTER CONSTRUCTION PLAN.
6. SEASONAL CONSTRUCTION PROPOSALS PRESENT DIFFERENT CONSTRUCTION MAT ARRANGEMENTS BASED ON FIELD CONDITIONS ENCOUNTERED AT THE TIME OF CROSSING AS ILLUSTRATED IN FIGURE 49 OF THE EPP (ALSO SEE DETAIL PAGE 1) TO ALLOW FOR WATER TO FLOW THROUGH OR UNDERNEATH MAT LAYERS, OR TO AID IN PREVENTING COMPACTION AND DISPERSE THE WEIGHT OF CONSTRUCTION EQUIPMENT.
7. PEAT PROFILES ARE INTERPOLATIONS BASED ON FIELD SURVEY DATA.

CLEARING AND VEGETATION REMOVAL

1. CLEARING WILL BE CONDUCTED IN WETLANDS AS OUTLINED IN SECTION 3.2 OF THE EPP. CHIPS, MULCH, OR MECHANICALLY CUT WOODY DEBRIS SHALL NOT BE STOCKPILED IN A WETLAND. HYDRO–AX DEBRIS, OR SIMILAR CAN BE LEFT IN THE WETLAND IF SPREAD EVENLY IN THE CONSTRUCTION WORKSPACE TO A DEPTH THAT WILL ALLOW FOR NORMAL REVEGETATION, AS DETERMINED BY THE EI. CHIPPING IS NOT ALLOWED ON PUBLIC LANDS. ON PUBLIC LANDS, MULCH AND MECHANICALLY CUT WOODY DEBRIS MUST BE UNIFORMLY BROADCAST TO LESS THAN 2–INCH THICKNESS AND IN A MANNER THAT MAINTAINS VISIBLE GROUND.
2. IN WINTER CONDITIONS, REMOVAL OF SNOW FROM THE CONSTRUCTION WORKSPACE MAY BE NECESSARY TO PROVIDE SAFE AND EFFICIENT WORKING CONDITIONS AND TO EXPOSE SOILS FOR GRADING AND EXCAVATION AS OUTLINED IN SECTION 3.4 OF THE WINTER CONSTRUCTION PLAN. SNOW IS TYPICALLY PUSHED OFF THE WORKING AREA WITH EQUIPMENT SUCH AS A GRADER, SNOWPLOW, OR BULLDOZER AND THEN STOCKPILED ALONG THE OUTER PORTIONS OF THE WORKSPACE. TO MINIMIZE SCRAPING OFF UNDERLYING SOIL OR GRAVEL DURING SNOW REMOVAL, SNOWBLOWER ATTACHMENTS WILL BE INSTALLED ON COMPATIBLE EQUIPMENT. ALL EQUIPMENT WILL REMAIN WITHIN THE WORKSPACE, AND SNOW WILL NOT BE PUSHED OR BLOWN ONTO ENVIRONMENTALLY SENSITIVE FEATURES (REFER TO SECTION 1.1 OF THE EPP) OFF ROW. WHEN SNOW IS STORED ON THE ROW, A PHYSICAL BARRIER SUCH AS MULCH OR SEPARATION OF SNOW PILES FROM SPOIL PILES WILL BE CONDUCTED TO AVOID MIXING.

WATER MANAGEMENT AND BEST MANAGEMENT PRACTICES (“BMPS”)

1. IN–WATER BMPS AND SINGLE– AND DOUBLE–PERIMETER CONTROL PLACEMENTS WERE DEVELOPED USING DRAFT DATA PREPARED FOR THE MINNESOTA POLLUTION CONTROL AGENCY’S STORMWATER POLLUTION PREVENTION PLAN (“SWPPP”) ENVIRONMENTAL PLAN SHEETS (“EPS”). EPS ISSUED FOR CONSTRUCTION OF THE PROJECT WILL SUPERSEDE THE INFORMATION ON THESE WETLAND/PEATLAND CONSTRUCTION PLANS.
2. MPCA’S DRAFT SECTION 401 WATER QUALITY CERTIFICATION CONTAINS A DRAFT CONDITION THAT, PRIOR TO COMMENCING THE PROJECT CONSTRUCTION ACTIVITIES IN ANY WETLAND, AND BASED ON SATURATION LEVELS OF EACH RESPECTIVE WETLAND AT THE TIME OF CONSTRUCTION AND THE WEATHER FORECASTS ENBRIDGE MUST MONITOR, ENBRIDGE MUST INSTALL IN–WETLAND BMPS THAT WILL PREVENT, DURING CONSTRUCTION ACTIVITIES, IMPACTS TO AQUATIC RESOURCES OUTSIDE OF THE AREA IN WHICH WETLAND IMPACTS ARE AUTHORIZED. ENBRIDGE MUST ENSURE THAT A TRAINED PERSON WILL INSPECT THE IN–WETLAND BMPS THROUGHOUT THE CONSTRUCTION SITE AT LEAST ONE TIME PER DAY TO ENSURE INTEGRITY AND EFFECTIVENESS. ENBRIDGE MUST IMMEDIATELY REPAIR, REPLACE, OR SUPPLEMENT ALL NON–FUNCTIONAL IN–WETLAND BMPS WITH FUNCTIONAL BMPS AS NEEDED TO PREVENT ANY UNAUTHORIZED IMPACTS TO STATE WATERS.
3. SHEET–PILING MAY BE USED AT WETLANDS CROSSED USING THE OPEN CUT METHOD IN ORDER TO STABILIZE THE TRENCH, OR TO ASSIST WITH WATER MANAGEMENT AS DESCRIBED IN SECTION 3.3 OF THE PROCEDURES. AT POTENTIAL SHEET–PILING LOCATIONS, A TEST HOLE MAY BE DUG IN PROXIMITY TO THE CROSSING LOCATION TO ASSESS SOIL STABILITY AND OTHER CONDITIONS (E.G., BEDROCK, COBBLES, BOULDERS), AND TO DETERMINE IF THE CROSSING WILL BE CONDUCTIVE TO THE INSTALLATION OF SHEET PILING.
4. THE OPEN CUT AND PUSH–PULL METHODS MAY OR MAY NOT REQUIRE TRENCH DEWATERING IN NON–FROZEN CONDITIONS. TRENCH DEWATERING WILL BE CONDUCTED AS OUTLINED IN SECTION 5.0 OF THE EPP.

SOIL MANAGEMENT

1. THE TRENCH–LINE–ONLY TOPSOIL SEGREGATION METHOD WILL BE USED IN WETLANDS (SEE FIGURES 14 AND 15 OF THE EPP) IN NON–FROZEN CONDITIONS. GENERALLY, SPOIL WILL BE STORED ON THE SPOIL, OR NON–WORKING SIDE OF THE PIPELINE TRENCH. IN WINTER CONDITIONS, SPOIL MAY ALSO BE STORED ON THE WORKING SIDE DUE TO THE SPACE NEEDED TO STORE FROZEN BLOCKS OF SOIL. ALL SOIL WILL BE STORED WITHIN THE CONSTRUCTION WORKSPACE.
2. TOPSOIL SEGREGATION ACTIVITIES WILL OCCUR AS OUTLINED IN SECTION 3.4 OF THE EPP. WHEN CONSTRUCTING IN WETLAND AREAS WITHOUT STANDING WATER, UP TO 1 FOOT OF TOPSOIL (ORGANIC LAYER) WILL BE STRIPPED FROM THE TRENCH LINE AND STOCKPILED SEPARATE FROM TRENCH SPOIL TO PRESERVE THE NATIVE SEED STOCK. TOPSOIL WILL NOT BE STOCKPILED IN WETLANDS FOR LONGER THAN 30 DAYS ON PUBLIC LANDS OR IN PUBLIC WATER WETLANDS, EXCEPT POTENTIALLY AT TIE–IN LOCATIONS WITHIN WETLANDS WHERE ADDITIONAL TIME MAY BE REQUIRED TO COMPLETE CONSTRUCTION OF THE PIPE SEGMENT. IN STANDING WATER WETLANDS, ORGANIC SOIL SEGREGATION IS NOT TYPICALLY PRACTICAL BECAUSE OF THE INABILITY TO MAINTAIN A COHESIVE SPOIL PILE DUE TO LIQUID NATURE OF SOIL; HOWEVER, ENBRIDGE WILL ATTEMPT TO SEGREGATE AS MUCH OF THE ORGANIC LAYER AS POSSIBLE BASED ON SITE SATURATION CONDITIONS. IF NORMALLY UNSATURATED WETLANDS ARE SATURATED AT THE TIME OF CONSTRUCTION, TOPSOIL SEGREGATION WILL BE ATTEMPTED AS ILLUSTRATED IN FIGURES 32 AND 33 AND BASED ON RECOMMENDATIONS FROM THE EI AND APPROPRIATE REGULATORY AGENCIES.
3. GAPS WILL BE LEFT AND EROSION AND SEDIMENT CONTROL BMPS INSTALLED WHERE STOCKPILED TOPSOIL AND SPOIL PILES INTERSECT WITH WATER CONVEYANCES (I.E., DITCHES, SWALES) TO MAINTAIN NATURAL DRAINAGE AS OUTLINED IN SECTION 1.10.2 OF THE EPP. A MINIMUM 1 FOOT OF SEPARATION WILL BE MAINTAINED BETWEEN THE TOPSOIL AND SUBSOIL/SPOIL PILES (AND SNOW IN WINTER CONDITIONS) TO PREVENT MIXING. WHERE THE 1–FOOT SEPARATION CANNOT BE MAINTAINED, THE EI MAY APPROVE THE USE OF A PHYSICAL BARRIER ON A SITE–SPECIFIC BASIS, SUCH AS A THICK LAYER OF MULCH OR SILT FENCE, BETWEEN THE SPOIL AND TOPSOIL PILES TO PREVENT MIXING.
4. IN SPHAGNUM–DOMINATED PEATLANDS, ENBRIDGE WILL SEPARATE APPROXIMATELY 1 FOOT OF THE ORGANIC MATERIAL WHERE STANDING WATER IS NOT PRESENT AND WILL STORE IT SEPARATELY FROM THE SUBSOIL AS OUTLINED IN SECTION 7.7.3 OF THE EPP. THESE AREAS ARE NOTED ON THE WETLAND/PEATLAND CONSTRUCTION PLANS WHERE CONDITIONS ARE ANTICIPATED. SEE RESTORATION, BELOW, FOR ADDITIONAL INFORMATION.
5. WHERE THE PIPELINE INTERSECTS AND AREA OF PERMEABLE PEAT, ENBRIDGE WILL ATTEMPT TO SEGREGATE POROUS AND NON–POROUS SOILS WITHIN THE SEGMENTS WHERE THE PIPELINE IS INSTALLED IN THE POROUS PEAT LAYER. THESE AREAS ARE NOTED ON THE WETLAND/PEATLAND CONSTRUCTION PLANS WHERE CONDITIONS ARE ANTICIPATED.

DEPTH OF COVER

1. IN STANDING WATER WETLANDS, ORGANIC SOIL SEGREGATION IS NOT TYPICALLY PRACTICAL BECAUSE OF THE INABILITY TO MAINTAIN A COHESIVE SPOIL PILE DUE TO LIQUID NATURE OF SOIL; HOWEVER, ENBRIDGE WILL ATTEMPT TO SEGREGATE AS MUCH OF THE ORGANIC LAYER AS POSSIBLE BASED ON SITE SATURATION CONDITIONS. LOCATIONS WHERE STANDING WATER MAY BE PRESENT BASED ON PRIOR FIELD SURVEY ARE NOTED IN THE “FIELD CONDITIONS” CALLOUT BOX ON EACH WETLAND/PEATLAND CONSTRUCTION PLAN. CONDITIONS WILL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
2. ENBRIDGE WILL INSTALL THE PIPELINE TO PROVIDE 48 INCHES OF COVER FROM THE TOP OF THE PIPE. DEPTH OF COVER REPRESENTATIONS ON THESE WETLAND/PEATLAND CONSTRUCTION PLANS ARE INTENDED TO BE REPRESENTATIVE; FIELD CONDITIONS ENCOUNTERED AT THE TIME OF CONSTRUCTION WILL DETERMINE THE POINT FROM WHICH DEPTH OF COVER IS MEASURED. DEPTH OF COVER WILL BE MEASURED AS ILLUSTRATED IN FIGURE 18 OF THE EPP (ALSO SEE DETAIL PAGE 2). THE DEPTH OF THE GRADED RIGHT–OF–WAY WILL VARY DEPENDING ON SITE SATURATION CONDITIONS. IN SATURATED CONDITIONS WHERE THERE IS A FLOATING MAT OR VEGETATION OVER A WATER LAYER, THE DEPTH OF COVER WILL BE MEASURED STARTING AT THE BOTTOM OF THE WATER RESOURCE SUBSTRATE.

NATIVE PLANT COMMUNITIES RANKED S1–S3 AND SITES OF BIODIVERSITY RANKED OUTSTANDING OR HIGH

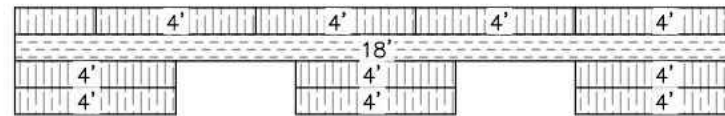
1. LOCATIONS THAT INTERSECT THE CONSTRUCTION RIGHT–OF WAY ARE SHOWN ON THE WETLAND/PEATLAND CONSTRUCTION PLANS.
2. ENBRIDGE HAS COMMITTED TO ADDITIONAL BMPS IN THESE AREAS AS OUTLINED IN SECTION 6.11.6 OF THE LICENSE TO CROSS PUBLIC LANDS APPLICATION.

RESTORATION

1. RESTORATION OF WETLANDS AND PEATLANDS WILL OCCUR AS OUTLINED IN SECTION 7.0 OF THE EPP AND AS OUTLINED IN THE PLANTING PLAN, WHICH IS APPENDIX A OF THE VMP.
2. IN SPHAGNUM–DOMINATED PEATLANDS, ENBRIDGE WILL SEPARATE APPROXIMATELY 1 FOOT OF THE ORGANIC MATERIAL WHERE STANDING WATER IS NOT PRESENT AND WILL STORE IT SEPARATELY FROM THE SUBSOIL AS OUTLINED IN SECTION 7.7.3 OF THE EPP. ONCE THE TRENCH HAS BEEN BACKFILLED, ENBRIDGE WILL UNIFORMLY SPREAD THE PREVIOUSLY SEGREGATED ORGANIC MATERIAL OVER THE TRENCH AREA. THE APPLICATION OF STRAW MULCH HAS BEEN SHOWN TO IMPROVE SPHAGNUM MOSS ESTABLISHMENT AND SURVIVAL BY PROVIDING HUMID CONDITIONS. ENBRIDGE WILL APPLY CERTIFIED WEED–FREE STRAW OR HAY AT A RATE OF 1.5 TONS/ACRE ON TOP OF THE REINTRODUCED SPHAGNUM MOSS WHERE CONDITIONS ALLOW. THESE AREAS ARE NOTED ON THE WETLAND/PEATLAND CONSTRUCTION PLANS WHERE CONDITIONS ARE ANTICIPATED.
3. ENBRIDGE WILL CONDUCT POST–CONSTRUCTION MONITORING IN ACCORDANCE WITH THE POST–CONSTRUCTION MONITORING PLAN FOR WETLANDS AND WATERBODIES, AND IN ACCORDANCE WITH THE VMP FOR THE UPLAND PORTIONS OF THE PROJECT ON PUBLIC LANDS.

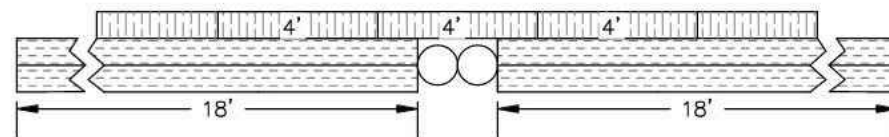


ENBRIDGE LINE 3 REPLACEMENT PROJECT WETLAND/PEATLAND CONSTRUCTION PLAN		
CONSTRUCTION NOTE PAGE		
SCALE	DWG. NO. WPCP–NOTES	PAGE NO.



MAY BE USED IN INUNDATED AREAS GREATER THAN 2 FEET DEEP IN NON-FROZEN CONDITIONS. MID-LAYER MATS MAY OR MAY NOT BE NECESSARY FOR BRIDGE STABILITY BASED ON SITE-SPECIFIC CONDITIONS. CONFIGURATIONS MAY BE REPEATED/DEPTH MAY VARY.

OPTION A  
PROFILE VIEW



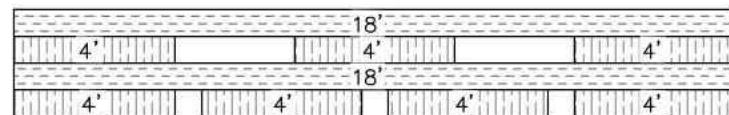
MAY BE USED IN AREAS LESS THAN 2 FEET DEEP IN NON-FROZEN CONDITIONS WITH CHANNELIZED FLOW. CULVERT(S) PLACED TO ALLOW FLOW.

OPTION B  
PROFILE VIEW



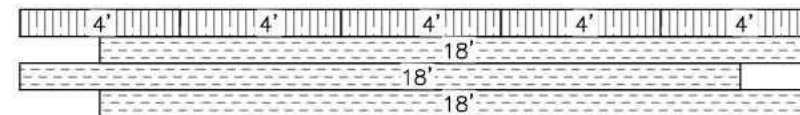
MAY BE USED IN SHALLOW AREAS NOT ABOVE HEIGHT OF MAT ROAD IN NON-FROZEN CONDITIONS WITH CHANNELIZED FLOW. CULVERT(S) PLACED TO ALLOW FLOW.

OPTION C  
PROFILE VIEW

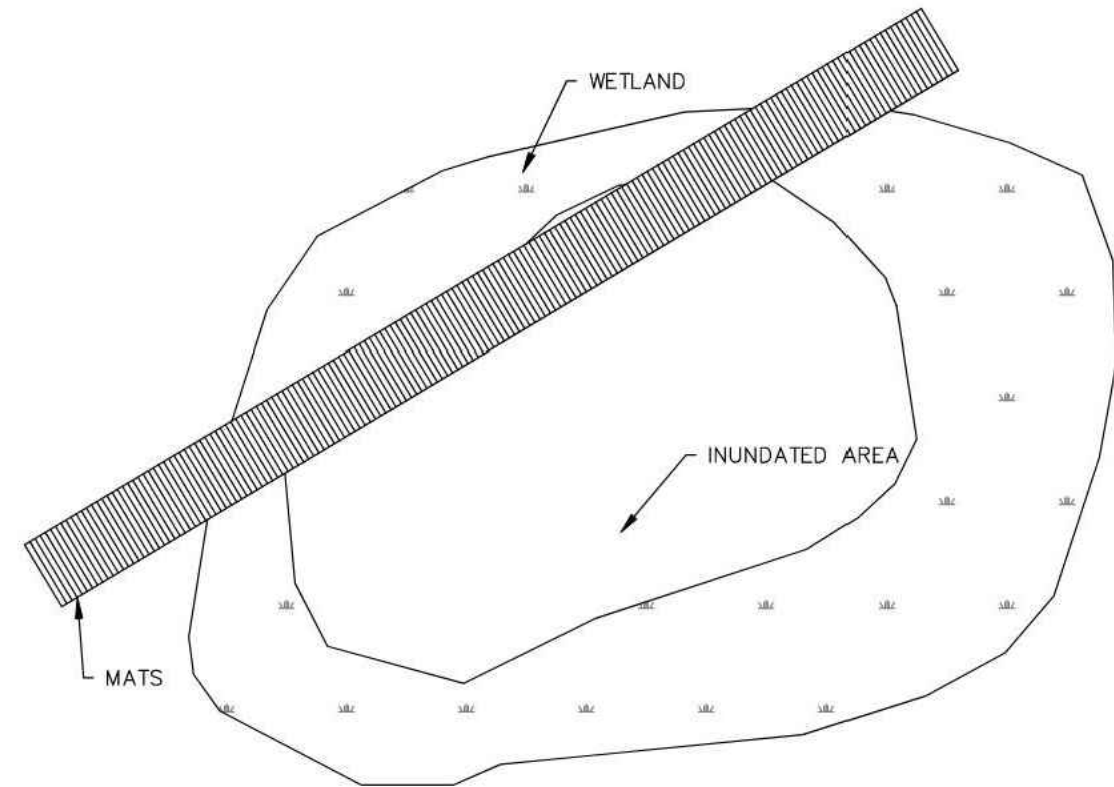


USED IN PEATLANDS DURING NON-FROZEN CONDITIONS TO AID IN MINIMIZING COMPACTION. CONFIGURATION MAY VARY, MULTIPLE LAYERS MAY BE USED.

OPTION D  
END VIEW



OPTION D  
PROFILE VIEW



PLAN VIEW

NOTE:

1. THE TOP IS THE "CAP" AND IS PLACED PERPENDICULAR TO FLOW. RUNNERS ARE INSTALLED IN MULTIPLE LAYERS AS NEEDED. THE NUMBER OF LAYERS USED IS BASED ON SITE-SPECIFIC CONDITIONS AT THE TIME OF CONSTRUCTION.
2. MAT APPROACH IS PLANNED BASED ON FIELD VISITS AND MODIFIED AT TIME OF CONSTRUCTION.
3. STANDARD MAT SIZE IS 8 INCHES THICK BY 4 FEET WIDE BY 18 FEET LONG.
4. CULVERTS AND SPANS WILL BE PLACED BY FIELD CREW IN COORDINATION WITH ENVIRONMENTAL INSPECTOR.
5. DURING WINTER CONSTRUCTION, ONE ROW OF FLAT MATS MAY OR MAY NOT BE USED WITH PRESENCE OF FROST.

WETLAND MATTING TYPICAL



ENBRIDGE LINE 3 REPLACEMENT PROJECT  
WETLAND/PEATLAND CONSTRUCTION PLAN

DETAIL PAGE 1

SCALE

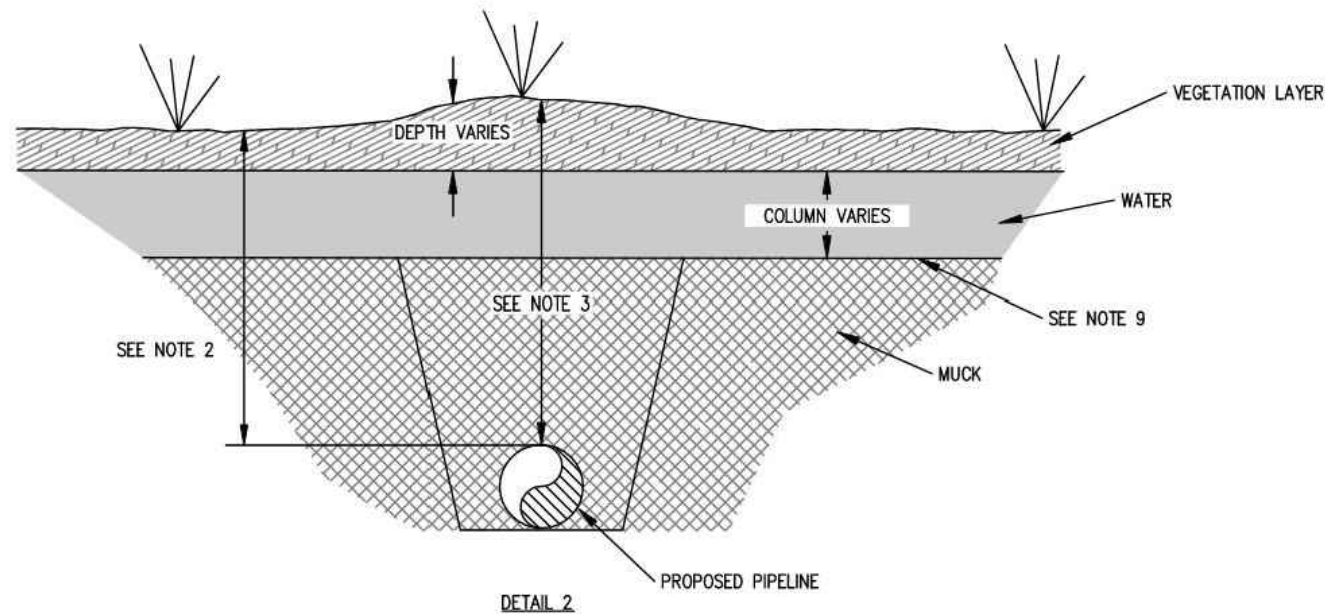
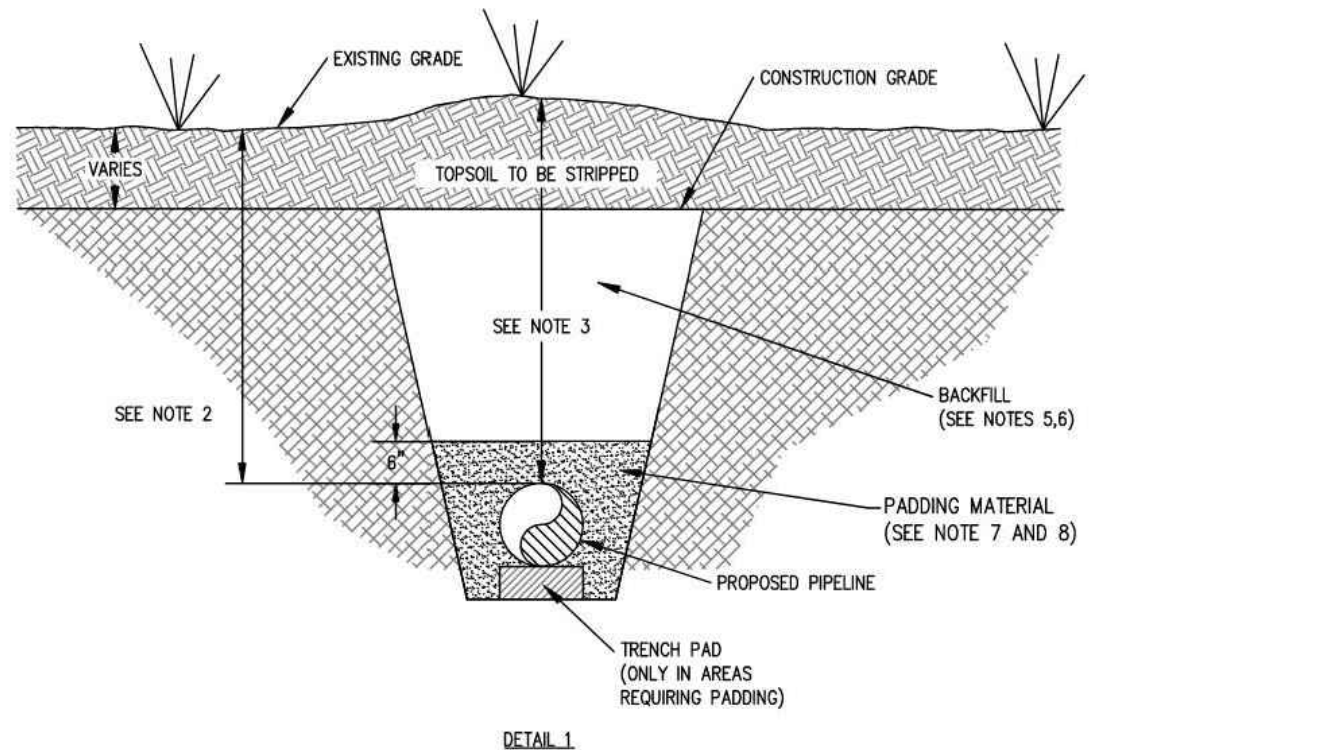
DWG. NO.

WPCP-DETAIL 1

PAGE NO.

PLOTTED SIZE: ANSI FULL BLEED B (17x11)





# TYPICAL TRENCH AND BACKFILL REQUIREMENTS

## NOTES

1. DEPTH OF COVER WILL VARY DEPENDING ON LAND USE.
2. (MN ONLY) MINIMUM OF 54" FROM CONSTRUCTION GRADE.
  - a. IN THE REQUISITE AREAS WHERE WE DO NOT HAVE A DEPTH OF COVER WAIVER SPECIFIC TO THE MN STATUTE 216G.07.
3. MINIMUM OF 48" FROM CONSTRUCTION GRADE UNLESS STATED OTHERWISE ON THE ALIGNMENT SHEETS OR LINE LIST.
  - a. (MN ONLY) IN THOSE AREAS WHEREIN WE HAVE A WAIVER OR ARE OUTSIDE OF THOSE AREAS DEFINED IN THE MN STATUTE 216G.07.
4. DEPTH OF COVER SHALL BE MEASURED AS THE SHORTEST DIMENSION FROM THE TOP OF THE PIPE, OR BUOYANCY CONTROL DEVICE TO THE GRADED RIGHT OF WAY.
5. REFER TO CONSTRUCTION SPECIFICATIONS REGARDING ROCK IN BACKFILL.
6. SIDE OF TRENCH TO BE SLOPED IN ACCORDANCE WITH OSHA SAFETY REGULATIONS REGARDING EXCAVATIONS.
7. THE PADDING MATERIAL SHALL BE PLACED ON THE PIPE USING A PROCEDURE THAT DOES NOT DAMAGE THE COATING OR PIPE.
8. THE MATERIAL USED FOR PADDING SHALL BE WELL GRADED FROM GRANULAR MATERIAL WITH A MAXIMUM PARTICLE SIZE OF 1.5 INCHES.
9. TOP OF MUCK LAYER WILL BE CONSIDERED CONSTRUCTION GRADE.

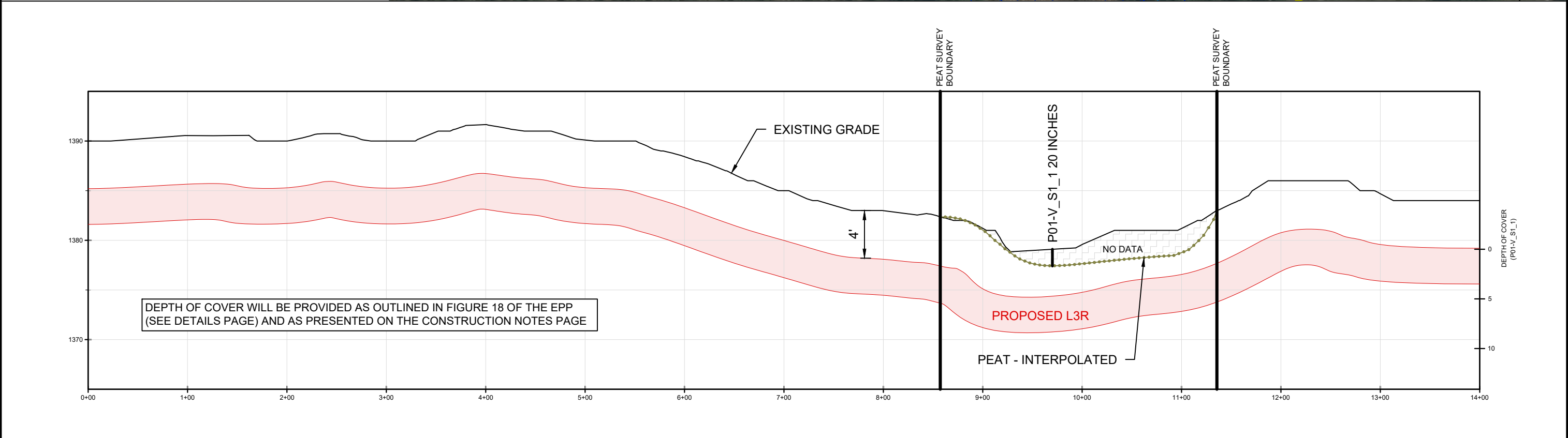
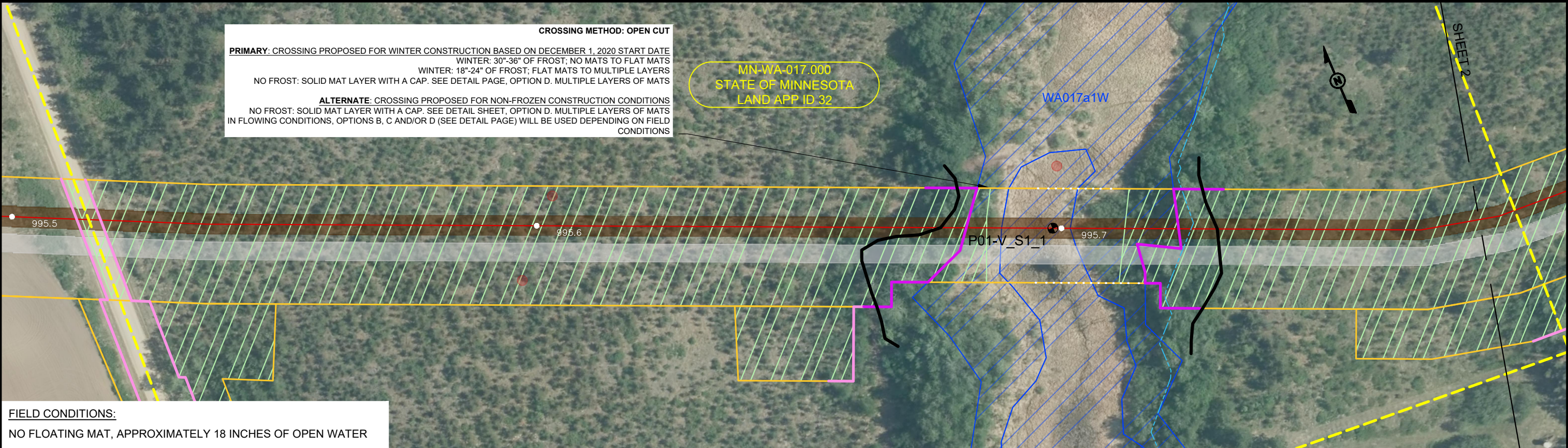
## MN STATUTE 216G.07 PROTECTING PUBLIC FACILITIES AND AGRICULTURAL LAND:

SUBDIVISION 1. DEPTH OF COVER. UNLESS WAIVED IN THE MANNER PROVIDED IN SUBDIVISION 2 OR 3, ANY PIPELINE INSTALLED AFTER MAY 26, 1979, SHALL BE BURIED WITH A MINIMUM LEVEL COVER OF NOT LESS THAN 4-1/2 FEET IN ALL AREAS WHERE THE PIPELINE CROSSES THE RIGHT-OF-WAY OF ANY PUBLIC DRAINAGE FACILITY OR ANY COUNTY, TOWN OR MUNICIPAL STREET OR HIGHWAY AND WHERE THE PIPELINE CROSSES CULTIVATED AGRICULTURAL LAND. WHERE THE PIPELINE CROSSES THE RIGHT-OF-WAY OF ANY DRAINAGE DITCH, THE PIPELINE SHALL BE AT LEAST 4-1/2 FEET BELOW THE AUTHORIZED DEPTH OF THE DITCH, UNLESS WAIVED IN THE MANNER PROVIDED IN SUBDIVISION 2 AND 3.



ENBRIDGE LINE 3 REPLACEMENT PROJECT WETLAND/PEATLAND CONSTRUCTION PLAN		
DETAIL PAGE 2		
SCALE	DWG. NO. WPCP-DETAIL 2	PAGE NO.





**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 32-35  
WADENA COUNTY, MINNESOTA / S02-T138N-R33W

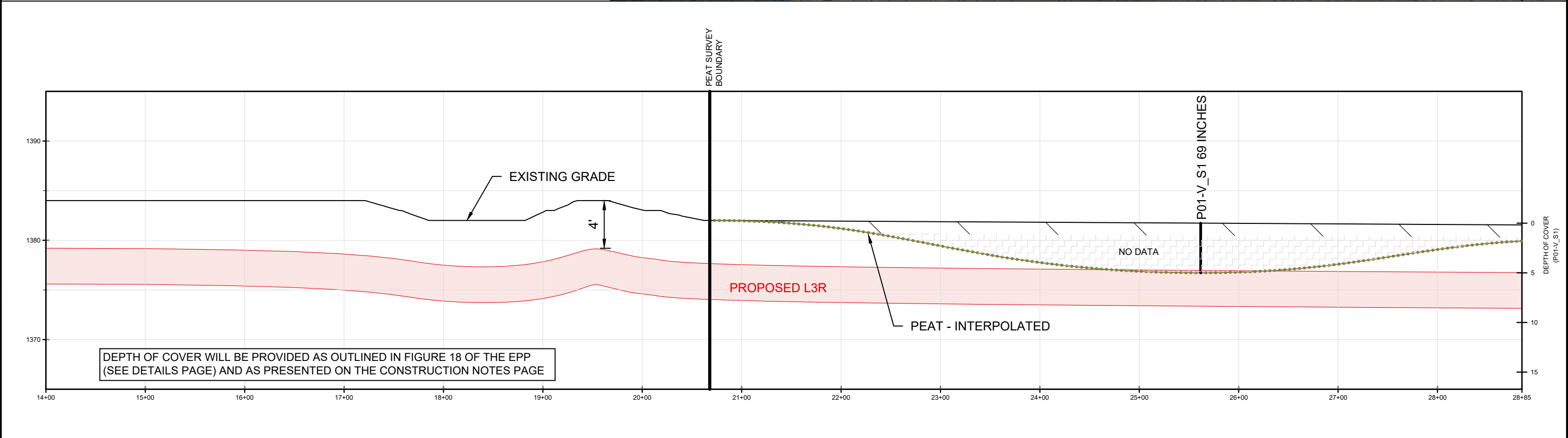
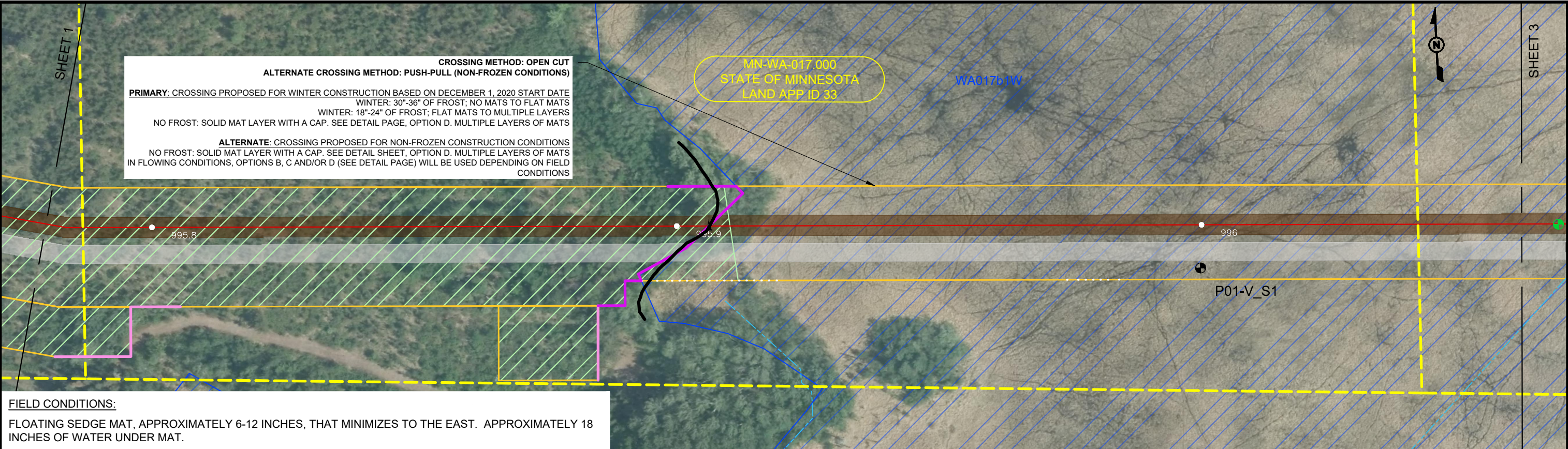
**LEGEND**

- PROPOSED LINE 3 REPLACEMENT
- PROPOSED WORKSPACE
- PEATLAND SURVEY BOUNDARY
- PEAT
- DELINEATED WATERBODY
- MDNR 40 BOUNDARIES
- DRAINAGE FLOWLINES
- VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE WATER BMPS
- DOUBLE PERIMETER CONTROLS
- SINGLE PERIMETER CONTROLS
- NATIVE PLANT COMMUNITY (S1-S3)
- SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
- EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)
- TRAVEL LANE
- DELINEATED WETLAND
- INVASIVE SPECIES
- PEAT DEPTH
- PEAT DEPTH AND PEAT EXTRACTION
- L3R MILEPOST
- INSTALLED PEATLAND WELL
- TRENCH BREAKER

**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 32-35  
WADENA COUNTY, MINNESOTA / S02-T138N-R33W

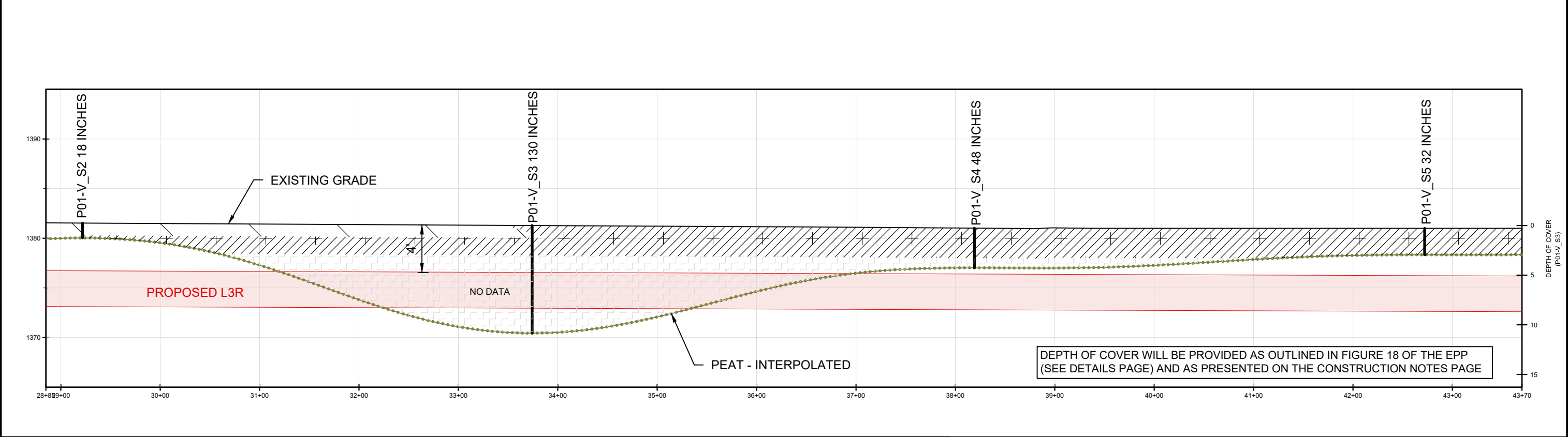
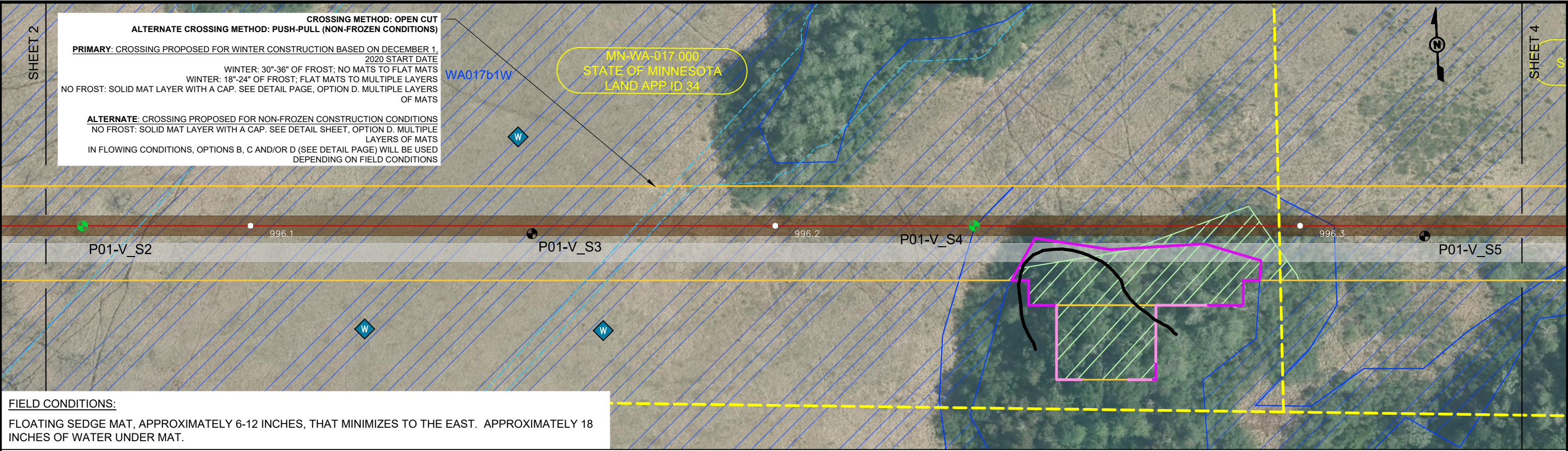
**LEGEND**

- PROPOSED LINE 3 REPLACEMENT
- PROPOSED WORKSPACE
- PEATLAND SURVEY BOUNDARY
- PEAT
- DELINEATED WATERBODY
- MDNR 40 BOUNDARIES
- DRAINAGE FLOWLINES
- VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE
- WATER BMPS
- DOUBLE PERIMETER CONTROLS
- SINGLE PERIMETER CONTROLS
- NATIVE PLANT COMMUNITY (S1-S3)
- SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
- EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)
- TRAVEL LANE
- DELINEATED WETLAND
- INVASIVE SPECIES
- PEAT DEPTH
- PEAT DEPTH AND PEAT EXTRACTION
- L3R MILEPOST
- INSTALLED PEATLAND WELL
- TRENCH BREAKER

**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 32-35  
WADENA COUNTY, MINNESOTA / S02-T138N-R33W

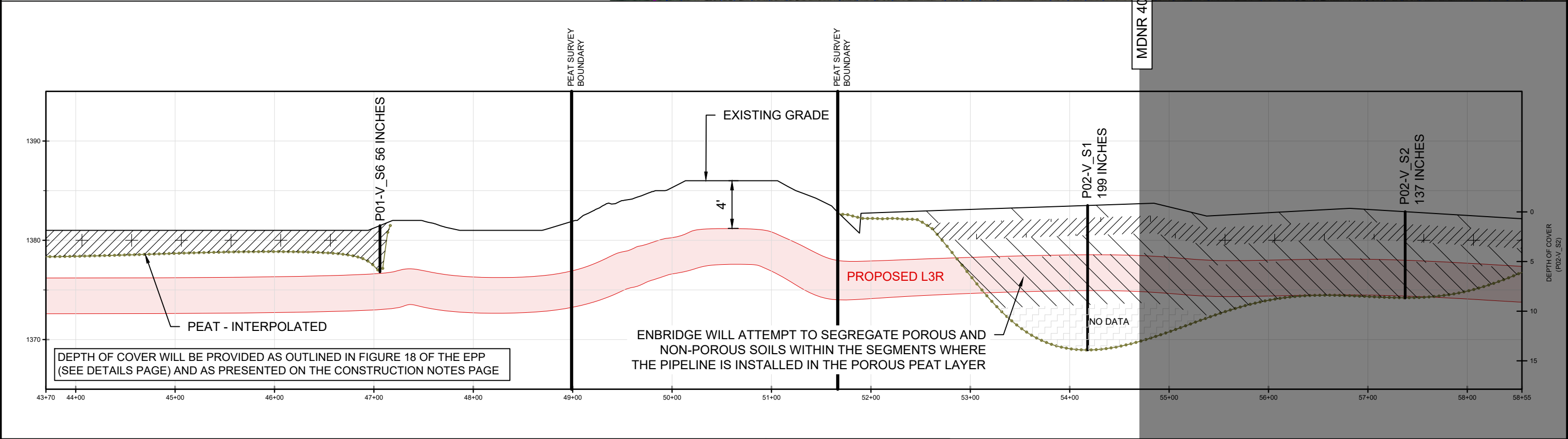
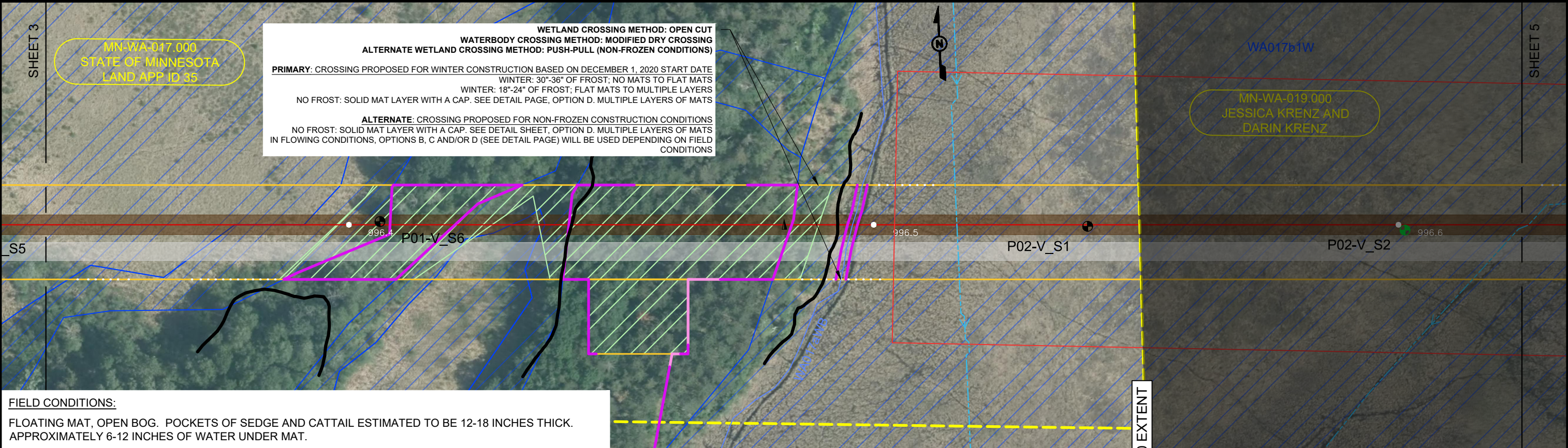
**LEGEND**

- PROPOSED LINE 3 REPLACEMENT
- PROPOSED WORKSPACE
- PEATLAND SURVEY BOUNDARY
- PEAT
- DELINEATED WATERBODY
- MDNR 40 BOUNDARIES
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**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS

LAND APP IDS 32-35

WADENA COUNTY, MINNESOTA / S02-T138N-R33W

ENBRIDGE

LEGEND

PROPOSED LINE 3 REPLACEMENT

PROPOSED WORKSPACE

PEATLAND SURVEY BOUNDARY

PEAT

DELINEATED WATERBODY

MDNR 40 BOUNDARIES

DRAINAGE FLOWLINES

VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE

WATER BMPS

DOUBLE PERIMETER CONTROLS

SINGLE PERIMETER CONTROLS

NATIVE PLANT COMMUNITY (S1-S3)

SITE OF BIODIVERSITY SIGNIFICANCE (O/H)

EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)

TRAVEL LANE

DELINEATED WETLAND

INVASIVE SPECIES

PEAT DEPTH

PEAT DEPTH AND PEAT EXTRACTION

L3R MILEPOST

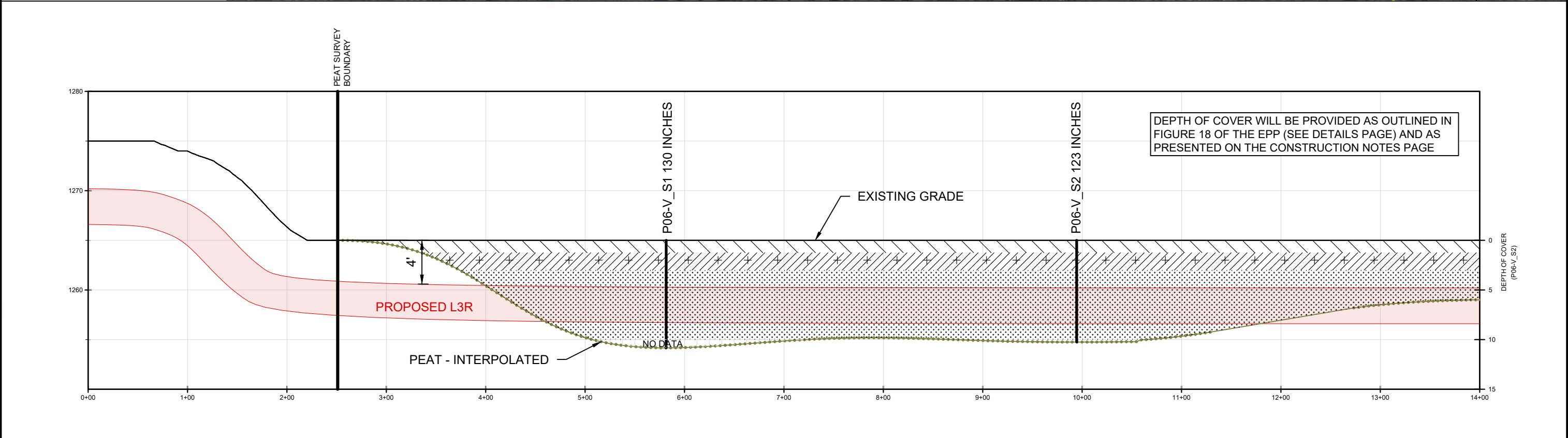
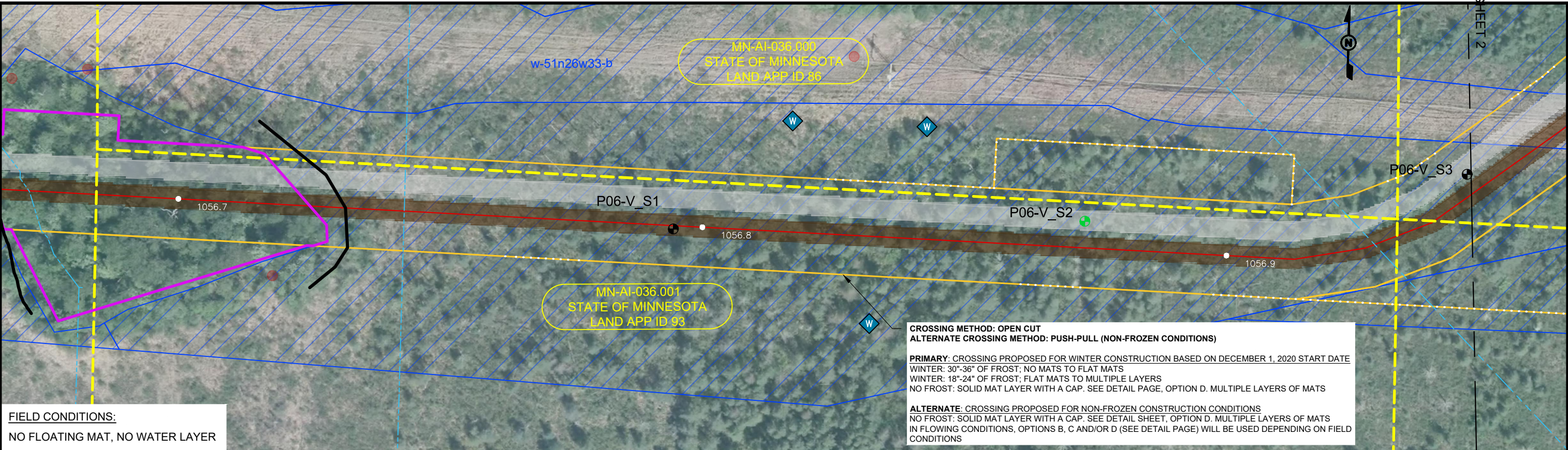
INSTALLED PEATLAND WELL

TRENCH BREAKER

VON POST DEGREE OF HUMIFICATION

H1	H2	H3	H4
H5	H6	H7	H8





### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S34-T51N-R26W

PAGE 01

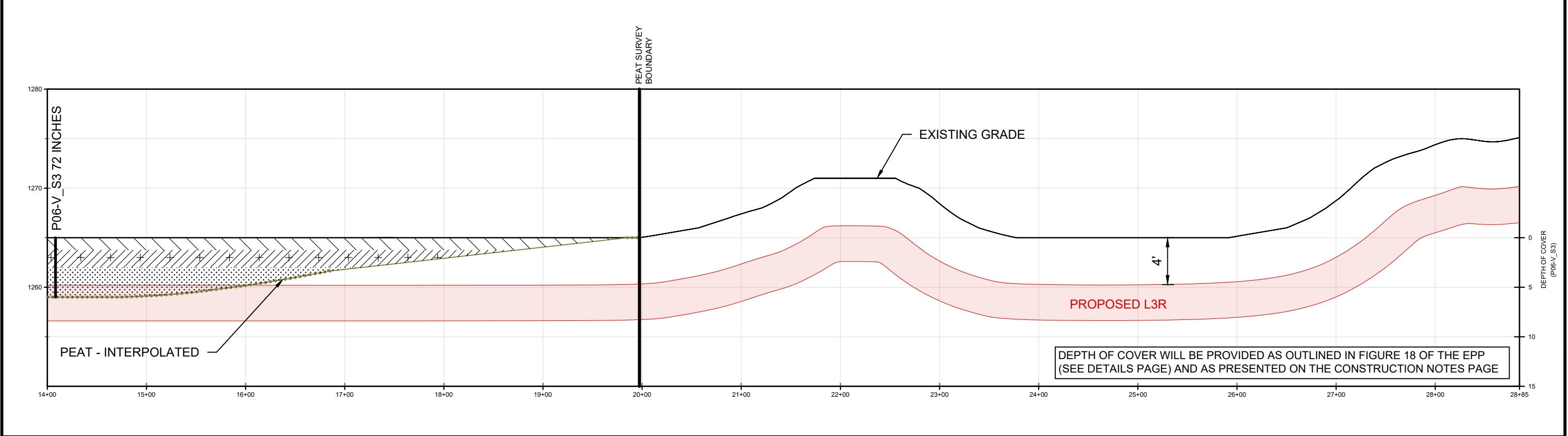
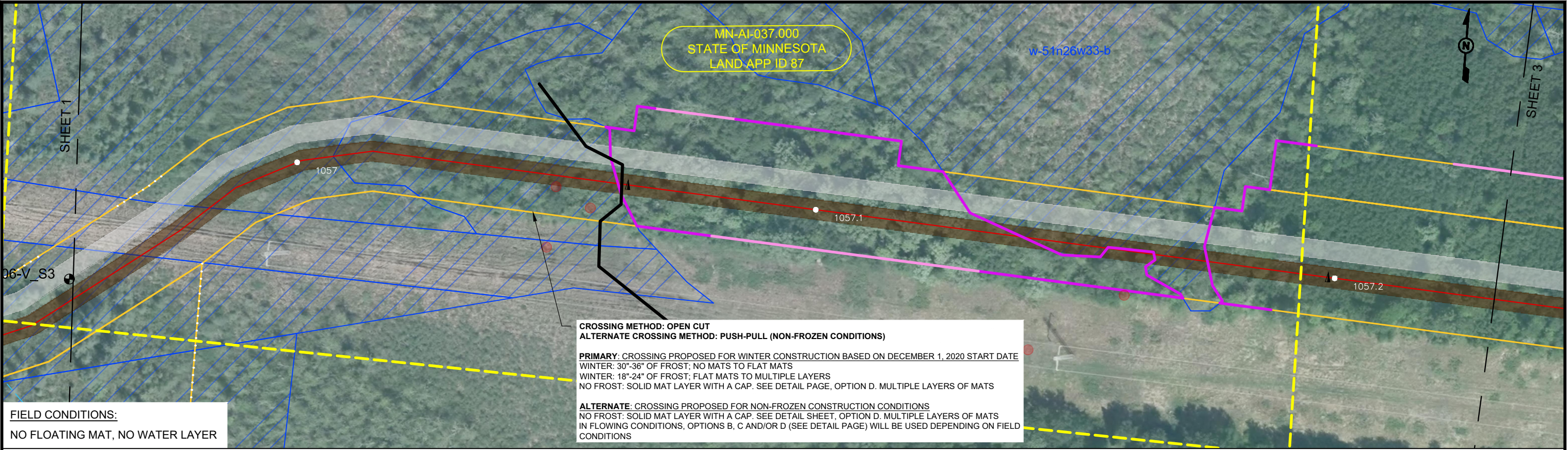
**LEGEND**

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- PROPOSED WORKSPACE
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- PEAT
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- MDNR 40 BOUNDARIES
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H1	H2	H3	H4
H5	H6	H7	H8





### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S34-T51N-R26W

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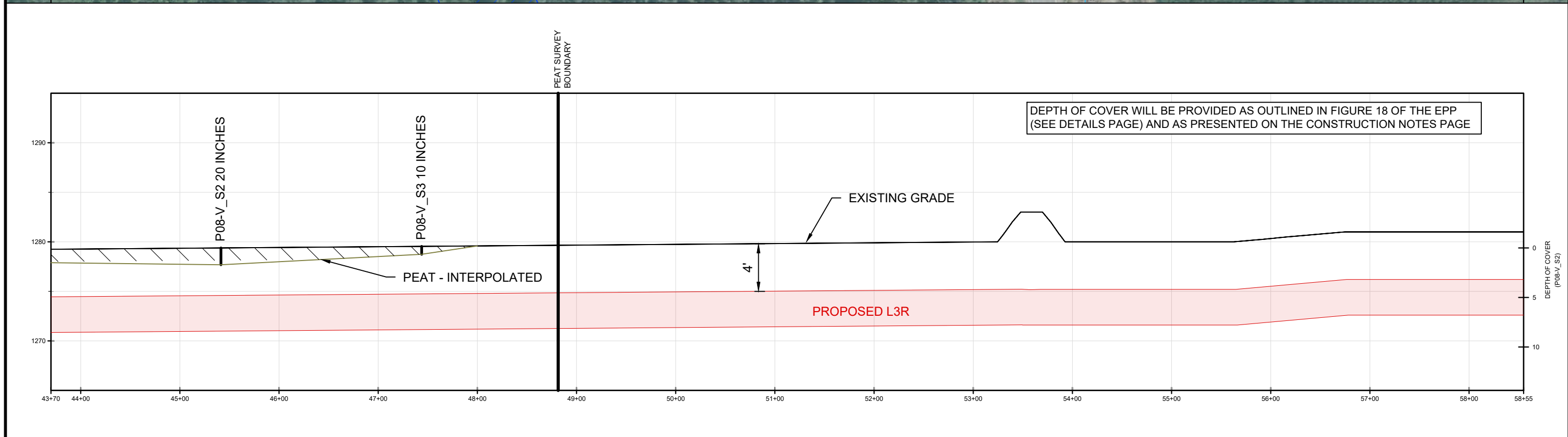
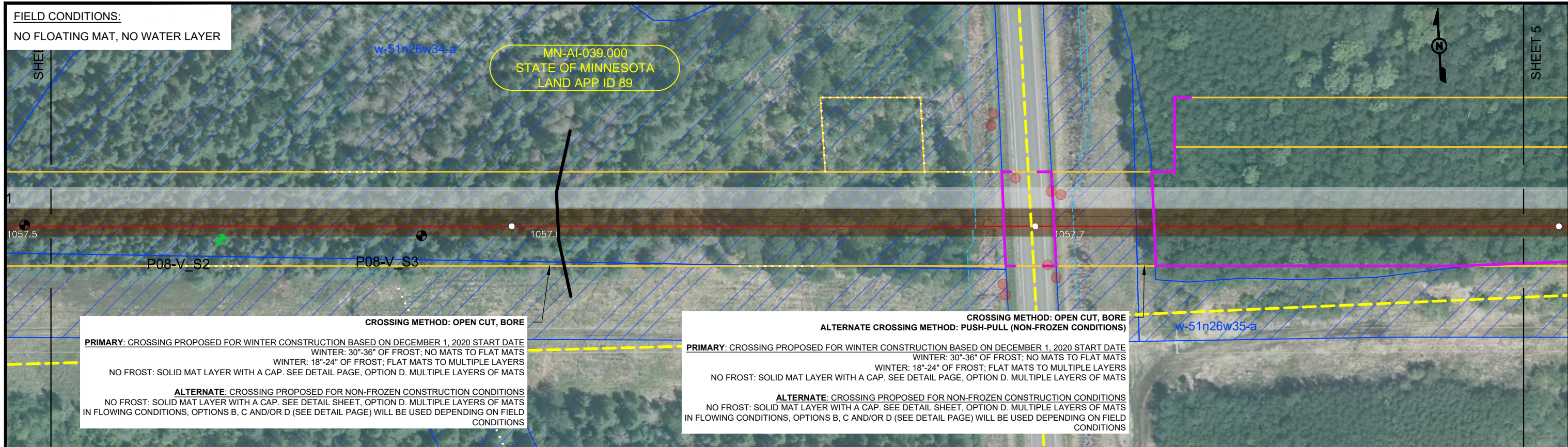
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**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S34 & 35-T51N-R26W

**ENBRIDGE**

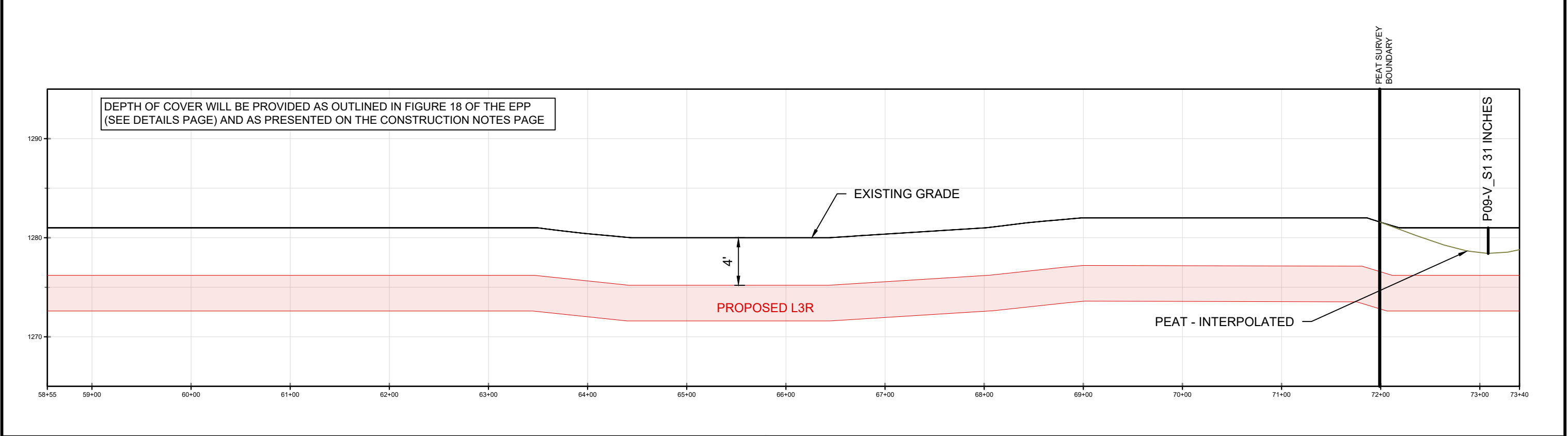
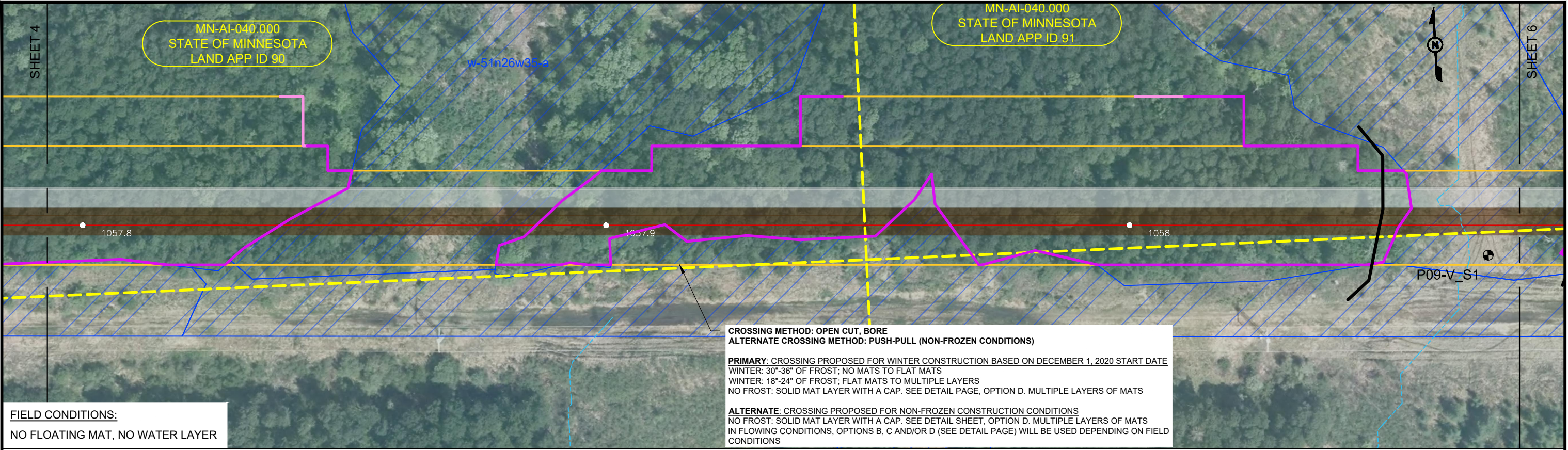
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**WETLAND / PEATLAND CONSTRUCTION PLAN**

MDNR PRIORITY AREAS ON PUBLIC LANDS

LAND APP IDS 86-110

AITKIN COUNTY, MINNESOTA / S35-T51N-R26W

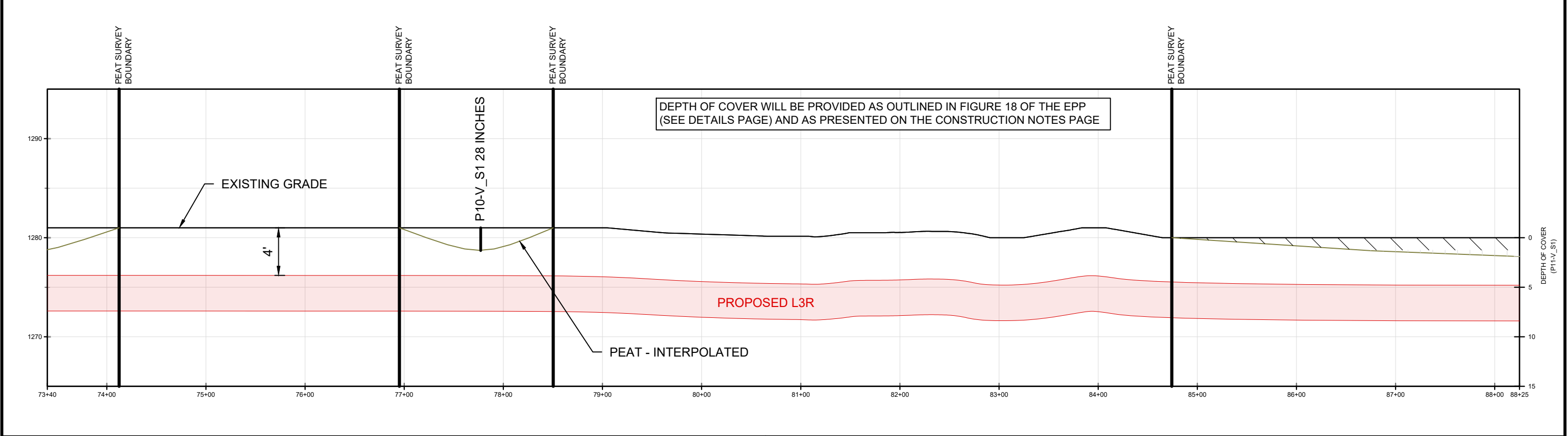
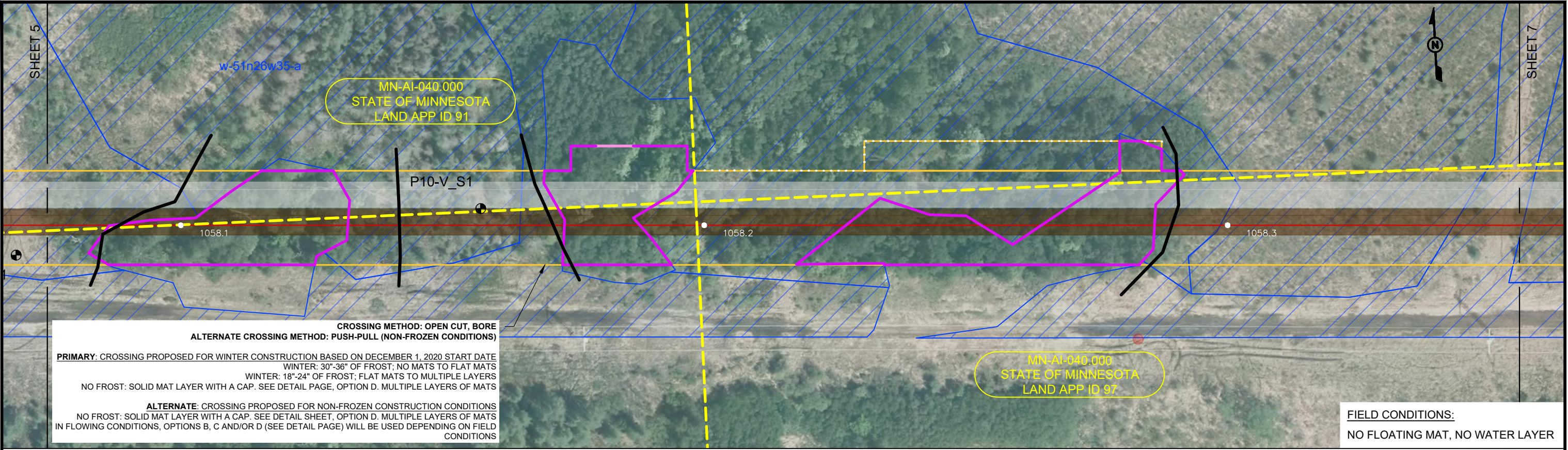
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MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S35-T51N-R26W

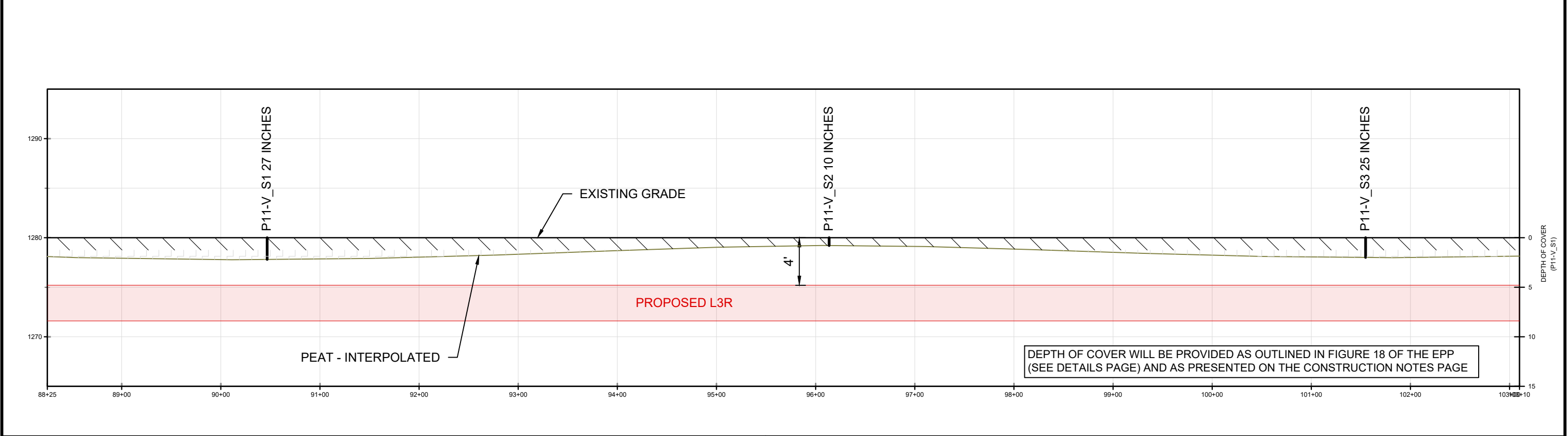
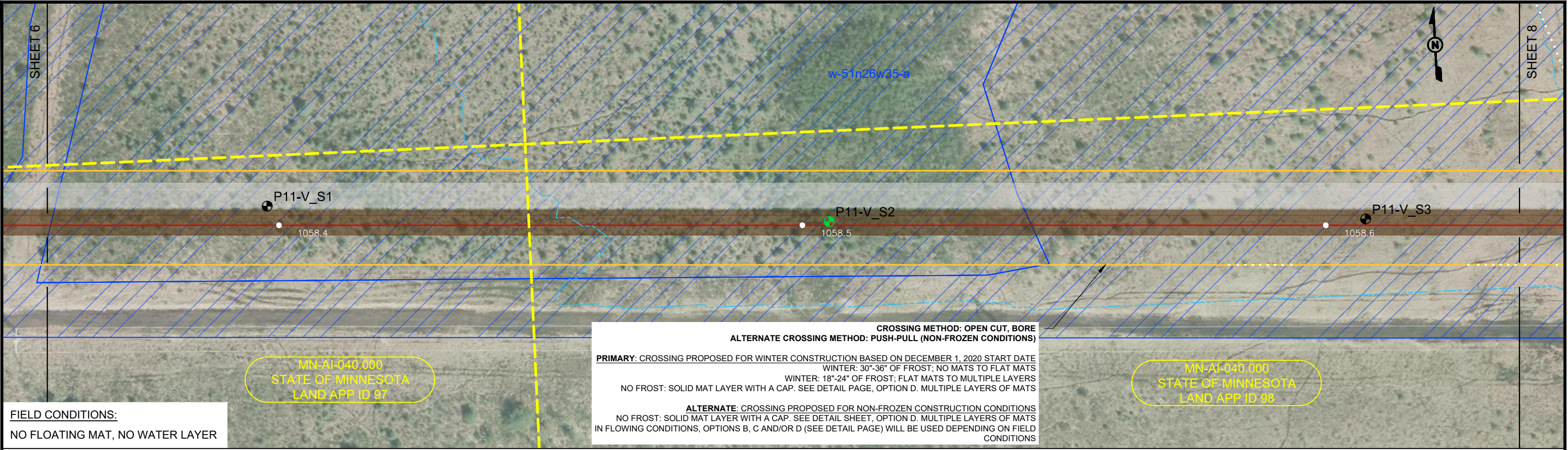
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**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S35-T51N-R26W

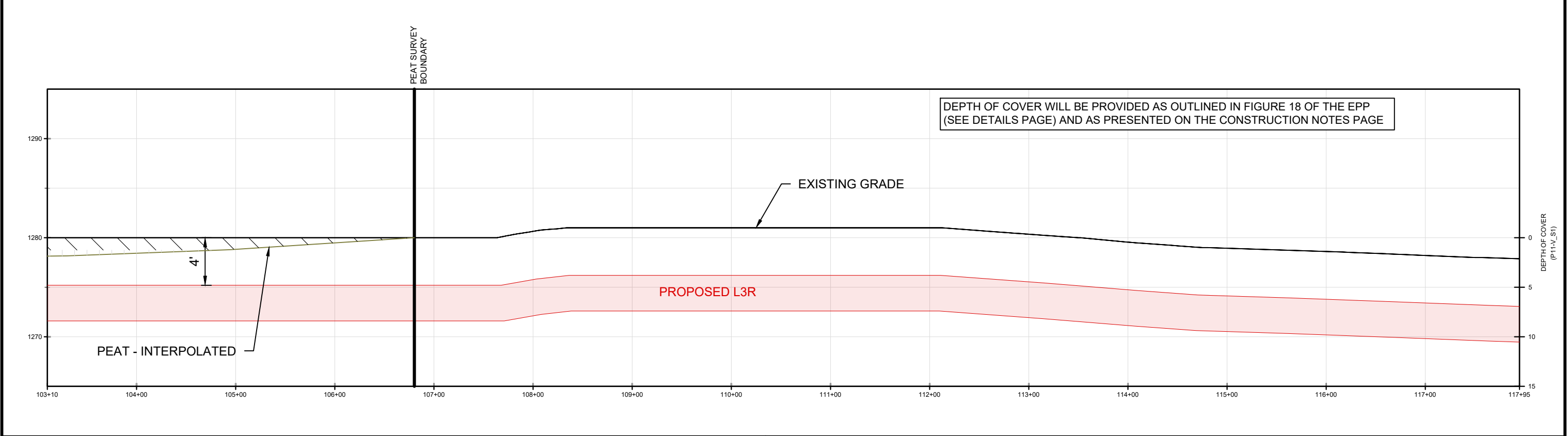
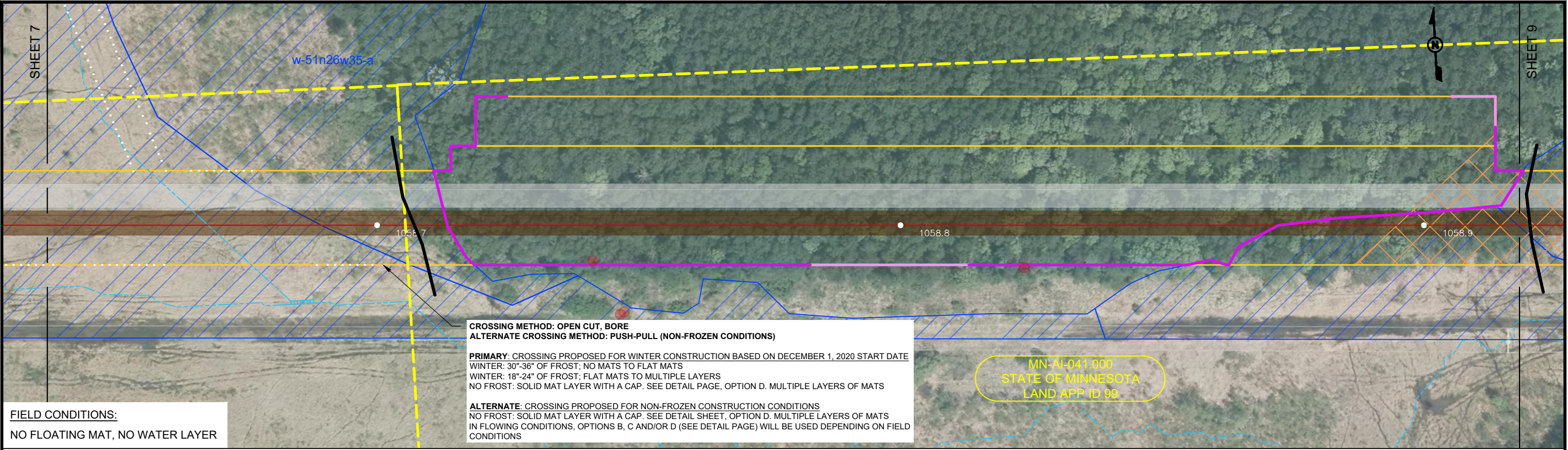
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### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S35 & 36-T51N-R26W

**LEGEND**

PROPOSED LINE 3 REPLACEMENT

PROPOSED WORKSPACE

PEATLAND SURVEY BOUNDARY

PEAT

DELINEATED WATERBODY

MDNR 40 BOUNDARIES

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DELINEATED WETLAND

INVASIVE SPECIES

PEAT DEPTH

PEAT DEPTH AND PEAT EXTRACTION

L3R MILEPOST

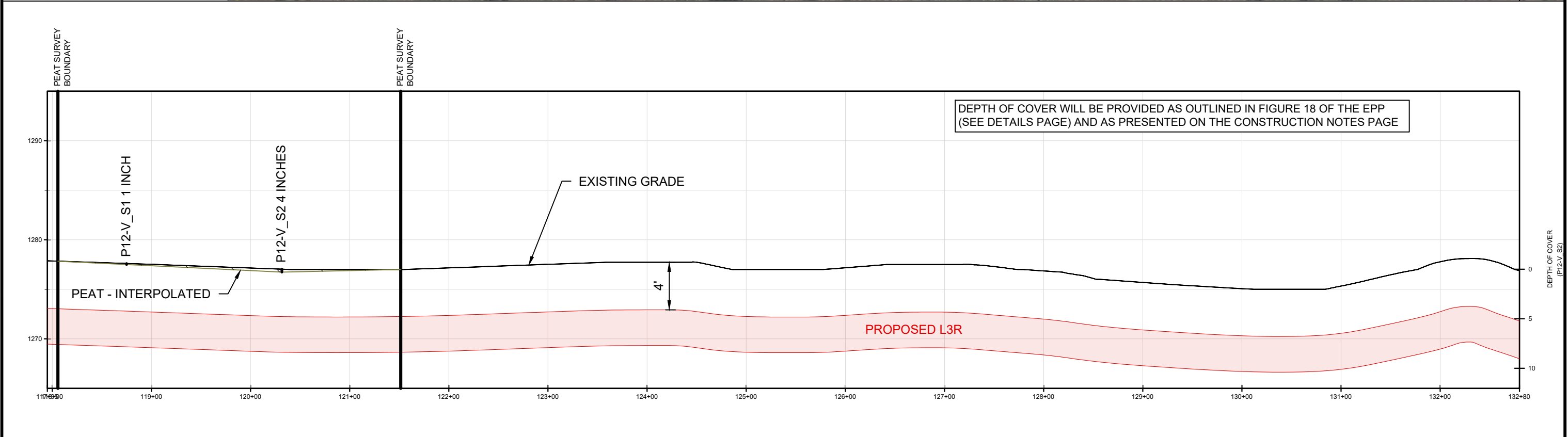
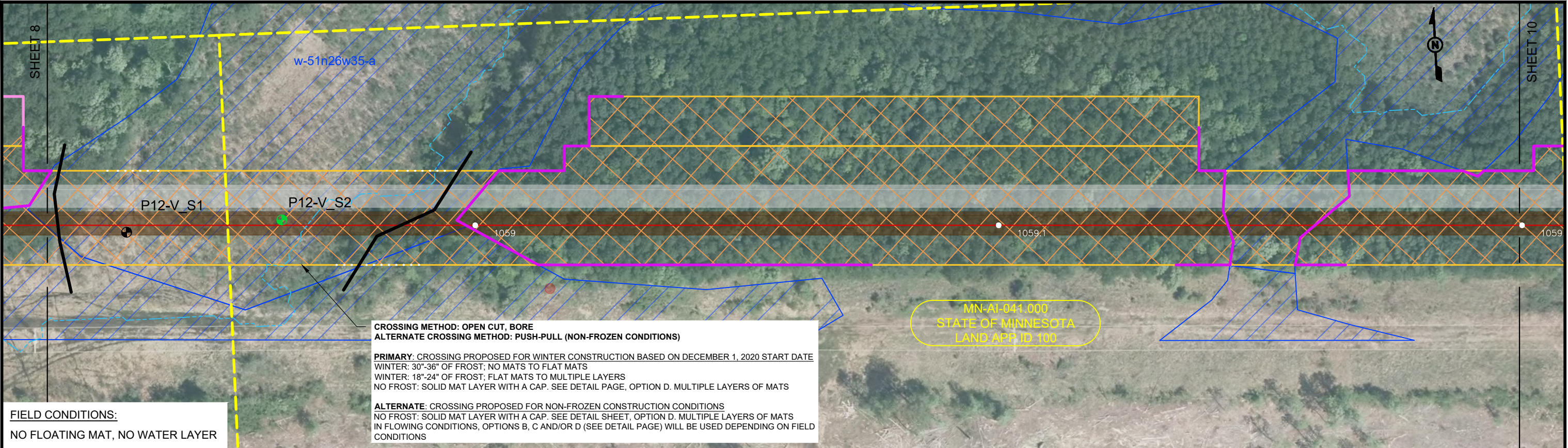
INSTALLED PEATLAND WELL

TRENCH BREAKER

**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S36-T51N-R26W

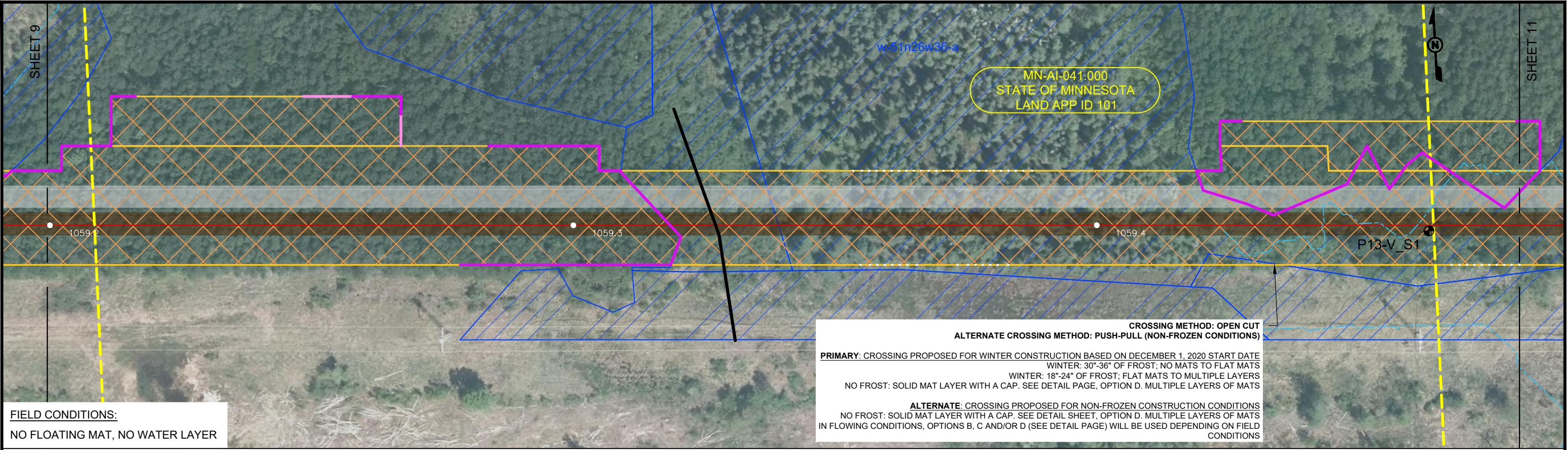
**LEGEND**

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- PROPOSED WORKSPACE
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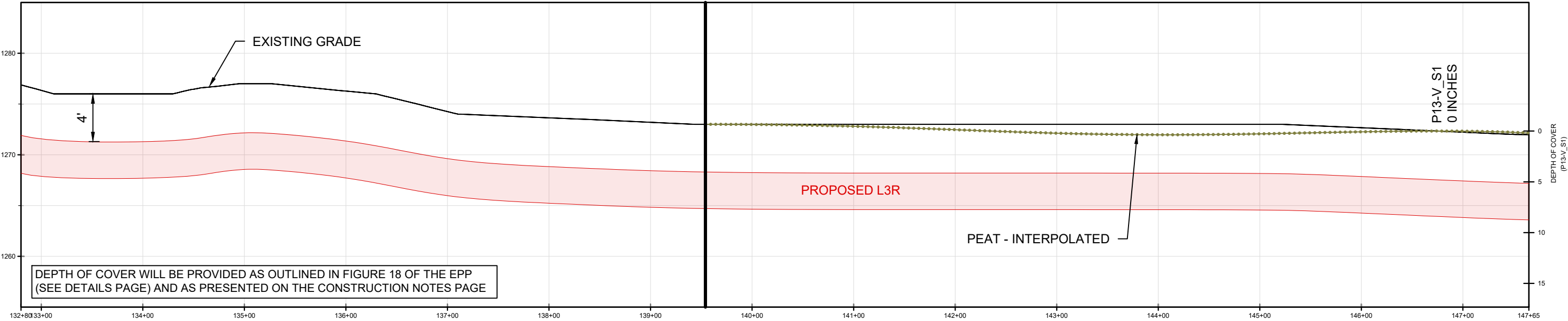
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H1	H2	H3	H4
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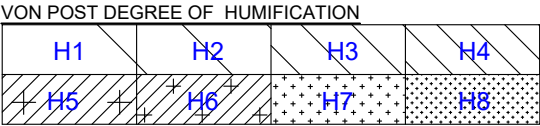
NOTES:  
PER SECTION 7.7.3 OF THE EPP IN SPHAGNUM-DOMINATED PEATLANDS, SEPARATE APPROXIMATELY 1 FOOT OF THE ORGANIC MATERIAL WHERE STANDING WATER IS NOT PRESENT AND STORE IT SEPARATELY FROM THE SUBSOIL. FOLLOWING BACKFILL, UNIFORMLY SPREAD SEGREGATED MATERIAL OVER TRENCH. APPLY CERTIFIED WEED-FREE STRAW OR HAY AT A RATE OF 1.5 TONS/ACRE WHERE CONDITIONS ALLOW.



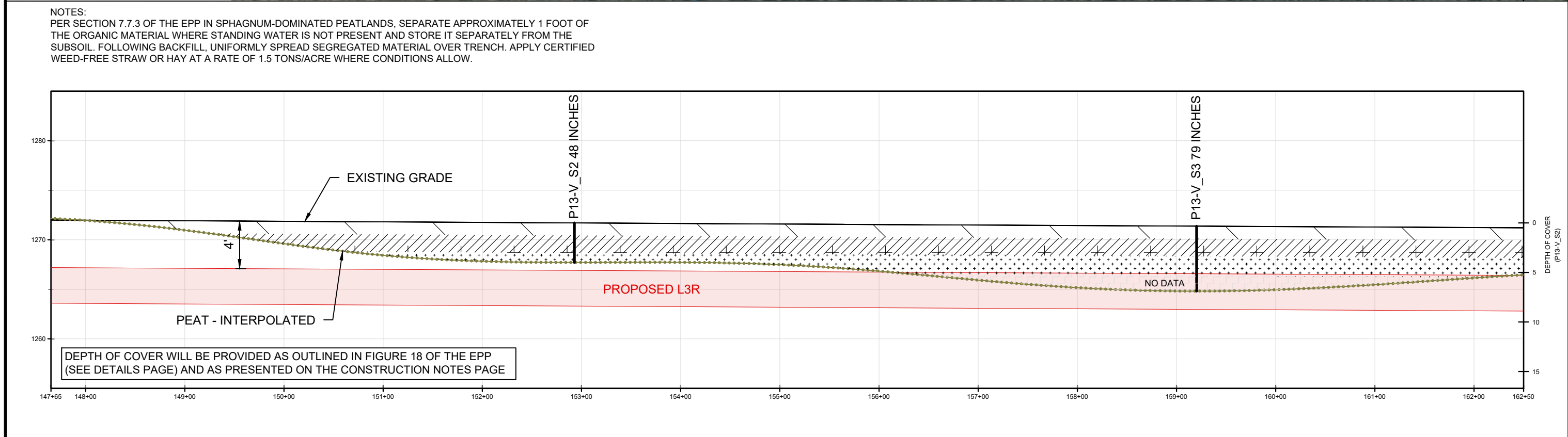
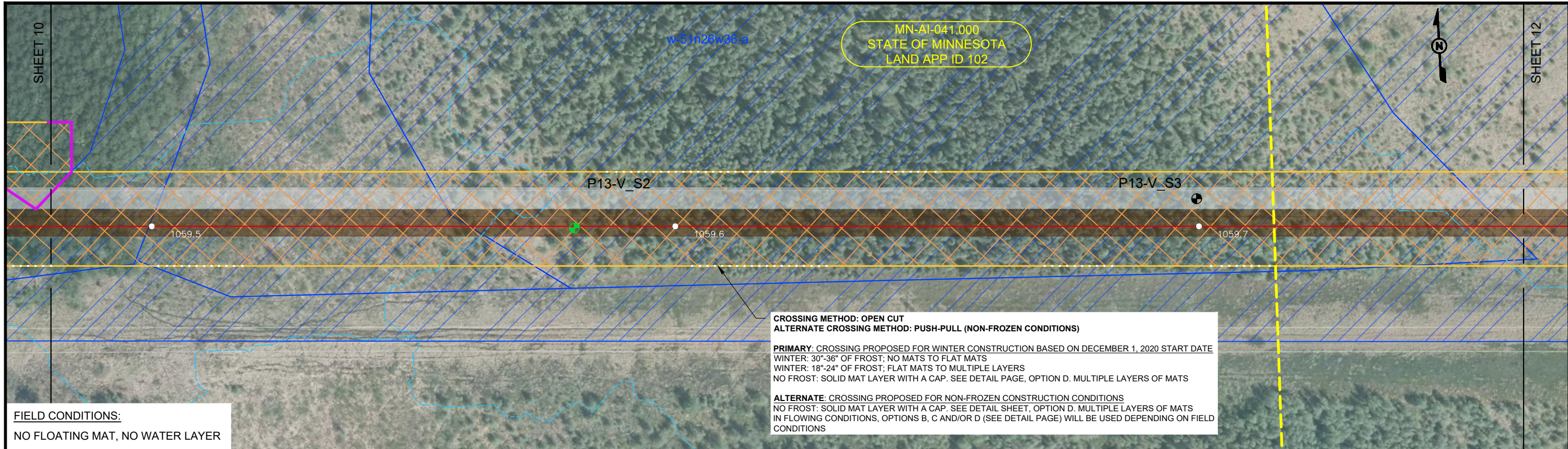
**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S36-T51N-R26W



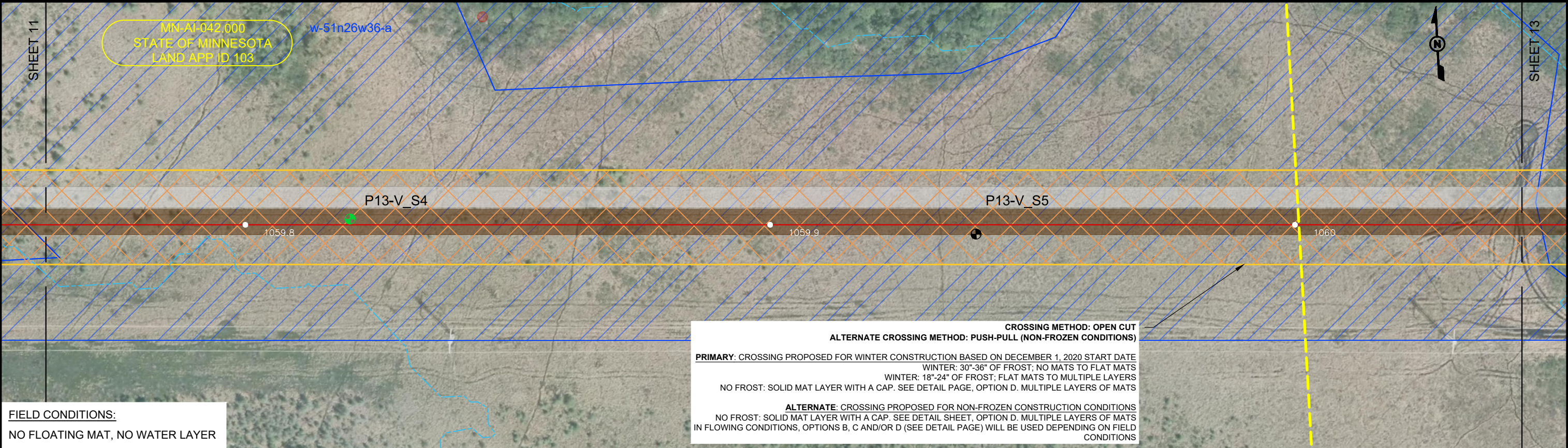
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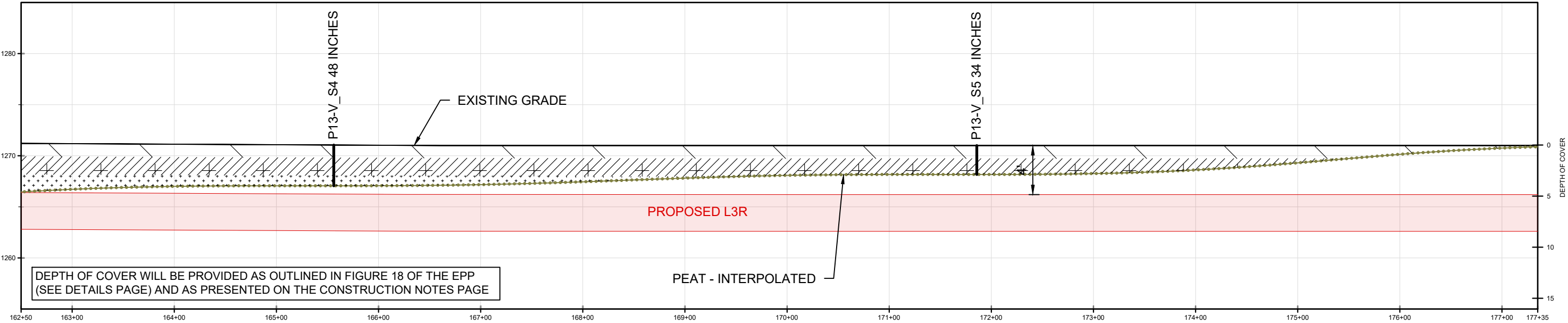








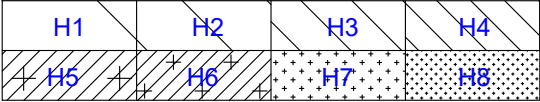
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LEGEND

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VON POST DEGREE OF HUMIFICATION



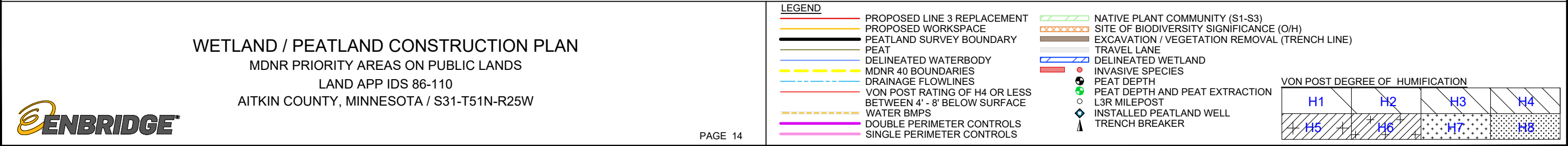
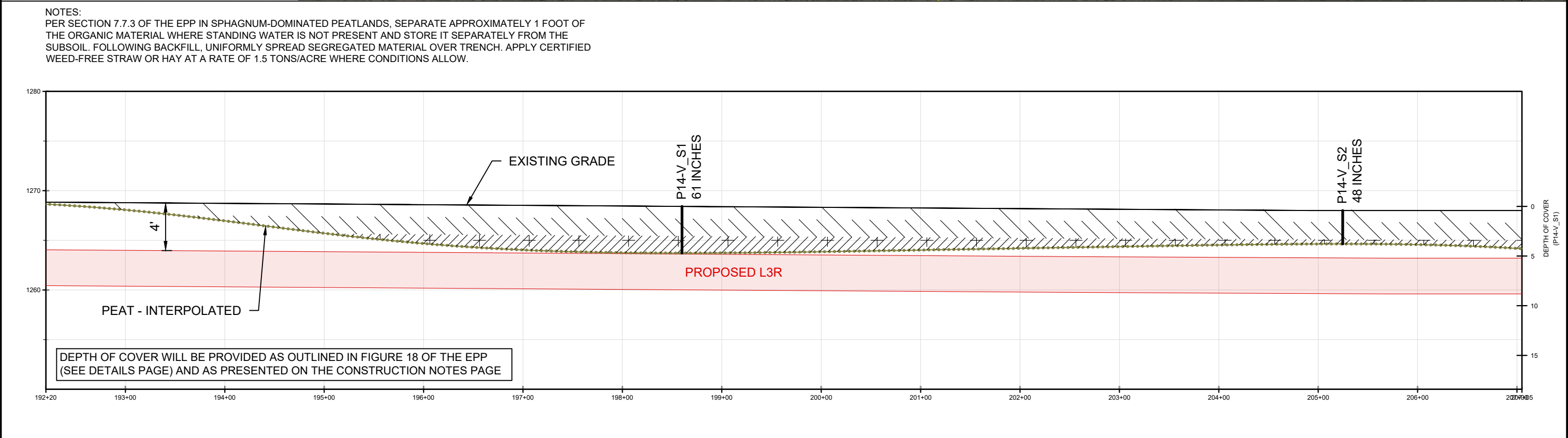
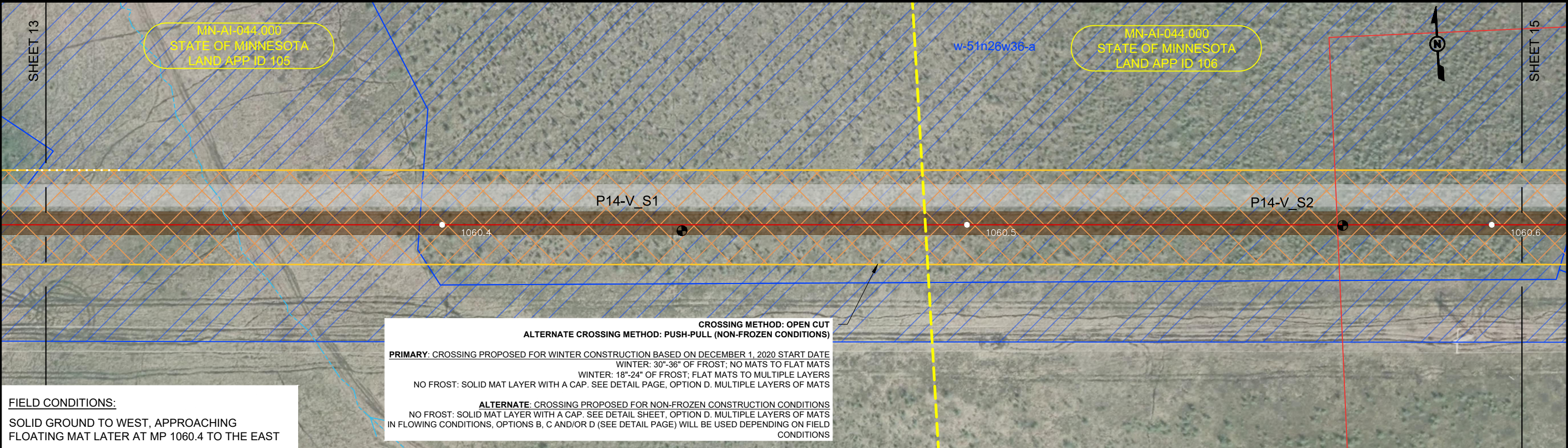
WETLAND / PEATLAND CONSTRUCTION PLAN  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S31-T51N-R25W



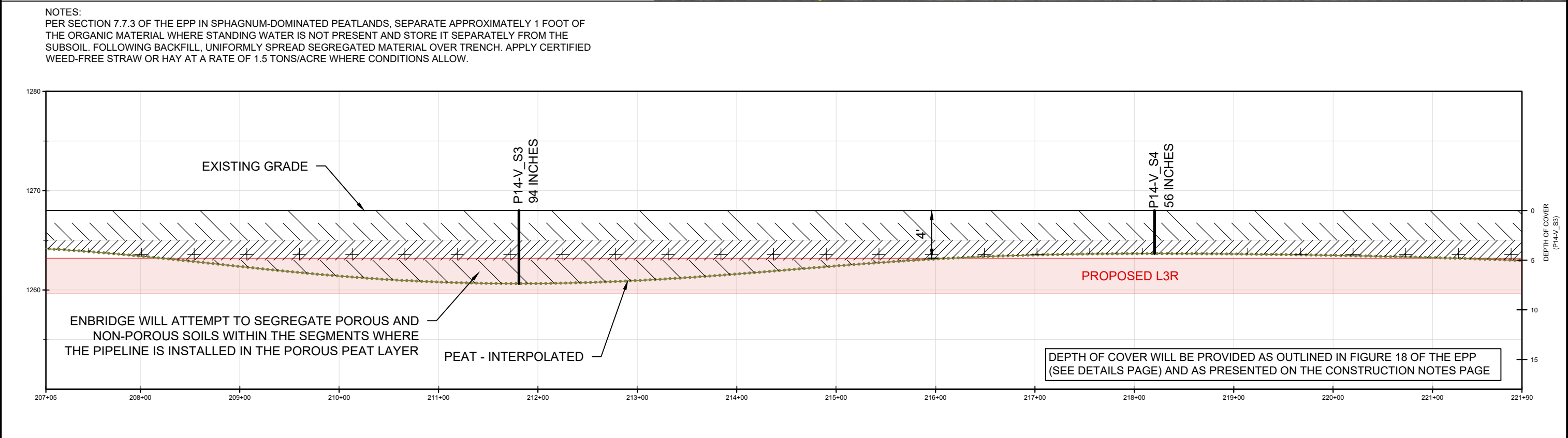
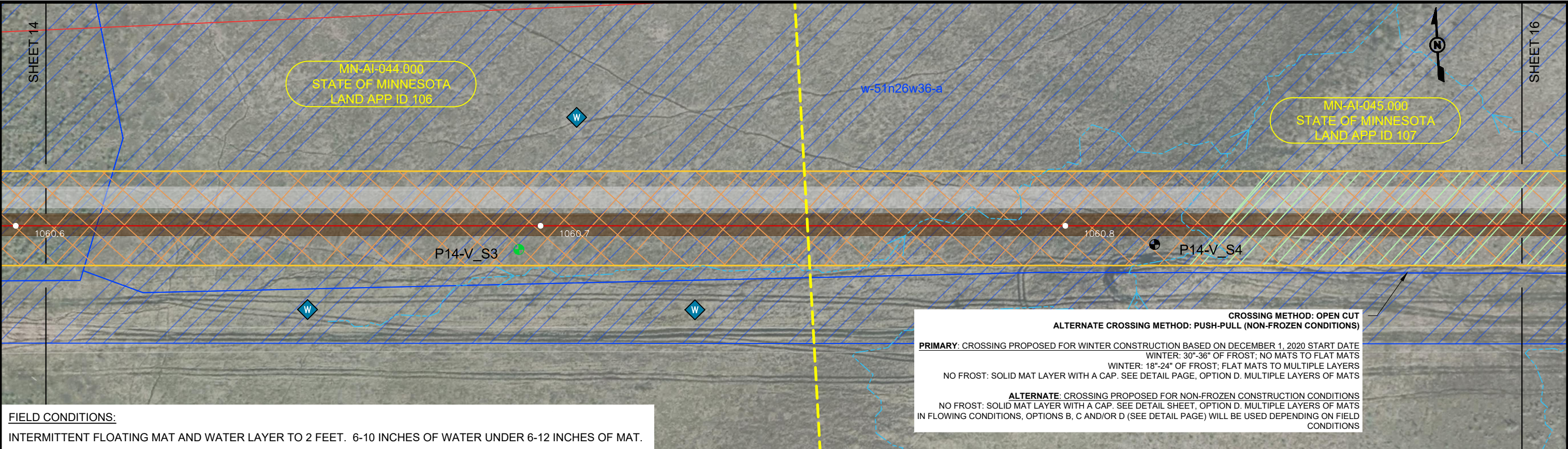












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MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S31 & 32-T51N-R25W

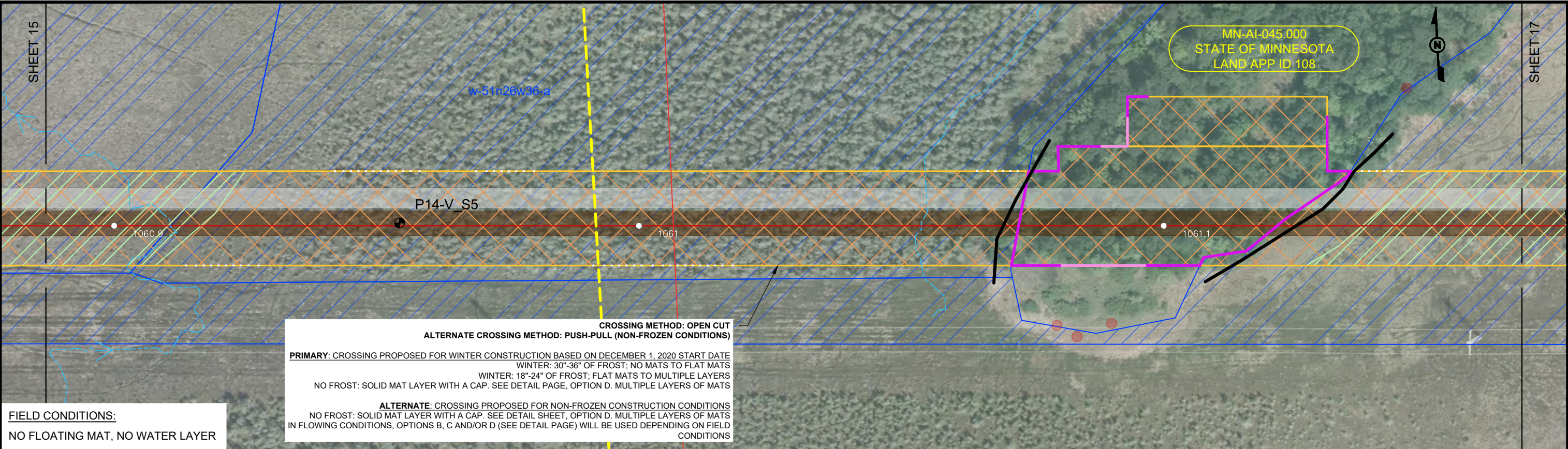
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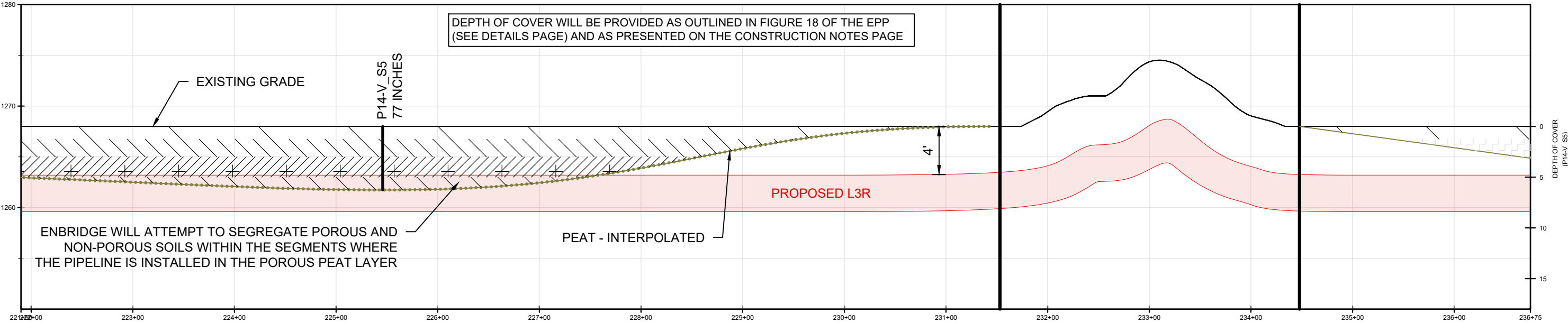
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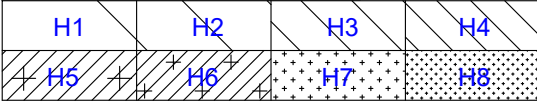
**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S32-T51N-R25W



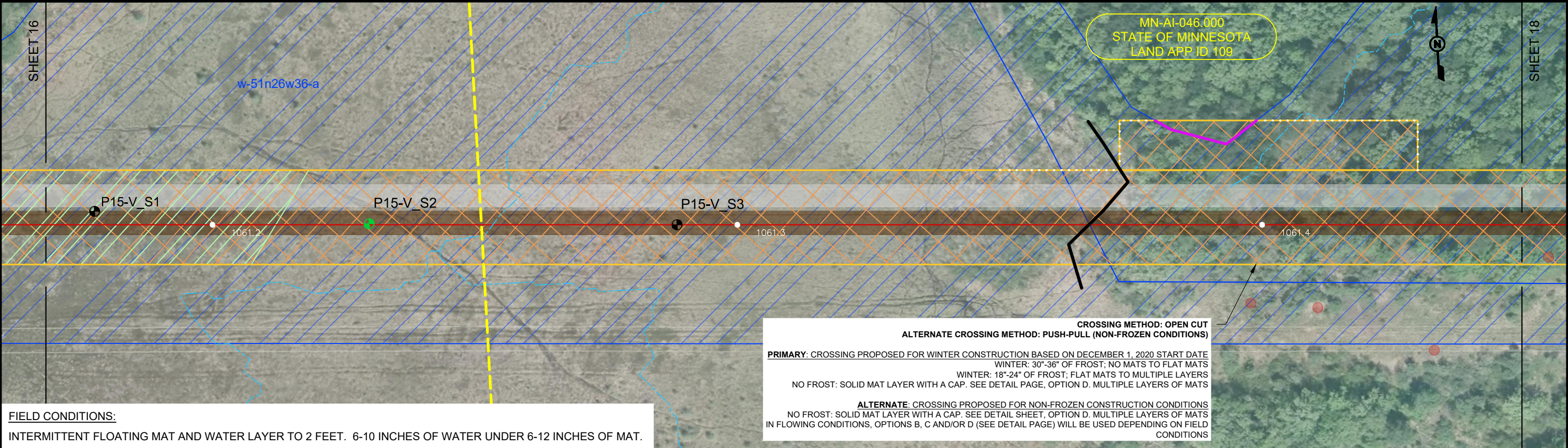
**LEGEND**

- PROPOSED LINE 3 REPLACEMENT
- PROPOSED WORKSPACE
- PEATLAND SURVEY BOUNDARY
- PEAT
- DELINEATED WATERBODY
- MDNR 40 BOUNDARIES
- DRAINAGE FLOWLINES
- VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE
- WATER BMPS
- DOUBLE PERIMETER CONTROLS
- SINGLE PERIMETER CONTROLS
- NATIVE PLANT COMMUNITY (S1-S3)
- SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
- EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)
- TRAVEL LANE
- DELINEATED WETLAND
- INVASIVE SPECIES
- PEAT DEPTH
- PEAT DEPTH AND PEAT EXTRACTION
- L3R MILEPOST
- INSTALLED PEATLAND WELL
- TRENCH BREAKER

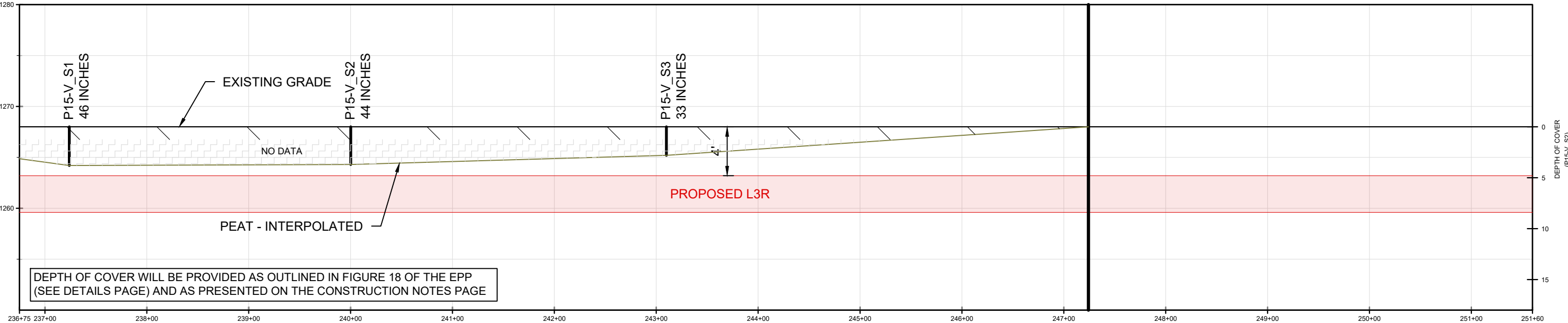
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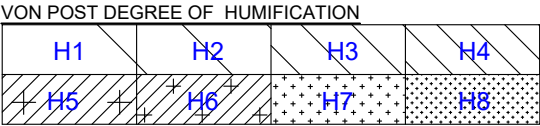
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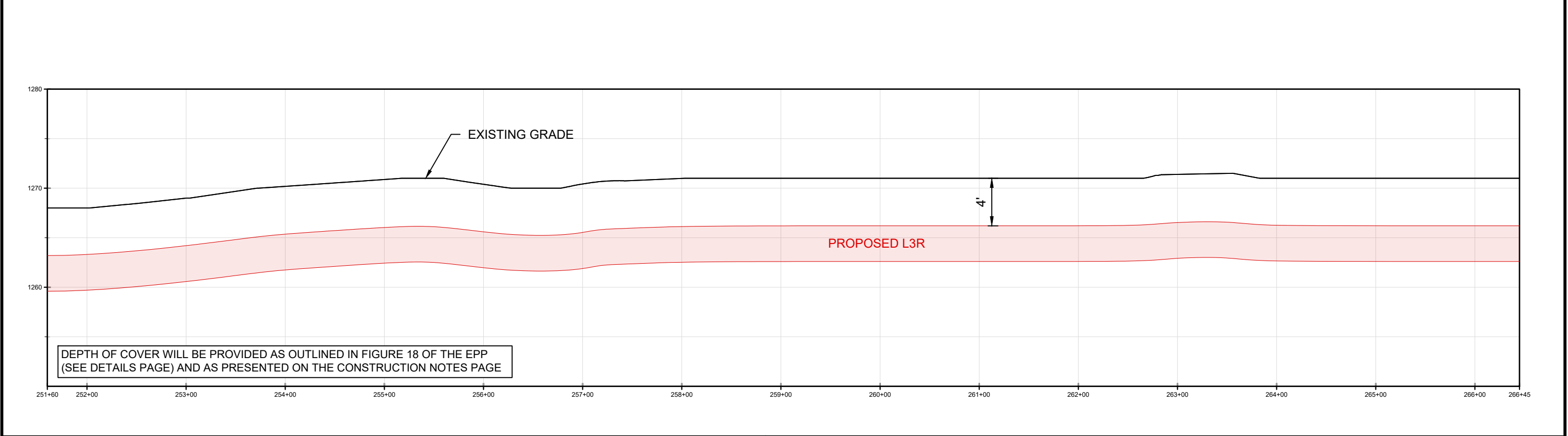
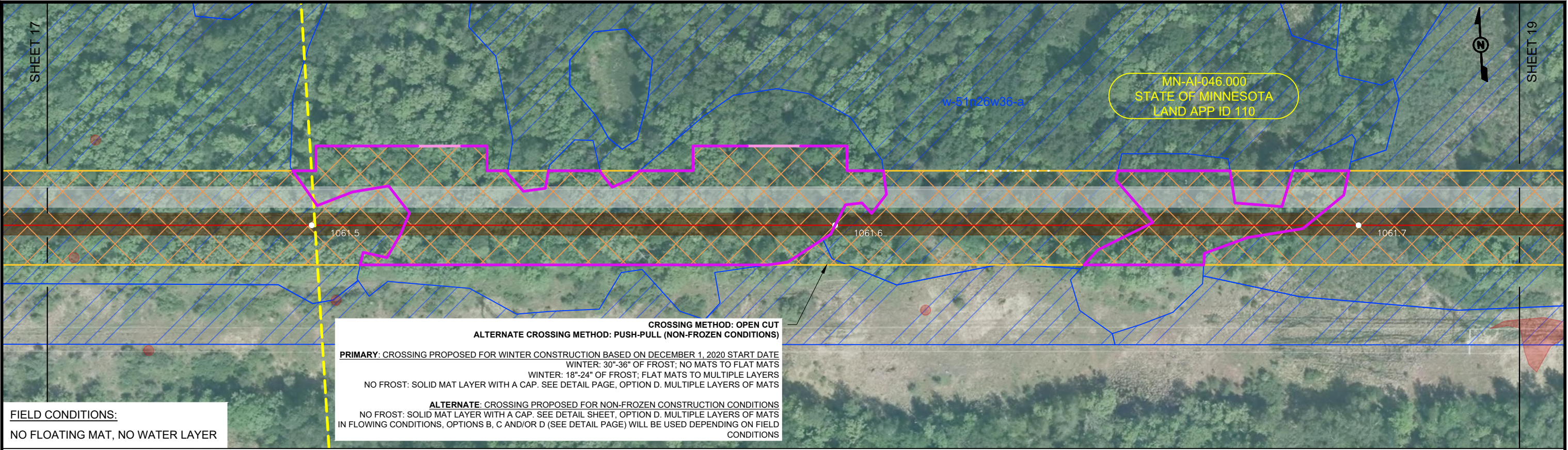
WETLAND / PEATLAND CONSTRUCTION PLAN  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S32-T51N-R25W



- LEGEND**
- PROPOSED LINE 3 REPLACEMENT
  - PROPOSED WORKSPACE
  - PEATLAND SURVEY BOUNDARY
  - PEAT
  - DELINEATED WATERBODY
  - MDNR 40 BOUNDARIES
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  - INSTALLED PEATLAND WELL
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### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S32-T51N-R25W

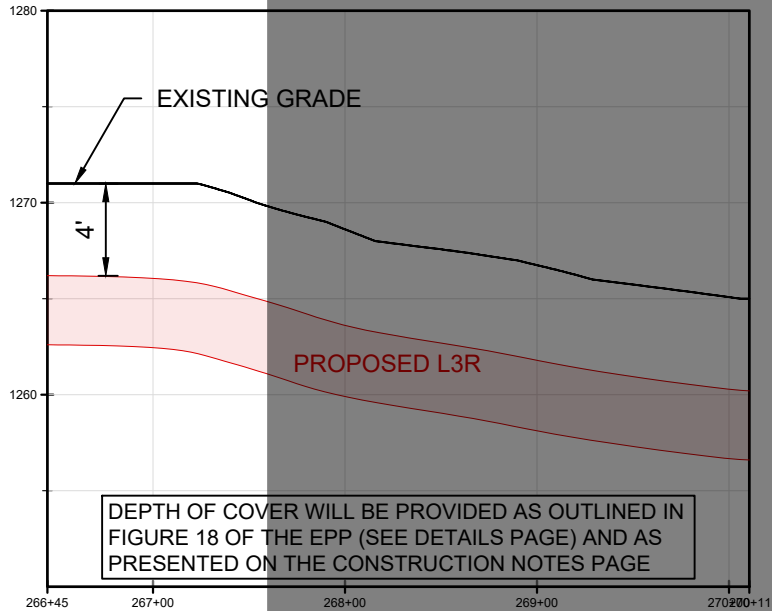
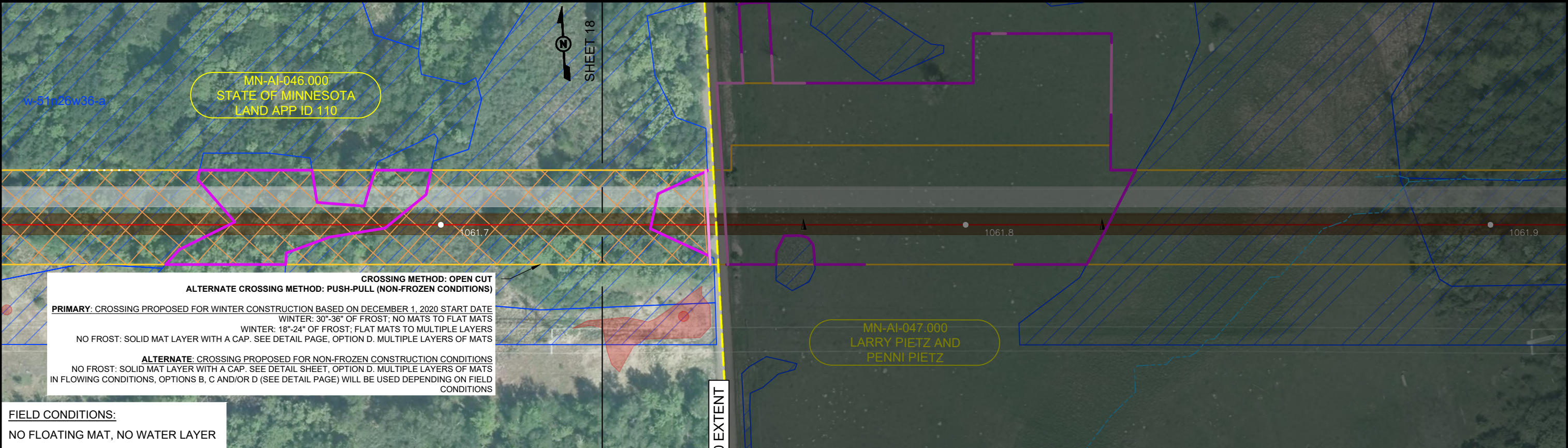
**LEGEND**

PROPOSED LINE 3 REPLACEMENT	NATIVE PLANT COMMUNITY (S1-S3)
PROPOSED WORKSPACE	SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
PEATLAND SURVEY BOUNDARY	EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)
PEAT	TRAVEL LANE
DELINEATED WATERBODY	DELINEATED WETLAND
MDNR 40 BOUNDARIES	INVASIVE SPECIES
DRAINAGE FLOWLINES	PEAT DEPTH
VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE	PEAT DEPTH AND PEAT EXTRACTION
WATER BMPS	L3R MILEPOST
DOUBLE PERIMETER CONTROLS	INSTALLED PEATLAND WELL
SINGLE PERIMETER CONTROLS	TRENCH BREAKER

**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





WETLAND / PEATLAND CONSTRUCTION PLAN  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 86-110  
AITKIN COUNTY, MINNESOTA / S32 & 33-T51N-R25W

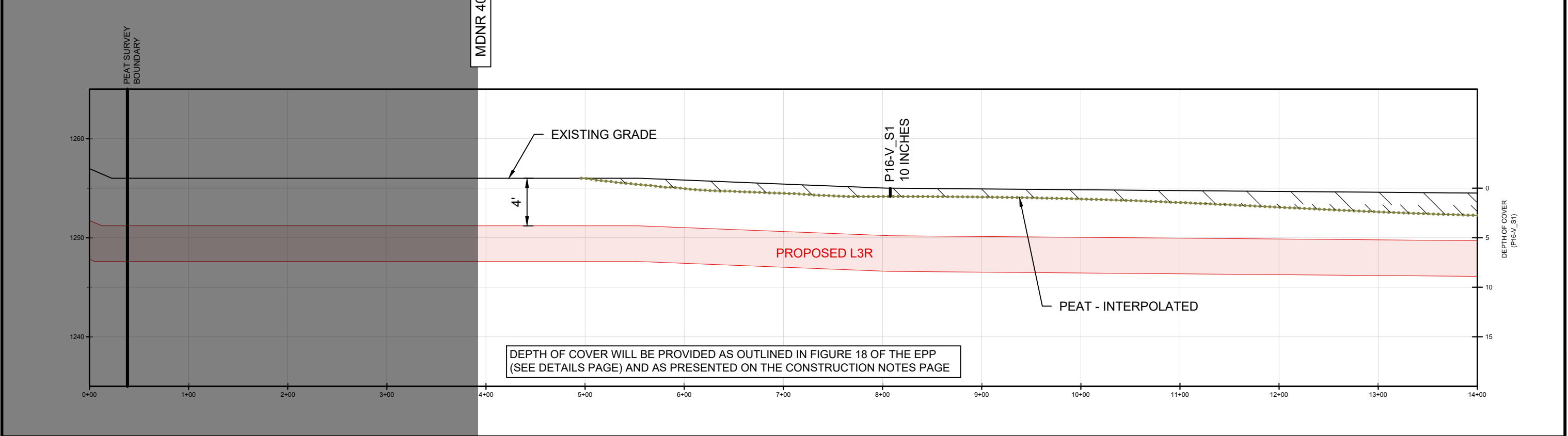
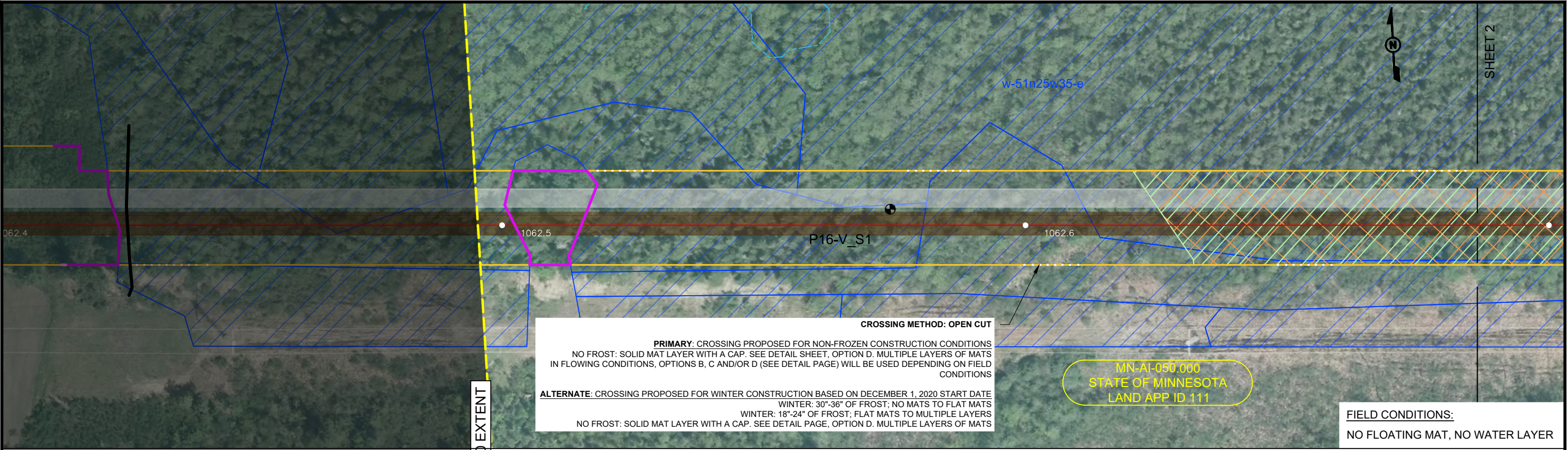
- LEGEND**
- PROPOSED LINE 3 REPLACEMENT
  - PROPOSED WORKSPACE
  - PEATLAND SURVEY BOUNDARY
  - PEAT
  - DELINEATED WATERBODY
  - MDNR 40 BOUNDARIES
  - DRAINAGE FLOWLINES
  - VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE
  - WATER BMPS
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  - PEAT DEPTH AND PEAT EXTRACTION
  - L3R MILEPOST
  - INSTALLED PEATLAND WELL
  - TRENCH BREAKER

VON POST DEGREE OF HUMIFICATION

H1	H2	H3	H4
H5	H6	H7	H8







### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 111-127  
AITKIN COUNTY, MINNESOTA / S33-T51N-R25W

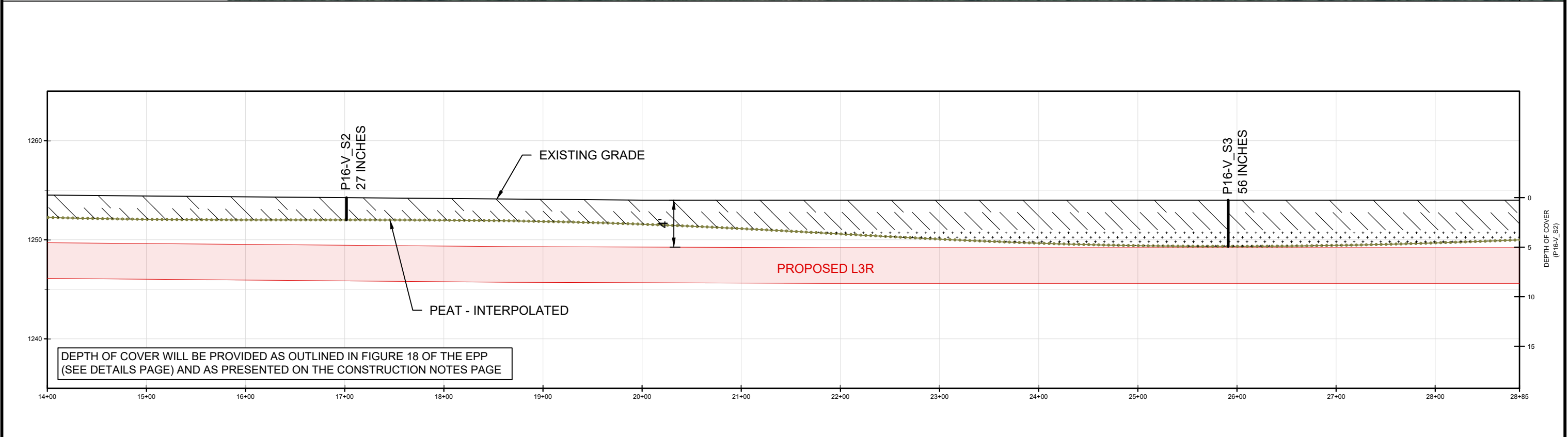
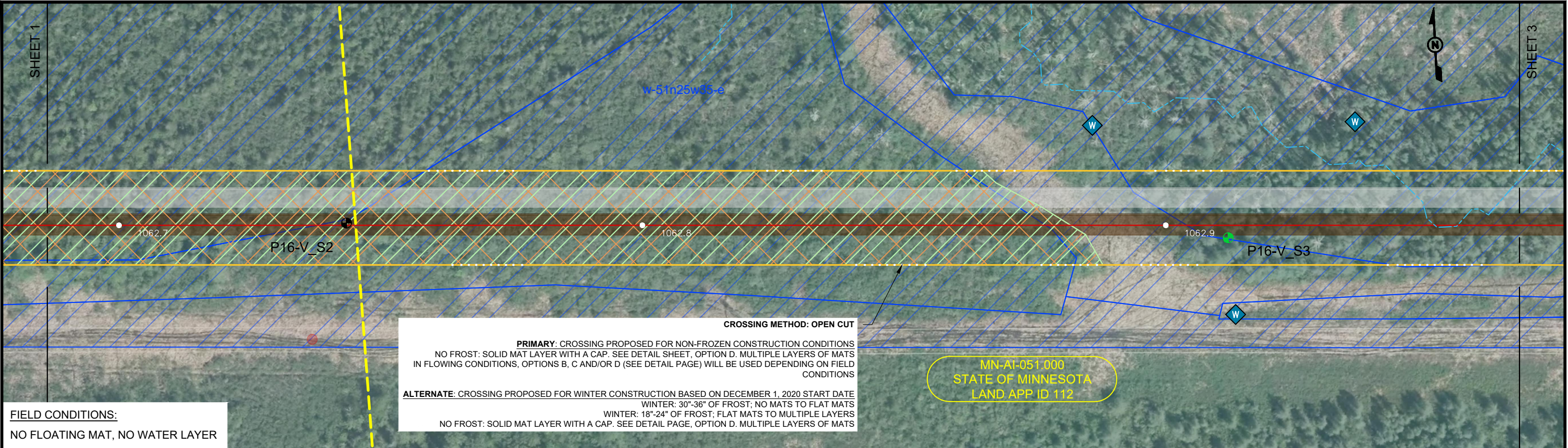
**LEGEND**

PROPOSED LINE 3 REPLACEMENT	NATIVE PLANT COMMUNITY (S1-S3)
PROPOSED WORKSPACE	SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
PEATLAND SURVEY BOUNDARY	EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)
PEAT	TRAVEL LANE
MDNR 40 BOUNDARIES	DELINEATED WETLAND
DRAINAGE FLOWLINES	INVASIVE SPECIES
VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE	PEAT DEPTH
WATER BMPS	PEAT DEPTH AND PEAT EXTRACTION
DOUBLE PERIMETER CONTROLS	L3R MILEPOST
SINGLE PERIMETER CONTROLS	INSTALLED PEATLAND WELL
	TRENCH BREAKER

**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 111-127  
AITKIN COUNTY, MINNESOTA / S33 & 34-T51N-R25W

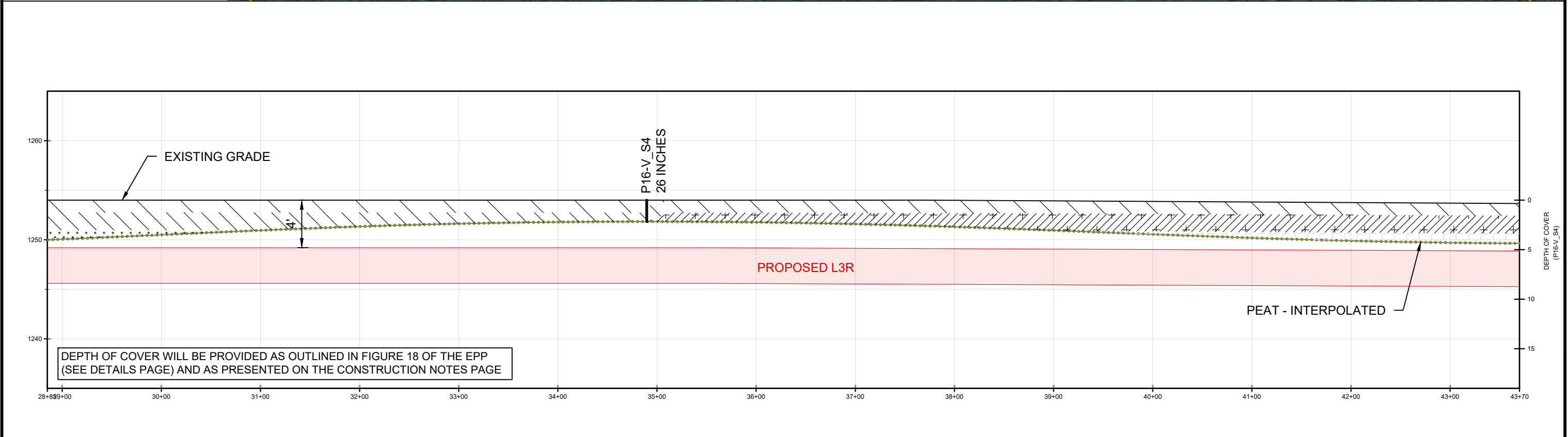
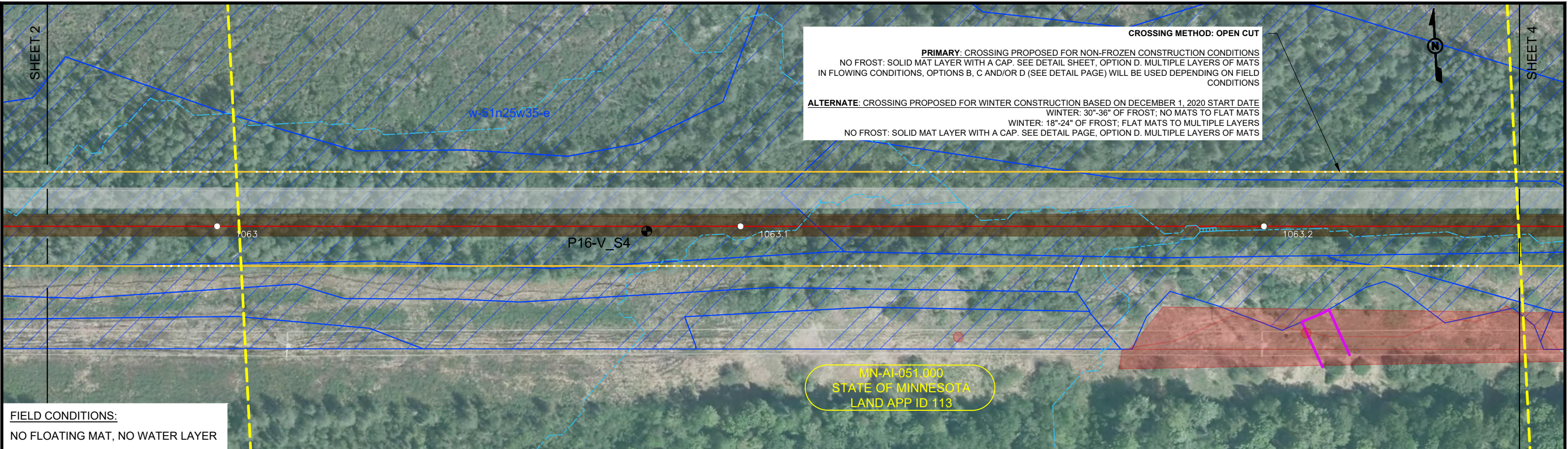
**LEGEND**

- PROPOSED LINE 3 REPLACEMENT
- PROPOSED WORKSPACE
- PEATLAND SURVEY BOUNDARY
- PEAT
- DELINEATED WATERBODY
- MDNR 40 BOUNDARIES
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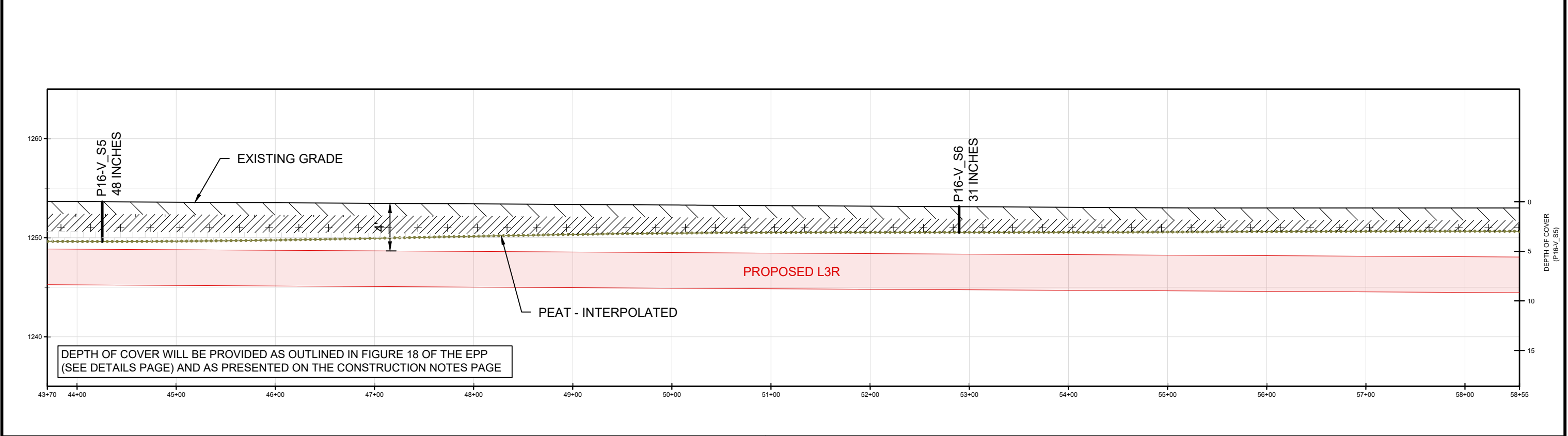
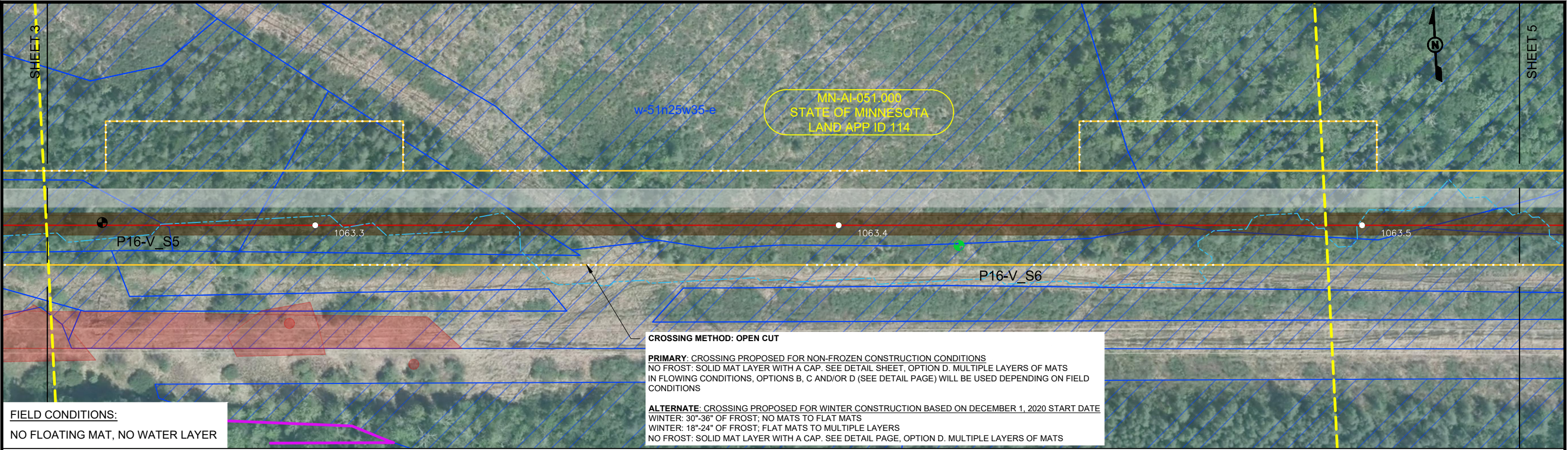
**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8









### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 111-127  
AITKIN COUNTY, MINNESOTA / S34-T51N-R25W

PAGE 04

**LEGEND**

PROPOSED LINE 3 REPLACEMENT

PROPOSED WORKSPACE

PEATLAND SURVEY BOUNDARY

PEAT

DELINEATED WATERBODY

MDNR 40 BOUNDARIES

DRAINAGE FLOWLINES

VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE

WATER BMPS

DOUBLE PERIMETER CONTROLS

SINGLE PERIMETER CONTROLS

NATIVE PLANT COMMUNITY (S1-S3)

SITE OF BIODIVERSITY SIGNIFICANCE (O/H)

EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)

TRAVEL LANE

DELINEATED WETLAND

INVASIVE SPECIES

PEAT DEPTH

PEAT DEPTH AND PEAT EXTRACTION

L3R MILEPOST

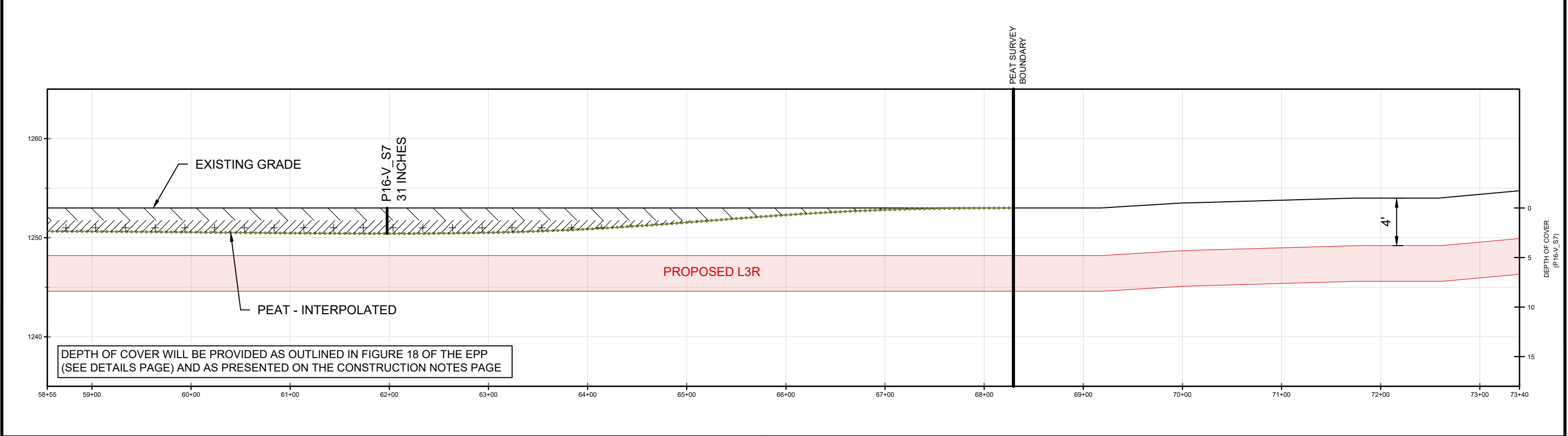
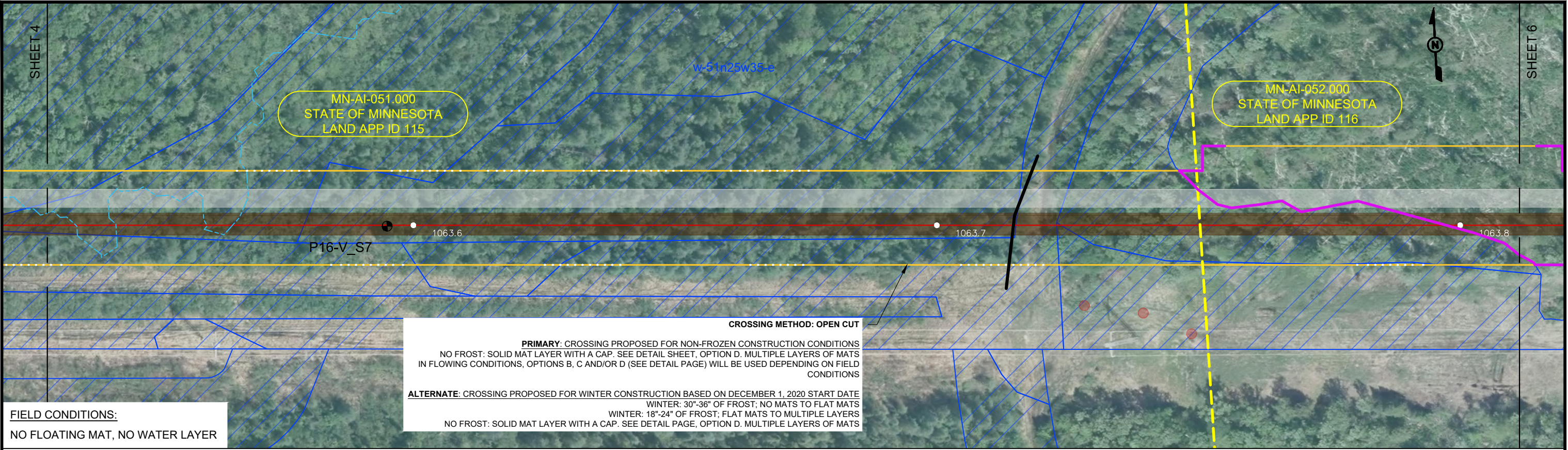
INSTALLED PEATLAND WELL

TRENCH BREAKER

**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 111-127  
AITKIN COUNTY, MINNESOTA / S34 & 35-T51N-R25W

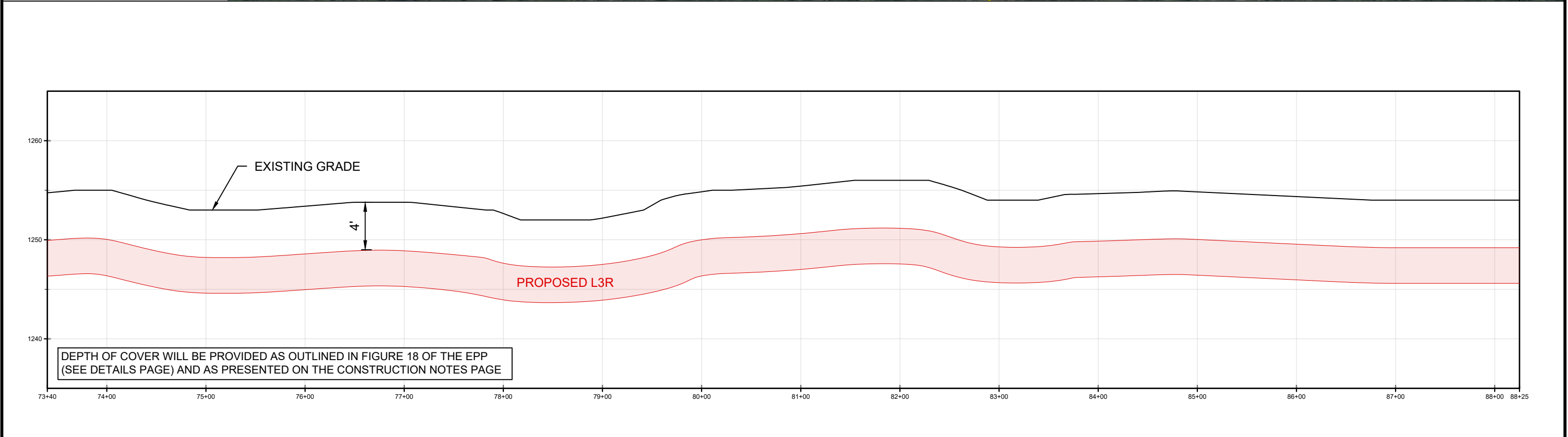
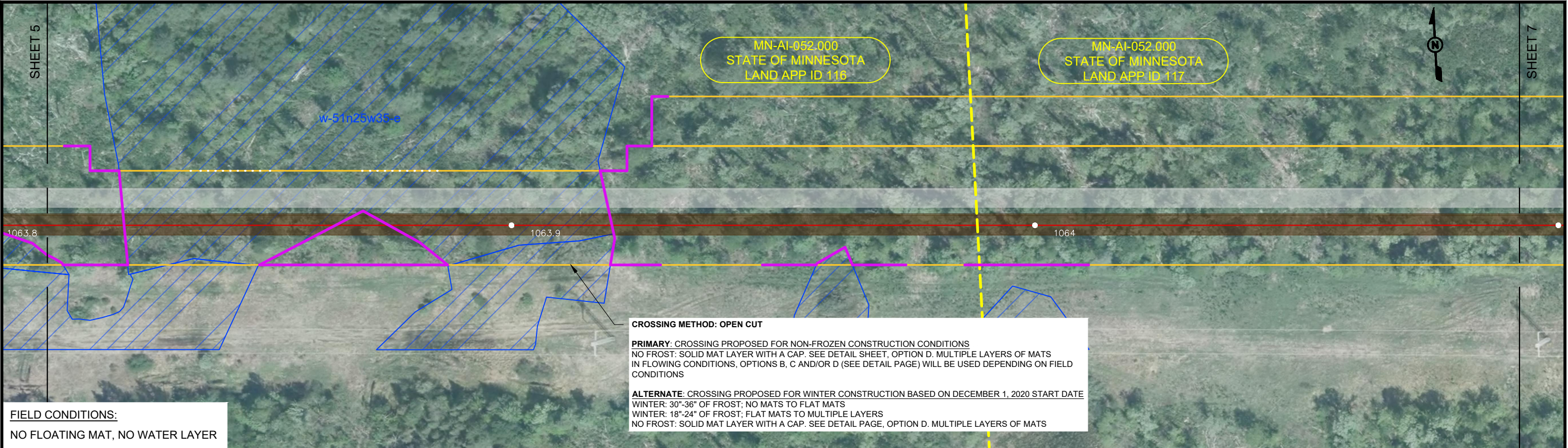
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**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 111-127  
AITKIN COUNTY, MINNESOTA / S35-T51N-R25W

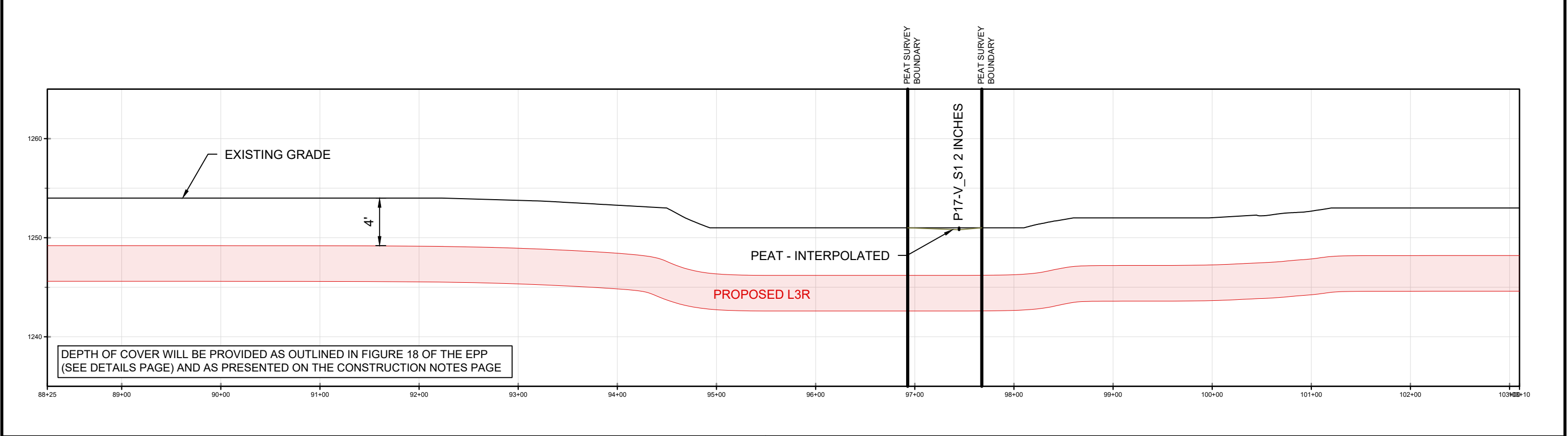
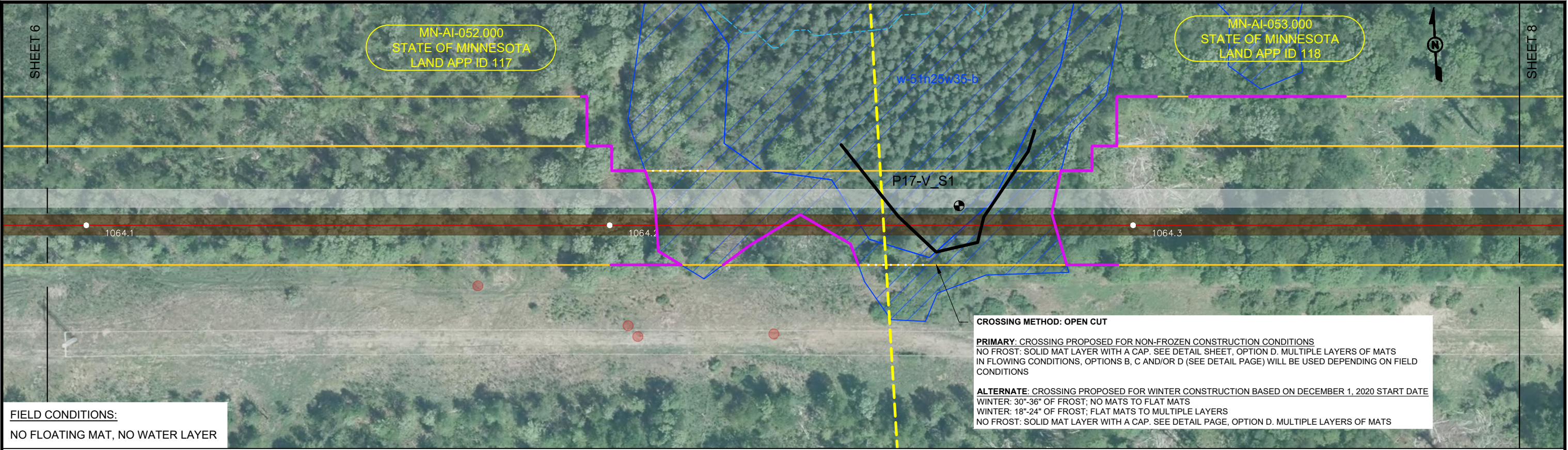
**LEGEND**

PROPOSED LINE 3 REPLACEMENT	NATIVE PLANT COMMUNITY (S1-S3)
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SINGLE PERIMETER CONTROLS	TRENCH BREAKER

**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 111-127  
AITKIN COUNTY, MINNESOTA / S35-T51N-R25W

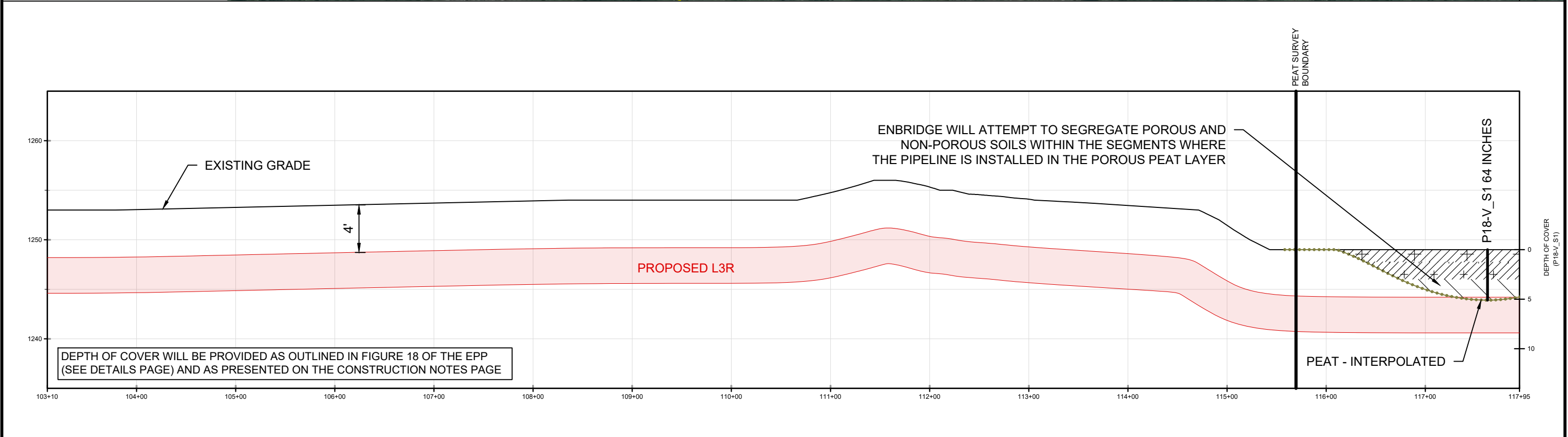
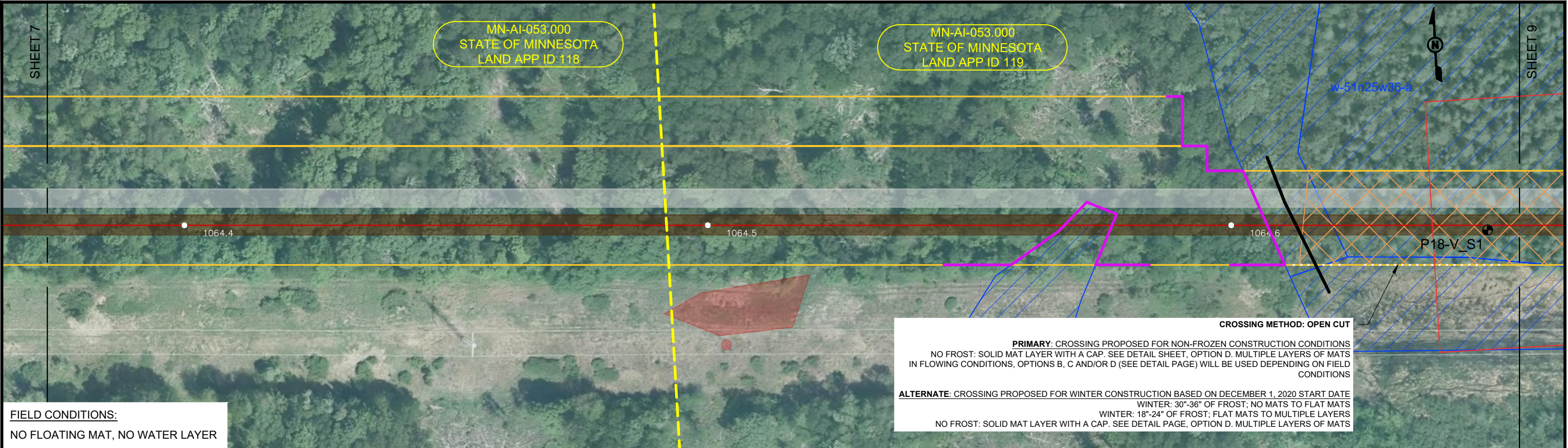
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**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 111-127  
AITKIN COUNTY, MINNESOTA / S35-T51N-R25W

**LEGEND**

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- PROPOSED WORKSPACE
- PEATLAND SURVEY BOUNDARY
- PEAT
- DELINEATED WATERBODY
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- TRENCH BREAKER

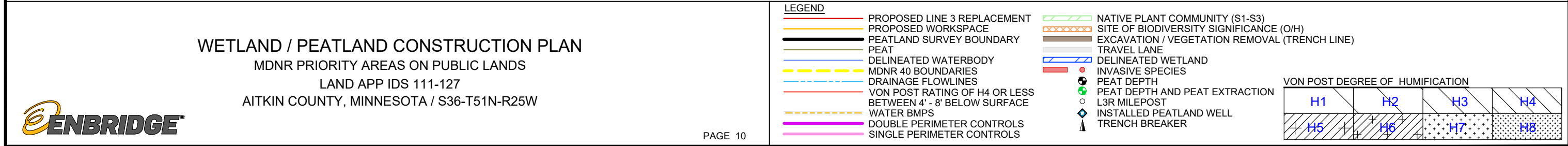
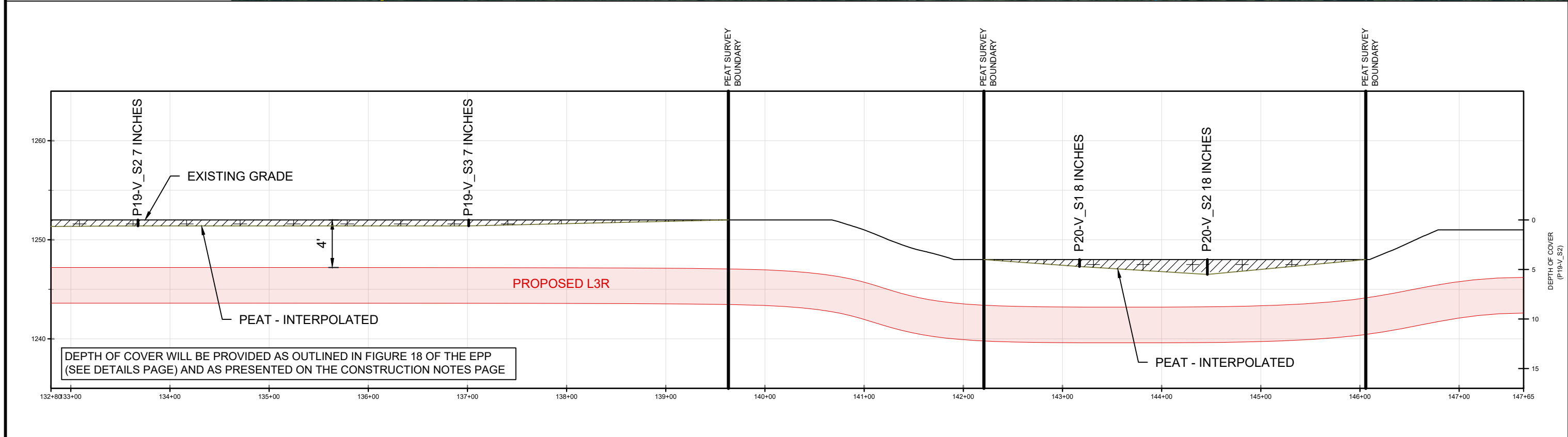
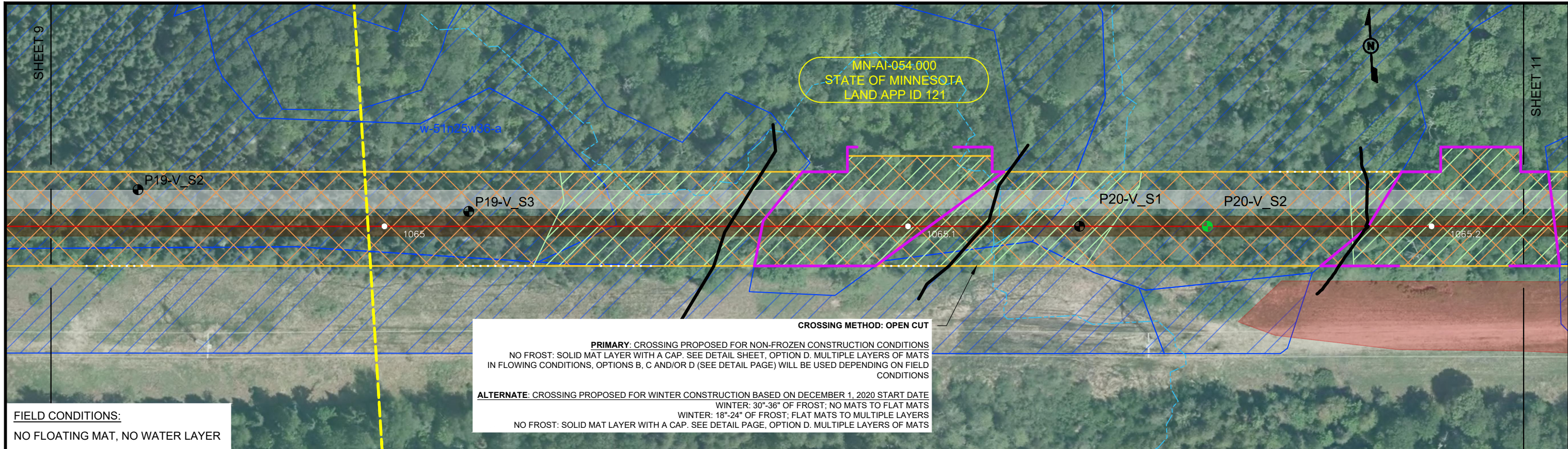
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H1	H2	H3	H4
H5	H6	H7	H8

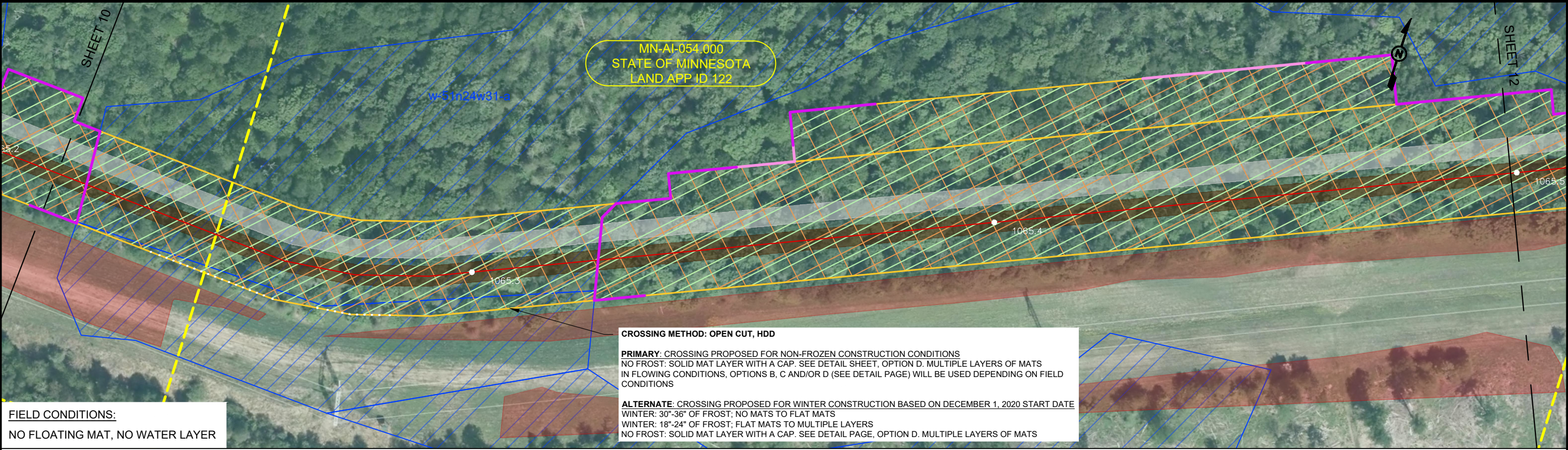




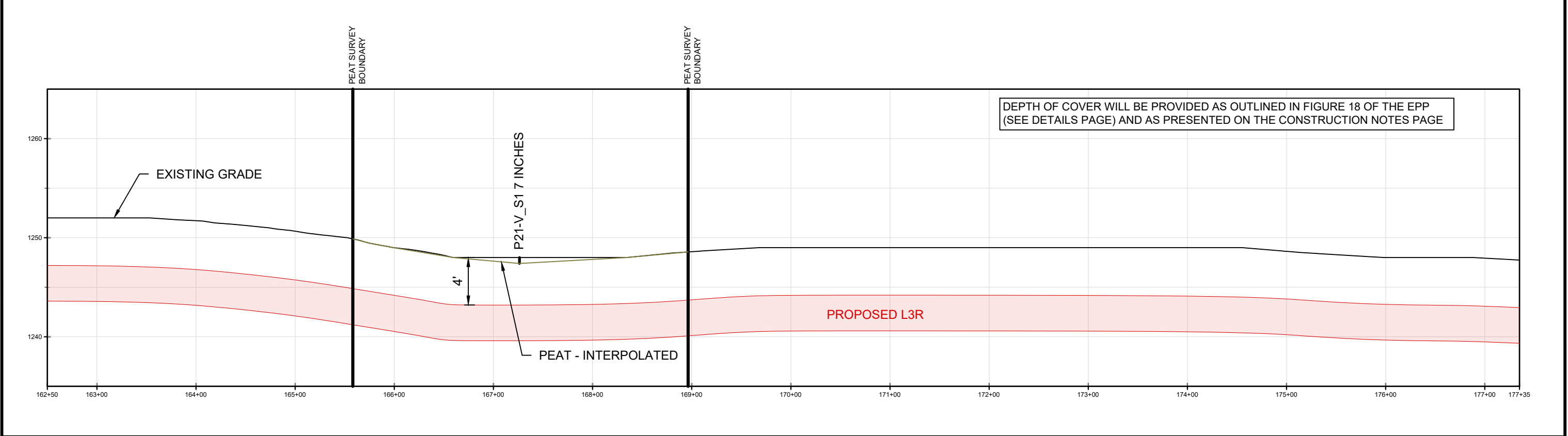
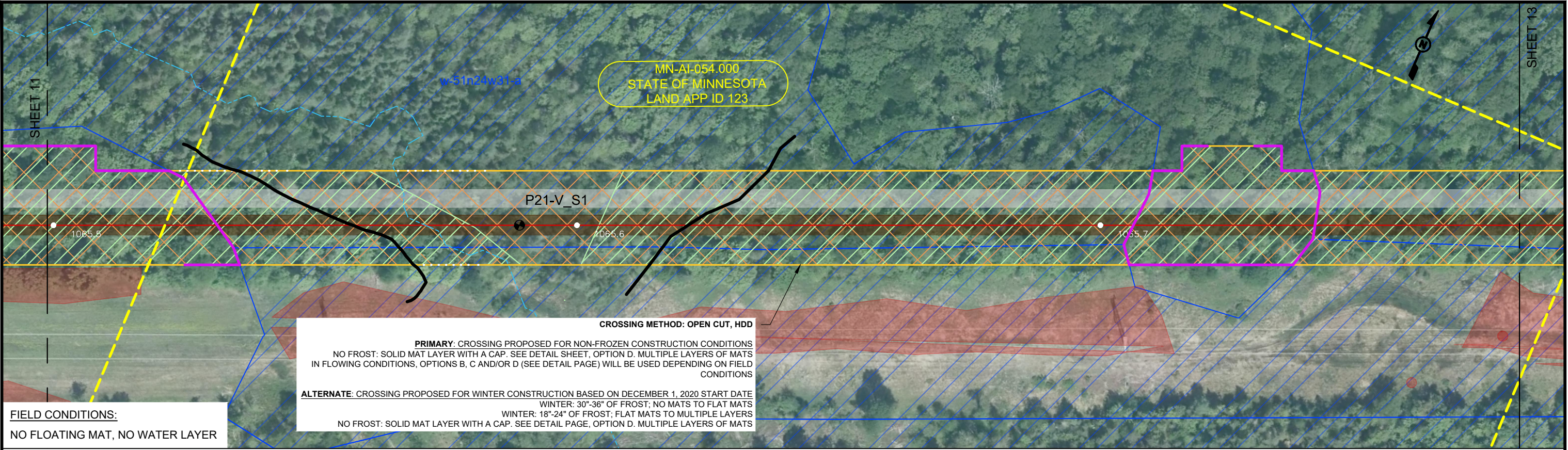












**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 111-127  
AITKIN COUNTY, MINNESOTA / S36-T51N-R25W

**ENBRIDGE**

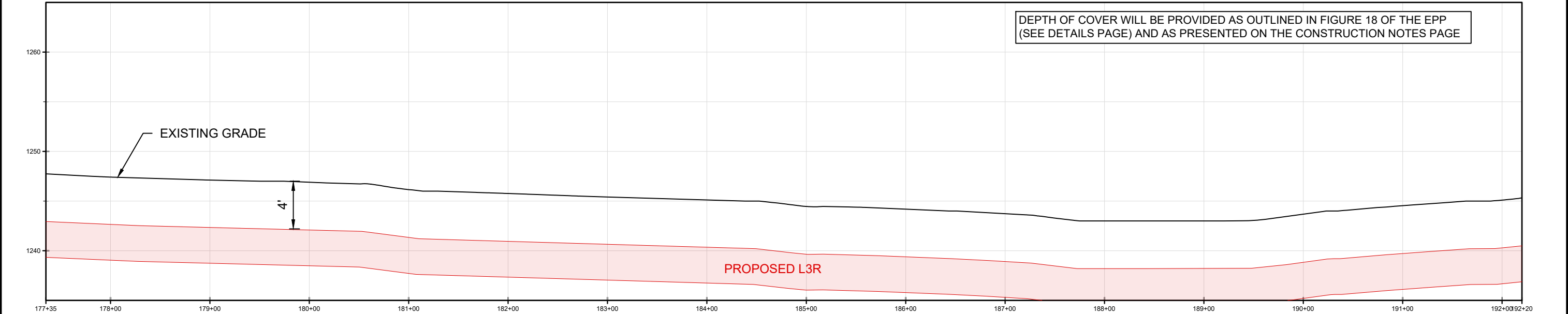
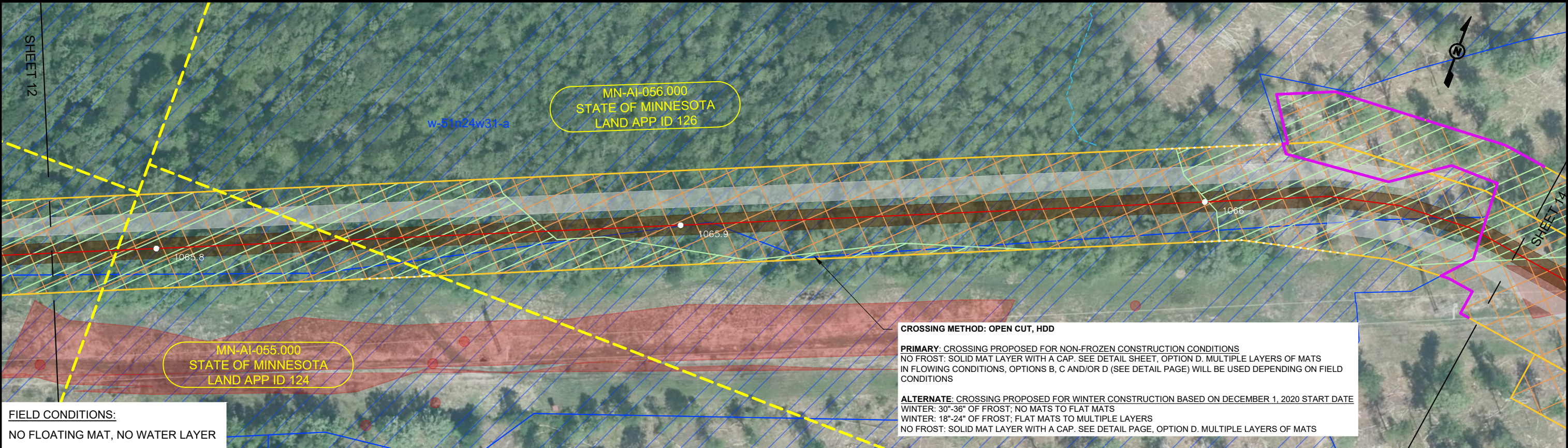
**LEGEND**

- PROPOSED LINE 3 REPLACEMENT
- PROPOSED WORKSPACE
- PEATLAND SURVEY BOUNDARY
- PEAT
- DELINEATED WATERBODY
- MDNR 40 BOUNDARIES
- DRAINAGE FLOWLINES
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- INVASIVE SPECIES
- PEAT DEPTH
- PEAT DEPTH AND PEAT EXTRACTION
- L3R MILEPOST
- INSTALLED PEATLAND WELL
- TRENCH BREAKER

**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 111-127  
AITKIN COUNTY, MINNESOTA / S31-T51N-R24W

**ENBRIDGE**

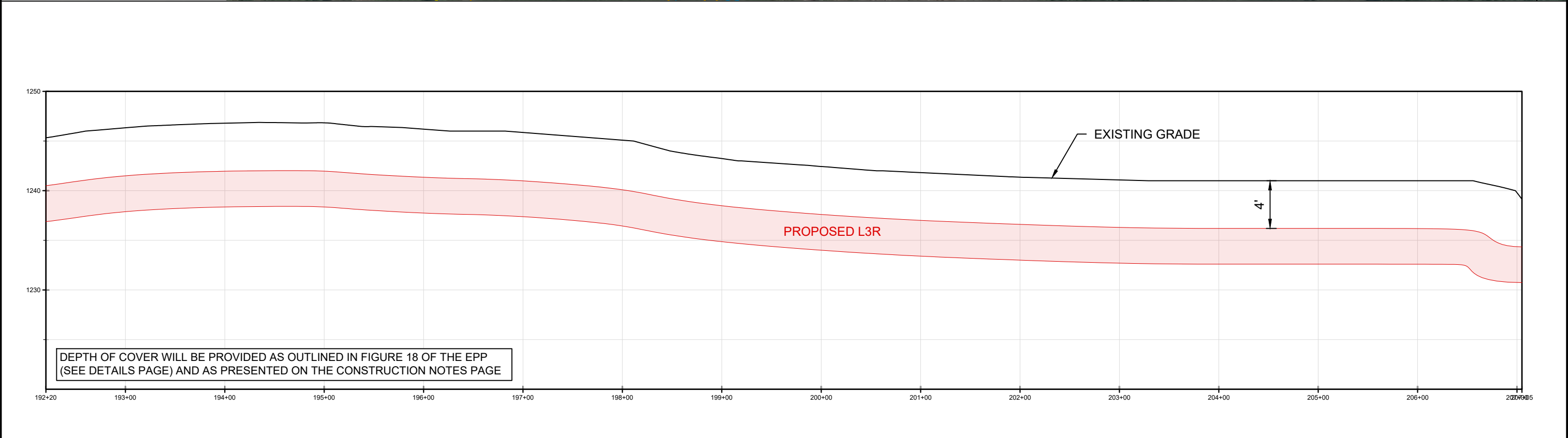
**LEGEND**

- PROPOSED LINE 3 REPLACEMENT
- PROPOSED WORKSPACE
- PEATLAND SURVEY BOUNDARY
- PEAT
- DELINEATED WATERBODY
- MDNR 40 BOUNDARIES
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**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 111-127  
AITKIN COUNTY, MINNESOTA / S31-T51N-R24W

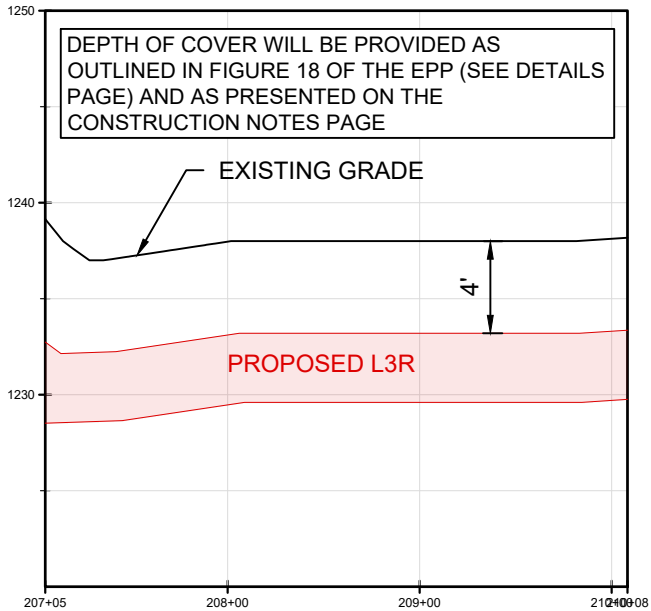
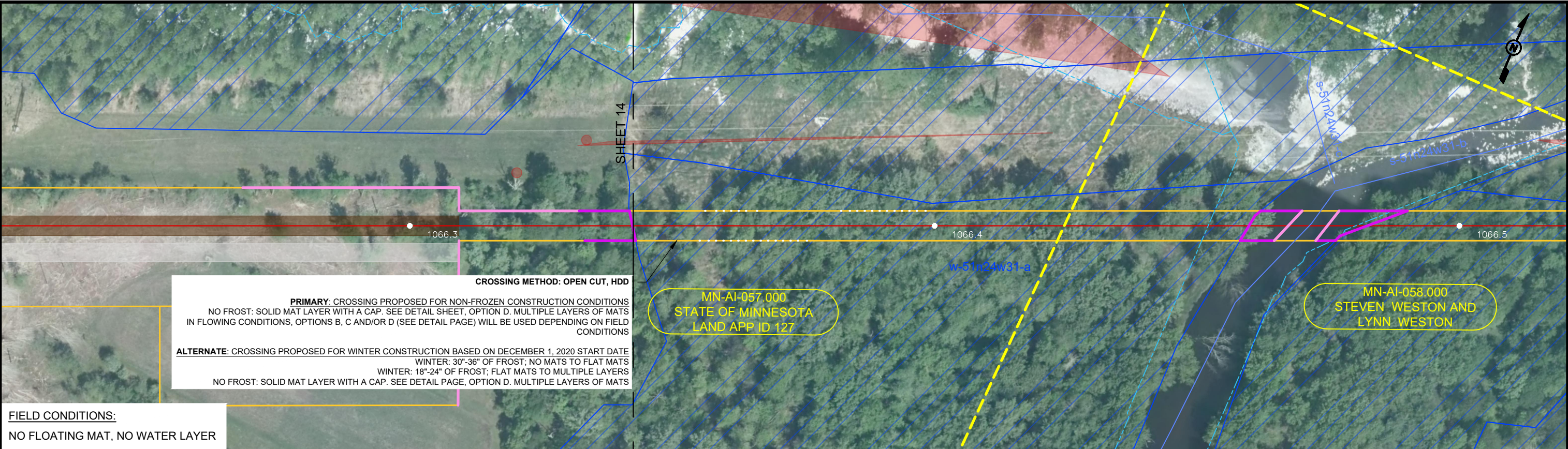
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PROPOSED LINE 3 REPLACEMENT	NATIVE PLANT COMMUNITY (S1-S3)
PROPOSED WORKSPACE	SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
PEATLAND SURVEY BOUNDARY	EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)
PEAT	TRAVEL LANE
DELINEATED WATERBODY	DELINEATED WETLAND
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SINGLE PERIMETER CONTROLS	TRENCH BREAKER

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H1	H2	H3	H4
H5	H6	H7	H8





### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 111-127  
AITKIN COUNTY, MINNESOTA / S31-T51N-R24W

**LEGEND**

PROPOSED LINE 3 REPLACEMENT	NATIVE PLANT COMMUNITY (S1-S3)
PROPOSED WORKSPACE	SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
PEATLAND SURVEY BOUNDARY	EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)
PEAT	TRAVEL LANE
DELINEATED WATERBODY	DELINEATED WETLAND
MDNR 40 BOUNDARIES	INVASIVE SPECIES
DRAINAGE FLOWLINES	PEAT DEPTH
VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE	PEAT DEPTH AND PEAT EXTRACTION
WATER BMPS	L3R MILEPOST
DOUBLE PERIMETER CONTROLS	INSTALLED PEATLAND WELL
SINGLE PERIMETER CONTROLS	TRENCH BREAKER

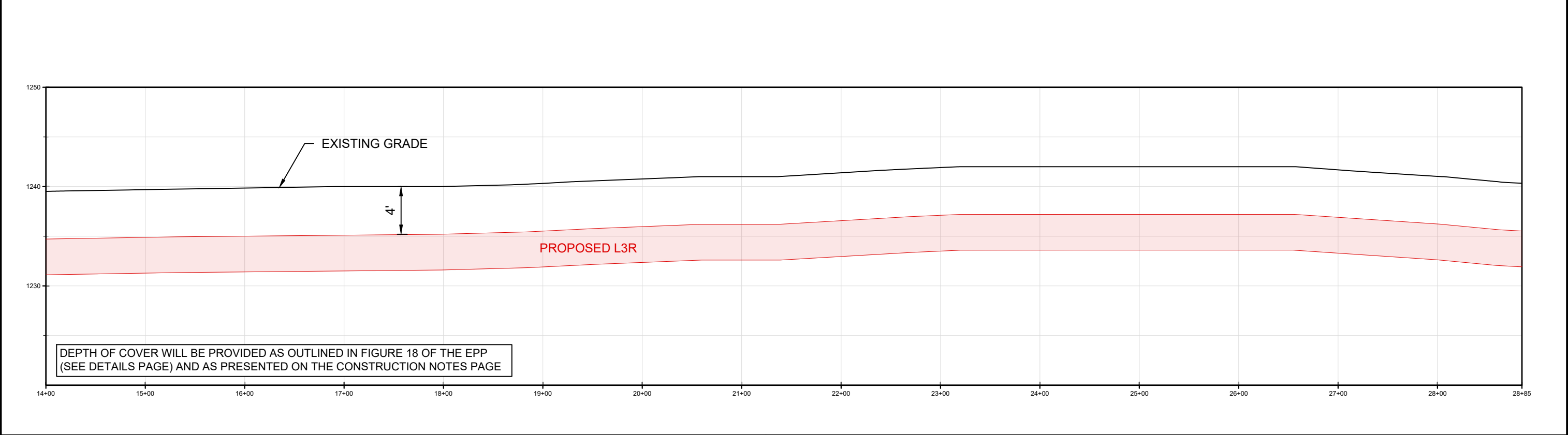
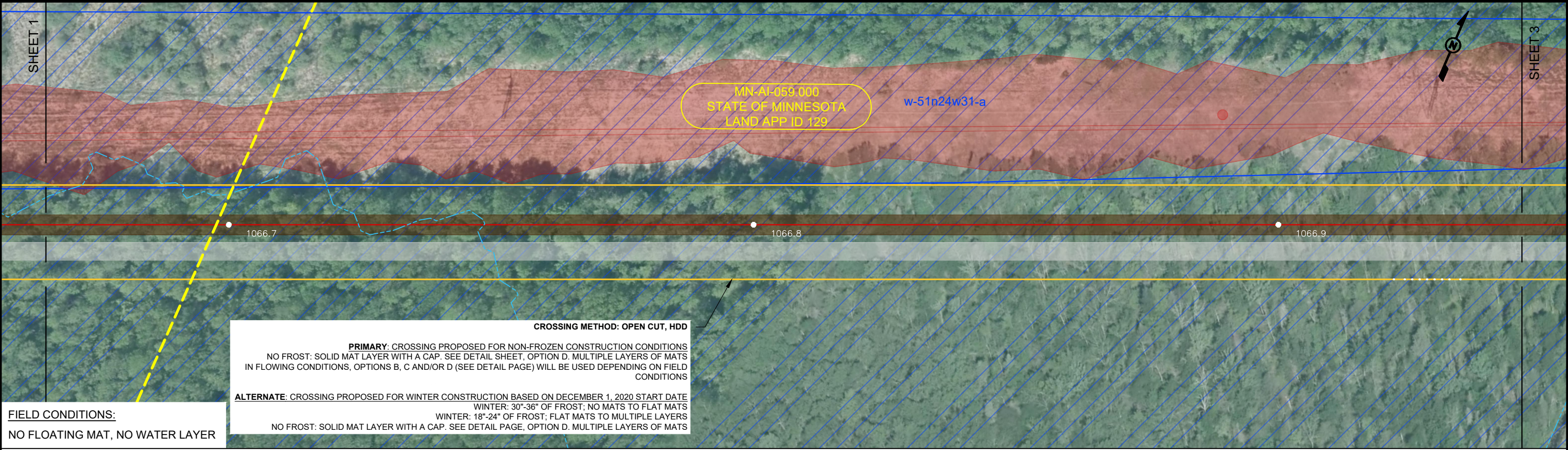
**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8









### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 128-137  
AITKIN COUNTY, MINNESOTA / S31-T51N-R24W

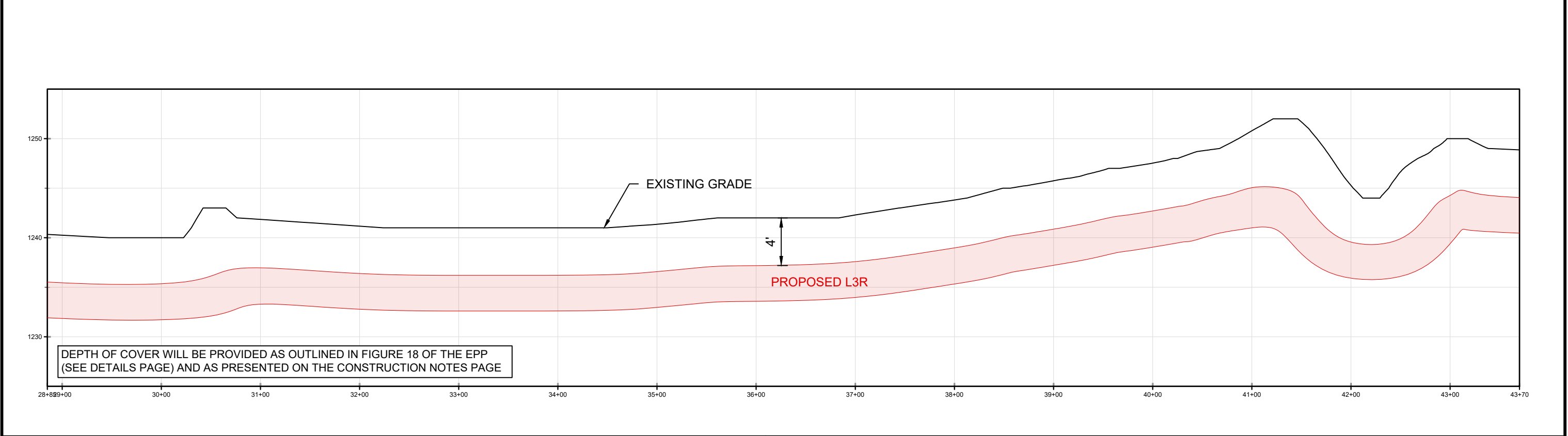
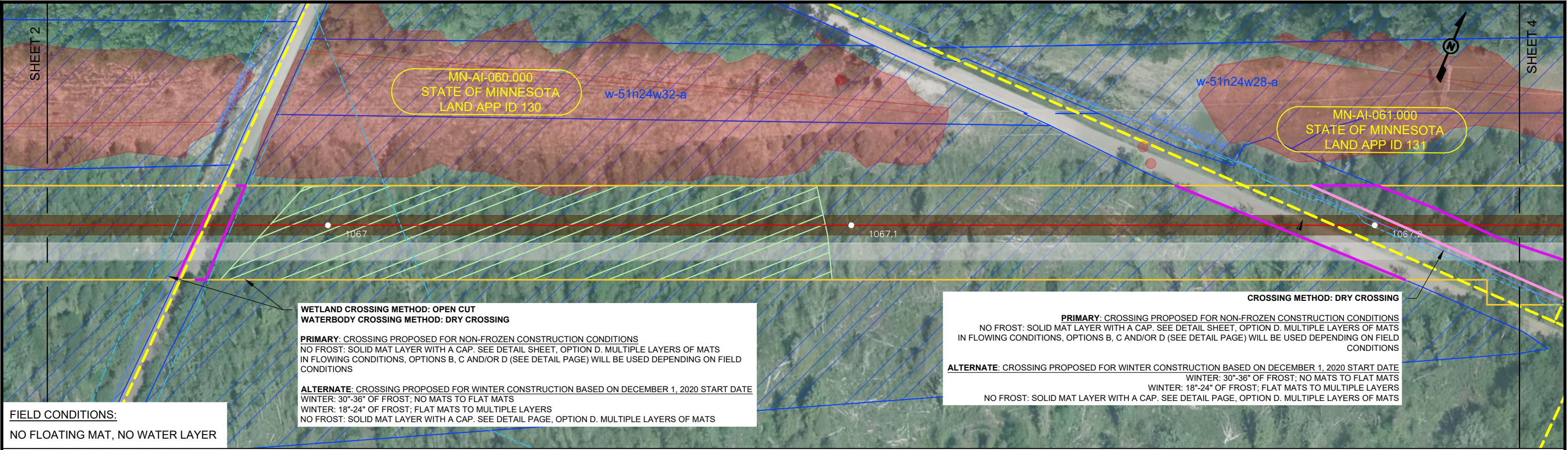
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**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 128-137  
AITKIN COUNTY, MINNESOTA / S32 & 29-T51N-R24W

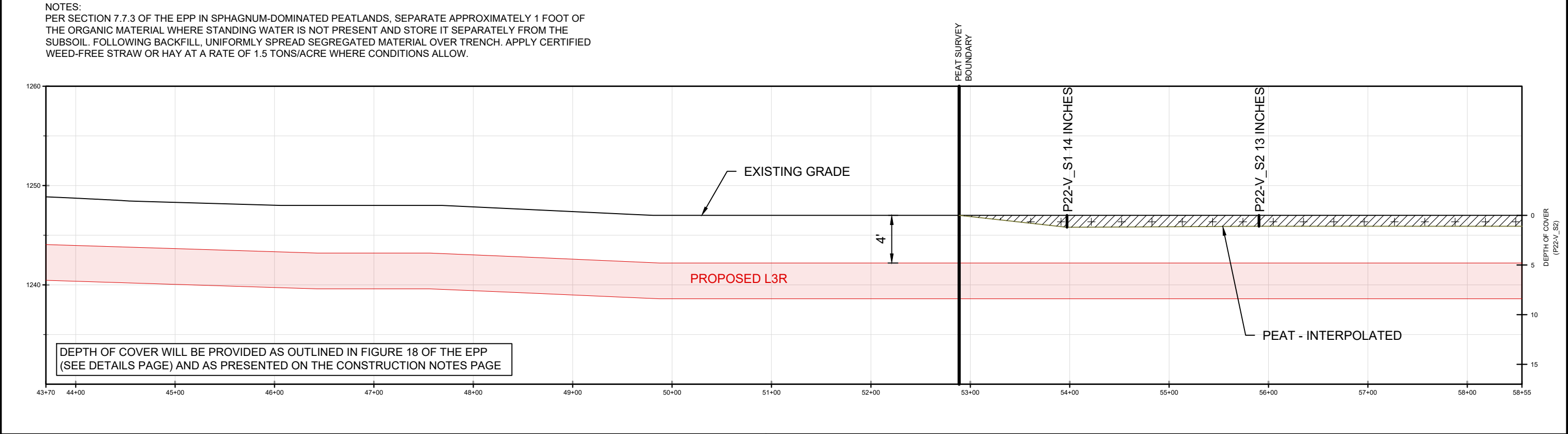
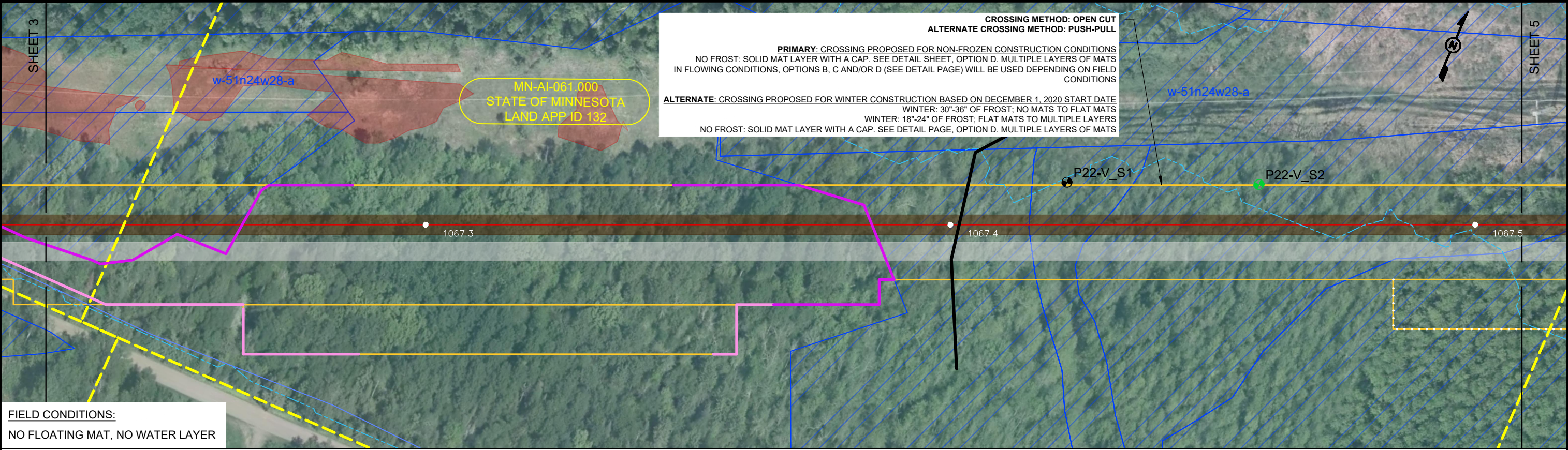
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- PROPOSED WORKSPACE
- PEATLAND SURVEY BOUNDARY
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- DELINEATED WATERBODY
- MDNR 40 BOUNDARIES
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- TRENCH BREAKER

**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 128-137  
AITKIN COUNTY, MINNESOTA / S29-T51N-R24W

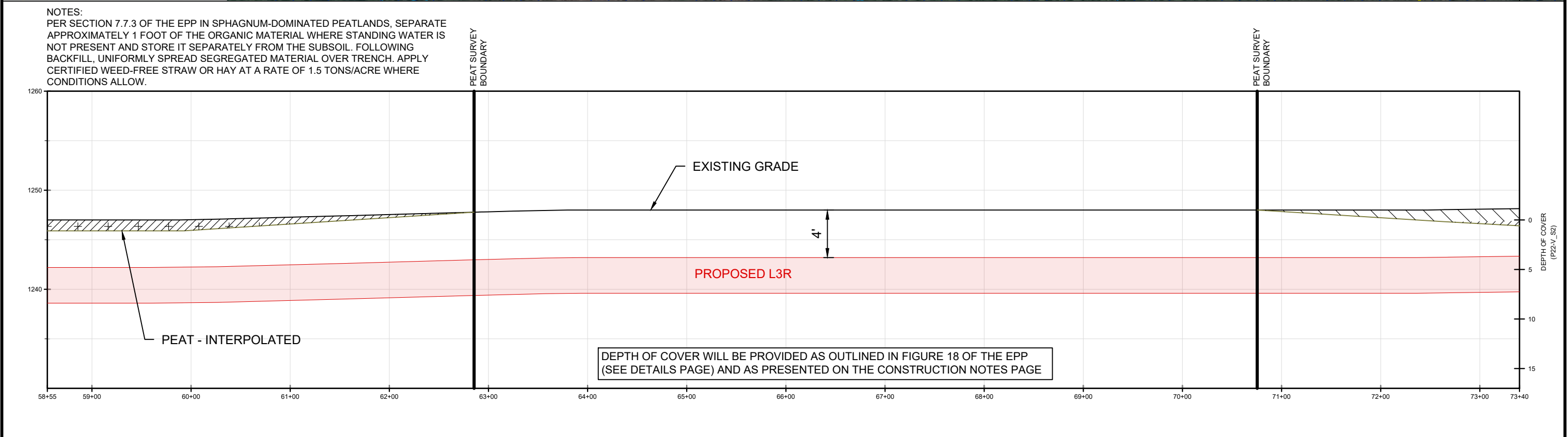
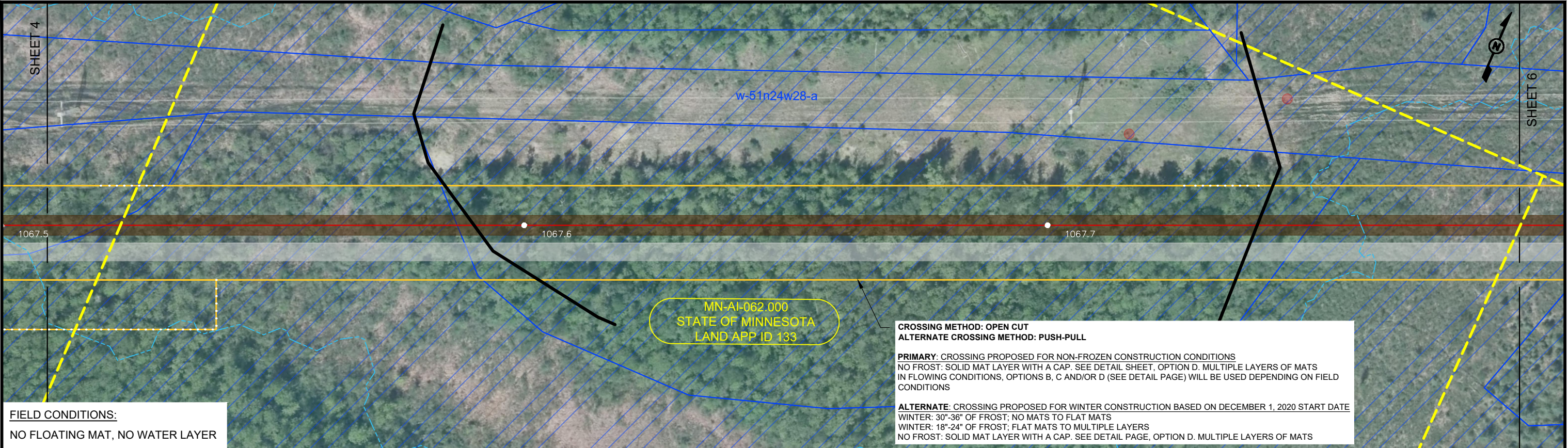
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H1	H2	H3	H4
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### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 128-137  
AITKIN COUNTY, MINNESOTA / S29-T51N-R24W

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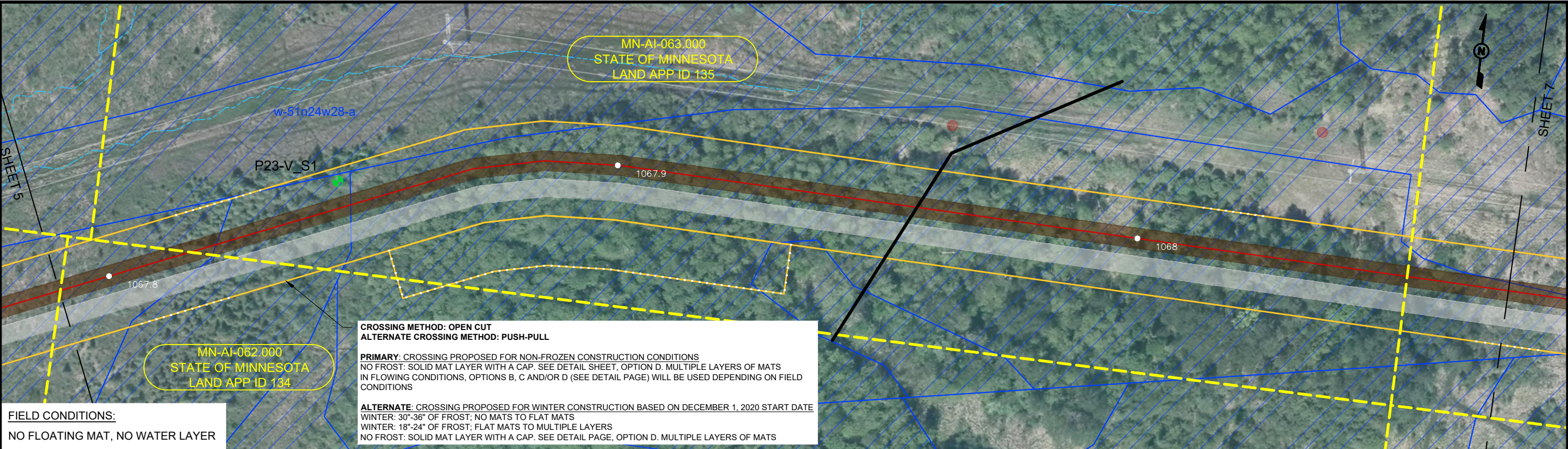
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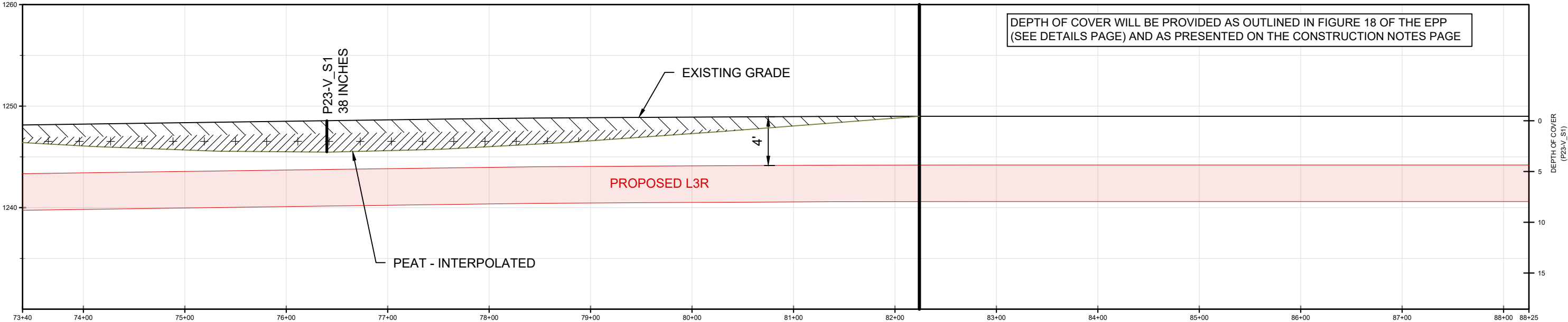
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H1	H2	H3	H4
H5	H6	H7	H8





NOTES:  
PER SECTION 7.7.3 OF THE EPP IN SPHAGNUM-DOMINATED PEATLANDS, SEPARATE APPROXIMATELY 1 FOOT OF THE ORGANIC MATERIAL WHERE STANDING WATER IS NOT PRESENT AND STORE IT SEPARATELY FROM THE SUBSOIL. FOLLOWING BACKFILL, UNIFORMLY SPREAD SEGREGATED MATERIAL OVER TRENCH. APPLY CERTIFIED WEED-FREE STRAW OR HAY AT A RATE OF 1.5 TONS/ACRE WHERE CONDITIONS ALLOW.



**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 128-137  
AITKIN COUNTY, MINNESOTA / S29-T51N-R24W

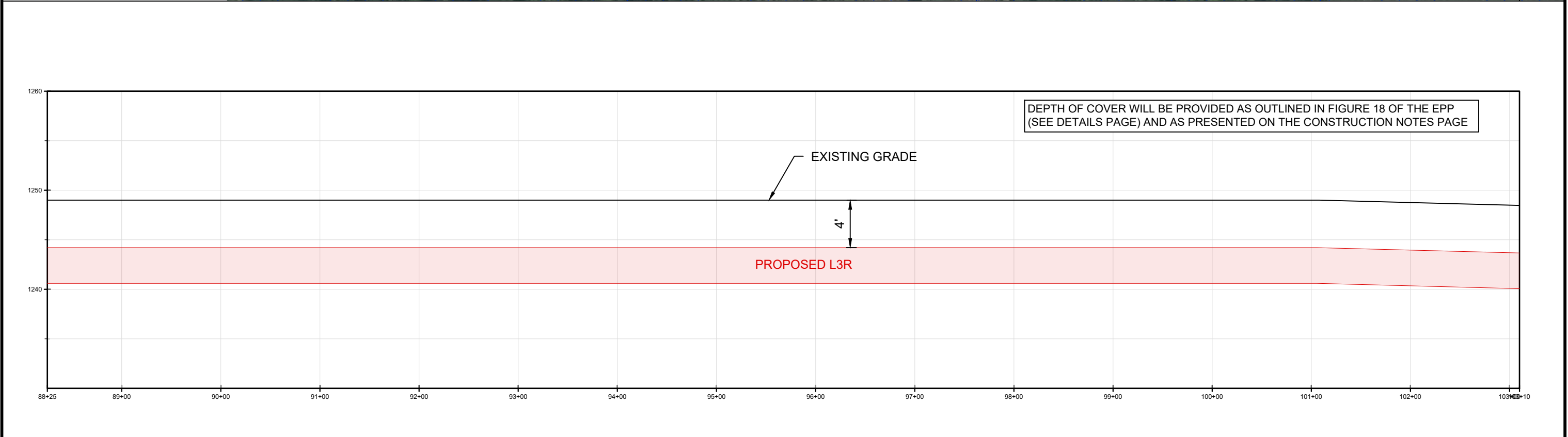
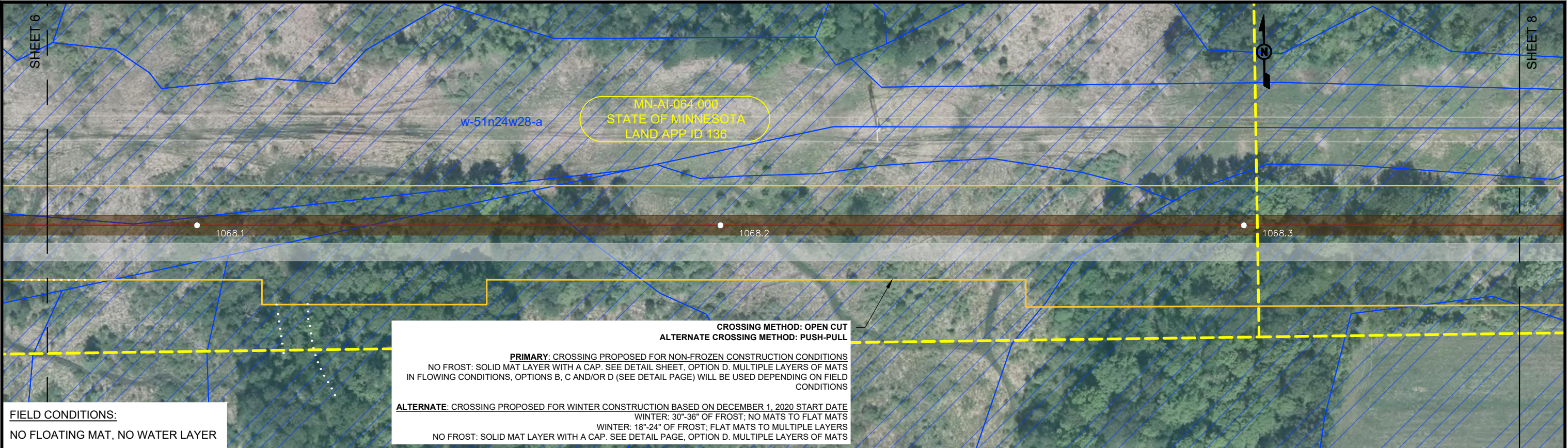


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### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 128-137  
AITKIN COUNTY, MINNESOTA / S28-T51N-R24W

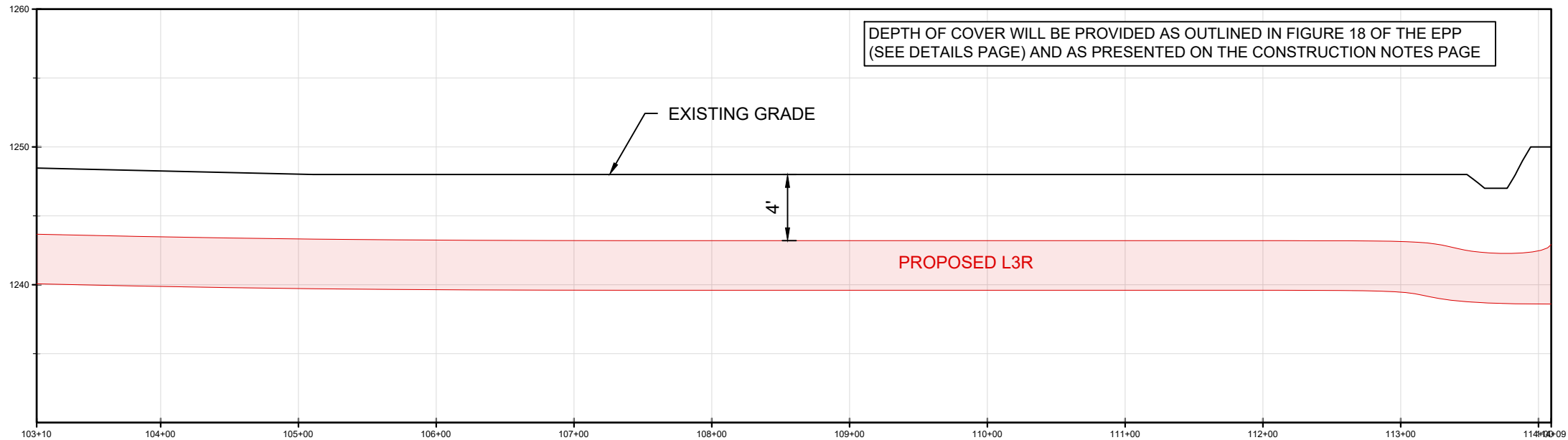
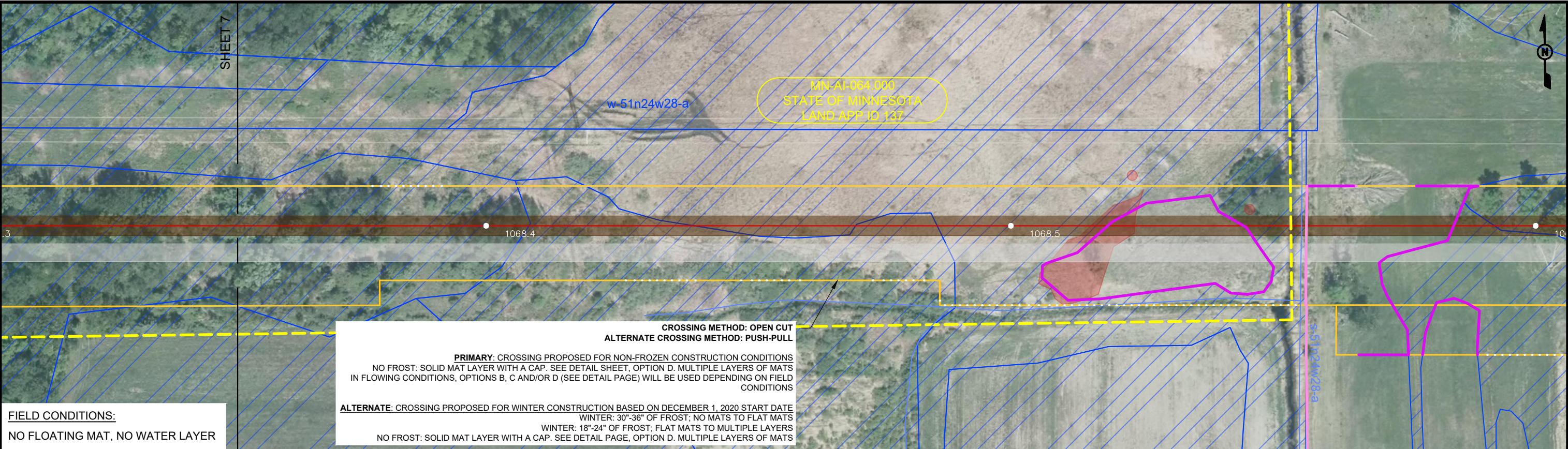
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WETLAND / PEATLAND CONSTRUCTION PLAN  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 128-137  
AITKIN COUNTY, MINNESOTA / S28-T51N-R24W

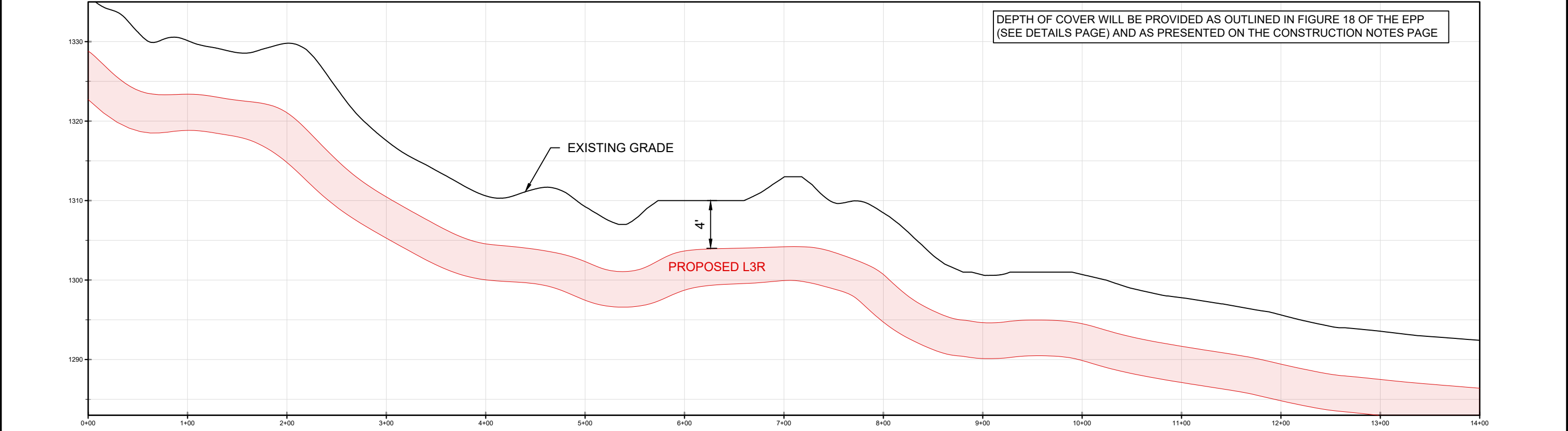
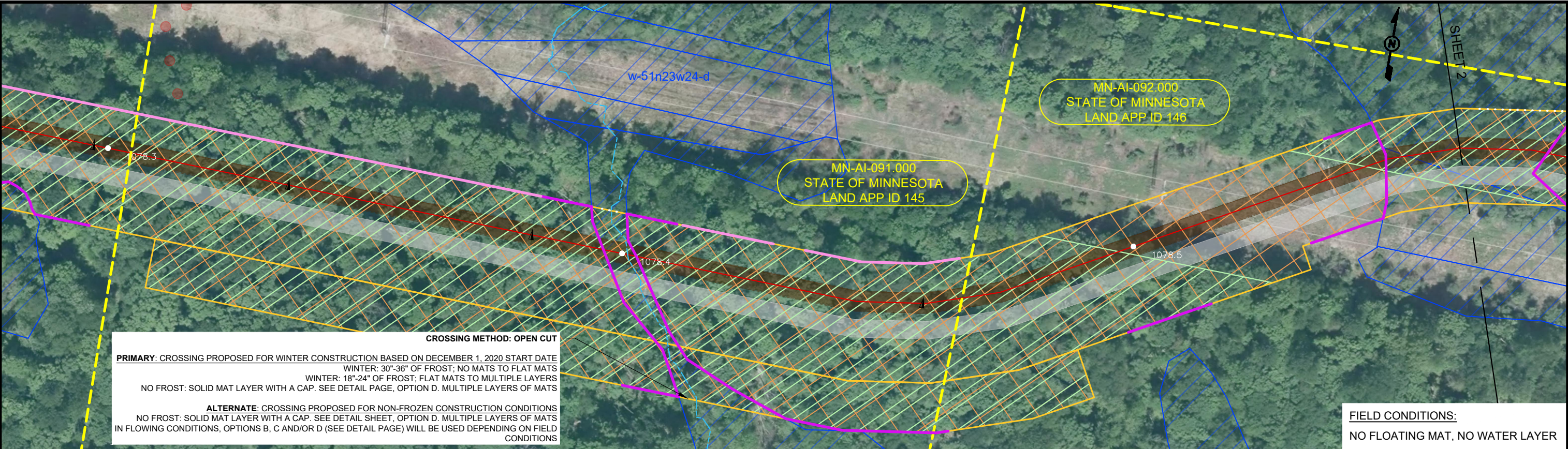


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**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 143 - 169  
AITKIN COUNTY, MINNESOTA / S19-T51N-R22W

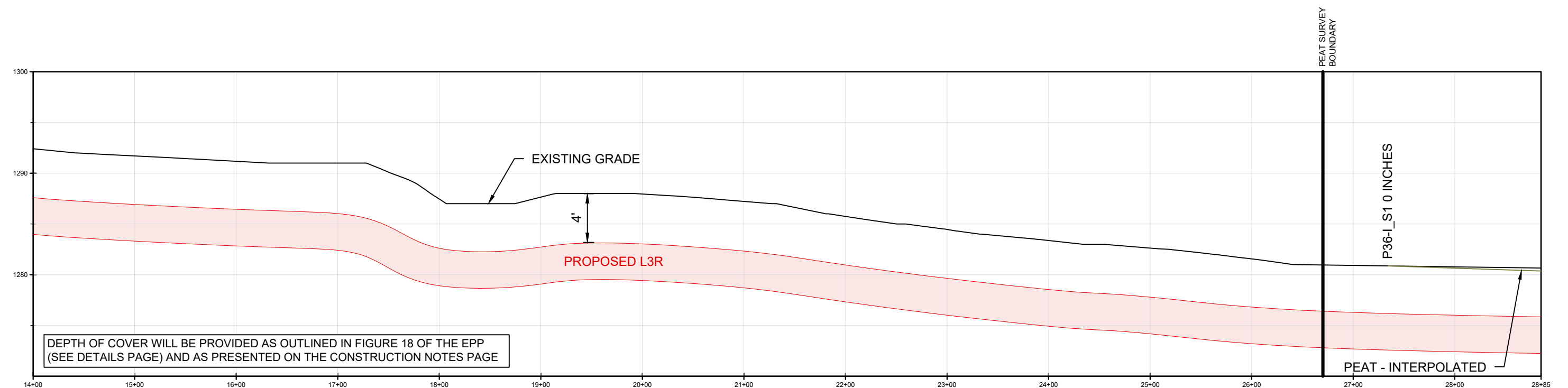
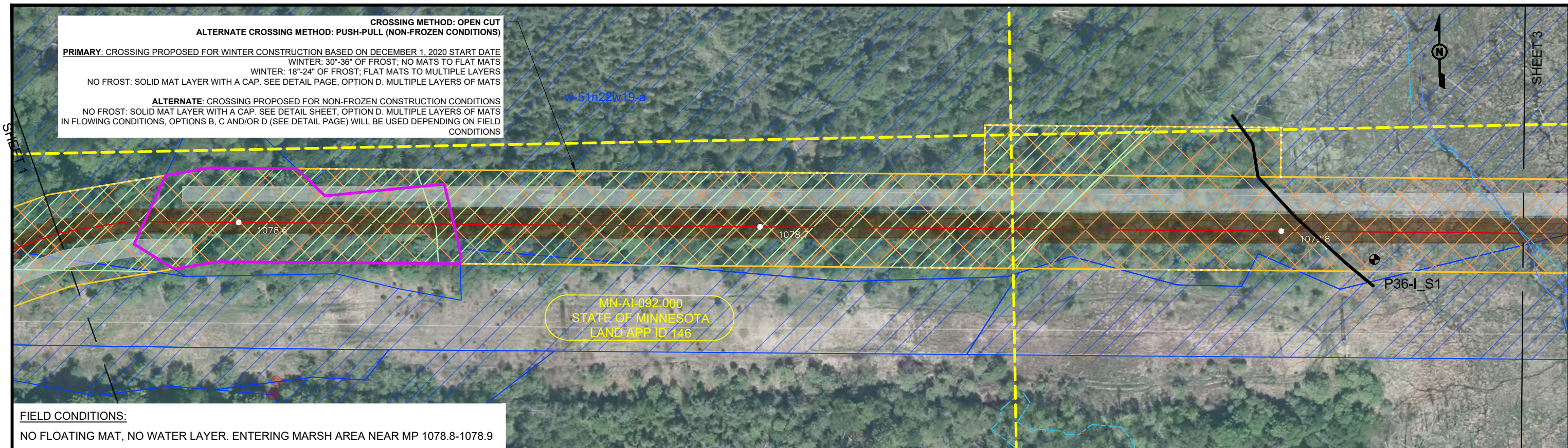
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H1	H2	H3	H4
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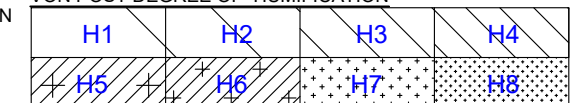
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MDNR PRIORITY AREAS ON PUBLIC LANDS  
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AITKIN COUNTY, MINNESOTA / S19-T51N-R22W



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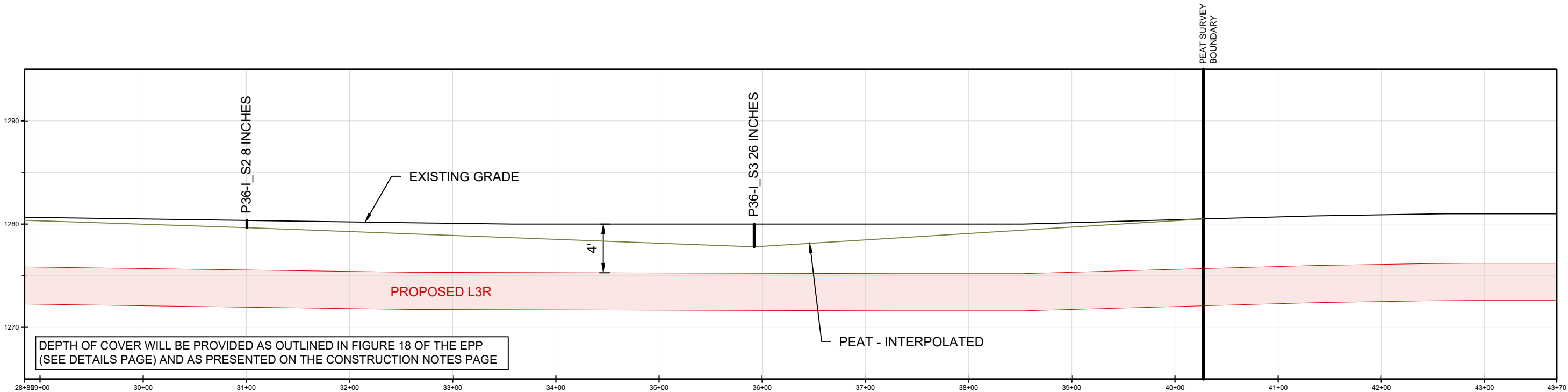
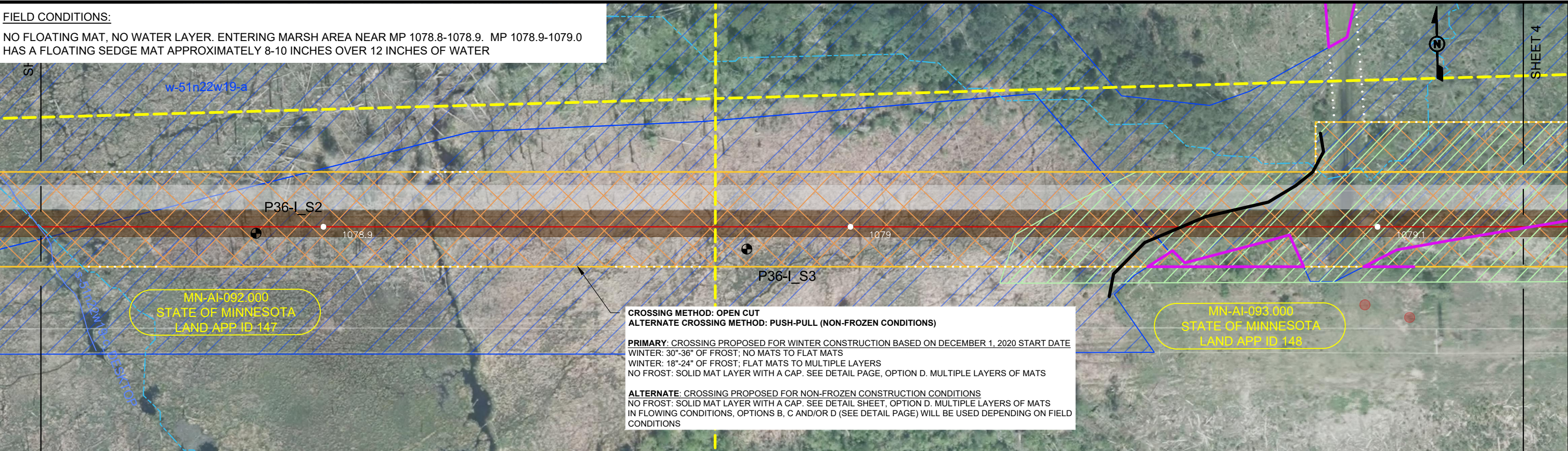
**VON POST DEGREE OF HUMIFICATION**





FIELD CONDITIONS:

NO FLOATING MAT, NO WATER LAYER. ENTERING MARSH AREA NEAR MP 1078.8-1078.9. MP 1078.9-1079.0 HAS A FLOATING SEDGE MAT APPROXIMATELY 8-10 INCHES OVER 12 INCHES OF WATER



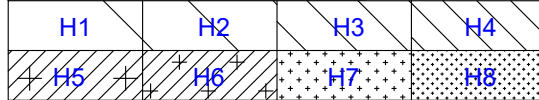
WETLAND / PEATLAND CONSTRUCTION PLAN  
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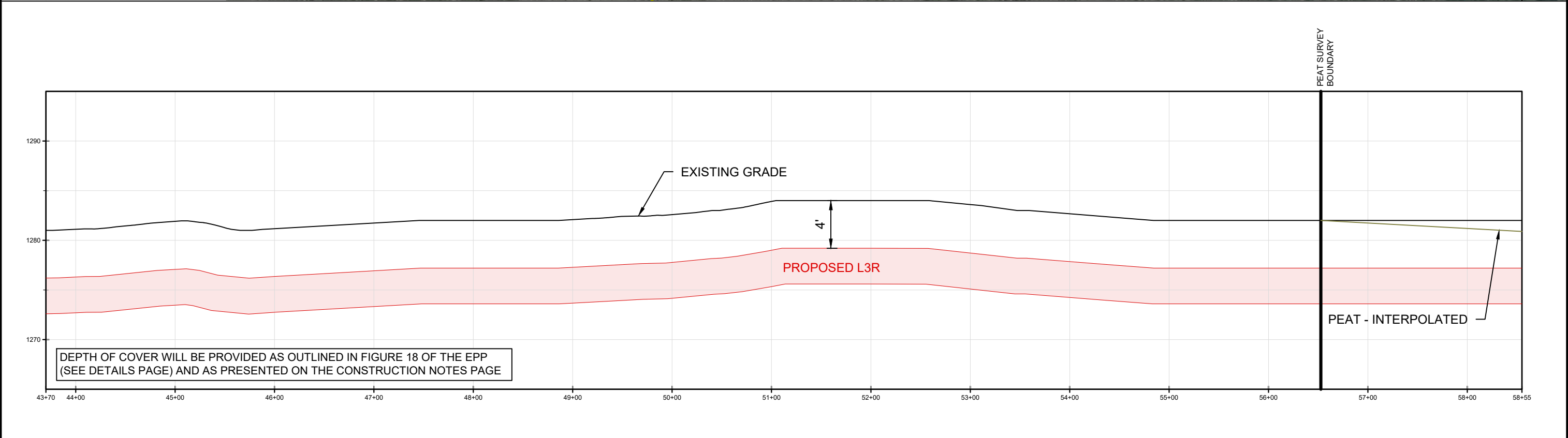
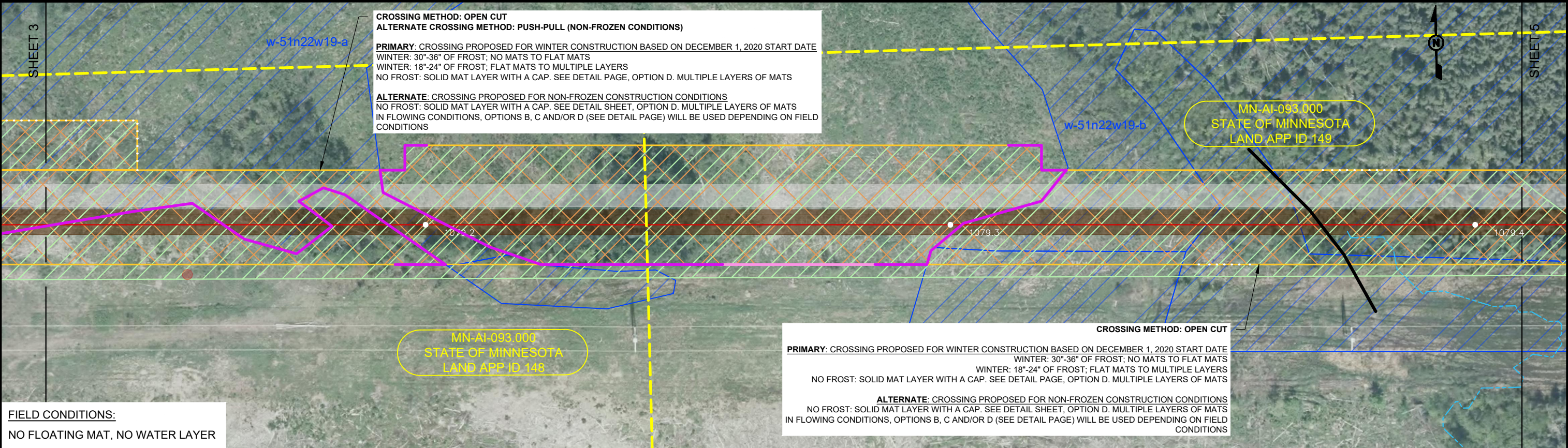
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MDNR PRIORITY AREAS ON PUBLIC LANDS  
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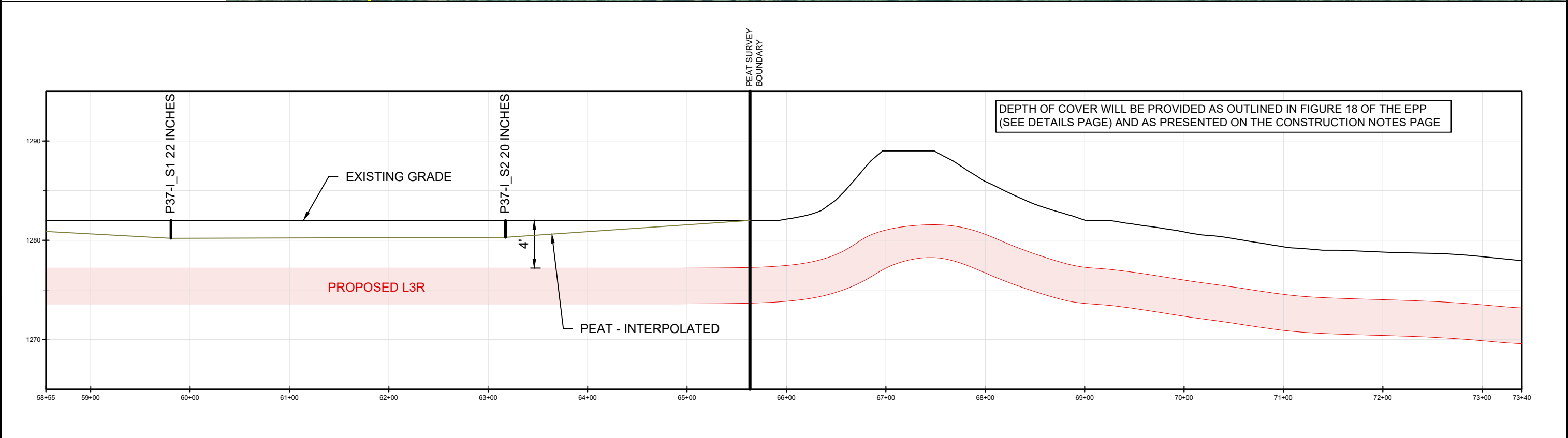
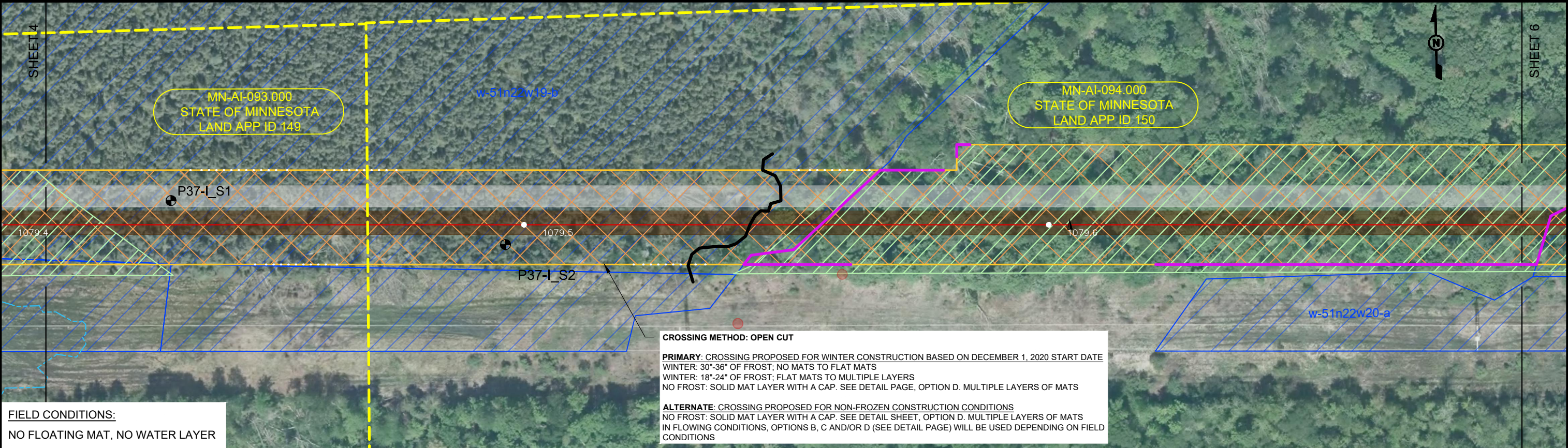
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H1	H2	H3	H4
H5	H6	H7	H8





### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 143 - 169  
AITKIN COUNTY, MINNESOTA / S19 & 20-T51N-R22W

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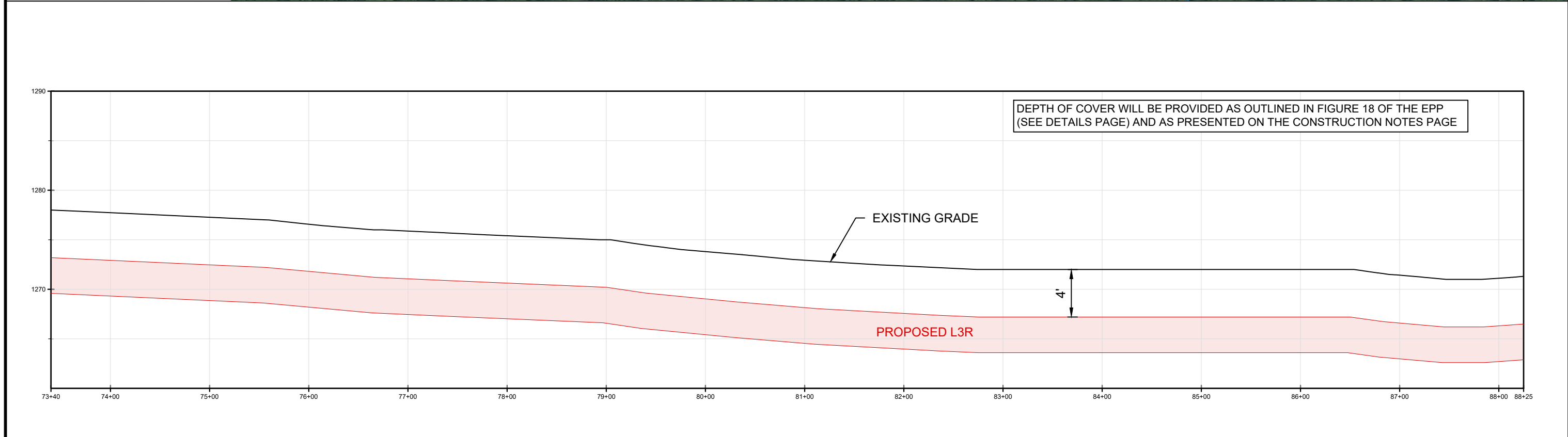
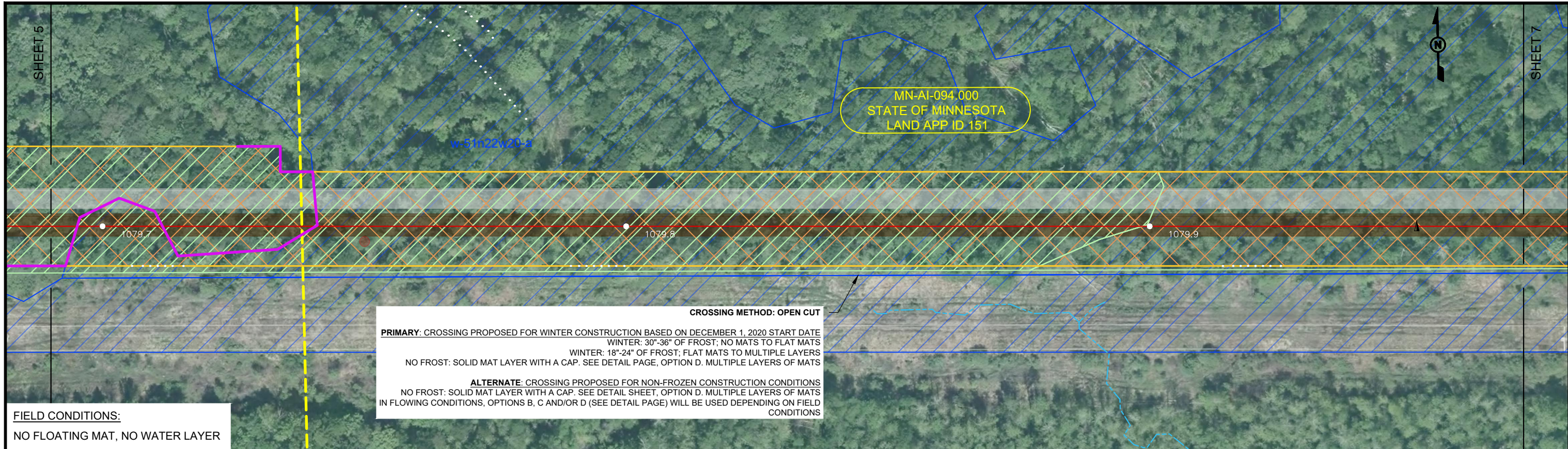
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MDNR PRIORITY AREAS ON PUBLIC LANDS  
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**LEGEND**

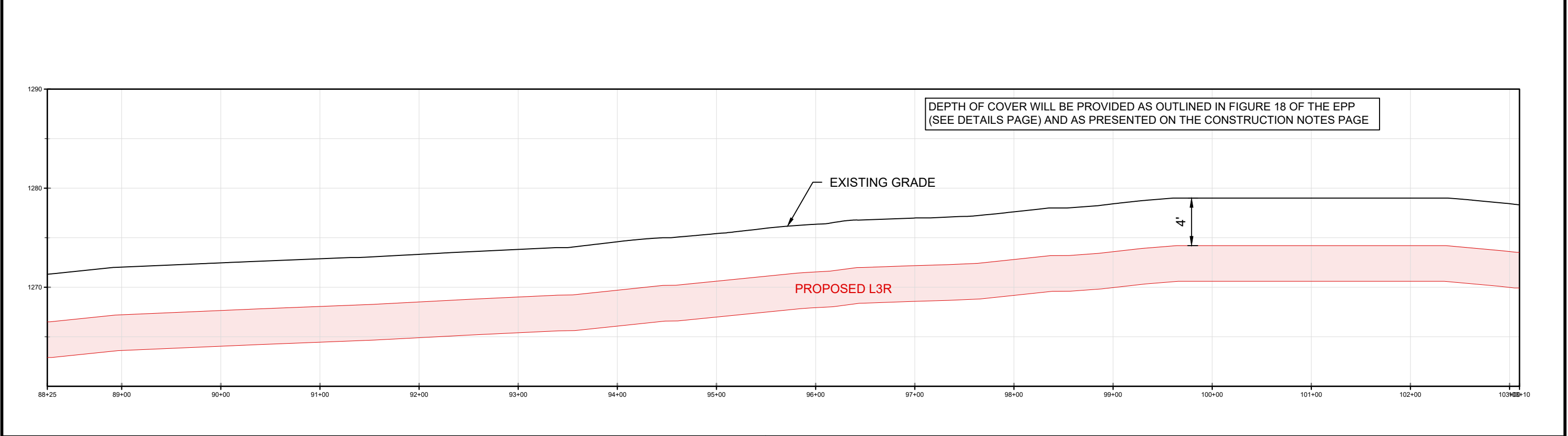
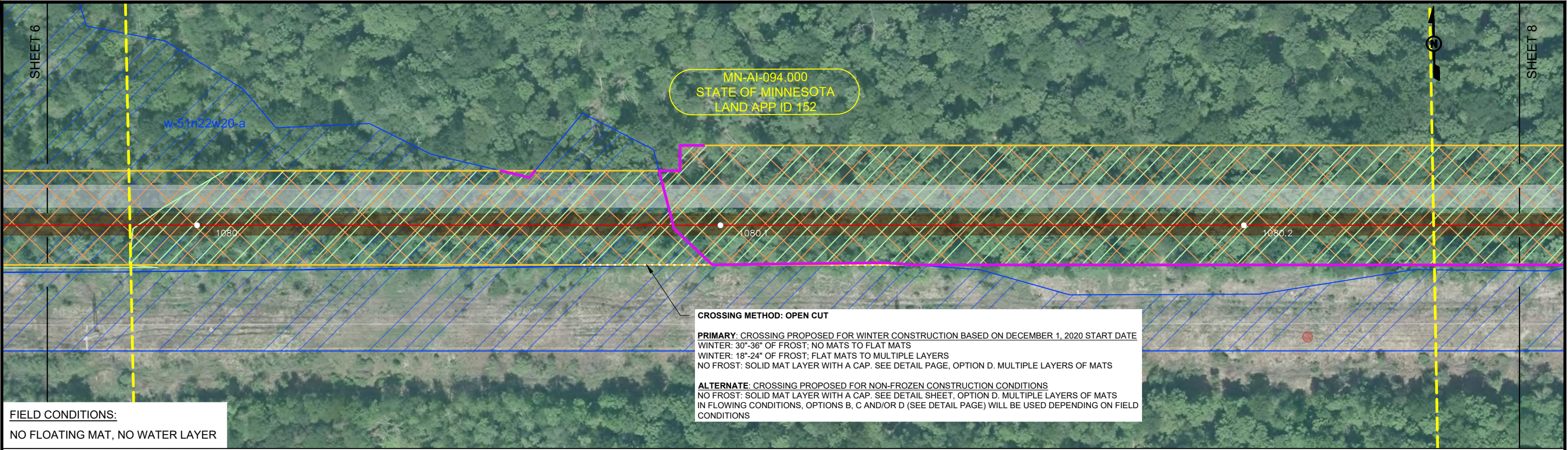
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VON POST DEGREE OF HUMIFICATION			
H1	H2	H3	H4
H5	H6	H7	H8

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**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
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AITKIN COUNTY, MINNESOTA / S20-T51N-R22W

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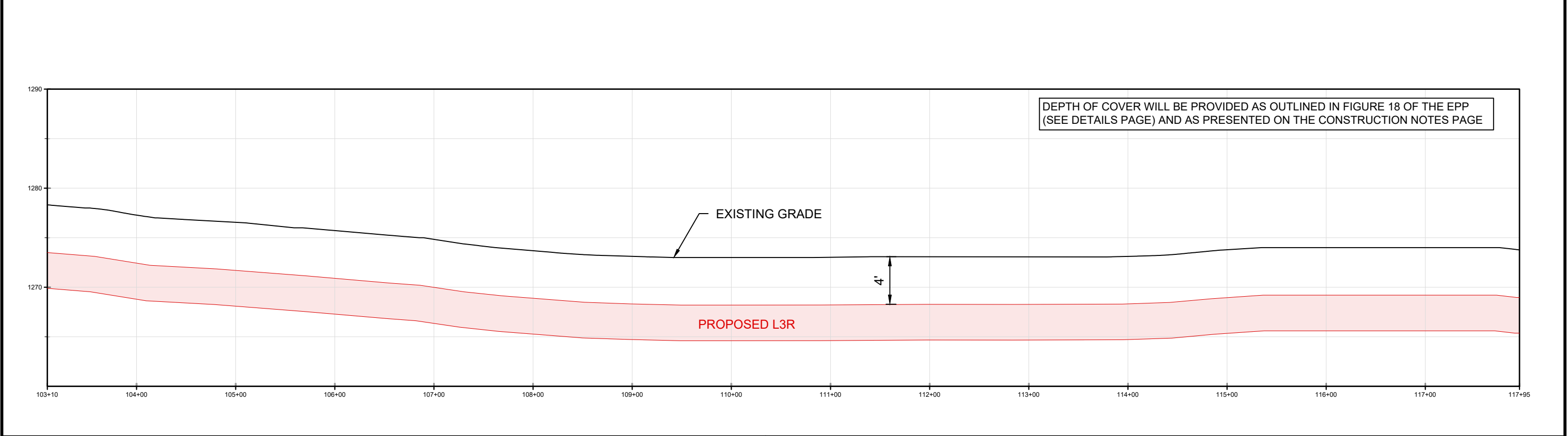
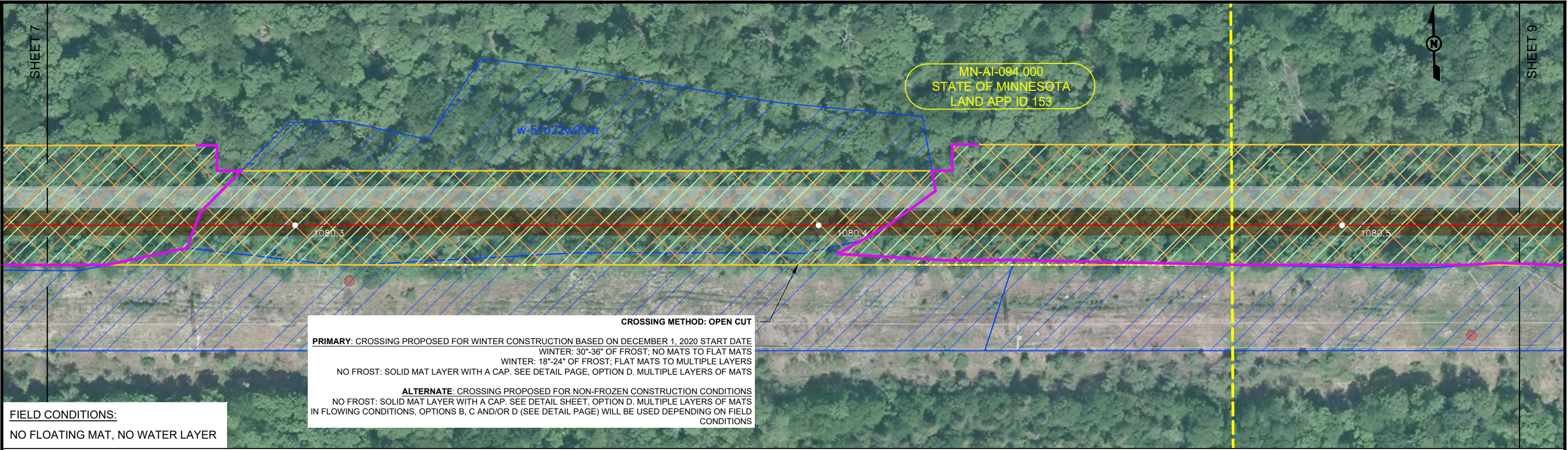
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- INSTALLED PEATLAND WELL
- TRENCH BREAKER

**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8







### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 143 - 169  
AITKIN COUNTY, MINNESOTA / S20 & 21-T51N-R22W

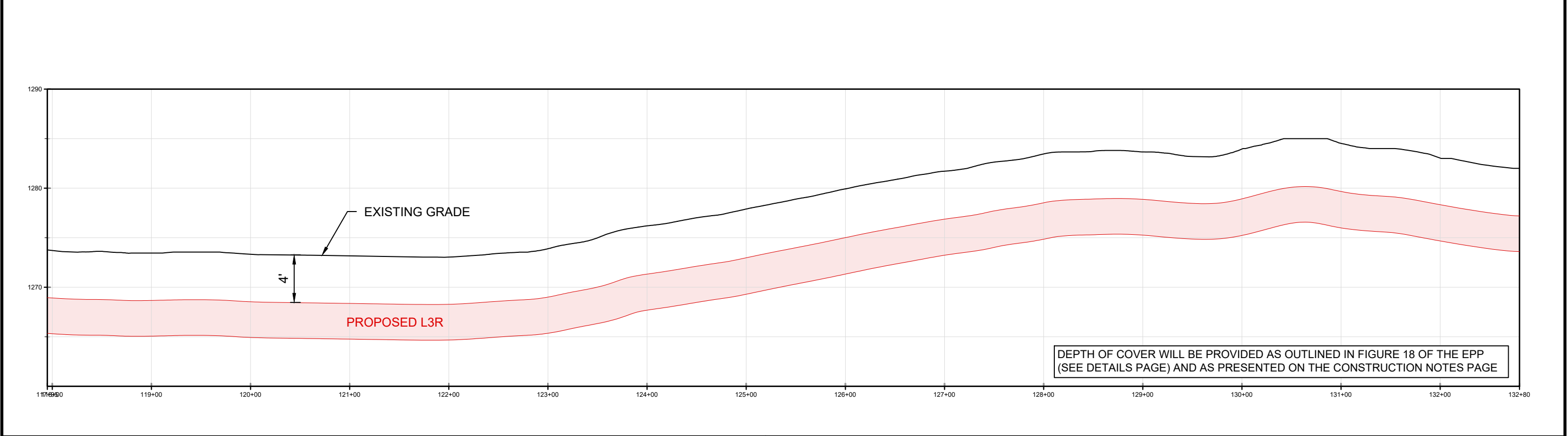
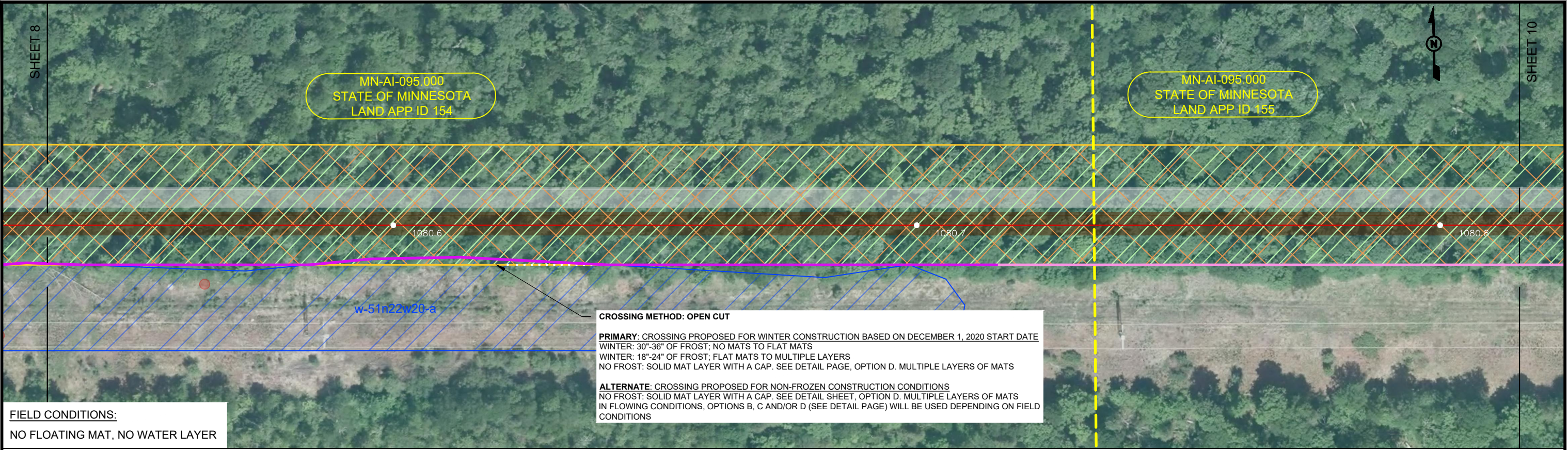
**LEGEND**

- PROPOSED LINE 3 REPLACEMENT
- PROPOSED WORKSPACE
- PEATLAND SURVEY BOUNDARY
- PEAT
- DELINEATED WATERBODY
- MDNR 40 BOUNDARIES
- DRAINAGE FLOWLINES
- VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE
- WATER BMPS
- DOUBLE PERIMETER CONTROLS
- SINGLE PERIMETER CONTROLS
- NATIVE PLANT COMMUNITY (S1-S3)
- SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
- EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)
- TRAVEL LANE
- DELINEATED WETLAND
- INVASIVE SPECIES
- PEAT DEPTH
- PEAT DEPTH AND PEAT EXTRACTION
- L3R MILEPOST
- INSTALLED PEATLAND WELL
- TRENCH BREAKER

**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 143 - 169  
AITKIN COUNTY, MINNESOTA / S21-T51N-R22W

**LEGEND**

- PROPOSED LINE 3 REPLACEMENT
- PROPOSED WORKSPACE
- PEATLAND SURVEY BOUNDARY
- PEAT
- DELINEATED WATERBODY
- MDNR 40 BOUNDARIES
- DRAINAGE FLOWLINES
- VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE
- WATER BMPS
- DOUBLE PERIMETER CONTROLS
- SINGLE PERIMETER CONTROLS
- NATIVE PLANT COMMUNITY (S1-S3)
- SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
- EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)
- TRAVEL LANE
- DELINEATED WETLAND
- INVASIVE SPECIES
- PEAT DEPTH
- PEAT DEPTH AND PEAT EXTRACTION
- L3R MILEPOST
- INSTALLED PEATLAND WELL
- TRENCH BREAKER

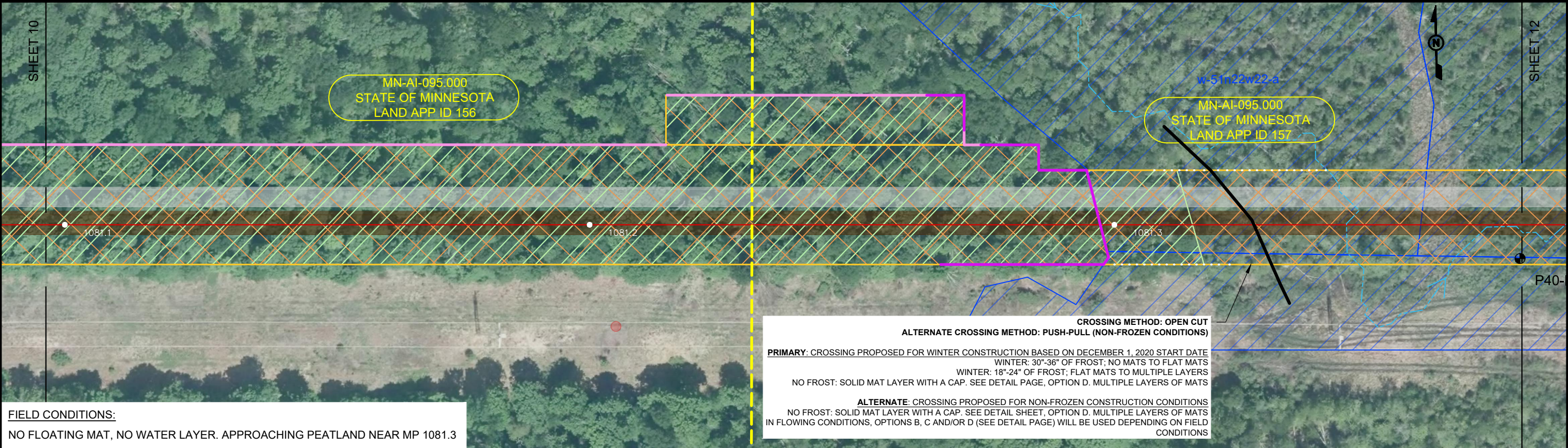
**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8

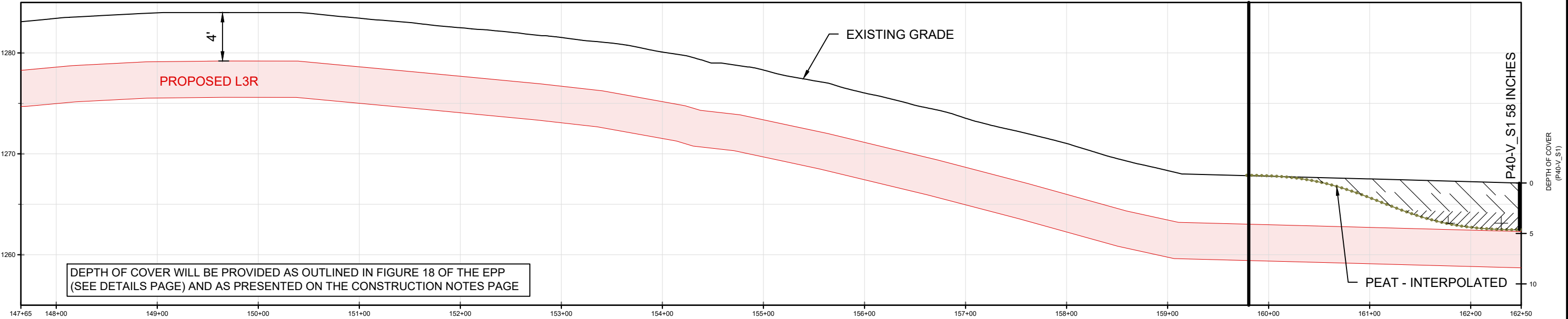








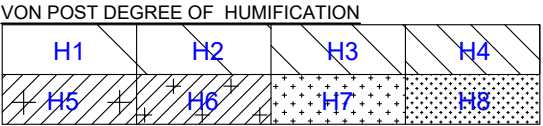
NOTES:  
PER SECTION 7.7.3 OF THE EPP IN SPHAGNUM-DOMINATED PEATLANDS, SEPARATE APPROXIMATELY 1 FOOT OF THE ORGANIC MATERIAL WHERE STANDING WATER IS NOT PRESENT AND STORE IT SEPARATELY FROM THE SUBSOIL. FOLLOWING BACKFILL, UNIFORMLY SPREAD SEGREGATED MATERIAL OVER TRENCH. APPLY CERTIFIED WEED-FREE STRAW OR HAY AT A RATE OF 1.5 TONS/ACRE WHERE CONDITIONS ALLOW.



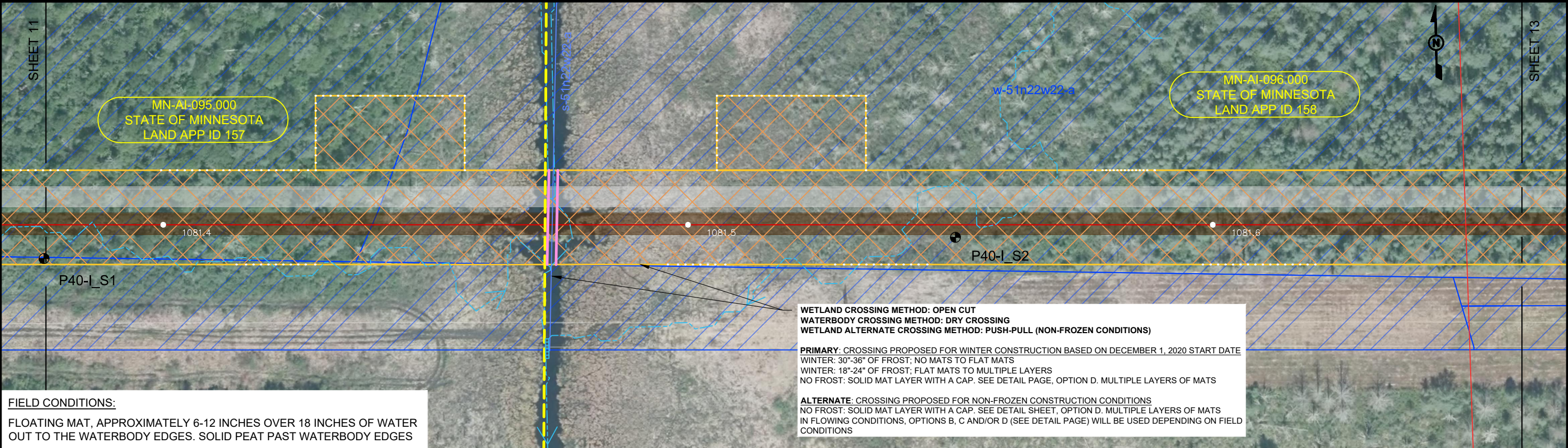
**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 143 - 169  
AITKIN COUNTY, MINNESOTA / S21-T51N-R22W



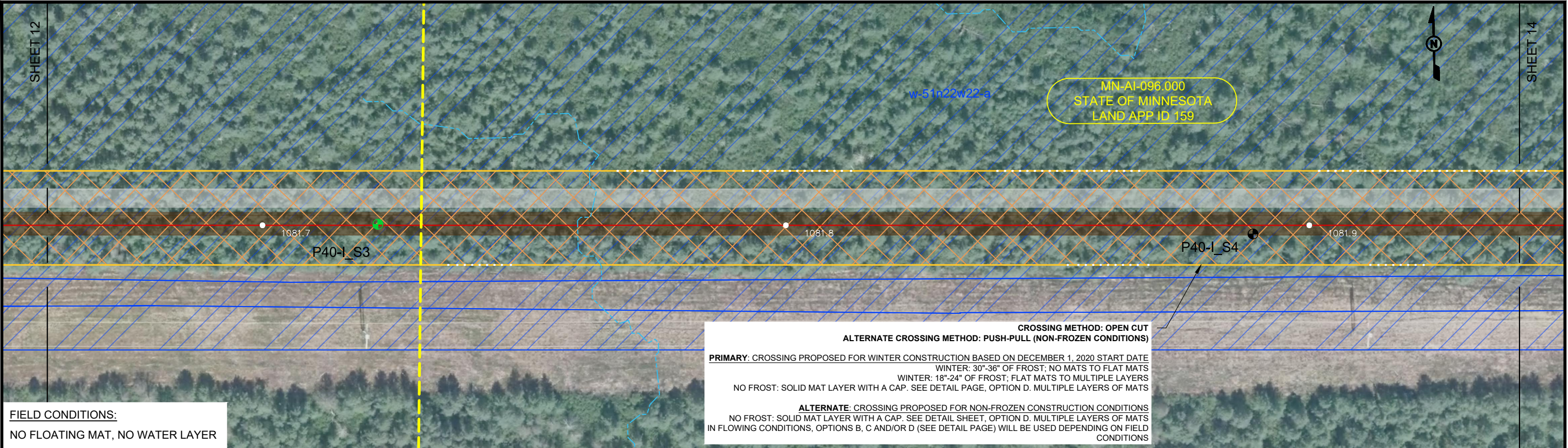
- LEGEND**
- PROPOSED LINE 3 REPLACEMENT
  - PROPOSED WORKSPACE
  - PEATLAND SURVEY BOUNDARY
  - PEAT
  - MDNR 40 BOUNDARIES
  - DRAINAGE FLOWLINES
  - VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE
  - WATER BMPs
  - DOUBLE PERIMETER CONTROLS
  - SINGLE PERIMETER CONTROLS
  - NATIVE PLANT COMMUNITY (S1-S3)
  - SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
  - EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)
  - TRAVEL LANE
  - DELIMITED WETLAND
  - INVASIVE SPECIES
  - PEAT DEPTH
  - PEAT DEPTH AND PEAT EXTRACTION
  - L3R MILEPOST
  - INSTALLED PEATLAND WELL
  - TRENCH BREAKER



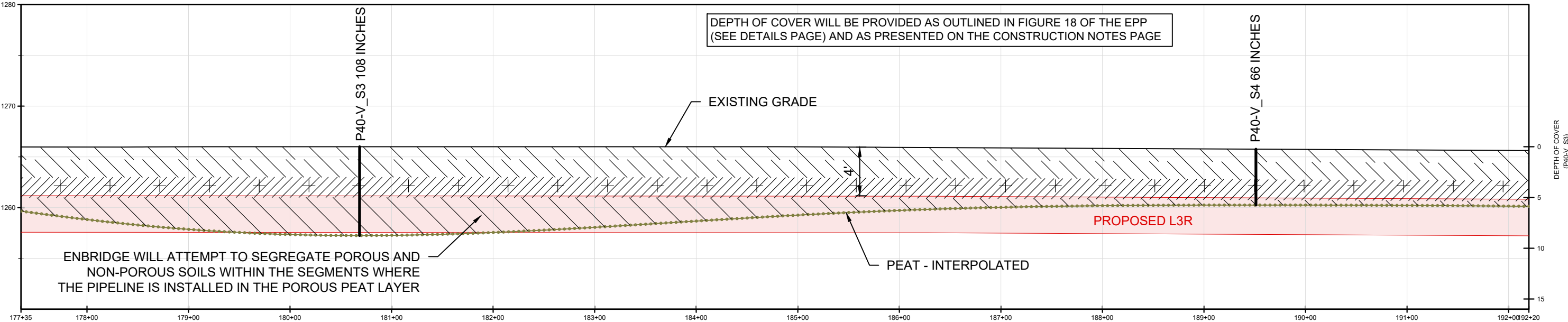








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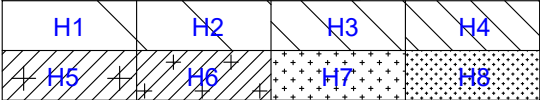
**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 143 - 169  
AITKIN COUNTY, MINNESOTA / S22-T51N-R22W



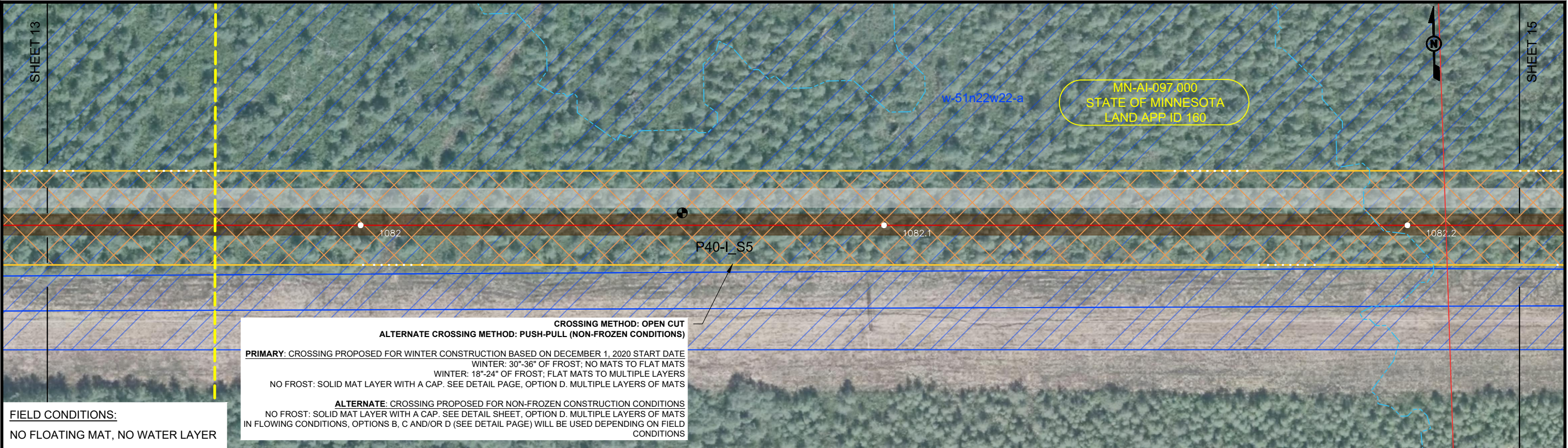
**LEGEND**

- PROPOSED LINE 3 REPLACEMENT
- PROPOSED WORKSPACE
- PEATLAND SURVEY BOUNDARY
- PEAT
- DELINEATED WATERBODY
- MDNR 40 BOUNDARIES
- DRAINAGE FLOWLINES
- VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE
- WATER BMPS
- DOUBLE PERIMETER CONTROLS
- SINGLE PERIMETER CONTROLS
- NATIVE PLANT COMMUNITY (S1-S3)
- SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
- EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)
- TRAVEL LANE
- DELINEATED WETLAND
- INVASIVE SPECIES
- PEAT DEPTH
- PEAT DEPTH AND PEAT EXTRACTION
- L3R MILEPOST
- INSTALLED PEATLAND WELL
- TRENCH BREAKER

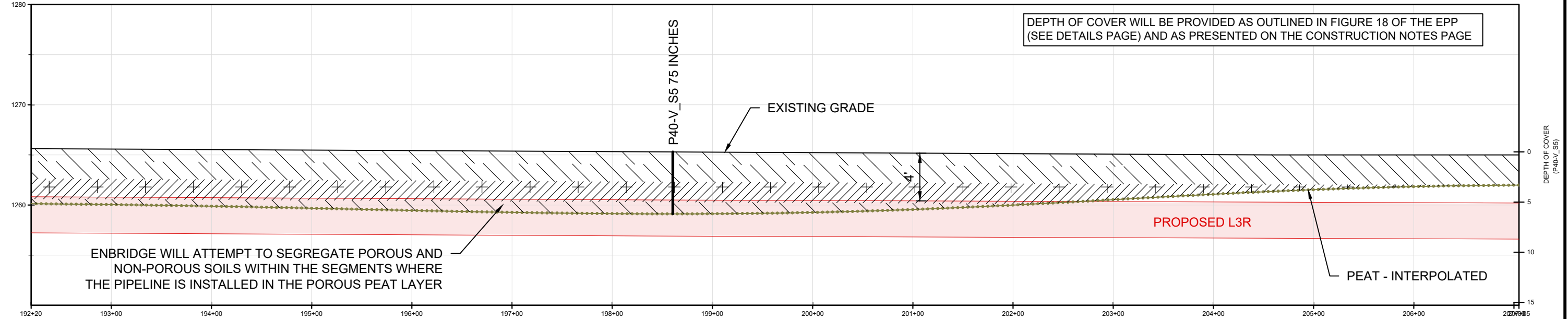
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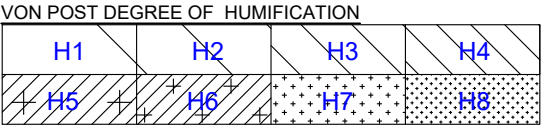


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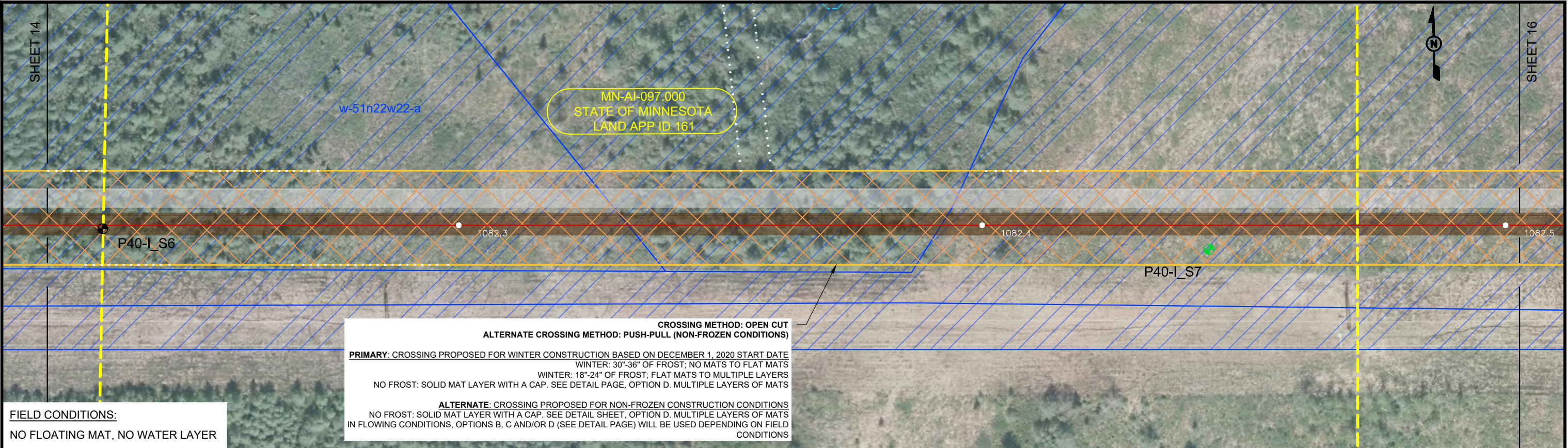


**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 143 - 169  
AITKIN COUNTY, MINNESOTA / S22-T51N-R22W

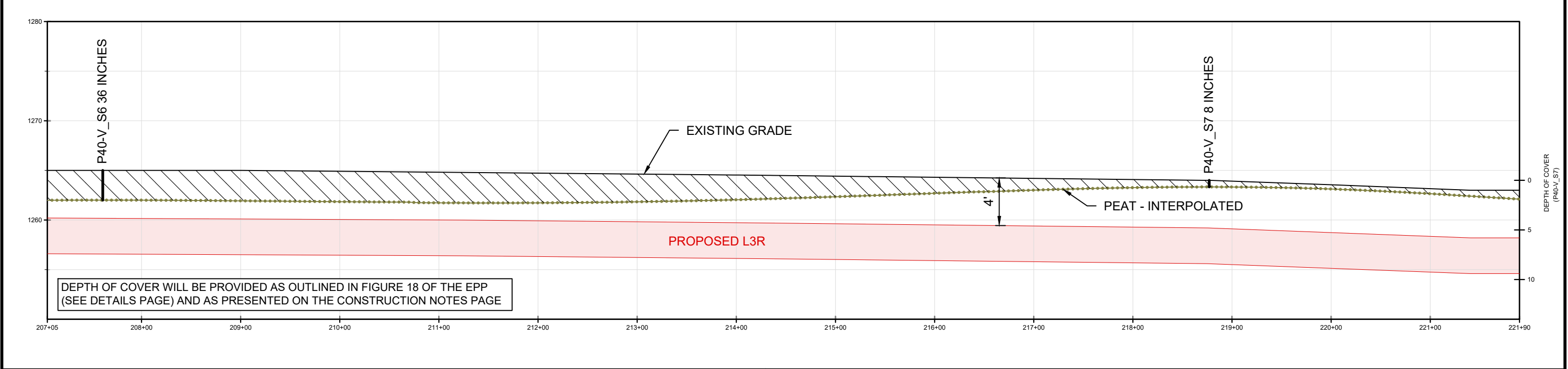
- LEGEND**
- PROPOSED LINE 3 REPLACEMENT
  - PROPOSED WORKSPACE
  - PEATLAND SURVEY BOUNDARY
  - PEAT
  - DELINEATED WATERBODY
  - MDNR 40 BOUNDARIES
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  - VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE
  - WATER BMPS
  - DOUBLE PERIMETER CONTROLS
  - SINGLE PERIMETER CONTROLS
  - NATIVE PLANT COMMUNITY (S1-S3)
  - SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
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  - TRAVEL LANE
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  - L3R MILEPOST
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NOTES:  
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### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 143 - 169  
AITKIN COUNTY, MINNESOTA / S22-T51N-R22W

PAGE 15

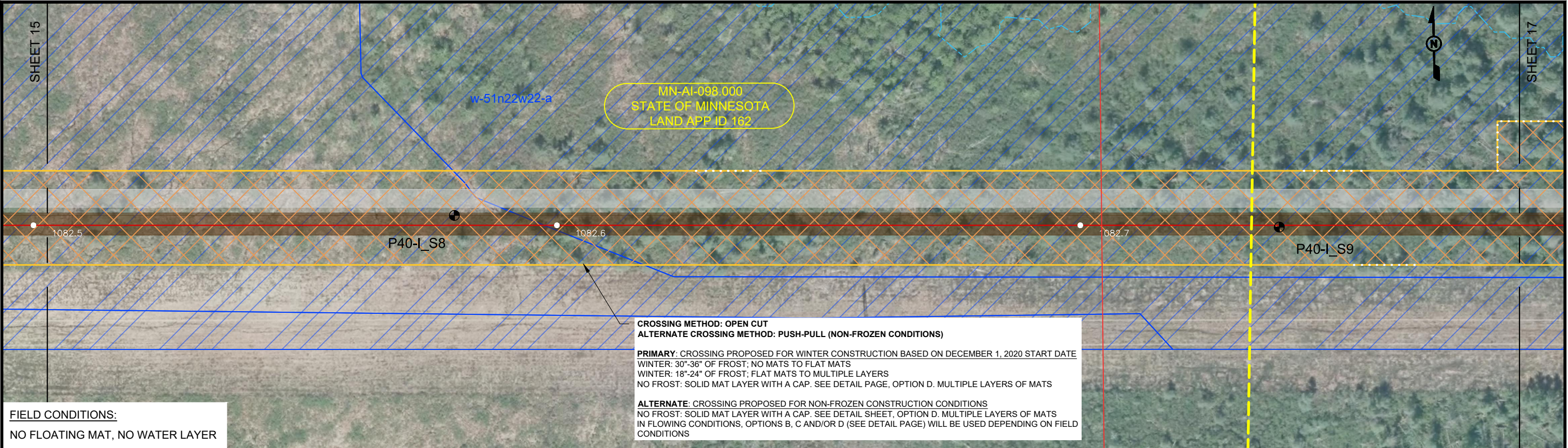
**LEGEND**

PROPOSED LINE 3 REPLACEMENT	NATIVE PLANT COMMUNITY (S1-S3)
PROPOSED WORKSPACE	SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
PEATLAND SURVEY BOUNDARY	EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)
PEAT	TRAVEL LANE
DELINEATED WATERBODY	DELINEATED WETLAND
MDNR 40 BOUNDARIES	INVASIVE SPECIES
DRAINAGE FLOWLINES	PEAT DEPTH
VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE	PEAT DEPTH AND PEAT EXTRACTION
WATER BMPS	L3R MILEPOST
DOUBLE PERIMETER CONTROLS	INSTALLED PEATLAND WELL
SINGLE PERIMETER CONTROLS	TRENCH BREAKER

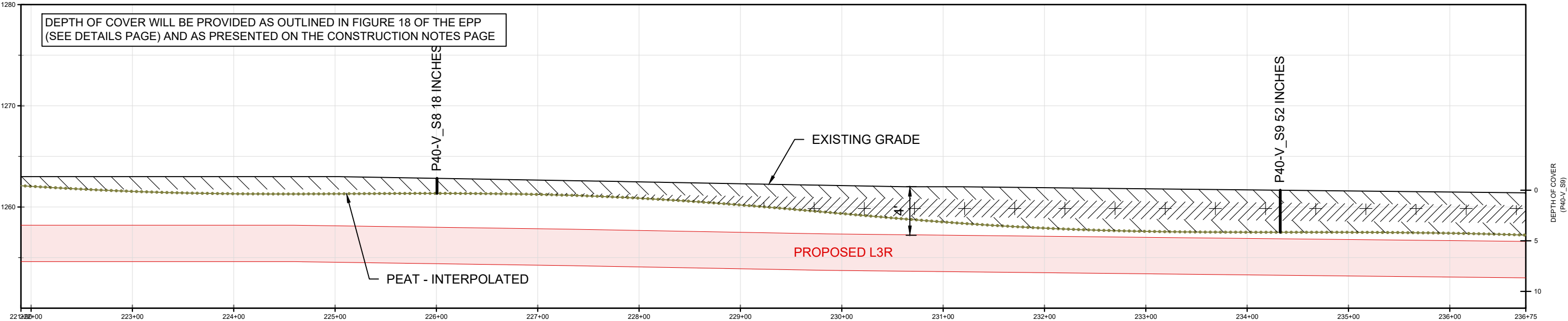
**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





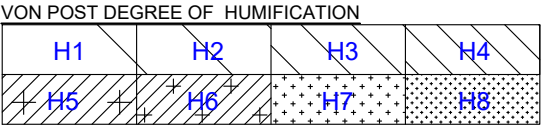
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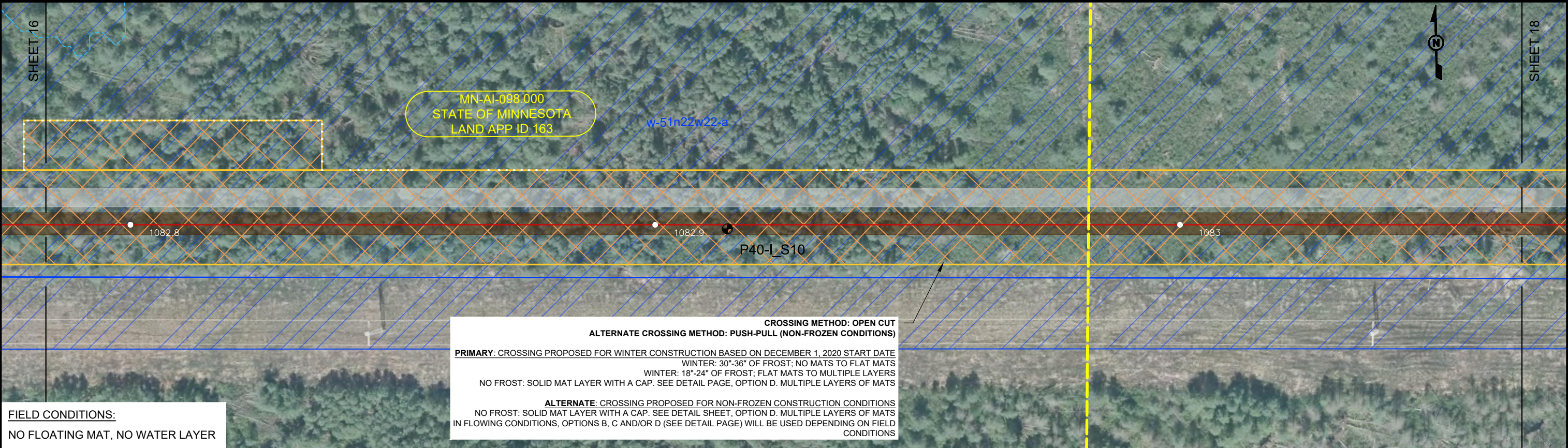
WETLAND / PEATLAND CONSTRUCTION PLAN  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 143 - 169  
AITKIN COUNTY, MINNESOTA / S23-T51N-R22W



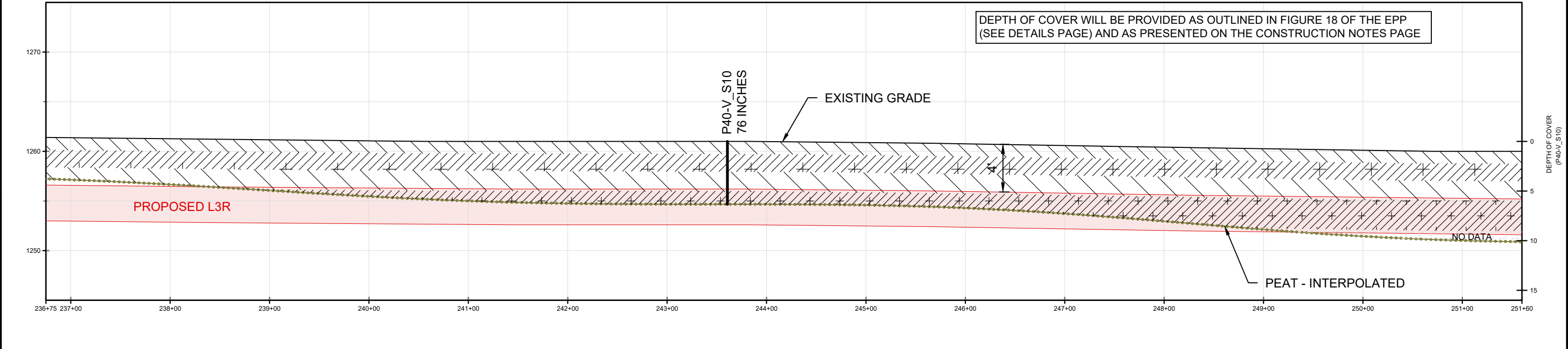
- LEGEND**
- PROPOSED LINE 3 REPLACEMENT
  - PROPOSED WORKSPACE
  - PEATLAND SURVEY BOUNDARY
  - PEAT
  - DELINEATED WATERBODY
  - MDNR 40 BOUNDARIES
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  - INVASIVE SPECIES
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**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 143 - 169  
AITKIN COUNTY, MINNESOTA / S23-T51N-R22W

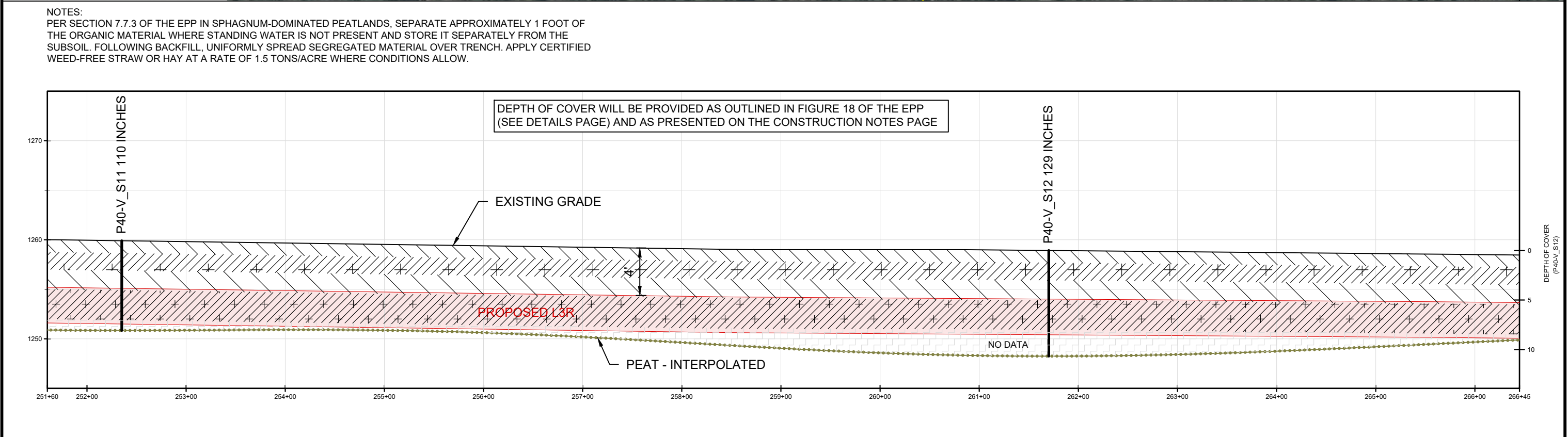
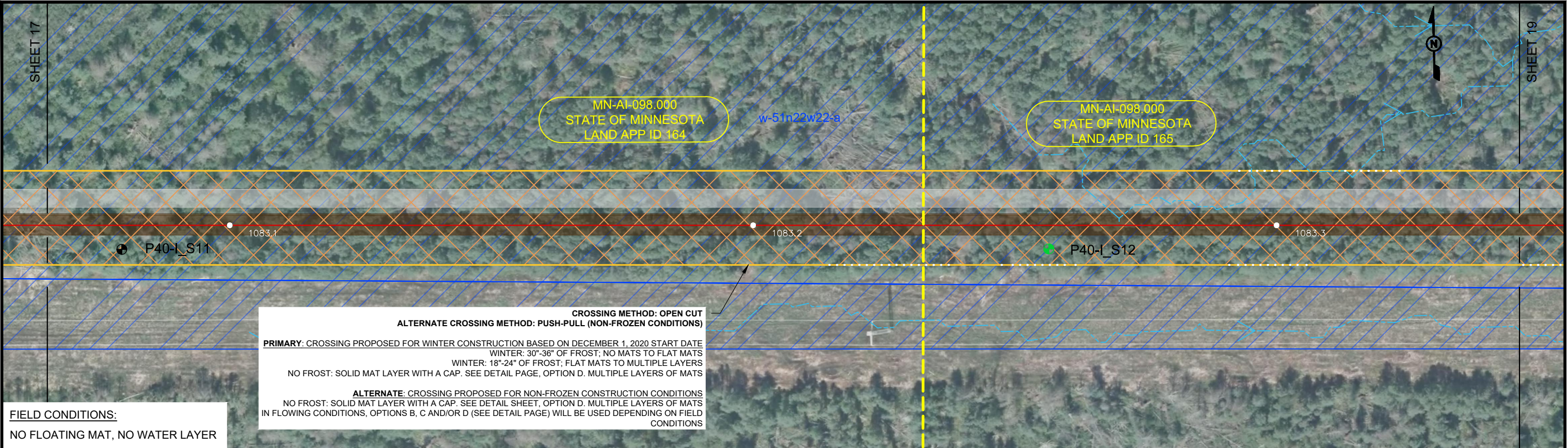
**LEGEND**

- PROPOSED LINE 3 REPLACEMENT
- PROPOSED WORKSPACE
- PEATLAND SURVEY BOUNDARY
- PEAT
- DELINEATED WATERBODY
- MDNR 40 BOUNDARIES
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**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8





### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 143 - 169  
AITKIN COUNTY, MINNESOTA / S23-T51N-R22W

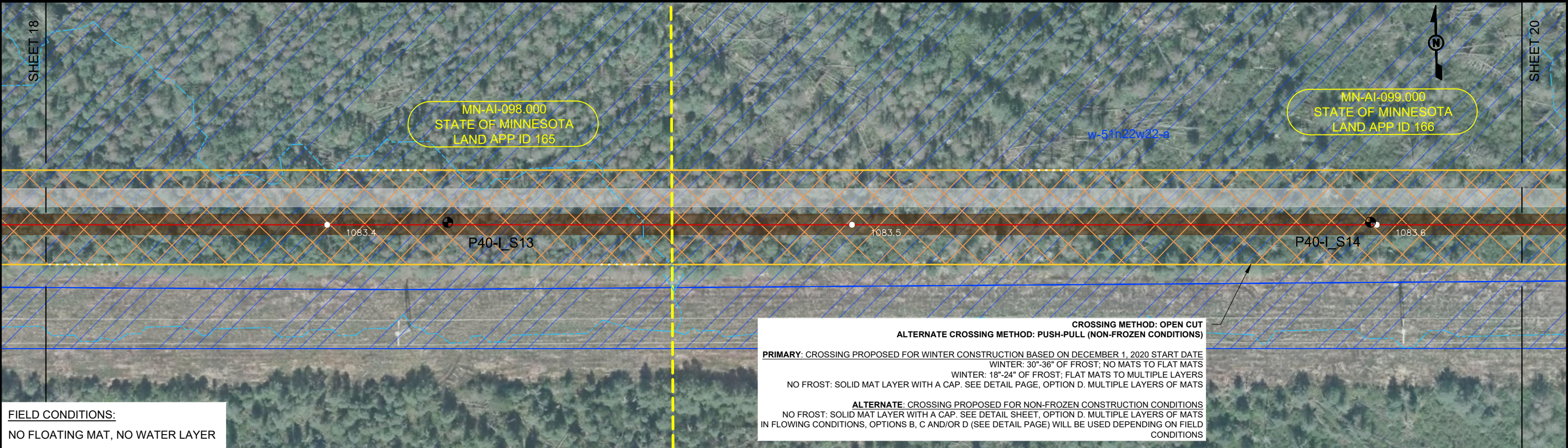
**LEGEND**

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- PROPOSED WORKSPACE
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- PEAT
- DELINEATED WATERBODY
- MDNR 40 BOUNDARIES
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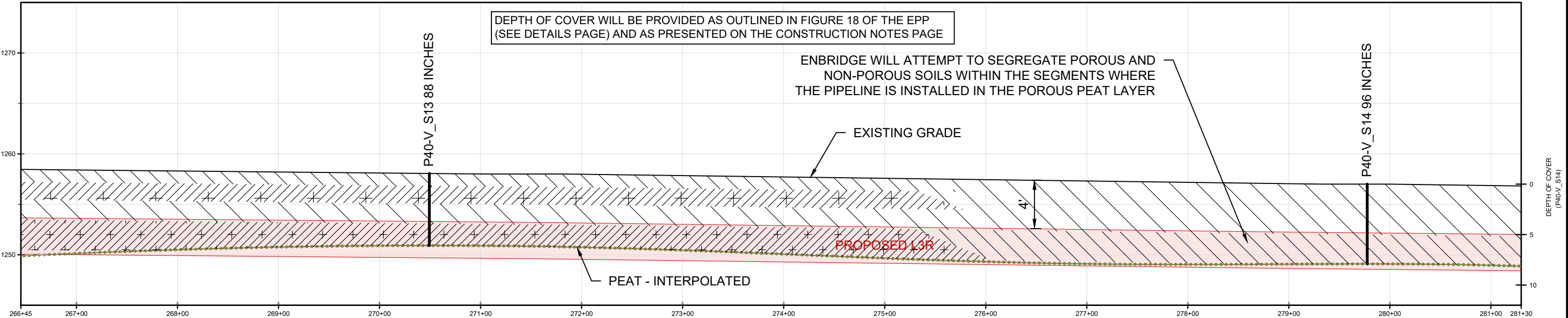
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H1	H2	H3	H4
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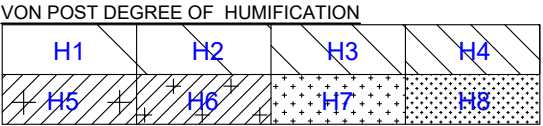
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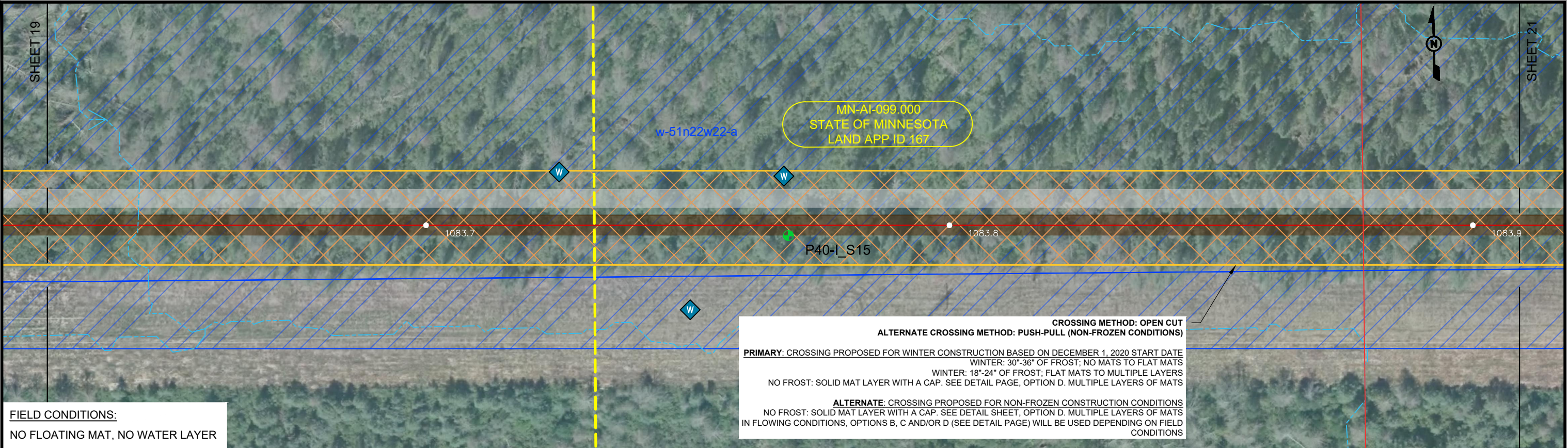
WETLAND / PEATLAND CONSTRUCTION PLAN  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 143 - 169  
AITKIN COUNTY, MINNESOTA / S23 & 24-T51N-R22W



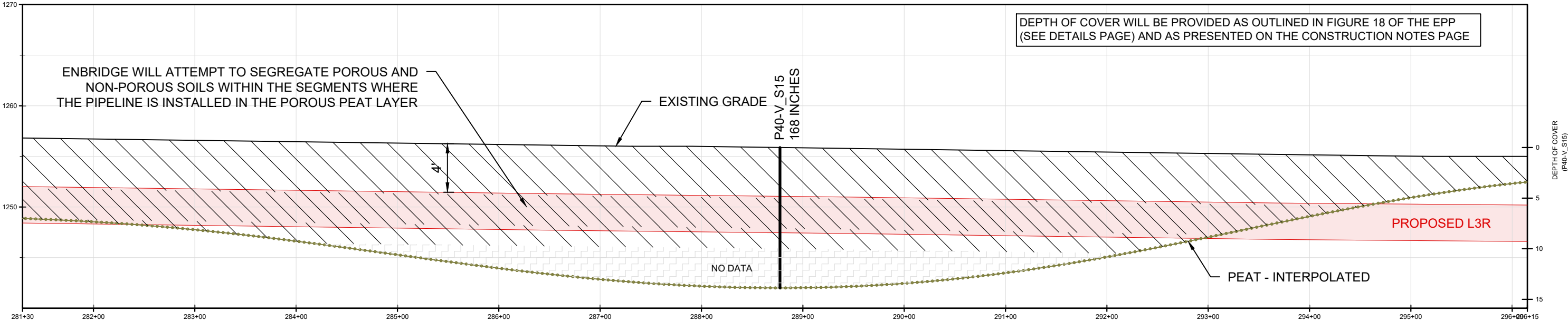
- LEGEND
- PROPOSED LINE 3 REPLACEMENT
  - PROPOSED WORKSPACE
  - PEATLAND SURVEY BOUNDARY
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  - DELINEATED WATERBODY
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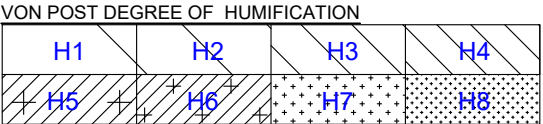


**WETLAND / PEATLAND CONSTRUCTION PLAN**  
MDNR PRIORITY AREAS ON PUBLIC LANDS  
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AITKIN COUNTY, MINNESOTA / S24-T51N-R22W

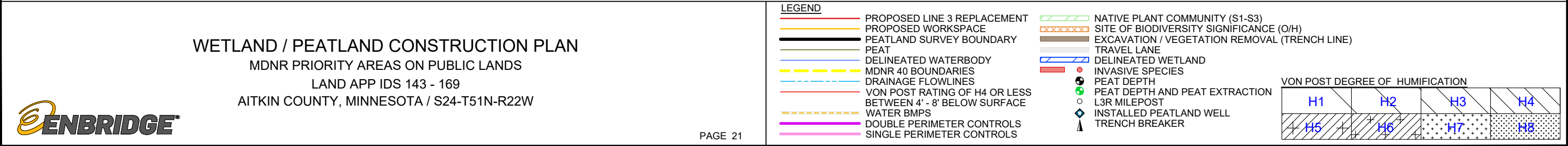
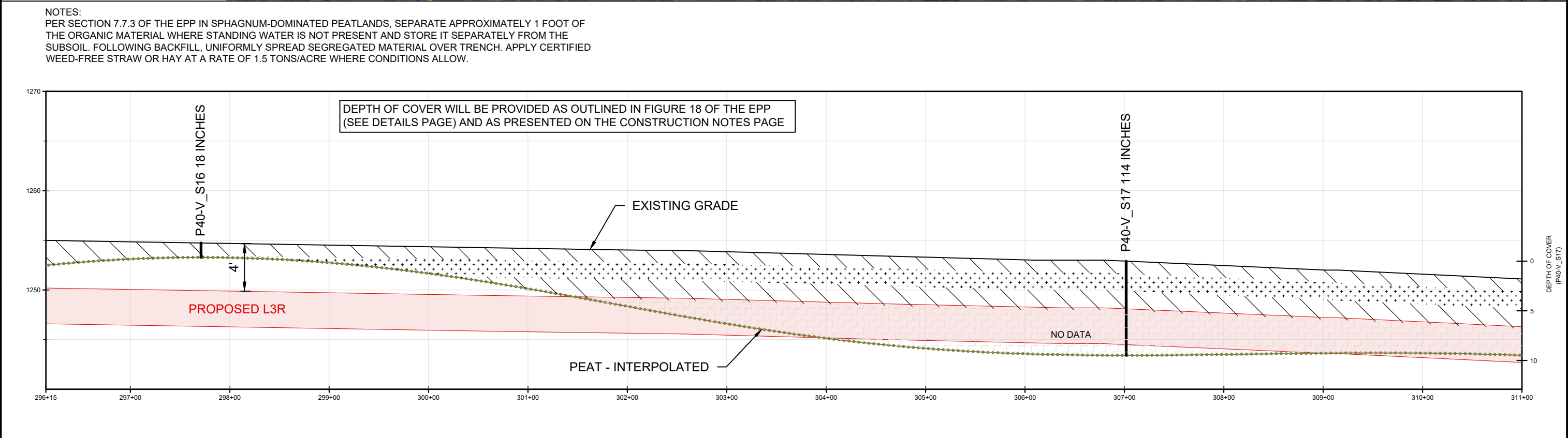
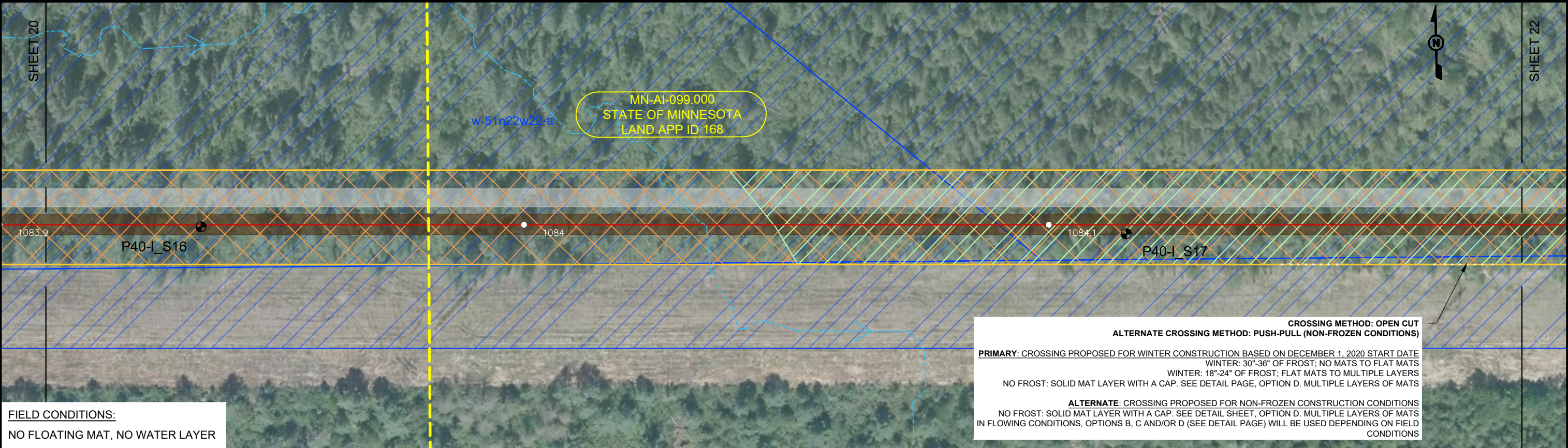


**LEGEND**

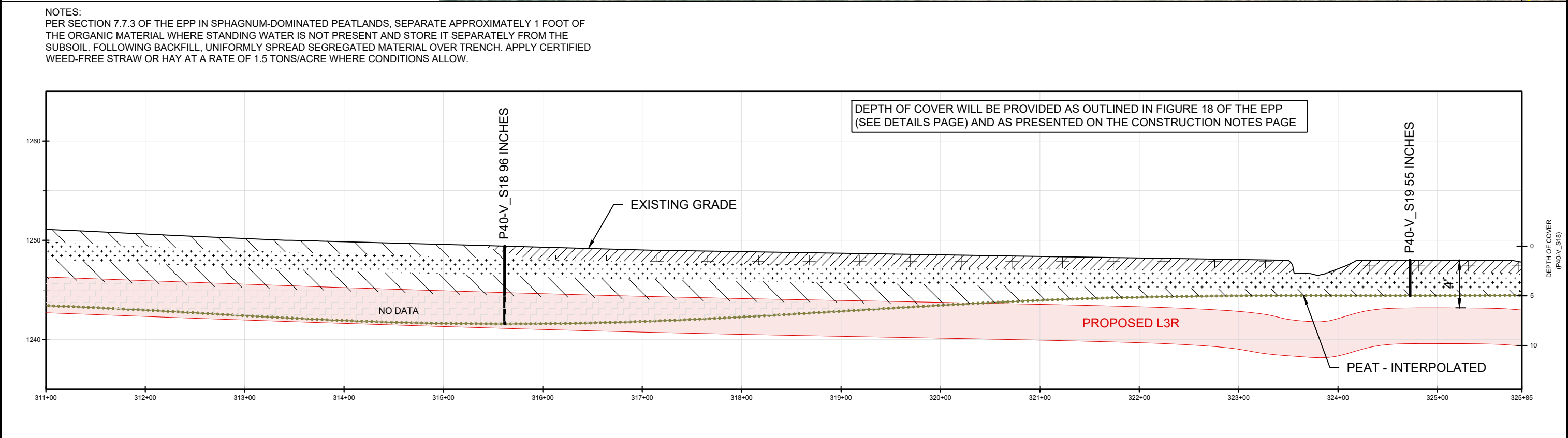
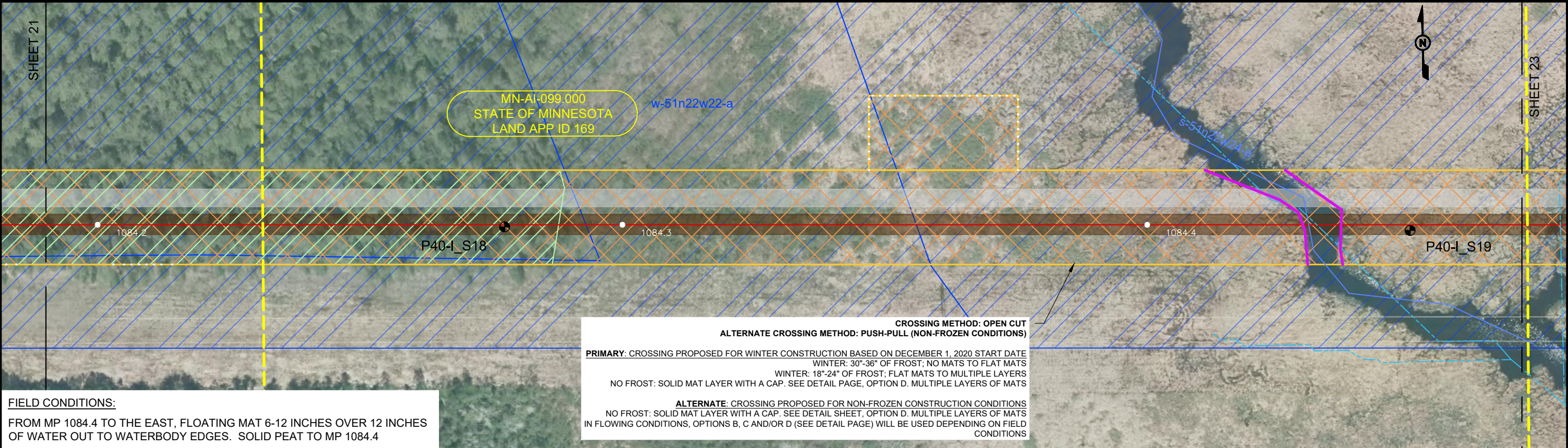
- PROPOSED LINE 3 REPLACEMENT
- PROPOSED WORKSPACE
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### WETLAND / PEATLAND CONSTRUCTION PLAN

MDNR PRIORITY AREAS ON PUBLIC LANDS  
LAND APP IDS 143 - 169  
AITKIN COUNTY, MINNESOTA / S24-T51N-R22W

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**LEGEND**

PROPOSED LINE 3 REPLACEMENT	NATIVE PLANT COMMUNITY (S1-S3)
PROPOSED WORKSPACE	SITE OF BIODIVERSITY SIGNIFICANCE (O/H)
PEATLAND SURVEY BOUNDARY	EXCAVATION / VEGETATION REMOVAL (TRENCH LINE)
PEAT	TRAVEL LANE
DELINEATED WATERBODY	DELINEATED WETLAND
MDNR 40 BOUNDARIES	INVASIVE SPECIES
DRAINAGE FLOWLINES	PEAT DEPTH
VON POST RATING OF H4 OR LESS BETWEEN 4' - 8' BELOW SURFACE	PEAT DEPTH AND PEAT EXTRACTION
WATER BMPS	L3R MILEPOST
DOUBLE PERIMETER CONTROLS	INSTALLED PEATLAND WELL
SINGLE PERIMETER CONTROLS	TRENCH BREAKER

**VON POST DEGREE OF HUMIFICATION**

H1	H2	H3	H4
H5	H6	H7	H8