



US Army Corps  
of Engineers  
St Paul District

APPLICANT:

Minnesota Department  
of Transportation  
(MnDOT), District 1;  
c/o Michael Kalnbach

## **Public Notice**

ISSUED: March 25, 2016

EXPIRES: April 25, 2016

REFER TO: MVP-2011-01891-SEW

SECTION:404 - Clean Water Act

1. APPLICATION FOR PERMIT TO discharge dredged and fill material into approximately 9.87 acres of wetlands and 0.024 acre (200 linear feet) of Armstrong River, to facilitate the reconstruction of approximately 5.7 miles of Trunk Highway (TH) 1/169 from approximately 0.3 mile west of Sixmile Lake Road to approximately 0.1 mile east of Bradach Road between the communities of Tower and Ely. The project would permanently impact 9.58 acres of wetlands, and temporarily impact 0.29 acre of wetlands.

### 2. SPECIFIC INFORMATION.

#### APPLICANT'S ADDRESS:

1123 Mesaba Avenue,  
Duluth, MN 55811

AGENT: SEH, c/o Jeffrey Olson

AGENT'S ADDRESS: 3535 Vadnais Center  
Drive, St. Paul, MN 55110-5196

PROJECT LOCATION: The project site is located in Sections 13 through 17 and Sections 19 through 21, T. 62N., R. 14W., St. Louis County, Minnesota. The approximate coordinates are 47.840679N., -92.152076W.

DESCRIPTION OF PROJECT: MnDOT proposes to reconstruct approximately 5.7 miles of TH 1/169 located between the communities of Tower and Ely, specifically beginning about 0.3 mile west of Sixmile Lake Road to approximately 0.1 acre east of Bradach Road, known as the "Eagles Nest Lake Improvement Project". In the project area, TH 1/169 is currently a 55 mile-per-hour (mph), two-lane undivided rural highway functionally classified as a minor arterial roadway. MnDOT states the project is needed to address long-term maintenance and safety concerns on this stretch of the TH 1/169. MnDOT has identified the primary needs of the project as infrastructure and safety improvements, and secondary needs as mobility maintenance and geometric design improvements. Crash data presented in MnDOT's 2014 Alternatives Development and Evaluation Technical Memorandum indicates this roadway segment has a relatively high proportion of lane departure crashes that could be reduced with safety improvements. The existing TH 1/169 roadway consists of two 12-foot wide travel lanes, 2-to-3 foot wide paved shoulders, 1-foot wide gravel shoulders, and sideslopes that vary between 1v:1h and 1v:3h. The shoulders are too narrow to provide a refuge area for vehicles that need to pull over in an emergency situation, and the sideslopes are too steep to allow for an errant vehicle to return to the roadway. The roadway segment also has areas of inadequate clear zone width.

The average daily traffic (ADT) volume on this segment of TH 1/169 is approximately 2,600 trips, though this can increase by more than two times that amount seasonally and on weekends due to recreational and industrial traffic. Existing intersections with other roadways are controlled with stop signs. There is a lack of turn lanes or shoulder bypass lanes at these intersections, with the exception

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of the intersection at County Road (CR) 28, resulting in safety concerns. The topography in the project area varies, and as a result, the highway alignment is generally rolling and includes several horizontal curves. There are 14 vertical curves and 11 horizontal curves that do not meet the minimum requirements for a 55 mph design speed, resulting in deficient stopping sight distance at various intersections and driveways. Also, passing is not allowed on approximately 4.2 miles of the roadway in either direction, and passing is limited to one direction for another mile in the project area; as such, passing opportunities are greatly restricted for almost the entire project length.

The new roadway would also be a 55-mph, rural, two-lane undivided highway section, consisting of two 12-foot wide travel lanes, 6-foot paved shoulders with two-foot gravel outside shoulders (for a total shoulder width of 8 feet), inslopes in the clear zone of 1v:4h, and a clear zone width of 48 to 62 feet from centerline, where feasible. For the western third of the project area, MnDOT proposes to reconstruct a portion of TH 1/169 on a new alignment located south of the existing roadway. The realigned segment would be approximately 2 miles, and would begin about a quarter mile east of the western project limit. The realigned segment would have extended passing opportunities in both directions. The new alignment would rejoin the existing alignment just east of milepost 271, which is located approximately one mile west of the intersection with CR 599 (Trygg Road), and from there, the project would continue along the existing alignment until the eastern terminus. The portion of the project on the existing alignment would include minor shifts of the roadway alignment to the north and south of the existing roadway in order to allow traffic to continue on TH 1/169 during the construction work. Once the new road is constructed, portions of the old highway that remain on the east side of the project would be removed and restored with native vegetation. On the west side of the project area in the realignment section, portions of existing TH 1/169 would remain to provide access to existing private properties, and would be turned back to local county or township jurisdiction. Other portions of the old TH 1/169 roadway in the realignment section may be converted to the Mesabi Regional Trail in the future, while other sections may be removed by MnDOT and restored to native vegetation. The construction of both the realignment segment and the segment on the existing alignment (with minor shifts) would require the removal of vegetation and bedrock excavation for construction.

There would be improvements completed at several intersections with TH 1/169 including Sixmile Lake Road, CR 599, CR 28 (Bear Head Lake State Park Road), and CR 408. Since the realigned portion of TH 1/169 would begin about 0.1 mile south of the existing intersection between TH 1/169 and Sixmile Lake Road, this intersection would be reconfigured by shifting it approximately 200 feet east of the existing location. The intersection would consist of a northwest-southeast connection to old TH 1 (referred to as "Old TH 1 West Connection") and a northwest-southeast connection to Sixmile Lake Road. The Old TH 1 West Connection would consist of two 12-foot travel lanes and four-foot paved shoulders to match the old TH 1 roadway. Inslopes would be 1v:6h in the clear zone, and 1v:3h outside the clear zone. Right turn lanes would be constructed from new westbound TH 1/169 to the Old TH 1 West Connection, and from the Old TH 1 West Connection to new westbound TH 1/169. At CR 599 and CR 128, which are about 0.2 mile apart, a designated 13-foot wide taper design center left turn lane would be installed between the eastbound and westbound travel lanes to serve the intersections at CR 599 and CR 128, as well as a driveway to a gravel pit located north of the intersection with CR 599. Twelve-foot right turn lanes with two-foot gravel shoulders would also be installed on TH 1/169 at the intersections with CR 599, the gravel pit driveway, and CR 128. Right turn lanes would also be added at the intersections with CR 408 (Mud Creek Road), Bobence Road, and Bradach Road. Other planned safety improvements include

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improved signage and rumble strips.

The project would require the replacement of the existing culvert that passes the Armstrong River under TH 1/169. The existing culvert is a 115-inch span by 72-inch rise reinforced concrete pipe arch culvert that is 107.63 feet long (including two aprons). It would be replaced with 132.96-foot long, 10-foot wide by 6-foot tall reinforced concrete box culvert with end sections and riprap placed at the inlet and outlet of the culvert. The new box culvert would be buried one foot below the existing bottom elevation of the river bed, which is 1453.9 feet. In this location, the road would be shifted slightly north of its existing alignment to allow construction under traffic, so the new culvert would be located slightly downstream of the existing culvert and would be slightly realigned to tie-in with the existing Armstrong Creek channel and new roadway realignment. The existing culvert would be removed and the area filled, permanently affecting 0.024 acre (200 linear feet) of the Armstrong Creek channel. The new channel area under the roadway would be about 0.032 acre and of similar length. A small amount of Wetland 7 (0.004 acre) would be affected at the downstream end of the culvert, and a small amount of Wetland 6 (0.003 acre) would be affected at the upstream end of the culvert.

**QUANTITY, TYPE, AND AREA OF FILL:** The project would result in approximately 9.44 acres of permanent wetland fill. These impacts would result from the realignment of a driveway on the west side of the project with TH 1/169 for safety purposes, construction of the “Old TH 1 West Connection” at the reconfigured intersection with Sixmile Lake Road, construction of TH 1/169 on a new alignment on the west side of the project, widening of TH 1/169 on the existing alignment (including minor shifts north and south of the roadway), and widening of TH 1/169 for the addition of a center turn lane and right turn lanes at CR 599 and CR 128.

The project would also involve the placement of approximately 0.15 acre of temporary fill for up to four months in Wetland 27 for the construction of a temporary road bypass; traffic would be diverted to the bypass to move traffic from the existing roadway onto the newly constructed roadway, and to allow construction work on the new mainline to continue without a detour. The bypass would consist of two 12-foot wide paved travel lanes with 2-foot wide gravel shoulders and 1v:3h sideslopes. Also, approximately 0.14 acre of Wetland 12 would be temporarily filled for the construction of a temporary bypass. The portion of the bypass in Wetland 12 would have a 12-foot paved driving surface with a 2-foot gravel shoulder and 1v:3h sideslopes. The fill for both bypasses in wetlands would be placed on top of a geotextile fabric overlain with one foot of wood chips.

Finally, the project would result in the placement of approximately 0.024 acre (200 linear feet) of fill in the Armstrong River to replace the existing culvert, as described above. A table of the proposed aquatic resource impacts is attached (“2011-01891-SEW, Table 1 of 2”), while the locations of each proposed impact are shown on the attached figures labeled “2011-01891-SEW, Figures 3 through 24 of 24”).

**VEGETATION IN AFFECTED AREA:** The project would result in permanent impacts to 9.58 acres of wetlands, including fill and excavation to the following wetland types: 0.01 acre of alder thicket, 1.04 acres of coniferous swamp, 1.66 acres of hardwood swamp, 3.51 acres of sedge meadow, 0.2 acre of shallow marsh, and 3.16 acres of wet meadow. Attached Table 2 shows the impacts broken out into fill and excavation by wetland type. MnDOT and FHWA’s December 2014 EA/EAW for this project states that approximately 75 acres of forest and 83 acres of brush/grassland/roadside ditch would be affected by the project, though these numbers may have been adjusted during project design. Since

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publication of the EA/EAW, MnDOT has reduced the area of wetlands that would be affected by more than one acre.

**SOURCE OF FILL MATERIAL:** MnDOT indicates that the source(s) of the fill material required to construct the new lanes would be determined by their selected contractor. MnDOT would require that the contractor use clean granular soils for embankment, and salvaged topsoil from the project area for final slope dressing. MnDOT's EA/EAW indicates some fill material may be obtained on-site, as excavation is required to construct the roadway.

**SURROUNDING LAND USE:** The project area is rural and consists mostly of open space, including forest, grassland, wetlands, lakes, and tributaries. In addition to wetlands and the Armstrong River, there are several water resources near the project area, including Fourmile Lake, Fivemile Lake, Sixmile Lake, Needle Boy Lake, Armstrong Lake, Clear Lake, Robinson Lake, the Eagles Nest Lakes the East Two River, and unnamed tributaries, among others. The community of Tower lies approximately 5 miles west along TH 1/169, and the community of Ely lies approximately 10 miles east along TH 1/169. As stated in MnDOT's EA/EAW for this project, there are no designated parts or trails within the immediate project area, though the eastern boundary of Vermilion Lake State Park is located about 0.5 miles northwest of the western project termini, and Bear Head Lake State Park is located several miles south of Highway 1/169. A public boat landing exists on the northern shore of Armstrong Lake, which is located south of TH 1/169 on the east side of the project.

**DESCRIPTION OF STRUCTURE:** See the above "Description of Project" for a description of the proposed TH 1/169 road section and the proposed box culvert replacement that would occur at the Armstrong River.

**DESCRIPTION OF DREDGING OR EXCAVATION:** The project would result in approximately 0.14 acre of permanent excavation (referred to as "cut" impacts) in wetlands, affecting seven wetlands. The cut impacts would be two feet deep or less, and would occur to establish drainage along the reconstructed road sideslope and to allow proper drainage through centerline culverts. A permanent cut impact would also occur at Wetlands 6 and 7 the Armstrong River to facilitate the replacement of the existing culvert in this location. See "Vegetation in Affected Area" and Table 2 for information on the wetland types that would be affected. MnDOT's EA/EAW indicates the project would also require bedrock excavation to construct the new TH 160 roadway.

**THE FOLLOWING POTENTIALLY TOXIC MATERIALS COULD BE USED AT THE PROJECT SITE:** Construction of the project may involve potentially toxic materials from the use of equipment, such as fuels, lubricants, and solvents. Specific types of products, quantities, and specific applications of these materials were not provided with the application.

**THE FOLLOWING PRECAUTIONS TO PROTECT WATER QUALITY HAVE BEEN DESCRIBED BY THE APPLICANT:** The project would result in an increase in impervious surface, resulting in the need to treat stormwater runoff prior to discharge off-site, as required by the Minnesota Pollution Control Agency (MPCA). The downstream receiving waters in the project area are the Armstrong River, Armstrong Lake, Clear Lake, and several unnamed wetlands. MnDOT states that treatment of stormwater runoff from the roadway surface would be provided by infiltration and filtration areas that would be located along the project area. None of these filtration or infiltration areas would be constructed in aquatic resources, though several would be sited adjacent to existing

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aquatic resources. MnDOT's EA/EAW states vegetated (grass) roadside ditches would collect and convey stormwater runoff from the roadway to filtration and/or infiltration areas. Grassed road sideslopes and roadside ditches would also provide some treatment of stormwater. MnDOT indicates that silt fence would be utilized at the construction limits in the vicinity of wetlands and other aquatic resources to control erosion and to minimize sedimentation in aquatic resources during construction. MnDOT would also use other erosion control best management practices, such as the placement of wood fiber sediment control logs as check dams in proposed roadside ditch bottoms, which would slow the movement of water and allow sediments to settle prior to entering downstream receiving waters, and rapid stabilization of disturbed areas post-construction, including seeding with native seed mixes. The project would require a Stormwater Pollution Prevention Plan (SWPPP) to control erosion from the project area and a National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Phase II Permit from the MPCA, which requires both temporary and permanent erosion and sediment control measures. MnDOT states that erosion control measures would be in place and maintained throughout the entire construction period, and would not be removed until all disturbed areas have been stabilized.

MnDOT's EA/EAW also addresses water quality concerns related to the potential for acid rock drainage (ARD) resulting from the bedrock excavation that would be required to reconstruct TH 1/169. ARD refers to the sulfuric acid that is produced when sulfide minerals are exposed to air and water. ARD has the potential to release sulfuric acid and dissolved minerals into downstream waters. The EA/EAW indicates the project is situated within bedrock formations that contain sulfide-bearing minerals. As such, MnDOT has consulted with Pennsylvania and Tennessee DOTs to determine how the potential for ARD is handled in those states, and has worked with experts from the MnDNR, MPCA, and a consulting firm to develop a plan to identify, minimize, and mitigate potential effects to water quality from ARD. In consultation with these agencies, MnDOT has developed a plan and conducted additional drilling in the proposed project area in order to improve understanding of bedrock characteristics in the project area. MnDOT will then work with MPCA, MnDNR, and a consulting firm to develop a plan for excavating, handling, and the use of acid-producing rock found in the project area, and, if needed, the use of limestone or other neutralizing materials to minimize ARD. MnDOT, in consultation with MnDNR and MPCA, will also determine if monitoring of excavated materials and/or surface water chemistry in adjacent waterbodies is needed during and/or after construction.

**MITIGATION:** Regarding the proposed 0.15 acre of proposed temporary fill impacts in Wetland 27 and the 0.14 acre of proposed temporary fill impacts in Wetland 12 for the construction of two temporary bypasses: the portion of the bypasses that would not become part of the mainline TH 169 would be removed in their entirety, and the wetland areas would be restored to preconstruction contours and elevations within four months of impact. Any areas requiring seeding would be seeded with a native wetland seed mix. Since these impacts would be restored, compensatory mitigation is not proposed for the temporary wetland fill impacts.

The applicant proposes to provide compensatory mitigation for unavoidable permanent and adverse wetland impacts by debiting wetland credits from the Minnesota Wetland Bank via the Cooperative Wetland Replacement Program administered by the Minnesota Board of Water and Soil Resources. Specifically, the applicant proposes to debit MnDOT-owned wetland credits from the closest Corps-approved bank in Bank Service Area (BSA) 1. The project is located in BSA 2, major watershed 73 (Vermilion River watershed). Final mitigation requirements will be determined by the Corps

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following evaluation of the proposal. It is anticipated that wetland credits would be required from BSA 1, as MnDOT has no Corps-approved credits in BSA 2.

**3. REPLIES/COMMENTS.**

Interested parties are invited to submit to this office written facts, arguments, or objections within 30 days of the date of this notice. These statements should bear upon the suitability of the location and the adequacy of the project and should, if appropriate, suggest any changes believed to be desirable. Comments received may be forwarded to the applicant.

Replies may be addressed to Regulatory Branch, St. Paul District, Corps of Engineers, 180 Fifth Street East, Suite 700, Saint Paul, MN 55101-1678.

Or, IF YOU HAVE QUESTIONS ABOUT THE PROJECT, call Sarah Wingert at the St. Paul office of the Corps, telephone number (651) 290-5358.

To receive Public Notices by e-mail, go to: [http://mvp-extstp.mvp.usace.army.mil/list\\_server/](http://mvp-extstp.mvp.usace.army.mil/list_server/) and add your information in the New Registration Box.

**4. FEDERALLY-LISTED THREATENED OR ENDANGERED WILDLIFE OR PLANTS OR THEIR CRITICAL HABITAT.**

St. Louis County is within the known or historic range of the following Federally-listed threatened (T) and endangered (E) species:

<u>Species</u>	<u>Habitat</u>
Canada Lynx (T) and its critical habitat	Northern forest
Gray Wolf (T)	Northern forest
Northern Long-Eared Bat (T)	Hibernates in caves and mines, swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
Piping Plover (E) and its critical habitat	Sandy beaches, islands
Rufa Red Knot (T)	Coastal areas along Lake Superior

This application is being coordinated with the U.S. Fish and Wildlife Service (FWS). Any comments it may have concerning Federally-listed threatened or endangered wildlife or plants or their critical habitat will be considered in our final assessment of the described work. MnDOT, on behalf of the FHWA, has made a determination of “no effect” for the piping plover and its critical habitat, “no effect” for the rufa red knot, and “may affect, not likely to adversely affect” for the Canada lynx and the gray wolf and any associated critical habitat. FWS concurred with MnDOT’s “may affect, not likely to adversely affect” determinations for the Canada lynx on December 16, 2014 and the gray wolf on March 10, 2015. MnDOT also anticipates a determination of “may affect, not likely to adversely affect” for the northern long-eared bat, and has been working with FWS on this determination.

**5. JURISDICTION.**

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This application is being reviewed in accordance with current practices for documenting Corps jurisdiction under Section(s) 9 & 10 of the Rivers and Harbor Act of 1899 and Section 404 of the Clean Water Act.

We have made a preliminary determination that the aquatic resources that would be impacted by the proposed project are subject to Corps of Engineers jurisdiction under Section(s) 9 & 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act. If an approved jurisdictional determination is completed as part of the review process for this application, a copy will be posted on the St. Paul District web page at the following link:

<http://www.mvp.usace.army.mil/Missions/Regulatory.aspx>.

THE APPLICANT HAS STATED THAT THE FOLLOWING STATE, COUNTY, AND/OR LOCAL PERMITS HAVE BEEN APPLIED FOR/ISSUED: 1) A Public Waters Work Permit for the culvert replacement at Armstrong River and potentially a Water Appropriations Permit from Minnesota Department of Natural Resources; 2) a Minnesota Wetland Conservation Act Wetland Replacement Plan approval from MnDOT; and 3) a NPDES Construction Stormwater Phase II Permit from MPCA.

### **6. STATE SECTION 401 WATER QUALITY CERTIFICATION.**

Valid Section 404 permits cannot be issued for any activity unless state water quality certification for the activity is granted or waived pursuant to Section 401 of the Clean Water Act. The state Section 401 authority in Minnesota is the Minnesota Pollution Control Agency (MPCA). The St. Paul District has provided this public notice and a copy of the applicant's Section 404 permit application form to the MPCA. If MPCA needs any additional information in order for the Section 401 application to be considered complete by MPCA, the MPCA has indicated that it will request such information from the applicant. It is the permit applicant's responsibility to ensure that the MPCA has received a valid, complete application for state Section 401 certification and to obtain a final Section 401 action from the MPCA.

The MPCA has indicated that this public notice serves as its public notice of the application for Section 401 water quality certification under Minnesota Rules Part 7001. The MPCA has also indicated that the Section 401 process shall begin to commence upon the issuance date of this public notice unless the MPCA notifies both the St. Paul District and the permit applicant to the contrary, in writing, before the expiration date of this public notice.

Any comments relative to MPCA's Section 401 Certification for the activity proposed in this public notice may be sent to:

Minnesota Pollution Control Agency, Resource Management and Assistance Division,  
Attention: 401 Certification, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

### **7. HISTORICAL/ARCHAEOLOGICAL.**

MnDOT, on behalf of FHWA, has completed the Section 106 National Historic Preservation Act review for this project, as FHWA is the lead federal agency for this project. MnDOT's Cultural Resource Unit reviewed the entire construction limits for this project for potential impacts to historic properties, and determined in December 2014 that there would be no historic properties affected by the

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proposed project. A Phase 1 archaeological survey was completed in 2007 along approximately 4.5 miles of TH 169 in the project area. MnDOT's December 2014 determination indicates there are no previously recorded historic sites with the project limits, and that the project has low potential to impact archaeological resources because a significant portion of the project would occur in bedrock areas. MnDOT also concluded the project would not impact any architectural history properties.

This public notice is being sent to the National Park Service and the State Archaeologist for their comments.

### **8. PUBLIC HEARING REQUESTS.**

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, in detail, the reasons for holding a public hearing. A request may be denied if substantive reasons for holding a hearing are not provided or if there is otherwise no valid interest to be served.

### **9. PUBLIC INTEREST REVIEW.**

The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production and, in general, the needs and welfare of the people. Environmental and other documents will be available for review in the St. Paul District Office.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Chad Konickson  
Chief, Technical Services Section

Enclosures

**NOTICE TO EDITORS:** This public notice is provided as background information and is not a request or contract for publication.

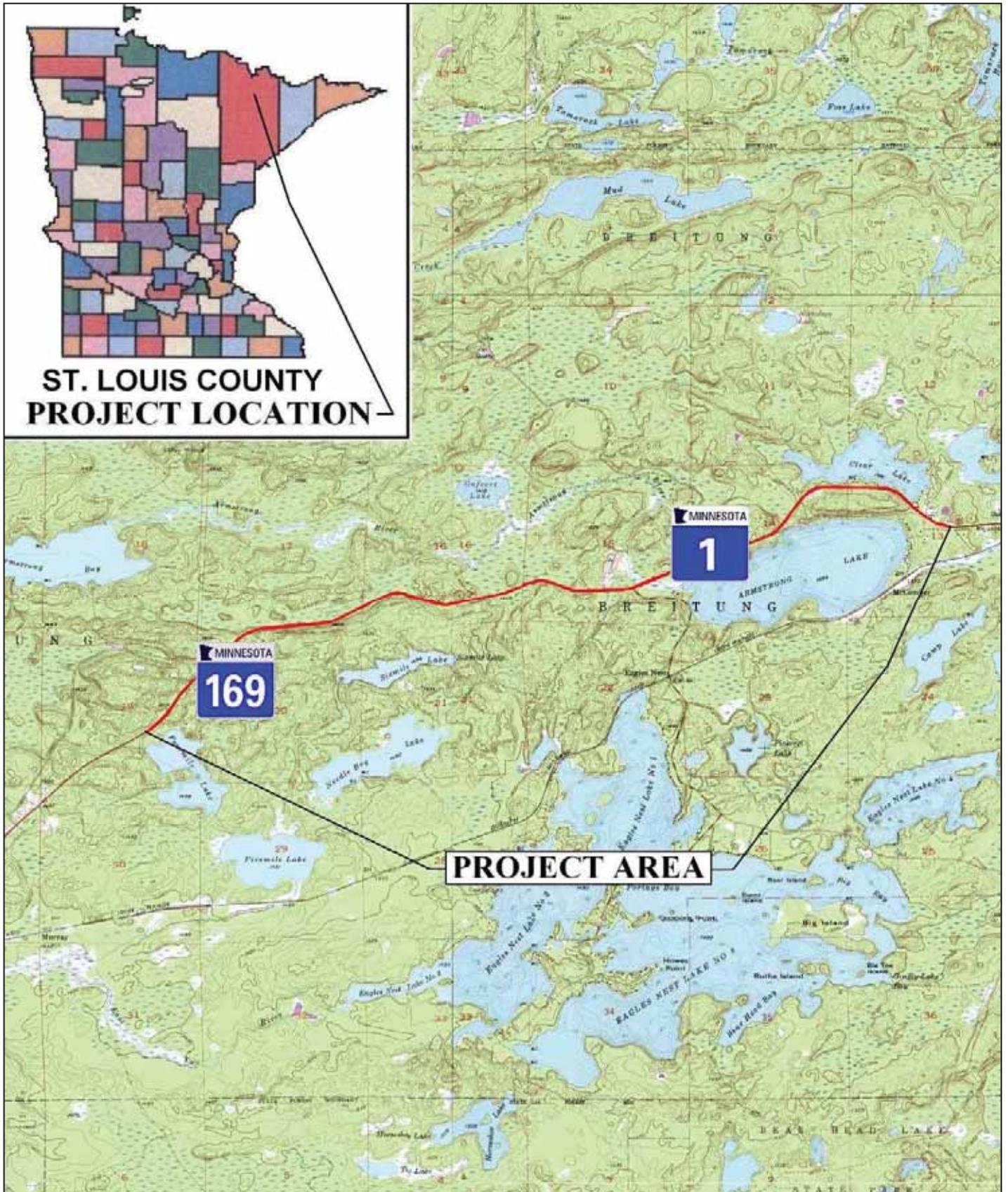
2011-01891-SEW, Table 1 of 2: Proposed Aquatic Resource Impacts

Aquatic Resource ID (as noted on overhead view)	Aquatic Resource Type (wetland, lake, tributary etc.)	Permanent Fill Impact (ac)	Permanent Cut Impact (ac)	Temporary Fill Impact (acre)	Total Impact (acre)	Overall Size of Aquatic Resource (ac)	Existing Plant Community Type(s) in Impact Area
1	wetland	0.17	0	0	0.17	4.66+	shallow marsh
1	wetland	0.03	0	0	0.03	4.66+	sedge meadow
6	wetland (fringe of Armstrong River)	0	0.003	0	0.003	6.54+	sedge meadow
7	wetland	2.25	0.03	0	2.28	6.22+	sedge meadow
Armstrong River	tributary	0.024	0	0	0.024	(200 linear feet)	n/a
10	wetland	0.84	0	0	0.84	6.31+	wet meadow
10	wetland	0.39	0	0	0.39	6.31+	hardwood swamp
11	wetland	0.04	0.02	0	0.06	2.01+	wet meadow
12	wetland	0.88	0.02	0.14 (four months max)	1.04	4.44+	hardwood swamp
13	wetland	1.86	0	0	1.86	2.74+	wet meadow
14	wetland	0.08	0	0	0.08	0.84+	hardwood swamp
15	wetland	0	0	0	0	0.67+	hardwood swamp
16	wetland	0.03	0	0	0.03	0.04	shallow marsh
17	wetland	0	0	0	0	0.50+	sedge meadow/open bog
21	wetland	0.16	0	0	0.16	0.58+	wet meadow
21	wetland	0.01	0	0	0.01	0.58+	alder thicket
22	wetland	0.07	0	0	0.07	0.71+	hardwood swamp
23	wetland	0.11	0	0	0.11	0.45+	coniferous swamp
24	wetland	0.27	0	0	0.27	0.27	coniferous swamp
25	wetland	0.2	0	0	0.2	0.60+	coniferous swamp
26	wetland	0.21	0	0	0.21	0.73+	sedge meadow
26	wetland	0.07	0	0	0.07	0.73+	hardwood swamp
27	wetland	0.53	0	0.15 (four months max)	0.68	0.94+	sedge meadow
28	wetland	0	0.01	0	0.01	0.06+	sedge meadow
29	wetland	0.45	0	0	0.45	0.64+	sedge meadow
31	wetland (fringe of Four Mile Lake)	0.03	0	0	0.03	0.37+	hardwood swamp
32	wetland	0	0	0	0	0.64+	hardwood swamp
33	wetland	0.15	0	0	0.15	1.12+	wet meadow
34	wetland roadside ditch	0.047	0.044	0	0.091	1.15+	wet meadow
35	wetland	0.446	0.014	0	0.46	0.5	coniferous swamp
47	wetland	0.12	0	0	0.12	0.17+	hardwood swamp
	<b>Totals</b>	<b>9.47</b>	<b>0.14</b>	<b>0.29</b>	<b>9.90</b>		
<b>Proposed Permanent Wetland Fill Impacts: 9.44 acres</b>							
<b>Proposed Permanent Wetland Cut Impacts: 0.14 acre</b>							
<b>Proposed Temporary Wetland Fill Impacts: 0.29 acre</b>							
<b>Proposed Permanent Tributary Fill Impacts: 0.024 acre</b>							
<b>TOTAL IMPACTS: 9.90 acres</b>							

2011-01891-SEW, Table 2 of 2: Wetland Impacts by Type

<b>Wetland Type</b>	<b>Permanent Fill (acre)</b>	<b>Permanent Excavation (acre)</b>	<b>Temporary Fill (acre)</b>	<b>Totals</b>
alder thicket	0.01	0	0	<i>0.01</i>
coniferous swamp	1.026	0.014	0	<i>1.04</i>
hardwood swamp	1.64	0.02	0.14	<i>1.8</i>
sedge meadow	3.47	0.043	0.15	<i>3.663</i>
shallow marsh	0.2	0	0	<i>0.2</i>
wet meadow	3.097	0.064	0	<i>3.161</i>
<b><i>Totals</i></b>	<b><i>9.44</i></b>	<b><i>0.14</i></b>	<b><i>0.29</i></b>	<b><i>9.87</i></b>

Figure 1 – State/County and USGS Location Map



2011-01891-SEW,  
 Figure 2 of 24:  
 Delineated Wetlands  
 in the Project Area

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**Legend**

- Original Study Area (May 2011)
- Delineated Wetlands (May 2011)
- Updated Study Area (August 2012)
- Wetland Boundary (August 2012)
- Wetland 47 (October 2012)

0 0.25 0.5 0.75 1 Miles

**SEH**  
 418 W. SUPERIOR ST., SUITE 200  
 DULUTH, MN 55802-1512  
 PHONE: (218) 279-3000  
 FAX: (888) 908-8166  
 TTY: (888) 722-2547  
 www.sehinc.com

Project: MNT01 114996  
 Print Date: 5/14/2013

Made by: seh  
 Projection: UTM Zone 15 NAD83  
 Source: MNDNR, MNDOT, SEHinc  
 Background: MNDNR 2009

**Wetland Delineations and Study Areas**  
 TH 1/169 Eagles Nest Lake Area Project  
 St. Louis County, Minnesota

Figure  
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This map is neither a legally recorded nor a survey map, and it is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources based on the map and it is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring accurate measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be held liable for any damages which arise out of the user's reliance on use of this product.



2011-01891-SEW,  
Figure 4 of 24:  
Aquatic Resource  
Impact Maps

**LEGEND**

- EXISTING WETLAND DETERMINATION
- WETLAND TYPE 7
- WETLAND TYPE 2
- WETLAND TYPE 6
- WETLAND TYPE 3
- WETLAND FILL
- GRUBBING AREA

NOTE: IF WETLAND IS NOT CROSS HATCHED IT DESIGNATES A WETLAND CUT

Wetland #34  
Type 2  
Area = 0.09 acres  
Fill = 0.046 acres  
Cut = 0.044 acres

Wetland #35 (1)  
Type 2  
Area = Avoided  
Fill = Avoided

Wetland #35  
Type 7  
Area = 0.46 acres  
Fill = 0.446 acres  
Cut = 0.014 acres

CONST18

32" X 61" RCP  
INCLUDES APRONS

CONST18  
22" X 30.61" P 30" X 100" RCP DES 3006  
+ 2 APRONS & SAFETY GRATE (INLET)  
(SKEWED 1° LT)

CONST18  
0.04" X 95" RCP  
P 1.4" X 17.46" RCP  
+ 2 APRONS & 1 SAFETY GRATE (INLET)  
(SKEWED 7° RT)

Wetland #32 (2)  
Type 7  
Area = Avoided  
Fill = Avoided

Wetland #31  
Type 7  
Area = 0.03 acres  
Fill = 0.03 acres

(1) THIS WETLAND CONTINUES ON NEXT SHEET.  
ACREAGE IS TOTAL FOR THE ENTIRE AREA.

(2) THIS WETLAND CONTINUES ON PREVIOUS SHEET.  
ACREAGE IS FOR BOTH TYPE 7 WETLAND AREAS.

I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 21-MAR-2016, LIC. NO. 48799 ENGINEER *RFC*

**WETLAND IMPACTS**

STATE PROJ. NO. 6904-46 (TH 1) SHEET NO. 2 OF 22 SHEETS

PLOTTED/REVISED: 21-MAR-2016

DISTRICT #: District 1  
PLOT NAME: rsw\_wet11  
PATH & FILENAME: \\P:\MP\6904\6904\Draw\_wet11.dgn

2011-01891-SEW,  
Figure 5 of 24:  
Aquatic Resource  
Impact Maps

Wetland #34  
Type 2  
Area = 0.001 acres  
Fill = 0.001 acres

Wetland #33  
Type 2  
Area = 0.15 acres  
Fill = 0.15 acres

Wetland #35  
Type 2  
Area = Avoided  
Fill = Avoided

Ⓢ THIS WETLAND CONTINUES ON PREVIOUS SHEET  
ACREAGE IS TOTAL FOR THE ENTIRE AREA.

**LEGEND**

- EXISTING WETLAND BOUNDARY
- WETLAND TYPE 7
- WETLAND TYPE 2
- WETLAND TYPE 6
- WETLAND TYPE 3
- GRUBBING AREA
- WETLAND FILL

NOTE: IF WETLAND IS NOT CROSS HATCHED IT DESIGNATES A WETLAND CUT

I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
DATE 21-MAR-2016, LIC. NO. 48799 ENGINEER *R. K. R.*

**WETLAND IMPACTS**

STATE PROJ. NO. 6904-46 (TH 1) SHEET NO. 3 OF 22 SHEETS

PLOTTED/REVISED: 21-MAR-2016

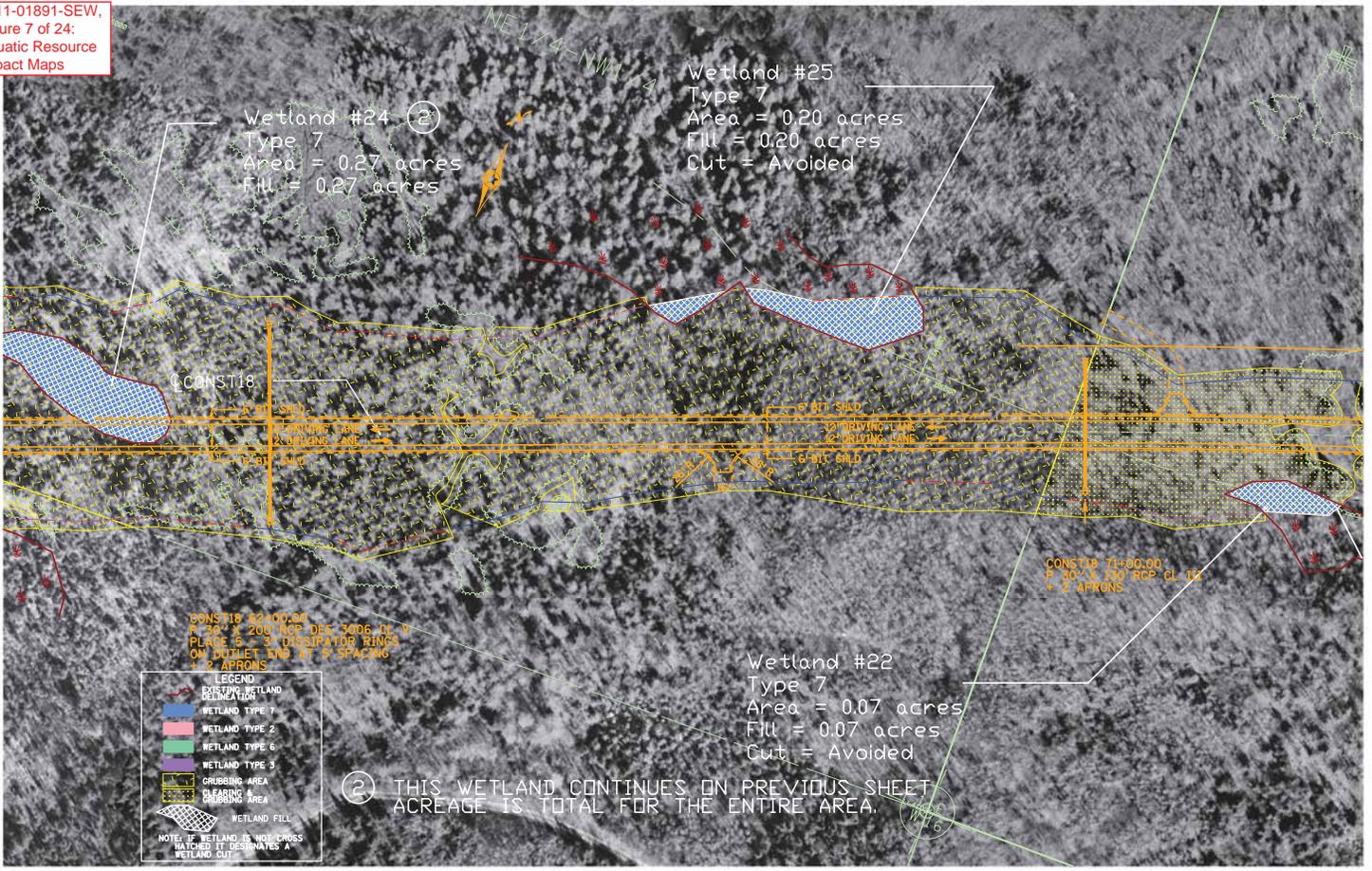
DISTRICT #: District 1  
PLOT NAME: rfw\_aws#2  
PATH & FILENAME: \\P:\MP\67505\Draw\_aws1.dgn



2011-01891-SEW,  
Figure 7 of 24:  
Aquatic Resource  
Impact Maps

PLOTTED/REVISED: 21-MAR-2016

DISTRICT #: District 1  
PLOT NAME: rfw\_aws4  
PATH & FILENAME: \\P:\P\67505\Drawings\aw4.dgn



I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
DATE 21-MAR-2016, LIC. NO. 48799 ENGINEER *RFC*

WETLAND IMPACTS

STATE PROJ. NO. 6904-46 (TH 1) SHEET NO. 5 OF 22 SHEETS

2011-01891-SEW,  
Figure 8 of 24:  
Aquatic Resource  
Impact Maps

PLOTTED/REVISED: 21-MAR-2016

**LEGEND**

- EXISTING WETLAND
- WETLAND TYPE 7
- WETLAND TYPE 2
- WETLAND TYPE 6
- WETLAND TYPE 3
- WETLAND TYPE 1
- WETLAND FILL

NOTES: IF WETLAND IS NOT CROSS MATCHED IT DESIGNATES A WETLAND CUT.

EXCESS TAKING PARCEL 5  
11.51 ACRES

CGONST18

WETLAND #24  
Type 2  
Area = 0.01 acres  
Fill = 0.01 acres  
Cut = 0.01 acres

Wetland #22 (2)  
Type 7  
Area = 0.07 acres  
Fill = 0.07 acres  
Cut = Avoided

Wetland #21  
Type 2  
Area = 0.16 acres  
Fill = 0.16 acres  
Cut = Avoided

Wetland #21  
Type 6  
Area = 0.01 acres  
Fill = 0.01 acres

(2) THIS WETLAND CONTINUES ON PREVIOUS SHEET  
ACREAGE IS TOTAL FOR THE ENTIRE AREA.

DISTRICT: District 1  
PLOT NAME: 19W-1466  
PATH & FILENAME: P:\19W\19W1466\19W1466.dgn

I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.  
DATE: 21-MAR-2016, LIC. NO. 48799, ENGINEER: *[Signature]*

**WETLAND IMPACTS**

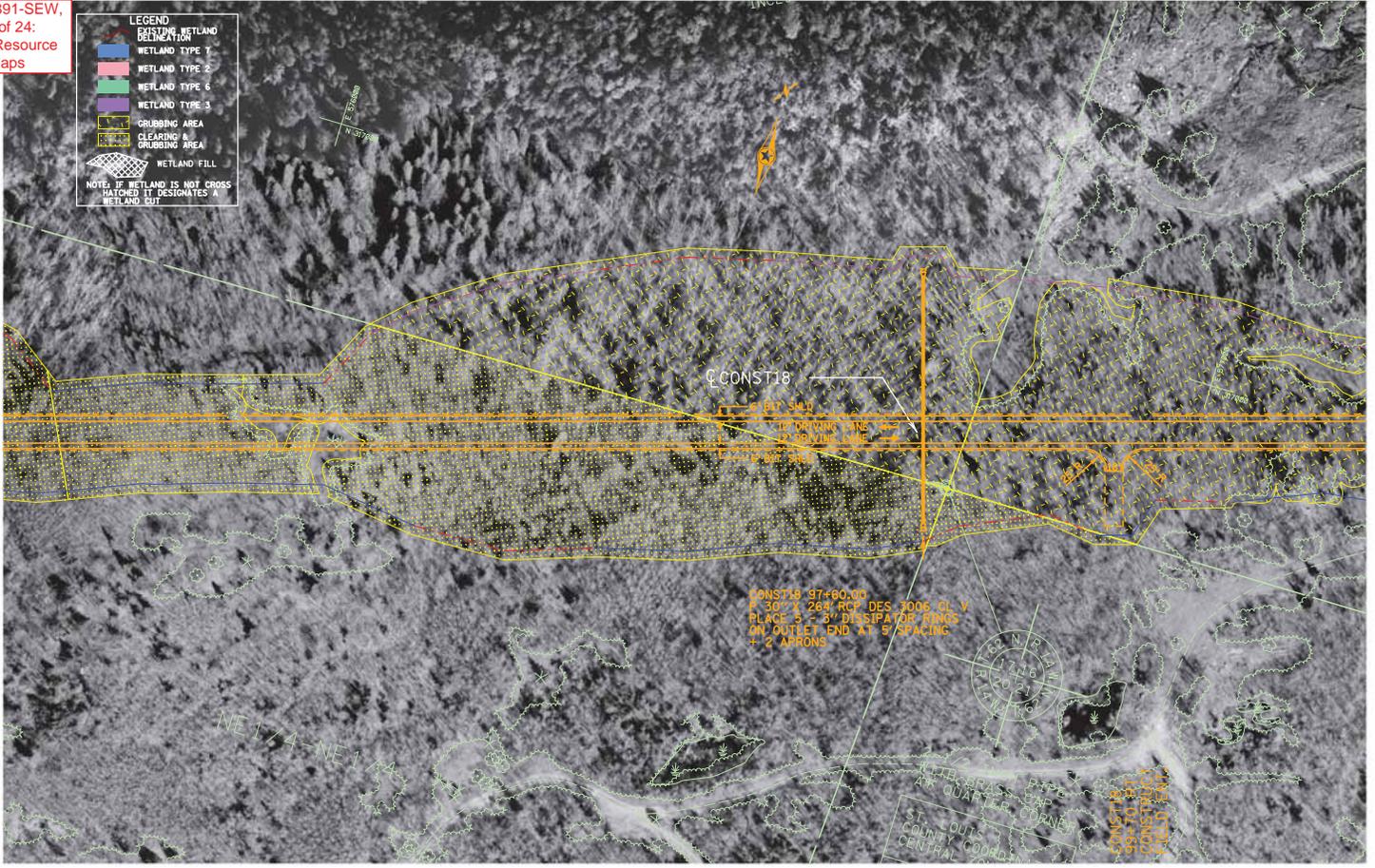
2011-01891-SEW,  
Figure 9 of 24:  
Aquatic Resource  
Impact Maps

PLOTTED/REVISED: 21-MAR-2016

**LEGEND**

- EXISTING WETLAND DELINEATION
- WETLAND TYPE 1
- WETLAND TYPE 2
- WETLAND TYPE 6
- WETLAND TYPE 3
- GRUBBING AREA
- CLEARING & GRUBBING AREA
- WETLAND FILL

NOTE: IF WETLAND IS NOT CROSS HATCHED IT DESIGNATES A WETLAND CUT



DISTRICT #: District 1  
PLOT NAME: rsw\_aws61  
PATH & FILENAME: ip\_20160325000000\_aws61.dgn

I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
DATE 21-MAR-2016, LIC. NO. 48799 ENGINEER *R. K. K.*

**WETLAND IMPACTS**

STATE PROJ. NO. 6904-46 (TH 1) SHEET NO. 7 OF 22 SHEETS

2011-01891-SEW,  
Figure 10 of 24:  
Aquatic Resource  
Impact Maps

**LEGEND**

- EXISTING WETLAND DELINEATION
- WETLAND TYPE 7
- WETLAND TYPE 2
- WETLAND TYPE 6
- WETLAND TYPE 3
- CRIBBING AREA
- WETLAND FILL

NOTE: IF WETLAND IS NOT CROSS HATCHED IT DESIGNATES A WETLAND CUT

Wetland #14  
Type 7  
Area = 0.08 acres  
Fill = 0.08 acres

Wetland #16  
Type 3  
Area = 0.03 acres  
Fill = 0.03 acres  
Cut = Avoided

Wetland #15  
Type 7  
Area = Avoided  
Fill = Avoided  
Cut = Avoided

Wetland #17  
Type 2  
Area = Avoided  
Cut = Avoided

PLOTTED/REVISED: 21-MAR-2016

DISTRICT #: District 1  
PLOT NAME: rrw\_aws62  
PATH & FILENAME: \\P:\MP\67505\Draw\_aws62.dgn

I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
DATE 21-MAR-2016, LIC. NO. 48799 ENGINEER *R. K. K.*

**WETLAND IMPACTS**

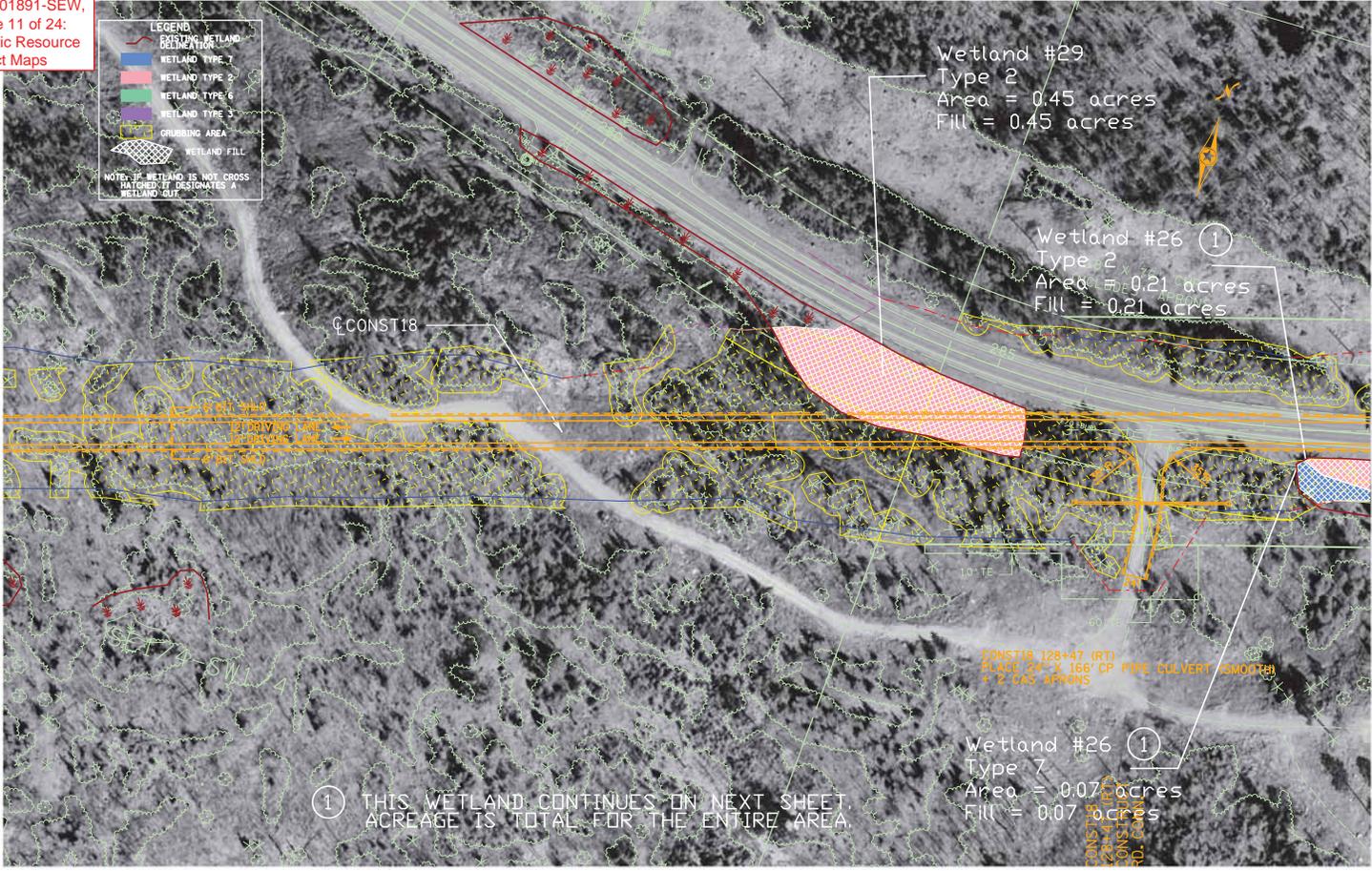
STATE PROJ. NO. 6904-46 (TH 1) SHEET NO. 8 OF 22 SHEETS

2011-01891-SEW,  
 Figure 11 of 24:  
 Aquatic Resource  
 Impact Maps

**LEGEND**

- EXISTING WETLAND
- WETLAND TYPE 7
- WETLAND TYPE 2
- WETLAND TYPE 6
- WETLAND TYPE 3
- GRUBBING AREA
- WETLAND FILL

NOTE: IF WETLAND IS NOT CROSS HATCHED IT DESIGNATES A WETLAND OUT



Wetland #29  
 Type 2  
 Area = 0.45 acres  
 Fill = 0.45 acres

Wetland #26 ①  
 Type 2  
 Area = 0.21 acres  
 Fill = 0.21 acres

① THIS WETLAND CONTINUES ON NEXT SHEET.  
 ACREAGE IS TOTAL FOR THE ENTIRE AREA.

CONST18 128+47 (RT)  
 24" DIA. X 166' CP PIPE ALLVERT (SMOOTH)  
 + 2' GAS APRONS

Wetland #26 ①  
 Type 7  
 Area = 0.07 acres  
 Fill = 0.07 acres

I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 21-MAR-2016, LIC. NO. 48799 ENGINEER *R. K. [Signature]*

**WETLAND IMPACTS**

STATE PROJ. NO. 6904-46 (TH 1) SHEET NO. 9 OF 22 SHEETS

DISTRICT #: District 1  
 PLOT NAME: rsw\_01891  
 PATH & FILENAME: \\P:\MP\6904\6904\Drawings\w11b.dgn  
 PLOTTED/REVISED: 21-MAR-2016

2011-01891-SEW,  
Figure 12 of 24:  
Aquatic Resource  
Impact Maps

**LEGEND**

- EXISTING WETLAND DELINEATION
- WETLAND TYPE 7
- WETLAND TYPE 2
- WETLAND TYPE 6
- WETLAND TYPE 3
- WETLAND TYPE 10A (TEMPORARY IMPACT GRABBING AREA)
- WETLAND FILL

NOTE: IF WETLAND IS NOT CROSS HATCHED IT INDICATES A WETLAND CUT

Wetland #27  
Type 2  
Area = 0.68 acres total  
Fill = 0.68 acres (0.15 temp)  
Cut = none

Wetland #13 (1)  
Type 2  
Area = 186 acres  
Fill = 186 acres

Wetland #26 (2)  
Type 2  
Area = 0.21 acres  
Fill = 0.21 acres

Wetland #26 (2)  
Type 7  
Area = 0.07 acres  
Fill = 0.07 acres

(1) THIS WETLAND CONTINUES ON NEXT SHEET  
ACREAGE IS TOTAL FOR THE ENTIRE AREA.

(2) THIS WETLAND CONTINUES ON PREVIOUS SHEET  
ACREAGE IS TOTAL FOR THE ENTIRE AREA.

I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 21-MAR-2016, LIC. NO. 48799 ENGINEER *R. K. K.*

**WETLAND IMPACTS**

STATE PROJ. NO. 6904-46 (TH 1) SHEET NO. 10 OF 22 SHEETS

PLOTTED/REVISED: 21-MAR-2016

DISTRICT #: District 1  
PILOT NAME: rkw\_aws64  
PATH & FILENAME: \\P:\MP\6904\6904\Drawings\w162.dgn







2011-01891-SEW,  
Figure 16 of 24:  
Aquatic Resource  
Impact Maps

PLUPPED\MICROSOFTS 21-MAR-2008

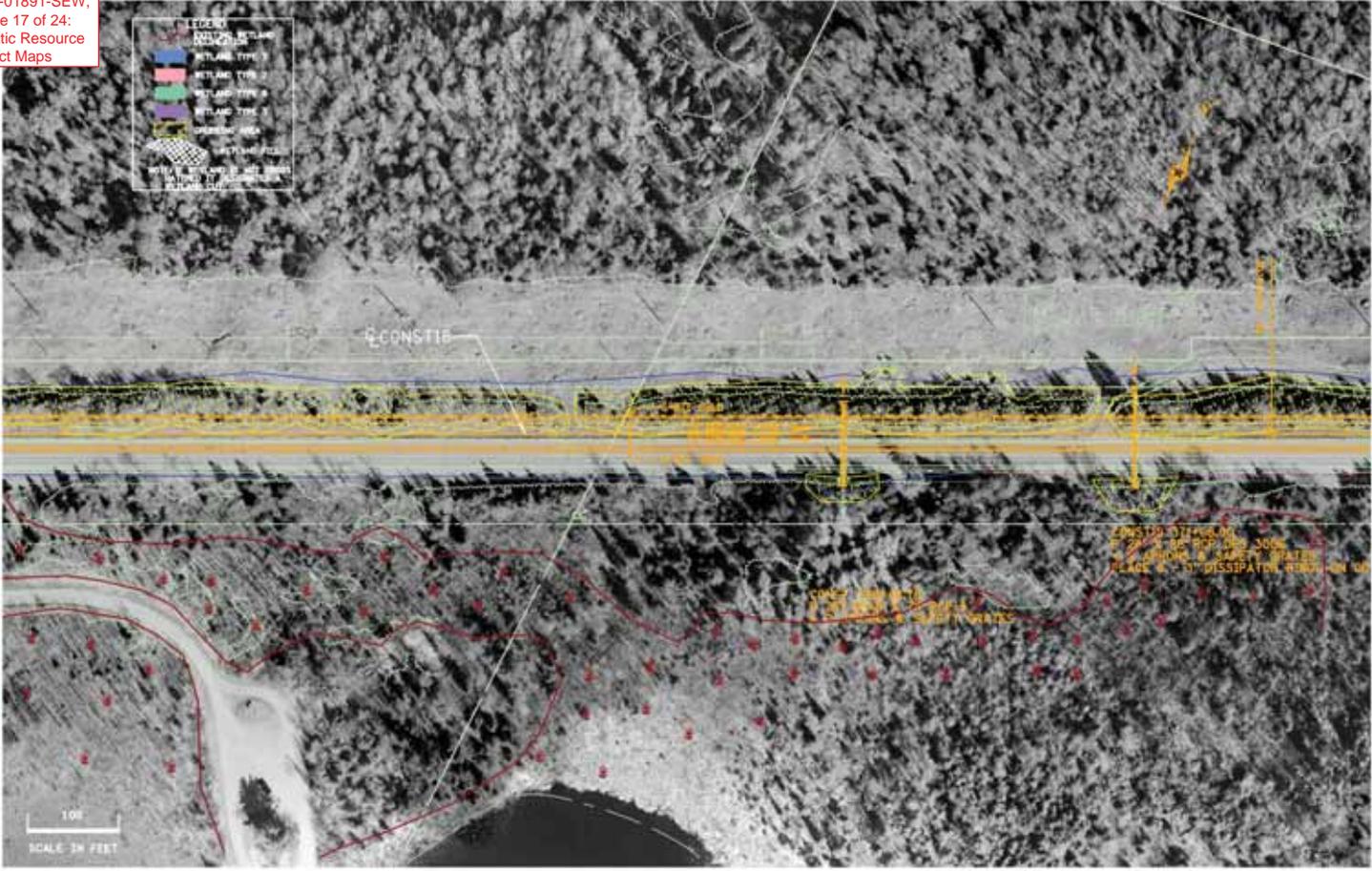
DISTRICT 4, District 7  
PLUPP 84402, WETLAND  
PART 8 FILENAME: 21-MAR-2008\METPLAN



2011-01891-SEW,  
 Figure 17 of 24:  
 Aquatic Resource  
 Impact Maps

A:\PROJECTS\2011-01891-SEW

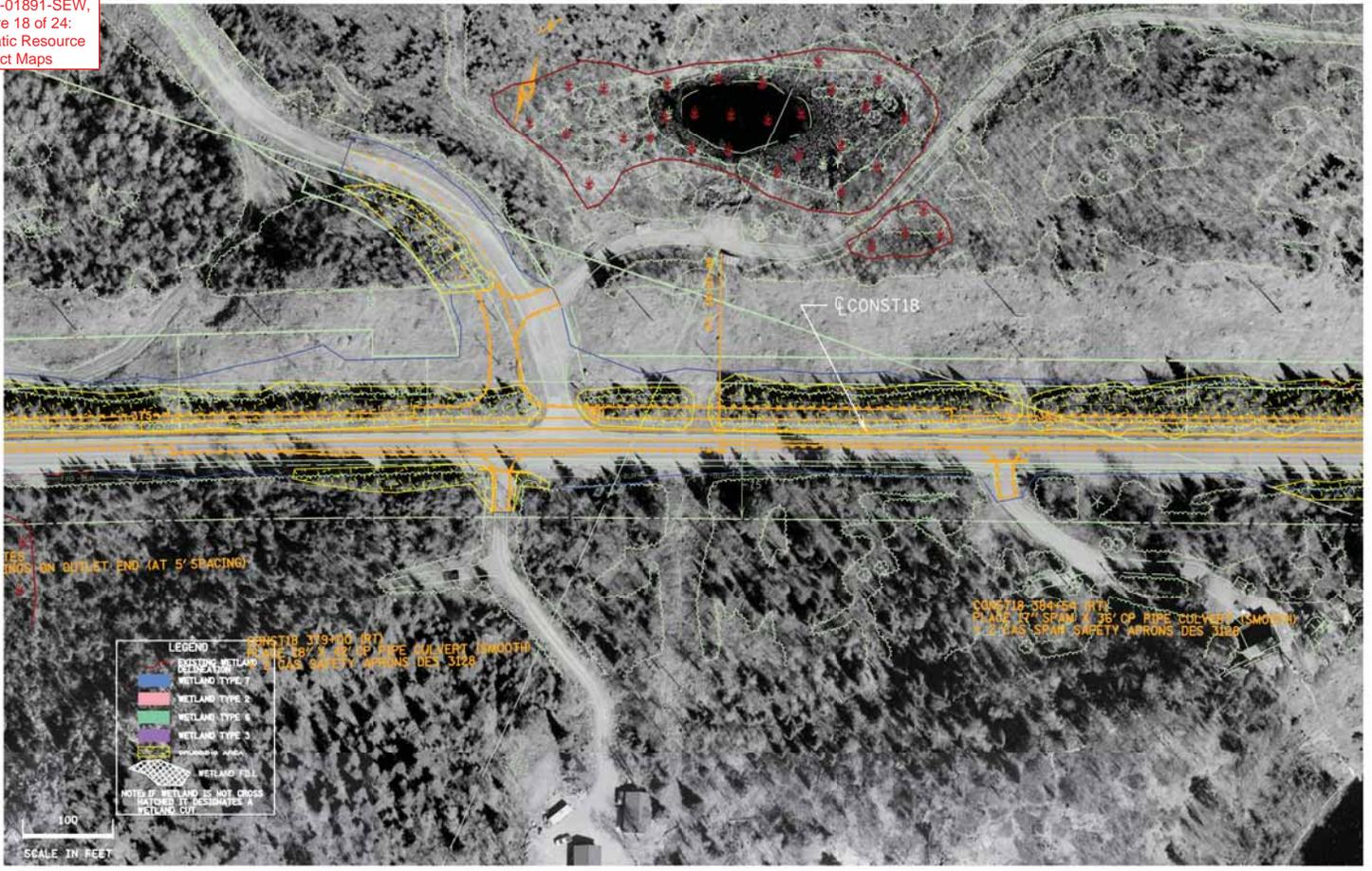
DISTRICT 4, District 7  
 PLUM BAY, METIS  
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2011-01891-SEW,  
Figure 18 of 24:  
Aquatic Resource  
Impact Maps

PLOTTED/REVISED: 2/14/2016

DISTRICT: District 1  
PLOT NAME: WET18  
PATH & FILENAME: P:\PROJECTS\2016\WET18.dwg



**LEGEND**

- WETLAND TYPE 1
- WETLAND TYPE 2
- WETLAND TYPE 3
- WETLAND TYPE 4
- WETLAND TYPE 5
- WETLAND TYPE 6
- WETLAND TYPE 7
- WETLAND TYPE 8
- WETLAND TYPE 9
- WETLAND TYPE 10
- WETLAND TYPE 11
- WETLAND TYPE 12
- WETLAND TYPE 13
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- WETLAND TYPE 87
- WETLAND TYPE 88
- WETLAND TYPE 89
- WETLAND TYPE 90
- WETLAND TYPE 91
- WETLAND TYPE 92
- WETLAND TYPE 93
- WETLAND TYPE 94
- WETLAND TYPE 95
- WETLAND TYPE 96
- WETLAND TYPE 97
- WETLAND TYPE 98
- WETLAND TYPE 99
- WETLAND TYPE 100

NOTES: IF WETLAND IS NOT CROSS HATCHED IT DESIGNATES A WETLAND CUT

CONST18-384-254 RTT  
PLAN: 17' SPAN X 38' CP PIPE CULVERT (SMOOTH)  
1/2" GAS SPAN SAFETY APRONS DES 3128

I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.  
DATE: 21-MAR-2016, LIC. NO. 48799, ENGINEER: *[Signature]*

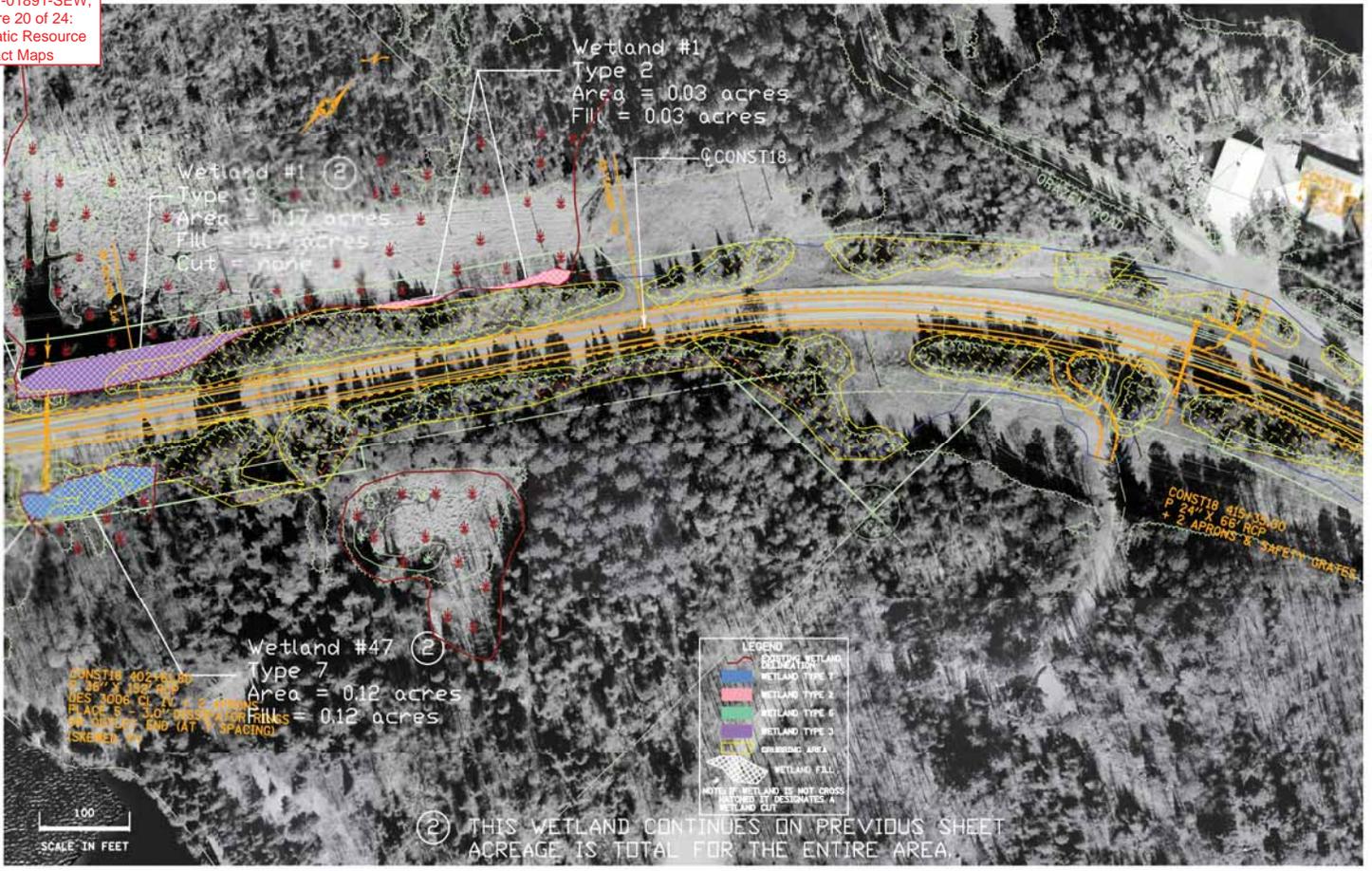
**WETLAND IMPACTS**  
STATE PROJ. NO. 6904-46 (TH 1) SHEET NO. 16 OF 22 SHEETS



2011-01891-SEW,  
Figure 20 of 24:  
Aquatic Resource  
Impact Maps

PLOTTED/REVISED: 21-MAR-2016

DISTRICT: District 1  
PLOT NAME: WETRS  
PATH & FILENAME: P:\PROJECTS\2016\WETRS



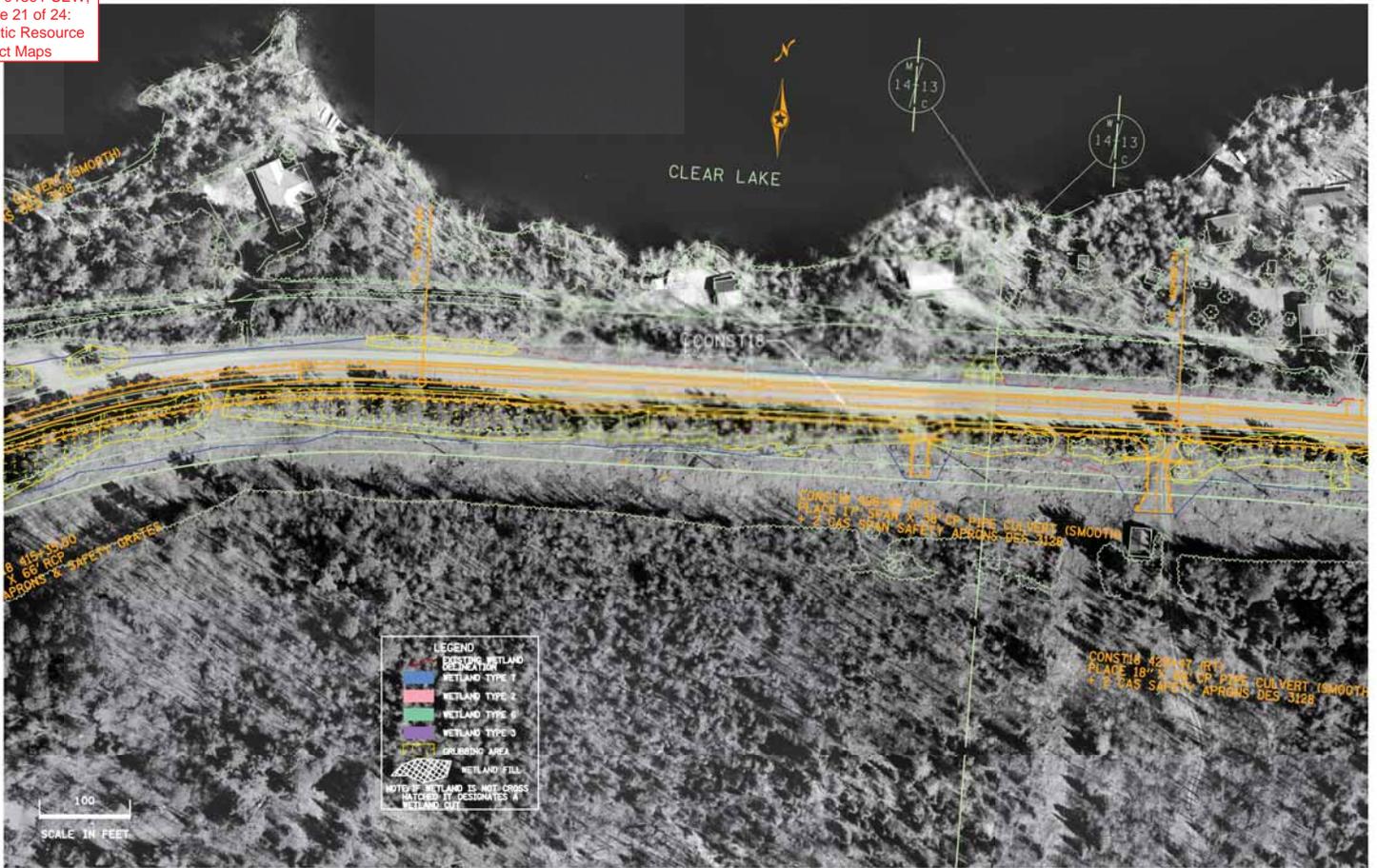
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
DATE: 21-MAR-2016, LIC. NO. 48799, ENGINEER: *[Signature]*

WETLAND IMPACTS

2011-01891-SEW,  
 Figure 21 of 24:  
 Aquatic Resource  
 Impact Maps

PLOTTED/REVISED: 24-MAR-2016

DISTRICT: District 1  
 PLOT NAME: WETRS  
 PATH & FILENAME: IP:\P\1891\2016\WETRS.dwg



100  
 SCALE IN FEET

**LEGEND**

- EXISTING WETLAND DEMINATION
- WETLAND TYPE 1
- WETLAND TYPE 2
- WETLAND TYPE 3
- WETLAND TYPE 3
- SCRUBBING AREA
- WETLAND FILL

NOTE: IF WETLAND IS NOT CROSS HATCHED IT IS DESIGNATED A WETLAND CUT

I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 DATE: 21-MAR-2016, LIC. NO. 48799, ENGINEER: *[Signature]*

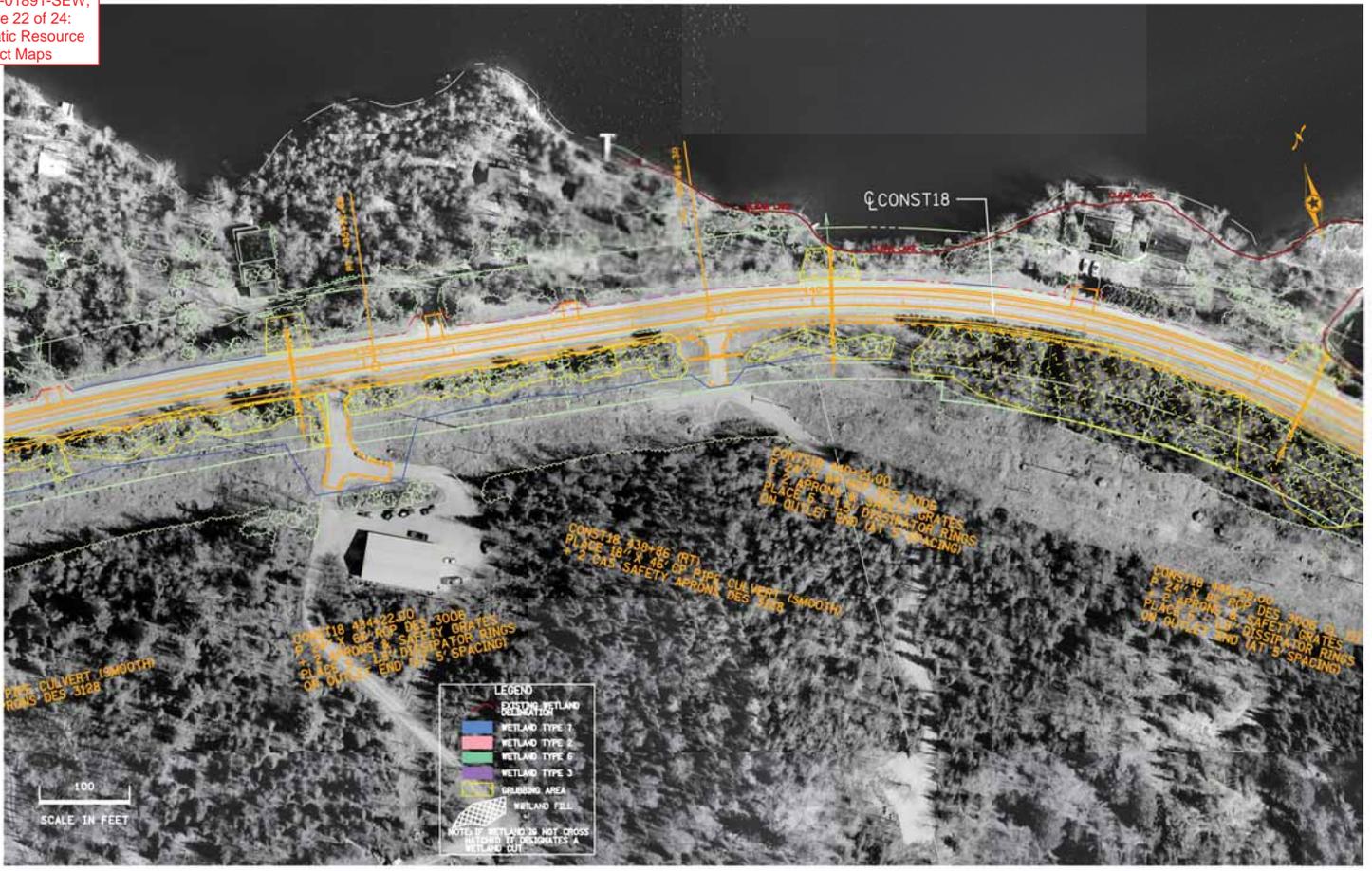
**WETLAND IMPACTS**

STATE PROJ. NO. 6904-46 (TH 1) SHEET NO. 19 OF 22 SHEETS

2011-01891-SEW,  
Figure 22 of 24:  
Aquatic Resource  
Impact Maps

PLOTTED/REVISED: 21-MAR-2016

DISTRICT: District 1  
PLOT NAME: WET18  
PATH & FILENAME: P:\PROJECTS\WET18CON



**LEGEND**

- EXISTING WETLAND
- WETLAND TYPE 1
- WETLAND TYPE 2
- WETLAND TYPE 3
- BRUSHING AREA
- WETLAND FILL

NOTE: IF WETLAND IS NOT CROSS  
HIGHLIGHTED, IT REPRESENTS A  
WETLAND CUT.

100  
SCALE IN FEET

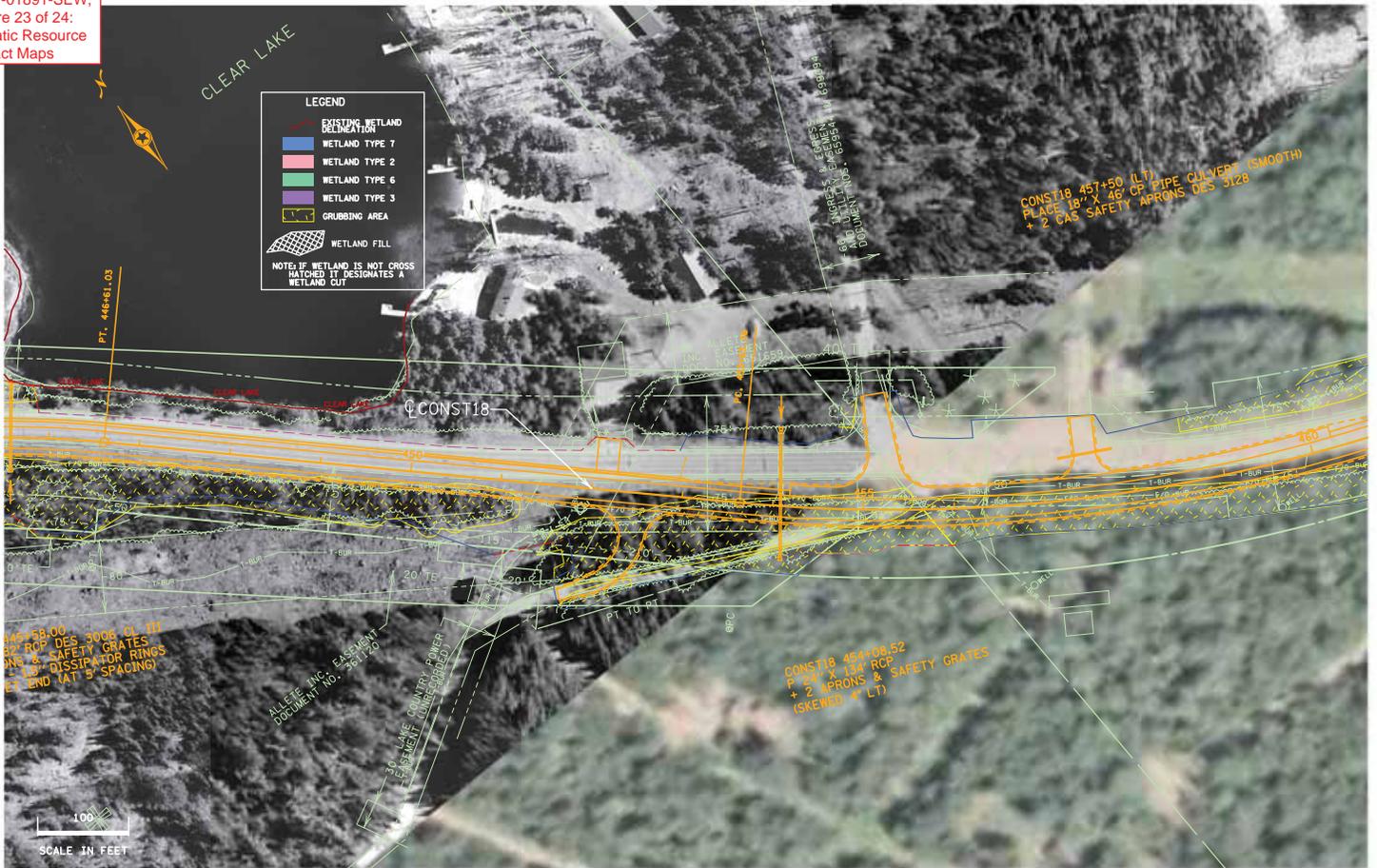
I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.  
DATE: 21-MAR-2016, LIC. NO. 48799 ENGINEER: *[Signature]*

**WETLAND IMPACTS**

2011-01891-SEW,  
Figure 23 of 24:  
Aquatic Resource  
Impact Maps

PLOTTED/REVISED: 21-MAR-2016

DISTRICT #: DISTRICT 1  
PLOT NAME: WET23  
PATH & FILENAME: IP\_JMP4675CHOWWET23.dgn



I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
DATE 21-MAR-2016, LIC. NO. 48799 ENGINEER *R. K. K.*

WETLAND IMPACTS

STATE PROJ. NO. 6904-46 (TH 1) SHEET NO. 21 OF 22 SHEETS

2011-01891-SEW,  
Figure 24 of 24:  
Aquatic Resource  
Impact Maps

**LEGEND**

-  EXISTING WETLAND DELINEATION
-  WETLAND TYPE 7
-  WETLAND TYPE 2
-  WETLAND TYPE 6
-  WETLAND TYPE 3
-  GRUBBING AREA
-  WETLAND FILL

NOTE: IF WETLAND IS NOT CROSS HATCHED IT DESIGNATES A WETLAND CUT



PLOTTED/REVISED: 21-MAR-2016

DISTRICT #: District 1  
PLOT NAME: WET23  
PATH & FILENAME: IP:\P\46750\WET23.dgn

100  
SCALE IN FEET

I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
DATE 21-MAR-2016, LIC. NO. 48799 ENGINEER *[Signature]*

**WETLAND IMPACTS**

STATE PROJ. NO. 6904-46 (TH 1) SHEET NO. 22 OF 22 SHEETS