BORROW



Overview

Background - Ray Barchenger

Design - Leon Eckroth

Scouting Borrow - Roxinne A. McPhail

Negotiator & Landowner Discussion - Brad Faiman

NEW Borrow Option Form - Mike Knox

Overview Continued

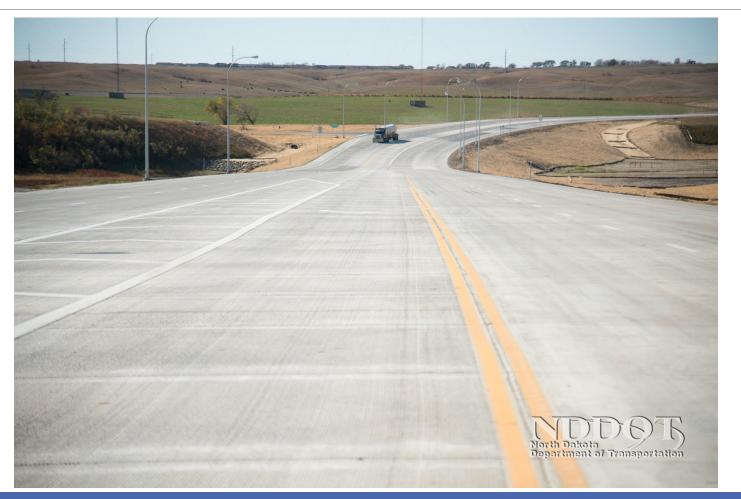
Contractor Payments - Justin Ramsey

Cultural Resources - Greg Wermers

Materials & Research - Matt Kurle

Bismarck District - Loren Lee

Design - Leon Eckroth

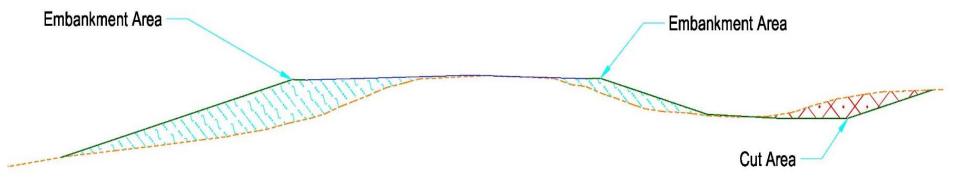


Borrow Determination Process

Create a Profile
 May be Major Changes to Existing Profile
 Or Not

Create a Typical(s) if needed for modeling
 Simple Typical Section
 Very Complex Typical Section





What Determines Borrow?

Earthwork

Just the difference between the embankment areas and the cut areas

Don't forget about shrinkage in the embankment areas

Designer should include shrinkage in the amount of borrow needed when given to ROW

Is Calculating Borrow Black Magic?

>No Black Magic involved!



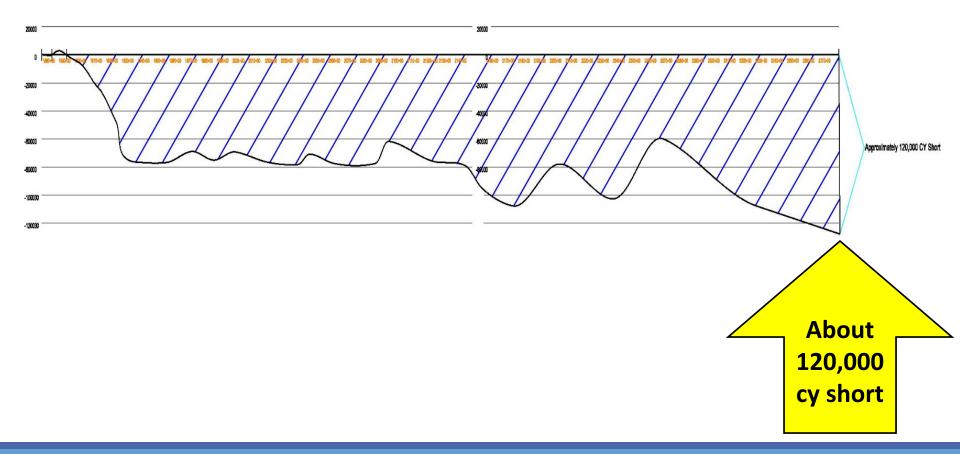
>We Simply use MicroStation!

- MicroStation uses the provided typical and profile to build the roadway as desired by the user
- MicroStation then provides Design with an Earth Summary and Mass Diagram if desired

Earth Summary

	Cut Areas				Fill Areas					
Station	Shrinkage Factor	Area	Volume	Adjusted	Shrinkage Factor	Area	Volume	Adjusted		Mass Ordinate
5259+68.00 R1										0
5259+72.00 R1	1	49	3.7	3.7						3.7
5259+90.93 R1	1	28	27.3	27.3						31
5260+00.00 R1	1	24	8.8	8.8						39.8
5260+29.99 R1	1	9	18.4	18.4	1.25	9	4.8	6	Positive	52.2
5260+68.01 R1	1	5	10.3	10.3	1.25	8	12	15		47.6
5260+72.01 R1	1	5	0.8	0.8	1.25	8	1.2	1.6	= Waste	46.8
5261+00.00 R1	1	2	3.9	3.9	1.25	12	10.5	13.1		37.6
5261+10.00 R1	1	2	0.8	0.8	1.25	15	4.9	6.1		32.3
5261+19.00 R1	1	2								
5363+00.00 R1	1	2	5.4	5.4	1.25	13	62	77.5		-8135.7
5364+00.00 R1	1	1	6.1	6.1	1.25	15	51.9	64.8		-8194.3
5364+35.00 R1	1	2	2.1	2.1	1.25	5	12.9	16.2	Negative	-8208.5
5364+49.96 R1	1	1	0.7	0.7	1.25	0	1.3	1.6		-8209.3
5365+00.00 R1	1	0	0.7	0.7	1.25	0	0.1	0.1	= Borrow	-8208.7
5365+15.00 R1	1	1	0.2	0.2	1.25	0	0.1	0.2		-8208.7
5365+98.00 R1	1	1	3	3	1.25	14	22.3	27.9	,	-8233.6
	Grand Total:		347.4	347.4			6864.9	8581.1		

Quick Mass Diagram as Visual Check



When does ROW get Involved?

Anytime the amount of borrow exceeds

50,000 CY's per project

(This is being updated in the Design Manual.)

If less <50,000 it is usually contractor furnished

There are always special considerations

ROW Involvement

Design sends an e-mail or Memo to their respective ROW liaison (include Mike Knox, ROW Program Manager) with the following:

- Project Number
- > PCN

Location of Project (Scope or Work, SOV map, etc.)

Amount of Borrow needed and desired locations (if needed in more than one location)



Maybe?

After ROW receives borrow needs from Design, they work their magic and send the information to Design

More Black Magic?

Design will then use the borrow information from ROW and include it in any new earthwork runs

Design - Final Steps

Make new earthwork runs

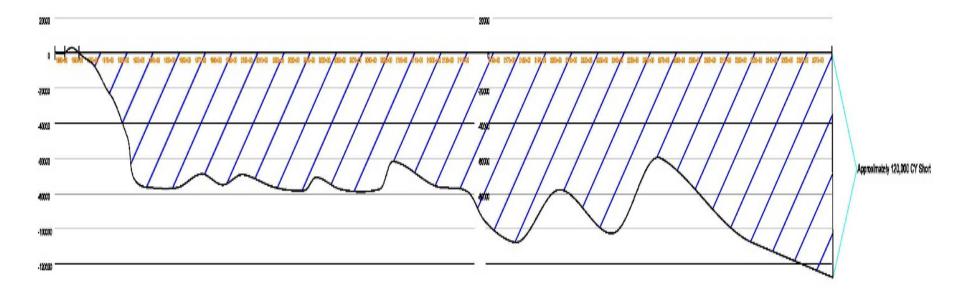
Create new Mass Diagram for final Plans

Add Borrow information to final Plan Sheets
Title Sheet

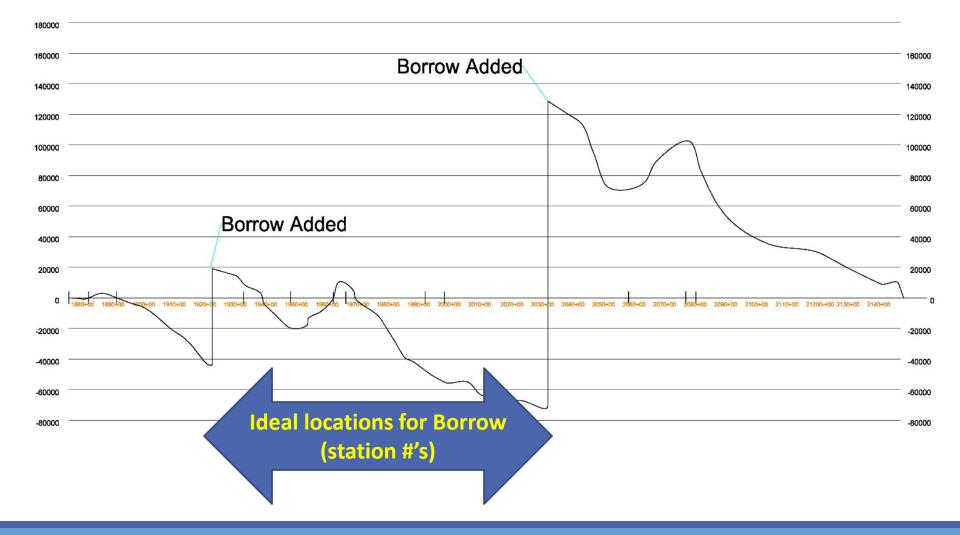
Scope of Work

➢Plan & Profile

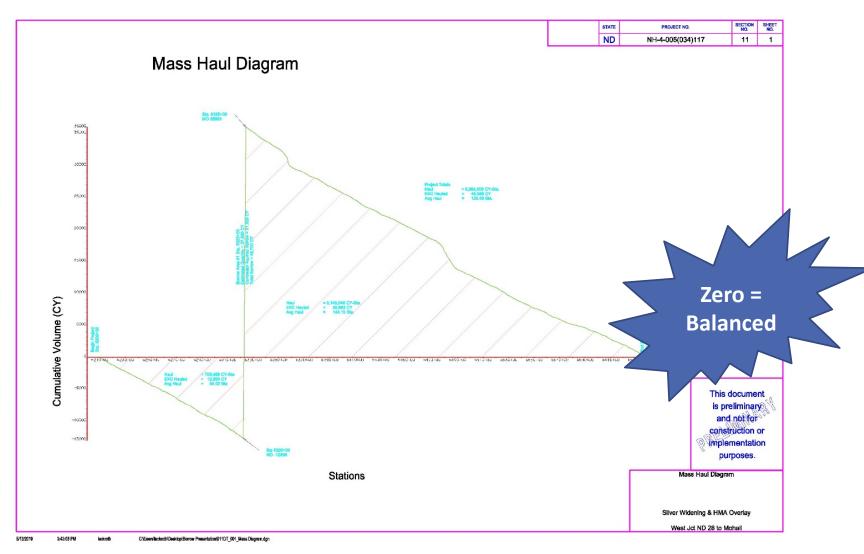
Old Mass Diagram



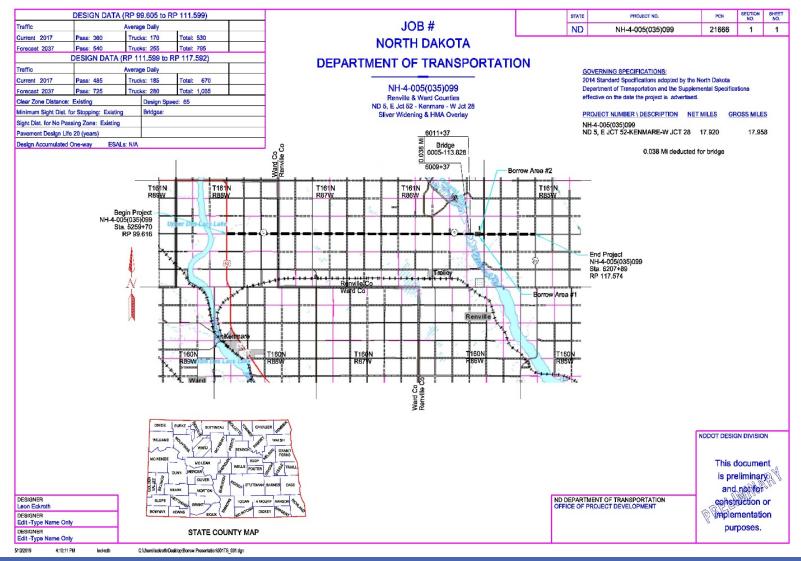
New Mass Diagram



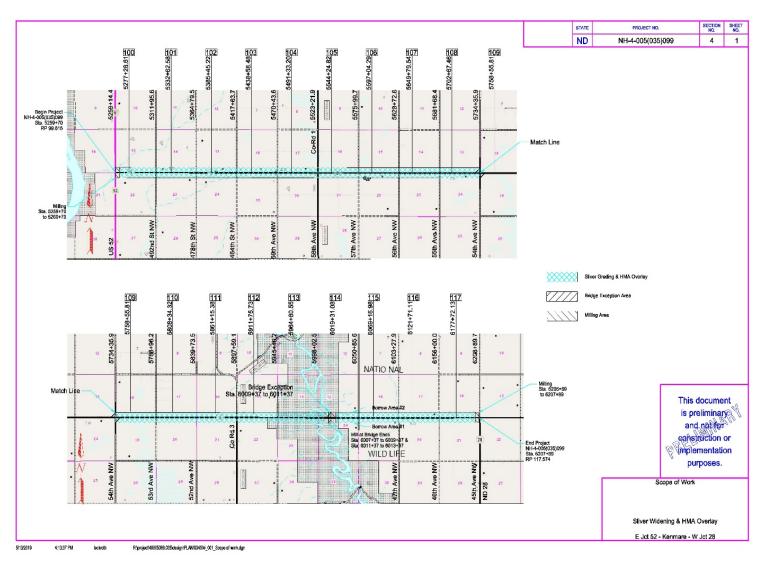
Example



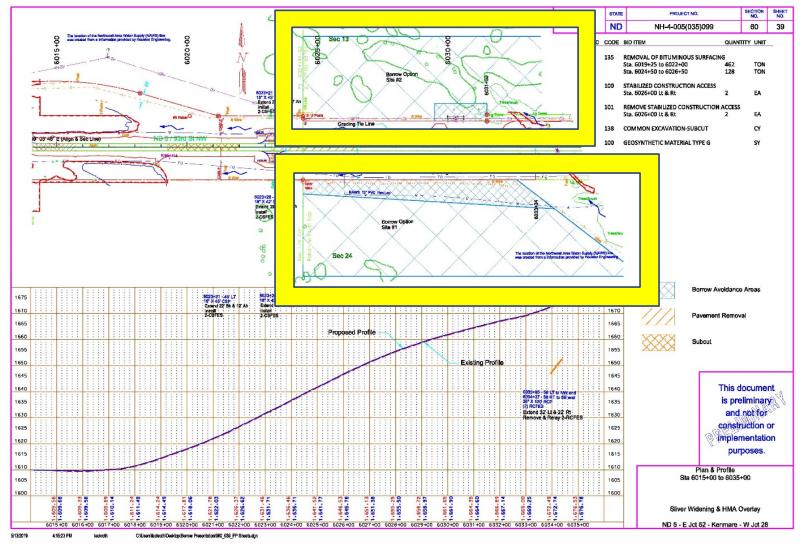
Title Sheet



Scope Of Work



Plan & Profile Sheet



Scouting Borrow - Roxinne A. McPhail



How Much Dirt?

Preliminary #'s

Balancing

Scope changes

Curve balls



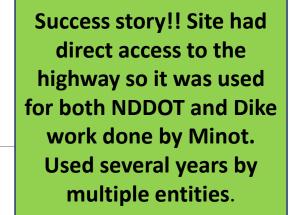


24

Access and Hauling









Public Meeting Outreach

Talk About Borrow

- Quantity
- # of Sites
- Timing



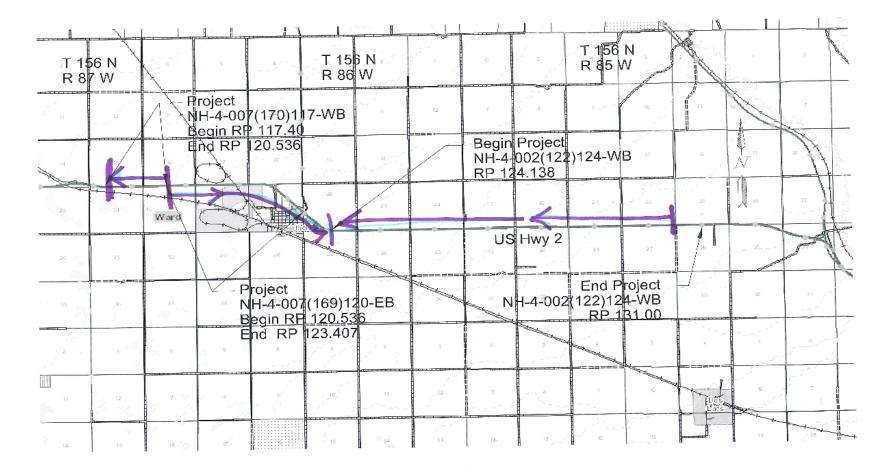
District Snow Problems



Utility Conflicts



Project Scope



Previously Cleared sites (COA)

COA's may exist and still have borrow



Info Gathering Recap

- >Work with Design to get quantity and Project Scope
- >Cultivated field with direct access to highway or short haul
- Public Outreach results
- District Snow Problems
- Utilities Conflicts

Desktop Investigation

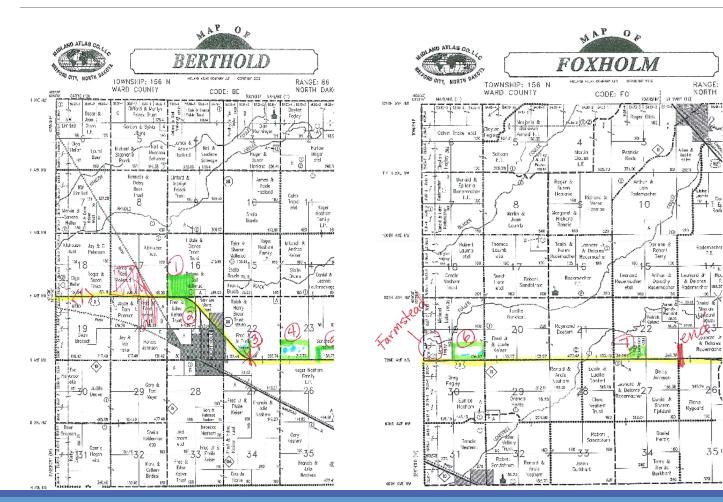
Look for avoidance areas Buildings, wet areas, virgin prairie, wells Direct Highway access is optimal

Check for animals and if temporary fencing will be required

Electric Fence Story

Check elevations and cultivation to target your search

County Atlas Pages



14

laine

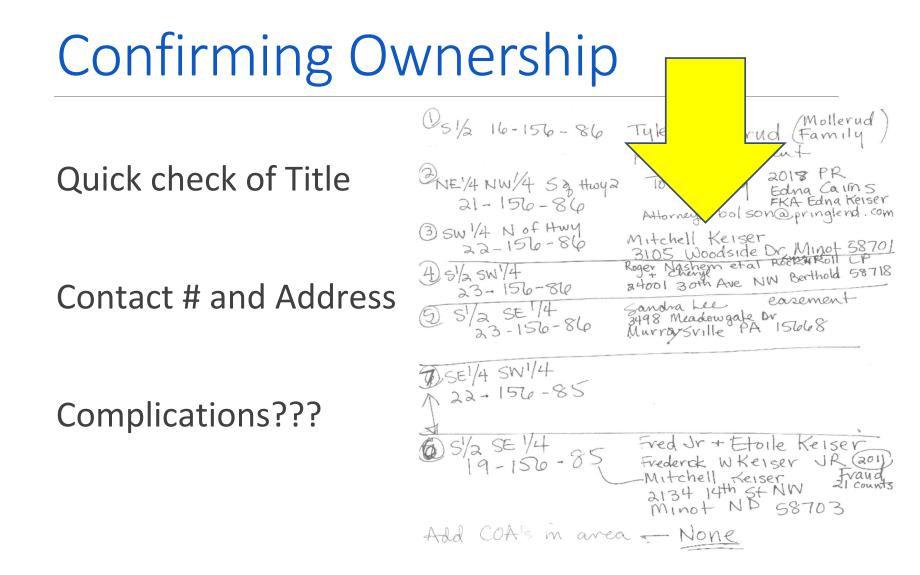
195

26

35:

323

103.37



Borrow Intro Letter



Transportation

Keep it to one page

Spring 2019

Landowner

.

Dear Landowner Family,

The NDDOT needs about 185,000 cubic yards of dirt from 3 or 4 sites along our project...

Estimate Quantity

Number of sites

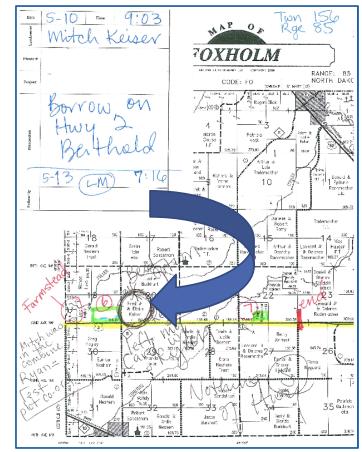
Hill in a cultivated field

Atlas with Investigation Notes

After driving the project and the surrounding areas I narrowed down the choices.

The distance to previously cleared sites bore witness to the lack of available borrow directly adjacent to the highway.

Only one site was viable...



Schedule Meeting with Landowner at Schatz in Minot



Negotiator & Landowner Discussion - Brad Faiman



What is an Option

Borrow Option is included in the plans

Contractor has the option to use optioned borrow sites
 Contractor may select a different site to use



Kitchen Table Discussion with Landowner

Be Proactive and Explain Benefits Monetary benefit – ex. 100,000 cubic yards at \$0.50/C.Y. = \$50,000 (potential income)

Cutting hills / Leveling cropland / Snow traps



Explain How Site Will Be Used

Top Soil will be stripped and stored on site until reclamation takes place after borrow is removed

Explain to landowner that a certain amount of acreage will be needed in order to store top soil, rocks, and an area to be used in order for trucks to maneuver

➢<u>Not</u> used for project staging area

Negotiating Prices

Market Driven

Differences across the State

➢ Typically more in the Oil Field in Western North Dakota and in the Red River Valley

> NDDOT approval required if more than 60 = 0/C V

if more than \$0.50/C.Y.

is offered



Walk / Inspect the Site with Landowner

Visit about where the landowner prefers to have borrow removed from on the site

Do a visual inspection to confirm if there is enough borrow available

Ask about additional site options



Discussion – Landowner Location Preference, etc.

Discuss specific areas within optioned acreage where landowner prefers borrow to be taken from

➢ Mark on an aerial map

Exhibit A in Borrow Option

Fencing and Access

- Specify within Borrow Option under additional conditions
 - Fencing, access, and approach locations shall be discussed with landowner prior to entering site

Tenants

Add Tenant information under Additional Conditions

Ask landowner to inform Tenant of Borrow Option

In typical situation, landowner notifies Tenant and the two of them work out cash rent payments or rent adjustments depending on disturbed acreage

Borrow Now vs. Borrow Then

Topsoil is stockpiled and restored

Contractors are taking more care to ensure reclamation is adequate

NDDOT involvement

- Better communication between landowners and contractors
- Project Engineer involvement

- Mike Knox



BORROW OPTION AGREEMENT

North Dakota Department of Transportation Environmental & Transportation Services SFN 10132 (1-2019)

CN		_

Project		
County		
Borrow Area Number	COA Number	_

Borrow Option Agreement

Use of borrow option agreement is subject to an Environmental Review, Cultural Resource Survey, Soil Survey, and a Utility Review.

	Grantor(s)					
	Grantor(s) Address	City		State	ZIP Code	
	ADD GRANTOR					
	Contact(s)					
	Telephone Number(s)	Email Address(s)				
x	Mortgagee		/	Granto	or(s) Initials]
	Mortgagee(s) Address	City		State	ZIP Code	
A	DD MORTGAGEE					
	Location	Section	Township	5	Range	
	Consideration	Approximate Total Borrow Cubic Yards	Purchase Pri	ice Per	Cubic Yard	

For the sum of the dollar amount listed above and other valuable consideration, the undersigned, for themselves, their heirs, executors and assigns, hereinafter referred to as "Grantor(s)," agree to sell and convey unto the state of North Dakota, for and on behalf of the North Dakota Department of Transportation, hereinafter referred to as NDDOT, all of the fill material suitable for highway purposes, located in and upon the following-described tract or parcel of real estate situated in the above County, North Dakota, specifically:

Specific Legal Description

See Exhibit A for an approximate overlay of above described tract or parcel of land

Grantor(s) covenant that they are well seized of the property described above, and have the right to grant this material option on behalf of themselves, their heirs, successors, and assigns, free of any encumbrances or other impairments preventing the removal of such material.

The Grantor(s) further agree(s) that NDDOT and its assigns shall have full and free right of entry upon and use of said land for the purpose of removing such material.

The Grantor(s) shall be compensated for the material removed at the purchase price per cubic yard listed above.

In addition, if any material is removed from the option site, NDDOT or its assigns (Contractor), will perform the following:

for contractor to call?

Contacts – Who is main contact

See Exhibit 1

Mortgage information with Grantor initial(s)

Location: Portion of SW1/4NE1/4

NEW EXHIBIT A: Overlay map showing preferred borrow area approved by landowner SFN 10132

Page 2 of 4

NDDOT Responsibilities

- Pay cash rent on the disturbed acreage at the rate of \$______ per acre. If the optioned area is still being utilized for borrow after May 15th of the following year, an additional year's cash rent will be paid.
- Make an additional rehabilitation payment on the disturbed acreage in the sum of \$_____ per acre.
- 3. Make an additional payment of **\$_____** per acre if the area excavated was seeded when the work commenced. (Cropland input cost as determined by NDDOT.)
- 4. Final Payment will be made AFTER Pit Release is turned in and complete. •

Contractor Responsibilities

- The Contractor will contact the Grantor(s) to determine a removal plan and final leveling requirements. A copy
 of the final plan signed by the Grantor(s) and Contractor will be submitted to the NDDOT engineer before any
 borrow is removed.
- Within 30 days of opening the borrow pit, the Contractor shall make an initial payment to the Grantor(s) equal to 80% of the minimum payment.
 - Minimum payment amount is calculated as follows:
- (______total cubic yardage optioned X rate per cubic yard \$______) X (______50 % from below)
- = \$ 0.00 Total Minimum Payment X 80% = \$ 0.00 Initial Payment Due to Grantor(s)

Percent of total cubic yards used for minimum payment calculation:

(<50,000 cubic yards = 50%) (50,001 <100,000 cubic yards = 40%) (>100,000 cubic yards = 30%)

3. The remaining balance of the minimum payment (\$ 0.00) plus the remaining balance of the royalty payment (based on the total amount of borrow quantity removed) shall be made by the contractor within 30 days after the Contractor has obtained a pit release from the Grantor(s).

4. Prior to excavation of material, a minimum depth of 6" topsoil will be stripped. In those areas where topsoil depth is in excess of 6", a maximum of 12" will be stripped. When the excavation work is completed for topsoil will be redistributed over the disturbed area. Adequate drainage will be provided as part of the reclamation of the disturbed property. If the reclaimed area is not cropland, it will be seeded to grass unless otherwise requested by the Grantor(s) within this agreement.

Additional Conditions:

It is mutually agreed between the parties hereto that the state, through NDDOT, may assign the right to exercise this option to other entities or persons to take fill material for highway improvement from the land herein described, and that said assignee shall pay to the parties to whom the state itself would pay for uch material taken, at the same rate as the state itself would pay if the material were taken by the state inder this borrow option agreement. Assignee shall notify the Grantor(s) in writing that assignee is exercising NDDOT's option and promptly present a detailed excavation plan to the Grantor(s).

This borrow option shall expire upon completion of the project, or at the end of five years, whichever occurs first. In the event that the project number changes, this option shall transfer and remain valid as long as the Certificate of Approval (COA) number remains the same. If the COA pumber changes, this borrow option agreement is void.

NDDOT will not record this borrow option agreement.

- The Grantor(s) will be given written notification if this option is not approved by NDDOT
- Once the COA is obtained, the NDDOT will forward a copy to the Grantor(s)

This borrow option agreement may be executed in several counterparts, each of which shall be deemed an original but all of which shall constitute on and the same instrument.

Borrow Option Agreement

NDDOT Payment made after signed Pit Release & Borrow Area Status Report turned into ROW

Additional Conditions: Fencing/Seeding/Tenant info/ Who gets paid and payment splits

Written notification to Grantor(s) if option is not approved by NDDOT

Copy of COA mailed to Grantor(s)

SFN 10132

Page 4 of 4

BORROW OPTION AGREEMENT - CONTRACTOR

North Dakota Department of Transportation

Environmental & mansportation Services	Project	auety			
PCN	Project		County		
	Borrow Area Number COA			DA Number	
Grantor(s)					
Grantor(s) Address	City		State	ZIP Code	
Contact(s)	Telephone Numb	er(s)			
Location	Section	Township	Range		
Approximate Total Borrow Cubic Yards	Purchase Price Per Cubic Yard				
Legal Description of Optioned Area:					
If any material is removed from the option site. N	DDOT or its assigns (Co	ontractor) will pe	arform th	e following:	
NDDOT Responsibilities		mitaotory, will pe	anonn u	ie tonowing.	
	rata of f	internet of the	a aution	a dense is still	
 Pay cash rent on the disturbed acreage at the being utilized for borrow after May 15th of the t 				ied area is still I be paid.	
2. Make an additional rehabilitation payment on t	he disturbed acreage in	the sum of \$		per acre.	
 Make an additional payment of \$ commenced. (Cropland input cost as determined) 	per acre if the area (ed by NDDOT.)	excavated was :	seeded	when the work	
4. Final Payment will be made AFTER Pit Relea	se is turned in and comp	olete.			
Contractor Responsibilities					
 The Contractor will contact the Grantor(s) to d of the final plan signed by the Grantor(s) and C borrow is removed. 					
2. \$0.00_Total agreed upon minimum	n payment shall be paid	as follows:			
 Within 30 days of opening the borrow pit, the Grantor(s). 	ne Contractor shall make	an initial payme	ent of S_	<u>0.00</u> to	
b. The remaining balance of the minimum pay royalty payment (based on the total amount within 30 days after the Contractor has obta	t of borrow quantity remo	oved) shall be m			
 Prior to excavation of material, a minimum dep depth is in excess of 6", a maximum of 12" will will be redistributed over the disturbed area. Are the disturbed property. If the reclaimed area is requested by the Grantor(s) within this agreem 	be stripped. When the e dequate drainage will be not cropland, it will be s	excavation work provided as pa	is comp rt of the	pleted the topsoil reclamation of	
Additional Conditions:					
Contractor shall notify the Grantor(s) in writing th detailed excavation plan to the Grantor(s).	at they are exercising N	DDOT's option a	and pron	nptly present a	

Date

Borrow Option Agreement

Contractor Auto Fill Page

Grantor(s) initial and keep a copy so they know what the contractor receives

BORROW / WASTE MATERIALS CHECK LIST

PROJ	ECT NO)			N #	
NEG	OTIATO	R		LANDOWNER(S)		
MAT	ERIAL			DATE MATERIAL SOURCE APPROVAL	REQUEST SUBMITTED	Borrow
Yes	No	N/A	1.	DOCUMENTS: (Submit in Order Listed) Borrow/Waste Option Report		Check List
0	0	0	2.	Borrow Option Agreement & Exhibit		
0	0	0	3.	Waste Materials Option Agreement	د .	
0	0	0	4.	Agreement for Entry and Construction Without Compensation	Total Payment Due	
0	0	0	5.	Site Map		
0	0	0	6.	Material Source Approval Request	Approved By	
0	0	0	7.	Material Source Certificate of Approval		
0	0	0	8.	Additional Written Communications		
				(Emails/Correspondence)	Date	
0	0	0	9.	Surface Ownership Report (SOR)		
0	0	0	10.	Executed W-9 (Not Required on Donations)		
0	0	0	11.	NDDOT Title VI Public Participation Survey		
0	0	0	12.	Other:		
				TITLE CURATIVE REMINDERS:		
Yes	No	N/A				
0	0	0	Joint	Tenancy – Copy of the Death Certificate for Any De	ceased Joint Tenant, Passes to Surviving	
			Joint	Tenant(s)		
0	0	O	Tena	nts in Common – Ask for a Copy of the Will for Dece	eased, and Obtain Heirs	
			Signa	ature. If Will Has Not Been Probated, Obtain Copy of	f Letters Testamentary	
			Appo	pinting Personal Representative, and Obtain Persona	al Representative's Signature.	
0	0	0	Life E	state Interest/Life Tenant – Obtain Copy of Death C	Certificate & Agreement for	
			Rema	ainderman		
0	0	0	Powe	er of Attorney/Trust Agreement Identifying Trustee(s)	
0	0	0	Land	owner – Tenant Lease Agreement(s)		
0	0	0	Own	ership Information Matches on the Plats, Title Work	s, and Acquisition Documents	Completed after recl
				REHABILITATION SUMMARY AND PAYMEN	NT:	
				(Internal Use Only)		
0	0	0		ow Area Status Form		
0	0	0	Origi	nal Borrow/Waste Option Status Report		

- Pit Release to NDDOT for final payment (Submitted by district office) O O O
- O 0 O Current W-9 on file

Initials:

pleted after reclamation

See Exhibit 2

Follow Up

Stay on top of potential title changes

Let Grantor(s) know about bid opening changes or project delays

Contractor Payments - Justin Ramsey



Initial Royalty Payments

OLD REQUIREMENT

Make initial payment upon opening the borrow pit

NEW REQUIREMENT

- Make initial payment within 30 days of opening the borrow pit
- Provide the Engineer with proof of payment within 30 days of issuing the payment
 - The format this takes could vary greatly, depending on how the contractor made the payment
 - Suggest the contractor simply get something signed by the landowner acknowledging having received the payment
 - Failure to provide this proof of payment results in the Engineer no longer making progressive payments for borrow

Remaining Royalty Payments

OLD REQUIREMENT

Make final payment within 30 days after the Contractor obtained the pit release from the grantor

NEW REQUIREMENT

Make final payment within 30 days of obtaining the pit release

Provide proof of payment to the Engineer within 30 days of making the final payment

The Engineer will not make payment for the final quantity of borrow material until the proof of payment is received

and the second sec

Spec Changes

Section 203

SECTION 203 EXCAVATION AND EMBANKMENT

2. Department Optioned Borrow.

Identify the legal owners of the borrow area at the time the material is being removed. Use county records for the identification of land owners. Include the names of any other parties having a legal interest in the property. Provide this information to the Engineer.

Notify the landowner in writing if exercising the Department's option, including the removal plan and location of the access route.

Submit a copy of the written notification and any other agreements negotiated with the landowner 10 days before starting operations in borrow area.

The Department will be responsible for utility relocations and costs of relocations.

Remove, stockpile, and spread topsoil as specified in Section 203.04 B, "Topsoil". Use seed as specified in the Contract, if no seed is specified use Class II seed mixture as specified in Section 251.03, "Materials".

Submit a copy of the landowner's release and receipt of payment, after the borrow area has been restored to a satisfactory condition.

If the work is performed in more than one calendar year, pay the landowner for the material removed the first calendar year by December 31 of that year. If a payment arrangement different from the Department's option is negotiated with the landowner, submit a copy of the agreement.

If a material shortage or other problems occur in the Department optioned area and the Engineer directs that borrow be furnished from an alternate site, the Department will pay for.

- Topsoil and seeding on the basis shown for the Department optioned area;
- Costs in excess of what would be incurred in the Department optioned area; and
- Haul will be measured as specified in Section 203.05 H, "Haul".

Section 203

SECTION 203 EXCAVATION AND EMBANKMENT

203.04 CONSTRUCTION REQUIREMENTS

D. Borrow Excavation.

2. Department Optioned Borrow.

a. General.

Identify the legal owners of the borrow area at the time the material is being removed. Use county records for the identification of land owners. Include the names of any other parties having a legal interest in the property. Provide this information to the Engineer.

Notify the landowner in writing if exercising the Department's option, including the removal plan and location of the access route.

Submit a copy of the written notification and any other agreements negotiated with the landowner 10 days before starting operations in borrow area.

The Department will be responsible for utility relocations and costs of relocations.

b. Topsoil Removal.

Before excavation, strip a minimum of 6 inches of topsoil. In areas where topsoil depth exceeds 6 inches, strip a maximum of 12 inches of topsoil.

c. Payment of Borrow.

Provide proof of payment to the Engineer within 30 days of issuing the payment to the grantor. The Department will not make progressive payments for borrow material removed from a location until the proof of payment is received.

d. Multi Year Projects.

If the work is performed in more than one calendar year, pay the landowner for the material removed the first calendar year by December 31 of that year. If a payment arrangement different from the Department's option is negotiated with the landowner, submit a copy of the agreement.

e. Material Shortage.

If a material shortage or other problems occur in the Department optioned area and the Engineer directs that borrow be furnished from an alternate site, the Department will pay for:

- Topsoil and seeding on the basis shown for the Department optioned area;
 Costs in excess of what would be incurred in the Department optioned area;
- · Haul will be measured as specified in Section 203.05 H, "Haul".
- and

 Haul will be measur
 f. Borrow Site Restoration.

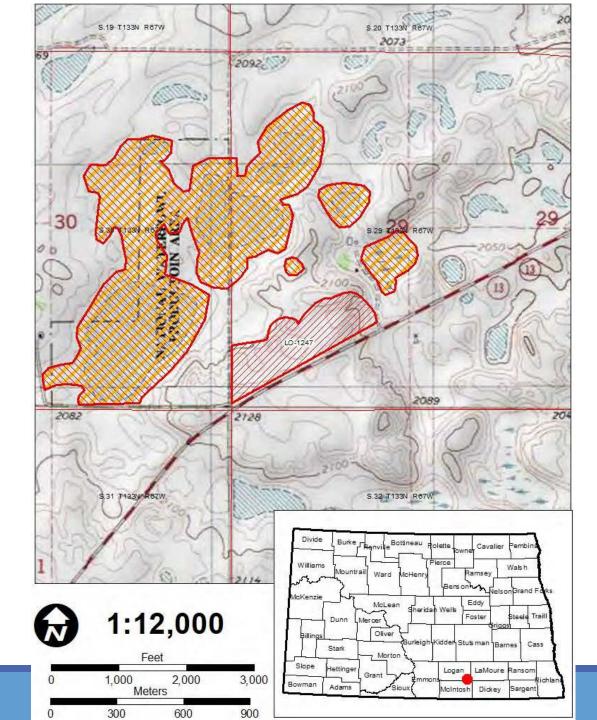
Once the borrow source is no longer needed, restore the borrow source by doing the following:

Optional or Mandatory? Is it better to have the sites be mandatory or optional?



Cultural Resources - Greg Wermers





Materials & Research - Matt Kurle



Borrow Material Investigation

Purpose

- Get a Representation of the Material that is in the Borrow Area
- Determine Suitability of the Material for Intended Use

Borrow Material Investigation

What is Needed to Get Started

- Borrow Option Agreement
 NDDOT Material Source Certificate of Approval
- Utility Locate (ND One Call)
- >Topographic Information
- (Topo Maps/Google Earth)

Borrow Agreement

Determine Quantity and Size of Borrow Area to Determine Appropriate Soil Investigation

BORROW OPTION AGREEMENT

North Dakota Department of Transportation Environmental & Transportation Services SFN 10132 (5-2017)

PCN				
2	1	6	8	6

Project SS-5-022(117)016	
County Hettinger	
Borrow Area Number 3	COA Number HT-1018

Page 1 of 3

Grantor(s) Sheidon Bohnhoff			
Grantor(s) Address	City	State	ZIP Code
6781 Hwy 22 S	New England	ND	58647

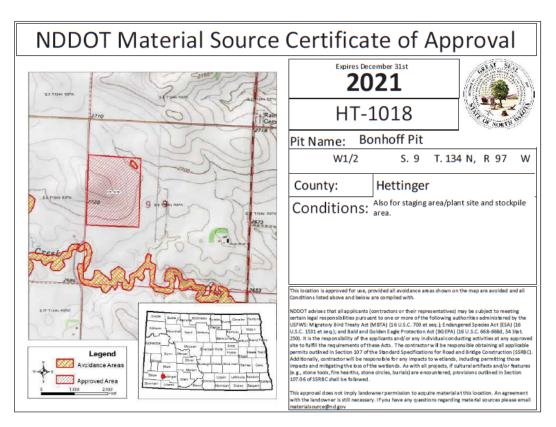
Contact(s) Sheldon Bohnhoff	
Telephone Number(s) 701-579-4522 (home) 701-590-0162 (cell)	Email Address(s)

Mortgagee Farm Credit Services			Initial
Mortgagee(s) Address	City	State	ZIP Code
1300 Roughrider Boulevard	Dickinson	ND	58601

Location		Section	Township	Range
A portion of the W 1/2		9	134	97
Consideration \$150.00	Approximate Tota 50,000	I Borrow Cubic Yards	Purchase Price Pe \$0.50	er Cubic Yard

Certificate of Approval

Areas to Avoid During Soils Investigation for Environmental/ Cultural Reasons



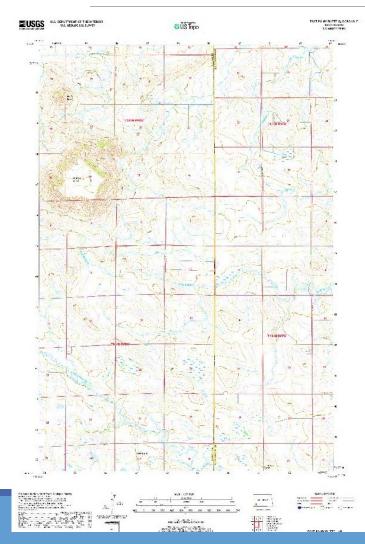
Utility Locate (ND One Call)

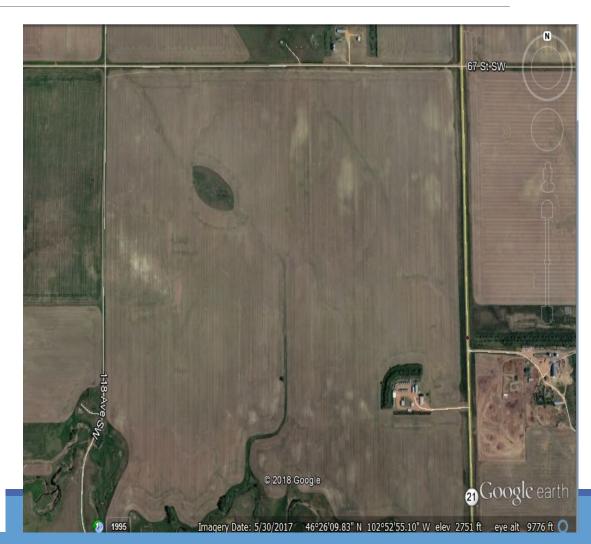
Need to Avoid Existing Utilities During Soil Investigation



Know what's **below. Call before you dig**.

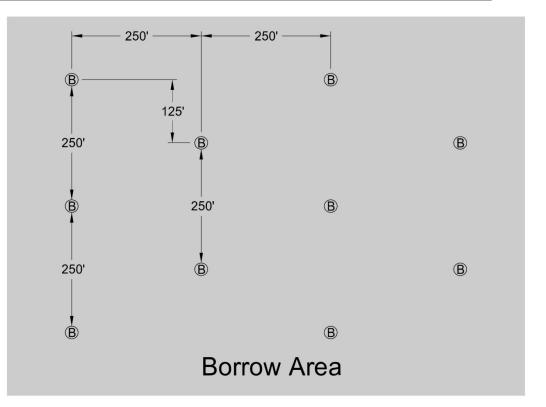
Topographic Information





Drilling Plan

Design
 Manual
 Chapter VII:
 Geotechnical
 Studies and
 Design



B = Boring Location

Proposed Drilling Plan

SS-5-022(117)016, PCN 21686

Borrow Option 3, Bonhoff Pit HT-1018. NW Corner of pit is 1200' south of the intersection of 118 Ave SW and 67 St SW

Google earth

2018 Google

Boring 6, 20'

Boring 7, 10'

Boring 8, 5'

Boring 2', 20'

Boring 4, 20⁹

Boring 5, 20'

Bore holes Boring 17, 10' Boring 34, 5' Boring 18, 10' (Boring 35', 5' (Boring 16, 10' (Boring 33, 10' (Boring 19, 20' (Boring 36, 10' (Boring 15, 20' (Boring 32, 10' (Boring 49, 5' (Boring 20, 20' (Boring 37, 10⁴ Boring 14, 20' (Boring 31, 10' (Boring 48, 5' (Boring 21, 20' (Boring 38, 10' (Boring 13, 20' (Boring 30, 20' (Boring 47, 5' (Boring 22, 20' (Boring 39, 10' (Boring 29, 20' (Boring 12, 20' (Boring 46, 5' (Boring 23, 20' (Boring 40, 10' (Boring 11, 20' (Boring 28, 10' (Boring 45, 5' (Boring 24, 10' (Boring 41, 10' (Boring 10, 5' (Boring 27, 5' (Boring 44, 5' (Boring 25, 5' (Boring 42, 5' Boring 9, 5' (Boring 26, 5' (Boring 43, 5'

Legend

Access to Property

Work with ROW Agent to Gain Access to property

Potential Issues: Fence/Access Weather Animals Crops

Drilling Operation

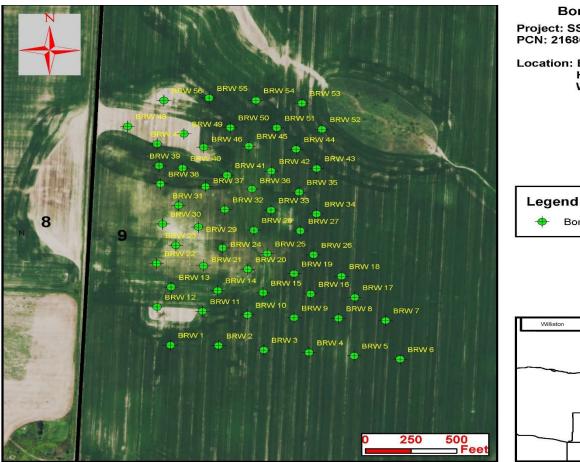
≻6" Auger

Moisture Content every foot

Bag Sample for Every Change in Soil Type



Drilling Operation



Bonhoff Borrow Site
Project: SS-5-022(117)016
PCN: 21686
Location: Bonhoff Pit, HT-1018
Hettinger County
W 1/2 of Sec9, T.134N, R.97W

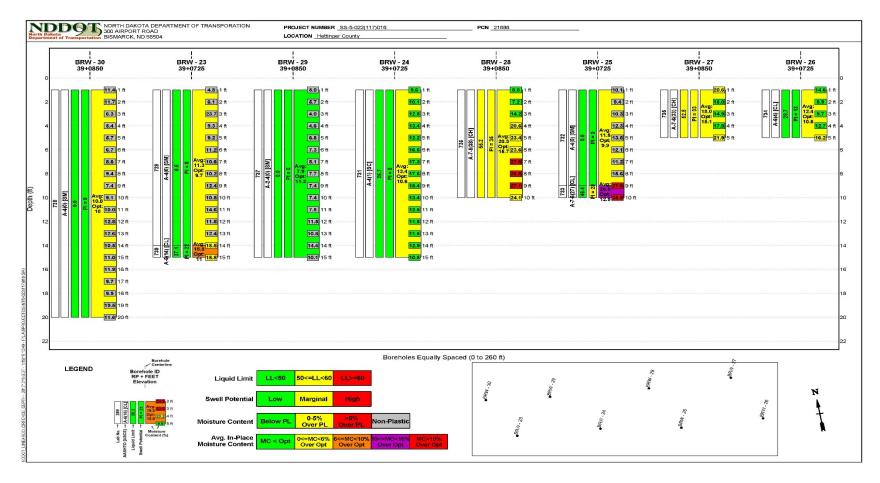


Laboratory Testing

> Moisture Content Proctor Test > Atterberg Limits ➢ Particle Size Analysis



Laboratory Analysis



Borrow Site Report

Summarizes the Soil Properties of the Material found.

Expectations of how the Material Will Perform for Intended Use

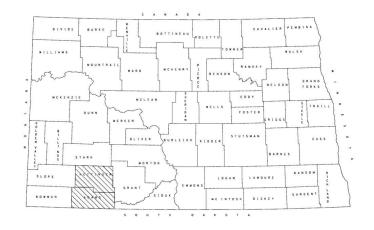
Borrow Site Report

PROJECT NO. SS-5-022(117)016

PCN 21686

COUNTY Adams/Hettinger

Highway 22 RP 16.186 to RP 47.572



PREPARED BY: Jared J. Loegering, P.E.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION MATERIALS AND RESEARCH DIVISION

January 2019

Bismarck District - Loren Lee



Before Excavation Starts

- Contractor inspects site
 - Discuss where the borrow is taken
 - How does land owner want the site finished
 - Scout out avoidance areas, current water levels
 - > Good contractor would do this before committing to the pit
- Written notification to land owner, removal plan, location of access route and other agreements submitted to DOT 10 days prior
- Contractor stake out initial area for excavation
 - First survey
- Utility Locates
- Erosion control
 - Perimeter silt fence
- ➤Staging Area
 - Separate agreement

Work Begins

➤Topsoil is stripped

- ➤Survey again
- >Alternately, survey the piles, or have agreed depth

➢ Begin excavation

- ➢ Backhoe and Side Dump Trucks
- ➤Scrapers
- Communicate with contractor if more survey required
- After excavation
 - Survey area again to get finished land surface



Measuring Quantities

District uses Trimble Business Center

Compares first two survey passes to get topsoil quantity

If contractor agreed to a topsoil depth, survey twice and calculate topsoil from the disturbed area

Compares second and third passes to get borrow quantity

BORROW I STATE D.	PTION
\ \	1/CF =
NDDOT 608 East Boulevard Ave.	Phone: (701)328-2149
Bismarck, ND 58505-0700 USA	Phone: (701)328-2149 rzahn@nd.gov

Project File I	Data	Coordinat	e System
Name:	H:\WorkSpace\Survey\200 Mercer\200Mercer.vce	Name:	United States/State Plane 1983
Size:	74 MB	Datum:	NAD 1983 (Conus)
Modified:	10/5/2018 9:50:43 AM (UTC:-5)	Zone:	Default
Time zone:	Central Standard Time	Geoid:	GEOID12A (Conus)
Reference number:		Vertical datum:	NAVD88
Description:	1/CF =		
Comment 1:			
Comment 2:			
Comment 3:			

Additional Coordinate System Details

Local Site Settings			
Project latitude:	N46°43'27.49037"	Ground scale factor:	1.0001105122
Project longitude:	W108°21'38.18669"	False northing offset:	0.0000 ft
Project height:	1900.0000 ft	False easting offset:	0.0000 ft

Earthwork Volume Report

Work-in-progress surface compared to Mass earthwork finished surface

Surfaces	
Borrow1Prepped	Classification: Work-in-progress
Borrow1 Final	Classification: Mass earthwork finished

Volumes from Surface Geom	ietry	
Material excavated Material placed	him	52,697.7 yd ³ 532.2 yd ³
Difference:		52,165.5 yd ³

Finishing Up

>Return the land as per any agreements

Contractor must do what it takes to get the land owner to sign the pit release

>SFN 14486

- Remove anything that has been left behind
- Till the weeds around erosion control

Seed and mulch per contract

> We won't finalize a project without pit releases

Name of Legal Pit Owner Staci Langemo		Name of Pit Langemo Pit		
Addreas 5824 Apple Creek Drive		City Bismarck	State ND	ZIP Code 58504
PIT LOCATION				
Section 6	Township 146N		Range 78W	
County Sheridan		State ND	and the Handson of American States	
Contractor Knife Rivet Materials				
Address P O Box 40		City Bemidji	Siato MN	ZIP Code 56619

Neme of Legal Pit Owner Stadi Langemo	Name of 2nd Legal Pit Owner (if applicable)	Winess Name
Signative Staci Langemo	Signature (if applicable)	Witness Signatura
Date 1-23-19	Date (if applicable)	Dale 1-23-14

MATERIALS REMOVED

Tons (Cubic Yards)	Type	Price Per Ton (Cubic Yards)	Total
41350.36 tons	bituminous material	\$1.00 per ton	\$41,350.36

Being the legal materials owner named above, I herewith acknowledge receipt of payment in full from the named contractor for all the materials removed from the pit stated above.

Name of Materials Owner Staci Langerso		Date Fa	yment Received & Accepted
Address 5824 Apple Creek Drive	City Bismarck	State ND	ZIP Cude 58504
Name of Materials Owner Staci Langerno	Witness Name	Cont Las	19 Emu
Signature Ataci Langeno	Witness Signat		, ,

Both sections must be signed, witnessed, and dated. This form to be secured by contractor and delivered to engineer.

*Electronic signatures are acceptable

Issues In The Field -Unsuitable Materials

> Engineer can direct contractor to get material elsewhere

State Option Pits

> Can reject – Extra topsoil, excess costs, haul. Change orders.

Contractor Pits

Can reject – No extra costs

If the Contractor leaves a state option pit on their own, additional payment is not needed.



Issues In The Field -Overruns & Material Shortage

- Once again, Engineer can direct contractor to get material elsewhere
- State Option Pits
 - ≻ Can the pit be expanded?
 - Material source clearance?
 - Extra topsoil, excess costs, haul.

Contractor Pits

- Shortage Go find more.
- Overrun Change order for time likely



Issues In The Field -Utilities

Utilities can be missing from the plans or in the wrong location

➢Important to use One Call

Land owners may require Contractor to excavate at utilities

Coordinate with utility companies

Long delays

Unexpected costs



State Optioned vs. Contractor Furnished

Notification

State – Written notification, removal plan, location of access route and other agreements 10 days before

Contractor – No minimum notification time

➤Topsoil

Erosion Control

Material Shortages

➢Topsoil, seeding, excess costs, haul

Utility Adjustments

Questions



Upcoming Meetings

Thursday, June 27th

Ben Kubischta Presents:

FIRE TO WAR - ND State Highway Department & Turbulent 1930's

12:00-1:30 pm CST

RSVP: <u>www.dot.nd.gov/LunchAndLearn.htm</u>

➢July 25th − Ben Kubischta Presents:

Safety has always been our first priority - The ND State Highway Department in the 1920s and 1930s - **12:00-1:30 pm CST**

≻August 22nd – TBA

Contact Information

Michael Knox, ROW Program Manager 701-328-4228 / <u>mrknox@nd.gov</u>

Negotiators/ROW Liaison:

Ray Barchenger 701-328-4437 / <u>rbarchen@nd.gov</u>

Brad Faiman 701-328-3649 / <u>bfaiman@nd.gov</u>

Roxinne A. McPhail 701-328-2048 / <u>rmcphail@nd.gov</u>

Stacy Wilz 701-328-4430 / <u>swilz@nd.gov</u> Leon Eckroth, Design 701-328-2588 / <u>leckroth@nd.gov</u>

Greg Wermers, Cultural Resources 701-328-2731 / <u>gwermers@nd.gov</u>

Matt Kurle, Materials & Research 701-328-6908 / <u>mkurle@nd.gov</u>

Loren Lee, Bismarck District 701-328-6961 / <u>lorlee@nd.gov</u> BORROW OPTION AGREEMENT

Exhibit 1

North Dakota Department of Transportation Environmental & Transportation Services SFN 10132 (1-2019)

PCN					
1	1	1	1	1	
1	1	1	1	1	

Project	
NH-X-XXX(XXX)XXX	

County

County

Borrow Area Number John Doe Borrow Site COA Number

Use of borrow option agreement is subject to an Environmental Review, Cultural Resource Survey, Soil Survey, and a Utility Review.

Grantor(s) John Doe			
Grantor(s) Address	City	State	ZIP Code
123 1st Street	Anywhere	ND	12345

Contact(s) John Doe	Main contact for contractor to call
Telephone Number(s)	Email Address(s)
701-555-1234	johndoe@hotmail.com

Mortgagee ABC Lending		Grantor((s) Initials
Mortgagee(s) Address	City	State	ZIP Code
6789 Broadway	Anywhere	ND	12345

Location	Section	Township	Range
A portion of the N½NW¼	24	136	100
Consideration \$150.00	Approximate Total Borrow Cubic Yards 150,000	Purchase Price Pe \$0.50	er Cubic Yard

For the sum of the dollar amount listed above and other valuable consideration, the undersigned, for themselves, their heirs, executors and assigns, hereinafter referred to as "Grantor(s)," agree to sell and convey unto the state of North Dakota, for and on behalf of the North Dakota Department of Transportation, hereinafter referred to as NDDOT, all of the fill material suitable for highway purposes, located in and upon the following-described tract or parcel of real estate situated in the above County, North Dakota, specifically:

A portion of the N1/2NW1/4 24-136-100 which is 20 acres more or less

Be specific

See Exhibit A for an approximate overlay of above described tract or parcel of land.

Grantor(s) covenant that they are well seized of the property described above, and have the right to grant this material option on behalf of themselves, their heirs, successors, and assigns, free of any encumbrances or other impairments preventing the removal of such material.

The Grantor(s) further agree(s) that NDDOT and its assigns shall have full and free right of entry upon and use of said land for the purpose of removing such material.

The Grantor(s) shall be compensated for the material removed at the purchase price per cubic yard listed above.

In addition, if any material is removed from the option site, NDDOT or its assigns (Contractor), will perform the following:

NDDOT Responsibilities

1. Pay cash rent on the disturbed acreage at the rate of \$______ per acre. If the optioned area is still being utilized for borrow after May 15th of the following year, an additional year's cash rent will be paid.

2. Make an additional rehabilitation payment on the disturbed acreage in the sum of \$______40.00_ per acre.

- 3. Make an additional payment of <u>\$300.00</u> per acre if the area excavated was seeded when the work commenced.(Cropland input cost as determined by NDDOT.)
- 4. Final Payment will be made AFTER Pit Release is turned in and complete.

NDDOT payment made after signed Pit Release & Borrow Area Status Report turned into ROW

Contractor Responsibilities

- The Contractor will contact the Grantor(s) to determine a removal plan and final leveling requirements. A copy
 of the final plan signed by the Grantor(s) and Contractor will be submitted to the NDDOT engineer before any
 borrow is removed.
- Within 30 days of opening the borrow pit, the Contractor shall make an initial payment to the Grantor(s) equal to 80% of the minimum payment.

Minimum payment amount is calculated as follows:

(<u>150,000</u> total cubic yardage optioned X rate per cubic yard <u>0.50</u> X (<u>30</u> % from below)

= \$ _____22,500.00 Total Minimum Payment X 80% = \$ _____18,000.00 Initial Payment Due to Grantor(s)

Percent of total cubic yards used for minimum payment calculation: (\leq 50,000 cubic yards = 50%) (50,001 \leq 100,000 cubic yards = 40%) (>100,000 cubic yards = 30%)

3. The remaining balance of the minimum payment (\$ 4,500.00) plus the remaining balance of the royalty payment (based on the total amount of borrow quantity removed) shall be made by the contractor within 30 days after the Contractor has obtained a pit release from the Grantor(s).

4. Prior to excavation of material, a minimum depth of 6" topsoil will be stripped. In those areas where topsoil depth is in excess of 6", a maximum of 12" will be stripped. When the excavation work is completed the topsoil will be redistributed over the disturbed area. Adequate drainage will be provided as part of the reclamation of the disturbed property. If the reclaimed area is not cropland, it will be seeded to grass unless otherwise requested by the Grantor(s) within this agreement.

Fencing/Seeding/Tenant info/Who gets paid/Payment splits

Additional Conditions:

Do not use existing approach to access borrow site, see Exhibit A for location to construct borrow site approach.

It is mutually agreed between the parties hereto that the state, through NDDOT, may assign the right to exercise this option to other entities or persons to take fill material for highway improvement from the land herein described, and that said assignee shall pay to the parties to whom the state itself would pay for such material taken, at the same rate as the state itself would pay if the material were taken by the state under this borrow option agreement. Assignee shall notify the Grantor(s) in writing that assignee is exercising NDDOT's option and promptly present a detailed excavation plan to the Grantor(s).

This borrow option shall expire upon completion of the project, or at the end of five years, whichever occurs first. In the event that the project number changes, this option shall transfer and remain valid as long as the Certificate of Approval (COA) number remains the same. If the COA number changes, this borrow option agreement is void.

NDDOT will not record this borrow option agreement.

The Grantor(s) will be given written notification if this option is not approved by NDDOT.

Once the COA is obtained, the NDDOT will forward a copy to the Grantor(s).

This borrow option agreement may be executed in several counterparts, each of which shall be deemed an original but all of which shall constitute on and the same instrument.

EXECUTED the date last signed below.

SFN 10132 Page 3 of 4

GRANTOR(S):

GRANTOR(S):		WITNESS		
Name (Type or Print) John Doe		Name (Type or Print)		
Signature Date		Signature	Date	

ROW AGENT

NDDOT APPROVAL

Name (Type or Print)		Name (Type or Print)	
Agency/Firm		Title	
Signature	Date	Signature	Date

PCN

1

1

BORROW OPTION AGREEMENT - CONTRACTOR

North Dakota Department of Transportation Environmental & Transportation Services

		•	Project NH-X-XXX(XXX)XXX	County County
1	1	1	Borrow Area Number John Doe Borrow Site	COA Number

Grantor(s) John Doe			
Grantor(s) Address 123 1st Street	City Anywhere	State ND	ZIP Code 12345
Contact(s) John Doe	Telephone Number(s) 701-555-1234		

Location	Section	Township	Range
A portion of the N½NW¼	24	136	100
Approximate Total Borrow Cubic Yards	Purchase Price Per Cubic Yard		
150,000	\$0.50		
Legal Description of Optioned Area:			

A portion of the N1/2NW1/4 24-136-100 which is 20 acres more or less

If any material is removed from the option site, NDDOT or its assigns (Contractor), will perform the following:

NDDOT Responsibilities

1. Pay cash rent on the disturbed acreage at the rate of \$_____40.00 per acre. If the optioned area is still being utilized for borrow after May 15th of the following year, an additional year's cash rent will be paid.

2. Make an additional rehabilitation payment on the disturbed acreage in the sum of \$_____40.00_ per acre.

- 3. Make an additional payment of \$______300.00 per acre if the area excavated was seeded when the work commenced.(Cropland input cost as determined by NDDOT.)
- 4. Final Payment will be made AFTER Pit Release is turned in and complete.

Contractor Responsibilities

- The Contractor will contact the Grantor(s) to determine a removal plan and final leveling requirements. A copy
 of the final plan signed by the Grantor(s) and Contractor will be submitted to the NDDOT engineer before any
 borrow is removed.
- 2. <u>\$22,500.00</u> Total agreed upon minimum payment shall be paid as follows:
 - a. Within 30 days of opening the borrow pit, the Contractor shall make an initial payment of <u>18,000.00</u> to the Grantor(s).
 - b. The remaining balance of the minimum payment (\$ 4,500.00) plus the remaining balance of the royalty payment (based on the total amount of borrow quantity removed) shall be made by the contractor within 30 days after the Contractor has obtained a pit release from the Grantor(s).
- 3. Prior to excavation of material, a minimum depth of 6" topsoil will be stripped. In those areas where topsoil depth is in excess of 6", a maximum of 12" will be stripped. When the excavation work is completed the topsoil will be redistributed over the disturbed area. Adequate drainage will be provided as part of the reclamation of the disturbed property. If the reclaimed area is not cropland, it will be seeded to grass unless otherwise requested by the Grantor(s) within this agreement.

Additional Conditions:

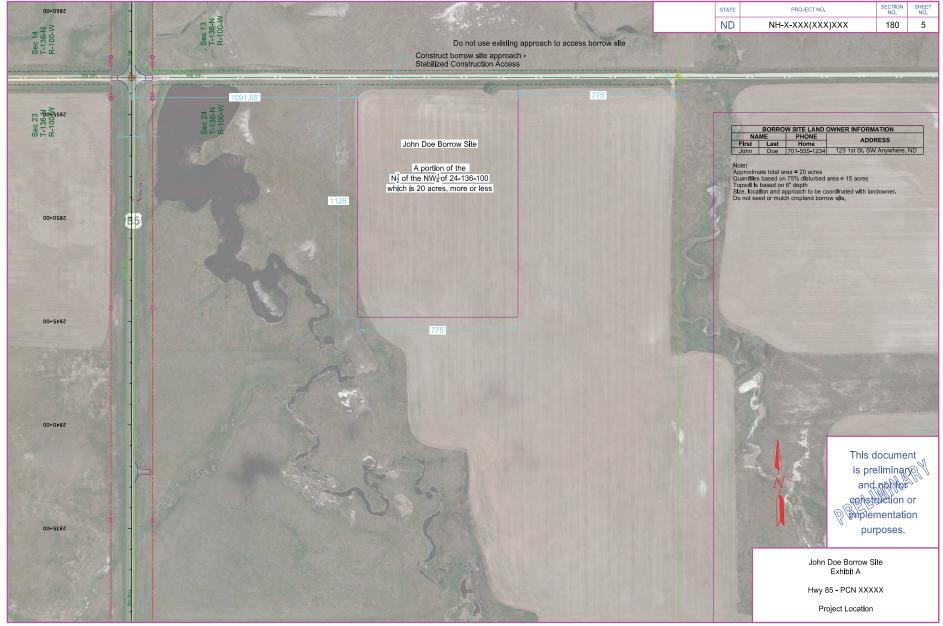
Do not use existing approach to access borrow site, see Exhibit A for location to construct borrow site approach.

Contractor shall notify the Grantor(s) in writing that they are exercising NDDOT's option and promptly present a detailed excavation plan to the Grantor(s).

Grantor((s)	Initials

Auto Fill Page

Exhibit A



5/29/2019 10:56:43 AM mwilz C:\Users\mwilz\Desktop\180PT_005_Borrow.dgn

EXHIBIT 2

BORROW / WASTE MATERIALS CHECK LIST

PROJ	ECT NO			PCNOPTI	ON #		
NEGO	IEGOTIATOR LANDOWNER(S)						
MAT	ERIAL	DATE MATERIAL SOURCE APPROVAL REQUEST SUBMITTED					
Nee	N 1-	NI / A	DOCUMENTS:				
Yes O	No O	N/A O	1.	(Submit in Order Listed) Borrow/Waste Option Report			
0	0	0	2.	Borrow Option Agreement & Exhibit			
0	0	0	3.	Waste Materials Option Agreement	Ś		
0	0	0	3. 4.	Agreement for Entry and Construction	Total Payment Due		
U	Ŭ	U		Without Compensation			
0	0	0	5.	Site Map			
0	0	0	6.	Material Source Approval Request	Approved By		
0	0	0	7.	Material Source Certificate of Approval			
0	0	0	8.	Additional Written Communications			
				(Emails/Correspondence)	Date		
0	0	Ο	9.	Surface Ownership Report (SOR)			
0	0	Ο	10.	Executed W-9 (Not Required on Donations)			
0	0	Ο	11.	NDDOT Title VI Public Participation Survey			
0	0	0	12.	Other:			
				TITLE CURATIVE REMINDERS:			
Yes	No	N/A					
0	0	0	Joint Tenancy – Copy of the Death Certificate for Any Deceased Joint Tenant, Passes to Surviving				
			Joint	Tenant(s)			
0	0	Ο	Tenants in Common – Ask for a Copy of the Will for Deceased, and Obtain Heirs				
			-	ture. If Will Has Not Been Probated, Obtain Copy	-		
				inting Personal Representative, and Obtain Personal			
0	0	Ο		state Interest/Life Tenant – Obtain Copy of Deat	h Certificate & Agreement for		
~			Remainderman				
0	0	0	Power of Attorney/Trust Agreement Identifying Trustee(s)				
0	0	0	Landowner – Tenant Lease Agreement(s)				
0	0	0	O Ownership Information Matches on the Plats, Title Work, and Acquisition Documents				
				REHABILITATION SUMMARY AND PAYN	1ENT:		
				(Internal Use Only)			
0	0	0	Borro	ow Area Status Form			
0	0	0	Original Borrow/Waste Option Status Report				
0	0	0	Pit Release to NDDOT for final payment (Submitted by district office)				
0	0	0	Current W-9 on file				