BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Petition of BNSF RAILWAY, Petitioner	DOCKET NO. **PETITION FOR EXEMPTION FROM CLOSE CLEARANCE RULES IN WAC 480-60-050** AND REQUEST FOR IMMEDIATE ACTION PURSUANT TO WAC 480-60-020

1 BNSF Railway respectfully petitions the Washington Utilities and Transportation Commission by and through its attorneys of record for an order exempting it from the operation of WAC 480-60-050 at the location and under the circumstances set forth in this Petition.

2 BNSF is a Delaware corporation with its principal place of business in Fort Worth, Texas. BNSF is a Class 1 railroad doing business as a common carrier of freight by rail with operations in Washington and 27 other states in the western United States with interchanges of freight and equipment to connecting carriers in the eastern United States and Canada.

3 BNSF is considered a major link in the transportation of freight to and from Washington including international container traffic as well as the transportation of domestic products such as lumber, grain, and consumer goods. BNSF works in

MONTGOMERY SCARP MACDOUGALL, PLLC
1218 Third Avenue, Suite 2700
Seattle, Washington 98101
Telephone (206) 625-1801
Facsimile (206) 625-1807

partnership with the major ports in Washington to provide cost effective and reliable transportation service to domestic and international shippers.

4 For BNSF, railroad safety is a continuous process undertaken individually and in cooperation with federal and state agencies. BNSF works with the railroad unions, state agencies and other interested parties in a collaborative process to enhance the safety of its employees and the public.

5 As part of its continuing safety initiatives, BNSF wishes to install a Trackside Acoustic Detection System (TADS) within Washington to assist in the early detection of potentially dangerous defects in cars operated on the BNSF mainline track. TADS is an important advancement in railroad safety.[1]

6 The main objective of TADS is to provide early indication of internal defects on railcar roller bearings. The current thermal detection technology effectively discovers defective bearings in the final stages of burn-off, but in some cases this progression occurs so rapidly that failure can occur within a few miles of the last thermal scanner, resulting in derailments. Because wheel bearing failures tend to occur at high speeds, such derailments often occur on main lines and can cause extensive damage.[2] TADS is designed to identify roller bearings that are at greater statistical risk than the norm so they can be monitored and/or removed from service before they overheat or cause a derailment.

7 TADS is manufactured by the Transportation Technology Center Inc. (TTCI), a wholly owned subsidiary of the Association of American Railroads. TADS is designed to detect and monitor flaws in roller bearings at nominal track speeds by obtaining data

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[1] Order Granting Petition for Exemption from Close Clearance Rules in WAC 480-60-050, *In the Matter of the Petition of The Burlington Northern and Santa Fe Railway Company*, TR-021397 (Nov. 15, 2002).

[2] *Id.*

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on freight car roller bearings of each train passing the site, and transmitting processed and compacted information on each bearing to a database. This compacted data is then used to evaluate the bearings in a process that includes passing the data through various defect algorithms that will detect the presence of possible defects. This technology has proven very effective in early detection of bearing failures.

8 Prior to late 2002, a small number of BNSF cars traversed a TADS detector weekly in Middlesex, NJ. Encouraged by TTCI's success, BNSF requested that "noisy" bearings identified by the detector be sent to the BNSF Wheel Shop in Lincoln NE for tear down inspection. Sixty-one of sixty-three bearings identified by TADS were in various stages of distress. At least two were evaluated as very near burn-off. Hot bearing teardown data suggests that 75% of overheated bearings should be detectable by TADS prior to overheating.

9 These results prompted BNSF to purchase numerous TADS systems and install them where they could most effectively cover the type of rail cars (merchandise, intermodal and coal) that data indicates are most likely to exhibit bearing defects detectable by TADS. Seven TADS detectors have now been installed across the BNSF network, with five of these sites receiving validation certificates through bearing teardown inspections. In order for a TADS site to be validated, fifty bearings must be torn down and result in at least a 90% defect rate. One of these systems is installed near Spokane, Washington and has been validated.

10 TADS is designed to measure the sound level of each bearing that passes by regardless of size. The microphones are highly directional with plumes shaped precisely to encompass each bearing's acoustical signature with as little background noise as possible. BNSF experimented with first generation acoustical detectors in the early 1990s with limited success due to low signal-to-noise ratios. These third generation

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detectors have been successful in raising the signal-to-noise ratio by decreasing their proximity to the noise source. Since sound attenuates exponentially with distance to the source, moving these devices two feet further from the track in compliance with current clearance regulations would render them all but useless.

11 The system is considered by the railroad to be part of its signal system and will be maintained by the signal department. WAC 480-60-050(15) applies to the system equipment because it is a signal not covered by other provisions. The rule requires the nearest equipment to be at least 96 inches from the centerline of the tracks. The overall height of the acoustic microphones is 21.2" at 47.2" from the nearest rail gauge face (73" from the centerline of the track on both sides). See Attachments 1, 2, and 3.[3]

12 BNSF plans to install the TADS system along its mainline track near Home Valley, Washington at Milepost 59.7 on BNSF's Fall Bridge Subdivision. This is a consistent route for garbage cars traveling from Everett/Interbay to Roosevelt. These are unit trains which are in a captive fleet and do not currently pass a TADS system. For this reason there is a greater risk of experiencing a burn-off event and possible derailment. No switching occurs in the area; thus, it is unlikely for employees to be exposed to the close clearance.

13 Similar to its Spokane TADS site, BNSF proposes to install "No Clearance" signs on each end of the close clearance areas in order to mitigate the potential tripping hazard (see Attachment 4). It will also maintain lighting at the site to further reduce dangers in darkness and post notice of the close clearance it its Timetable.

14 BNSF seeks an order approving the installation of the TADS system as set forth in this petition and Attachments 1–4.

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[3] Attachments 1, 2, and 3 (and 4) were also provided in BNSF's 2002 Petition to waive the same clearance requirement at the Spokane TADS site. *See* TR-021397. The technology is the same and the attachments are still accurate for the instant Petition.

MONTGOMERY SCARP MACDOUGALL, PLLC
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15 BNSF has crews prepared for a November 1, 2009 installation. Because of the adverse effect that delay of the installation date would have, BNSF requests immediate action pursuant to WAC 480-60-020(3).

Respectfully submitted this 1st day of October, 2009.

Montgomery Scarp MacDougall, PLLC

Kelsey E. Endres, WSBA # 39409
Bradley P. Scarp, WSBA # 21453
Attorneys for Petitioner
kelsey@montgomeryscarp.com
brad@montgomeryscarp.com

MONTGOMERY SCARP MACDOUGALL, PLLC
1218 Third Avenue, Suite 2700
Seattle, Washington 98101
Telephone (206) 625-1801
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CERTIFICATE OF SERVICE

I am over the age of 18; and not a party to this action. I am a paralegal with Montgomery Scarp MacDougall, PLLC, whose address is 1218 Third Avenue, Suite 2700, Seattle, Washington, 98101.

I hereby certify that the original and 12 copies of Petitioner's *PETITION FOR EXEMPTION FROM WAC 480-60-050* has been sent by FED EX to David W. Danner at WUTC and PDF and Word Perfect versions submitted for filing via electronic mail at records@utc.wa.gov.

I declare under penalty under the laws of the State of Washington that the foregoing information is true and correct.

DATED this 1st day of October, 2009 at Seattle, Washington.

Lisa Miller, Paralegal

MONTGOMERY SCARP MACDOUGALL, PLLC
1218 Third Avenue, Suite 2700
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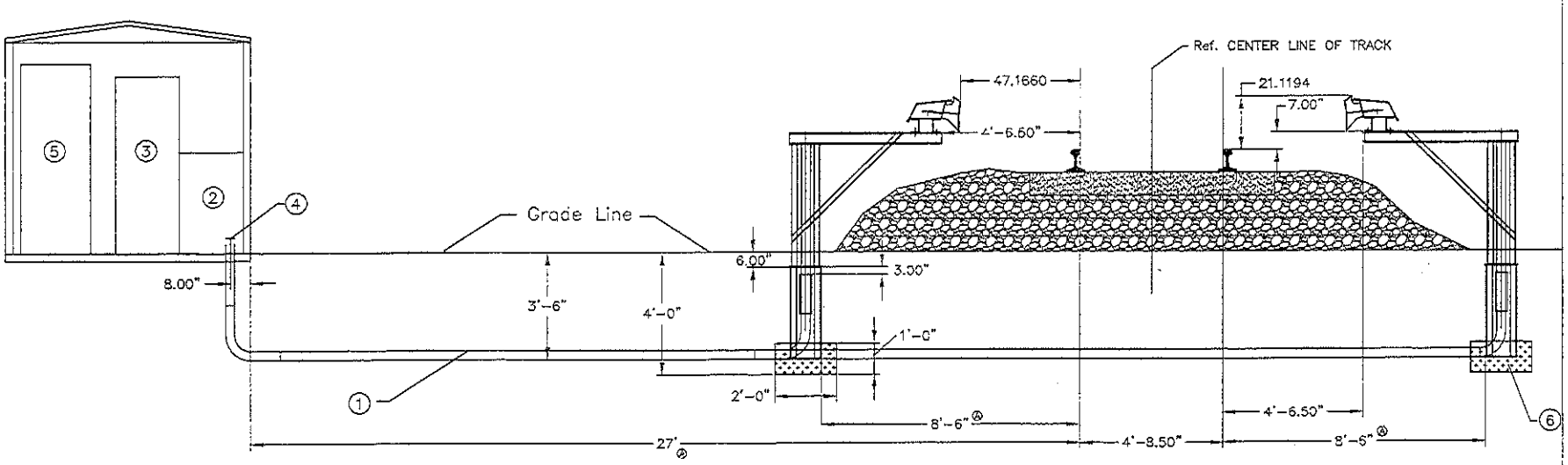
ATTACHMENT 1

(1) 3-INCH GALVANIZED RIGID CONDUIT (GRC) 42-INCH BELOW GRADE
(2) RACK VERTICAL HEIGHT IS 40-INCHES
(3) RACK VERTICAL HEIGHT IS 70-INCHES
(4) GRC EXTENDS 6-INCHES ABOVE BUNGALOW FLOOR
(5) BUNGALOW DOOR
(6) SEE DETAIL "A" ON SHEET 3 – TYPICAL 8 PLACES

EQUIPMENT BUNGALOW



REV.	DESCRIPTION	BY	DATE
(A)	CHANGE DIM'S AND TAD SUPPORT STANDS	WL	11/30/02

TTCI Transportation Technology Center
TRANSPORTATION TECHNOLOGY CENTER P.O. BOX 11130, PUEBLO CO. 81001
TTCI is a subsidiary of the Association of American Railroads

TRACKSIDE ACOUSTIC DETECTION SYSTEM (TADS)

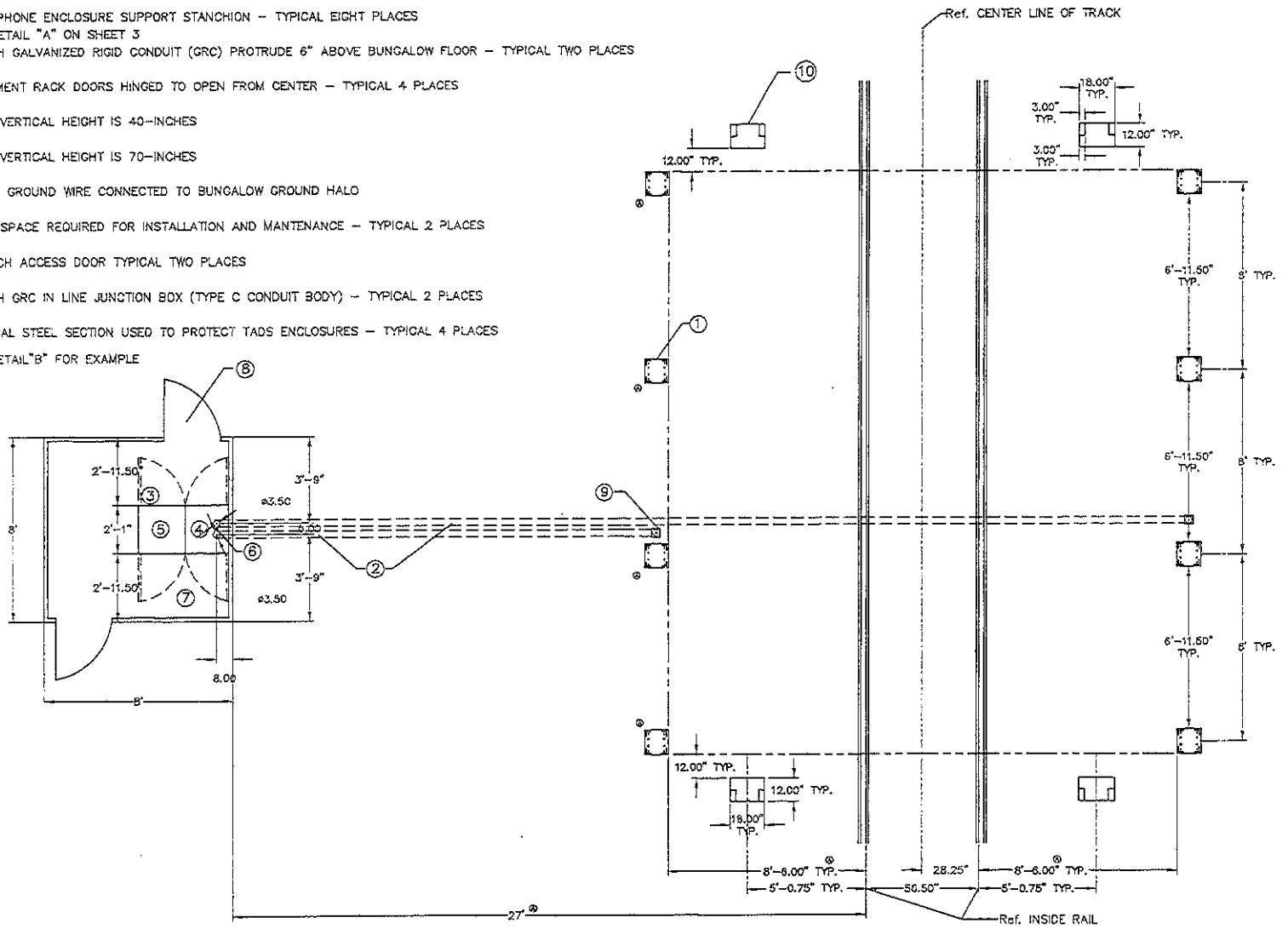
BNSF SITE LAYOUT
SIDE VIEW – PRELIMINARY

25-TCI-001SEG02-01.00

DESIGNED	WD
DRAWN	LM
CHECKED	KLW
APPROVED	GMA
DATE	07/19/02
SCALE	NTS
TTC PROJ. #	61435
REFERENCE	PART 02BLDWG
SHEET	2 OF 3

ATTACHMENT 2

1. MICROPHONE ENCLOSURE SUPPORT STANCHION – TYPICAL EIGHT PLACES
   SEE DETAIL "A" ON SHEET 3
2. 3–INCH GALVANIZED RIGID CONDUIT (GRC) PROTRUDE 6" ABOVE BUNGALOW FLOOR – TYPICAL TWO PLACES
3. EQUIPMENT RACK DOORS HINGED TO OPEN FROM CENTER – TYPICAL 4 PLACES
4. RACK VERTICAL HEIGHT IS 40–INCHES
5. RACK VERTICAL HEIGHT IS 70–INCHES
6. AWG 2 GROUND WIRE CONNECTED TO BUNGALOW GROUND HALO
7. WORK SPACE REQUIRED FOR INSTALLATION AND MANTENANCE – TYPICAL 2 PLACES
8. 27–INCH ACCESS DOOR TYPICAL TWO PLACES
9. 3–INCH GRC IN LINE JUNCTION BOX (TYPE C CONDUIT BODY) – TYPICAL 2 PLACES
10. VERTICAL STEEL SECTION USED TO PROTECT TADS ENCLOSURES – TYPICAL 4 PLACES
    SEE DETAIL"B" FOR EXAMPLE



REV.	DESCRIPTION	BY	DATE
A	CHANGE ONE'S AND TWO SUPPORT STAND LOCS.	MSL	9/28/09

TRANSPORTATION TECHNOLOGY CENTER
P.O. BOX 11130, PUEBLO, CO. 81001
TTCI is a subsidiary of the Association of American Railroads

TRACKSIDE ACOUSTIC DETECTION SYSTEM (TADS)

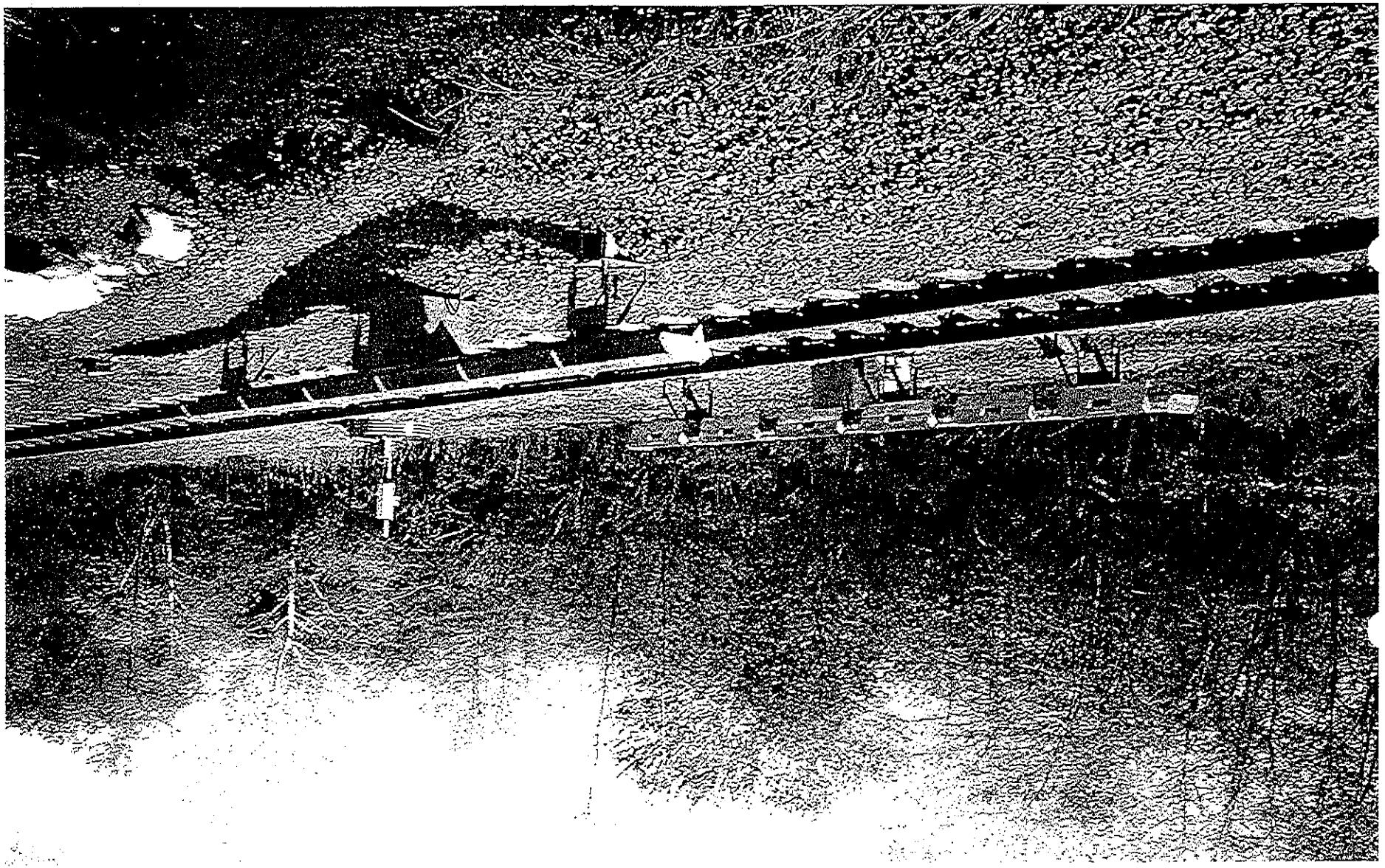
BNSF SITE LAYOUT
TOP VIEW – PRELIMINARY

25–TCI–001SEG02–01.00

DESIGNED: SED
DRAWN: LM
CHECKED: RLM
APPROVED: DRA

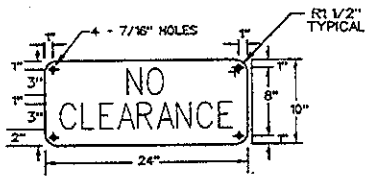
DATE: 07/19/02
SCALE: NTS
TTC PROJ. #: C1J5
ADD'L PROJ. #:
SHEET 1 OF 3

ATTACHMENT 3

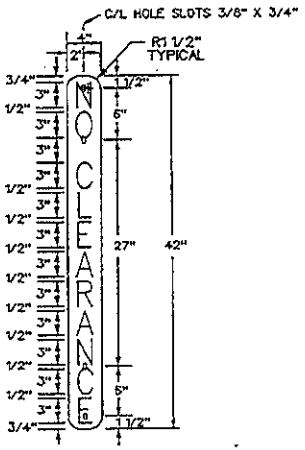


ATTACHMENT 4

EXAMPLE 1



EXAMPLE 2



SIGNS:

NO. 44 - "NO CLEARANCE"

PLACE NO CLEARANCE SIGN ON BUILDING STRUCTURE OVER C/L TRACK WHERE VERTICAL CLEARANCE IS LESS THAN REQUIRED. LETTERED AND MOUNTED AS SHOWN IN EXAMPLE 1.

NO. 44A - "NO CLEARANCE"

PLACE NO CLEARANCE SIGN ON BUILDING STRUCTURE OR POST WHERE HORIZONTAL CLEARANCE IS LESS THAN REQUIRED. LETTER AND MOUNTED AS SHOWN IN EXAMPLE 2.

NOTES:

1. THE SIGNS LISTED IN THIS PLAN ARE 10" X 24" AND 4" X 42" SIZED WITH WHITE BACKGROUND AND BLACK LETTERS, ONE SIDE ONLY, AS SHOWN IN EXAMPLES 1 AND 2.
2. SEE PLAN 3000.01 FOR ADDITIONAL SPECIFICATIONS AND INFORMATION CONCERNING THE REFLECTIVE AND PANEL MATERIAL.
3. FOR USE IN THE STATE OF MINNESOTA AS ORDERED BY THE PUB. SERV. COMM. AT POINTS WHERE CLEARENCE IS LESS THAN THE LEGAL REQUIREMENT.

BILL OF MATERIALS

QUANTITY	SIGN PANEL
1 EA.	SIGN NO. 44-NO CLEARANCE ITEM NO. 047220983
1 EA.	SIGN NO. 44A-NO CLEARANCE ITEM NO. 047220984
	OPTIONAL HARDWARE
1 EA.	2 LB. PER LIN. FT. GALVANIZED FLANGED CHANNEL STEEL POST, 8'-0" LONG WITH 3/8"0 MONTING HOLES, 1" CENTERS, WITH POINTED END.
2 EA.	5/16" DIA. X 2" GALVANIZED ROUND HEAD SQUARE NECK MACHINE BOLT, ALL THREAD, WITH LOCK NUT AND WASHER.

BURLINGTON NORTHERN SANTA FE
STANDARD PLAN
ENGINEERING DEPT., FORT WORTH, TEXAS

CLEARANCE SIGNS

RAIL:

DATE: 06/10/96 | SCALE:

DWG. NO.	SHEET NO.	REV. NO.
3044	01	04