STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES
Division of Mining, Land and Water
Water Resources Section

550 West 7th Avenue, Suite 1020 Anchorage, AK 99501-3579 907-269-8505 southcentral.waterrights@alaska.gov	P. O. Box 111020 400 Willoughby, 4th Floor Juneau, AK 99801 907-465-2533	3700 Airport Way Fairbanks, AK 99709 907-451-2790	**Office Use Only** **Date/Time Stamp** JUL 2 2026 9:25
Statewide TTY: 711 for Alaska Relay or 1-800-770-8973		**Receipt Type: WR**	

APPLICATION FOR WATER RIGHT

LAS # 36123
(For ADNR Use Only)

CID # 1766886
(For ADNR Use Only)

INSTRUCTIONS:

1. Complete one application for each water source. **Incomplete applications will not be accepted.**
2. Attach a copy of an executed deed, lease agreement, or other possessory interest document for property where water will be used (applicant must own, lease, or obtain written authorization to use water on property).
3. If water source is not on your property, attach copy of legal access document (i.e. right-of-way, easement, permit) or application for legal access to water withdrawal point and transport route, if applicable, or copy of request or application for legal access to water withdrawal point.
4. Attach driller's well log for drilled wells (if already drilled and available).
5. Attach sketch, photos, plans of water system, or project description (if applicable).
6. Attach legible map that includes Meridian, Township, Range, and Section lines such as a subdivision Plat, USGS topographical quadrangle, or borough tax map. Indicate location of water withdrawal; dot on map if subsurface but if surface source the route of water transmission water use area boundary, points of water use within boundary, and point of water return flow (if applicable).
7. Attach copy of approved ADEC Water and Wastewater system certificate (if applicable).
8. Attach copy of ADF&G Fish Habitat Permit (if applicable).
9. Attach completed Statement of Beneficial Use of Water form and associated fee if water system and water use are fully developed (See page 4).
10. **Submit the non-refundable fee** (See page 4).

APPLICANT INFORMATION:

Alaska Railroad Corporation
Organization Name (if applicable)

Shane Maloney
Agent or Consultant Name and Title (if applicable)

Individual Applicant Name (if applicable)

Individual Co-applicant Name (if applicable)

327 W Ship Creek Ave
Mailing Address

Anchorage
City

AK
State

99501
Zip Code

907-265-2216
Daytime Phone Number

Alternative Phone Number (optional)

Fax Number (if applicable)

maloneys@akrr.com, brownk@akrr.com, wilsonn@akrr.com
Email Address (optional)

PROPERTY DESCRIPTIONS:

Location of Water Use							
Subdivision Name or Survey Number	Lot, Block, or Tract	Meridian	Township	Range	Section	Quarter Sections	
USS 1170	Lot 2	Seward	13N	3W	18	NE QQ ¼	NW Q ¼
Location of Water Source							
Subdivision Name or Survey Number	Lot, Block, or Tract	Meridian	Township	Range	Section	Quarter Sections	
USS 1170	Lot 2	Seward	13N	3W	18	QQ ¼	Q ¼
Location of Water Return Flow or Discharge (if applicable)							
Geographic Name of Water Body or Well Depth		Meridian	Township	Range	Section	Quarter Sections	
Ship Creek via storm drain		Seward	13N	3W	18	QQ ¼	NW Q ¼

WATER SOURCE DESCRIPTION:

Ground Water				
Type (e.g. drilled, dug)	Total Depth (in feet)	Static Water Level (in feet)	Date Completed	Well Yield (in gpm)
Drilled	365.6 ft	1	7/1/10	160
Surface Water				
Type (e.g. stream, lake, spring)		Geographic Name (if named)		

METHOD OF TAKING WATER (if known):

Pump	Pump Intake 4" Inches Pump Output 160 GPM	Hours Working 12 Hours/Day Length of Pipe 40 Feet (from pump to point of use)
Gravity	Pipe Diameter _____ Inches Head _____ Feet	Length of Pipe _____ Feet (take point to point of use) Diversion Rate _____ ☐ GPM or ☐ CFS
Ditch	L _____ D _____ W _____ Feet	Diversion Rate _____ ☐ GPM or ☐ CFS
Reservoir	L _____ D _____ W _____ Feet	Water Storage _____ AF
Dam	L _____ H _____ W _____ Feet	Water Storage _____ AF

REFERENCES:

Measurement Units

GPD = gallons per day
GPM = gallons per minute
MGD = million gallons per day
CFS = cubic feet per second
AF = acre-feet
AFY = acre-feet per year (325,851 gallons/year)
AFD = acre-feet per day (325,851 gallons/day

AMOUNT OF WATER:

Type of Use	How Many		Standard Amounts		Total Yearly Amount Requested	Months of Use	
						Begin	End
Fully Plumbed Single-family Home (includes irrigation of 10,000 sq. ft.)	# _____ Homes	X	500 GPD	=			
Partially Plumbed Single-family Home (no hot water heater	# _____ Homes	X	250 GPD	=			
Unplumbed Single-family Home (hand carry water)	# _____ Homes	X	75 GPD	=			
Duplex	# _____ Bldgs.	X	1,000 GPD	=			
Tri-plex and Larger Housing	# _____ Units	X	250 GPD	=			
Motel or Resort	# _____ Rooms	X	150 GPD	=			
Work Camps	# _____ People	X	50 GPD	=			
Domestic Irrigation	# _____ Sq. ft.	X	250 GPD per 10,000 Sq. ft.	=			
Non-domestic Irrigation	# _____ Acres	X	0.5 AFY	=			

Other Water Uses

Type of Use	Amount GPD (Gallons per Day)	Total Yearly Amount Requested	Months of Use	
			Begin	End
Ground water for closed non-contact cooling system for historic railroad depot.	115,200	17.5M	5/1	10/1
Water heated ~10F then discharged into on-site storm drain system.				
Storm drain outfalls into Ship Creek 800 ft away.				

Expected date for water system and water use to be fully developed ***or*** date when existing use started _____

Note: Pursuant to AS 46.15.180(a)(1). Crimes, a person may not construct works for an appropriation, or divert, impound, withdraw, or use a significant amount of water from any source without a permit, certificate of appropriation, or authorization issued under this chapter.

VERIFICATION OF INFORMATION:

The information presented in this application is true and correct to the best of my knowledge. I understand that per 11 AAC 93.040 and 11 AAC 93.050 additional information may be required by the department to adjudicate this application. Failure to provide requested information could result in this file being closed.

Signature _____ Date 7-2-26

LAS # 36123

FEE REQUIRED BY REGULATION 11 AAC 05.260 (INCLUDES $50 STATEMENT OF BENEFICAL USE FEE):

Make checks payable to "Alaska Department of Natural Resources"

- **$150** for one single-family residence or duplex, or for water use associated with one single-family residence or duplex.
- **$1,550** for up to 60 hours of staff time, for activities related to oil and gas and associated substances.
- **$1,550** for up to 60 hours of staff time, for activities related to locatable mining.
- **$1,550** for up to 60 hours of staff time, for hydroelectric power generation capacity greater than 100 kilowatts.
- **$1,550** for up to 60 hours of staff time, for water removal out of a hydrologic unit under AS 46.15.035 or 46.15.037.
- **$300** for 5,000 GPD or less for a use not listed above.
- **$615** for greater than 5,000 GPD and no more than 30,000 GPD for a use not listed above.
- **$740** for greater than 30,000 GPD and no more than 100,000 GPD for a use not listed above.
- **$1,175** for greater than 100,000 GPD for a use not listed above.

STATEMENT OF BENEFICIAL USE OF WATER

Is your water source and water use **FULLY** developed at this time? YES (●) NO ( ) **If no, SKIP THIS SECTION.** If yes, sign the following statement of use.

I certify under penalty of perjury that the above is a true and accurate statement of the extent to which the above water use has been fully developed and am using the stated quantity of water.

Signature

7-2-26
Date

11 AAC 93.040 sets out the required information on an application for a water right. AS 38.05.035(a) authorizes the director to decide what information is needed to process an application for the sale or use of state land and resources. This information is made a part of the state public land records and becomes public information under AS 40.25.110 and 40.25.120 (unless the information qualifies for confidentiality under AS 38.05.035(a)(8) and confidentiality is requested, AS 43.05.230, or AS 45.48). Public information is open to inspection by you or any member of the public. A person who is the subject of the information may challenge its accuracy or completeness under AS 44.99.310, by giving a written description of the challenged information, the changes needed to correct it, and a name and address where the person can be reached. False statements made in an application for a benefit are punishable under AS 11.56.210. In submitting this form, the applicant agrees with the Department to use "electronic" means to conduct "transactions" (as those terms are used in the Uniform Electronic Transactions Act, AS 09.80.010 - AS 09.80.195) that relate to this form and that the Department need not retain the original paper form of this record: the department may retain this record as an electronic record and destroy the original.

ALASKA
2011-017190-0
Recording Dist: 301 - Anchorage
4/14/2011 9:37 AM Pages: 1 of 7

The United States of America

To all to whom these presents shall come, Greeting:

Patent

MAR 30 2011

AA-55129-17

This Patent is issued by the UNITED STATES, Department of Transportation, Federal Railroad Administration, 1200 New Jersey Avenue, S.E., Washington, D.C., 20590, as GRANTOR, to the Alaska Railroad Corporation, P.O. Box 107500, Anchorage, Alaska, 99510-7500, as GRANTEE, for lands in the Anchorage Recording District.

WHEREAS

Alaska Railroad Corporation

Pursuant to Sec. 604(b)(2) and Sec. 604(b)(3) of the Alaska Railroad Transfer Act of 1982, 45 U.S.C. 1201, et seq.(hereinafter referred to as ARTA), the Alaska Railroad Corporation is entitled to a patent for real property of the Alaska Railroad including both the right-of-way of the Alaska Railroad (railroad right-of-way) and other railroad lands (railroad parcels). An Exclusive License was issued for these lands on January 5, 1985, and recorded in the Anchorage Recording District, Book 1212, Pages 297-352. This patent is hereby issued for the real property described below:

Railroad Parcel:

Lots 2 and 3, and Parcel A;
U.S. Survey No. 1170, Alaska.

Containing 821.86 acres as shown on plat of survey officially filed December 13, 2010.

Parcel No. 1:

Parcel No. 1 is that portion of the lands described in Section 1, Public Land Order No. 546, filed in the Federal Register, volume 14, page 226 on January 14, 1949, located between the bounds of Lot 2, U.S. Survey No. 1170 and Informational Traverse No. 1 as shown on the plat of U. S. Survey No. 1170, officially filed December 13, 2010, more particularly described as follows:

Beginning at corner No. 43, Lot 2, U.S. Survey No. 1170;

thence S. 61°10'30" W. along line 43-44, Lot 2, U.S. Survey No. 1170, 151.42 feet to corner No. 44, Lot 2, U.S. Survey No. 1170;

thence along a curve concave to the east, having a radius of 220.99 feet, a chord bearing of S. 16°35'56" W., a chord distance of 8.81 feet, an arc distance of 8.81 feet to corner No. 45, Lot 2, U.S. Survey No. 1170;

thence S. 15°34'37" W. along line 45-46, Lot 2, U.S. Survey No. 1170, 15.88 feet to corner No. 46, Lot 2, U.S. Survey No. 1170;

thence N. 74°25'23" W. along line 46-47, Lot 2, U.S. Survey No. 1170, 25.05 feet to corner No. 47, Lot 2, U.S. Survey No. 1170;

thence S. 61°10'30" W. along line 47-48, Lot 2, U.S. Survey No. 1170, 417.22 feet to corner No. 48, Lot 2, U.S. Survey No. 1170;

thence S. 54°28'39" W. along a portion of line 48-49, Lot 2, U.S. Survey No. 1170, 997.21 feet to the point of intersection with Informational Traverse No. 1 of Public Land Order No. 546 as shown on aforesaid officially filed plat;

thence N. 65°16'00" E. along said Informational Traverse No. 1, 63.35 feet to an angle point;

thence N. 54°23'26" E. along said Informational Traverse No. 1, 717.05 feet to an angle point;

thence N. 59°47'44" E. along said Informational Traverse No. 1, 633.53 feet to an angle point;

thence N. 55°31'29" E. along said Informational Traverse No. 1, 138.89 feet to the point of intersection with a curve between corner Nos. 42 and 43, Lot 2, U.S. Survey No. 1170;

thence along a curve concave to the east, having a radius of 160.99 feet, a chord bearing N. 52°35'17" E., a chord distance of 48.12 feet, an arc distance of 48.30 feet to corner
No. 43, Lot 2, U.S. Survey No. 1170, and the Point of Beginning.

Containing 0.59 acre, more or less.

Parcel No. 2:

Parcel No. 2 is that portion of the lands described in Section 1, Public Land Order No. 546 filed in the Federal Register, volume 14, page 226 on January 14, 1949, located between the bounds of

Lot 2, U.S. Survey No. 1170 and Informational Traverse No. 2, as shown on plat of U.S. Survey No. 1170, officially filed December 13, 2010, more particularly described as follows:

Beginning at corner No. 71, Lot 2, U.S. Survey No. 1170;

thence N. 29°41'56" E. along line 71-72, Lot 2, U.S. Survey No. 1170, 649.22 feet to corner No. 72, Lot 2, U.S. Survey No. 1170;

thence S. 29°48'23" W. along Informational Traverse No. 2, as shown on aforesaid officially filed plat, 506.75 feet to an angle point;

thence S. 53°21'39" W. along said Informational Traverse No. 2, 101.35 feet to the point
of intersection with line 70-71, Lot 2, U.S. Survey No. 1170;

thence S. 10°16'37" E. along line 70-71, Lot 2, U.S. Survey No. 1170, 64.79 feet to corner No. 71, Lot 2, U.S. Survey No. 1170 and the Point of Beginning.

Containing 0.07 acre, more or less.

Aggregating 822.52 acres.

NOW KNOW YE, that the UNITED STATES OF AMERICA has, given and granted, and by these presents in conformity with ARTA does give, grant, and convey unto the Alaska Railroad Corporation, its assigns and successors, the real property described above to have and to hold forever.

The right, title, and interest hereby granted and conveyed in and to the real property described above are the full and complete right, title, and interest of the United States in and to the said real property, subject to the Reservations and Conditions set out below. Pursuant to Sec. 606(b)(4)(B) of ARTA, the right, title, and interest granted by the United States in the above-described real property that is located within the right-of-way of the Alaska Railroad shall be not less than an exclusive-use easement as defined in Sec. 603(6) of ARTA.

Reservations and Conditions:

1. Access to Anchorage Petroleum Terminal (U.S. Army) by way of Ocean Dock, Port, Tidewater and Terminal Roads and W. Bluff Drive and the unnamed road branching off to the east from Ocean Dock Road; located within the Alaska Railroad Terminal Reserve, in Section 7, T. 13 N., R. 3 W., Seward Meridian.

2. Multiproduct underground pipelines located within Section 7, lots 10 and 15, T. 13 N., R. 3 W., Seward Meridian; and including an area extending out 10 feet on either side of the lines (A-041517).

3. Subject to the right, title, and interest, if any, that has otherwise vested in the State of Alaska in any submerged lands among the above-described lands which are situated beneath nontidal navigable waters up to the ordinary high water mark or which are permanently or periodically covered by tidal waters up to the line of mean high tide.

4. Pursuant to Sec. 604(c)(1) of ARTA, there is excluded from this conveyance any unexercised right-of-way that may exist under 43 U.S.C. 975(d).

Definitions:

1. "Real property", as used herein, means land and all the appurtenances, hereditaments, improvements, facilities, trackwork, roadbed, buildings, franchises, ways, waters, minerals, rights, privileges, fixtures, licenses, lease-holds, reversions, easements, rights under operating, trackage and joint facilities agreements, rents, issues, profits and other interests and items belonging to or in any way appertaining to the above-described land.

2. All of the terms used in this instrument that are defined in Sec. 603 of ARTA have the same meaning herein as provided in said section, including but not limited to the following terms:

a. "exclusive-use easement", as used herein, means as provided by Sec. 603(6) of ARTA an easement which affords to the easement holder the following:

1. the exclusive right to use, possess, and enjoy the surface estate of the lands subject to this easement for transportation, communication, and transmission purposes and for support functions associated with such purposes;

2. the right to use so much of the subsurface estate of the lands subject to this easement as is necessary for transportation, communication, and transmission purposes and the associated support functions for which the surface of such lands is used;

3. subjacent and lateral support of the lands subject to the easement; and

4. the right (in the easement holder's discretion) to fence all or part of the lands subject to this easement and to affix track, fixtures, and structures to such lands, and to exclude other persons from all or part of such lands.

b. "right-of-way", as used herein, means as provided by Sec. 603(11) of ARTA:

1. an area extending not less than one hundred feet on both sides of the center line of any main line or branch line of the Alaska Railroad; or

2. an area extending on both sides of the center line of any main line or branch line of the Alaska Railroad appropriated or retained by or for the Alaska Railroad that, as a result of military jurisdiction over, or non-federal ownership of, lands abutting the main line or branch line, is of a width less than that described in subparagraph (1) of this paragraph.

IN WITNESS WHEREOF, the undersigned authorized officer of the Department of Transportation has, in the name of the United States, set his/her hand and caused the seal of the Department to be hereunto affixed on this 30th day of March 2011.

UNITED STATES OF AMERICA

Secretary of Transportation by the Administrator of the Federal Railroad Administration

Accepted:

ALASKA RAILROAD CORPORATION

By:_____

Title:_____

Dated:_____

Filed for Record at the Request of and Return to:

State of Alaska
Alaska Railroad Corporation
Attn: Ms. Wendy Lindskoog
Vice-President Corporate Affairs
P.O. Box 107500
Anchorage, Alaska 99510-7500

STATE BUSINESS – NO CHARGE

Location Index for Recording Information:
U.S. Survey No. 1170 located within
Secs. 7, 8, 9, 17, and 18, T. 13 N., R. 3 W.,
Seward Meridian.

Patent No. 50-2011-0122

ALASKA RAILROAD CONCURRENCE

The Alaska Railroad Corporation has reviewed the following document pursuant to the Alaska Railroad Transfer Act of 1982, and finds it to be acceptable.

This concurrence applies to the following document under the specified case file number:

AA-55129-17

Christopher Aadnesen

By

President and CEO

Title

February 25, 2011

Date

DOWL HKM
WWW.DOWLHKM.COM

COMPUTATIONS	Project #: 1124.60478.01
Client Name: ARRC / ECI HYER	Sheet 1 of 1
Project Name: ARRC DEPOT COOLING WELL	Prepared by: DEN Date 4/24/10 — Checked by: Date

FLOW CALCULATIONS

GIVEN:

MAX FLOW RATE = 160 gpm

AVERAGE FLOW RATE = 50 gpm

OPERATION TIME: MAY 1 – OCT 1 (153 days)

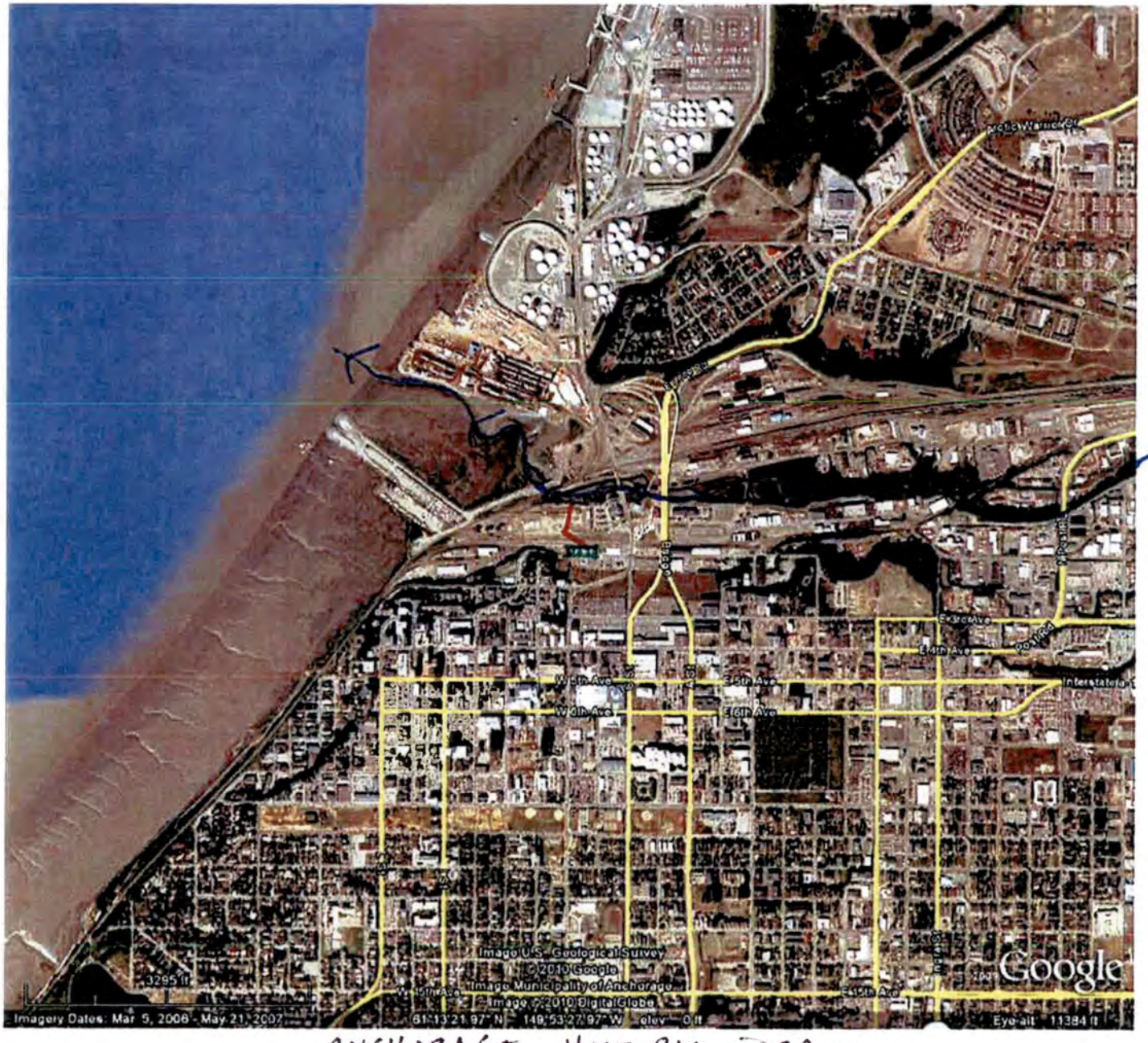
MAX DAILY RATE

$$(160\ \text{gpm})\left(\frac{12\ \text{hr}}{\text{day}}\right)\left(\frac{60\ \text{min}}{\text{hr}}\right) = 115{,}200\ \text{gpd}$$

MAX YEARLY RATE

$$(115{,}200\ \text{gpd})\left(153\ \frac{\text{days}}{\text{yr}}\right) = 17{,}625{,}600\ \text{gpy}$$

(gallons per year)



ANCHORAGE HISTORIC DEPOT

N

1"=3,295 ft

- SITE

DISCHARGE ROUTE

SHIP CREEK

ANCHORAGE HISTORIC DEPOT

N

1" = 404 ft

[ ] - SITE

← SHIP CREEK

—— DISCHARGE ROUTE

NOTES

1. *Portions of this subdivision are situated within the flood hazard district as it exists on the date hereof. The boundaries of the flood hazard district may be altered from time to time in accordance with the provisions of Section 21.60.020 (Anchorage Municipal Code). All construction activities and any land use within the flood hazard district shall conform to the requirements of Chapter 21.60 (Anchorage Municipal Code).*

   Any developement within portions of this plat that are located within the floodplain will require a flood hazard permit.

2. *The bike trail as depicted in the Ship Creek–Port AMSA, Map 6, AO No. 91–89 is to be located south of the 25 foot creek/maintenance setback within the greenbelt easement and shall be built to Municipal Parks Trail Standards.*

3. *Information furnished by Burns & Peterson Architects reference drawing of the Ship Creek Greenbelt, derived from AMSA Map 9.*

4. *No clearing can occur within the greenbelt except for trail or other public access amenities. Landscaping and planting of trees and shrubs are permissible on sites denuded prior to June 1992.*

5. *T. & E. denotes Telecommunications & Electrical.*

LEGEND

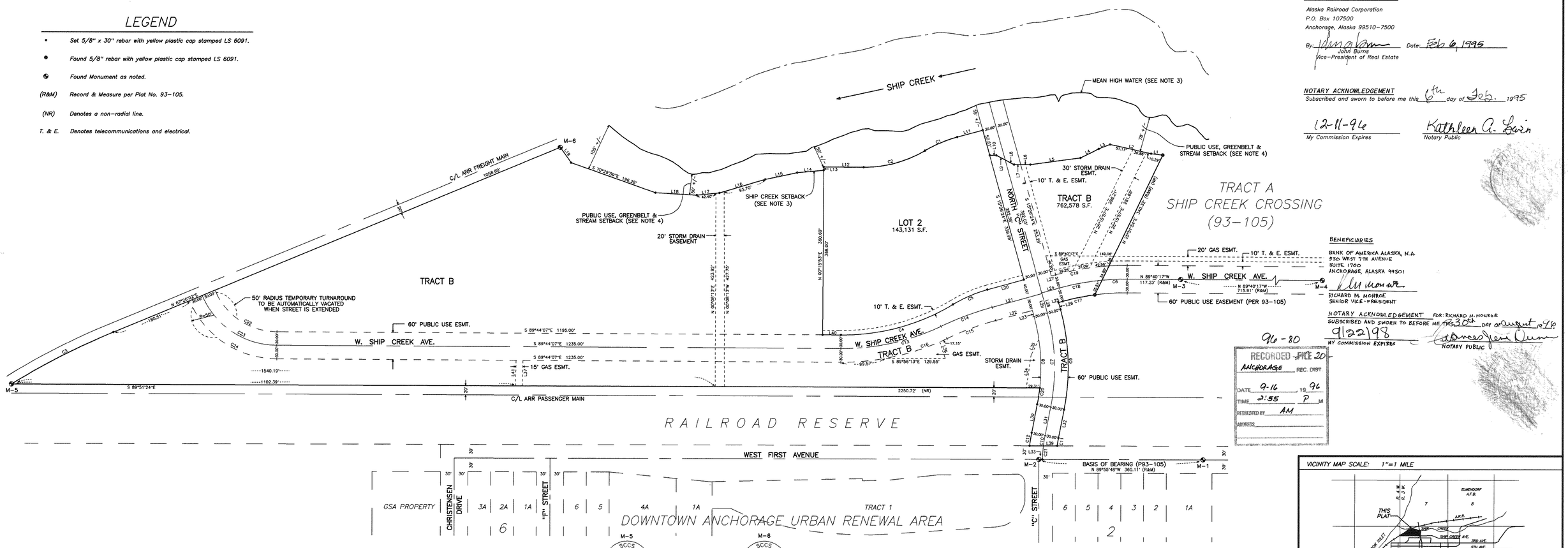
- • *Set 5/8" x 30" rebar with yellow plastic cap stamped LS 6091.*
- ● *Found 5/8" rebar with yellow plastic cap stamped LS 6091.*
- ⊕ *Found Monument as noted.*
- *(R&M) Record & Measure per Plat No. 93–105.*
- *(NR) Denotes a non–radial line.*
- *T. & E. Denotes telecommunications and electrical.*

LINE TABLE

COURSE	BEARING	DISTANCE
L1	N 83°07'53"W	25.62'
L2	N 77°19'06"W	92.26'
L3	S 68°20'06"W	26.90'
L4	S 63°33'36"W	44.66'
L5	S 82°23'34"W	110.97'
L6	N 89°50'19"W	21.20'
L7	N 89°50'19"W	14.53'
L8	N 62°36'27"W	21.82'
L9	N 62°36'27"W	21.89'
L10	N 89°50'19"W	14.48'
L11	S 74°33'36"W	57.96'
L12	N 89°44'07"W	87.50'
L13	S 00°15'53"W	7.31'
L14	S 84°43'10"W	58.03'
L15	S 78°03'31"W	71.54'
L16	S 73°26'50"W	104.31'
L17	S 84°26'56"W	50.23'
L18	N 86°39'34"W	90.16'
L19	N 35°29'51"W	41.37'
L20	N 74°33'36"E	83.15'
L21	N 74°33'36"E	113.15'
L22	N 74°33'36"E	83.15'
L23	S 15°26'24"E	14.10'
L24	N 74°33'36"E	39.71'
L25	N 74°33'23"E	9.71'
L26	N 15°26'24"W	15.68'
L27	N 74°33'36"E	9.71'
L28	S 15°26'24"E	45.68'
L29	S 15°26'24"E	44.10'
L30	N 11°04'00"E	63.68'
L31	N 11°04'00"E	63.68'
L32	N 11°04'00"E	63.68'
L33	S 89°55'48"E	7.74'
L34	N 08°00'00"E	71.93'
L35	N 26°15'56"E	38.81'
L36	S 18°04'06"E	38.38'
L37	N 01°42'19"E	55.85'
L38	N 25°51'54"E	23.75'
L39	S 89°55'48"E	60.43'
L40	N 89°44'07"W	40.00'
L41	N 01°42'19"E	55.88'

CURVE TABLE

CURVE	RADIUS	TANGENT	LENGTH	DELTA	CHORD	CH. BEARING
C1	290.00'	38.88'	77.30'	15°16'23"	77.08'	S 66°55'44"W
C2	260.00'	72.04'	140.54'	30°58'18"	138.84'	S 74°46'43"W
C3	1555.25'	125.40'	250.26'	9°13'11"	249.99'	S 62°49'27"W
C4	470.00'	132.06'	257.49'	31°23'22"	254.28'	S 74°34'13"W
C5	300.00'	41.32'	82.12'	15°41'04"	81.87'	N 66°43'04"E
C6	550.00'	27.92'	55.79'	5°48'43"	55.77'	N 87°25'14"E
C7	450.02'	105.99'	208.19'	26°30'24"	206.34'	S 02°11'12"E
C8	420.02'	79.93'	157.97'	21°32'57"	157.04'	S 04°39'55"E
C9	480.02'	113.06'	222.07'	26°30'24"	220.10'	S 02°11'12"E
C10	314.99'	11.59'	23.17'	4°12'54"	23.17'	N 08°57'33"E
C11	284.99'	8.70'	17.39'	3°29'50"	17.39'	N 09°19'05"E
C12	344.99'	14.48'	28.94'	4°48'26"	28.94'	N 08°39'47"E
C13	500.00'	115.24'	226.52'	25°57'26"	224.59'	S 77°17'10"W
C14	669.53'	60.06'	119.81'	10°15'09"	119.65'	N 69°26'02"E
C15	639.53'	57.37'	114.44'	10°15'08"	114.28'	N 69°26'01"E
C16	530.00'	122.15'	240.11'	25°57'26"	238.06'	S 77°17'10"W
C17	520.00'	36.00'	71.89'	7°55'15"	71.83'	N 78°31'14"E
C18	550.00'	47.91'	95.58'	9°57'24"	95.46'	N 79°32'22"E
C19	580.00'	59.66'	118.90'	11°44'44"	118.69'	N 80°25'57"E
C20	420.02'	18.18'	36.34'	4°57'27"	36.33'	N 08°35'16"E
C21	314.99'	15.05'	30.09'	5°28'21"	30.07'	N 04°06'55"E
C22	147.59'	98.00'	173.02'	67°10'09"	163.29'	N 56°08'58"W
C23	177.59'	117.92'	208.19'	67°10'09"	196.48'	N 56°08'58"W
C24	207.59'	137.84'	243.36'	67°10'11"	229.67'	N 56°09'00"W



M–5 SCCS TR. B LS–6091 1995 — *SET 2 1/2" X 30" ALUMINUM CAP MONUMENT FLUSH WITH GROUND*

M–6 SCCS TR. B LS–6091 1995 — *SET 2 1/2" X 30" ALUMINUM CAP MONUMENT FLUSH WITH GROUND*

M–1 S6915 1988 — *FOUND 2" ALUMINUM CAP MONUMENT IN MONUMENT CASE 0.6' BELOW A.C. PAVEMENT*

M–2 M OF A 1978 — *FOUND 1 1/2" BRASS CAP MONUMENT IN MONUMENT CASE 0.7' BELOW A.C. PAVEMENT*

M–3 SHIP CREEK COMMUNITY CONTROL SURVEY STA NO 3 1991 6714S — *FOUND 3 1/4" ALUMINUM CAP MONUMENT IN MONUMENT CASE 0.3' BELOW A.C. PAVEMENT*

M–4 SHIP CREEK COMMUNITY CONTROL SURVEY STA NO 3 1991 6714S — *FOUND 3 1/4" ALUMINUM CAP MONUMENT IN MONUMENT CASE 0.4' BELOW A.C. PAVEMENT*

CERTIFICATE OF OWNERSHIP and CONVEYANCE

The Grantor, the Alaska Railroad Corporation, for good and valuable consideration, conveys and warrants to the Municipality of Anchorage, an Alaska municipal corporation, an easement in perpetuity in the following described real property:

Lot 2 and Tract B, Ship Creek Crossing Subdivision

for a public street, highway, troll, and corridor for municipal utilities of every kind and nature, including but not limited to the right to construct, reconstruct, maintain, repair, operate, and improve a public street, highway, troll, and municipal electric, telephone or telecommunications, gas, water, sewer, or other utility transmission or distribution facilities, together with the right to license, permit, or otherwise agree to the exercise of these rights by any other person or entity. All improvements placed on the real property subject to this easement are the property of the Municipality of of Anchorage, and are removable at its option. The failure of the Grantee to exercise any of its rights granted herein shall not be construed as a waiver or abandonment of said rights.

This easement is subject to any currently existing rights of other persons or entities to operate utilities or pipelines on, in, or underneath the real property subject to this easement. This easement shall not be deemed to be a dedication or other conveyance of all the interest of the Grantor in the property subject to this easement. Nothing in this easement shall be construed as a limit upon the right of the Grantor to regulate or otherwise control the location, design, construction, or operation of any crossing of the Grantor's railroad tracks.

Dated: Feb 6, 1995

Alaska Railroad Corporation
By: John A Burns
Its: VP Real Estate & Facilities

OWNER:

Alaska Railroad Corporation
P.O. Box 107500
Anchorage, Alaska 99510–7500

By: John A Burns Date: Feb 6, 1995
John Burns
Vice–President of Real Estate

NOTARY ACKNOWLEDGEMENT

Subscribed and sworn to before me this 6th *day of* Feb. 1995

12-11-96
My Commission Expires

Kathleen A. Levin
Notary Public

BENEFICIARIES

BANK OF AMERICA ALASKA, N.A.
530 WEST 7TH AVENUE
SUITE 1700
ANCHORAGE, ALASKA 99501

Richard M. Monroe
RICHARD M. MONROE
SENIOR VICE-PRESIDENT

NOTARY ACKNOWLEDGEMENT FOR: RICHARD M. MONROE
SUBSCRIBED AND SWORN TO BEFORE ME THIS 30th DAY OF August 1996
9/22/98
MY COMMISSION EXPIRES
Frances Jean Dunn
NOTARY PUBLIC

96-80

RECORDED - FILED
ANCHORAGE REC. DIST.
DATE 9-16 19 96
TIME 2:55 P M
REQUESTED BY AM
ADDRESS

SURVEYOR'S CERTIFICATE

I, Jeffery A. Gastaldi, professional land surveyor do hereby certify that the plat of As Shown Hereon is a true and correct representation of lands actually surveyed and that the distances and bearings are shown correctly and that all permanent exterior control monuments, all other monuments, and lot corners have been set and staked, or if final completion is assured by subdivision agreement, they will be set as specified in said subdivision agreement. Lot corners to be set by_____. Monuments to be set by_____.

STATE OF ALASKA 49TH
Jeffery A. Gastaldi
LS–6091
Registered Professional Land Surveyor

PLAT APPROVAL

Plat approved by the Municipal Platting Authority this 10th *day of* April, 1996

Authorized Official

ACCEPTANCE OF CONVEYANCE

The Municipality of Anchorage hereby accepts for public uses and for public purposes the real property conveyed on this plat including, but not limited to the easements, rights–of–way, alleys, roadways, thoroughfares and parks shown hereon.

Dated at Anchorage, Alaska this 8 *day of* April 19 96

Attest

Municipal Clerk

Mayor of Anchorage

TAX CERTIFICATION

All real property taxes levied by the Municipality of Anchorage on the area shown on this plat have been paid in full, and if approval is sought between January 1 and the tax due date, there is on deposit with the chief fiscal officer an amount sufficient to pay real property tax for the current year.

8-7-96
Date

Authorized Official

APPROVALS	Signature	Date
Platting Officer		
Municipal Surveyor		8-7-96
Environmental Protection		8/2/96

VICINITY MAP SCALE: 1"=1 MILE

A PLAT OF

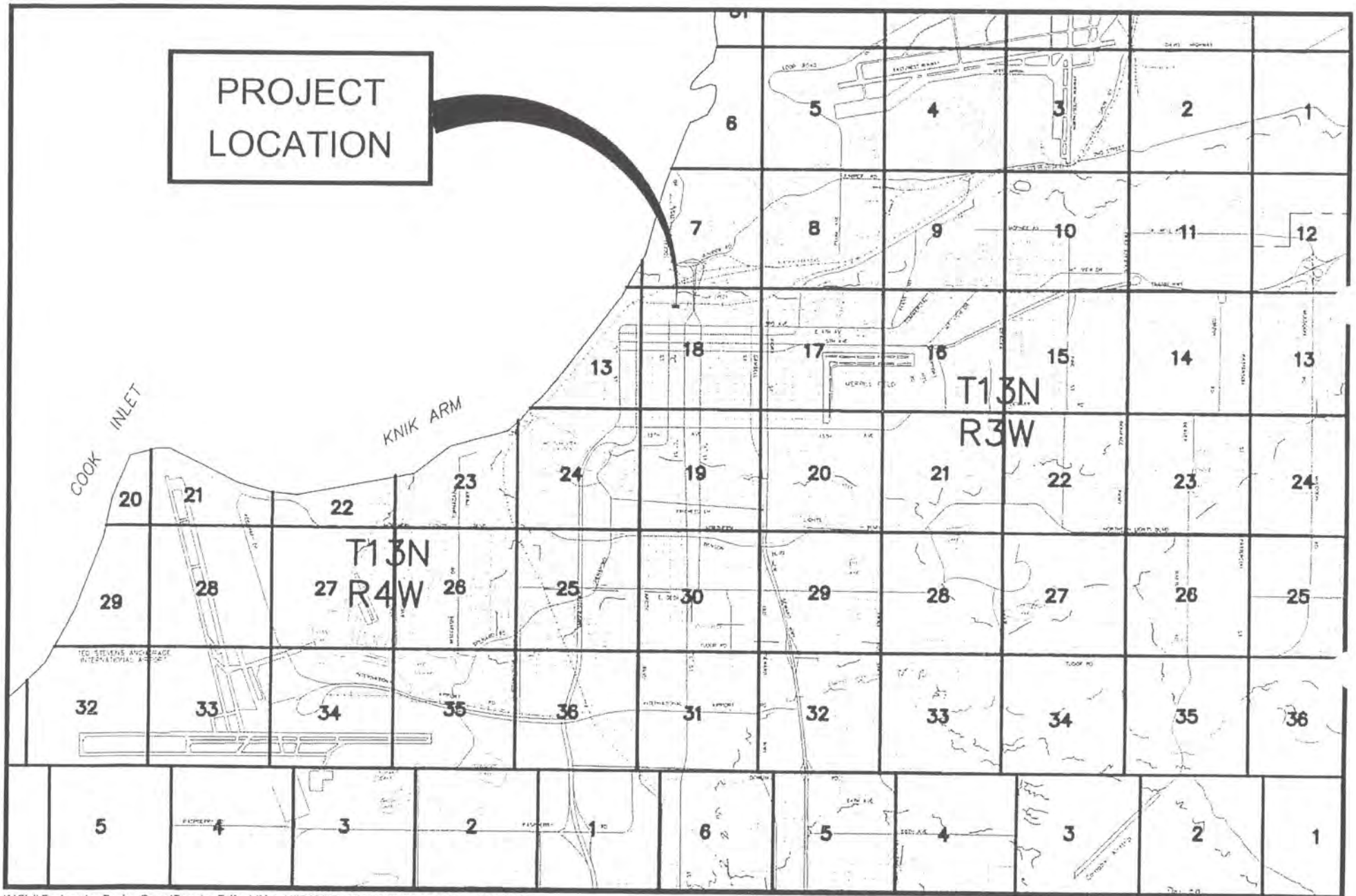
SHIP CREEK CROSSING SUBDIVISION
LOT 2 & TRACT B

A subdivision of a portion of the Alaska Railroad Terminal Reserve per U.S. Survey No. 1170 and lying within the N.E. 1/4 & N.W. 1/4 Section 18, T.13N., R.3W., S.M., Alaska, Anchorage Recording District Containing 20.79 Acres, more or less.

GASTALDI LAND SURVEYING
4726 WEST 88TH AVE.
ANCHORAGE, ALASKA 248–5454

Grid: 1229/1230	Scale: 1"=100'	Date: 12/21/94	BK: 92–13 PG: 24
Drawn: V.E.	File No.: SHIPCRKS	W O No.:	Case No.: S–9214

96-80

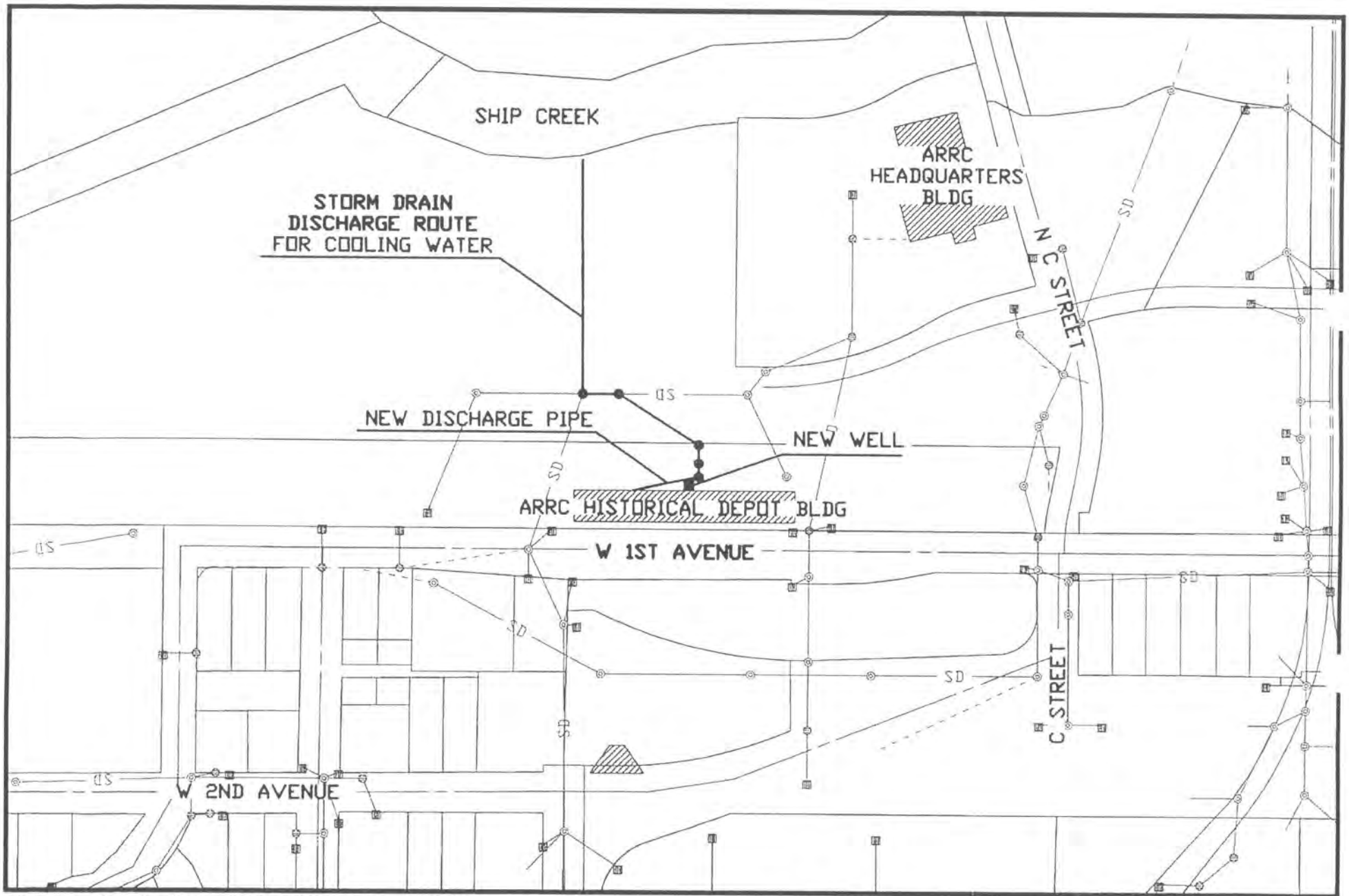


K:\Civil Engineering Design Group\Brandon Telford (May 14)\D60478 - ARR\ANCHORAGE.dwg 2010-5-20 MOA GRID: SW1230 .scr SCALE: NTS

DOWL HKM

LOCATION MAP
ARR HISTORIC DEPOT REMODEL & UPGRADE PHASE 2
ANCHORAGE, ALASKA

FIGURE 1



K:\Civil Engineering Design Group\Brandon Telford (May 14)\D60478 - ARR\Storm.dwg 2010-5-24 MOA GRID: SW1230 .scr SCALE: NTS

DOWL HKM

STORM DRAIN MAP
ARR HISTORIC DEPOT REMODEL & UPGRADE PHASE 2
ANCHORAGE, ALASKA

FIGURE 2

DOWL FILE No:

SCRIPT FILE:

GRAPHIC SCALE
30 0 15 30 60

N

WATER HOOK-UP ABANDONED?

SDCB
N RIM=20.67
N INV=12.71(12")
SE INV=12.82(18")
SW INV=12.72(12")

SDCB
N RIM=19.72
N INV=11.69(24")
E INV=11.86(24")
S INV=11.75(24")

SDCB
N RIM=20.41
E INV=16.18(10")

GAS RISER W/ TEST SWITCH

GAS VALVE

SDCB
N RIM=20.26
S INV=16.74(10")
W INV=16.83(10")

SDCB
N RIM=20.03
E INV=16.88(10")

10' T&E EASEMENT

GAS EASEMENT

STORM DRAIN EASEMENT

10"CPP
SW INV=17.66

SDCB
N RIM=20.40
N INV=16.68(10")
SE INV=16.50(24")

SDMH
N RIM=20.14
NE INV=6.23(36")
SW INV=6.92(36")

3" ST CASING

COMM MH

SWITCH BOARD

CONCRETE VAULT

6" CONCRETE

6" CI

4"

ARRC HISTORICAL DEPOT BLDG

F.F.=22.23

CAPPED GAS STUB-UP

SDMH
N RIM=22.18
S INV=12.23(12")

ANCHOR POLES

AGS MH

ARRC SAFE ZONE BLDG

F.F.=22.54

SDCB
N RIM=21.18
SW INV=16.14(10")

SDCB
N RIM=18.61
NW INV=14.60(10")

SDCB
N RIM=20.98
NE INV=16.94(10")

SDCB
N RIM=18.94
SE INV=15.27(10")

SDCB
N RIM=21.82
SW INV=16.64(10")

SDMH
N RIM=21.14
N INV=14.16(18")
NE TOP=15.09(10")
S INV=12.87(12")
SW INV=UNMEASURABLE

SDMH
N RIM=21.34
S INV=13.58(12")
SW INV=15.36(10")

SDCB
N RIM=19.27
E INV=16.33(10")

SDCB
N RIM=21.61
NE INV=18.44(10")

SDCB
N RIM=22.88
NW INV=19.28(10")

SDCB
N RIM=22.56
W INV=19.68(10")

SDCB
N RIM=22.60
SW INV=19.17(12")

SDMH
N RIM=35.37
NW INV=22.88(24")
NE INV=26.03(12")
E INV=29.51(10")
S INV=23.01(24")
SW INV=24.20(12")

TRACT 1

ARRC SECURITY

SDMH
N RIM=23.50
N INV=16.17(4")
NE INV=15.35(12")

STORAGE CONNEX

FOR PERMIT ONLY

DOWL HKM
4041 B STREET ANCHORAGE, ALASKA 99503
907-562-2000
www.dowlhkm.com

HYFR
ARCHITECTURE PLANNING INTERIORS

STATE OF ALASKA
49TH
Daniel E. Nichols
CE-11012
REGISTERED PROFESSIONAL ENGINEER
5/25/10

ALASKA RAILROAD CORPORATION
HISTORIC DEPOT REMODEL & UPGRADE-PHASE 2A
CONSTRUCTION DOCUMENTS

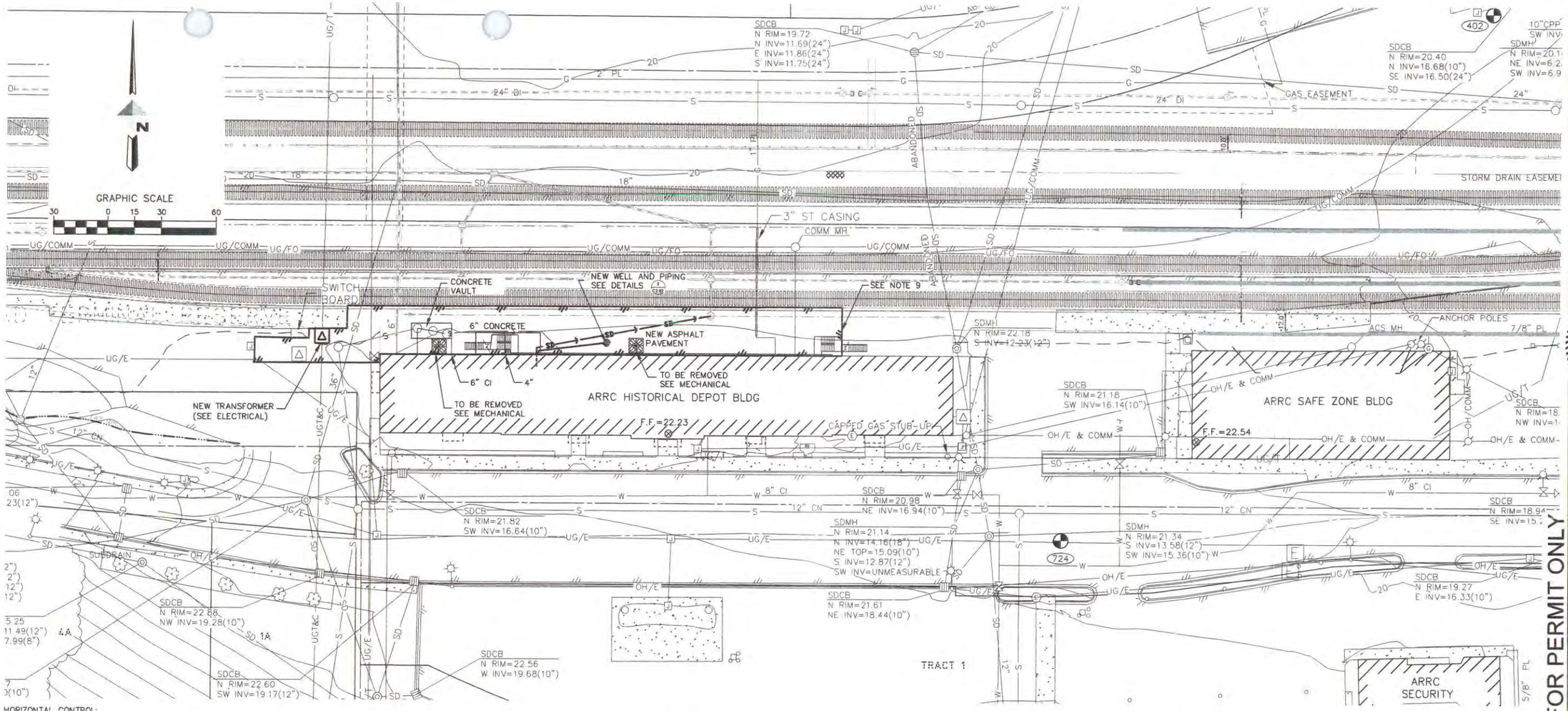
EXISTING SITE PLAN

PROJECT NO. 2104.11
SUBMIT DATE 01 MARCH 2010
DRAWN Author
CHECKED Checker
REVISIONS
PLOT DATE 05/26/2010 8:30:47 AM

C1.00

101 WEST BENSON SUITE 306 ANCHORAGE ALASKA 99503 907 561 5543

\Projects\D60478\DESIGN\DSI-HDEPOT.dwg 2010-5-25 11:23:21 USER: JAR



HORIZONTAL CONTROL:
Coordinate System:
This project is located entirely within the Anchorage Bowl 2000 adjustment, a local surface grid coordinate system expressed in U.S. Survey feet units developed by the Alaska Department of Transportation.

Basis of Coordinates:
The Basis of Coordinates is NGS Station "O'MALLEY", located near the intersection of the New Seward Highway and O'Malley Road. Said station has Anchorage Bowl 2000 coordinates of 303939.2310 N, 353362.5446 E. U.S. Survey Feet.

Basis of Bearings:
The Basis of Bearings is a local plane bearing between NGS Station "O'MALLEY" and NGS Station "LOOP 2 USE RM 3 1964". NGS Station Loop 2 USE RM 3 1964 bears N01°43'26.4"E a distance of 49488.4476 feet from NGS Station "O'MALLEY". NGS Station Loop 2 USE RM 3 1964 has Anchorage Bowl 2000 coordinates of 353405.2778 N, 354851.3982 E. U.S. Survey Feet.

Translation Parameters:
To convert the local coordinates to NAD83 (92) State Plane coordinates expressed in U.S. Survey Feet, translate using +2296868.6878 N usf, +1312517.4904 E usf, and scale using 0.9998910192.

VERTICAL CONTROL:
Elevations are based on the Municipality of Anchorage (MOA) Vertical Control Network, datum NGS 1972 Adjust, MSL = 0.00 U.S. feet. The Basis of Elevations is MOA Bench Mark "TIDAL-12" having a value of 22.14 feet.

Elevations of other Vertical Survey Control and Horizontal Survey Control points were established by differential levelling loops using a Leica DNA10 digital level. Elevations of Horizontal Survey Control points should be verified from the Vertical Survey Control before using due to the potential of settlement or frost heave of these types of monuments over time.

NOTES:
1) Horizontal control points 551, 552, 553, 554, 555, 556, and 557 were used as the basis of coordinates from AKDOT Survey Control and held in a simultaneous Least Squares Network Adjustment in Starnet Version 6.0. All other survey control points were established by DOWL Engineers using conventional traverse techniques with a Leica TCR 1105 Total Station instrument and adjusted in the network using Starnet.

2) This survey was completed during March and April, 2005. All dimensions and coordinates shown are in U.S. Survey Feet unless noted otherwise.

CONTROL POINTS

POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
10	341,085.82	345,138.56	95.63	ALCAP
11	341,129.20	347,928.28	88.15	ALCAP
12	342,122.86	349,610.65	23.46	ALCAP
13	342,027.45	348,973.40	19.59	ALCAP
14	342,021.46	348,174.47	18.90	ALCAP
15	342,005.72	346,074.53	19.11	ALCAP
16	341,482.72	346,877.19	67.11	ALCAP
17	341,469.32	347,252.96	69.39	ALCAP
18	341,879.85	346,731.35	44.97	ALCAP
19	342,013.59	347,124.48	19.73	ALCAP
20	341,380.38	349,366.94	87.30	ALCAP
402	342,089.87	347,849.14	20.57	ALCAP
403	342,311.90	346,470.56	21.54	ALCAP
404	341,774.13	345,438.02	18.67	ALCAP
451	341,456.81	347,813.40	54.47	ALCAP
551	341,072.60	345,138.68	95.93	ALCAP
552	341,095.09	349,380.37	93.77	ALMON
553	341,813.44	347,939.40	18.18	BRASS CAP
554	342,145.91	349,493.55	21.46	ALUM MON
555	342,115.17	349,198.12	19.20	ALUM MON
556	342,207.59	348,964.91	20.12	ALUM MON
557	342,209.64	348,249.02	16.98	ALUM MON
703	341,090.49	345,419.56	93.03	ALCAP
704	341,091.87	346,139.10	93.90	REBAR
705	341,091.63	346,499.72	97.34	BRASS CAP
706	341,092.53	346,859.82	93.87	ALCAP
707	341,487.38	346,651.66	57.92	ALCAP
709	341,814.07	348,299.51	17.01	ALCAP
710	341,815.46	348,659.69	18.45	STEELROD
711	341,814.68	349,019.61	19.07	IRONROD
712	341,814.94	349,379.64	19.86	REBAR
713	341,455.19	349,380.06	55.14	REBAR
722	341,094.78	349,020.44	89.74	BRASS CAP
723	341,091.18	346,139.71	94.54	ALCAP
724	341,797.73	347,609.74	21.56	ALCAP
725	341,091.63	344,914.17	39.71	BRASS CAP

LEGEND

- ADJACENT PROPERTY
- ROW CENTERLINE
- EASEMENT LINE
- SURVEY MONUMENT
- REBAR
- CONTROL POINT
- BUILDING
- CONCRETE
- CURB & SIDEWALK
- EDGE OF PAVEMENT
- EDGE GRAVEL
- WALL
- FENCE / HAND RAIL
- EDGE OF TREES
- TREE CONIFEROUS
- TREE DECIDUOUS
- WATER LINE
- VALVE / KEYBOX
- FIRE HYDRANT
- CAP
- WATER METER
- WELL
- OVERHEAD ELECTRIC LINE
- UNDERGROUND ELECTRIC LINE
- POWER POLE / UTILITY POLE
- LIGHT POLE
- POLE WITH LUMINARE
- ELECTRIC METER
- JUNCTION BOX/VAULT
- TRANSFORMER
- GUY WIRE & ANCHOR
- SEWER LINE
- SEWER MANHOLE
- SEWER CLEANOUT
- SERVICE
- STANDPIPE
- STORM DRAIN LINE
- STORM DRAIN MANHOLE
- CATCH BASIN (TOP or FIELD INLET)
- CATCH BASIN (SIDE INLET)
- DRYWELL
- STORM DRAIN CULVERT
- CULVERT TO MANHOLE
- MAJOR CONTOUR
- MINOR CONTOUR
- GUARD RAIL
- BOLLARD
- SIGN
- MAILBOX
- TB-2 TEST BORING
- RAILROAD TRACKS
- COMMUNICATION PEDESTAL/MANHOLE
- GAS METER
- VALVE
- SIGNAL LIGHT POLE
- TRASH RECEPTACLE

SITE NOTES

1. EXISTING INFORMATION PRESENTED IN THESE DRAWINGS ARE BASED ON A COMPILATION OF AS-BUILTS, PLOT PLANS AND TOPOGRAPHIC SURVEY WORK PERFORMED BY DOWL HKM IN DECEMBER 1999. CONTRACTOR SHALL VERIFY SITE CONDITIONS.
2. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY LOCATIONS BY OBTAINING UTILITY LOCATES PRIOR TO BEGINNING CONSTRUCTION. EXERCISE CAUTION DURING EXCAVATION. CALL ANCHORAGE AREA LOCATE CENTER AT 278-3121.
3. VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION. RECORD LOCATIONS AND CHANGES TO UTILITIES IN SURVEY NOTES AND ON AS BUILT DRAWINGS.
4. ELEVATIONS SHOWN ARE TO PIPE INVERT, FLOW LINE, OR FINISH PAVEMENT SURFACE UNLESS NOTED OTHERWISE.
5. DIMENSIONS SHOWN ARE TO EDGE OF PAVEMENT, GRADE BREAK, EDGE OF CONCRETE, BACK OF CURB, OR FACE OF SIDEWALK UNLESS NOTED OTHERWISE.
6. RESTORE ALL DISTURBED PROPERTY TO ORIGINAL CONDITIONS
7. DEWATERING MAY BE REQUIRED FOR ALL EXCAVATIONS THAT PENETRATE THE GROUND WATER SURFACE. WATER RESULTING FROM CONTRACTOR'S DEWATERING EFFORT MAY NOT BE PUMPED OR OTHERWISE DIVERTED INTO EXISTING STORM DRAINS UNLESS REQUIRED PERMITS, INCLUDING, BUT NOT LIMITED TO, THE MOA STORM WATER TREATMENT PLAN, ARE OBTAINED BY THE CONTRACTOR. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE ALLOWED TO DIVERT WATER FROM THE EXCAVATION ONTO ROADWAYS. CONTRACTOR SHALL PROVIDE DISPOSAL SITE FOR EXCESS WATER AND SHALL BE RESPONSIBLE FOR ALL NECESSARY PERMITS AND APPROVALS. CONTRACTOR SHALL PROVIDE COPIES OF PERMITS AND APPROVALS TO THE MOA RIGHT-OF-WAY PERMIT OFFICE.
8. THE CONTRACTOR SHALL FOLLOW ALL MOA REGULATIONS FOR NOISE, HOURS OF OPERATIONS, AND DUST CONTROL. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION SCHEDULE WITH PROPERTY OWNERS THROUGH THE DESIGNATED ALASKA RAILROAD REPRESENTATIVE PRIOR TO COMMENCING WORK.
9. AFTER ALL TRENCHING AND SITE WORK IS COMPLETE, THE CONTRACTOR SHALL REMOVE AND REPLACE ALL REMAINING ASPHALT BETWEEN THE BUILDING AND THE NEAR TRACK. THE LIMITS HAVE BEEN ESTIMATED ON THE SITE PLAN. CONTRACTOR SHALL CONFIRM LIMITS WITH OWNER'S REP PRIOR TO REMOVING ASPHALT PAVEMENT. THE CONTRACTOR SHALL MATCH EXISTING GRADES, SLOPES, AND MAINTAIN DRAINAGE WITH NEW ASPHALT PAVEMENT.

DOWL FILE No.
SCRIPT FILE
\\Projects\D60478\DESIGN\DSI-HDEPOT.dwg 2010-5-25 11:23:39 USER: JAR

DOWL HKM
ENGINEERS
ANCHORAGE, ALASKA 99503
907.562.2000 WWW.DOWL.COM

HYFR

STATE OF ALASKA
49TH
Daniel E. Nichols
CE-11012
5/25/10
REGISTERED PROFESSIONAL ENGINEER

FOR PERMIT ONLY

ALASKA RAILROAD CORPORATION
HISTORIC DEPOT REMODEL & UPGRADE-PHASE 2A
CONSTRUCTION DOCUMENTS

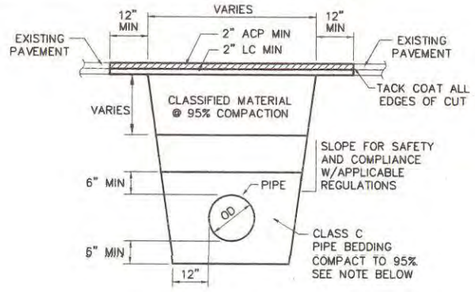
SITE PLAN

PROJECT NO. 21041.1
SUBMIT DATE 01 MARCH 2010
DRAWN AdHsr
CHECKED Checker
REVISIONS
PLOT DATE 05/17/2010 9:26:42 AM

C1.01

ARCHITECTURE PLANNING INTERIORS

101 WEST BENSON SUITE 306 ANCHORAGE ALASKA 99503 907 561 5543

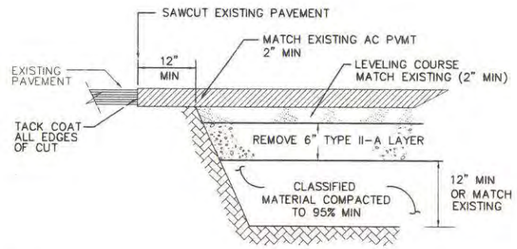


PAVED AREAS

1 / C2.01 TYPICAL UTILITY TRENCH SECTIONS

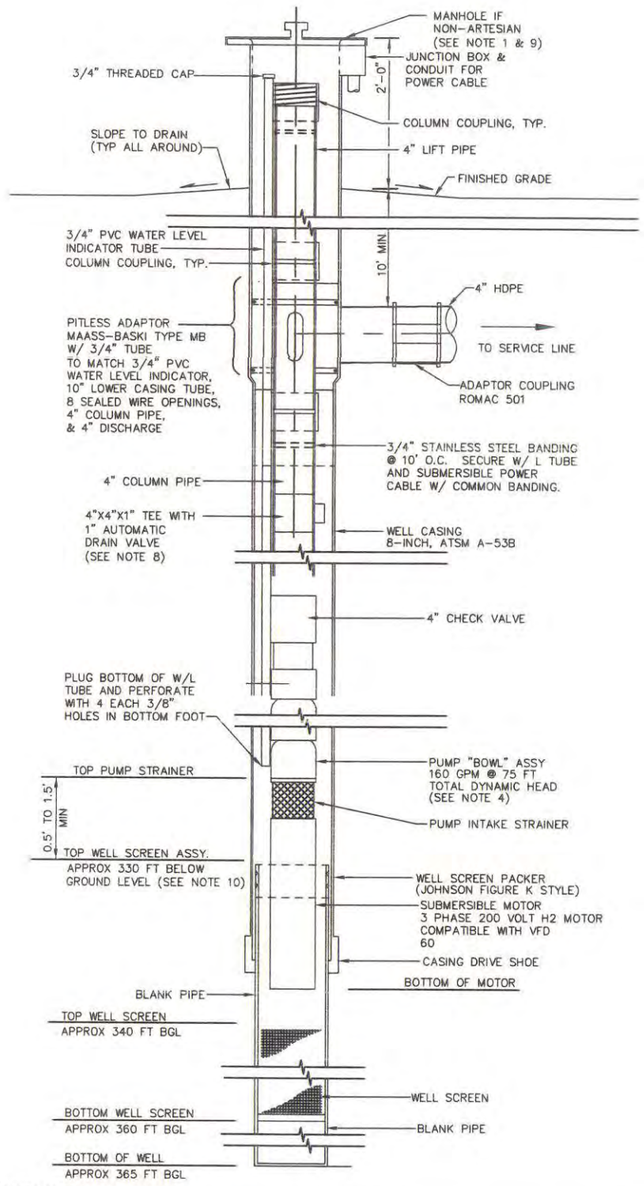
NTS NOTES:

1. WITHIN ONE DAY OF COMPLETING BACKFILL AND COMPACTION THE CONTRACTOR SHALL PATCH TRENCHES WITH COLD PATCH ASPHALT.
2. COLD PATCH ASPHALT SHALL BE NEAT AND FREE FROM PONDING TO MAINTAIN DRAINAGE.
3. COLD PATCH ASPHALT IS TEMPORARY AND AFTER COMPLETION OF ALL SITE AND TRENCH WORK SHALL BE REPLACED WITH ASPHALT PAVEMENT, SEE SHEET C1.01 FOR MORE INFORMATION



2 / C2.01 TYPICAL PAVEMENT REPLACEMENT DETAIL

NTS



GROUNDWATER WELL NOTES

1. SEE PROFILE FOR WELL HEAD MANHOLE DETAILS.
2. THE CONTRACTOR SHALL HEAT FUSE JOINTS OR USE MEGA-LUG RESTRAINING JOINTS ON NEW EXTERIOR PIPE FITTINGS.
3. WELL DEPTHS WERE ESTIMATED BASED ON OTHER WELLS IN THE AREA, AND ARE THUS APPROXIMATE ONLY.
4. PUMP SHALL BE A CROWN GRUNDFOS MODEL 150'S 7.5 HP OR APPROVED EQUAL. PUMP WILL BE VERIFIED BY ENGINEER ONCE WELL STATIC WATER DEPTHS ARE KNOWN. CONTRACTOR RESPONSIBLE FOR PUMP COMPATIBILITY WITH VARIABLE FREQUENCY DRIVE. SEE MECHANICAL FOR PUMP, MOTOR, & VFD SPECIFICS.
5. WELL SHALL HAVE A PLAQUE STATING WELL IS "NON-POTABLE WATER"
6. INSTALLATION OF PITLESS ADAPTOR MAY REQUIRE TRENCH PROTECTION OR SHORING.
7. AUTOMATIC DRAIN VALVE SHALL BE INSTALLED BELOW PITLESS ADAPTOR BUT ABOVE HIGH STATIC WATER LEVEL.
8. WELL IS ASSUMED TO BE NON-ARTESIAN. IF WELL IS FOUND TO BE ARTESIAN THE WELLHEAD WILL BE LOCATED ABOVE GROUND.
9. WELL DEPTHS ARE MEASURED FROM EXISTING GROUND LEVEL NOT TOP OF WELL HEAD.

3 / C2.01 WELL PROFILE

NTS

DOWL HKM
4041 B STREET ANCHORAGE, ALASKA 99503
907-562-2000
www.dowlhkm.com

HYFR

ARCHITECTURE PLANNING INTERIORS

STATE OF ALASKA 49TH
Daniel E. Nichols
CE-11012
REGISTERED PROFESSIONAL ENGINEER
5/25/10

ALASKA RAILROAD CORPORATION
HISTORIC DEPOT REMODEL & UPGRADE-PHASE 2A
CONSTRUCTION DOCUMENTS

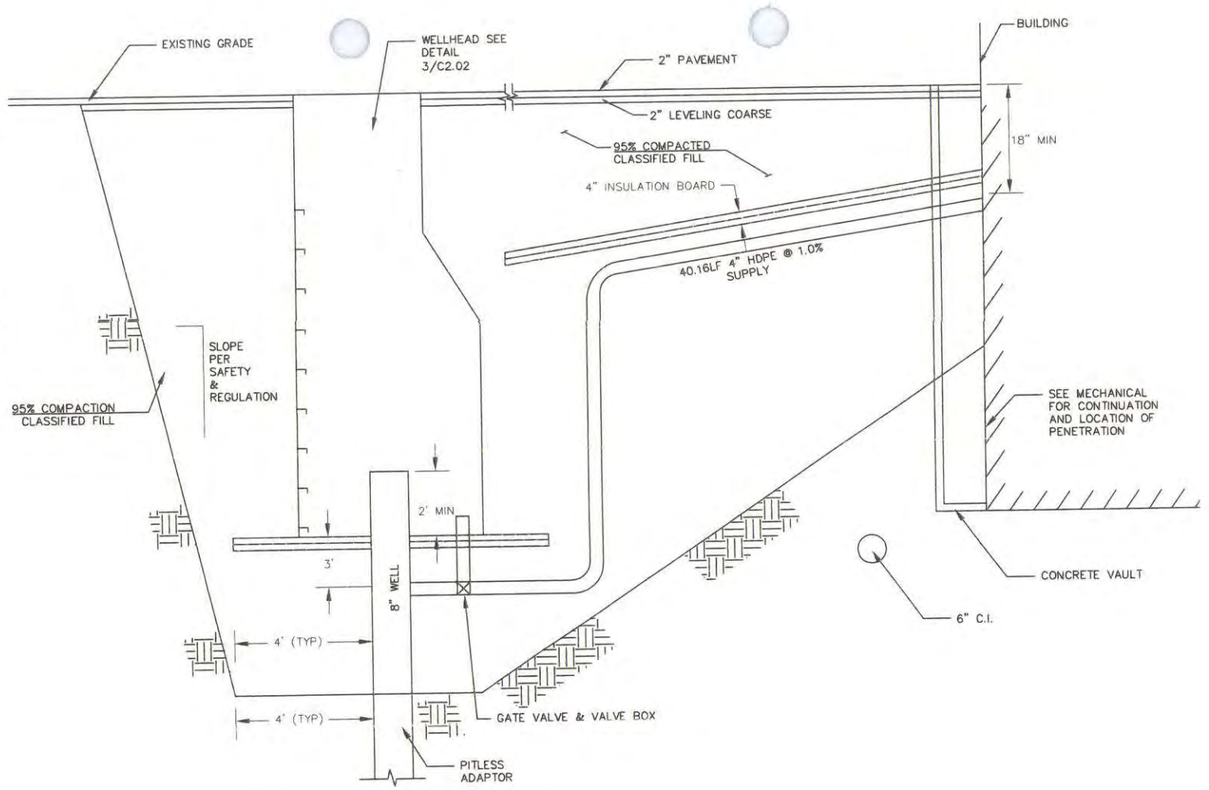
DETAILS

FOR PERMIT ONLY

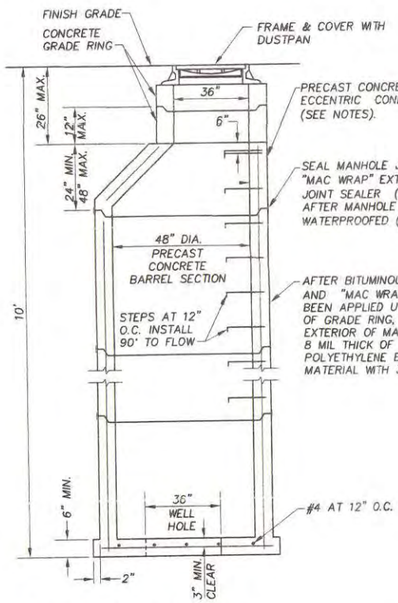
PROJECT NO. 210411
SUBMIT DATE 01 MARCH 2010
DRAWN Author
CHECKED Checker
REVISIONS
PLOT DATE 05/17/2010 9:38:42 AM

C2.01

101 WEST BENSON SUITE 306 ANCHORAGE ALASKA 99503 907 561 5543



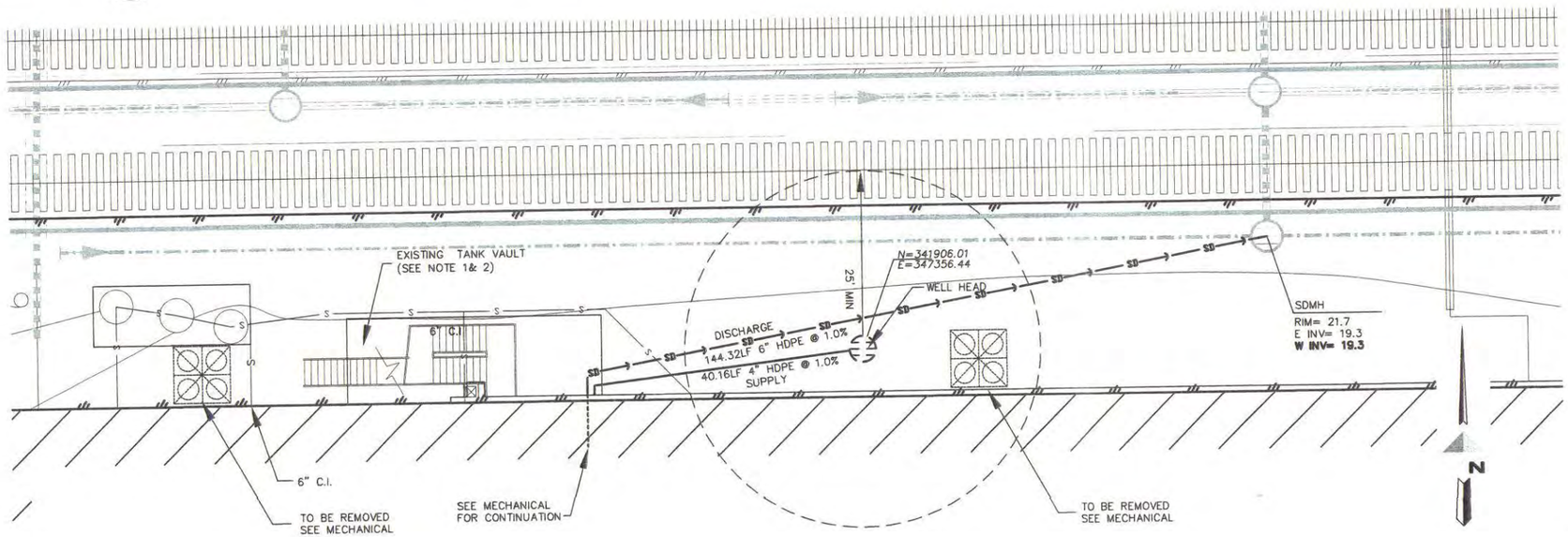
1 C2.02 **WELL HEAD MANHOLE AND PROFILE**
NTS



NOTES:

1. MIN. STEEL REQ'D FOR BARREL AS PER A.S.T.M. C-478-69 SHALL BE IMBEDDED IN BASE SO THAT FIRST BARREL SECTION IS CONNECTED WITH BASE.
2. ALL MANHOLE SECTIONS SHALL CONFORM TO A.S.T.M. C-478-69.
3. "RAM-NEK" OR EQUAL AND PRIME BARREL JOINTS. HEAT "RAM-NEK" AND SEAL SURFACES BEFORE FINAL ASSEMBLY.
4. COAT CONCRETE EXT. SURFACES OF MANHOLE WITH WATERPROOF BITUMINOUS COATING.
5. MANHOLE TO HAVE A MINIMUM OF ONE (1) SIX-INCH (6") GRADE RING.
6. BACKFILL AROUND MANHOLE WITH CLASSIFIED MATERIAL (1-FOOT MIN.) AROUND MH.

3 C2.02 **WELL HEAD MANHOLE**
NTS



2 C2.02 **COOLING PIPING**
NTS

NOTE

1. CONTRACTOR SHALL REMOVE AND DISPOSE OF TWO METAL STORAGE TANKS, ACCORDING TO CURRENT A DEC RULES AND REGULATIONS.
2. TANK VAULTS SHALL BE BACKFILLED BY CONTRACTOR, WITH CLASSIFIED MATERIAL COMPACTED TO 95% PERCENT.
3. THE COOLING WATER SUPPLY & DISCHARGE LINES CROSS A MINIMUM OVER THE 6-INCH SEWER SERVICE 18-INCH

HYFR
DOWL HKM
4041 B STREET MIDTOWN, ALASKA 99503
907-562-2000
www.dowlhkm.com

STATE OF ALASKA
49TH
Daniel E. Nichols
CE-11012
REGISTERED PROFESSIONAL ENGINEER

ARCHITECTURE PLANNING INTERIORS

ALASKA RAILROAD CORPORATION
HISTORIC DEPOT REMODEL & UPGRADE-PHASE 2A
CONSTRUCTION DOCUMENTS

DETAILS

C2.02

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PROJECT NO 2104.11
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CHECKED Checker
REVISIONS
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COOLING COIL SCHEDULE

SYMBOL	LOCATION SERVICE	MBH TOT/ SENS	SCFM	AIR TEMP IN (DB/WB)	MAX VEL. (FPM)	AIR TEMP OUT (DB/WB)	MAX APD (IN WC)	FLUID	GPM	FLUID TEMP IN/OUT (DEG F)	MAX WPD (FT)	REMARKS	CONTROL VALVE TYPE
CC-1A	AHU-1 1ST W	84.8 70.7	3,050	76.7/64.1	500	55/54.5	0.5	30% P.G.	22.0	46/54	18.0	36WX24H 8 ROWS 6 FPI	2-WAY
CC-1B	AHU-1 1ST C	55.7 46.5	2,000	76.7/64.1	500	55/54.5	0.5	30% P.G.	17.0	46/54	18.0	26WX22H 8 ROWS 6 FPI	2-WAY
CC-1C	AHU-1 1ST E	87.7 72.9	3,150	76.7/64.1	500	55/54.5	0.5	30% P.G.	23.0	46/54	18.0	36WX24H 8 ROWS 6 FPI	2-WAY
CC-2A	AHU-2 2ND NW-W	35.2 29.2	1,250	76.7/64.1	500	55/54.5	0.5	30% P.G.	9.0	46/54	18.0	18WX21H 8 ROWS 6 FPI	2-WAY
CC-2B	AHU-2 2ND SW	77.9 65.1	2,800	76.7/64.1	500	55/54.5	0.5	30% P.G.	18.0	46/54	18.0	38WX22.5H 8 ROWS 6 FPI	2-WAY
CC-2C	AHU-2 2ND NW-E	35.2 29.2	1,250	76.7/64.1	500	55/54.5	0.5	30% P.G.	9.0	46/54	18.0	18WX21H 8 ROWS 6 FPI	2-WAY
CC-3A	AHU-3 2ND NE-W	30.6 25.7	1,100	76.7/64.1	500	55/54.5	0.5	30% P.G.	7.5	46/54	18.0	18WX21H 8 ROWS 6 FPI	3-WAY
CC-3B	AHU-3 2ND SE	87.0 72.1	3,100	76.7/64.1	500	55/54.5	0.5	30% P.G.	21.0	46/54	18.0	38WX22.5H 8 ROWS 6 FPI	3-WAY
CC-3C	AHU-3 2ND NE-E	30.6 25.7	1,100	76.7/64.1	500	55/54.5	0.5	30% P.G.	7.5	46/54	15.0	16WX21H 8 ROWS 6 FPI	3-WAY
CC-3D	AHU-3 1ST E	55.7 46.4	2,000	76.7/64.1	500	55/54.5	0.5	30% P.G.	13.0	46/54	15.0	24WX24H 8 ROWS 6 FPI	3-WAY
CC-4A	AHU-4 S	126.6 104.6	4,400	76.7/64.1	500	55/54.5	0.5	30% P.G.	40.0	46/54	15.0	40WX31.5H 8 ROWS 6 FPI	2-WAY
CC-4B	AHU-4 N	84.2 70.2	3,000	76.7/64.1	500	55/54.5	0.5	30% P.G	18.0	46/54	15.0	36WX30H 8 ROWS 6 FPI	2-WAY

HEATING COIL SCHEDULE

SYMBOL	LOCATION SERVICE	MBH	SCFM	AIR TEMP (IN/OUT)	MAX VEL. (FPM)	MAX APD (IN WC)	FLUID	GPM	FLUID TEMP IN/OUT (DEG F)	MAX WPD (FT)	REMARKS	CONTROL VALVE TYPE
HC-1A	AHU-1 1ST W	111.5	3,050	60/94	500	0.20	WATER	9.1	155/130	5.0	36WX24H 2 ROWS, 7 FPI	2-WAY
HC-1B	AHU-1 1ST C	73.5	2,000	60/94	500	0.20	WATER	6.0	155/130	5.0	26WX22H 2 ROWS, 7 FPI	2-WAY
HC-1C	AHU-1 1ST E	113.7	3,150	60/94	500	0.20	WATER	9.3	155/130	5.0	36WX24H 2 ROWS, 7 FPI	2-WAY
HC-2A	AHU-2 2ND NW-W	46.4	1,250	60/94	500	0.20	WATER	3.8	155/130	5.0	18WX21H 2 ROWS, 7 FPI	2-WAY
HC-2B	AHU-2 2ND SW	103.3	2,800	60/94	500	0.20	WATER	8.5	155/130	5.0	38WX22.5H 2 ROWS, 7 FPI	2-WAY
HC-2C	AHU-2 2ND NW-E	46.4	1,250	60/94	500	0.20	WATER	3.8	155/130	5.0	18WX21H 2 ROWS, 7 FPI	2-WAY
HC-3A	AHU-3 2ND NE-W	43.0	1,100	60/94	500	0.20	WATER	3.5	155/130	5.0	18WX21H 2 ROWS, 7 FPI	3-WAY
HC-3B	AHU-3 2ND SE	109.7	3,100	60/94	500	0.20	WATER	9.0	155/130	5.0	38WX22.5H 2 ROWS, 7 FPI	3-WAY
HC-3C	AHU-3 2ND NE-E	43.0	1,100	60/94	500	0.20	WATER	3.5	155/130	5.0	18WX21H 2 ROWS, 7 FPI	3-WAY
HC-3D	AHU-3 1ST E	72.9	2,000	60/94	500	0.20	WATER	6.0	155/130	5.0	24WX24H 2 ROWS, 7 FPI	3-WAY
HC-4A	AHU-4 S	163.6	4,400	60/94	500	0.20	WATER	13.4	155/130	5.0	40WX31.5H 2 ROWS, 7 FPI	2-WAY
HC-4B	AHU-4 N	117.0	3,000	60/94	500	0.20	WATER	9.6	155/130	5.0	36WX30H 2 ROWS, 7 FPI	2-WAY

FOR TYPICAL 2-WAY ZONE HEATING COIL PIPING SEE DETAIL 5/M6.1

FOR TYPICAL 3-WAY ZONE HEATING COIL PIPING SEE DETAIL 6/M6.1

PUMP SCHEDULE

SYMBOL	LOCATION	SERVICE	FLUID	TEMP. (DEG F)	GPM	HEAD (FT)	IMPLR SIZE (INCH)	MIN. EFF. (%)	RPM	CONTROLLER TYPE	MOTOR (HP,V,PH)	REMARKS, BASIS OF DESIGN
PMP-1A,B	BASEMENT MECHANICAL	BUILDING PRIMARY HEATING	WATER	180	120	35	7	60	1,760	VSD	3,208,3	VERTICAL INLINE, INVERTER DUTY MOTOR, 2 X 2 X 7, VSD CONTROLLER. TACO KV-2007
PMP-2	BASEMENT MECHANICAL	HX-1 WARM SIDE	WATER	160	92	26	5.65	65	1,750	STARTER	1,208,3	INLINE CENTRIFUGAL, 2" FLANGE CONNECTION. TACO 1635
PMP-3	BASEMENT MECHANICAL	HX-1 COOL SIDE	30% P.G	155	90	55	4.5	55	3,500	VSD	3,208,3	INLINE CENTRIFUGAL, 1-1/2" FLANGE CONNECTION. TACO 1911
PMP-4	BASEMENT MECHANICAL	HX-2 COOL SIDE	30% P.G	46	265	70	9.25	65	1,760	VSD	7.5,208,3	VERTICAL INLINE, INVERTER DUTY MOTOR, 3 X 3 X 9, VFD CONTROLLER. TACO KV-3009
HWC-1	BASEMENT MECHANICAL	DOMESTIC HW CIRC	WATER	120	2	6	--	--	1750	LINE SWITCH	1/40,120,1	CARTRIDGE CIRCULATOR TACO 006
WWP-1	SITE WELL WATER COOLING	HX-2 WARM SIDE	WATER	42	160	75	--	67	3450	VSD	7-1/2,208,3	MULTISTAGE SUBMERSIBLE STAINLESS STEEL, FRANKLIN MOTOR GRUNDFOS 150S75-3
SP-1A,B	BASEMENT	SUMP PUMP	WATER	60	50	15	--	--	1750	FLOAT SWITCH	1/2,120,1	SUMP PUMP (SECTION 15150) GOULD WS05118F

MISCELLANEOUS EQUIPMENT SCHEDULE

SYMBOL	LOCATION	MOTOR (HP,V,PH)	DESCRIPTION
BLR-1,2	BASEMENT MECHANICAL ROOM	20A, 120, 60	GAS-FIRED CONDENSING BOILER: 1,500 MBH INPUT. MFR: AERCO MODEL: BMK 1.5 LN
CN-1	BASEMENT MECHANICAL	-	CONDENSATE NEUTRALIZER: 20 GPH CAPACITY, WITH MANUFACTURER'S MOUNTING HARDWARE. MFR: JAM BOILER WORKS MODEL: JM-20
AS-1	BASEMENT MECHANICAL	-	HYDRONIC HEATING SYSTEM AIR SEPARATOR, CENTRIFUGAL TYPE WITH STRAINER, 4" INLET, 4" OUTLET, FLANGED CONNECTIONS, RATED FOR 120 GPM AT 35 FT HEAD, MAXIMUM OPERATING PRESSURE 125 PSIG. AMTROL MODEL 4-AS
AS-2	BASEMENT MECHANICAL	-	GLYCOL HEATING SYSTEM AIR SEPARATOR, CENTRIFUGAL TYPE WITH STRAINER, 3" INLET, 3" OUTLET, FLANGED CONNECTIONS, RATED FOR 90 GPM AT 55 FT HEAD, MAXIMUM OPERATING PRESSURE 125 PSIG. AMTROL MODEL 3-AS
AS-3	BASEMENT MECHANICAL	-	GLYCOL COOLING SYSTEM AIR SEPARATOR, CENTRIFUGAL TYPE WITH STRAINER, 4" INLET, 4" OUTLET, FLANGED CONNECTIONS, RATED FOR 205 GPM AT 70 FT HEAD, MAXIMUM OPERATING PRESSURE 125 PSIG. AMTROL MODEL 4-AS
BF-1	BASEMENT MECHANICAL		CHEMICAL POT BYPASS FEEDER
ET-1A,1B	BASEMENT MECHANICAL	-	HYDRONIC HEATING SYSTEM EXPANSION TANK: ASME STAMPED, STEEL SHELL WITH HEAVY DUTY BUTYL REMOVABLE BLADDER, FULL ACCEPTANCE. 53 GALLON TANK VOLUME, 125 PSIG MAXIMUM WORKING PRESSURE, 240 DEG F MAXIMUM OPERATING TEMPERATURE. PRE-CHARGED TO 12 PSIG. BASE MOUNTED IN VERTICAL POSITION. AMTROL 206-L
ET-2	BASEMENT MECHANICAL	-	GLYCOL HEATING SYSTEM EXPANSION TANK: ASME STAMPED, STEEL SHELL WITH BUTYL BLADDER, 22.6 GALLONS ACCEPTANCE VOLUME, 44.5 GALLONS TOTAL VOLUME, PRE-CHARGED TO 12 PSIG, 125 PSI WORKING PRESSURE, 240 DEG F MAXIMUM OPERATING TEMPERATURE. AMTROL AX-80V
ET-3	BASEMENT MECHANICAL	-	GLYCOL COOLING SYSTEM EXPANSION TANK: ASME STAMPED, STEEL SHELL WITH BUTYL BLADDER, 11.3 GALLONS ACCEPTANCE VOLUME, 21.7 GALLONS TOTAL VOLUME, PRE-CHARGED TO 12 PSIG, 125 PSI WORKING PRESSURE, 240 DEG F MAXIMUM OPERATING TEMPERATURE. AMTROL AX-40V
ET-4	BASEMENT MECHANICAL	-	DOMESTIC HOT WATER EXPANSION TANK: STEEL SHELL WITH BUTYL BLADDER, 11.25 GALLONS ACCEPTANCE VOLUME, 25.0 GALLONS TOTAL VOLUME, PRE-CHARGED TO 40 PSIG, 150 PSI WORKING PRESSURE, 200 DEG F MAXIMUM OPERATING TEMPERATURE. AMTROL THERM-X-TROL ST-60V-C.
GM-1	BASEMENT MECHANICAL	1/3,120,1	GLYCOL MAKE-UP PACKAGE: COMPLETE WITH PUMP, LOW LEVEL CUT-OFF AND ALARM ARRANGEMENT, PRIMING VALVE, SHUTOFF VALVE, STRAINER, PRESSURE TANK WITH PRESSURE CONTROL, REDUCING VALVE AND GAUGE, AND 50 GALLON CROSSLINKED POLYETHYLENE TANK WITH LID MOUNTED ON STEEL FRAME. 1.8 GPM MAKE-UP CAPACITY AT 50 PSI WESSELS MODEL GMP-13050
WH-1	BASEMENT MECHANICAL	--	WATER HEATER: GAS FIRED, HIGH EFFICIENCY, SEALED COMBUSTION, 125 MBH INPUT, 60 GALLON TANK BRADFORD WHITE EF-60T-125 DR APPROVED EQUAL

HEAT EXCHANGER SCHEDULE

SYMBOL	LOCATION	HOT SIDE FLUID	GPM	TEMP. IN (F)	TEMP. OUT (F)	MAX WPD (PSI)	COLD SIDE FLUID	GPM	TEMP. IN (F)	TEMP. OUT (F)	MAX WPD (PSI)	MIN. OUTPUT (MBH)	REMARKS
HX-1	BASEMENT MECHANICAL	WATER	92	160	136.6	5.00	30% P.G.	85	130	155	5.00	1050.0	FLAT PLATE IN FRAME ALFA-LAVAL 45Lx19W X76H 31 PLATE COUNTERFLOW
HX-2	BASEMENT MECHANICAL	30% P.G.	201	54	46	4.00	WATER	160	42	52	2.00	794.0	FLAT PLATE IN FRAME DOUBLE WALL ALFA-LAVAL 45Lx26W X76H 113 PLATES COUNTERFLOW

TERMINAL HEATING UNIT SCHEDULE

SYMBOL	LOCATION	MBH	FLUID	GPM	MAX WPD (FT)	FLUID TEMP IN/OUT (DEG F)	REMARKS
FT-1	OFFICE 139	1200 BTUH/LF	WATER	-	-	160/160	FINNED TUBE BASEBOARD: SLOPE TOP ENCLOSURE, 24" CABINET HEIGHT, 1" COPPER TUBING, SINGLE TIER, 4-1/4" X 3-5/8" ALUMINUM FINS, 40 FINS PER FOOT. STERLING JVB-ARS
FT-2	SHARED OFFICE 118	1690 BTUH/LF	WATER	-	-	180/160	FINNED TUBE BASEBOARD: SLOPE TOP ENCLOSURE, 24" CABINET HEIGHT, 1" COPPER TUBING, DOUBLE TIER, 4-1/4" X 3-5/8" ALUMINUM FINS, 40 FINS PER FOOT. STERLING JVB-ARS

PLUMBING FIXTURE CONNECTION SCHEDULE

SYMBOL	FIXTURE	WASTE (INCH)	VENT (INCH)	HW (INCH)	CW (INCH)	REMARKS
RD-1, ORD-1	ROOF DRAIN	3				COATED CAST IRON BODY WITH COMBINED FLASHING CLAMP AND GRAVEL STOP, SUMP RECEIVER AND UNDERDECK CLAMP.
P-1	SINK	2	2	1/2	1/2	DOUBLE COMPARTMENT WITH SINGLE LEVER SPRAY SPOUT FAUCET, BASKET STRAINER, HOT WATER DISPENSER
P-2	SINK	2	2	1/2	1/2	SINGLE COMPARTMENT WITH SINGLE LEVER SPRAY SPOUT FAUCET, BASKET STRAINER, HOT WATER DISPENSER

HYER

ENGINEERS
Athens, Morgenthaler and Co., Inc.
701 East Tudor Road - Suite 250
Anchorage, Alaska 99503
ph 907.561.5543 fax 907.561.5191
www.amc-engineers.com

STATE OF ALASKA 49TH
Daniel W. Cleary
01 MAR 2010
MECHANICAL

ALASKA RAILROAD CORPORATION
HISTORIC DEPOT REMODEL & UPGRADE-PHASE 2A
CONSTRUCTION DOCUMENTS

SCHEDULES

PROJECT NO: 2008.11
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M0.3

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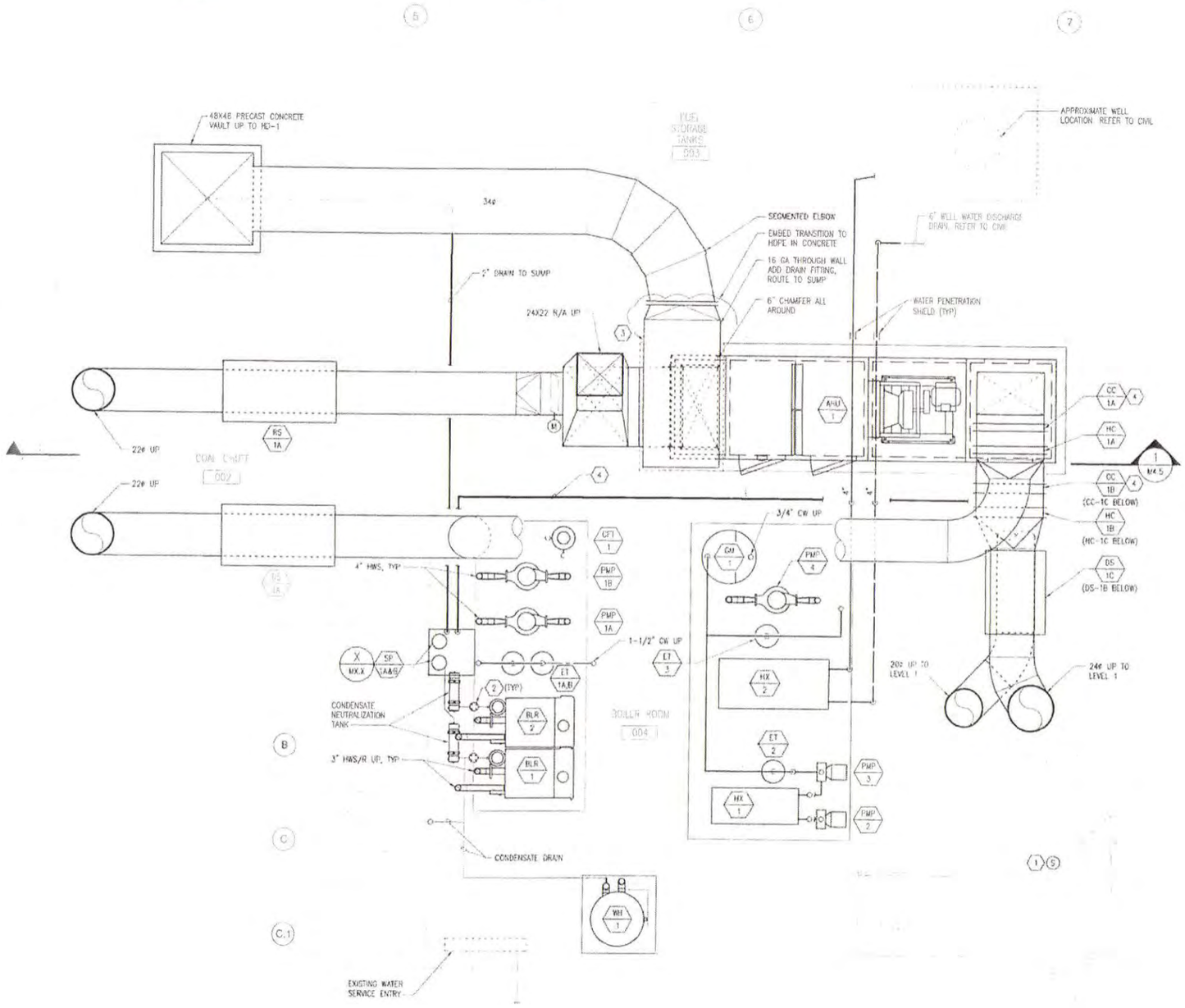

SHEET NOTES

1. BOILER EMERGENCY SHUT-OFF BUTTON SWITCH MOUNTED AT +54" ABOVE LANDING. PROVIDE ENGRAVED PLACARD TO READ "BOILER EMERGENCY SHUT-OFF". MOUNT IMMEDIATELY ABOVE.
2. CONDENSATE TRAP FURNISHED WITH BOILER.
3. SEAL DUCT PENETRATION WATER TIGHT.
4. PROVIDE SLOPED CONDENSATE DRAIN BETWEEN COOLING COIL AND HEATING COILS, TYPICAL EACH SUPPLY TRUCK DUCT. DRAIN TO COMMON CONDENSATE PUMP. ROUTE DISCHARGE TO SUMP.

1 / M4.1 BOILER ROOM LOWER LEVEL ENLARGED PLAN (REFER TO M4.2 FOR UPPER PLAN)

SCALE: 3/8" = 1'-0"

0 16' 32' 48' 96'

HYER

ENGINEERS
Adams, Morgenthaler and Co., Inc.
1031 W. 4th Ave., Suite 200
Anchorage, Alaska 99501
ph 907.257.5100 fax 907.257.5181
www.ami-engineers.com

STATE OF ALASKA 49TH David W. Adams

09814

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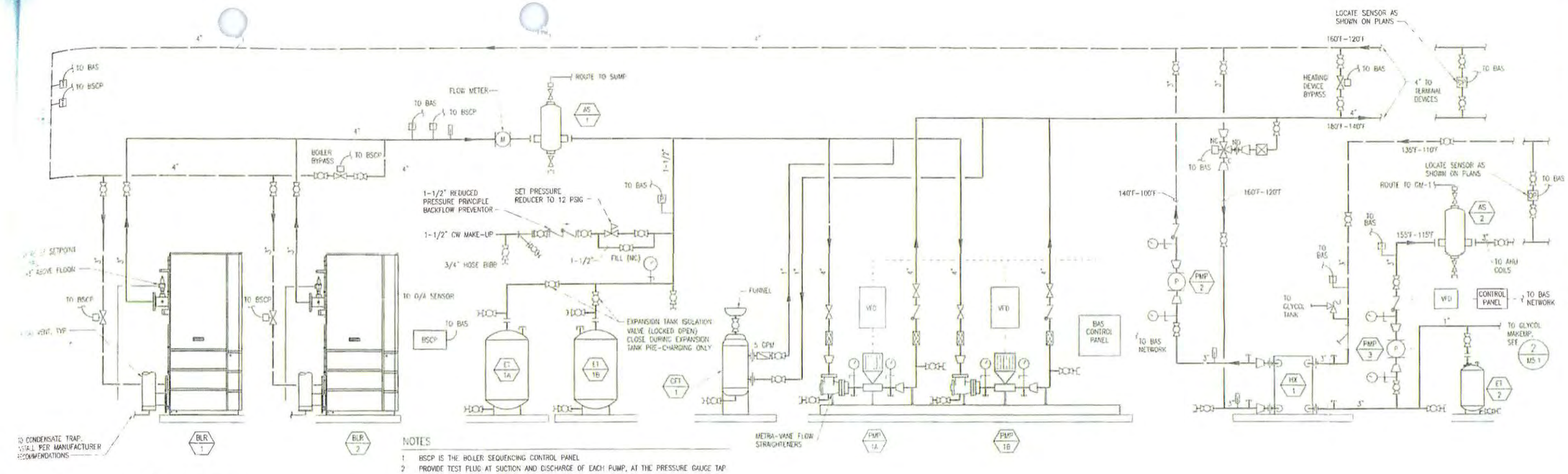
BOILER ROOM LOWER LEVEL ENLARGED PLAN

M4.1

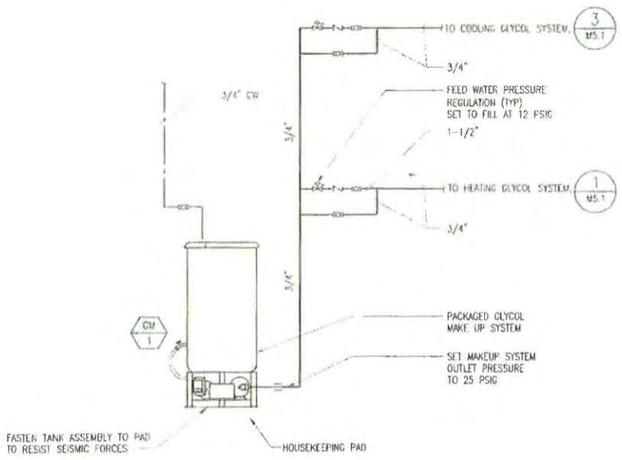


NOTES

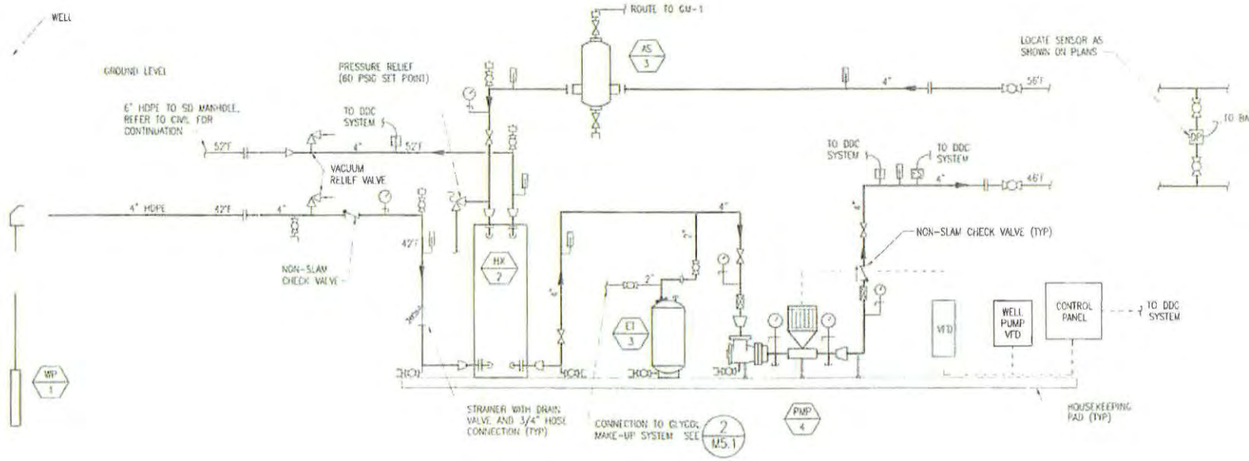
1 BSCP IS THE BOILER SEQUENCING CONTROL PANEL

2 PROVIDE TEST PLUG AT SUCTION AND DISCHARGE OF EACH PUMP, AT THE PRESSURE GAUGE TAP

1 DIAGRAM – HEATING PIPING
SCALE: NONE



2/M5.1 DETAIL – GLYCOL MAKEUP GM-1
SCALE: NONE



3/M5.1 DIAGRAM – WELL WATER COOLING PIPING
SCALE: NONE

ALASKA RAILROAD CORPORATION
HISTORIC DEPOT REMODEL & UPGRADE-PHASE 2A
HEATING & COOLING SYSTEM DIAGRAMS
CONSTRUCTION DOCUMENTS

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M5.1

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ENGINEERS
Adams, Morgenthaler and Co., Inc.
701 East Tudor Road - Suite 250
Anchorage, Alaska 99503
ph. 907.561.5200 fax 907.561.5343
www.ame-engineers.com
101 WEST BENSON SUITE 306 ANCHORAGE ALASKA 99503 907 561 5543

2 / M4.5 SECTION – AHU-1 O/A INTAKE DUCT

SCALE: 3/8" = 1'-0"

1 / M4.5 BOILER ROOM SECTION

SCALE: 3/8" = 1'-0"

0 16' 32' 48' 96'

HYER

ENGINEERS
Alaska Mechanical Consultants, Inc
700 East Tudor Road, Suite 250
Anchorage, Alaska 99503
ph (907) 258-8100 fax (907) 258-3131
www.amcengineers.com

STATE OF ALASKA 48TH David W. Cohen 01 March 2010 REGISTERED PROFESSIONAL ENGINEER

09811

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HISTORIC DEPOT RENOVATION & UPGRADE PHASE 2A
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BOILER ROOM SECTIONS

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M4.5

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